

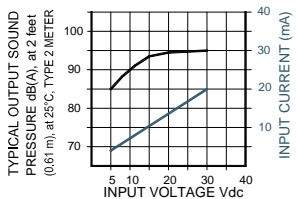
# MW-09-530-Q(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

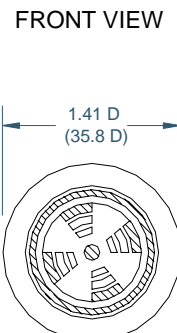
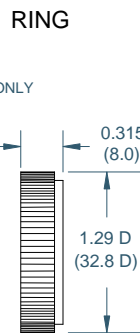
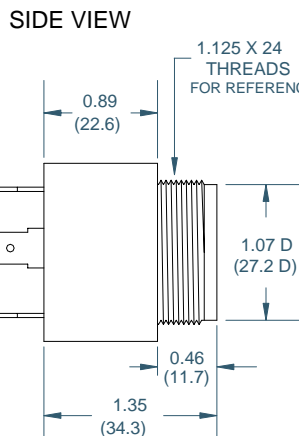
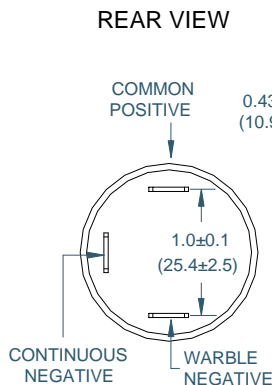


The MW-09-530-Q(M)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a medium warble tone and as a continuous tone. Both tone modes have a typical sound pressure level of 95 dB(A) at maximum voltage.

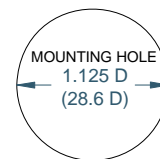
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

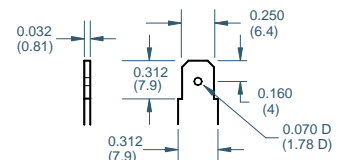


## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76) UNLESS OTHERWISE SPECIFIED.

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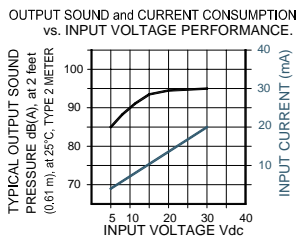
**Revision: 2.07**

# MW-09-530-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



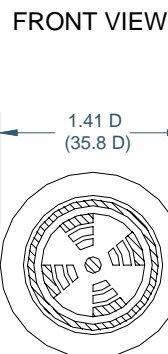
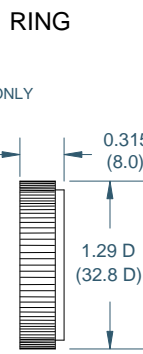
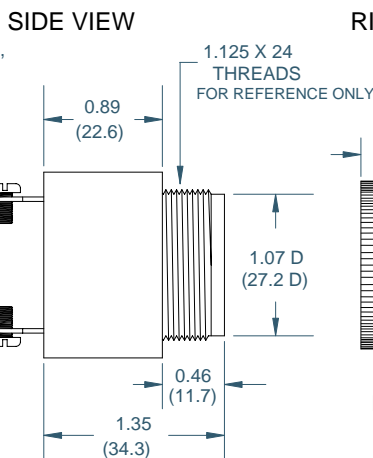
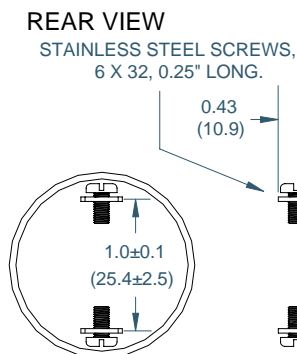
The MW-09-530-S is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 2 times per second.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C. 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

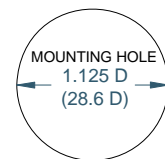
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

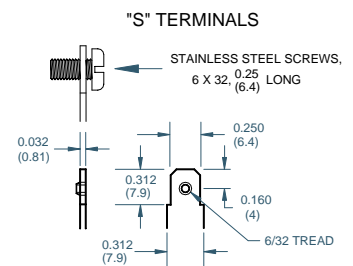


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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**Revision: 2.07**

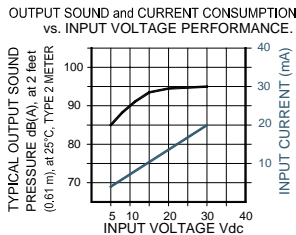


# MW-09-530-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

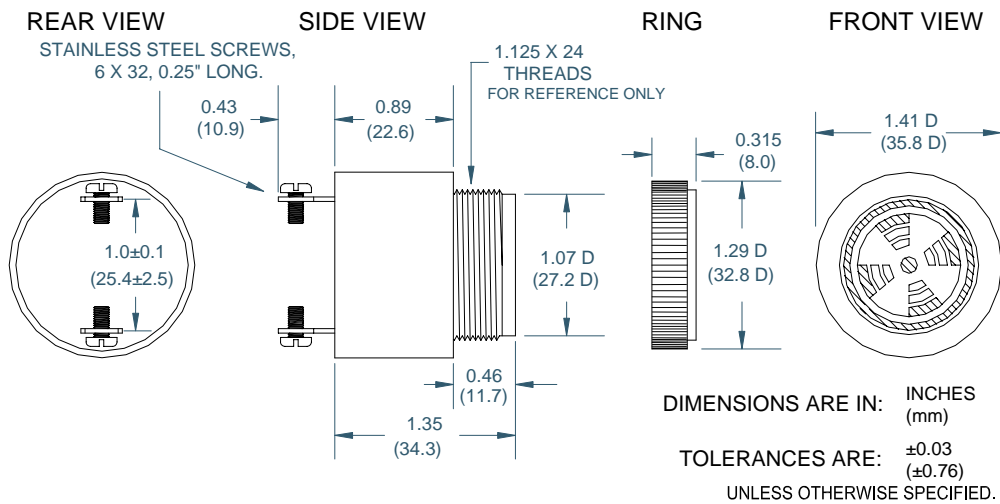


The MW-09-530-S(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 10 times per second. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

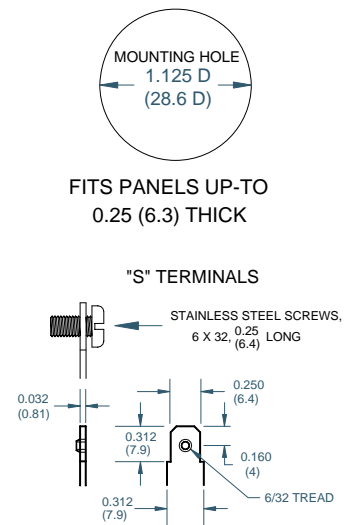
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

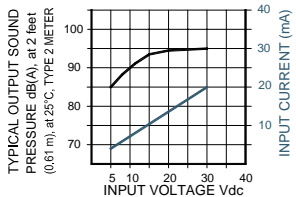
# MW-09-530-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

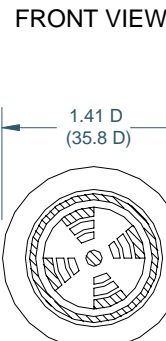
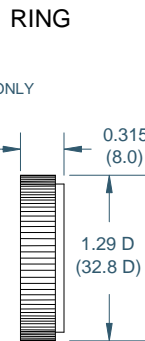
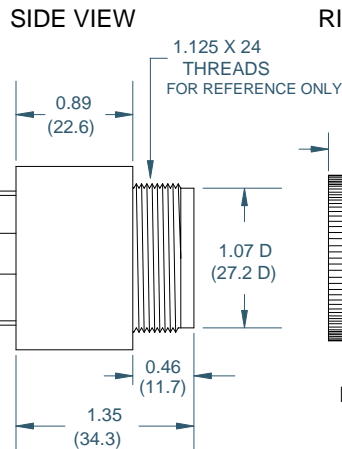
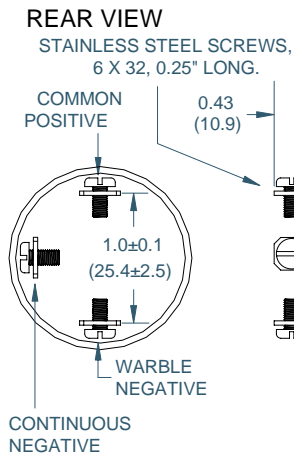


The MW-09-530-S(F)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a fast warble tone and as a continuous tone.

## SPECIFICATIONS

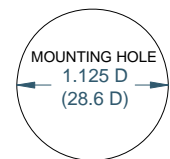
<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



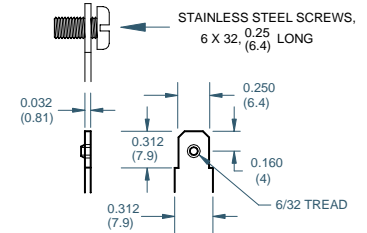
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 2.07**

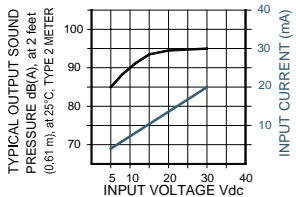
# MW-09-530-S(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

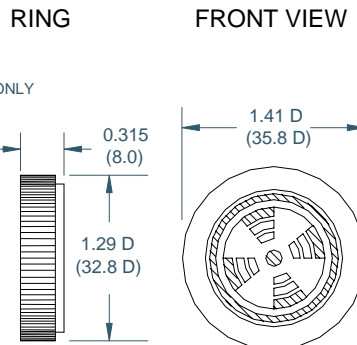
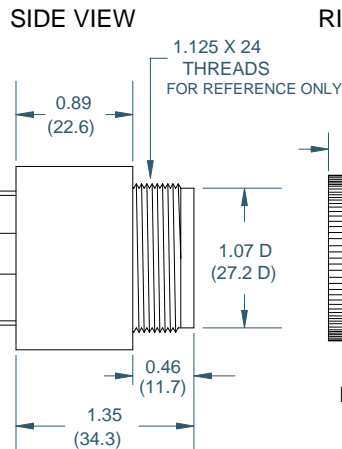
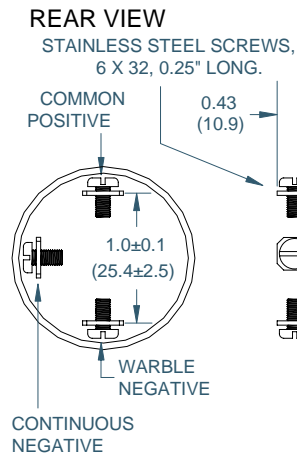


The MW-09-530-S(M)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a medium warble tone and as a continuous tone.

## SPECIFICATIONS

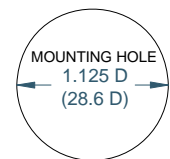
<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



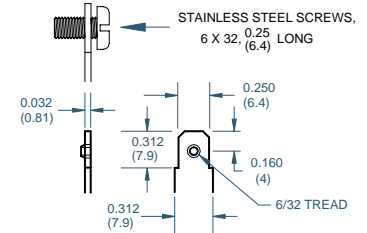
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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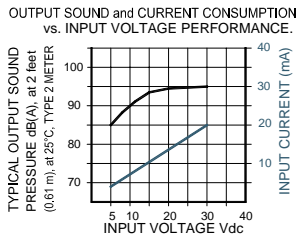
**Revision: 2.07**

# MW-09-530-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-09-530-W is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 2 times per second. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

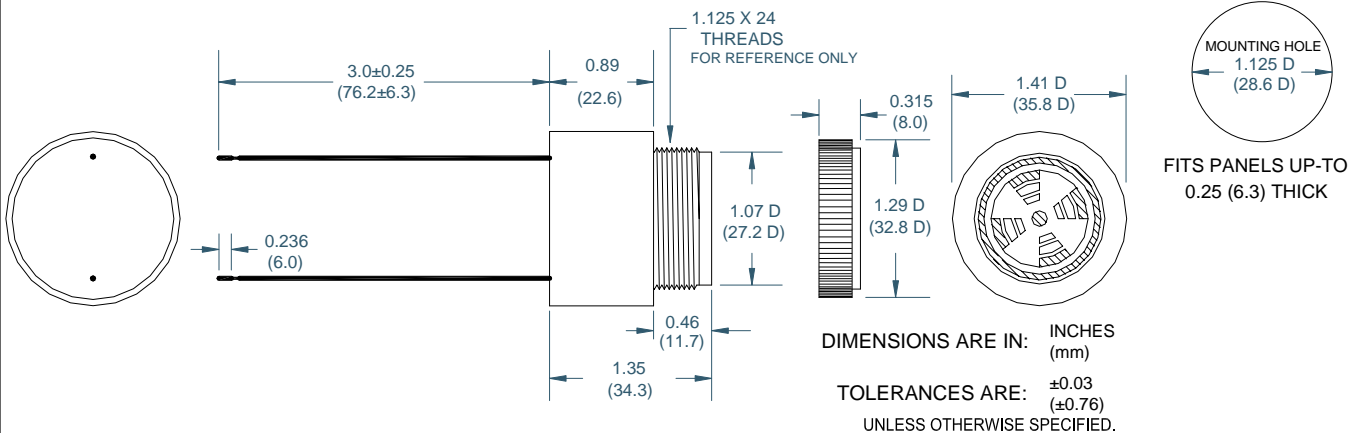
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07

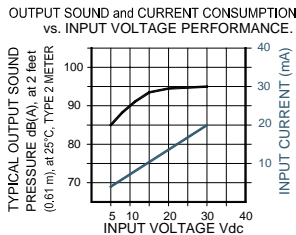


# MW-09-530-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-09-530-W(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 10 times per second. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

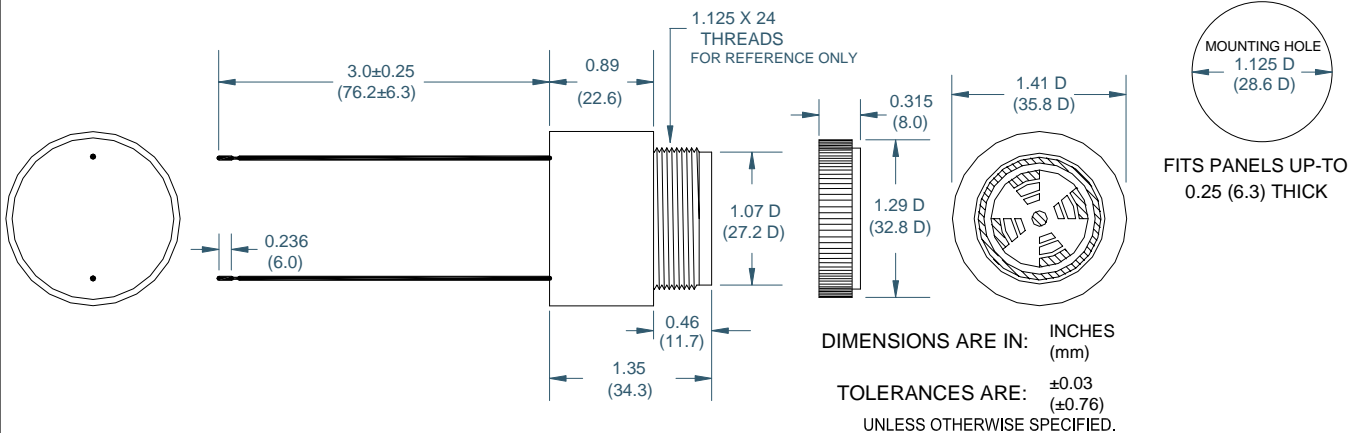
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07

# MW-09-531-Q(F)

**Made in  
USA**



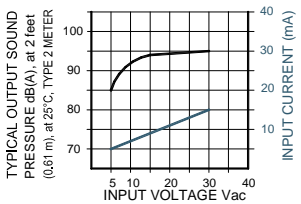
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The MW-09-531-Q(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-24 VAC/VDC and warbles at a rate of 10 times per second. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting.

## SPECIFICATIONS

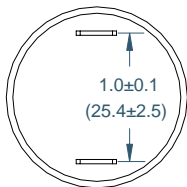
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

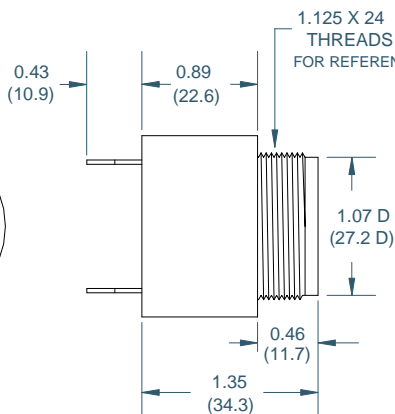


## DIMENSIONS

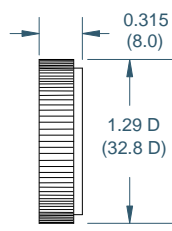
REAR VIEW



SIDE VIEW



RING

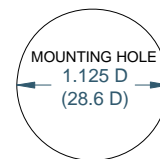


FRONT VIEW



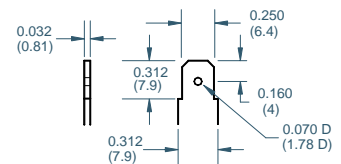
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

# MW-09-531-Q(M)

**Made in  
USA**

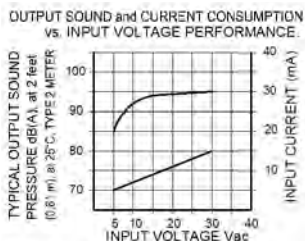


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The MW-09-531-Q(M) is a warble tone alarm with a typical loudness level of 95 dB (A). It can be operated over a voltage range of 5-24 VAC/VDC and warbles at a rate of 2 times per second. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

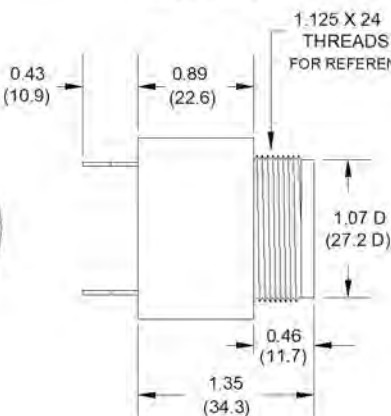


## DIMENSIONS

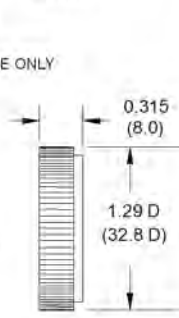
REAR VIEW



SIDE VIEW



RING



FRONT VIEW



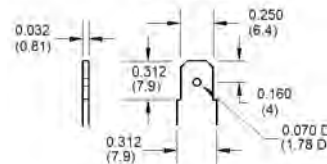
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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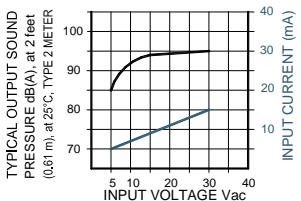
# MW-09-531-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-09-531-S is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-24 VAC/VDC and warbles at a rate of 2 times per second. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/Vdc  
**Nominal Operating Voltage:** 24 Vac/Vdc  
**Operating Frequency:** High Frequency Peak: 3000±250 Hz.  
 Low Frequency Peak: 2600±250 Hz.  
 2±25% Cycles per second

**Typical Operating Current:** 5 mA at 5 Vac  
 15 mA at 24 Vac

**Typical Sound Pressure:** 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.

**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load

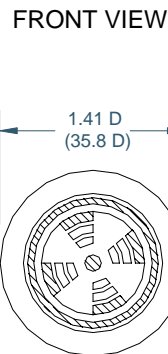
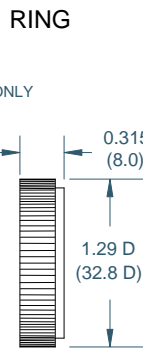
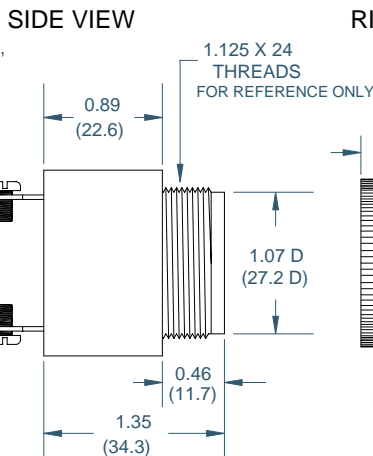
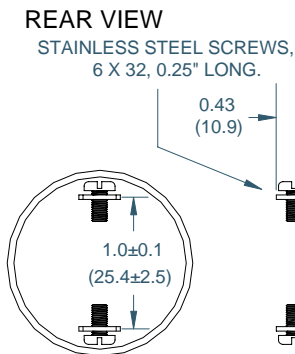
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.

**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
 Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
 For a period of two years from the date of manufacture under normal operating conditions.

**Environmental Durability:**

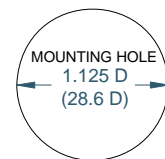
**Life Expectancy:**  
**Warranty:**

## DIMENSIONS

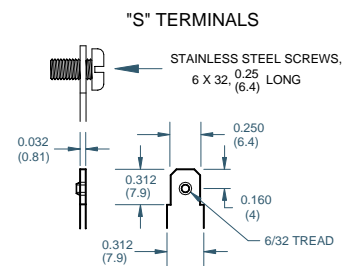


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
 0.25 (6.3) THICK



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**Revision: 2.07**

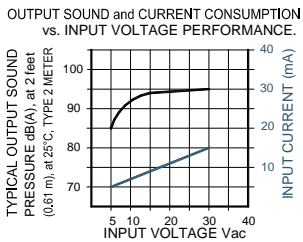


# MW-09-531-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

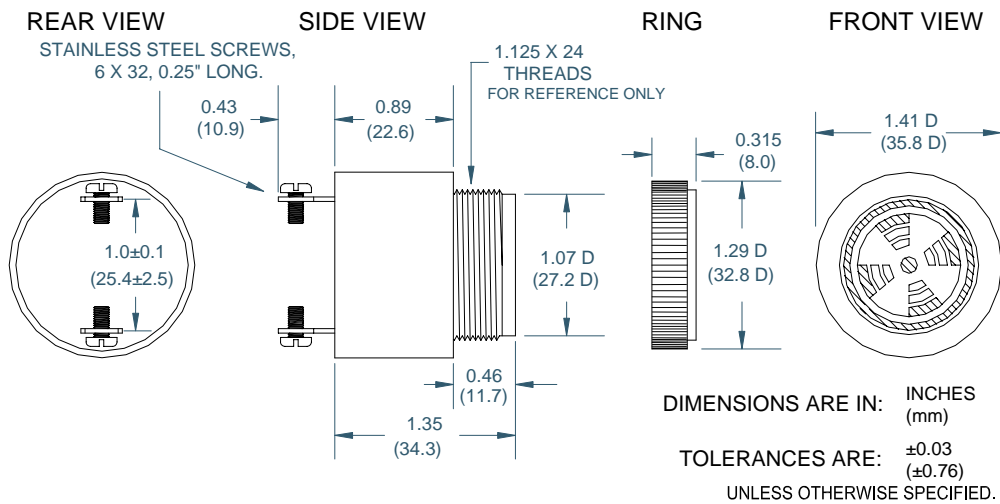


The MW-09-531-S(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-24 VAC/VDC and warbles at a rate of 10 times per second. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

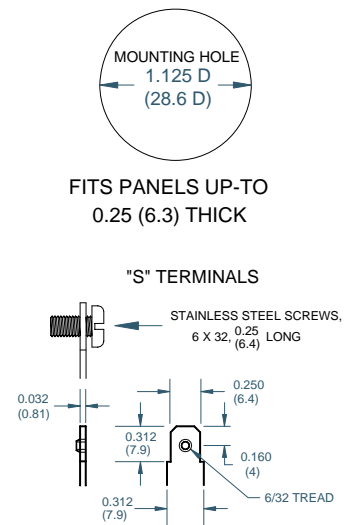
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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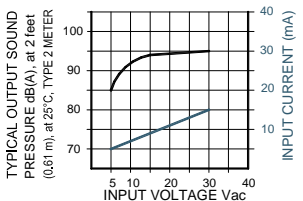
# MW-09-531-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-09-531-W is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-24 VAC/VDC and warbles at a rate of 2 times per second. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

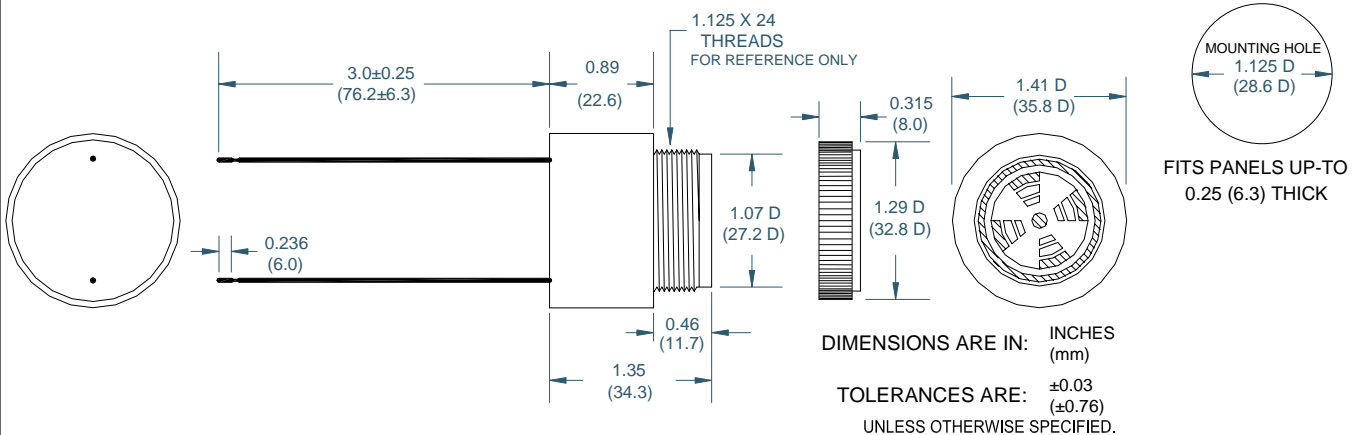
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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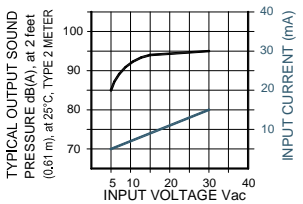
# MW-09-531-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-09-531-W(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 5-24 VAC/VDC and warbles at a rate of 10 times per second. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

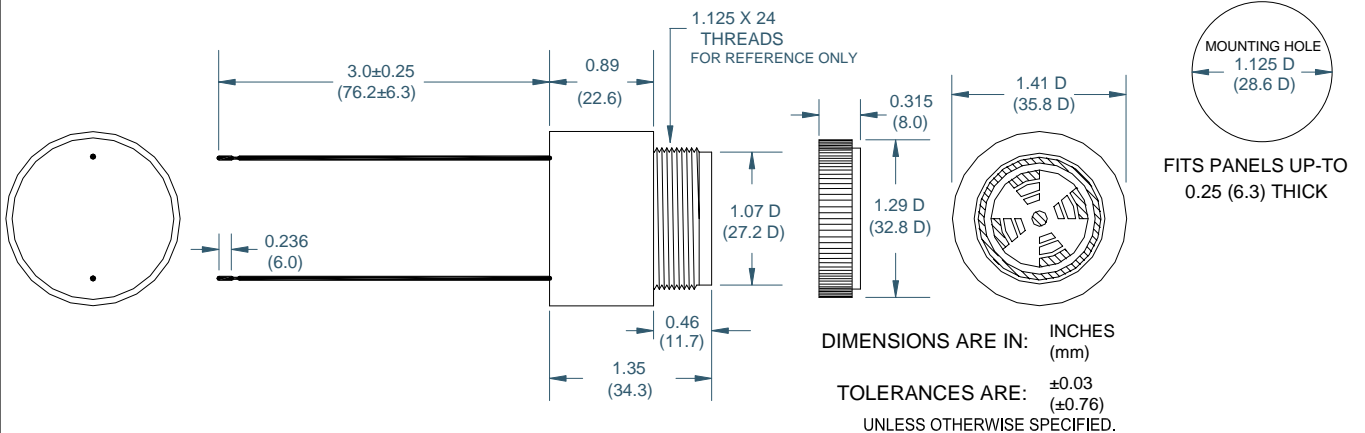
REAR VIEW

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PANEL MOUNTING



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Revision: 2.07

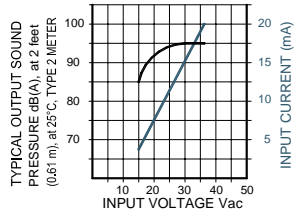
# MW-09-550-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



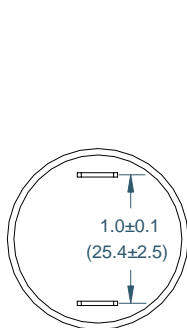
The MW-09-550-Q is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over voltage ranges of 15-36 Vac and 15-50 Vdc. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

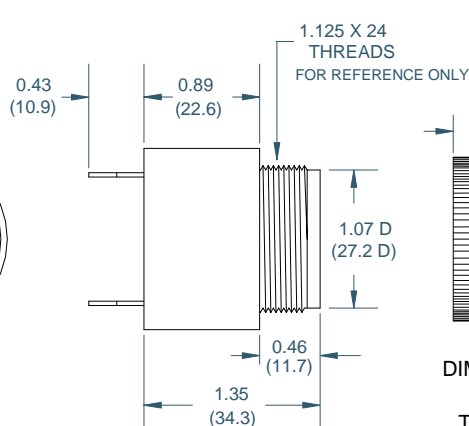
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 15-36 Vac, 15-50 Vdc  
**Nominal Operating Voltage:** 36 Vac  
**Operating Frequency:** High Frequency Peak: 2900±250 Hz.  
 Low Frequency Peak: 2200±250 Hz.  
 15±25% Cycles per second  
**Typical Operating Current:** 5 mA at 15 Vac  
 20 mA at 36 Vac  
**Typical Sound Pressure:** 85±5 dB(A), at 15 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 36 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Operating Temperature:** Pull test with a maximum of 22 pounds (10 kg) load  
 -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

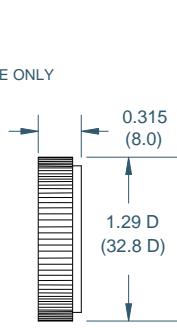
REAR VIEW



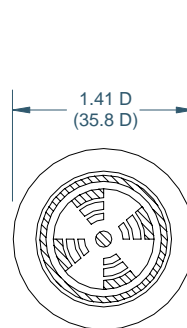
SIDE VIEW



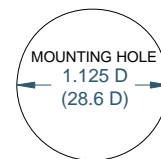
RING



FRONT VIEW

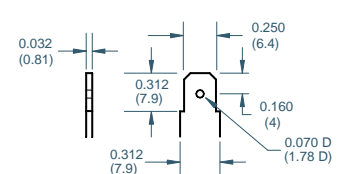


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

 **Floyd Bell Inc**  
 An ISO 9001:2000 Registered Company

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 www.floydbell.com

**Revision: 2.07**



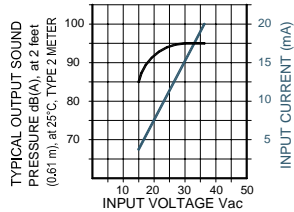
# MW-09-550-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-09-550-S is a warble tone alarm which can be operated over voltage ranges of 15-36 Vac and 15-50 Vdc. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs. The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

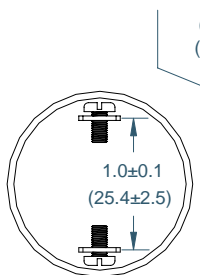
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	15-36 Vac, 15-50 Vdc
<b>Nominal Operating Voltage:</b>	36 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 15 Vac 20 mA at 36 Vac
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 15 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 36 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

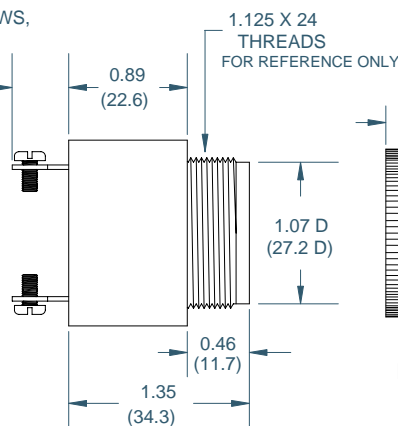
## PANEL MOUNTING

### REAR VIEW

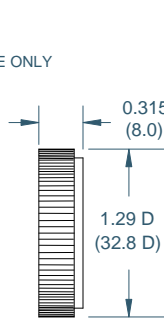
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



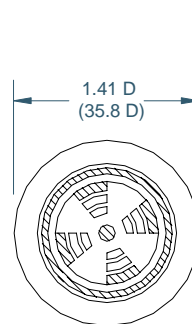
### SIDE VIEW



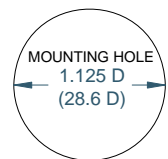
### RING



### FRONT VIEW

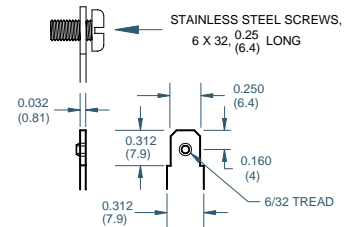


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



An ISO 9001:2000 Registered Company

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Revision: 2.07

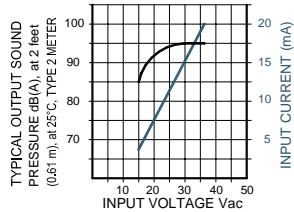
# MW-09-550-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-09-550-W is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over voltage ranges of 15-36 Vac and 15-50 Vdc. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 15-36 Vac, 15-50 Vdc  
**Nominal Operating Voltage:** 36 Vac  
**Operating Frequency:** High Frequency Peak: 2900±250 Hz.  
 Low Frequency Peak: 2200±250 Hz.  
 15±25% Cycles per second  
**Typical Operating Current:** 5 mA at 15 Vac  
 20 mA at 36 Vac  
**Typical Sound Pressure:** 85±5 dB(A), at 15 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 36 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Operating Temperature:** Pull test with a maximum of 22 pounds (10 kg) load  
 -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

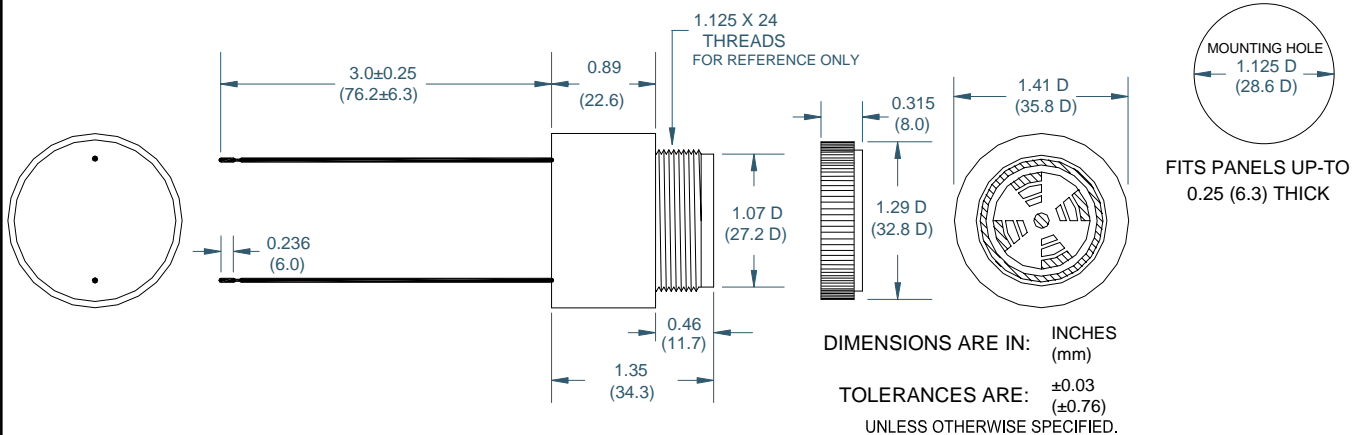
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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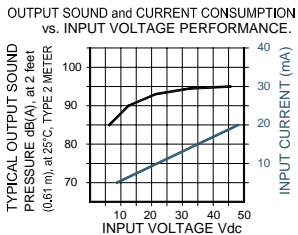
**Revision: 2.07**

# MW-09-948-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



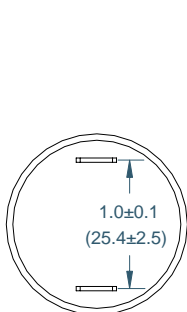
The MW-09-948-Q(F) is a warble tone alarm with a typical loudness level of 95 dB (A). It can be operated over a voltage range of 9-48 Vdc and warbles at a rate of 10 times per second. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

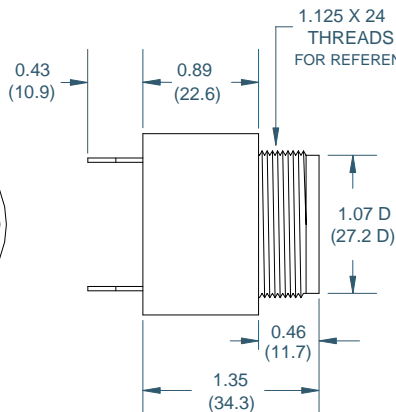
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

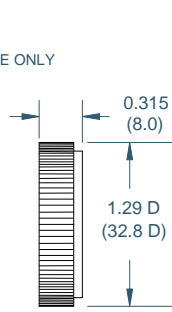
REAR VIEW



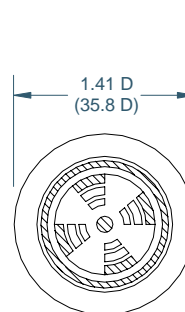
SIDE VIEW



RING

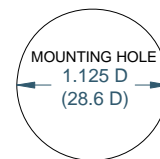


FRONT VIEW



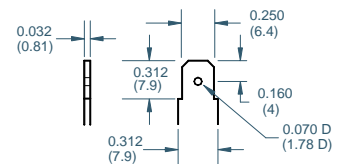
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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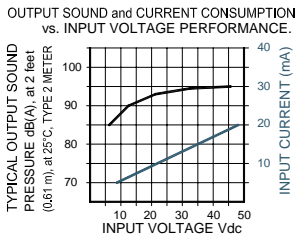
Revision: 2.07

# MW-09-948-Q(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



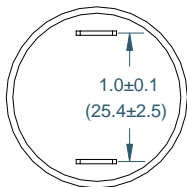
The MW-09-948-Q(M) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 9-48 Vdc and warbles at a rate of 2 times per second. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

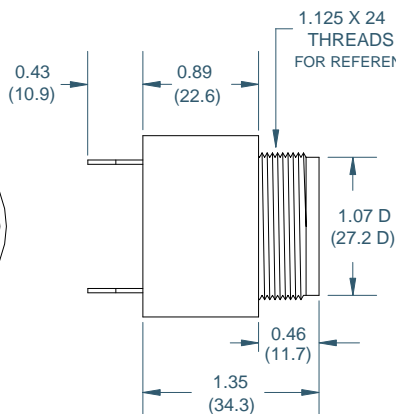
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

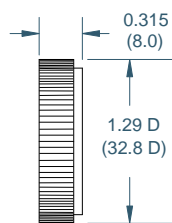
REAR VIEW



SIDE VIEW



RING

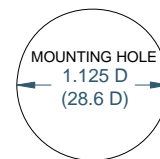


FRONT VIEW



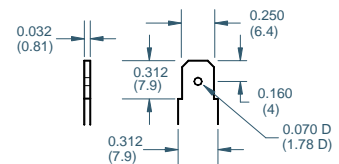
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

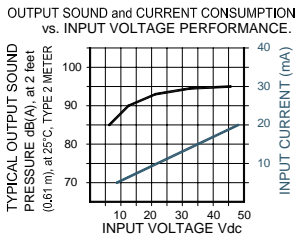


# MW-09-948-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

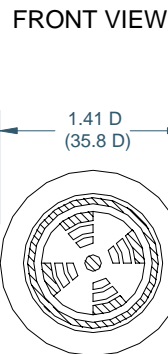
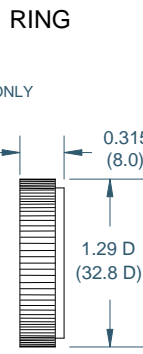
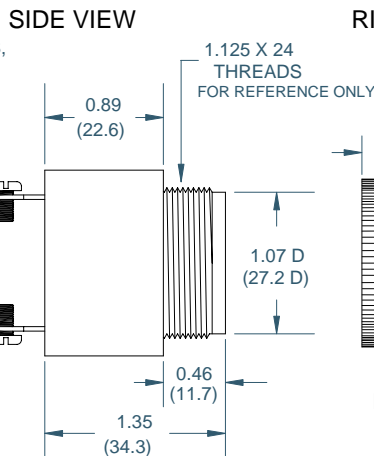
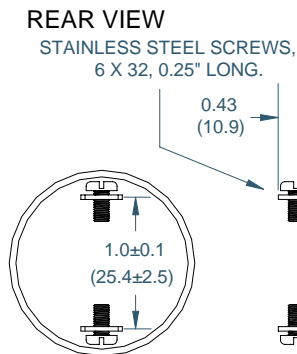


The MW-09-948-S(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 9-48 VDC and warbles at a rate of 10 times per second. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

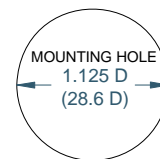
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Environmental Durability:</b>	
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

## DIMENSIONS

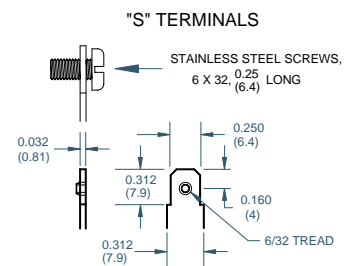


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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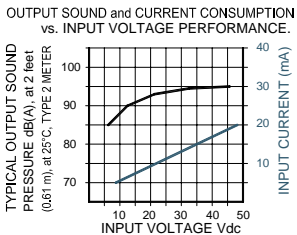
**Revision: 2.07**

# MW-09-948-S(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

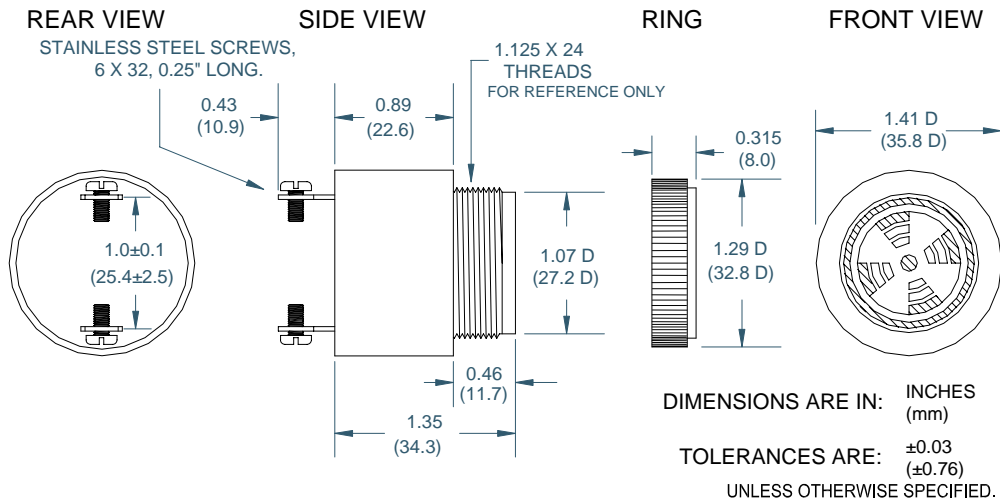


The MW-09-948-S(M) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 9-48 VDC and warbles at a rate of 2 times per second. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

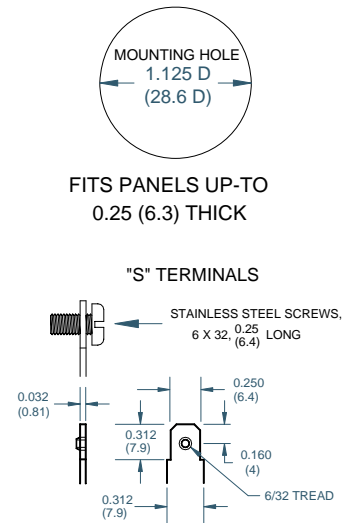
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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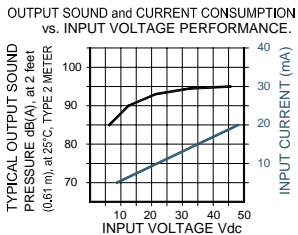
**Revision: 2.07**

# MW-09-948-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-09-948-W(F) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 9-48 Vdc and warbles at a rate of 10 times per second. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** High Frequency Peak: 3000±250 Hz.  
 Low Frequency Peak: 2600±250 Hz.  
 10±25% Cycles per second

**Typical Operating Current:** 5 mA at 9 Vdc  
 20 mA at 48 Vdc

**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.

**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.

**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

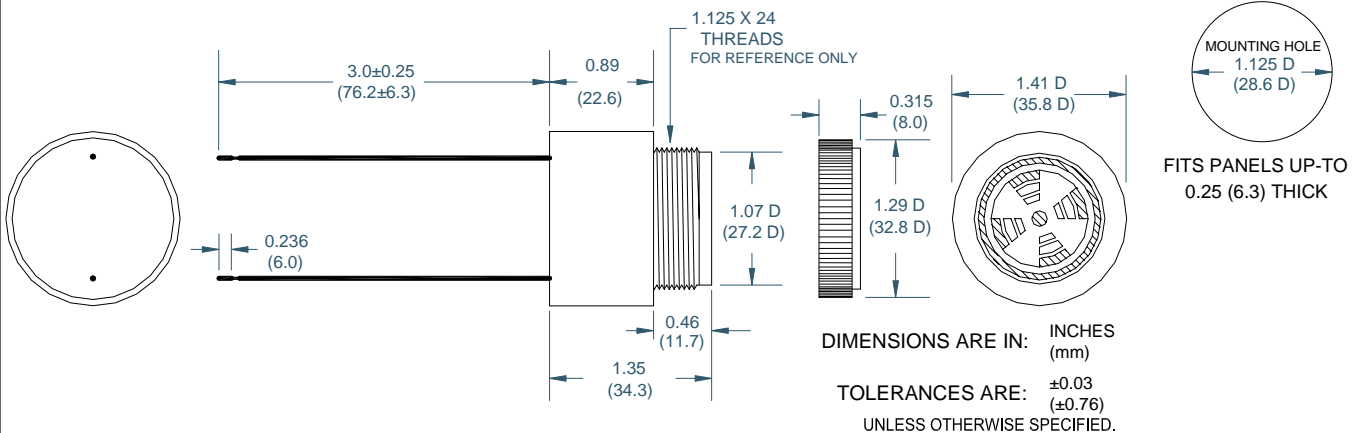
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**

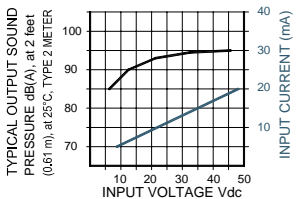
# MW-09-948-W(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-09-948-W(M) is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 9-48 Vdc and warbles at a rate of 2 times per second. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

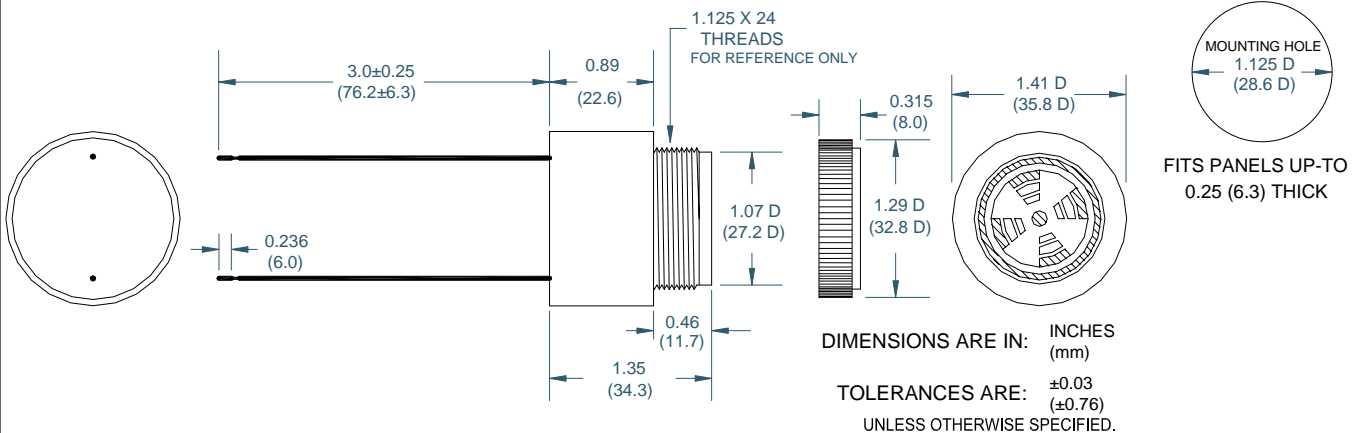
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07



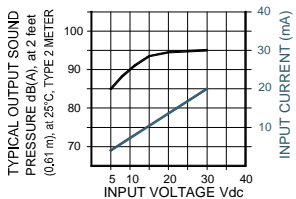
# MW-V07-530-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-V07-530-S is a warble tone alarm that can be operated over a voltage range of 5-30 VDC and warbles at a rate of 2 times per second.

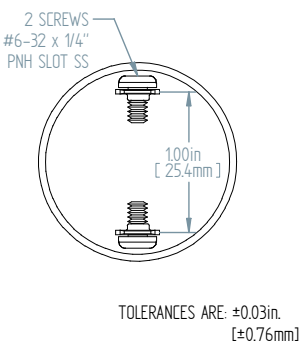
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Environmental Durability:</b>	10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

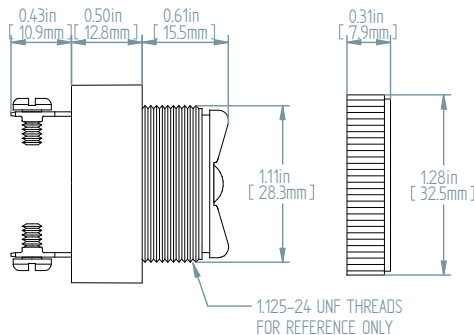
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

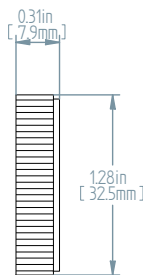
### REAR



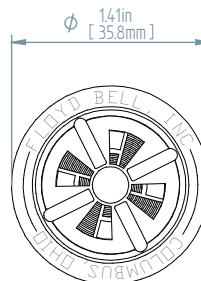
### SIDE



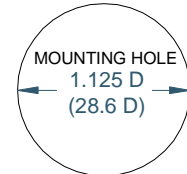
### RING



### FRONT



### PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

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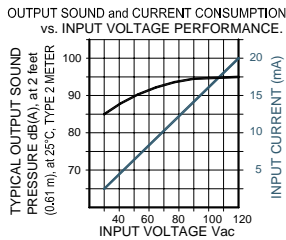
Revision: 10.09

# MW-V09-201-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-V09-201-Q is a warble tone alarm with a typical loudness level of 95 dB (A). It can be operated over a voltage range of 30-120VAC and warbles at a rate of 15 times per second.

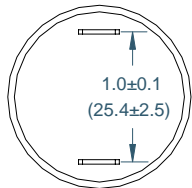
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 30 Vac 20 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

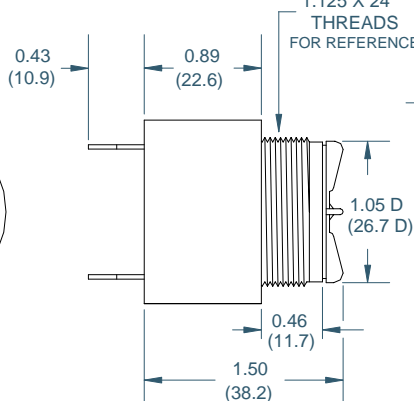
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

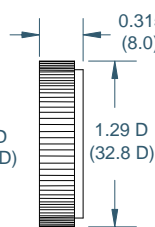
REAR VIEW



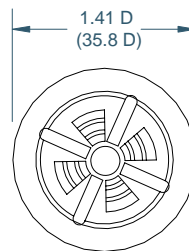
SIDE VIEW



RING

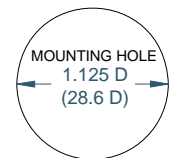


FRONT VIEW



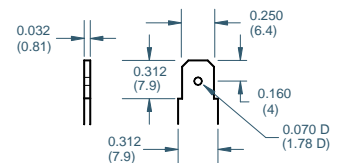
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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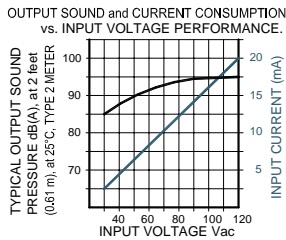
**Revision: 2.07**

# MW-V09-201-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-V09-201-S can be operated over a voltage range of 30-120VAC and warbles at a rate of 15 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

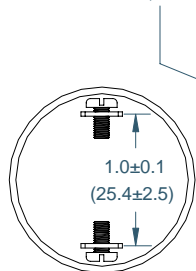
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 30 Vac 20 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)– 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

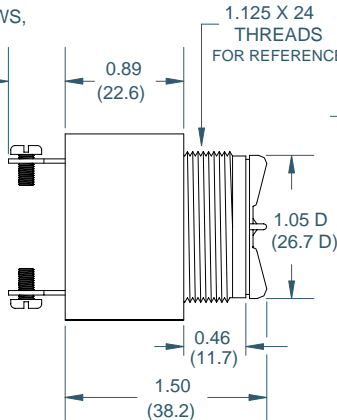
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

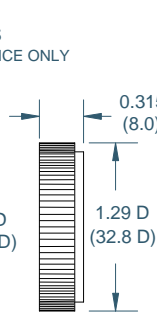
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



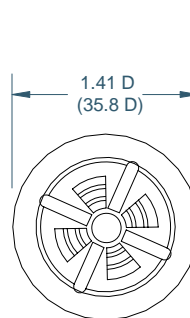
**SIDE VIEW**



**RING**

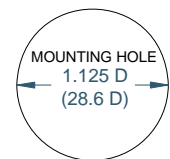


**FRONT VIEW**



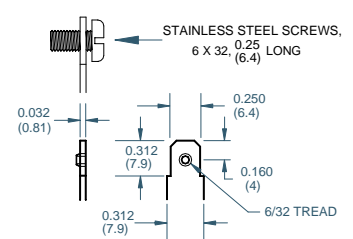
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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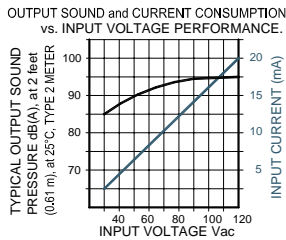
**Revision: 2.07**

# MW-V09-201-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

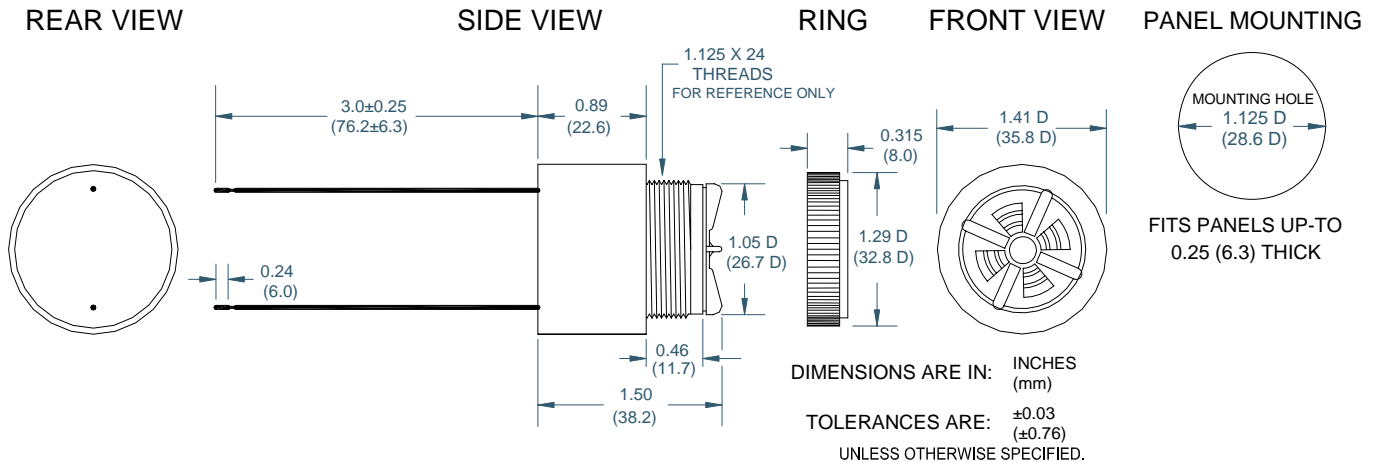


The MW-V09-201-W is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 30-120VAC and warbles at a rate of 15 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 30 Vac 20 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

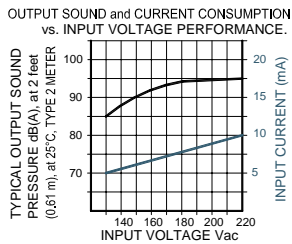


# MW-V09-301-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-V09-301-Q is a warble tone alarm with a typical loudness level of 95 dB (A). It can be operated over a voltage range of 130-220VAC and warbles at a rate of 15 times per second.

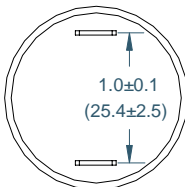
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 130 Vac 10 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

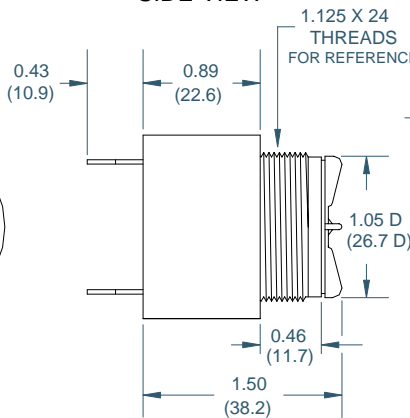
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

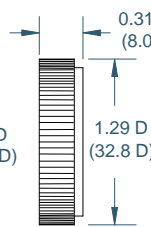
REAR VIEW



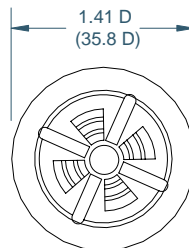
SIDE VIEW



RING

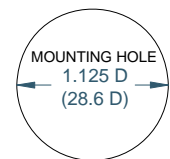


FRONT VIEW



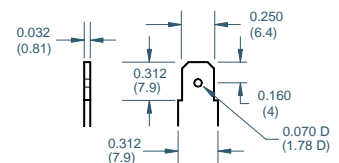
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS



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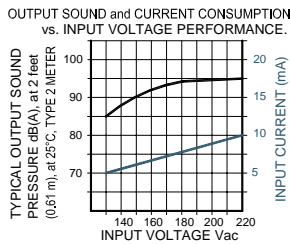
**Revision: 2.07**

# MW-V09-301-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-V09-301-S is a warble tone alarm with a typical loudness level of 95 dB (A). It can be operated over a voltage range of 130-220VAC and warbles at a rate of 15 times per second.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 130-220 Vac  
**Nominal Operating Voltage:** 220 Vac  
**Operating Frequency:** High Frequency Peak: 2900±250 Hz.  
 Low Frequency Peak: 2200±250 Hz.  
 15±25% Cycles per second

**Typical Operating Current:** 5 mA at 130 Vac  
 10 mA at 220 Vac

**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.

**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.

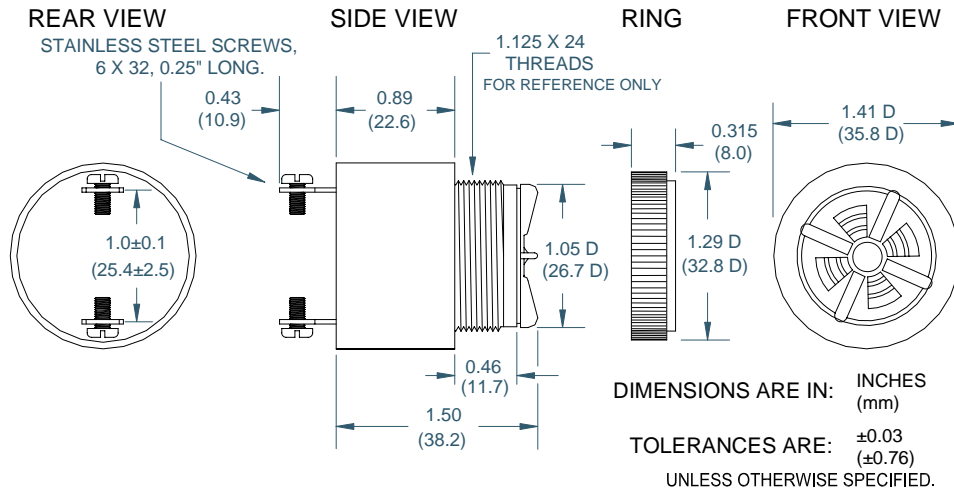
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene

**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

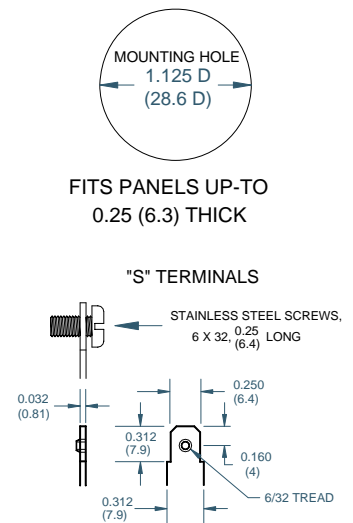
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS



## PANEL MOUNTING



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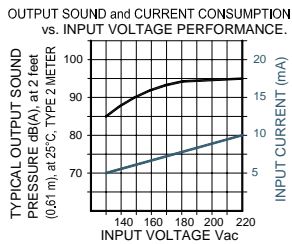
**Revision: 2.07**

# MW-V09-301-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

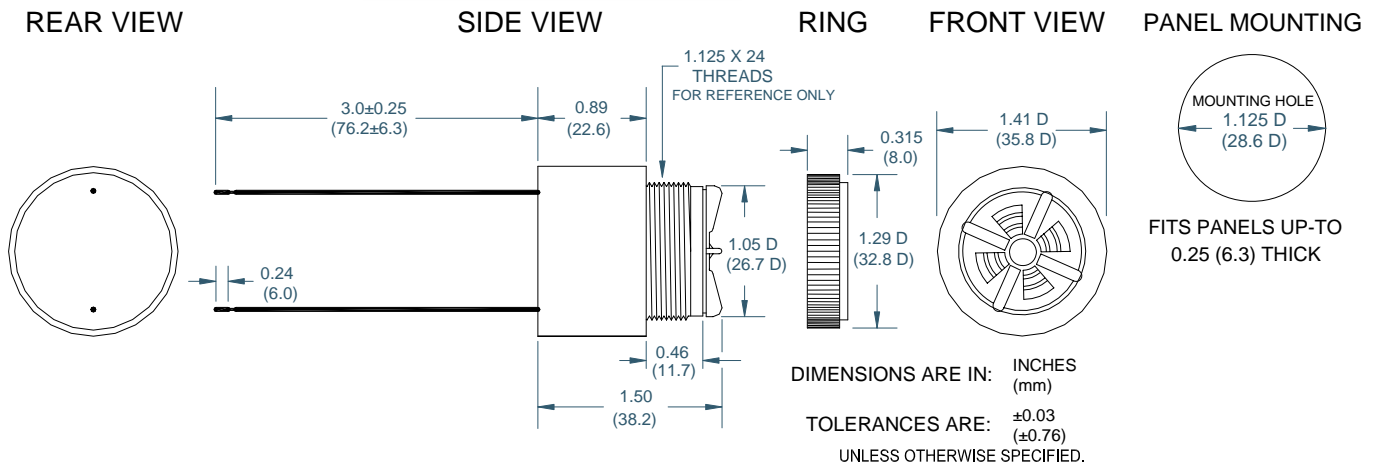


The MW-V09-301-W is a warble tone alarm with a typical loudness level of 95 dB(A). It can be operated over a voltage range of 130-220VAC and warbles at a rate of 15 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 130 Vac 10 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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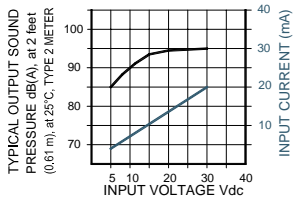
# MW-V09-530-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-V09-530-Q is a warble tone alarm that can be operated over a voltage range of 5-30 VDC and warbles at a rate of 2 times per second.

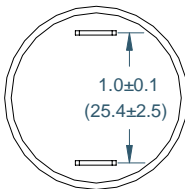
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

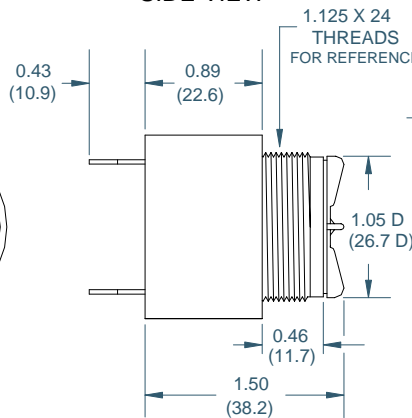
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

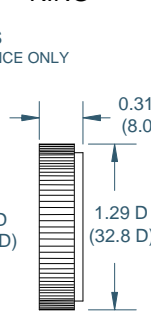
REAR VIEW



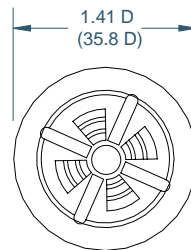
SIDE VIEW



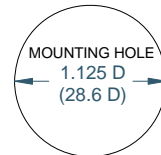
RING



FRONT VIEW

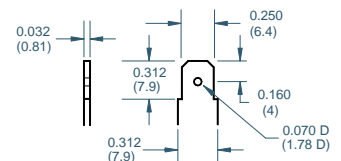


PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

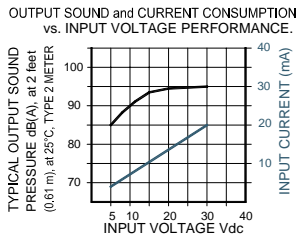


# MW-V09-530-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



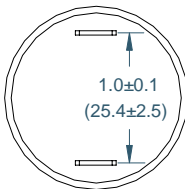
The MW-V09-530-Q(F) is a warble tone alarm that can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

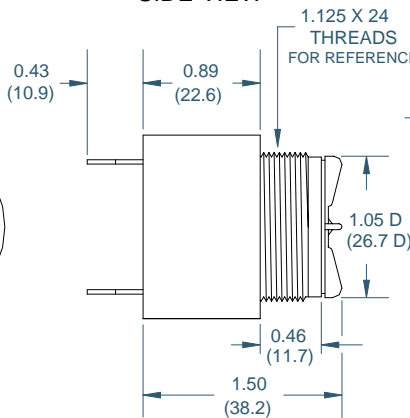
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	-20°C to +65°C.
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

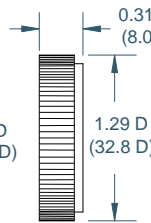
REAR VIEW



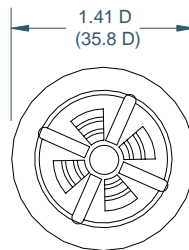
SIDE VIEW



RING

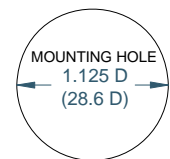


FRONT VIEW



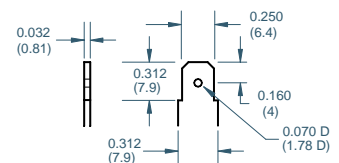
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

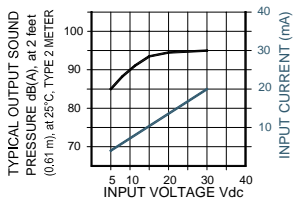
# MW-V09-530-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

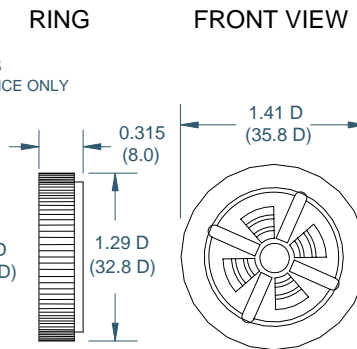
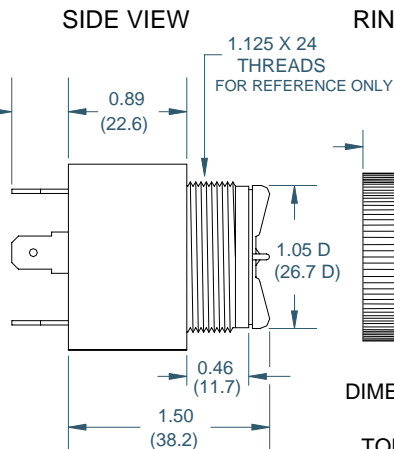
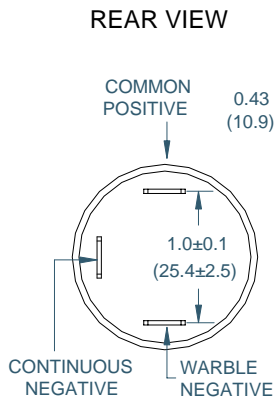


The MW-V09-530-Q(F)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a fast warble tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

## DIMENSIONS

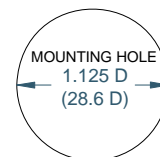


DIMENSIONS ARE IN: INCHES (mm)

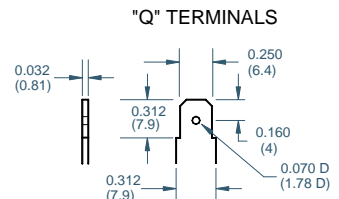
TOLERANCES ARE: ±0.03 (±0.76)

UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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Revision: 2.07

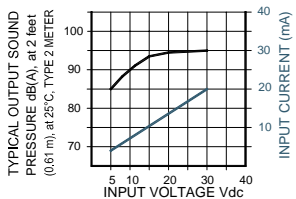
# MW-V09-530-Q(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

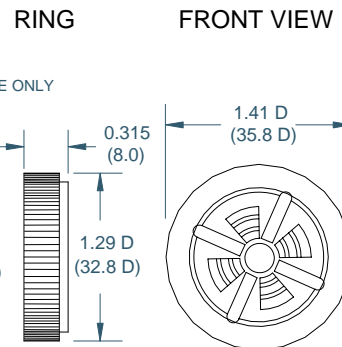
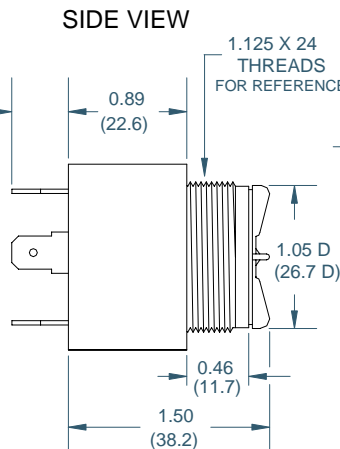
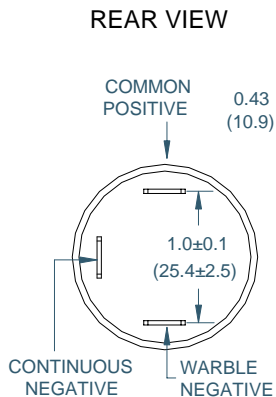


The MW-V09-530-Q(M)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a medium warble tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

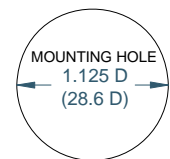


DIMENSIONS ARE IN: INCHES (mm)

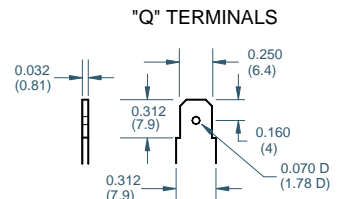
TOLERANCES ARE: ±0.03 (±0.76)

UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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**Revision: 2.07**

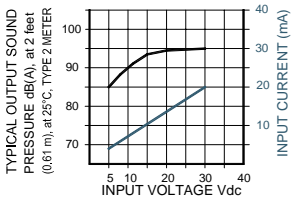
# MW-V09-530-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



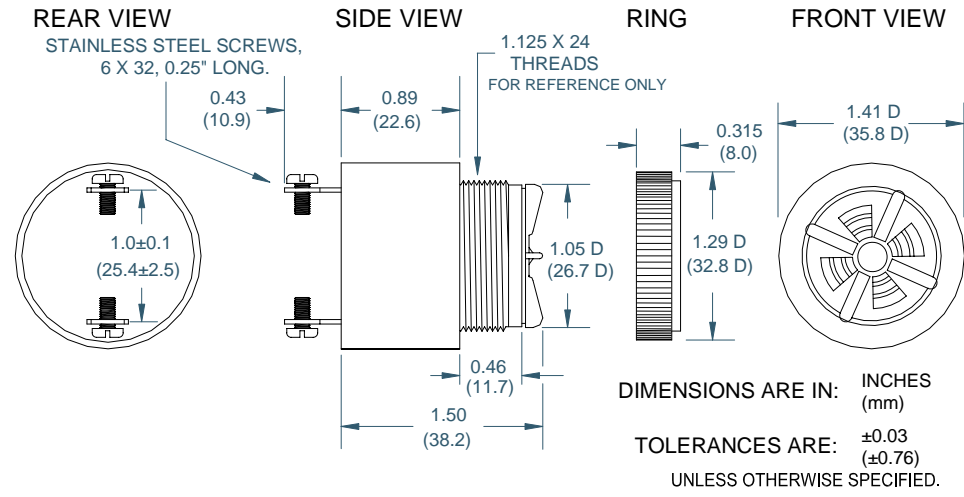
The MW-V09-530-S is a warble tone alarm that can be operated over a voltage range of 5-30 VDC and warbles at a rate of 2 times per second.

## SPECIFICATIONS

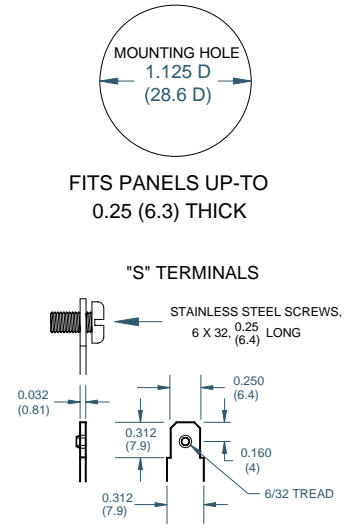
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** High Frequency Peak: 3000±250 Hz.  
 Low Frequency Peak: 2600±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vdc  
 20 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



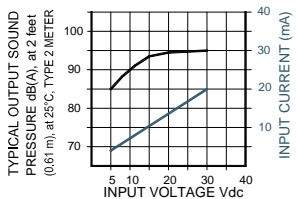
# MW-V09-530-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

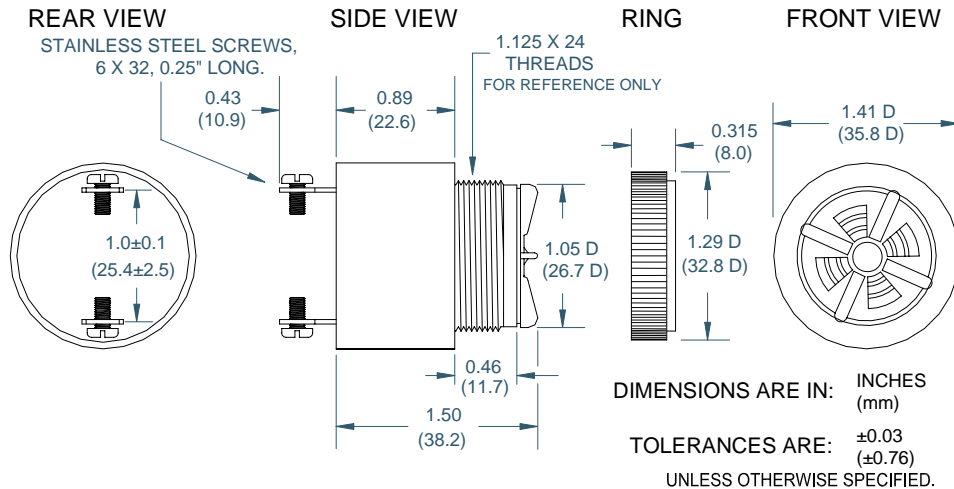


The MW-V09-530-S(F) is a warble tone alarm that can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

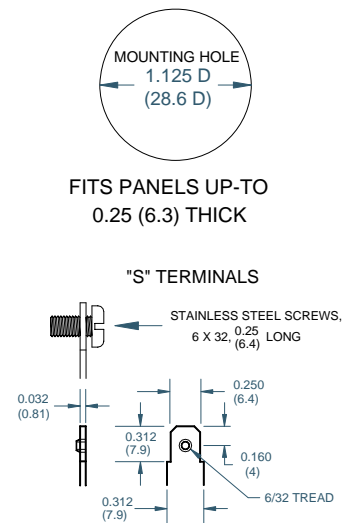
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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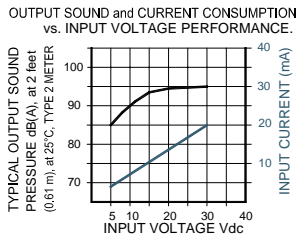
**Revision: 2.07**

# MW-V09-530-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package



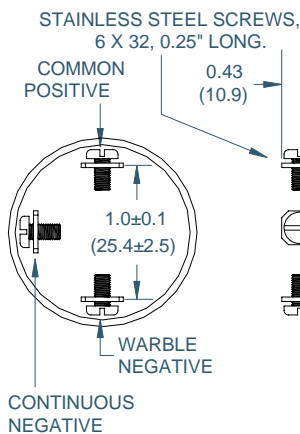
The MW-V09-530-S(F)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a fast warble tone and as a continuous tone.

## SPECIFICATIONS

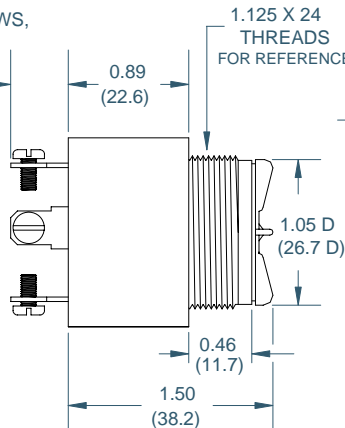
<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

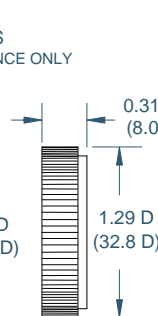
### REAR VIEW



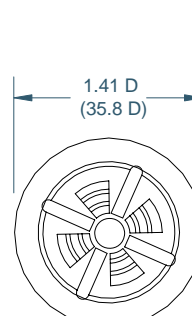
### SIDE VIEW



### RING



### FRONT VIEW

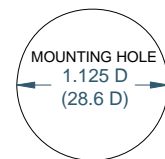


DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

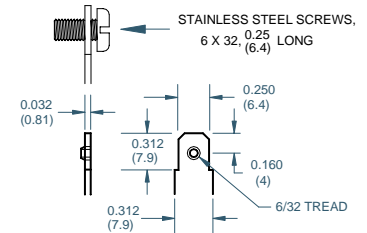
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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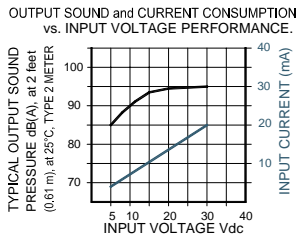
Revision: 2.07

# MW-V09-530-S(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package



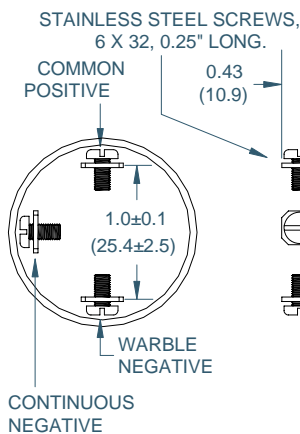
The MW-V09-530-S(M)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a medium warble tone and as a continuous tone.

## SPECIFICATIONS

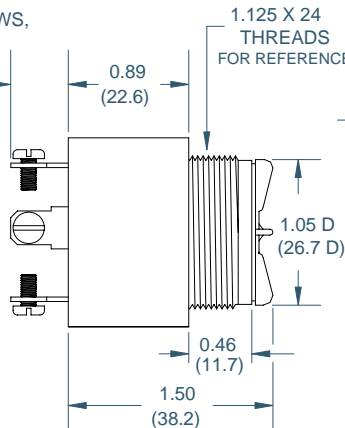
<b>Operating Mode:</b>	Medium Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	Continuous Mode 2900±250 Hz. Warble Mode High Frequency Peak: 3000±250 Hz. Warble Mode Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second in Warble Mode
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

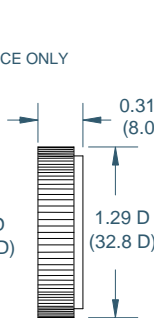
### REAR VIEW



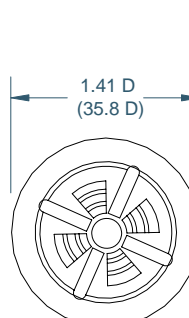
### SIDE VIEW



### RING



### FRONT VIEW

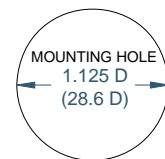


DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

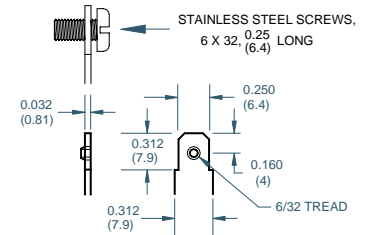
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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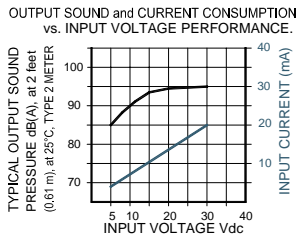
**Revision: 2.07**

# MW-V09-530-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

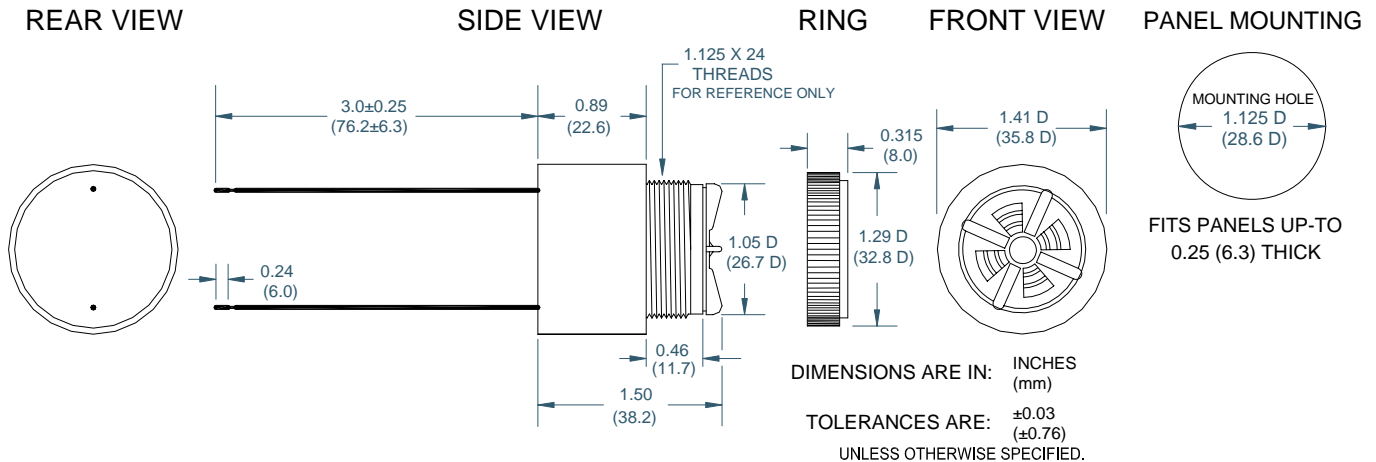


The MW-V09-530-W is a warble tone alarm that can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

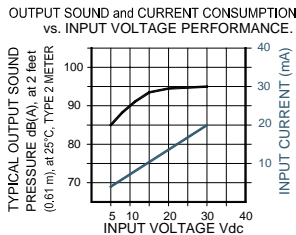


# MW-V09-530-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

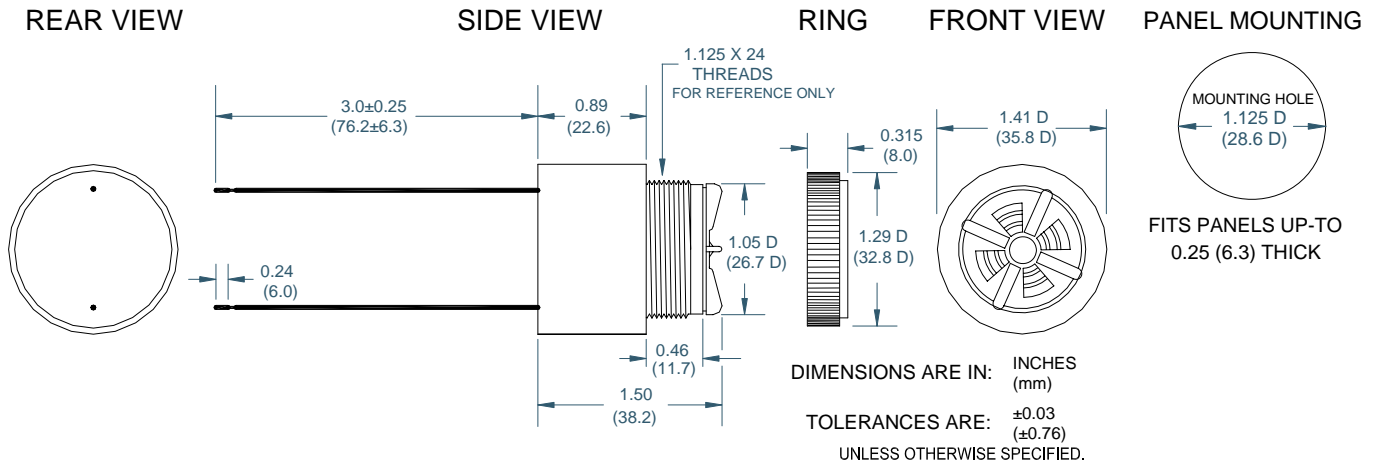


The MW-V09-530-W(F) is a warble tone alarm that can be operated over a voltage range of 5-30 Vdc and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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An ISO 9001:2000 Registered Company

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**Revision: 2.07**

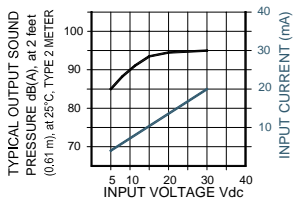
# MW-V09-530-W(M)D

Made in  
USA

Image Not  
Available

- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-V09-530-W(M)D is a medium loud output, dual function, panel mounted alarm for operating voltages of 5-30VDC. The alarm functions as a medium warble tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Dual Function Warble/Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** Continuous Mode 2900±250 Hz.  
 Warble Mode High Frequency Peak: 3000±250 Hz.  
 Warble Mode Low Frequency Peak: 2600±250 Hz.  
 2±25% Cycles per second in Warble Mode

**Typical Operating Current:** 2 mA at 5 Vdc  
 20 mA at 30 Vdc

**Typical Sound Pressure:** 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

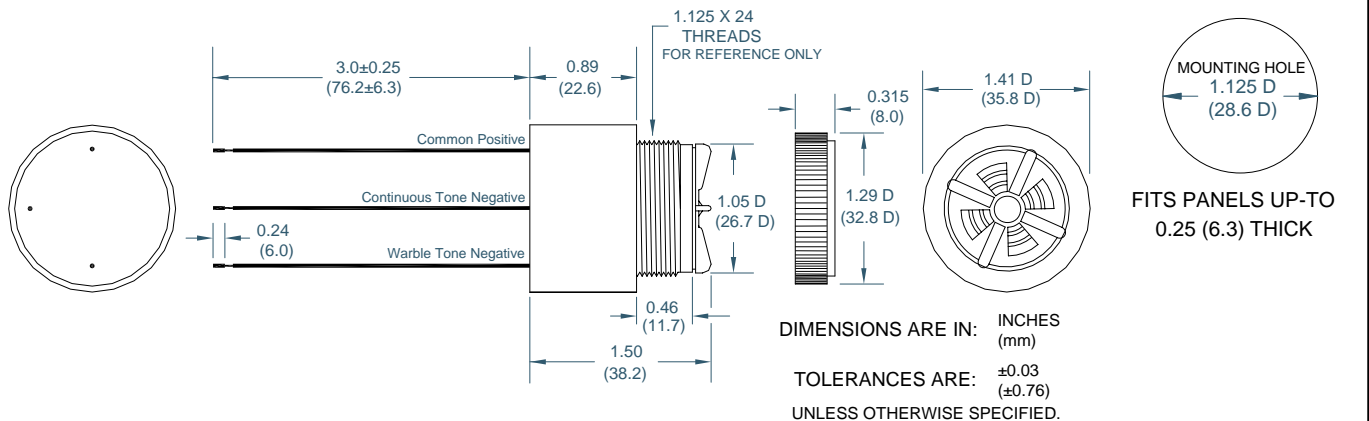
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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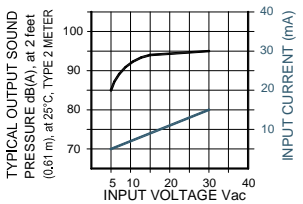
# MW-V09-531-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



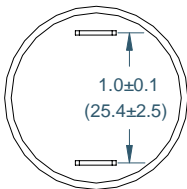
The MW-V09-531-Q is a warble tone alarm for operating voltages of 5-24 VAC/ VDC and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

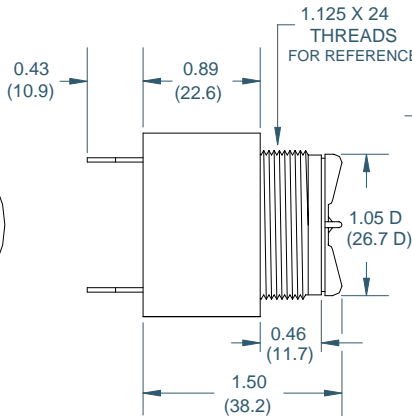
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

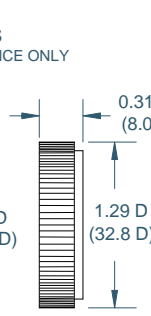
REAR VIEW



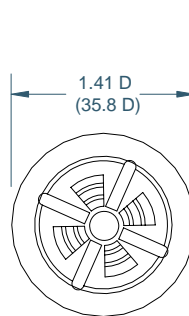
SIDE VIEW



RING

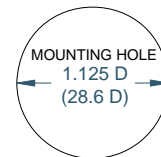


FRONT VIEW



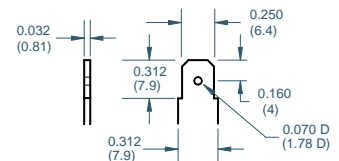
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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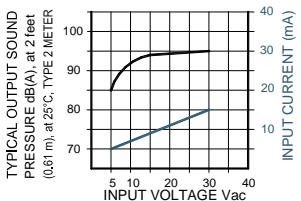
# MW-V09-531-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



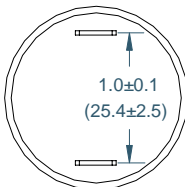
The MW-V09-531-Q(F) is a warble tone alarm for operating voltages of 5-24 VAC/VDC and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

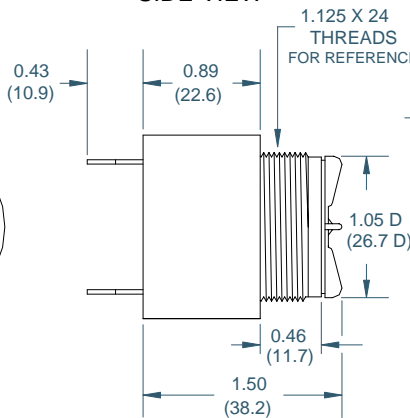
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

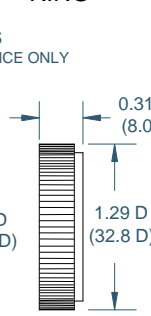
REAR VIEW



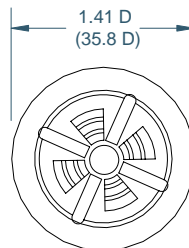
SIDE VIEW



RING

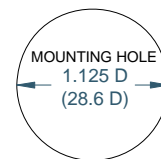


FRONT VIEW



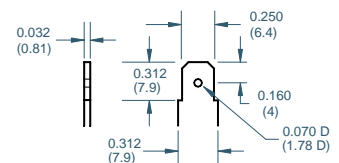
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07



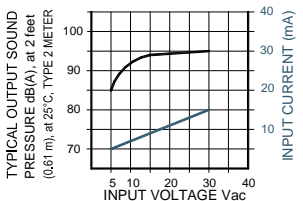
# MW-V09-531-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

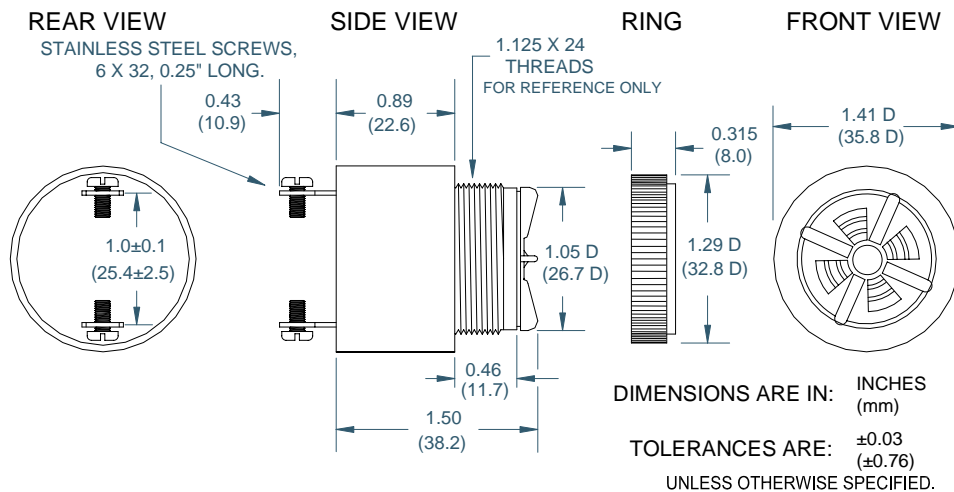


The MW-V09-531-S is a warble tone alarm for operating voltages of 5-24 VAC/VDC and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added.

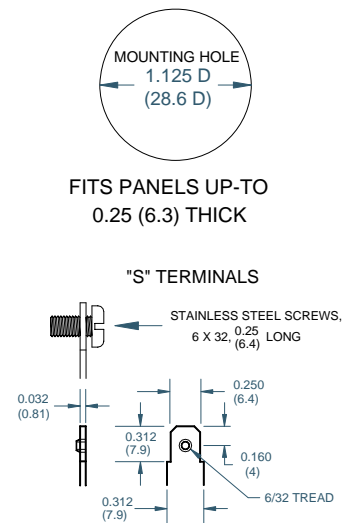
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	
<b>Life Expectancy:</b>	
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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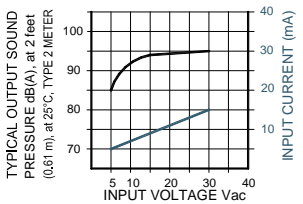
# MW-V09-531-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-V09-531-S(F) is a warble tone alarm for operating voltages of 5-24 VAC/VDC and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/Vdc  
**Nominal Operating Voltage:** 24 Vac/Vdc  
**Operating Frequency:** High Frequency Peak: 3000±250 Hz.  
 Low Frequency Peak: 2600±250 Hz.  
 10±25% Cycles per second

**Typical Operating Current:** 5 mA at 5 Vac  
 15 mA at 24 Vac

**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.

**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load

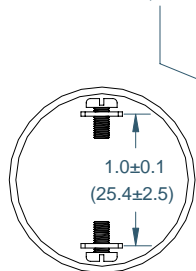
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
 Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## Environmental Durability:

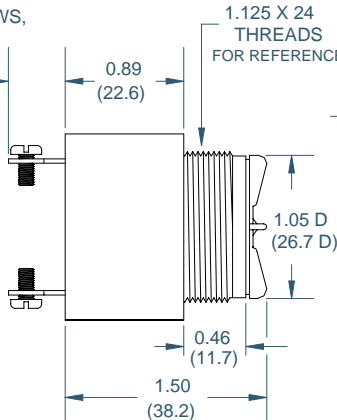
**Life Expectancy:**  
**Warranty:**

## DIMENSIONS

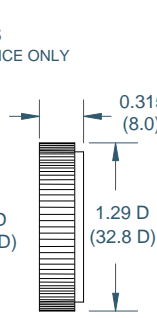
**REAR VIEW**  
 STAINLESS STEEL SCREWS,  
 6 X 32, 0.25" LONG.



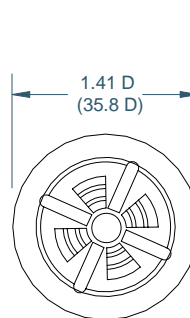
**SIDE VIEW**



**RING**

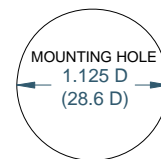


**FRONT VIEW**



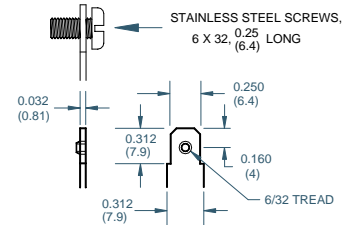
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
 0.25 (6.3) THICK

"S" TERMINALS



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**Revision: 2.07**

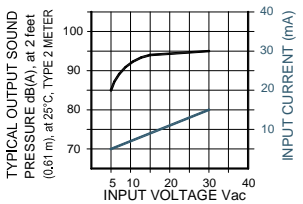
# MW-V09-531-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

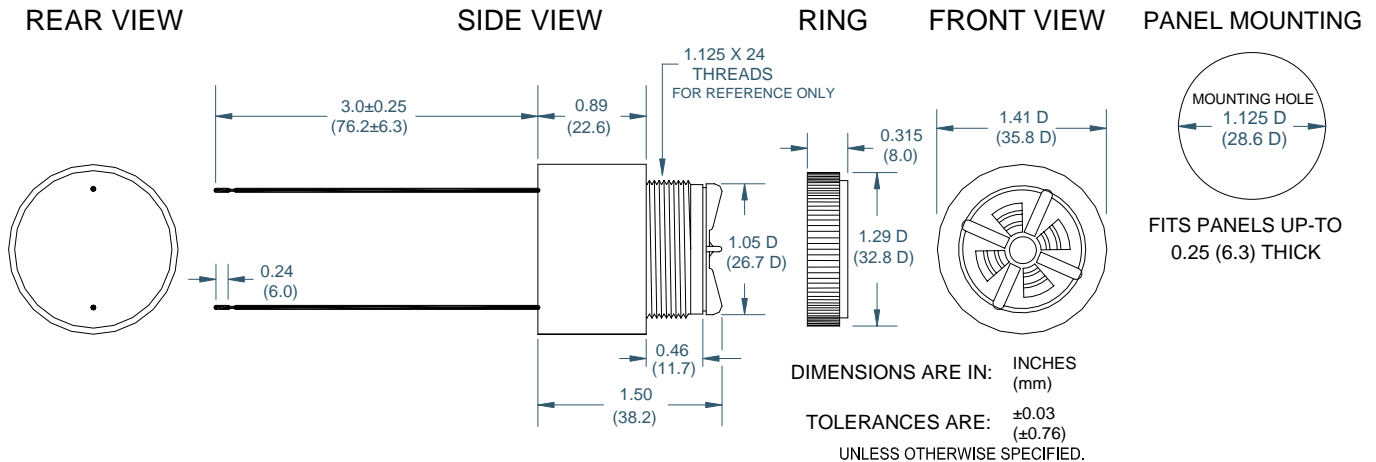


The MW-V09-531-W is a warble tone alarm for operating voltages of 5-24 VAC/VDC and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

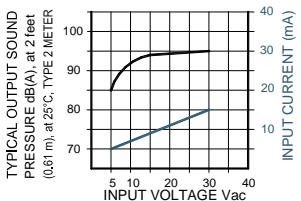
# MW-V09-531-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

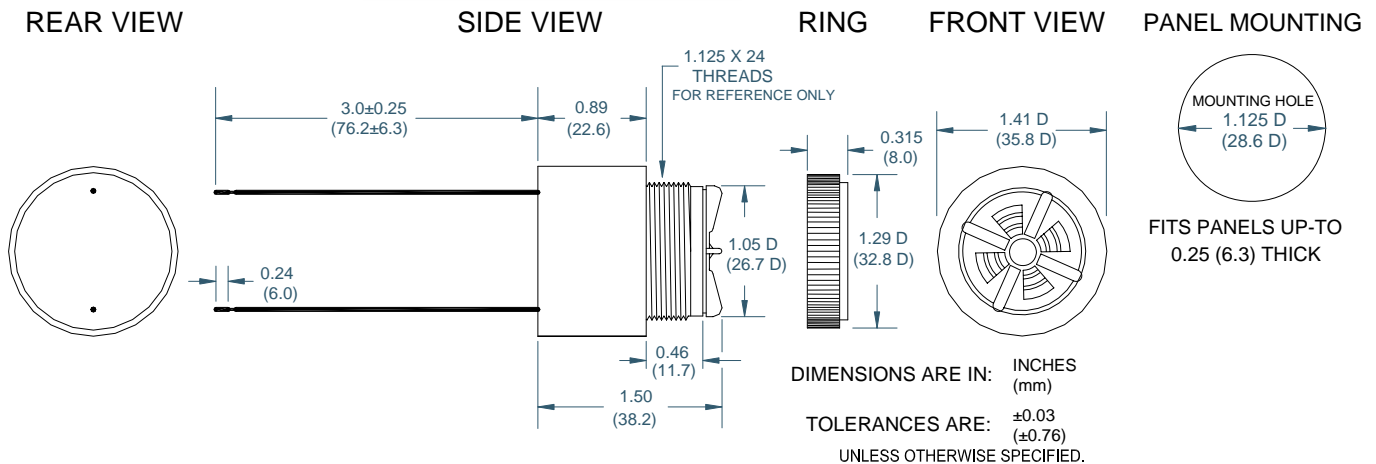


The MW-V09-531-W(F) is a warble tone alarm for operating voltages of 5-24 VAC/VDC and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/Vdc
<b>Nominal Operating Voltage:</b>	24 Vac/Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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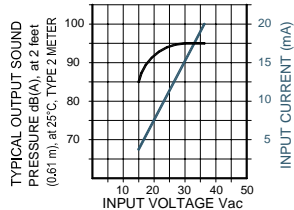
# MW-V09-550-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



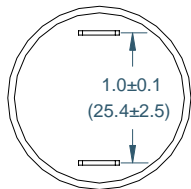
The MW-V09-550-Q is a warble tone alarm with a built-in volume control that provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment. The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

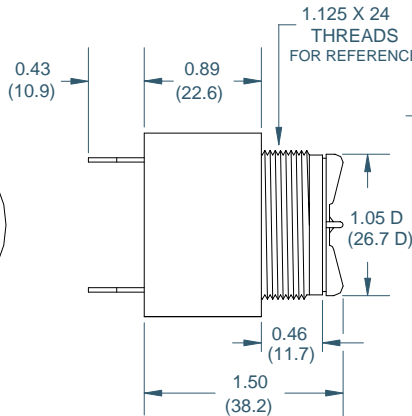
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	15-36 Vac, 15-50 Vdc
<b>Nominal Operating Voltage:</b>	36 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 15 Vac 20 mA at 36 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 15 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 36 Vac, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	-20°C to +65°C.
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

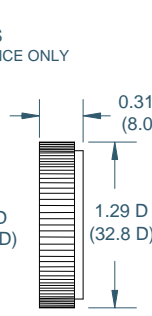
REAR VIEW



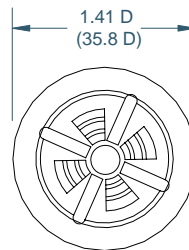
SIDE VIEW



RING

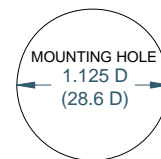


FRONT VIEW



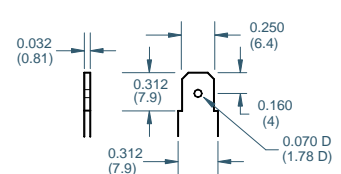
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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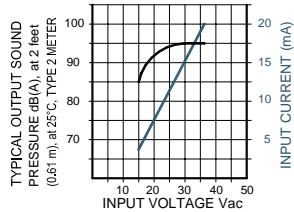
# MW-V09-550-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-V09-550-S is a warble tone alarm with a built-in volume control that provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs. The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

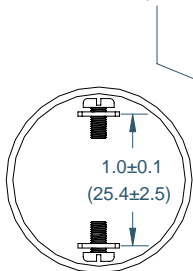
## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 15-36 Vac, 15-50 Vdc  
**Nominal Operating Voltage:** 36 Vac  
**Operating Frequency:** High Frequency Peak: 2900±250 Hz.  
 Low Frequency Peak: 2200±250 Hz.  
 15±25% Cycles per second  
**Typical Operating Current:** 5 mA at 15 Vac  
 20 mA at 36 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 15 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 36 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

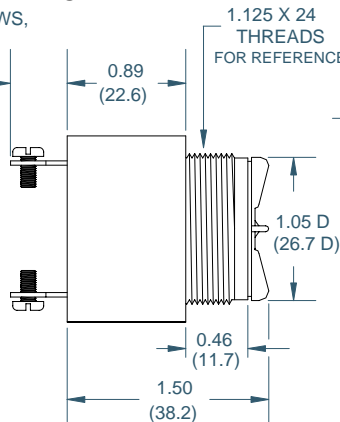
## DIMENSIONS

### REAR VIEW

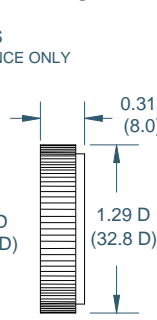
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



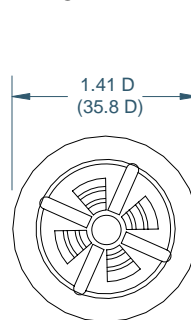
### SIDE VIEW



### RING

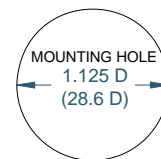


### FRONT VIEW



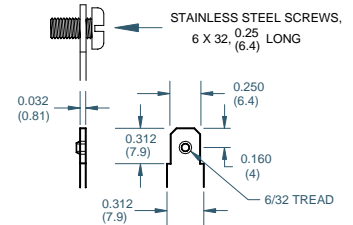
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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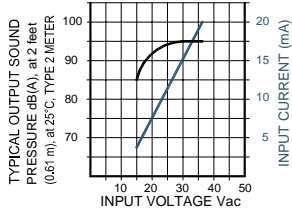
# MW-V09-550-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

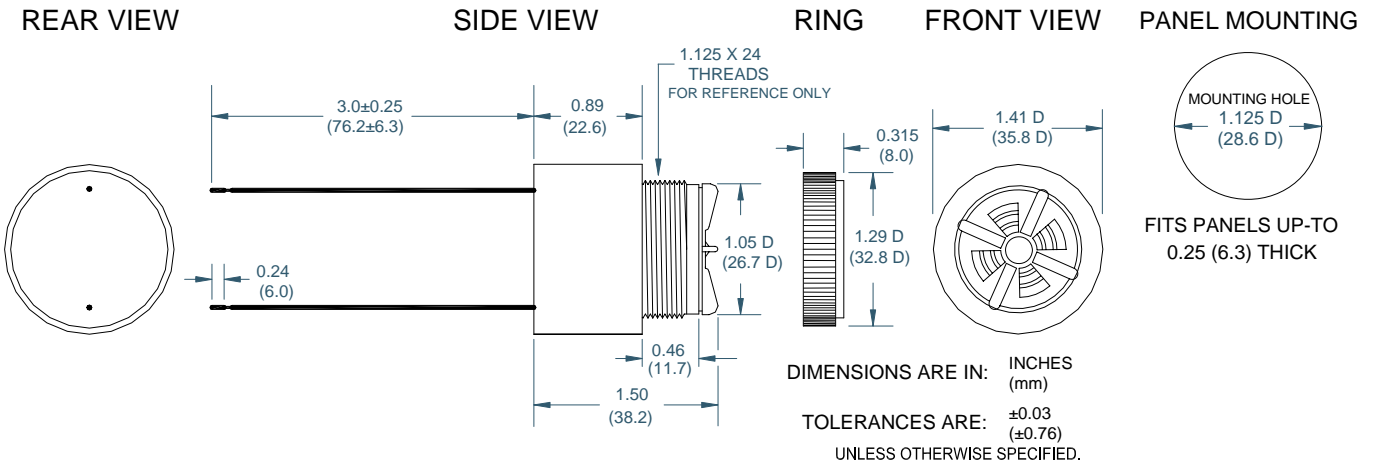


The MW-V09-550-W is a warble tone alarm with a built-in volume control that provides variable attenuation up to 20 dB(A) typically. It can be operated over voltage ranges of 15-36 Vac and 15-50 Vdc. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	15-36 Vac, 15-50 Vdc
<b>Nominal Operating Voltage:</b>	36 Vac
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 15 Vac 20 mA at 36 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 15 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 36 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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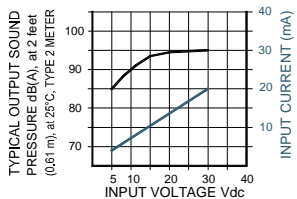
# MW-V09-616-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The MW-V09-616-Q is a warble tone alarm that can be operated over a voltage range of 5-30VDC and warbles at a rate of 2 times per second.

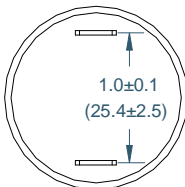
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 20 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)– 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

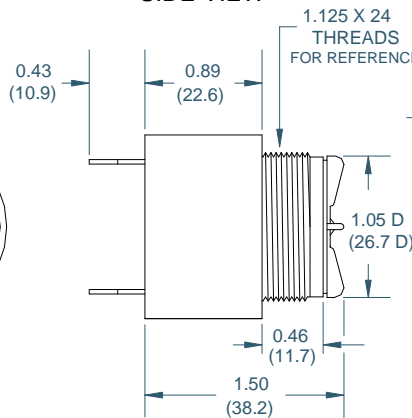
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

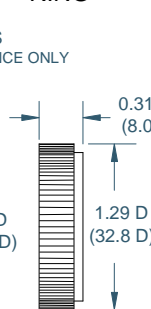
REAR VIEW



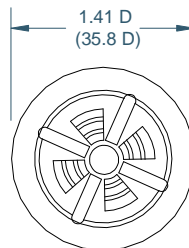
SIDE VIEW



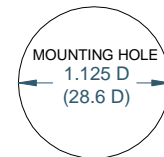
RING



FRONT VIEW

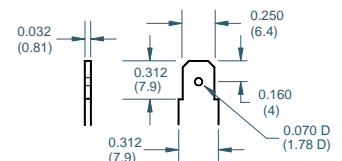


PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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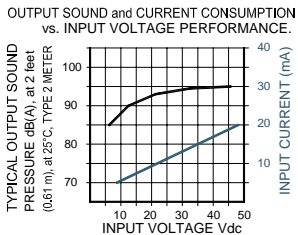


# MW-V09-948-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



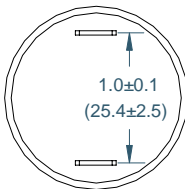
The MW-V09-948-Q(F) is a warble tone alarm that can be operated over a voltage range of 9-48 VDC and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

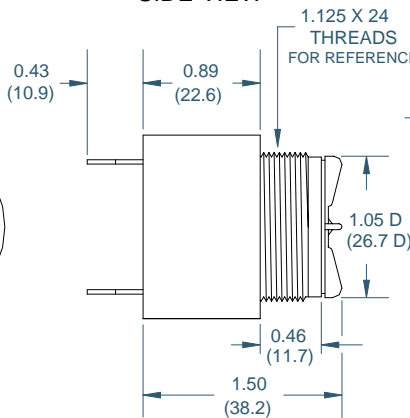
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	-20°C to +65°C.
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

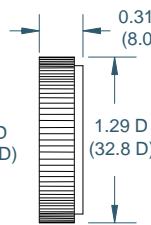
REAR VIEW



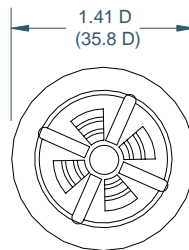
SIDE VIEW



RING

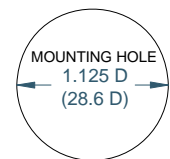


FRONT VIEW



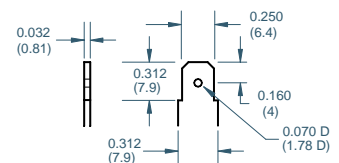
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



 **Floyd Bell Inc**  
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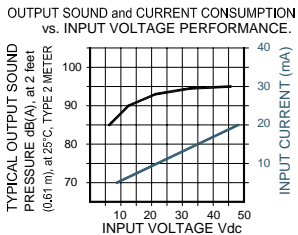
Revision: 2.07

# MW-V09-948-Q(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



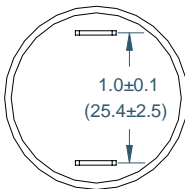
The MW-V09-948-Q(M) is a warble tone alarm that can be operated over a voltage range of 9-48 VDC and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

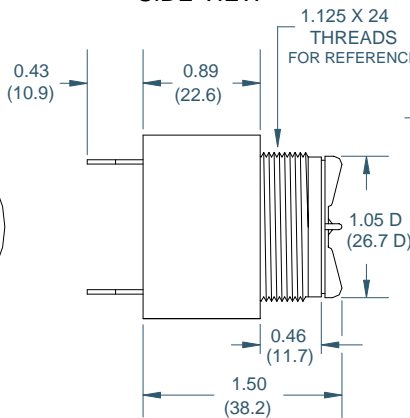
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	-20°C to +65°C.
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

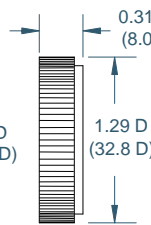
REAR VIEW



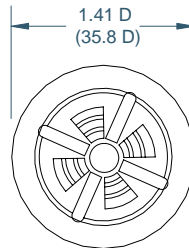
SIDE VIEW



RING

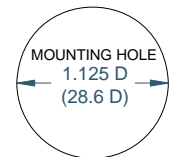


FRONT VIEW



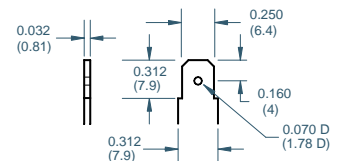
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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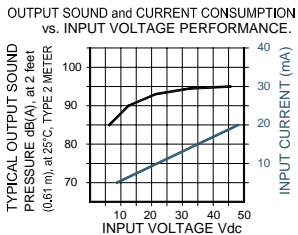
Revision: 2.07

# MW-V09-948-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The MW-V09-948-S(F) is a warble tone alarm that can be operated over a voltage range of 9-48 VDC and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** High Frequency Peak: 3000±250 Hz.  
 Low Frequency Peak: 2600±250 Hz.  
 10±25% Cycles per second

**Typical Operating Current:** 5 mA at 9 Vdc  
 20 mA at 48 Vdc

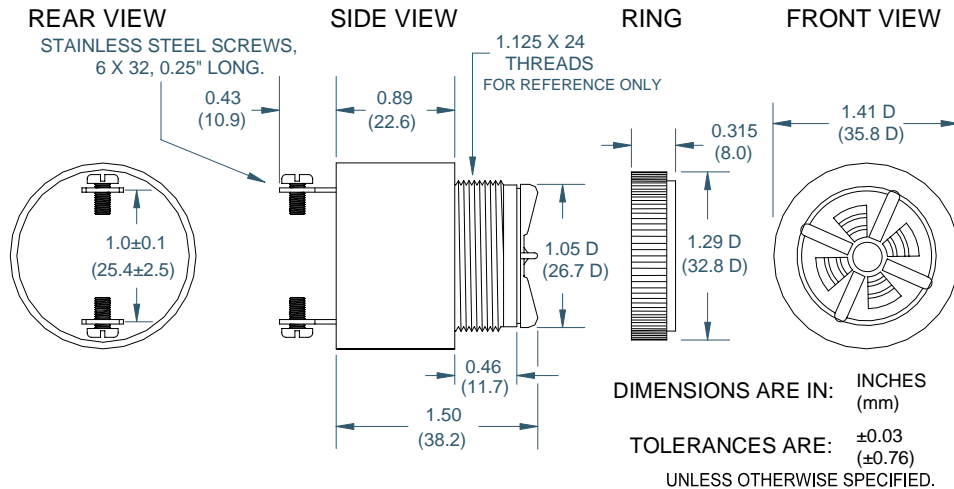
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws

**Termination:** Pull test with a maximum of 22 pounds (10 kg) load  
 -20°C to +65°C.  
 -40°C to +85°C.

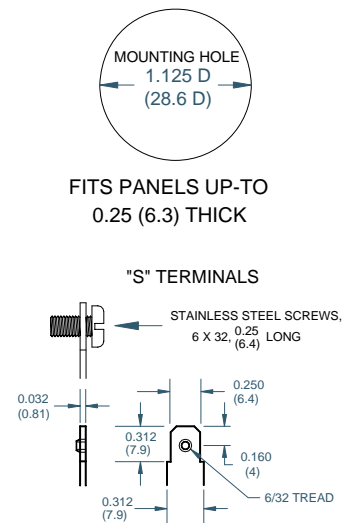
**Termination Strength:** 20% over maximum rated voltage for less than 5 minutes.  
**Operating Temperature:** To the maximum operating voltage.  
**Storage Temperature:** Underwriters Laboratory  
**Surge Voltage:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
**Reverse Voltage Protection:** Internal Circuit- Audio-oscillator and piezoelectric driver  
**Part Recognized By:** Potting- 2 parts epoxy resin or silicone, black  
**Construction Materials:** Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
 Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

**Environmental Durability:**

## DIMENSIONS



## PANEL MOUNTING



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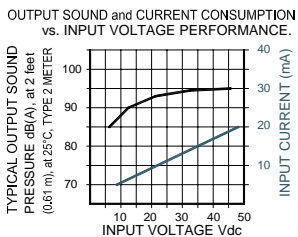
**Revision: 2.07**

# MW-V09-948-S(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

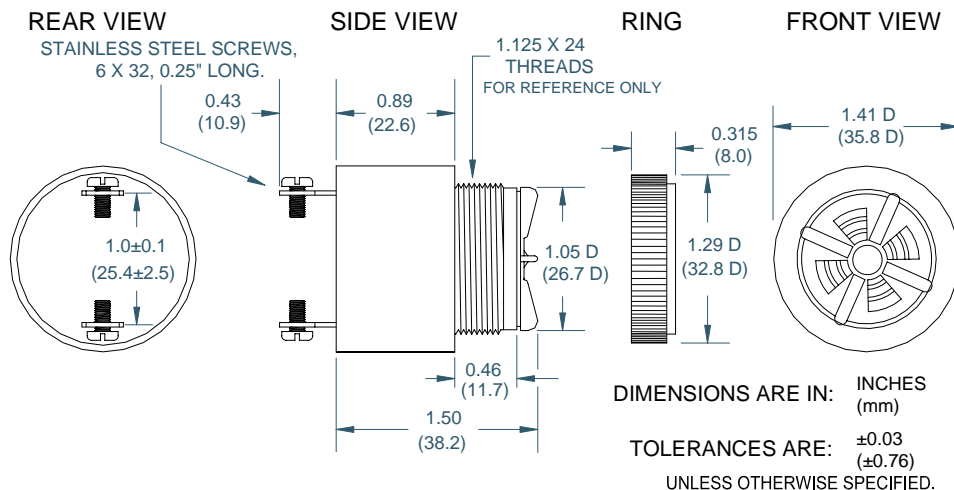


The MW-V09-948-S(M) is a warble tone alarm that can be operated over a voltage range of 9-48 VDC and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

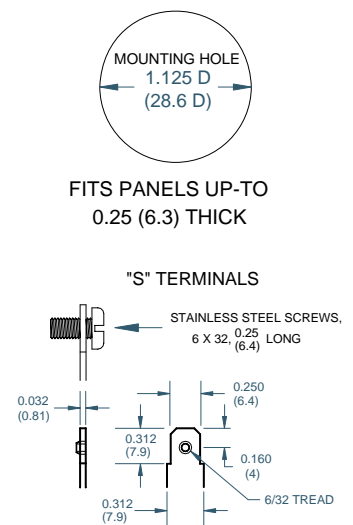
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



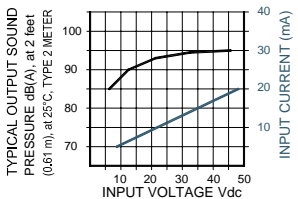
# MW-V09-948-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

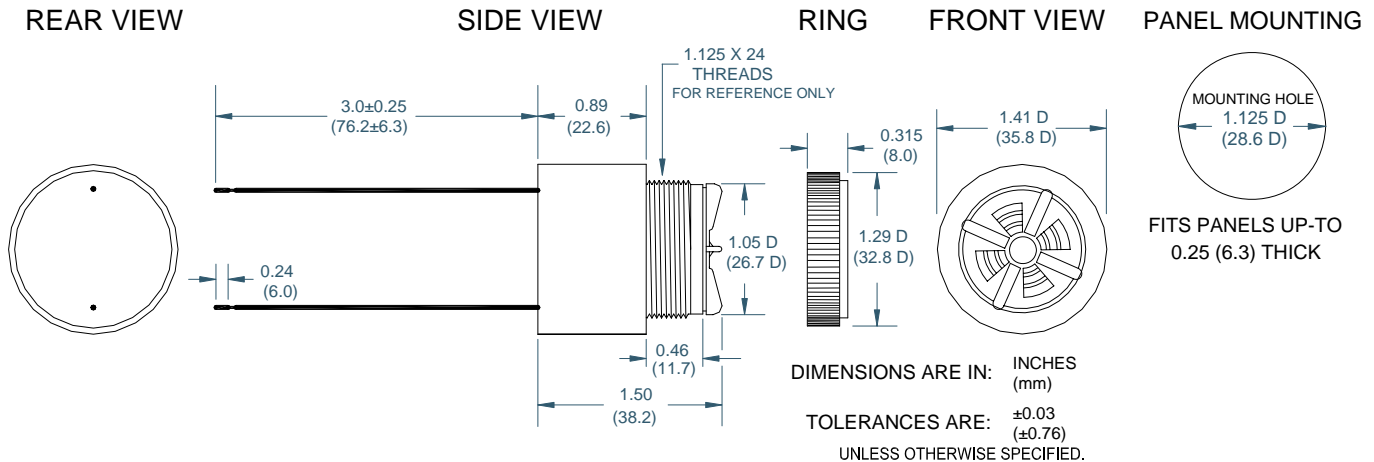


The MW-V09-948-W(F) is a warble tone alarm that can be operated over a voltage range of 9-48 VDC and warbles at a rate of 10 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 2.07

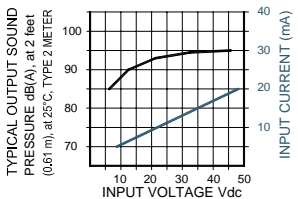
# MW-V09-948-W(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

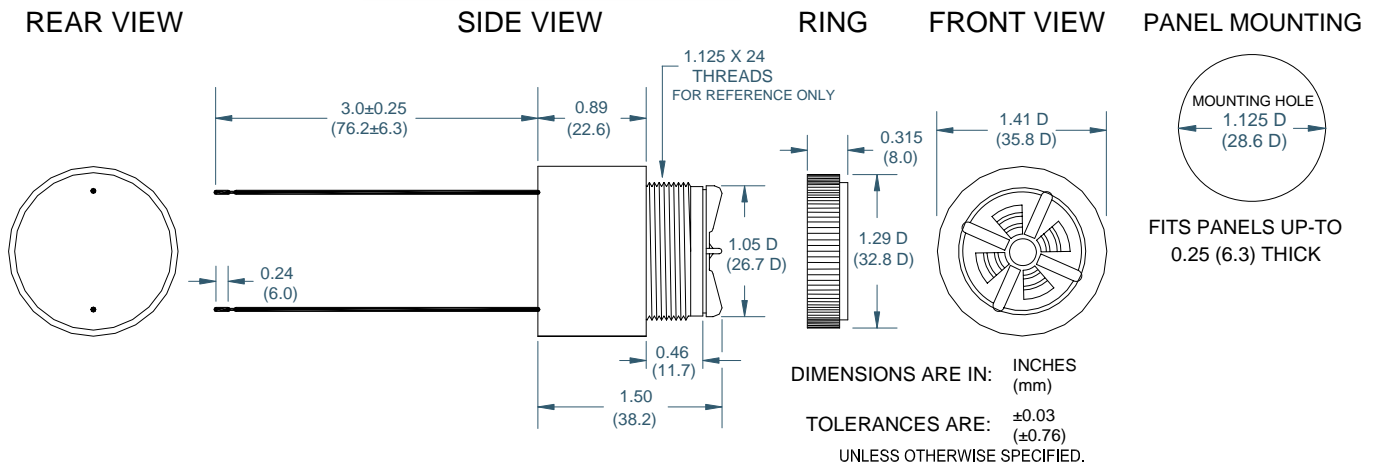


The MW-V09-948-W(M) is a warble tone alarm that can be operated over a voltage range of 9-48 VDC and warbles at a rate of 2 times per second. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	High Frequency Peak: 3000±250 Hz. Low Frequency Peak: 2600±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 9 Vdc 20 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 2.07

# PBX-1H

**Made in  
USA**



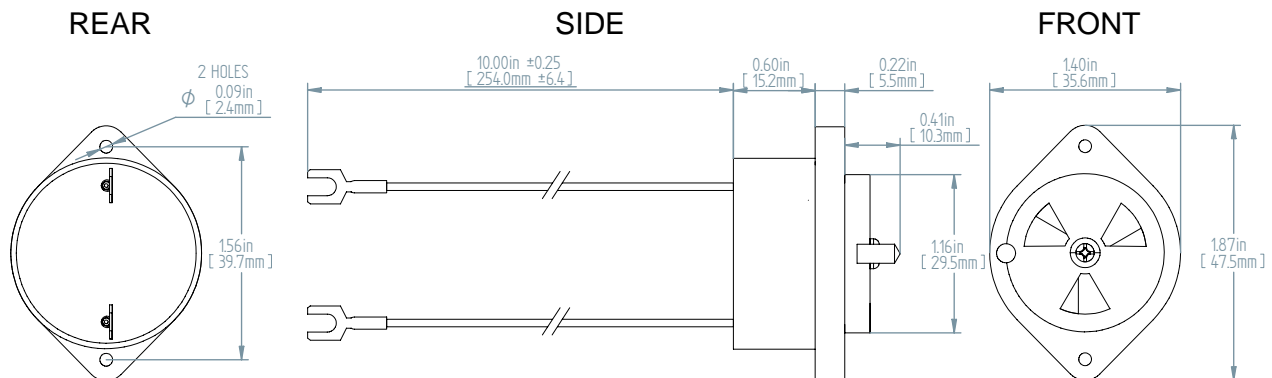
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Lower current than conventional ringers
- Volume control provides up to 15 dB attenuation
- Reliable Piezoelectric Technology
- Installs Easily
- Not intended for frequency selective ringing systems

The PBX-1H is a pleasant warbling, electronic PBX ringer. It can be operated over a voltage range of 5-20 Vrms at 50-60 Hz. The wire leads come with telephone-standard spade lug terminals.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-20 Vrms, 50-60 Hz or 7-20 Vdc
<b>Nominal Operating Voltage:</b>	20 Vrms
<b>Operating Frequency:</b>	High Frequency Peak: 3500±250 Hz. Low Frequency Peak: 2900±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	15 mA at 20 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 20 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 wire leads with telephone-standard spade lug terminals
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- ABS Thermoplastic, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibrations- Withstand vibrations between 0 and 55 Hz. on all axis.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

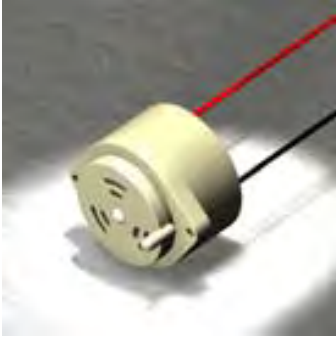


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**Revision: 4.08**

# PBX-1L

**Made in  
USA**



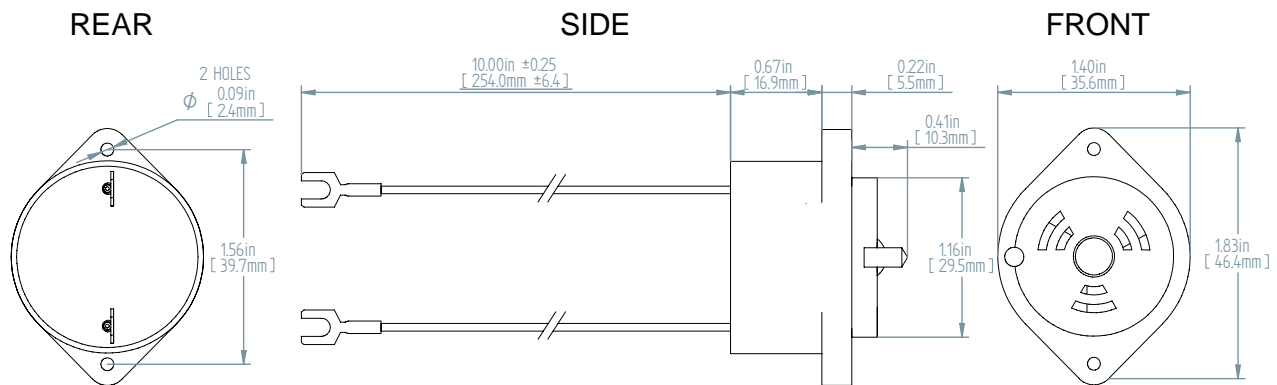
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Lower current than conventional ringers
- Volume control provides up to 15 dB attenuation
- Reliable Piezoelectric Technology
- Installs Easily
- Not intended for frequency selective ringing systems

The PBX-1L is a pleasant warbling, electronic PBX ringer. It can be operated over a voltage range of 5-20 Vrms at 50-60 Hz. The wire leads come with telephone-standard spade lug terminals.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-20 Vrms, 50-60 Hz or 7-20 Vdc
<b>Nominal Operating Voltage:</b>	20 Vrms, 50 to 60 Hz
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. (Dominant) 15±25% Cycles per second
<b>Typical Operating Current:</b>	15 mA at 20 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 20 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 wire leads with telephone-standard spade lug terminals
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- ABS Thermoplastic, Beige Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibrations- Withstand vibrations between 0 and 55 Hz. on all axis.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 4.08



# PBX-2H

**Made in  
USA**



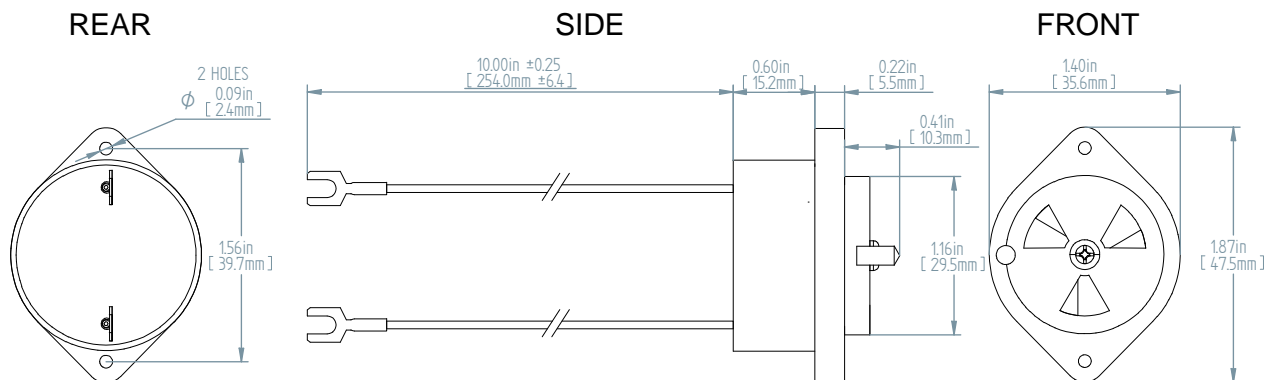
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Lower current than conventional ringers
- Volume control provides up to 15 dB attenuation
- Reliable Piezoelectric Technology
- Installs Easily
- Not intended for frequency selective ringing systems

The PBX-2H is a pleasant warbling, electronic PBX ringer. It can be operated over a voltage range of 15-36 Vrms at 50-60 Hz. The wire leads come with telephone-standard spade lug terminals.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	15-50 Vdc or 15-36 Vrms, 50-60 Hz
<b>Nominal Operating Voltage:</b>	36 Vrms, 50 to 60 Hz
<b>Operating Frequency:</b>	High Frequency Peak: 3500±250 Hz. Low Frequency Peak: 2900±250 Hz. 15±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 36 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 36 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 wire leads with telephone-standard spade lug terminals
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- ABS Thermoplastic, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Humidity- 95% relative humidity at +40°C continuous for 100 hours. Vibrations- Withstand vibrations between 0 and 55 Hz. on all axis.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

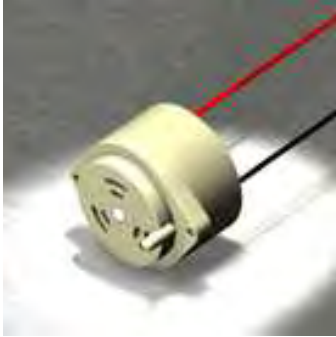


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**Revision: 9.13**

# PBX-2L

**Made in  
USA**



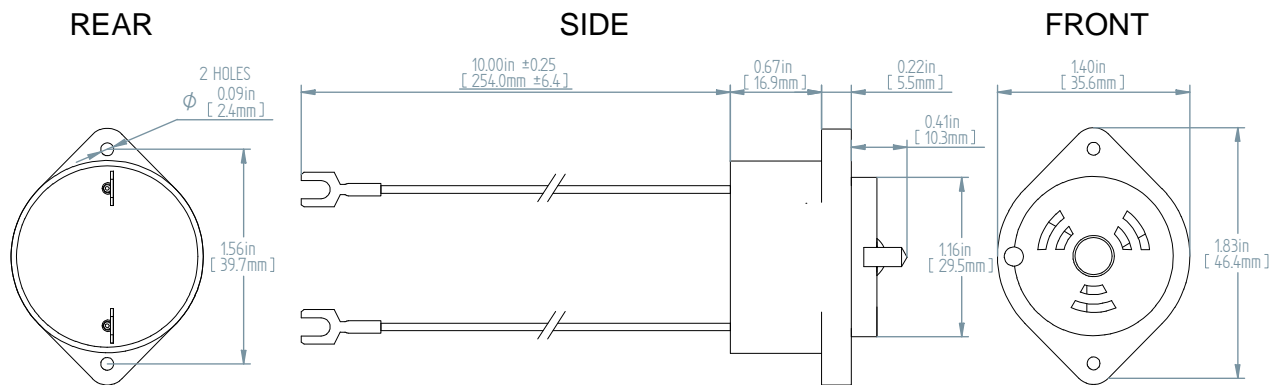
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Lower current than conventional ringers
- Volume control provides up to 15 dB attenuation
- Reliable Piezoelectric Technology
- Installs Easily
- Not intended for frequency selective ringing systems

The PBX-2L is a pleasant warbling, electronic PBX ringer. It can be operated over a voltage range of 15-36 Vrms at 50-60 Hz. The wire leads come with telephone-standard spade lug terminals.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	15-50 Vdc or 15-36 Vrms, 50-60 Hz
<b>Nominal Operating Voltage:</b>	36 Vrms, 50 to 60 Hz
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. (Dominant) 15±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 36 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 36 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 wire leads with telephone-standard spade lug terminals
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- ABS Thermoplastic, Beige Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Humidity- 95% relative humidity at +40°C continuous for 100 hours. Vibrations- Withstand vibrations between 0 and 55 Hz. on all axis.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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**Revision: 9.13**

# PM-80



**Made in  
USA**



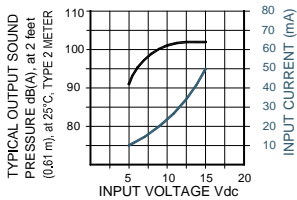
- UL Certified
- Meets SAE J1171
- Meets EMC 89/336/EEC
- Epoxy Encapsulated and Polarity Protected Circuit
- Plastics 94V-0 Flame Rated
- 304 Stainless Steel Sound Diaphragm

The PM-80 is a miniature, high-output, continuous tone alarm with a typical sound pressure level of 103 dB(A). It can be operated from 5-15VDC. The alarm is terminated with two 18AWG wires, 3" long, with 0.25" strip.

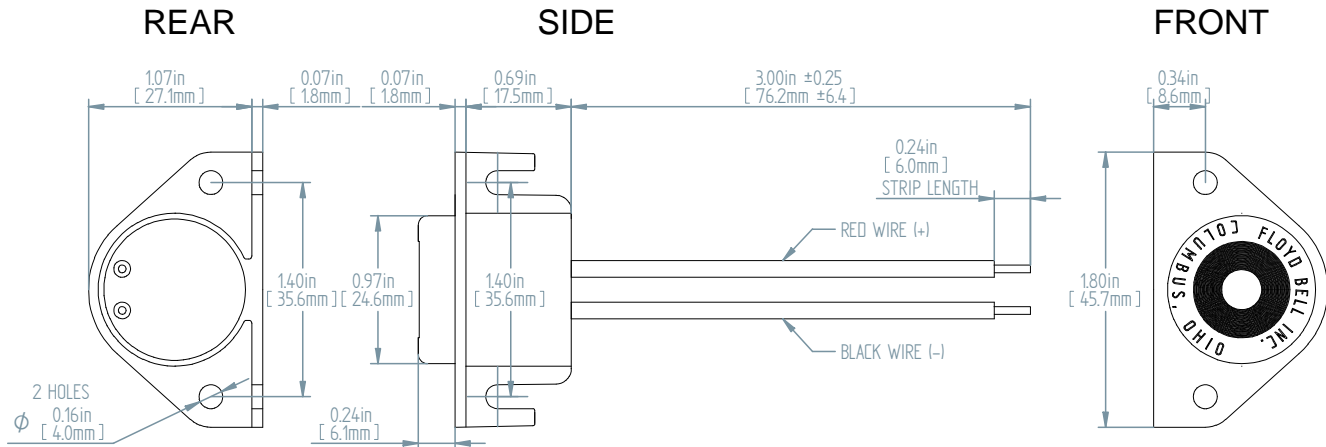
## SPECIFICATIONS

<b>Operating Mode:</b>	Continuous Tone
<b>Operating Voltage:</b>	5-15 VDC
<b>Nominal Operating Voltage:</b>	12 VDC
<b>Operating Frequency:</b>	2900 ± 250 Hz.
<b>Typical Operating Current:</b>	10 mA at 5 VDC 50 mA at 15 VDC
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 VDC, at 24 inches (61 cm), at 25°C. 103±5 dB(A), at 15 VDC, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure SAE J1171 Ignition Protection EMC89/336/EEC Electromagnetic Compatibility Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Tested to 20gs @ 25Hz to 100Hz, 10gs @ 100Hz to 500Hz.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in (±0.76mm) UNLESS OTHERWISE SPECIFIED

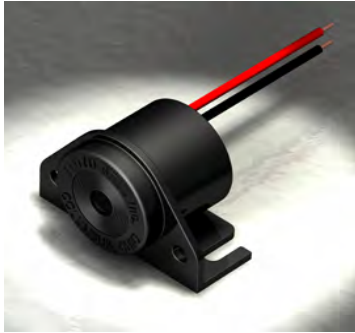
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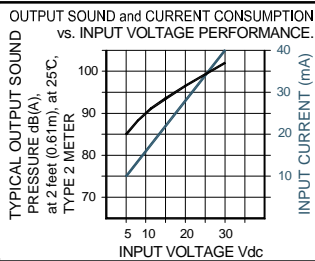
Revision: 8.09

# PM-81

**Made in  
USA**



- Expanded Voltage Range
- Small Footprint
- Epoxy Encapsulated
- Polarity Protected Circuit
- Plastics 94V-0 Flame Rated
- 304 Stainless Steel Sound Diaphragm



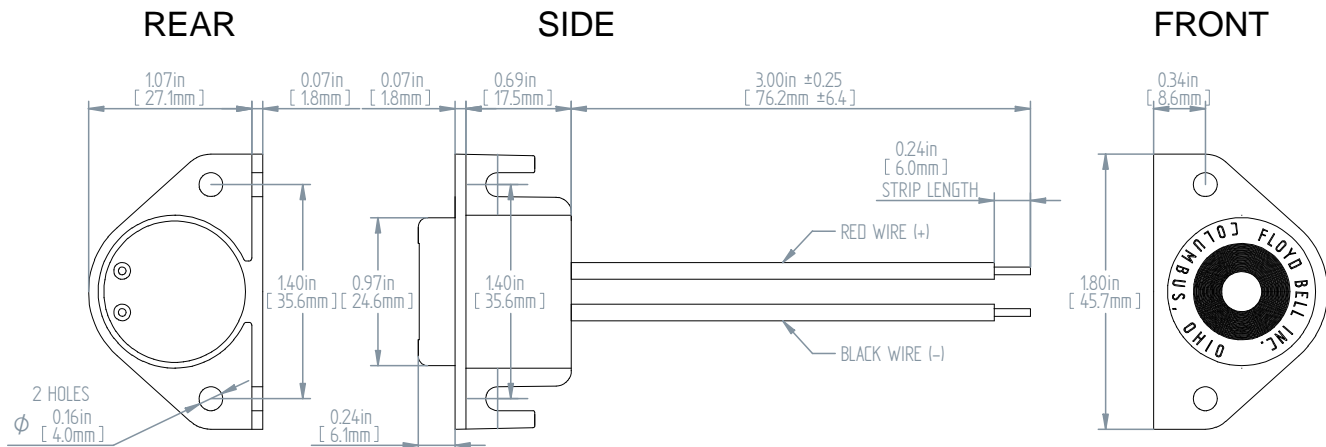
The PM-81 is a miniature, high-output, continuous tone alarm with a typical sound pressure level of 103 dB(A). It can be operated from 5-30VDC. The alarm is terminated with two 18AWG wires, 3" long, with 0.25" strip.

## SPECIFICATIONS

<b>Operating Mode:</b>	Continuous Tone
<b>Operating Voltage:</b>	5-30 VDC
<b>Nominal Operating Voltage:</b>	24 VDC
<b>Operating Frequency:</b>	2900 ± 250 Hz.
<b>Typical Operating Current:</b>	10 mA at 5 VDC 40 mA at 30 VDC
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 VDC, at 24 inches (61 cm), at 25°C. 103±5 dB(A), at 30 VDC, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure SAE J1171 Ignition Protection EMC89/336/EEC Electromagnetic Compatibility Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Tested to 20gs @ 25Hz to 100Hz, 10gs @ 100Hz to 500Hz.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 02.11



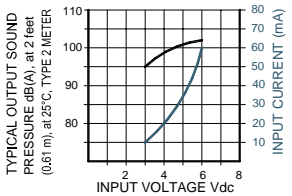
# PM-100

Made in  
USA



- Polarity Protected
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Fits Compact Spaces
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

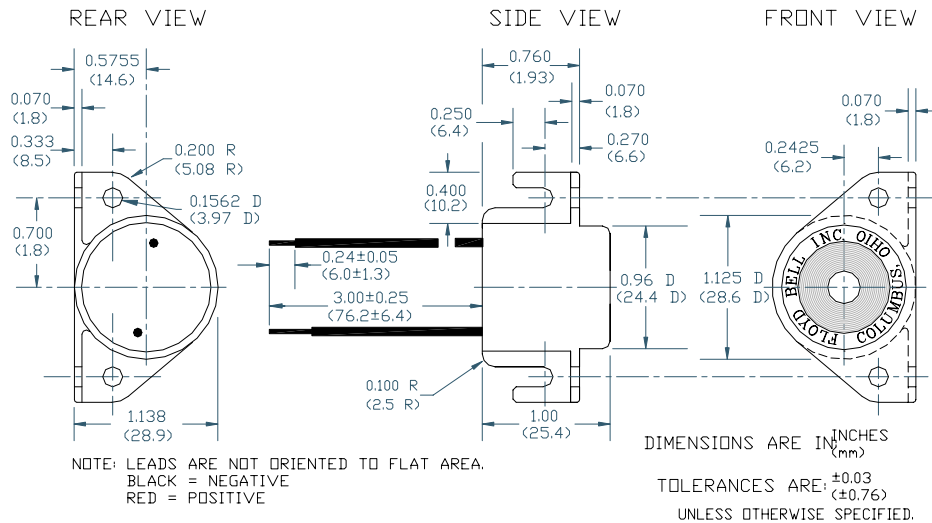


The PM-100 is a miniature, high-output, continuous tone alarm with a typical sound pressure level of 102 dB(A). It can be operated from 3-6VDC. The alarm is terminated with two 18AWG wires, 3" long, with 0.25" strip.

## SPECIFICATIONS

<b>Operating Mode:</b>	Continuous Tone
<b>Operating Voltage:</b>	3-6 VDC
<b>Nominal Operating Voltage:</b>	6 VDC
<b>Operating Frequency:</b>	2900 ± 250 Hz.
<b>Typical Operating Current:</b>	10 mA at 3 VDC 60 mA at 6 VDC
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 3 VDC, at 24 inches (61 cm), at 25°C. 102±5 dB(A), at 6 VDC, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



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Revision: 2.07

# TCAN-98R-930-H

**Made in USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Included Gasket.
- Reliable Piezoelectric Technology
- Deutsch DT04-4P
- CE Approved
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

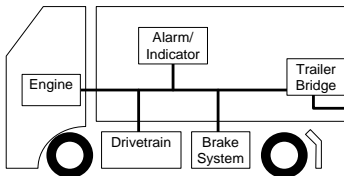
Floyd Bell's new TCAN or Twin CAN alarm & Light is specifically designed to meet the specifications of J1939-15 (250Kb/s) automotive standard, including arbitrary address capability. This robust alarm combines the functionality of a multi-tone audible alarm and multi-function Light all in one package. While on the network, the alarm and light function independently each with its own PGN. (see J1939-15 communication reference document)

## SPECIFICATIONS

<b>Operating Mode:</b>	J1939-15 CAN Device
<b>Baud Rate:</b>	250Kb/s
<b>Operating Voltage Range::</b>	9-30Vdc (+Red, -Black)
<b>Nominal Operating Voltage:</b>	24Vdc (+Red, -Black)
<b>CAN-H and CAN-L Voltage:</b>	5Vdc Nominal (CH&CL tolerate -3Vdc to +24Vdc with respect to ground)
<b>Frequency Range:</b>	1.6Khz to 2Khz
<b>Resonant Frequency:</b>	1800 Hz. (Max output can be achieved at this frequency)
<b>Typical Operating Current Alarm:</b>	30 mA at 12 Vdc, 35 mA at 24 Vdc, 40 mA at 30 Vdc
<b>Typical Operating Current Light:</b>	50 mA at 12 Vdc, 35 mA at 24 Vdc, 30 mA at 30 Vdc
<b>Typical Idle Current:</b>	<20 mA from 12Vdc or 24 Vdc
<b>Sound Pressure Range:</b>	Network adjustable from 60 dB(A) $\pm$ 5,-to-108dBA $\pm$ 5, 10 steps.
<b>Termination:</b>	Deutsch DT04-4P housing, 638112-1 gold terminals and four, 18AWG GXL Wires, Red, Black, Yellow, and Green Pull test with a maximum of 22 pounds (10 kg) load

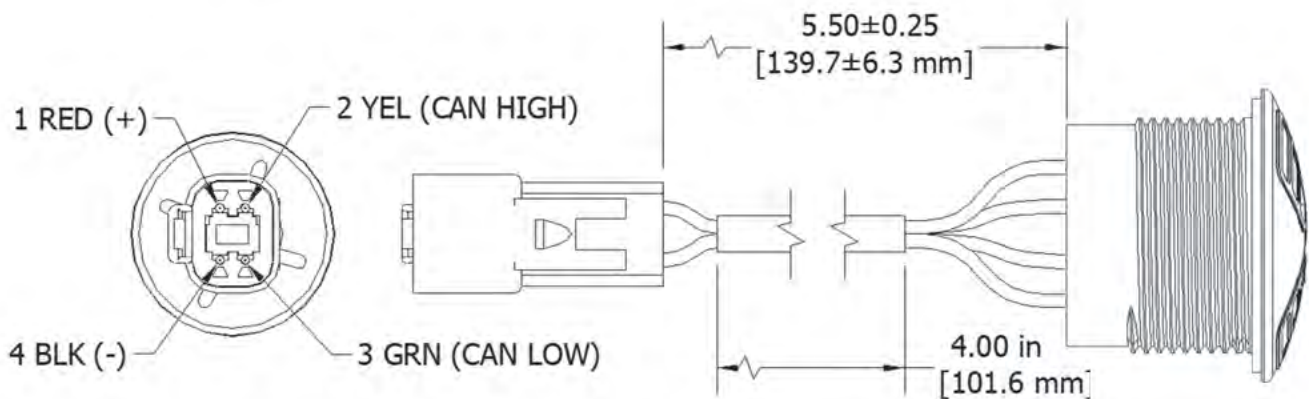
<b>Termination Strength:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Operating Temperature:</b>	Polarity Protected - Red and Black only.
<b>Storage Temperature:</b>	Laboratory tested and certified per declarations doc.
<b>Surge Voltage:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black
<b>Reverse Voltage Protection:</b>	Internal Circuit- CAN interface, power conditioning, Micro, amp.
<b>CE Certified:</b>	Potting- 2 parts epoxy resin or silicone, black
<b>Construction Materials:</b>	Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Gasket - 0.062" Thick, 60 Durometer Neoprene
	ASTM B117 Certified- Withstands exposure to salt spray for 300hr.
	IP 68 Certified- Withstands water submergence and dust exposure
	Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.
	Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## Application



**BACK**

**SIDE**



TOLERANCES ARE  $\pm 0.03 \pm 0.76$ mm UNLESS OTHERWISE NOTED

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Revision: 10.21

# TCH-82-530-Q(F)



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-82-530-Q(F) is a medium loud output, flange mounted alarm for operating voltages of 5-30VDC. The alarm will chime 3 times per second when power is applied.

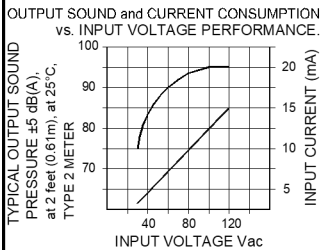
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	12 / 24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3 chimes per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304

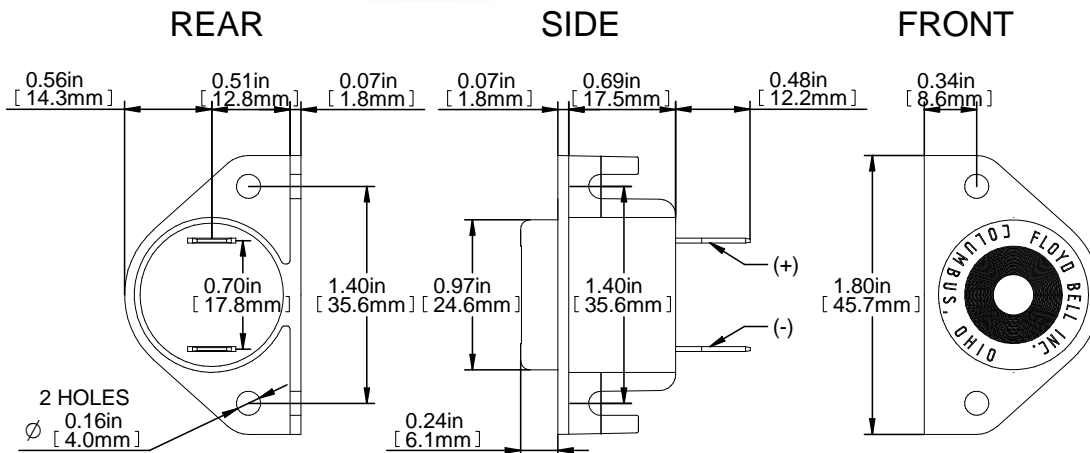
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
IP 68 Certified- Withstands water submergence and dust exposure  
Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
10 years under normal operating conditions.

**Life Expectancy:** 10 years under normal operating conditions.

**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 1.13

# TCH-82-530-Q(M)



**Made in  
USA**

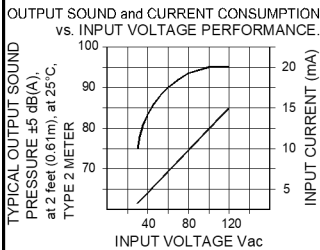


- Patented Revolutionary Turbo Design
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

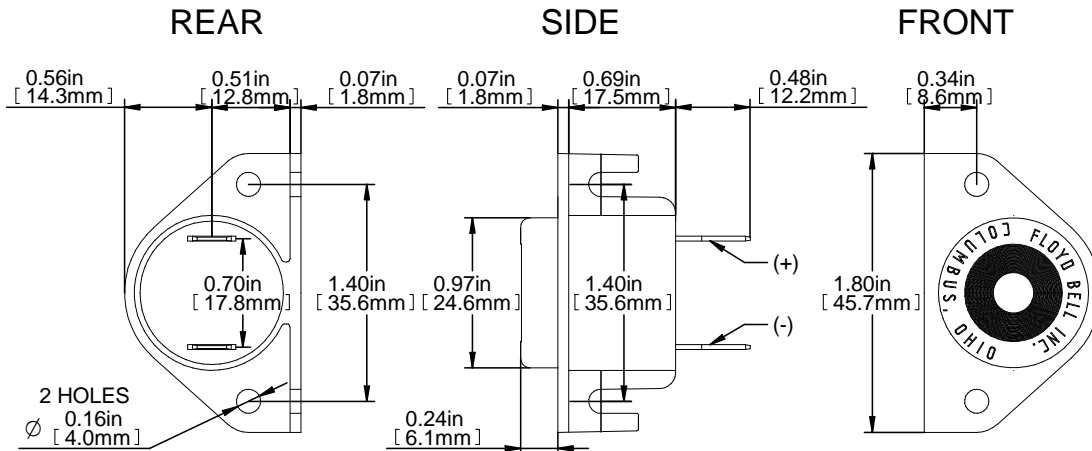
The Turbo TCH-82-530-Q(M) is a medium loud output, flange mounted alarm for operating voltages of 5-30VDC. The alarm will chime 1 time per second when power is applied.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	12 / 24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1 chime per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 1.13



# TCH-86-530-P(F)



Made in  
USA



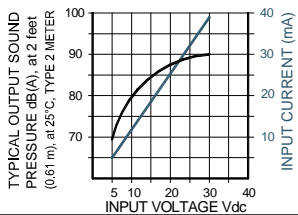
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-86-530-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

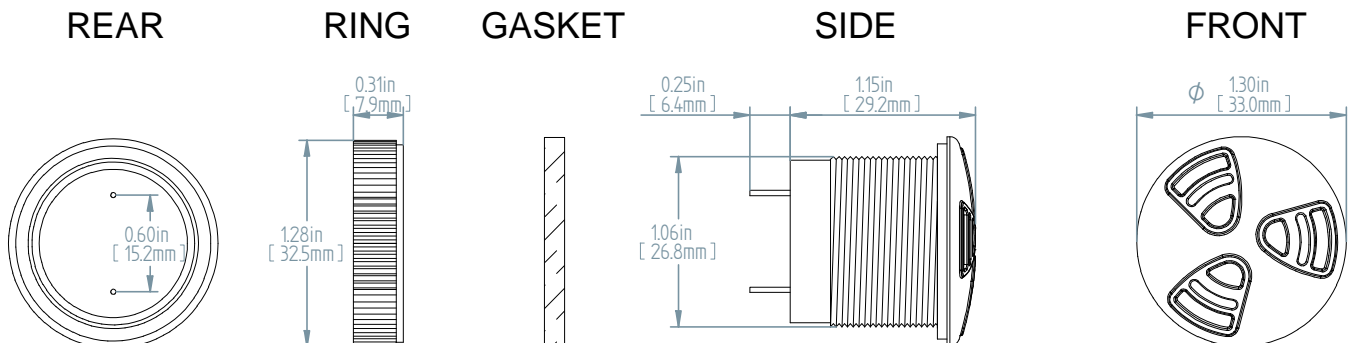
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

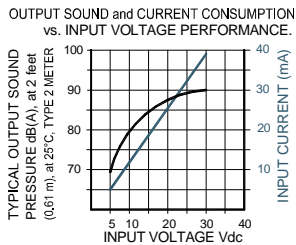
# TCH-86-530-P(M)



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



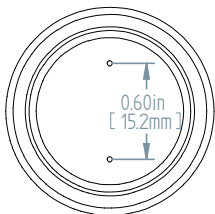
The Turbo TCH-86-530-P(M) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

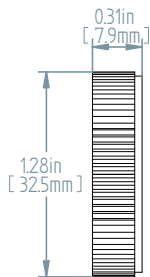
<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



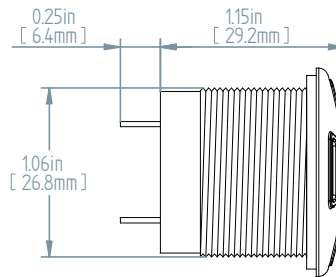
RING



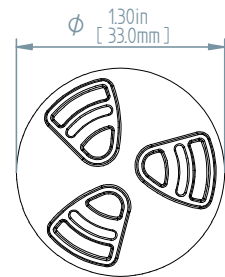
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TCH-86-530-Q(F)



**Made in  
USA**



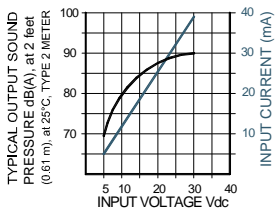
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-86-530-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

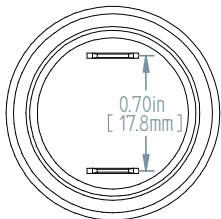
<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

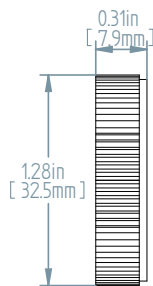


## DIMENSIONS

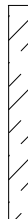
REAR



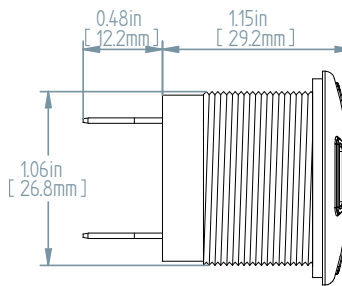
RING



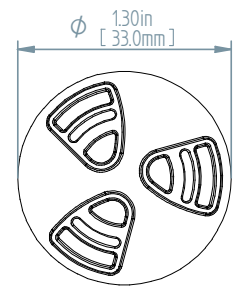
GASKET



SIDE



FRONT



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Revision: 9.09

# TCH-86-530-Q(M)



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USA**



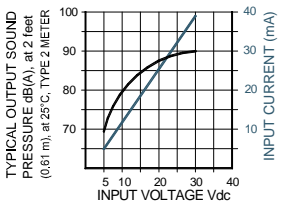
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-86-530-Q(M) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

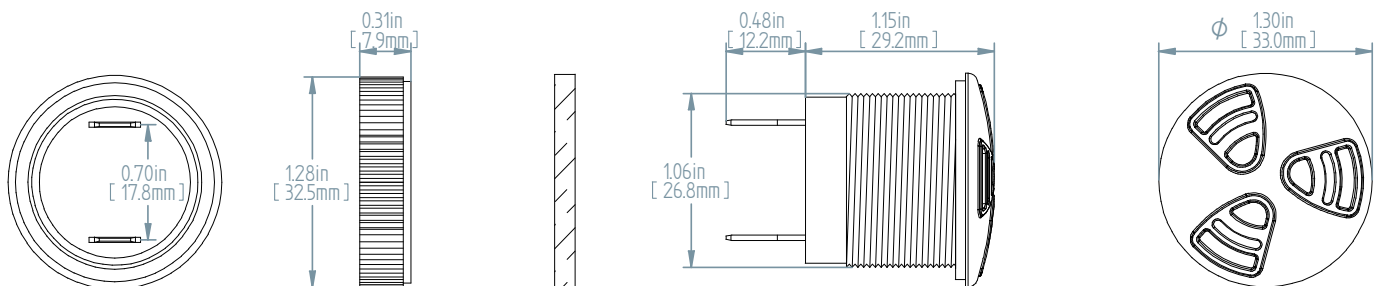
REAR

RING

GASKET

SIDE

FRONT



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# TCH-86-530-S(F)



**Made in  
USA**



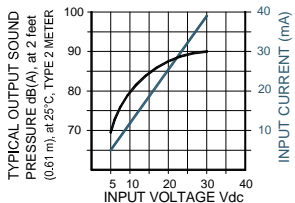
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-86-530-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

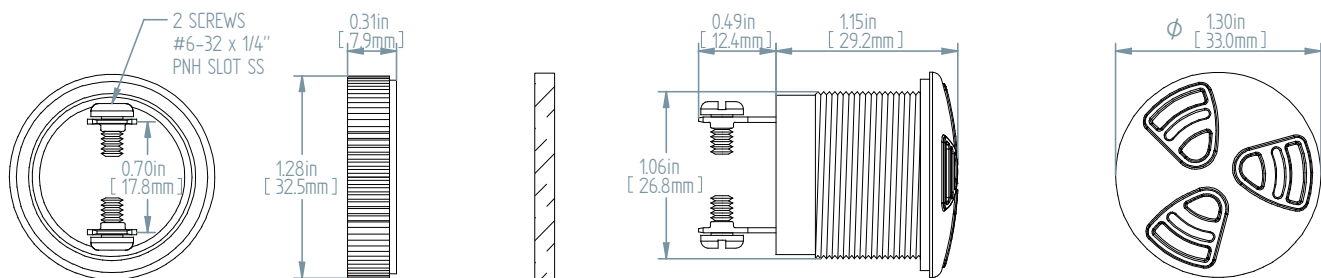
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TCH-86-530-S(M)



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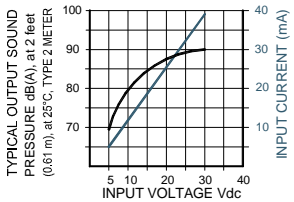
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-86-530-S(M) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

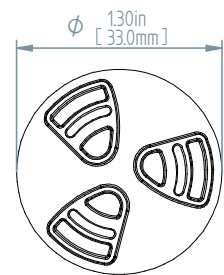
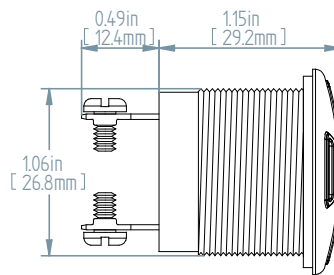
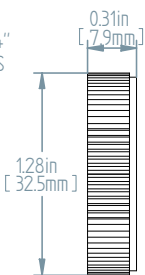
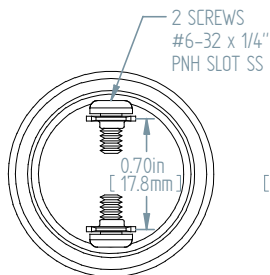
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TCH-86-530-W(F)



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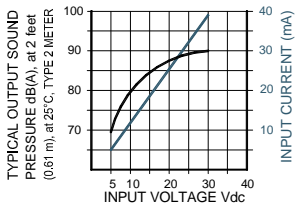
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-86-530-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

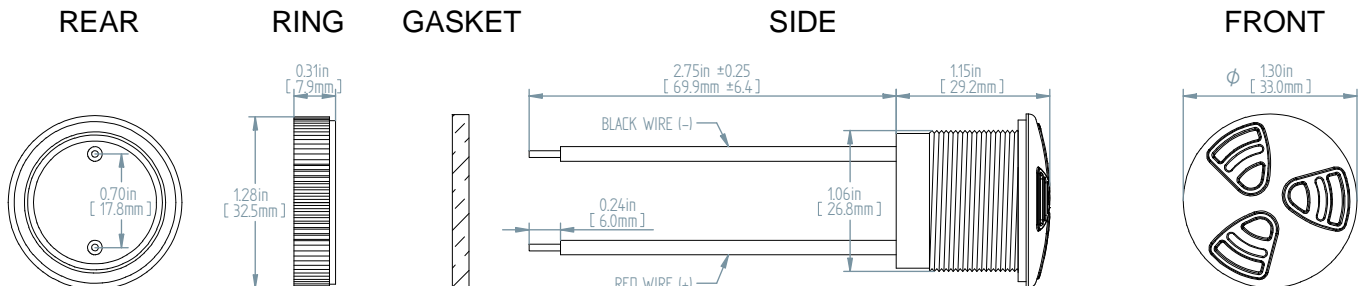
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TCH-86-530-W(M)



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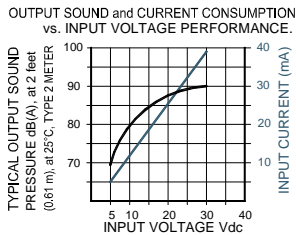


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- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

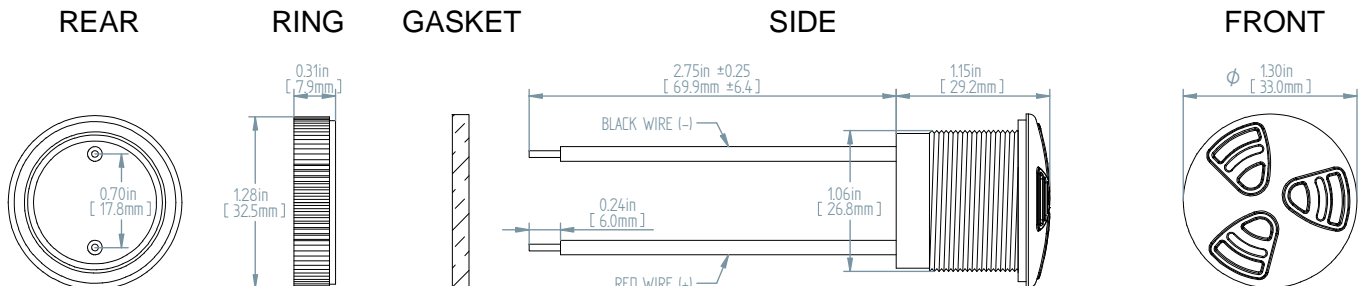
The Turbo TCH-86-530-W(M) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



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Revision: 9.09

# TCH-V86-530-P(F)



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USA**



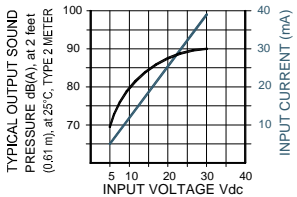
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-V86-530-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

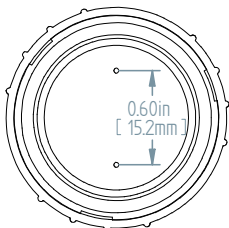
<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

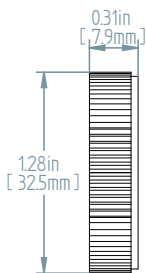


## DIMENSIONS

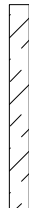
REAR



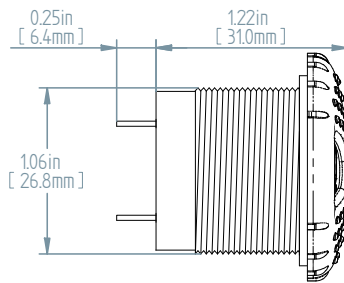
RING



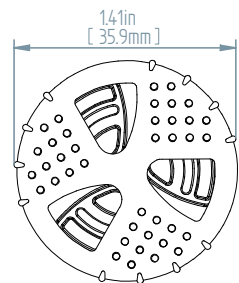
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09



# TCH-V86-530-P(M)

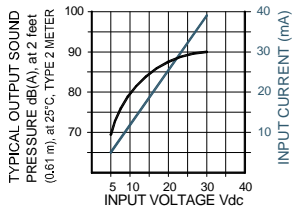


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

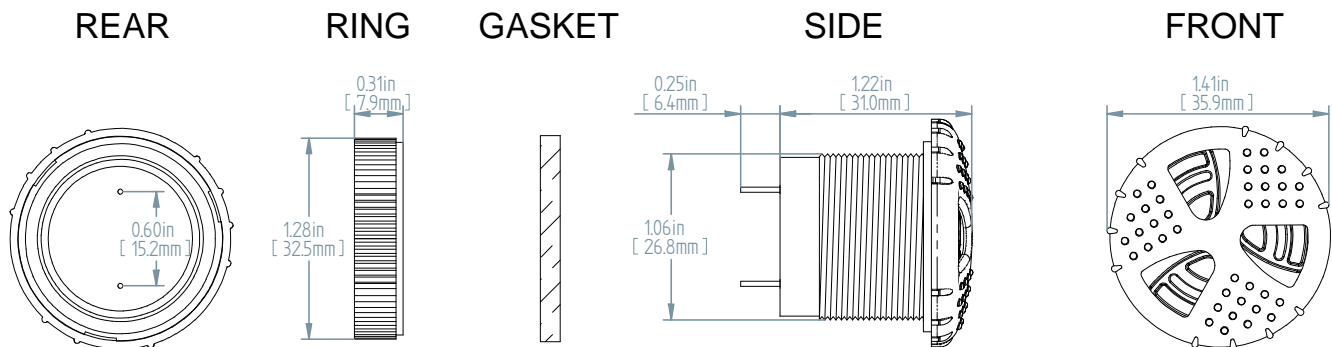


The Turbo TCH-V86-530-P(M) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TCH-V86-530-Q(F)



Made in  
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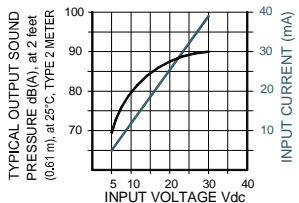
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-V86-530-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

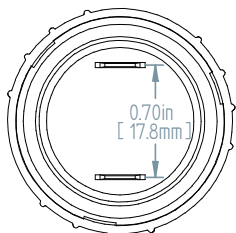
<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C. 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

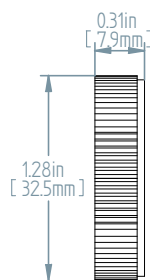


## DIMENSIONS

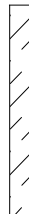
REAR



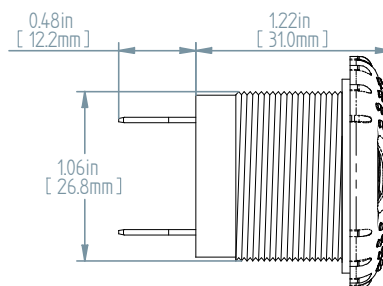
RING



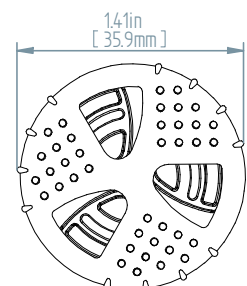
GASKET



SIDE



FRONT



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Revision: 9.09

# TCH-V86-530-Q(M)



**Made in  
USA**



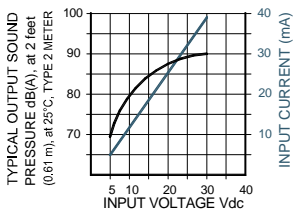
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-V86-530-Q(M) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C. 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

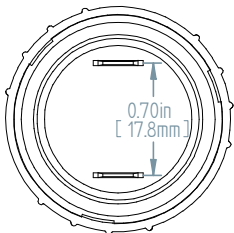
OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



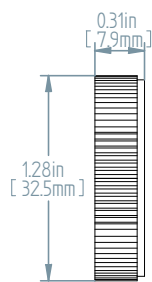
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

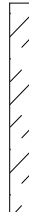
REAR



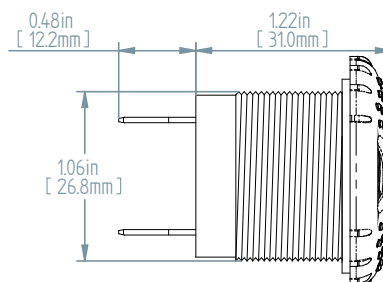
RING



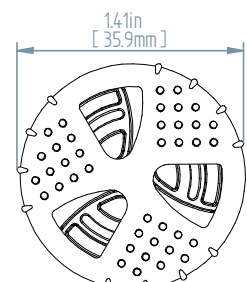
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 12.11

# TCH-V86-530-S(F)

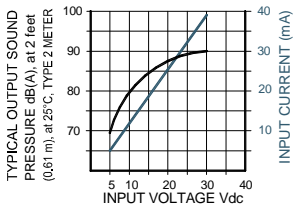


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- Patented Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



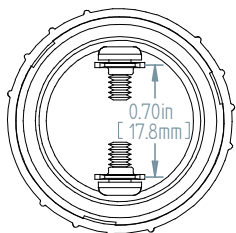
The Turbo TCH-V86-530-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

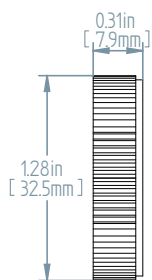
<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	To the maximum operating voltage.
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



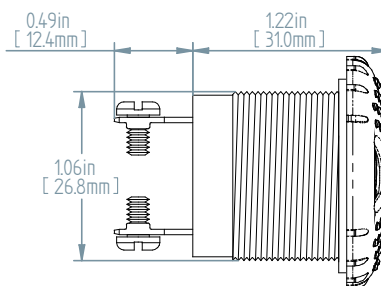
RING



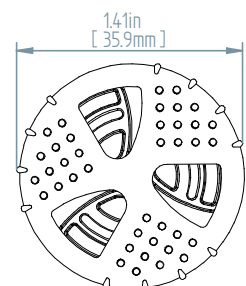
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TCH-V86-530-S(M)



**Made in  
USA**



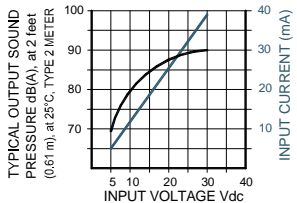
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-V86-530-S(M) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

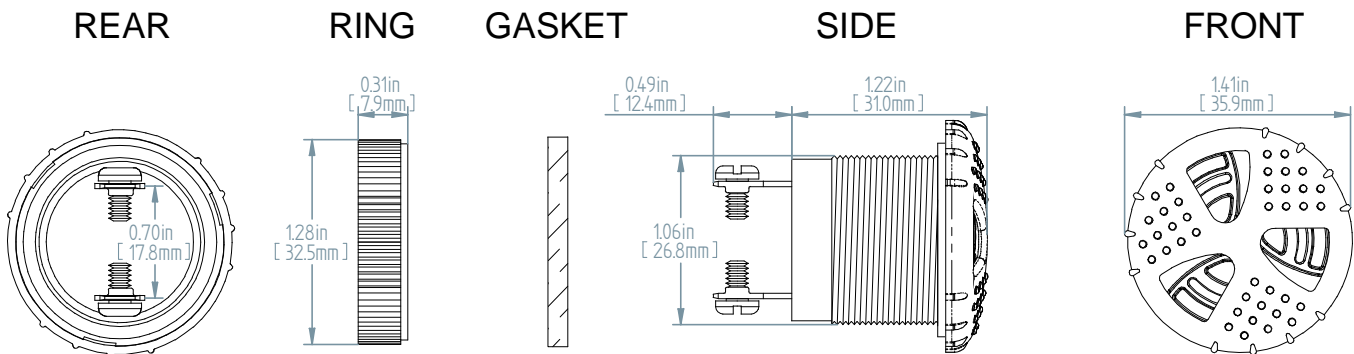
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	To the maximum operating voltage.
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TCH-V86-530-W(F)



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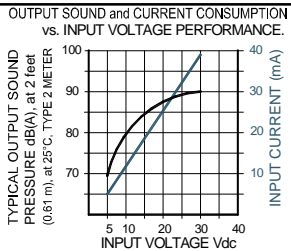


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

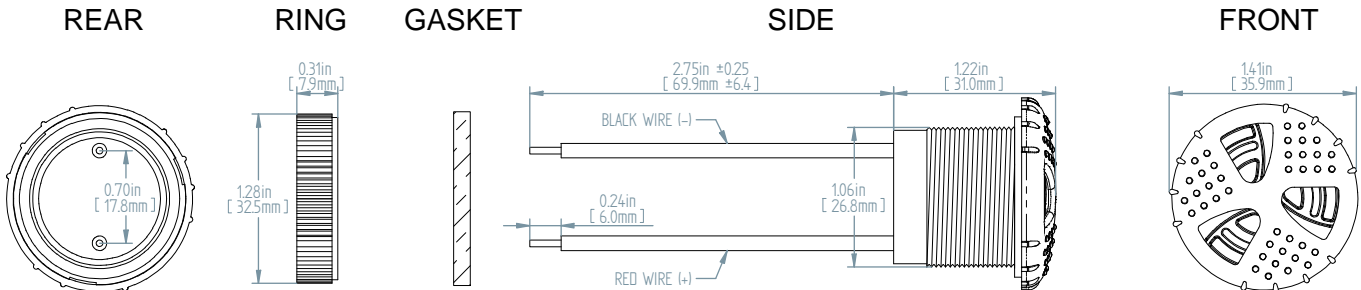
The Turbo TCH-V86-530-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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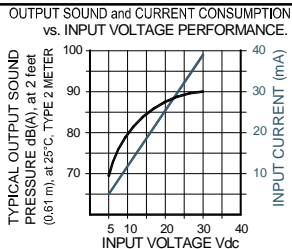
# TCH-V86-530-W(M)



Made in  
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- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

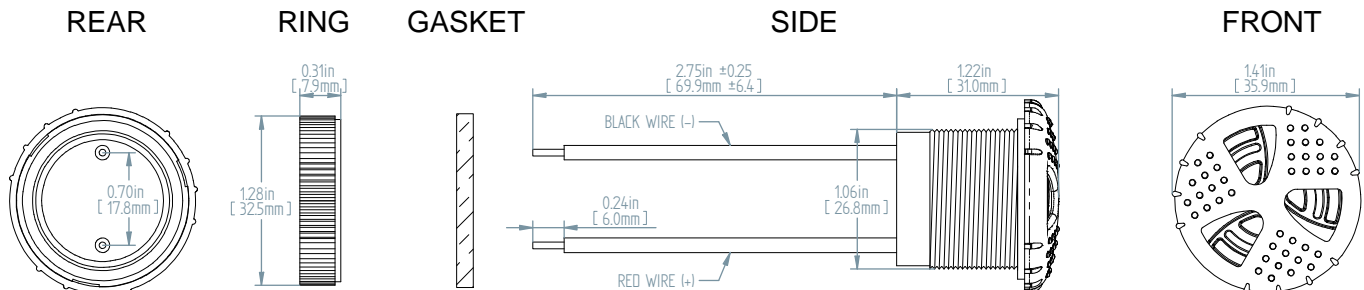


The Turbo TCH-V86-530-W(M) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TCH-V86-530-Q(F)

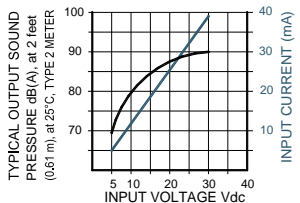


**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



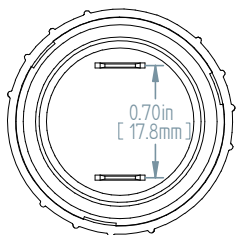
The Turbo TCH-V86-948-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

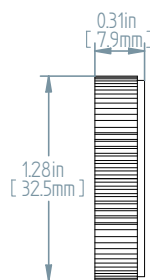
**Operating Mode:** Medium Loud Chime Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Chimes per second  
**Typical Operating Current:** 4 mA at 5 Vdc  
 40 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 70±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 90±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

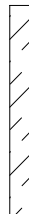
REAR



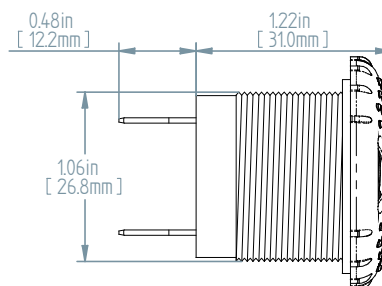
RING



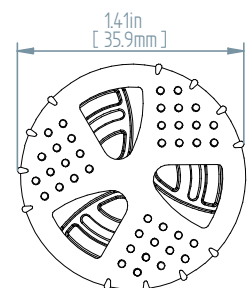
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TCH-V86-948-Q(M)



**Made in USA**



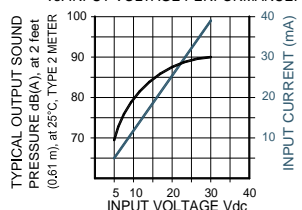
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TCH-V86-948-Q(M) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Chime Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Chimes per second
<b>Typical Operating Current:</b>	4 mA at 5 Vdc 40 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 70±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 90±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

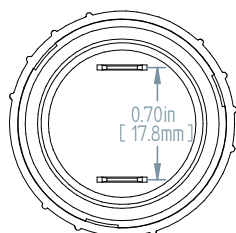
OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



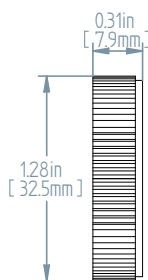
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

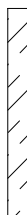
REAR



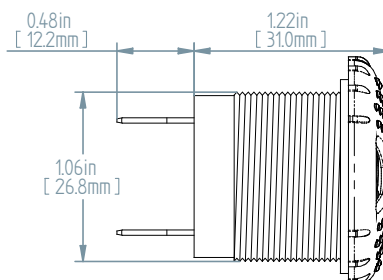
RING



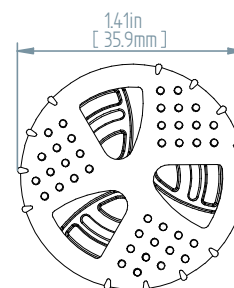
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 12.11

# TLDH-87RG-930-Q

Made in  
USA



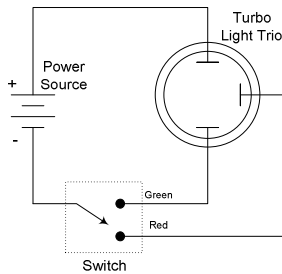
- Emits BRIGHT Green or Red Light
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Duo TLDH Series are continuous, multi-color, extra-bright output LED panel indicators for operating voltages of 9-30VDC. The Turbo Light Duo design features a regulated power supply, 2 light colors, low profile, tamper resistant case and easy to use active low switch inputs. This clear-lens polycarbonate panel light is rugged and ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

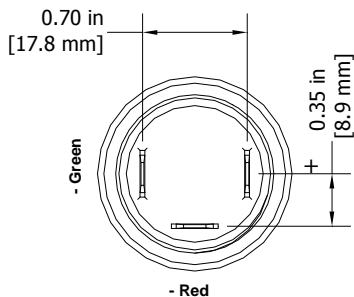
<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Emits Red or Green Light (Individually)
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	(8000 cd/m <sup>2</sup> Red) or (9000 cd/m <sup>2</sup> Green) ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	145 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	3 Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness, One positive Blade and three negative Blades for color select.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

### Application Circuit

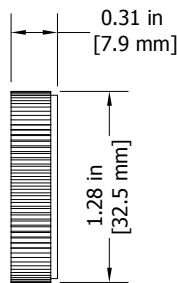


## DIMENSIONS

### BACK



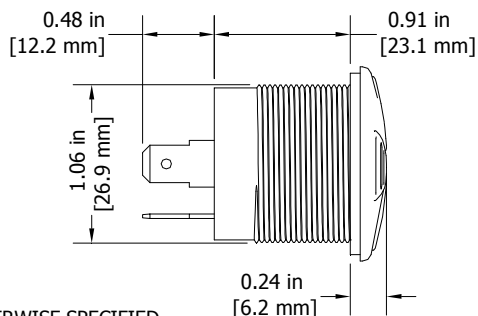
### RING



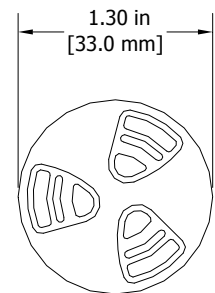
### GASKET



### SIDE



### FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 08.13



# TLH-87B-930-Q



**Made in  
USA**



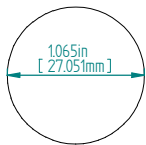
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	1700 cd/m <sup>2</sup> ± 20% at 9 Vdc 1850 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

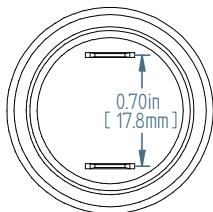
## PANEL MOUNTING



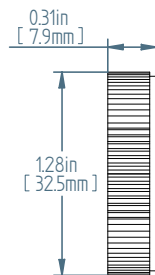
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

REAR



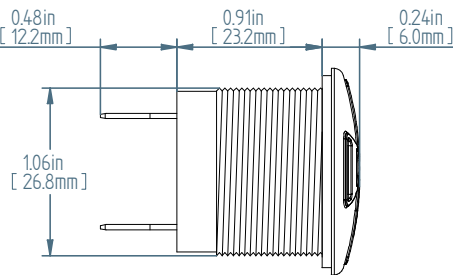
RING



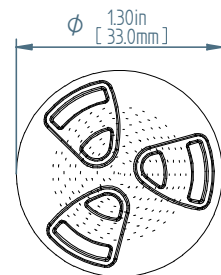
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 6.13

# TLH-87B-930-S



**Made in  
USA**



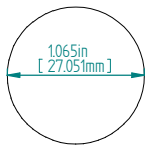
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	1700 cd/m <sup>2</sup> ± 20% at 9 Vdc 1850 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

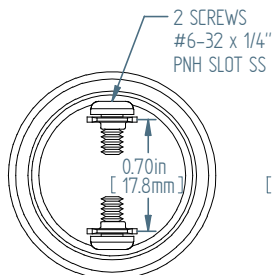
## PANEL MOUNTING



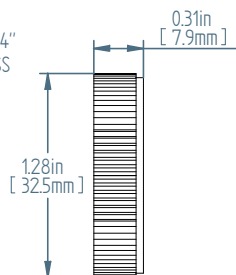
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



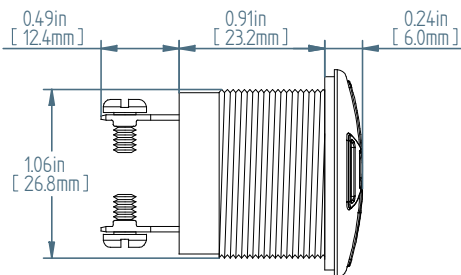
### RING



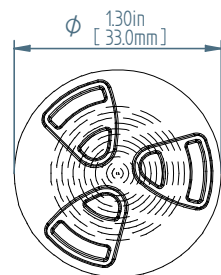
### GASKET



### SIDE



### FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 6.13

# TLH-87G-930-Q



**Made in  
USA**



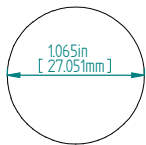
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	4500 cd/m <sup>2</sup> ± 20% at 9 Vdc 4700 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

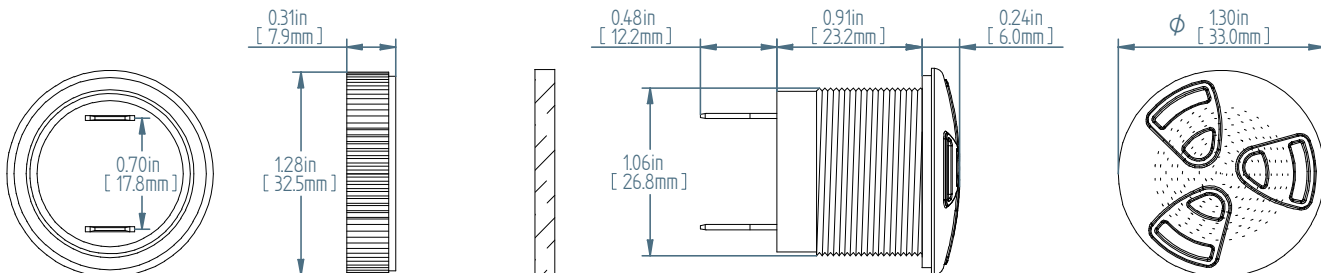
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 6.13

# TLH-87G-930-S



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USA**



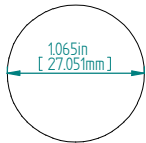
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	4500 cd/m <sup>2</sup> ± 20% at 9 Vdc 4700 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

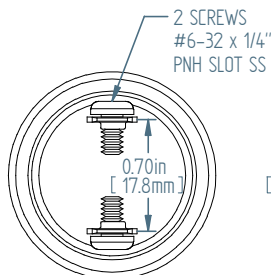
## PANEL MOUNTING



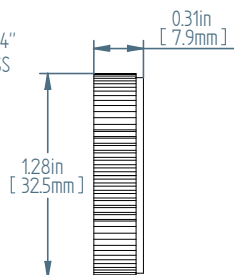
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



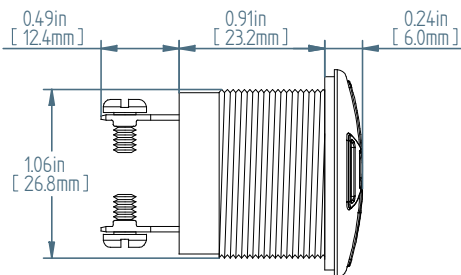
### RING



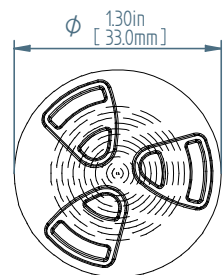
### GASKET



### SIDE



### FRONT



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Revision: 6.13

# TLH-87R-930-P



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USA**



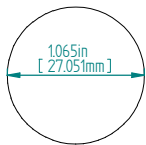
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	5300 cd/m <sup>2</sup> ± 20% at 9 Vdc 5700 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

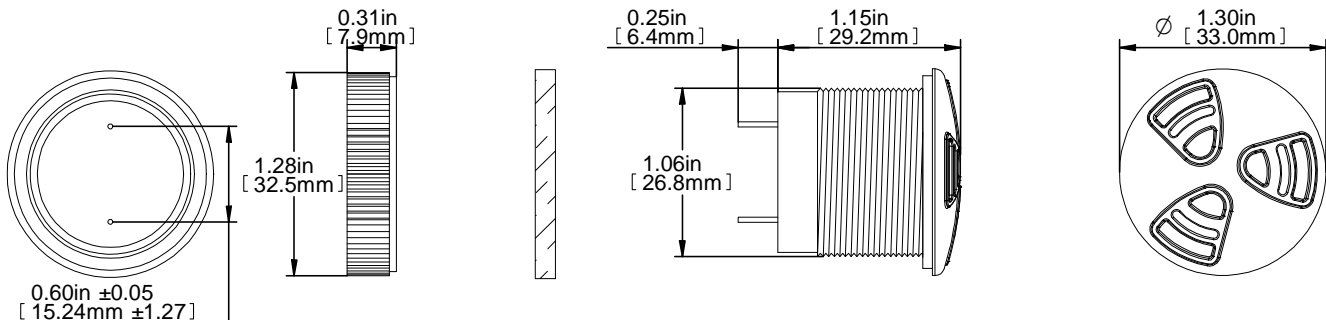
REAR

RING

GASKET

SIDE

FRONT



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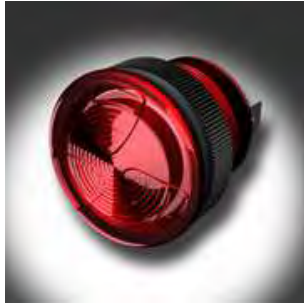
Revision: 11.13



# TLH-87R-930-Q



**Made in  
USA**



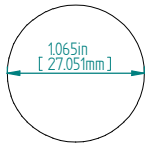
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	5300 cd/m <sup>2</sup> ± 20% at 9 Vdc 5700 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

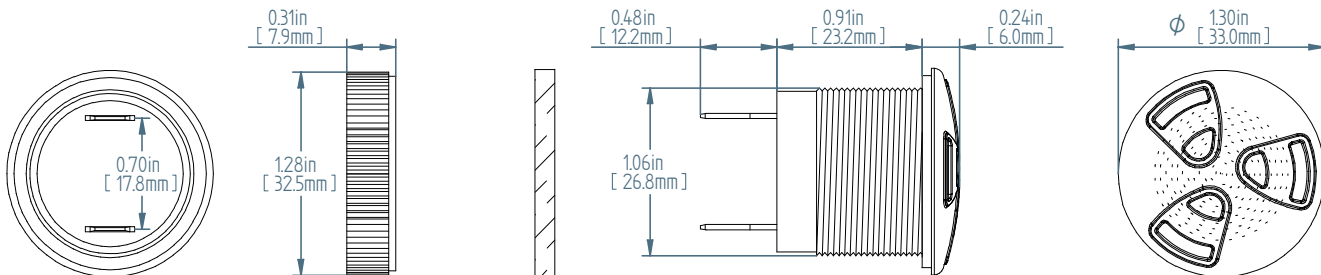
REAR

RING

GASKET

SIDE

FRONT



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# TLH-87R-930-S



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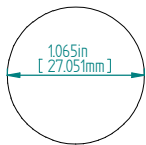
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	5300 cd/m <sup>2</sup> ± 20% at 9 Vdc 5700 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

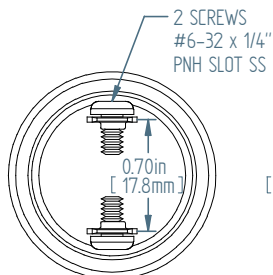
## PANEL MOUNTING



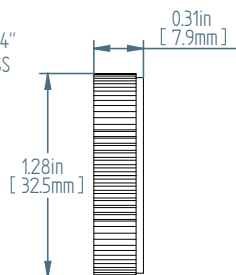
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



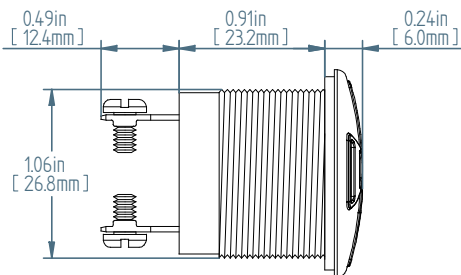
### RING



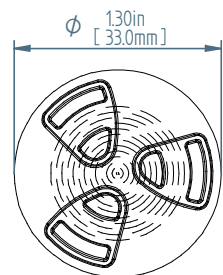
### GASKET



### SIDE



### FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLH-87W-930-Q



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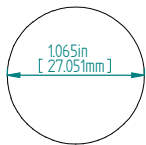
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	13500 cd/m <sup>2</sup> ± 20% at 9 Vdc 14500 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

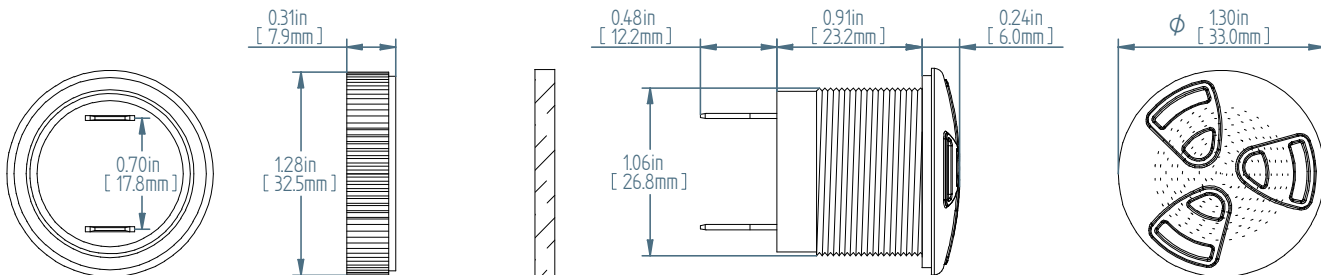
REAR

RING

GASKET

SIDE

FRONT



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Revision: 6.13

# TLH-87W-930-S



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USA**



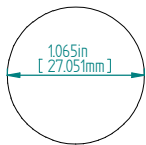
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	13500 cd/m <sup>2</sup> ± 20% at 9 Vdc 14500 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

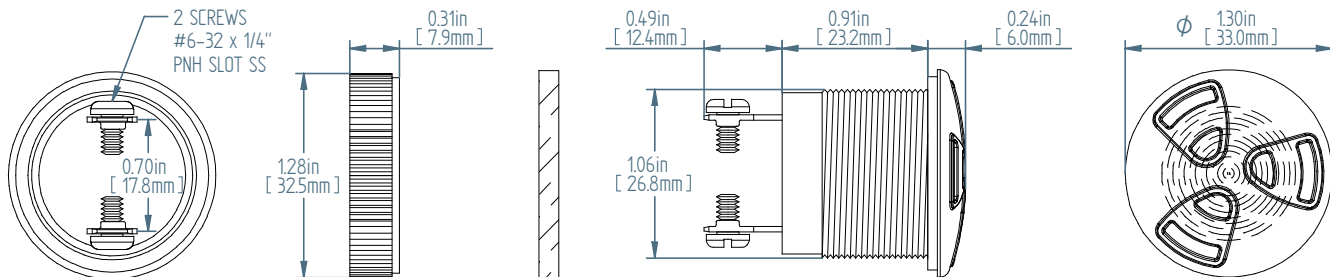
REAR

RING

GASKET

SIDE

FRONT



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Revision: 6.13

# TLH-87Y-930-P



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USA**



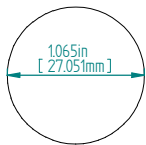
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	12100 cd/m <sup>2</sup> ± 20% at 9 Vdc 13000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

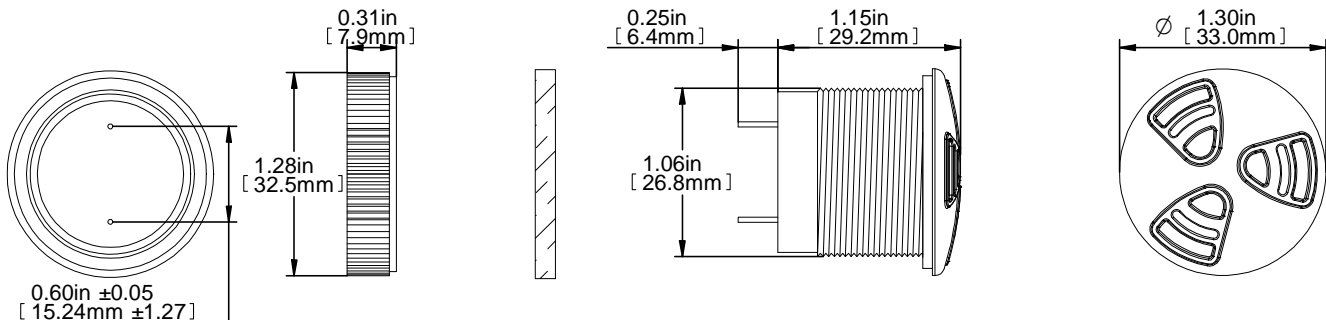
REAR

RING

GASKET

SIDE

FRONT



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Revision: 11.13



# TLH-87Y-930-Q



**Made in  
USA**



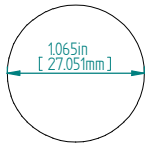
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	12100 cd/m <sup>2</sup> ± 20% at 9 Vdc 13000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

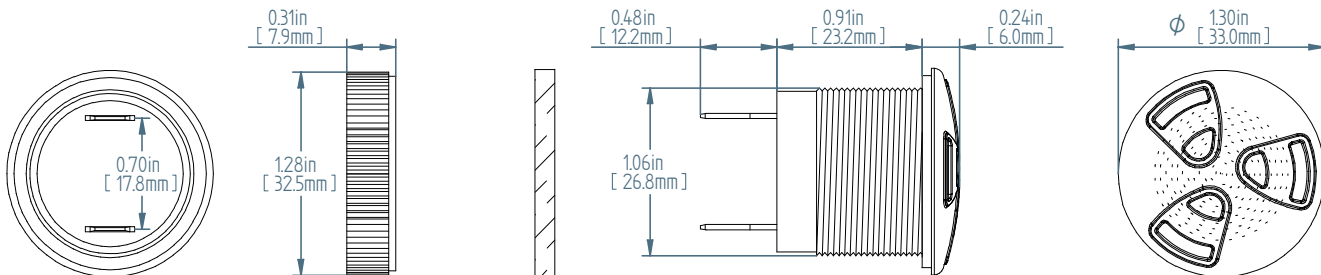
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 6.13

# TLH-87Y-930-S



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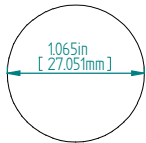
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLH Series are continuous extra-bright output, LED panel indicators for operating voltages of 9-30VDC. Twice as bright as the TLM Series, the TLH Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	12100 cd/m <sup>2</sup> ± 20% at 9 Vdc 13000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

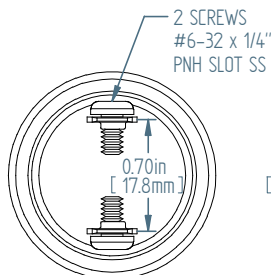
## PANEL MOUNTING



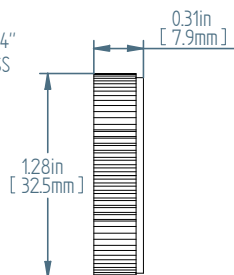
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



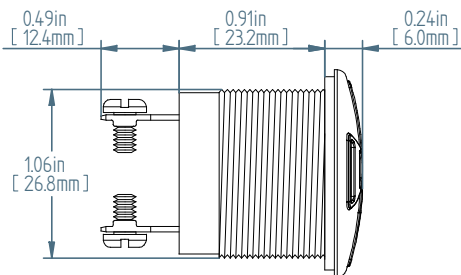
### RING



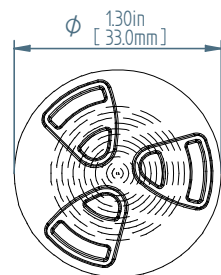
### GASKET



### SIDE



### FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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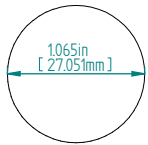
# TLHB-88B-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

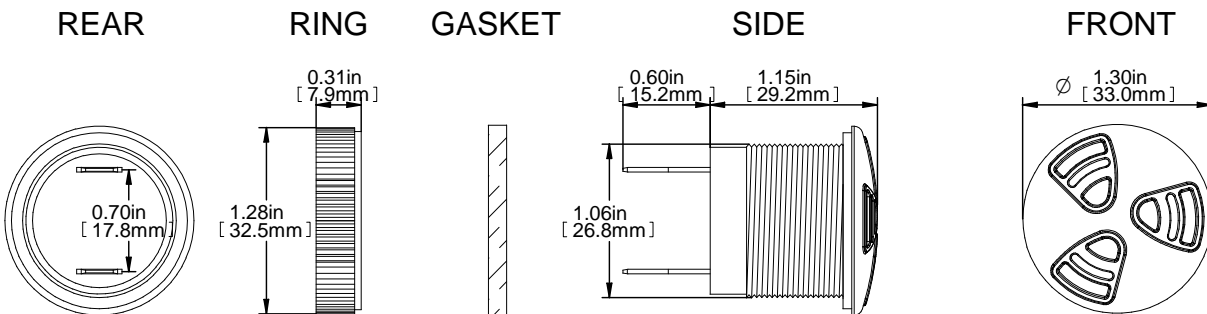
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88B-930-QS

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- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

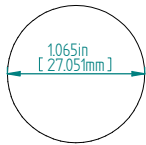
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

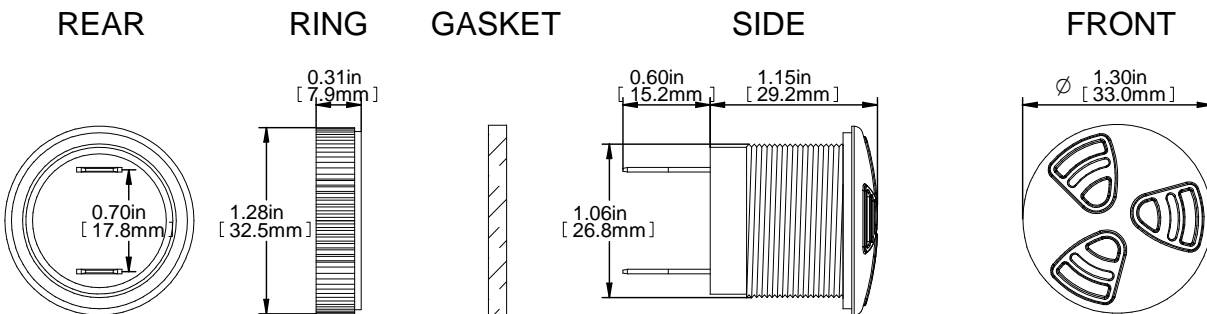
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88B-930-SF

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- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

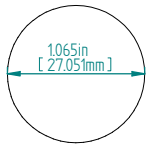
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

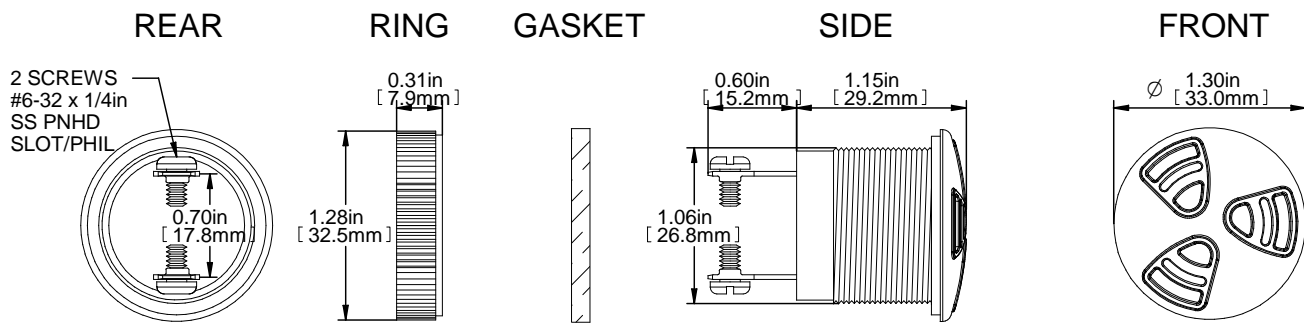
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88B-930-SS

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- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

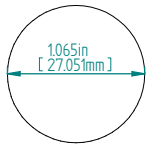
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

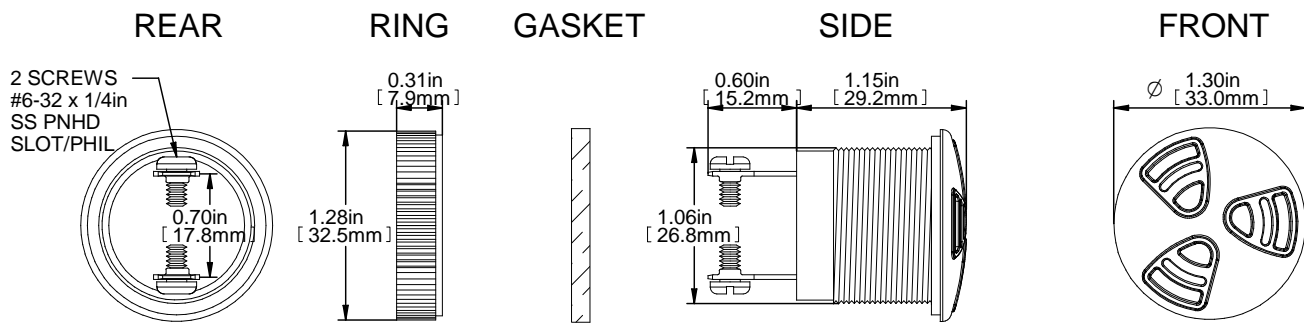
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88B-930-WF

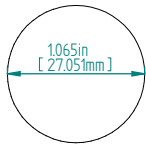
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

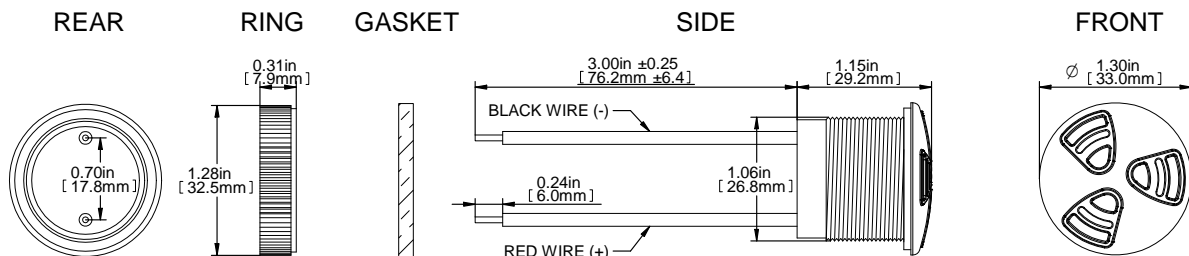
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88B-930-WS

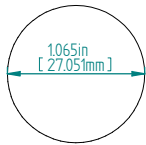
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

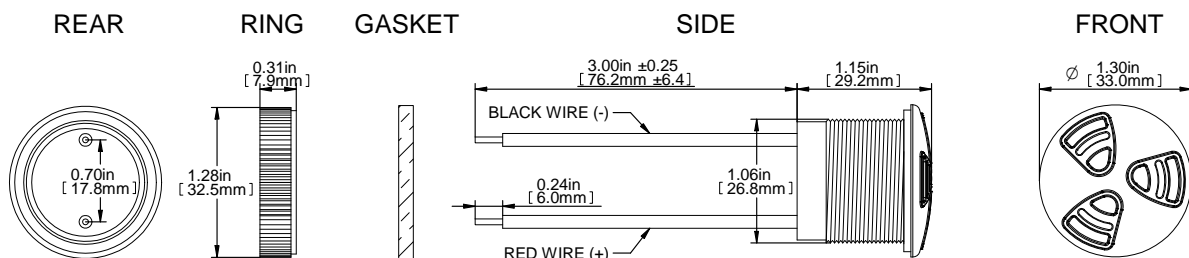
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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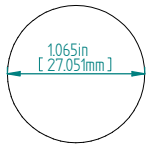
# TLHB-88G-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

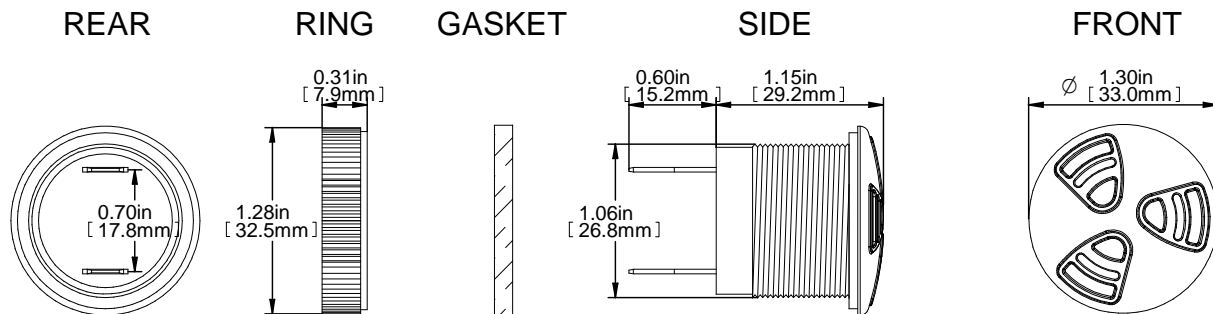
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 1*03±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours * IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

**Floyd Bell Inc**  
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Revision: 10.12

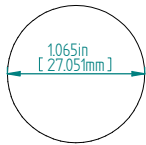
# TLHB-88G-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

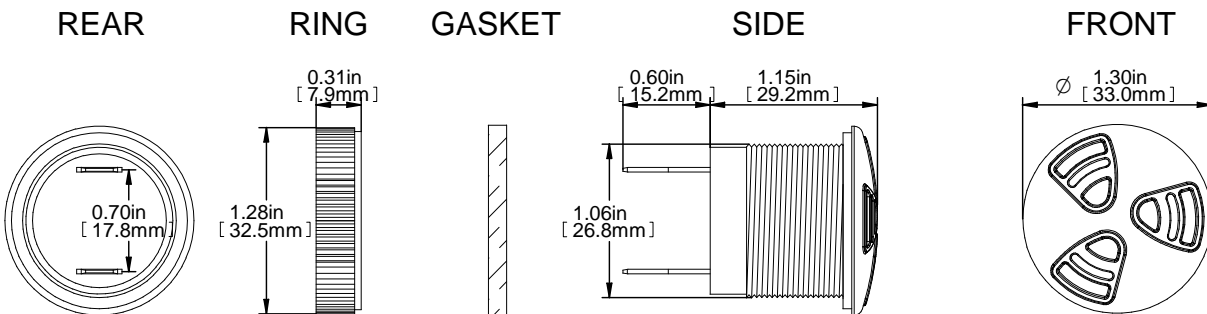
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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# TLHB-88G-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

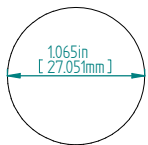
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

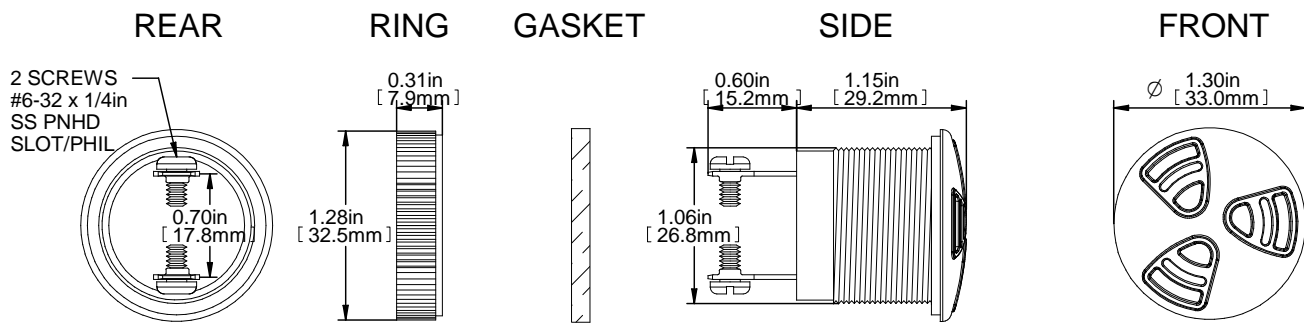
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



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# TLHB-88G-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

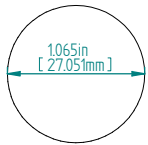
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

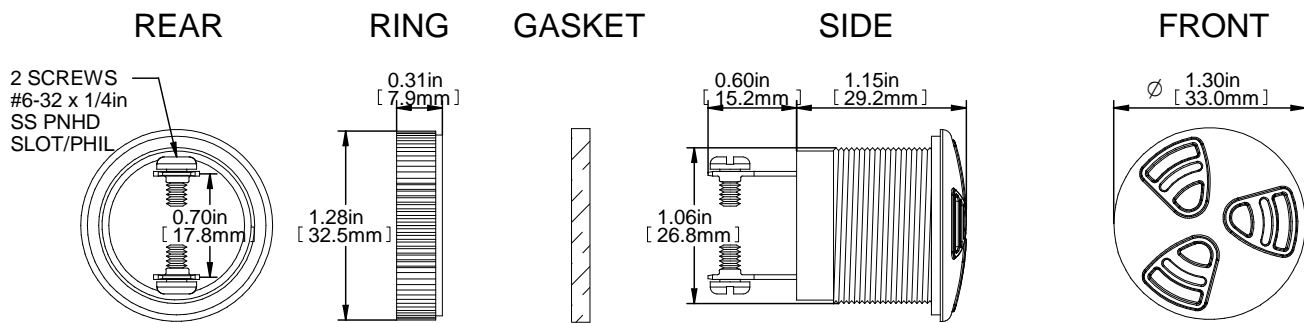
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88G-930-WF

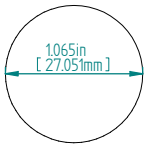
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

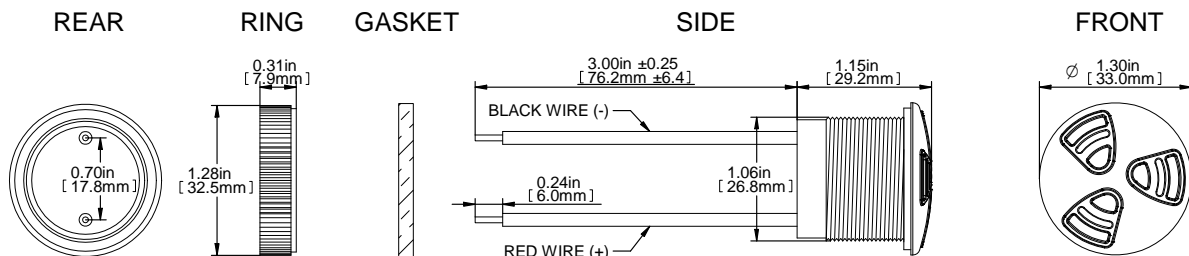
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



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# TLHB-88G-930-WS

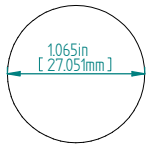
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

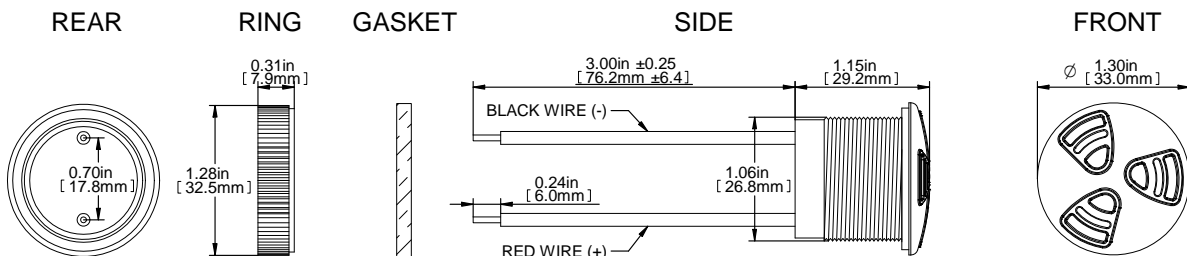
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
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## DIMENSIONS



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# TLHB-88R-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

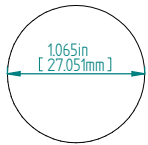
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
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<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
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<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

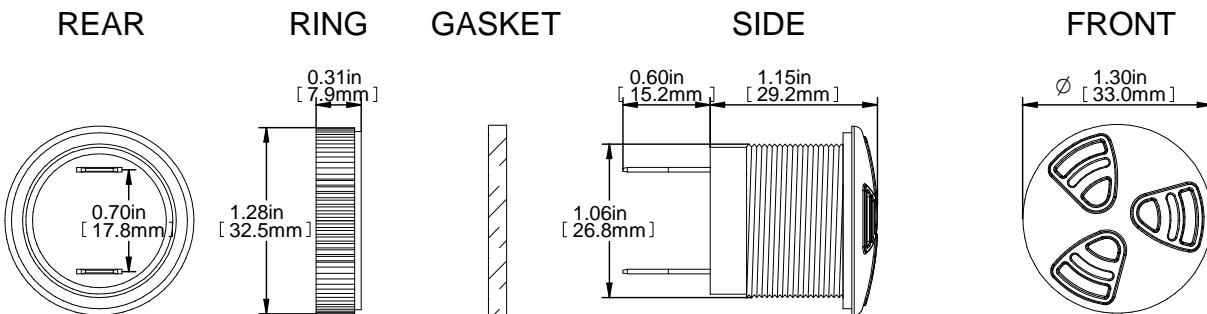
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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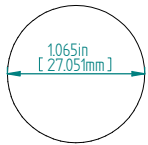
# TLHB-88R-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

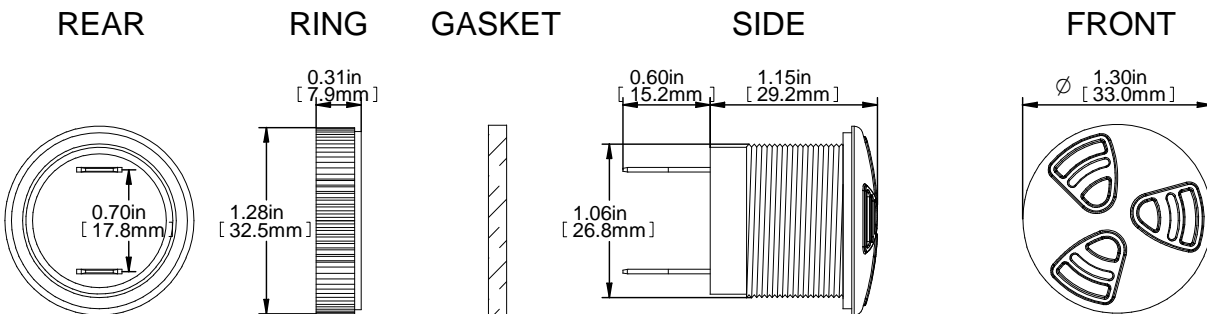
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
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<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
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<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



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# TLHB-88R-930-SF

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- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

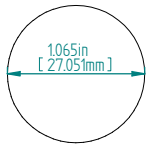
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

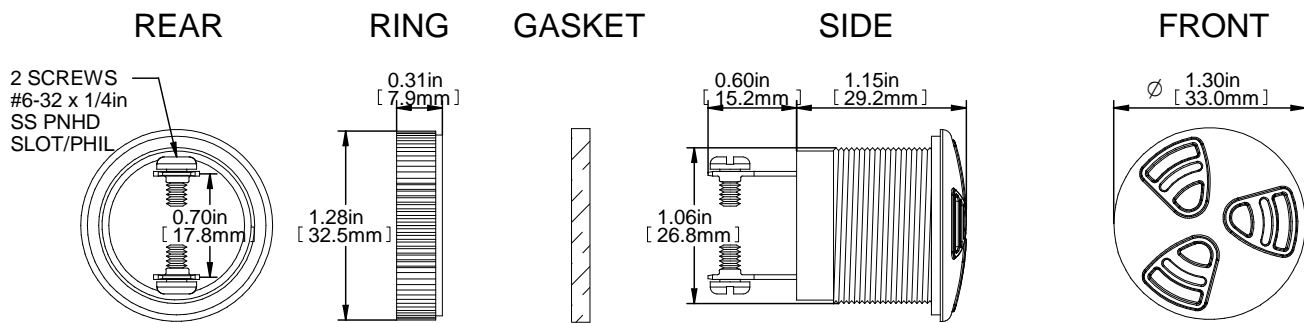
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

# TLHB-88R-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

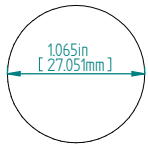
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

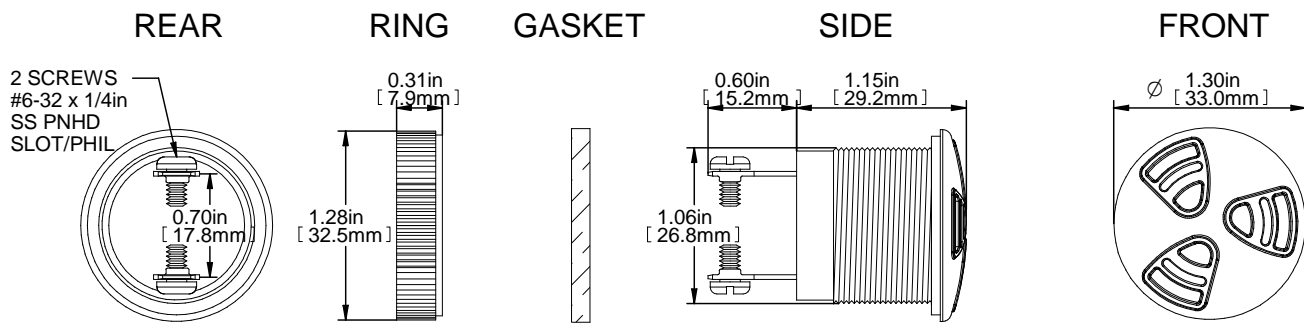
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TLHB-88R-930-WF

Made in  
USA



Image Not  
Available

Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

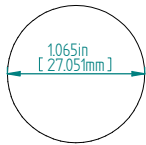
## SPECIFICATIONS

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

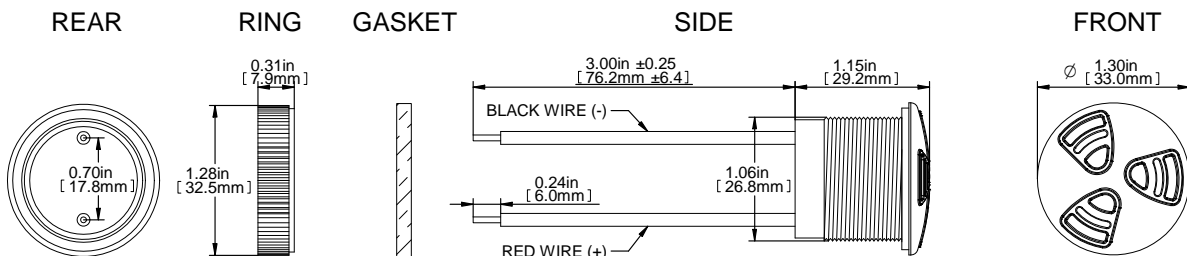
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

# TLHB-88R-930-WS

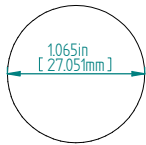
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

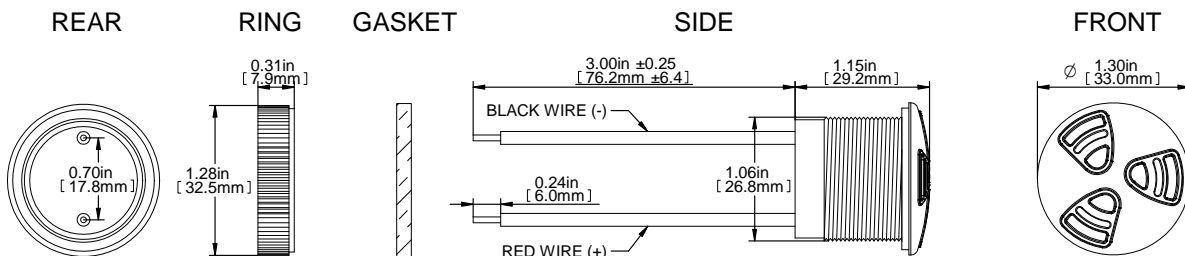
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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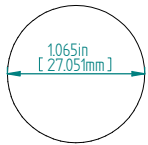
# TLHB-88W-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

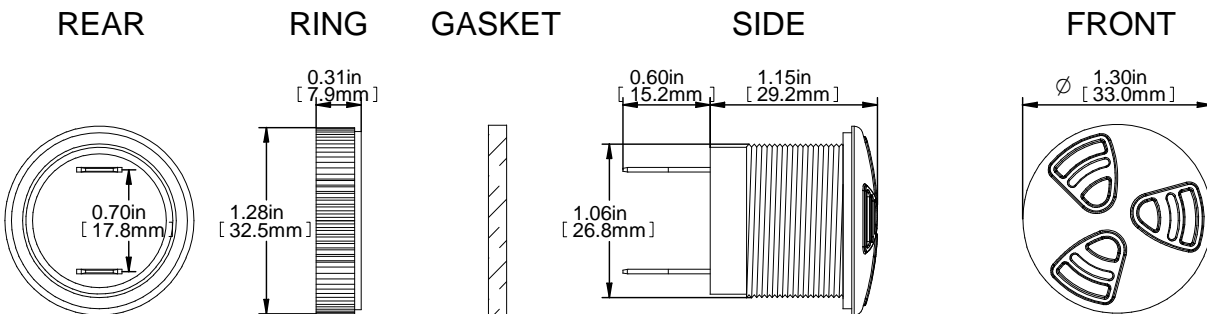
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHB-88W-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

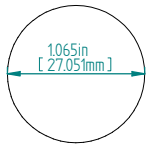
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

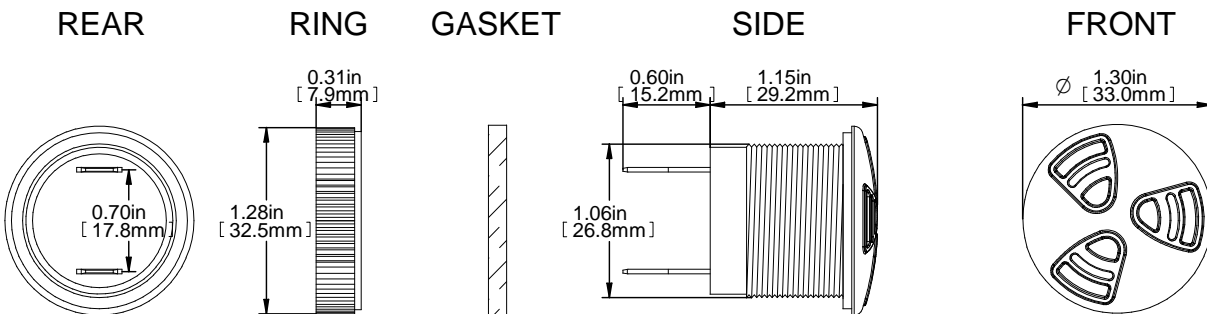
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHB-88W-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

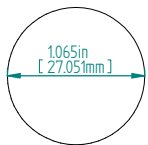
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

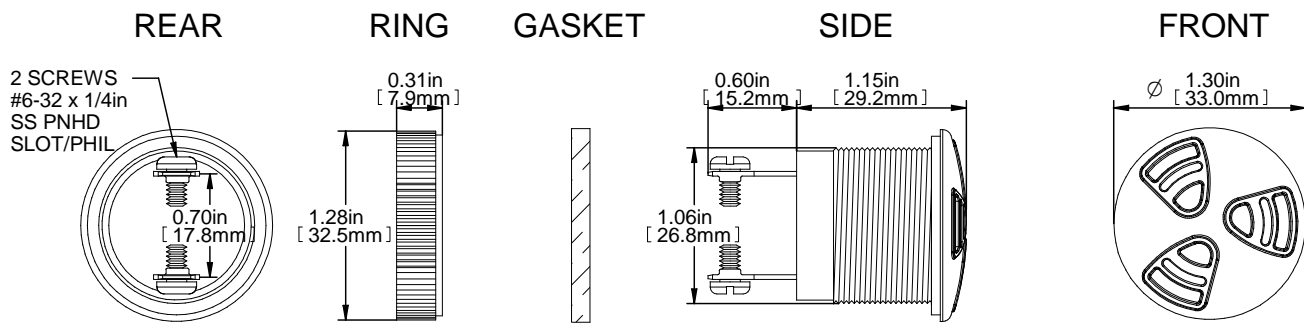
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88W-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

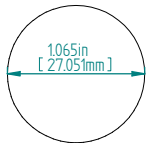
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
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<b>Termination Strength:</b>	
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<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

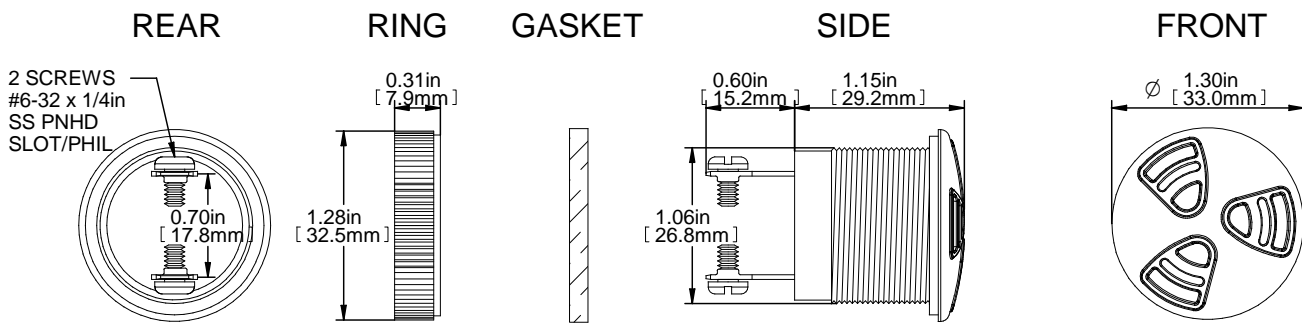
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88W-930-WF

Made in  
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Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

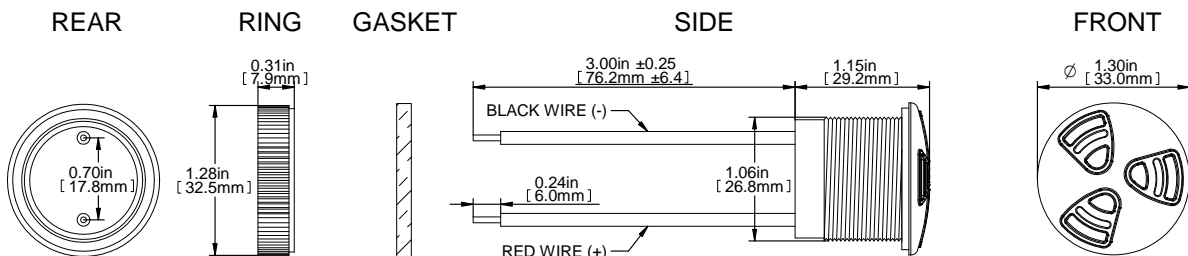
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

PANEL MOUNTING

FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12



# TLHB-88W-930-WS

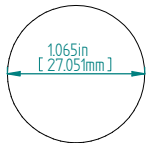
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

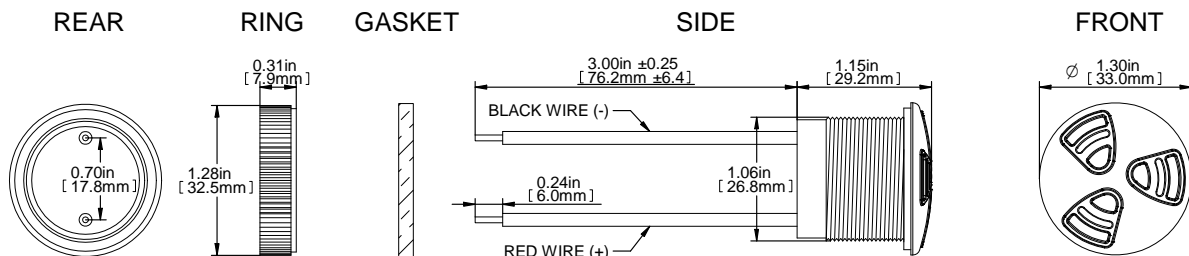
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Cycles per second  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHB-88Y-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

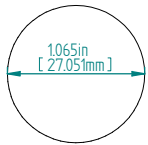
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

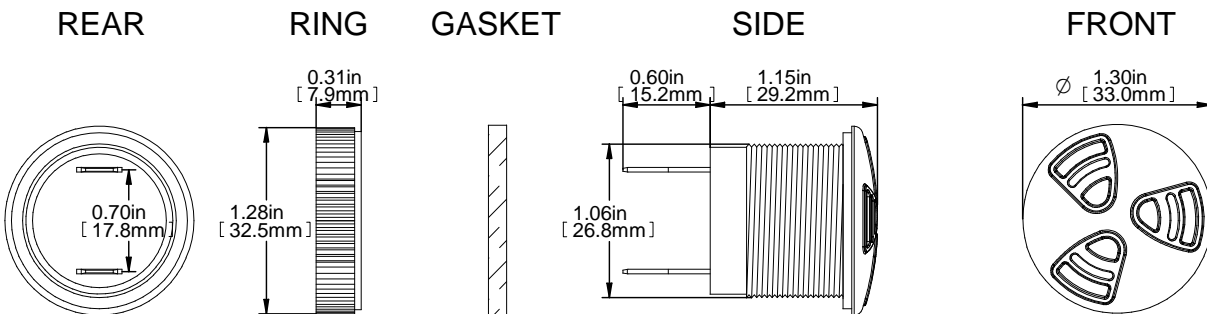
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHB-88Y-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

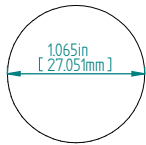
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

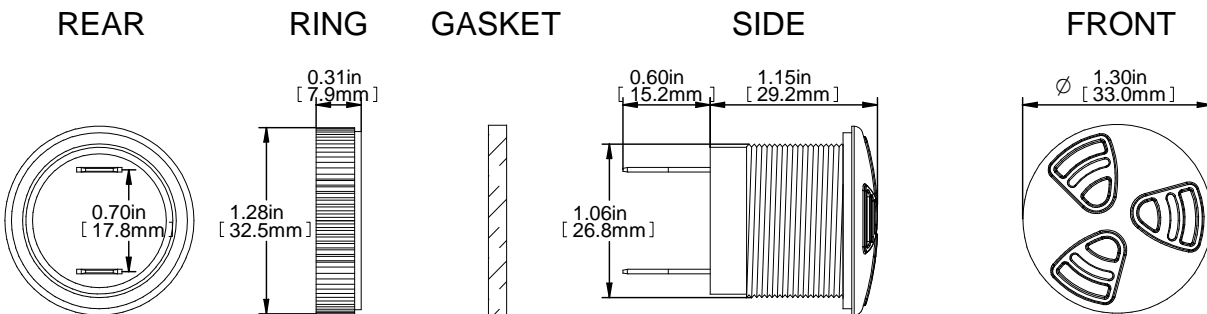
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHB-88Y-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

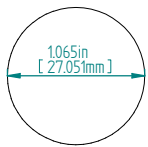
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

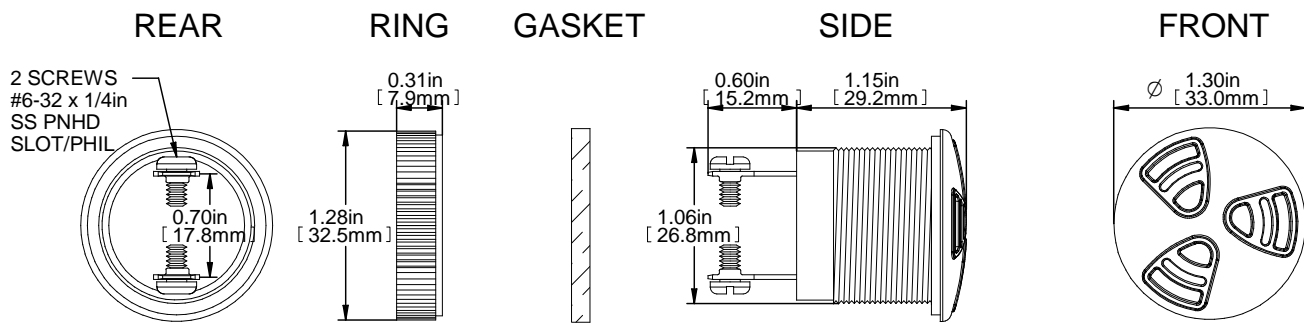
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHB-88Y-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

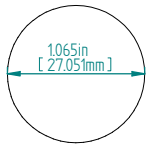
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

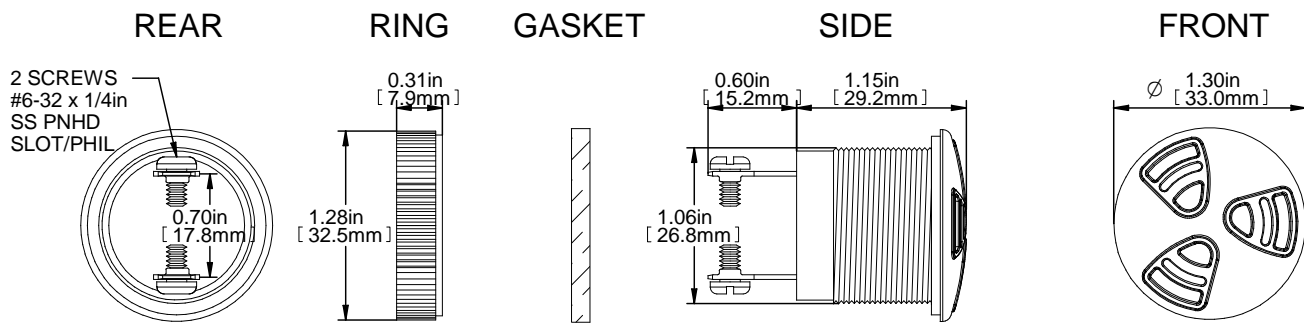
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHB-88Y-930-WF

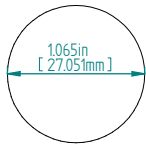
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

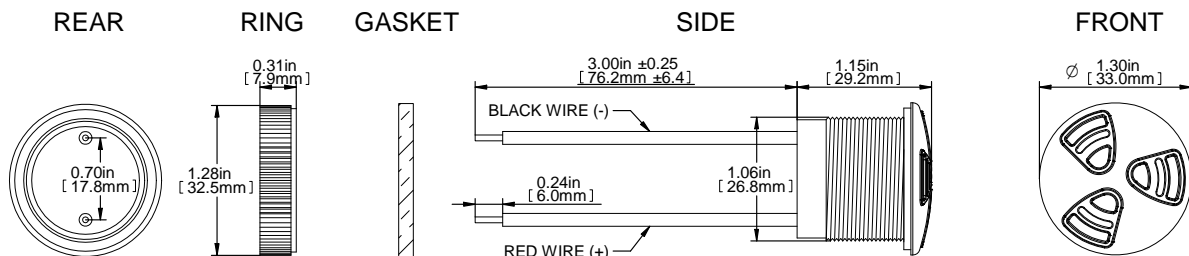
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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\*Not Evaluated by UL

## DIMENSIONS



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Revision: 10.12

# TLHB-88Y-930-WS

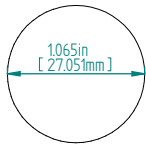
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

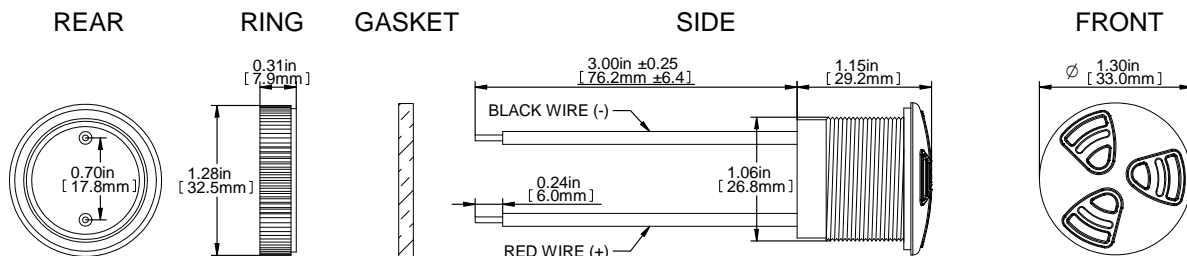
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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\*Not Evaluated by UL

## DIMENSIONS



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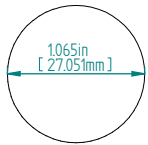
# TLHB-V88R-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

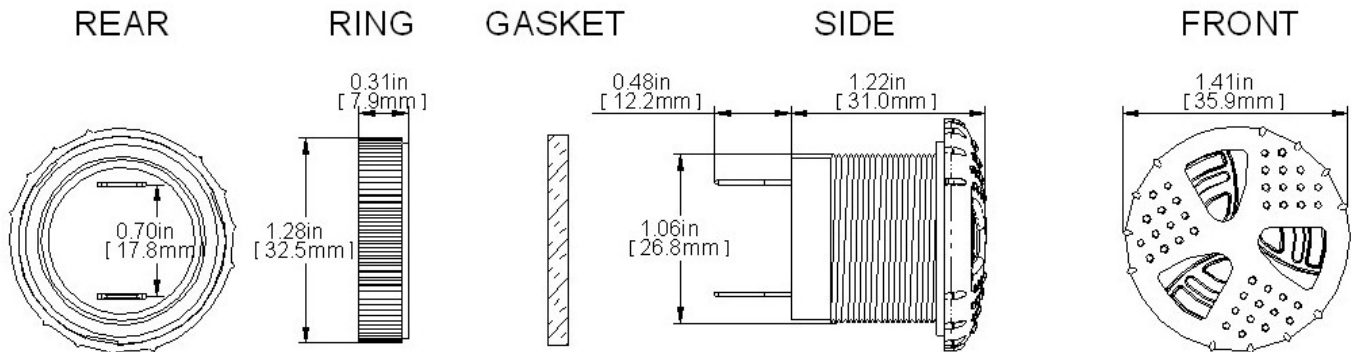
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Beep Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: *85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED  
Dimensions shown with volume control installed on unit.

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Revision: 3.14

# TLHC-88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

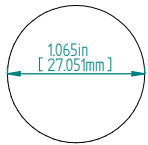
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

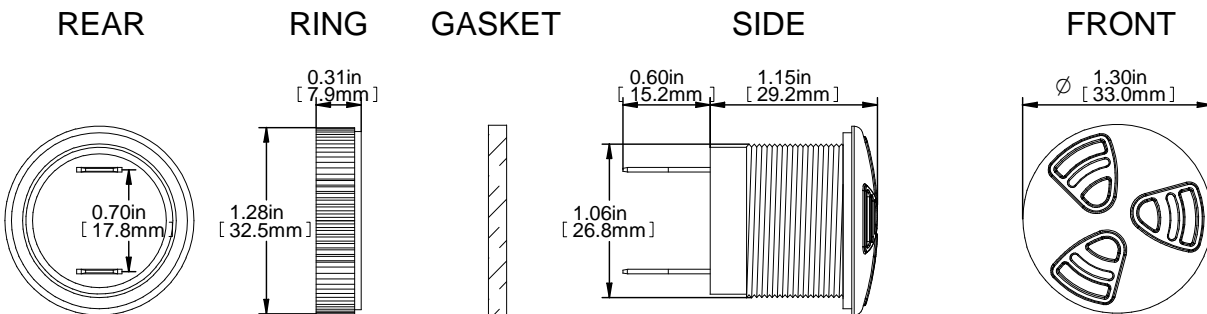
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-88B-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

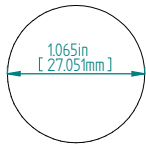
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

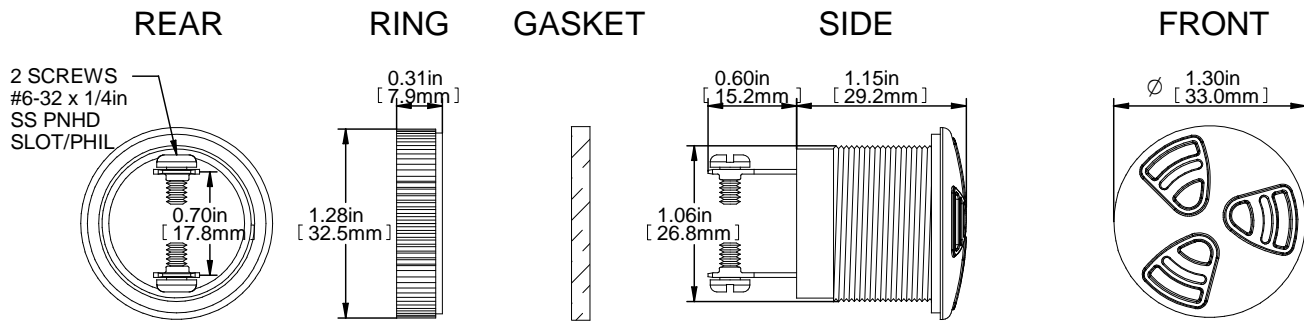
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12



# TLHC-88B-930-W

Made in  
USA



Image Not  
Available

Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

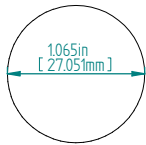
## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

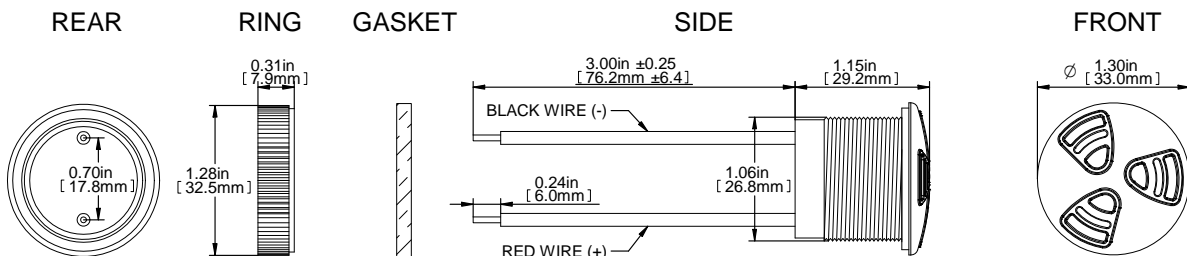
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-88G-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

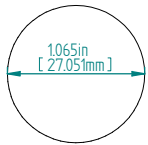
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified– Withstands water submergence and dust exposure Humidity– Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

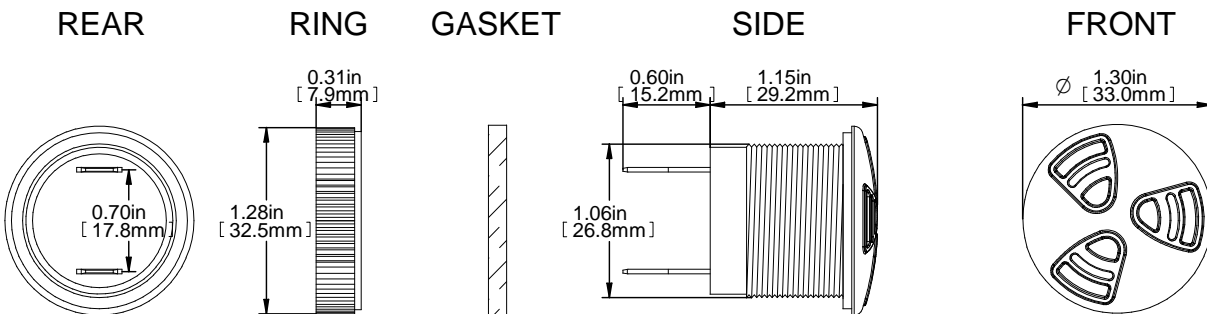
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

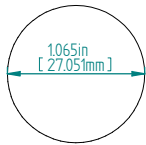
# TLHC-88G-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

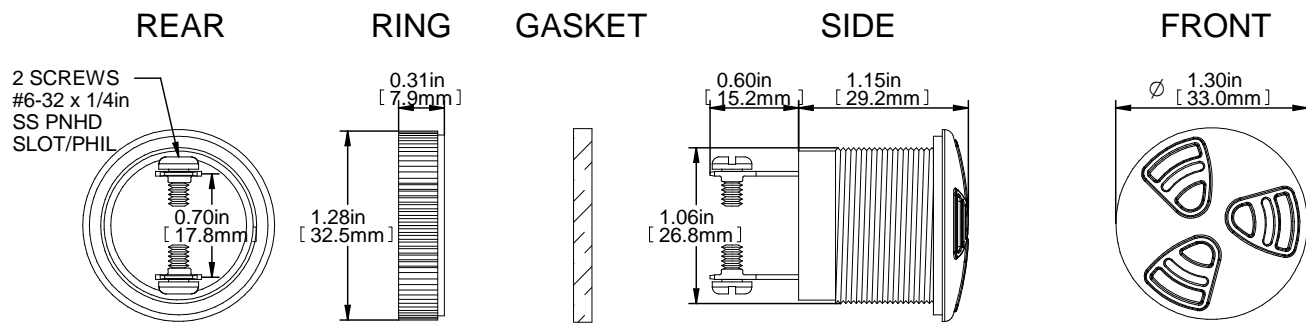
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-88G-930-W

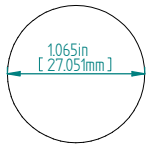
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

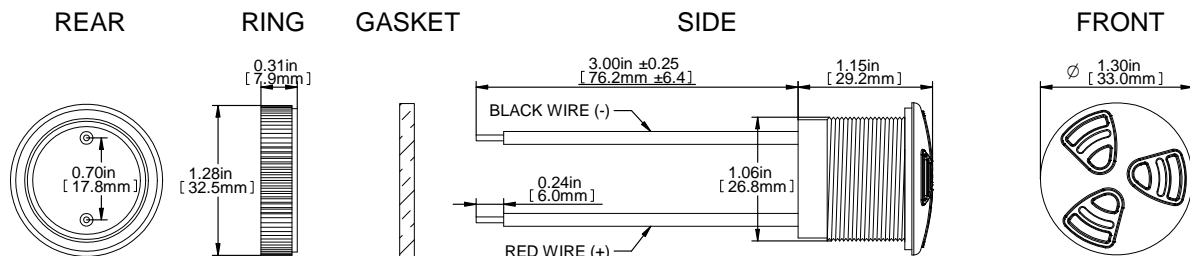
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-88R-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

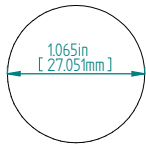
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

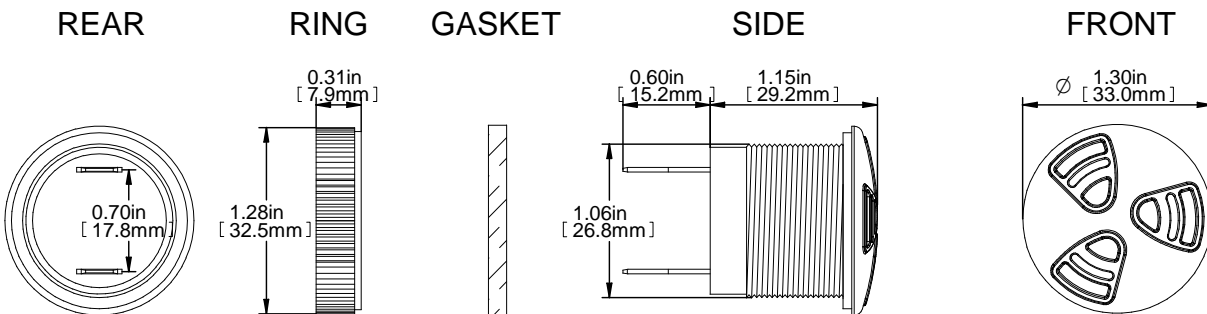
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11



# TLHC-88R-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

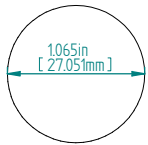
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

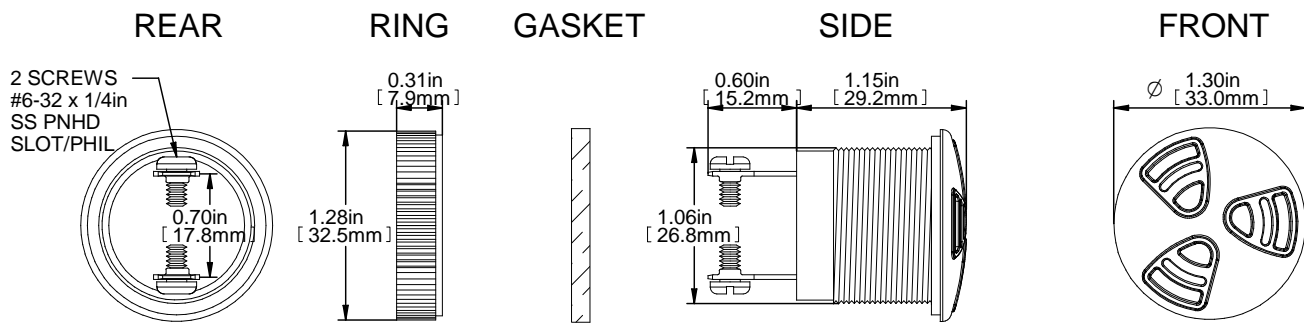
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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www.floydbell.com

Revision: 4.11

# TLHC-88R-930-W

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

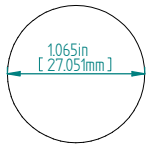
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

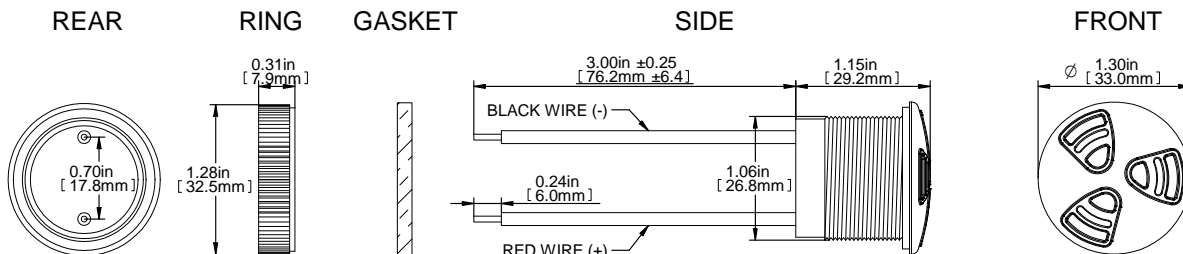
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.15

# TLHC-88W-930-Q

**Made in  
USA**



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

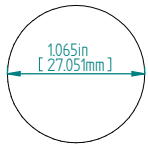
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

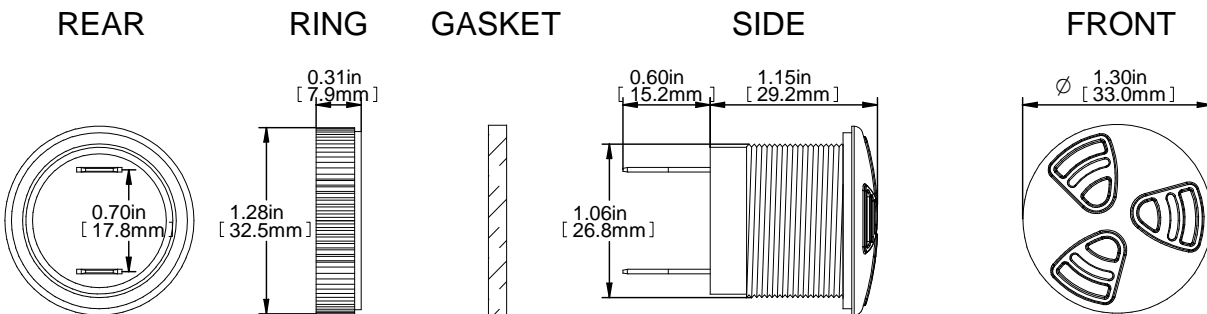
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 10.12

# TLHC-88W-930-S

Made in  
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- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

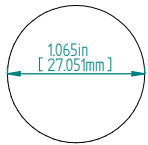
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

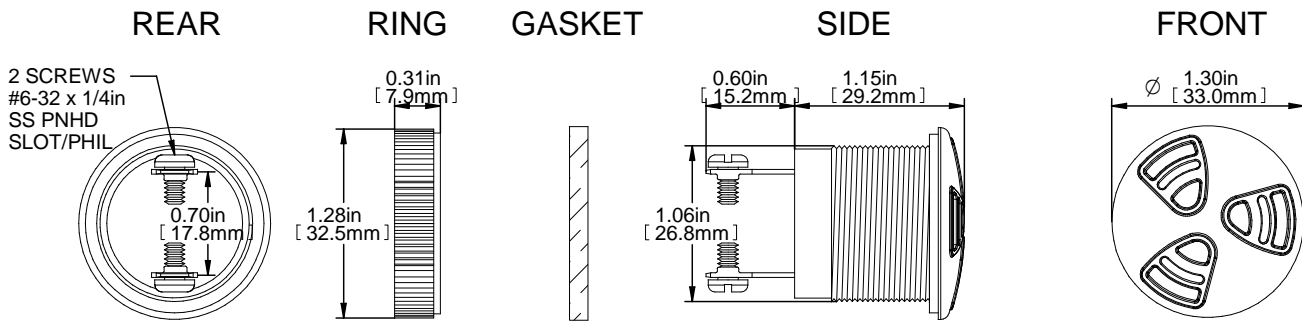
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-88W-930-W

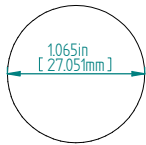
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

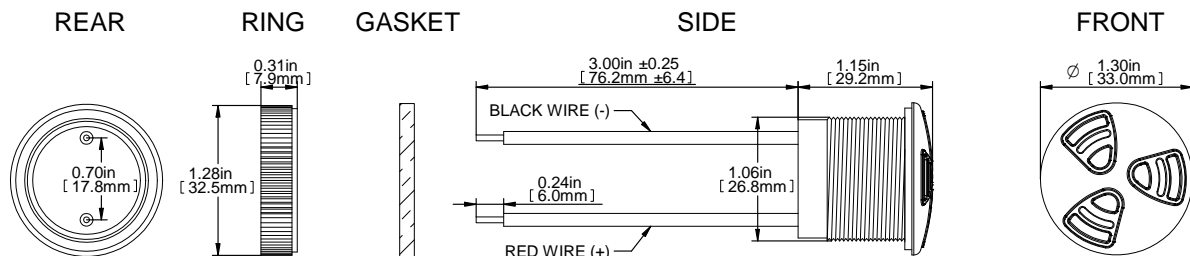
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12



# TLHC-88Y-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

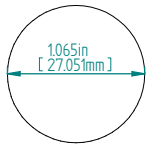
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified– Withstands water submergence and dust exposure Humidity– Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

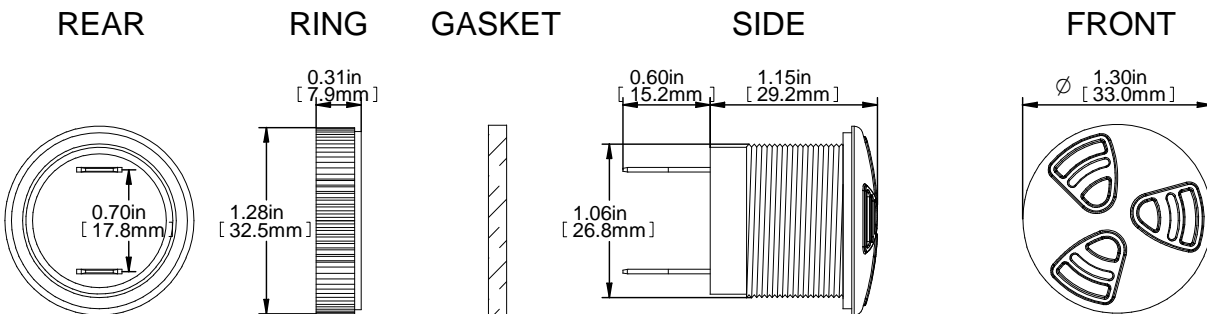
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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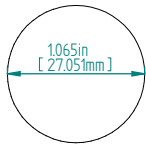
# TLHC-88Y-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

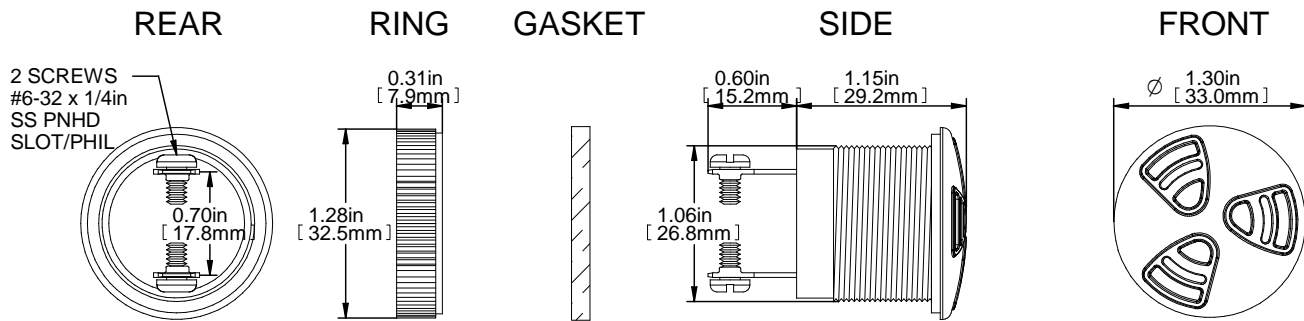
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-88Y-930-W

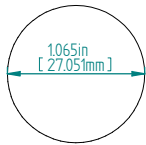
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

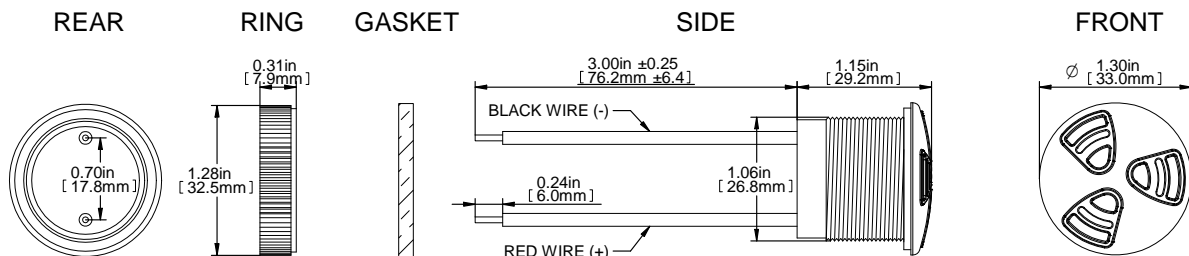
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHC-V88G-930-Q

Made in  
USA



Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

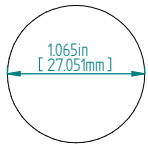
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: *85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

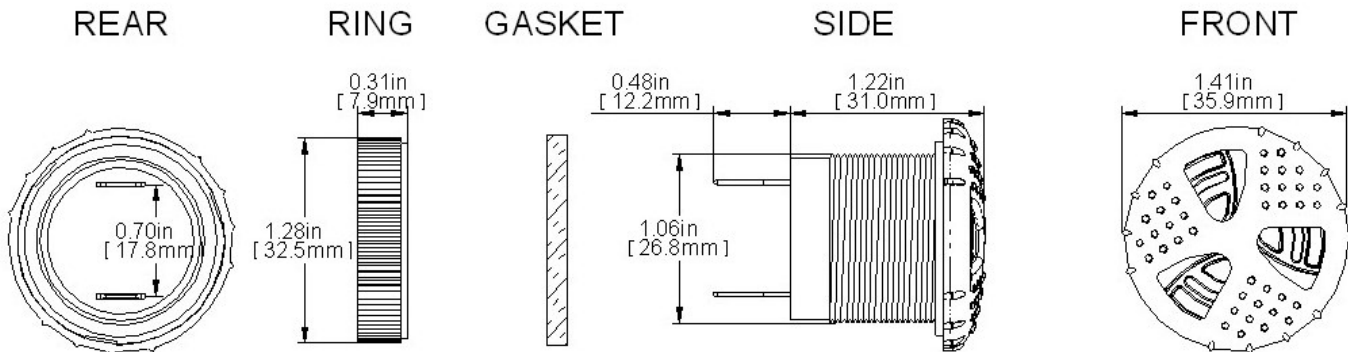
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED  
Dimensions shown with volume control installed on unit.

**Floyd Bell Inc**  
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Revision: 2.13

# TLHC-V88R-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

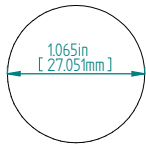
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Continuous Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: *85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

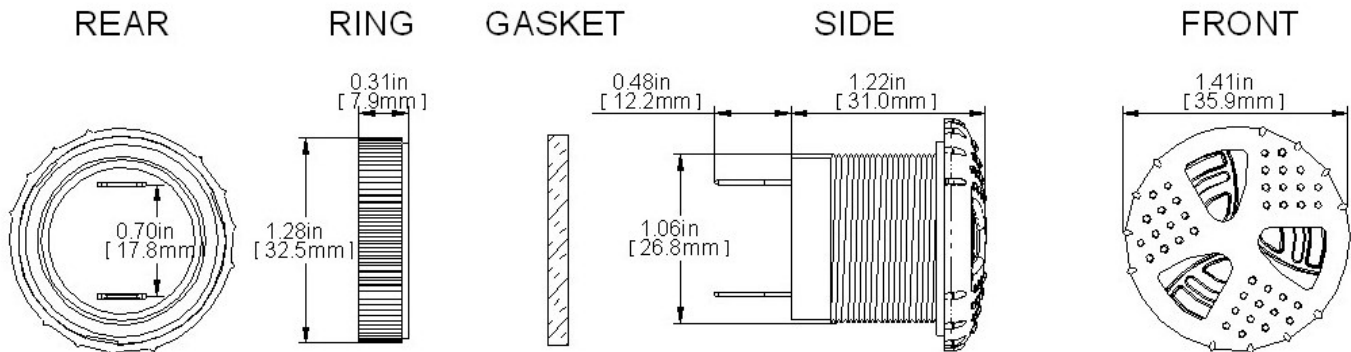
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED  
Dimensions shown with volume control installed on unit.

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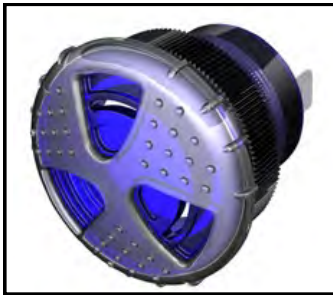
720 Dearborn Park Lane • Columbus, OH 43085  
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Revision: 2.13



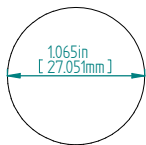
# TLHO-V88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

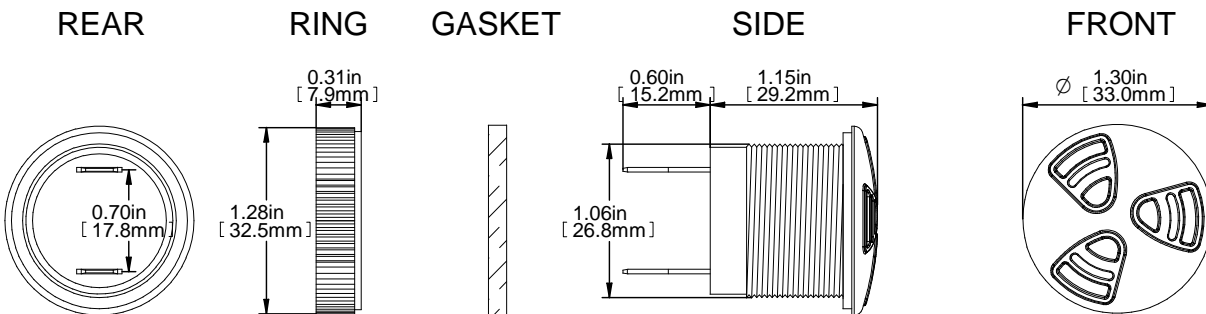
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With the volume control fully open. *85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

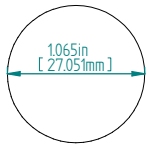
# TLHO-88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

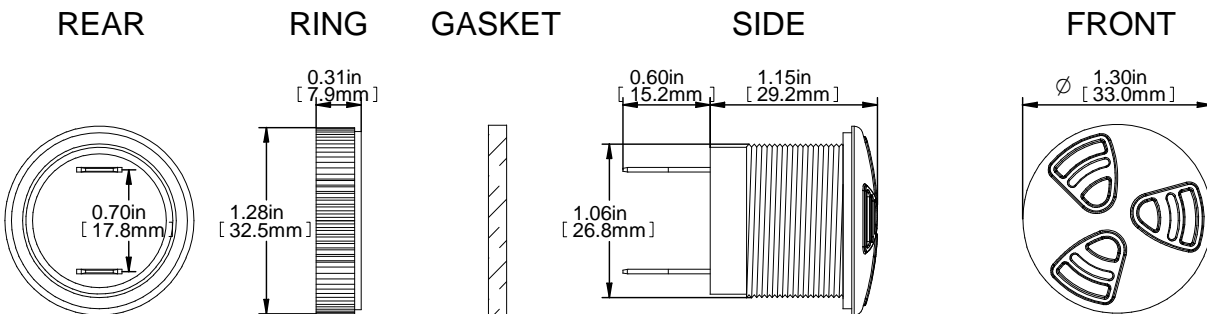
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHO-88B-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

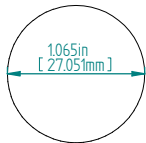
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

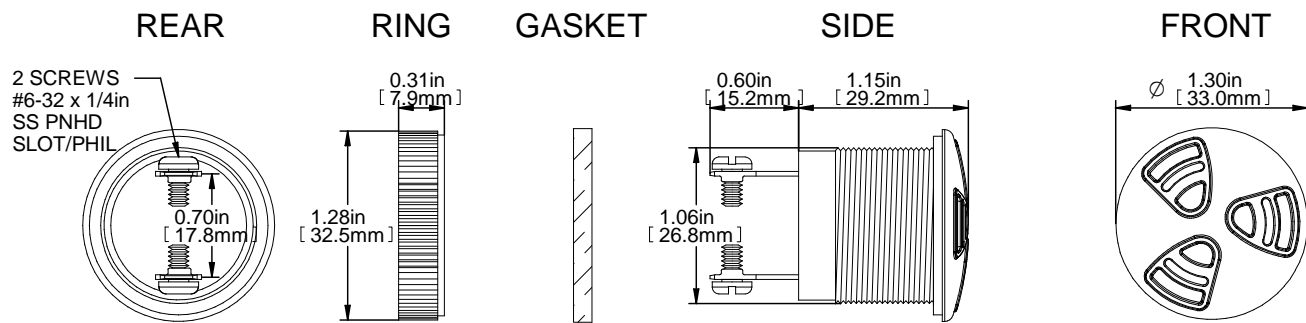
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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www.floydbell.com

Revision: 10.12

# TLHO-88B-930-W

Made in  
USA



Image Not  
Available

Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

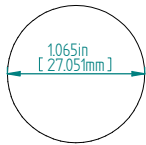
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

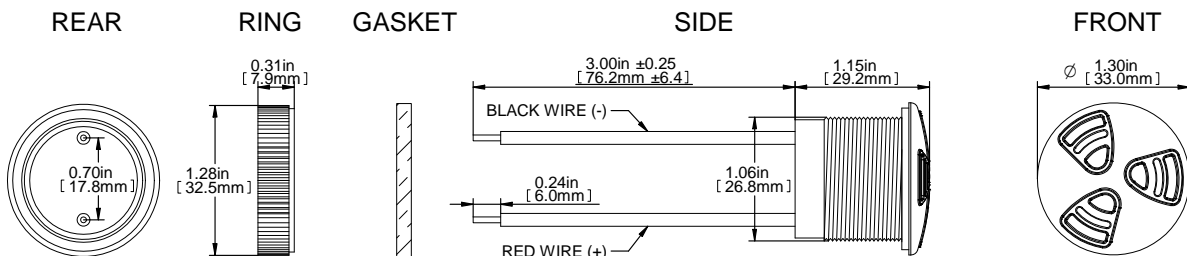
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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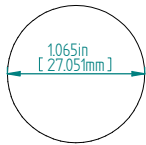
# TLHO-88G-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

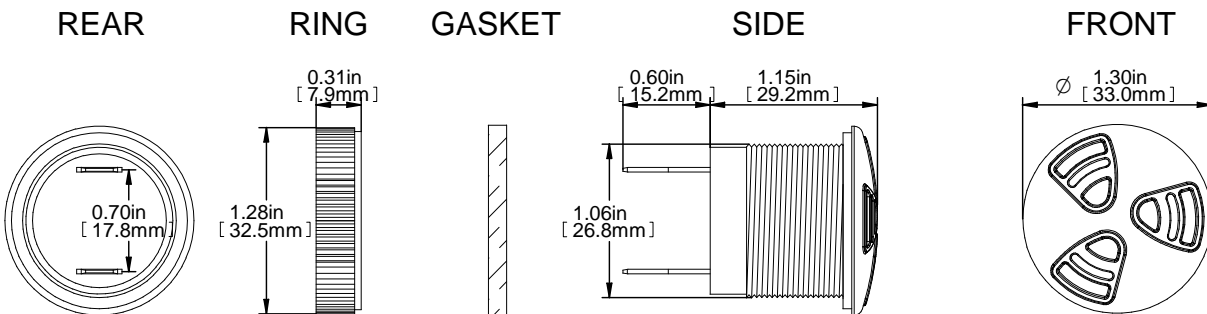
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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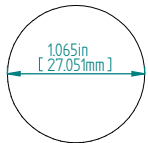
# TLHO-88G-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

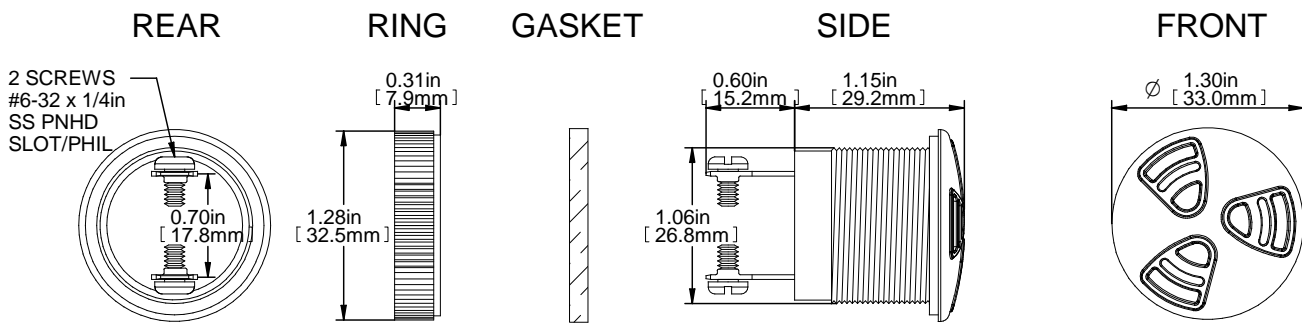
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHO-88G-930-W

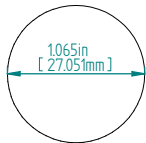
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

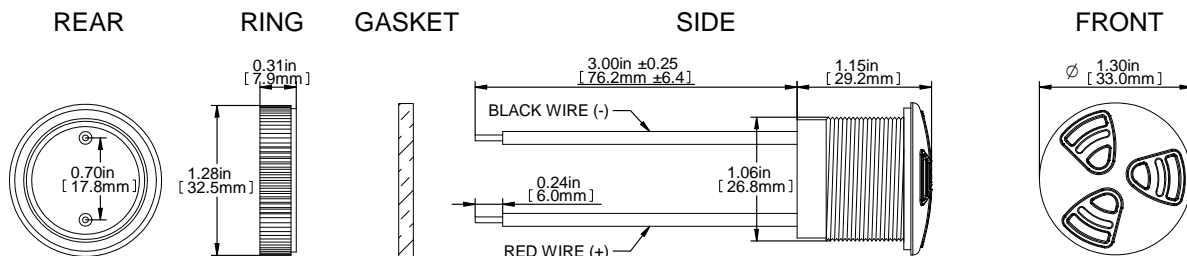
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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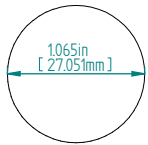
# TLHO-88R-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

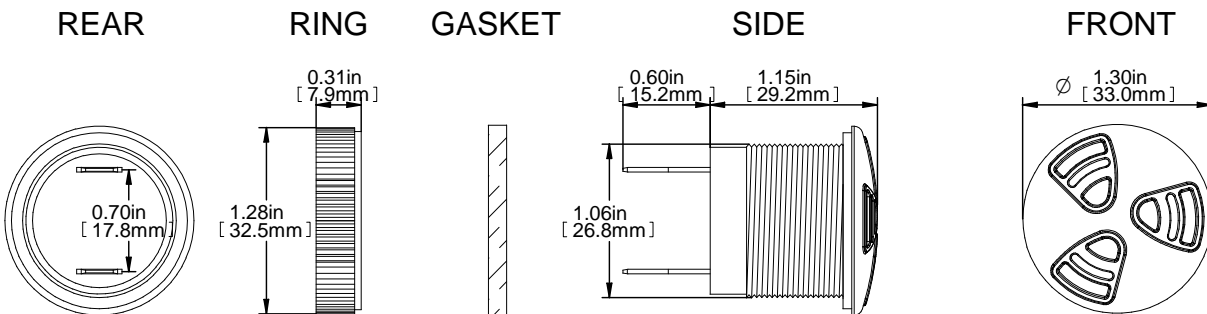
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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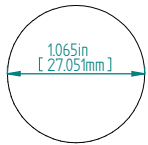
# TLHO-88R-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

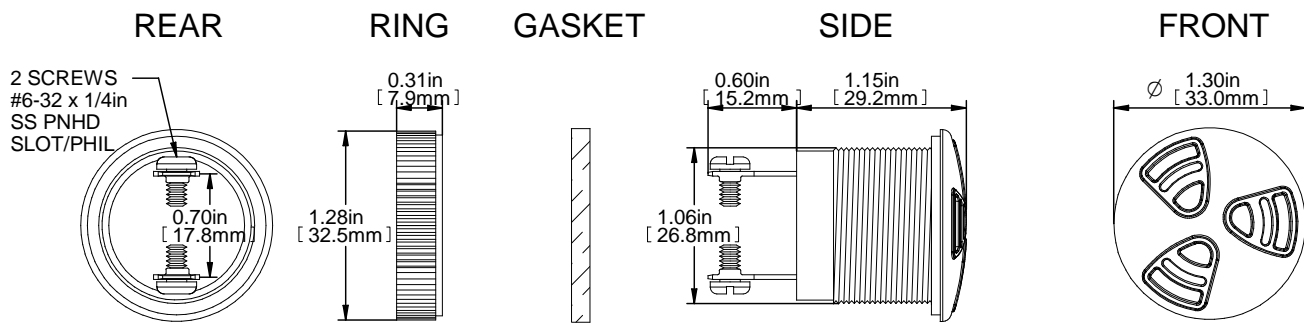
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHO-88R-930-W

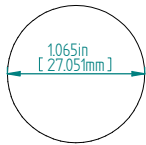
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

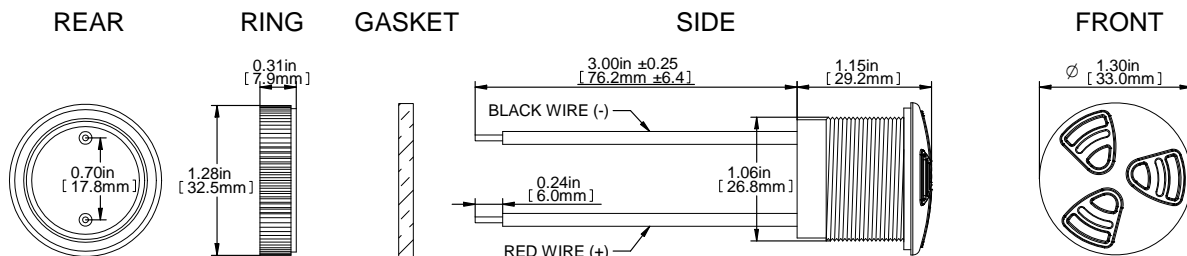
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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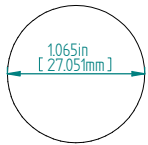
# TLHO-88W-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

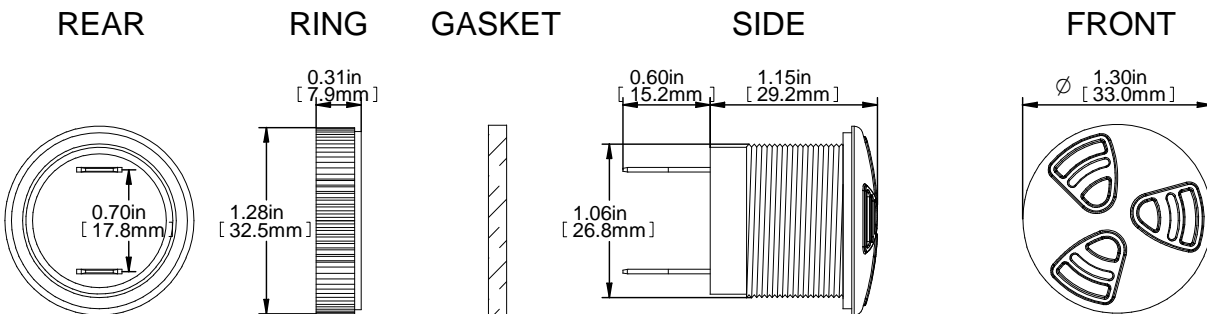
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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# TLHO-88W-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

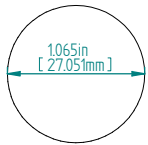
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

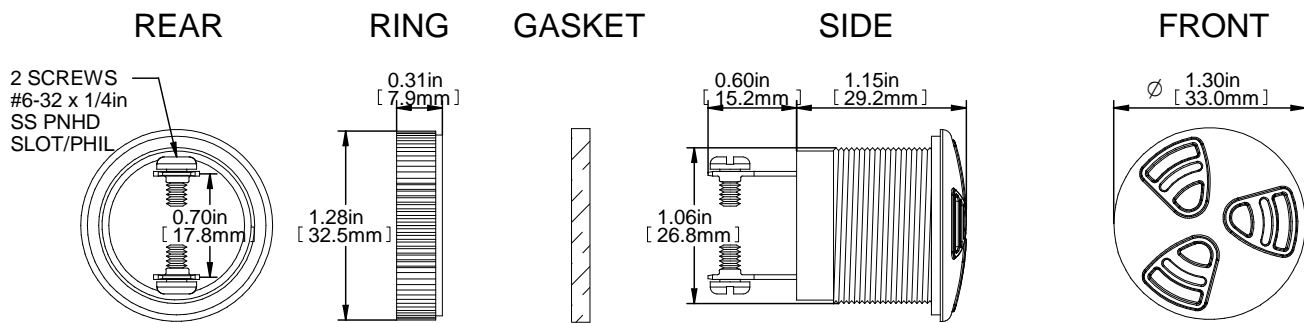
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TLHO-88W-930-W

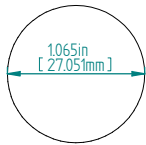
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

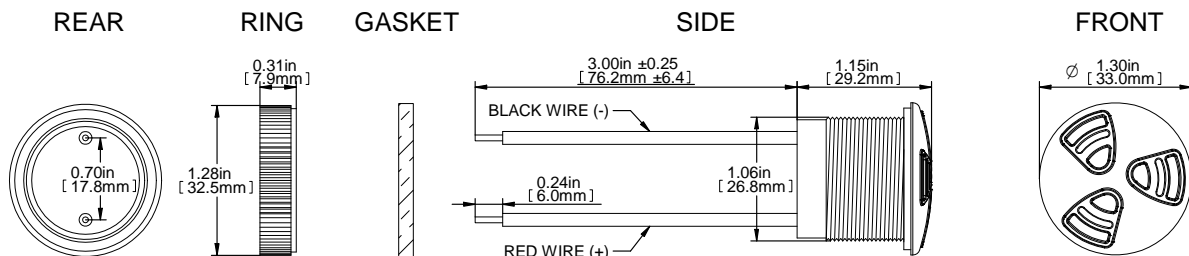
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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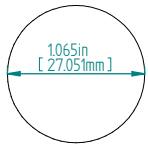
# TLHO-88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

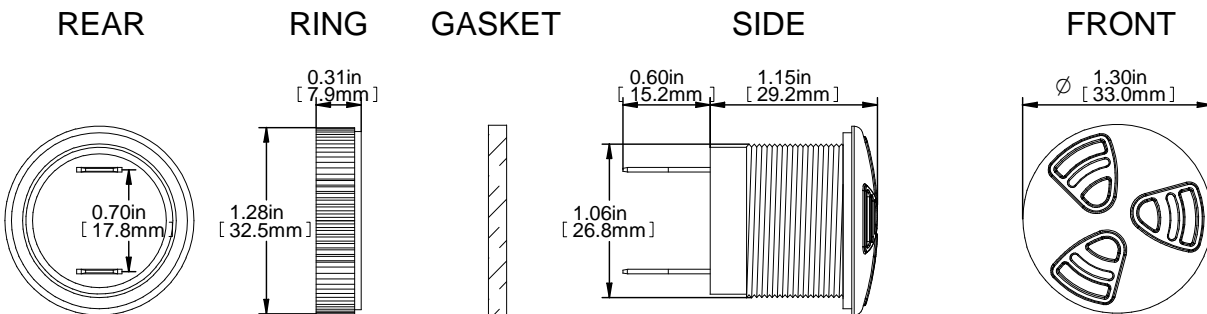
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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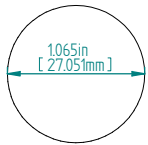
# TLHO-88Y-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

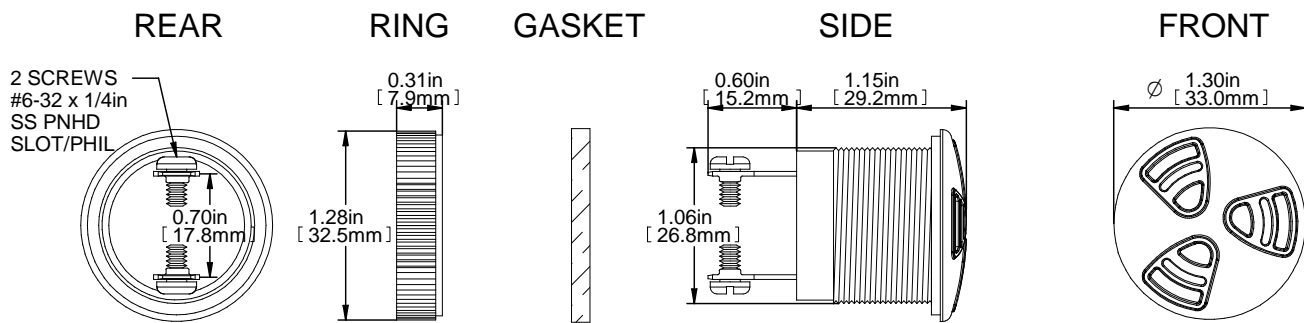
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12



# TLHO-88B-930-W

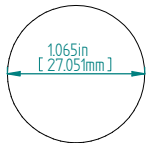
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

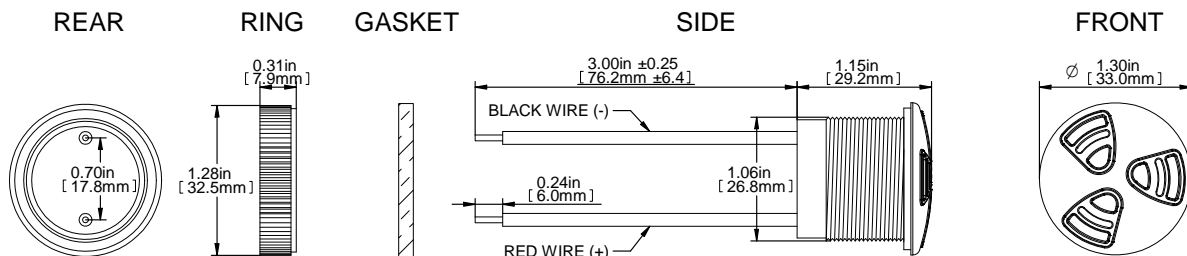
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

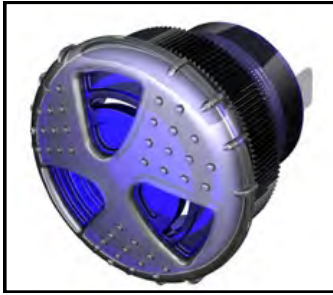
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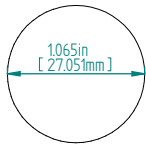
# TLHO-V88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

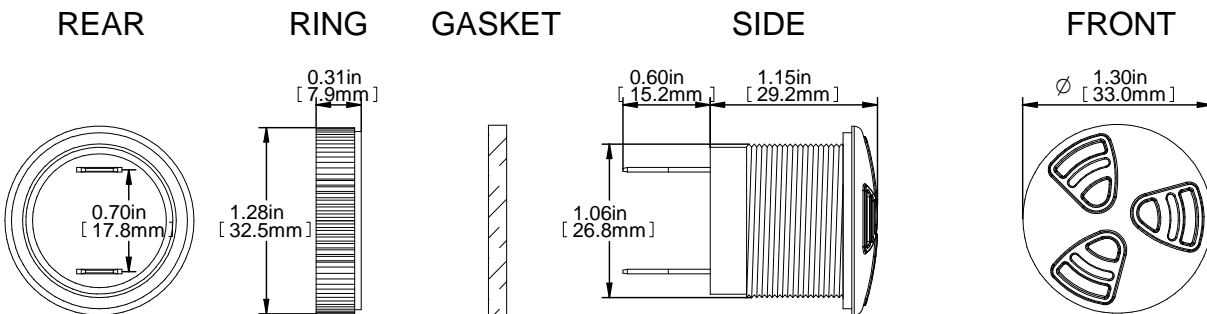
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Whoop Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With the volume control fully open. *85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



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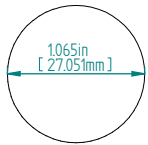
# TLHS-88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

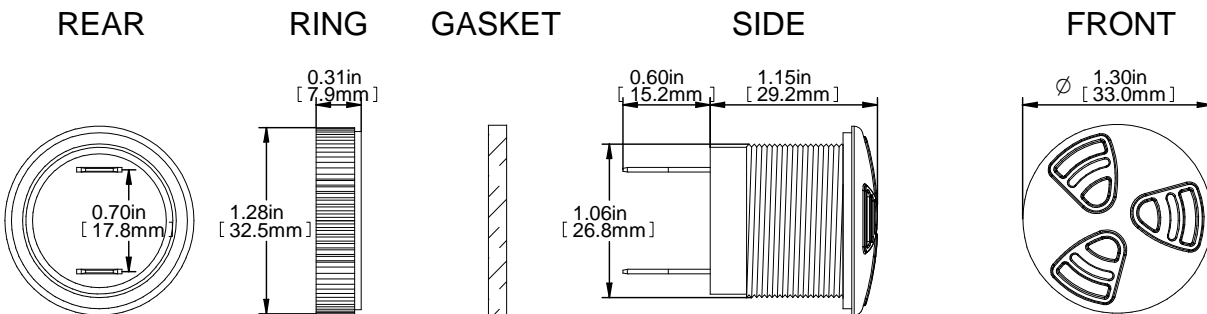
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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Revision: 10.12

# TLHS-88B-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

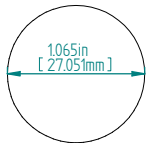
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

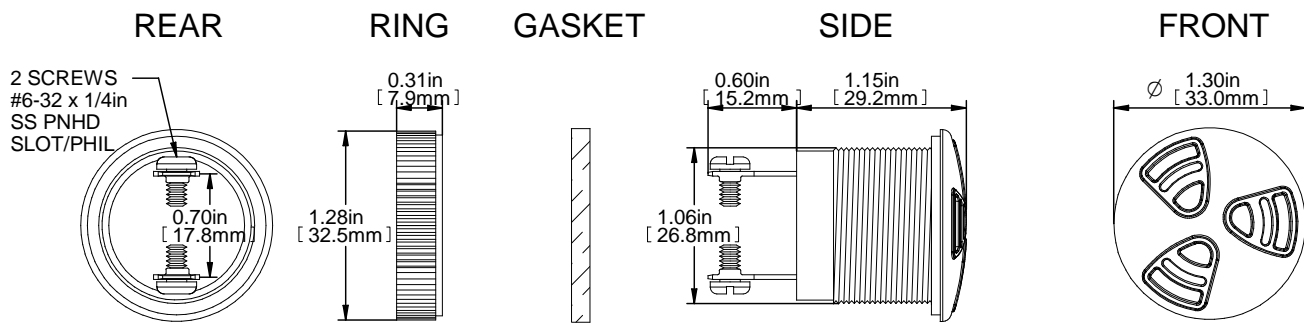
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHS-88B-930-W

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Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

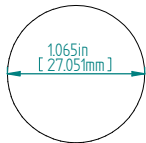
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

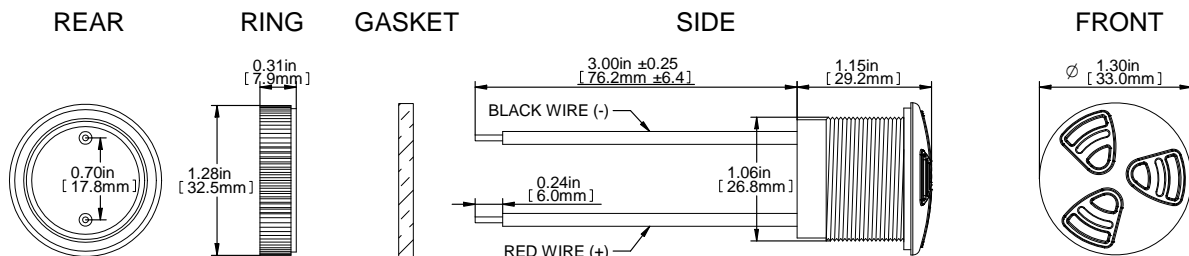
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



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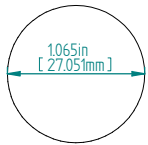
# TLHS-88G-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

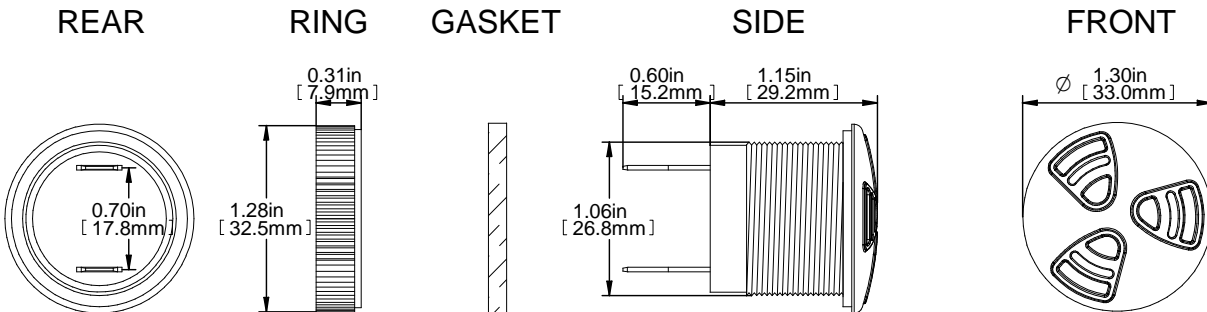
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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## DIMENSIONS



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# TLHS-88G-930-S

Made in  
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- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

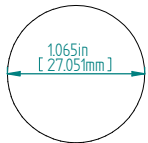
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

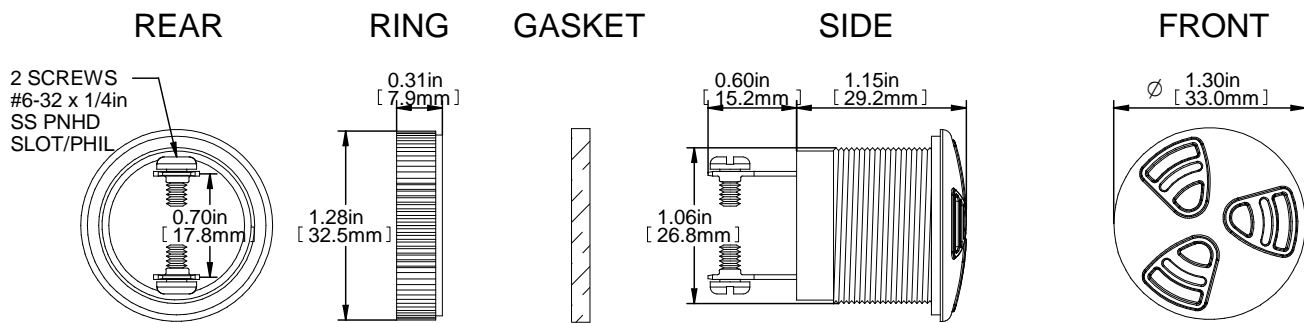
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 10.12

# TLHS-88G-930-W

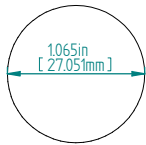
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Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

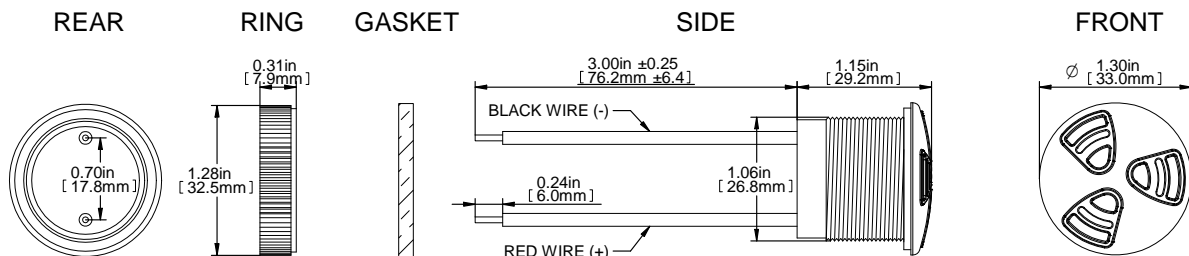
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

**Floyd Bell Inc**  
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720 Dearborn Park Lane • Columbus, OH 43085  
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Revision: 10.12

# TLHS-88R-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

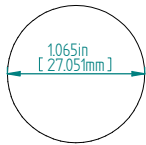
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

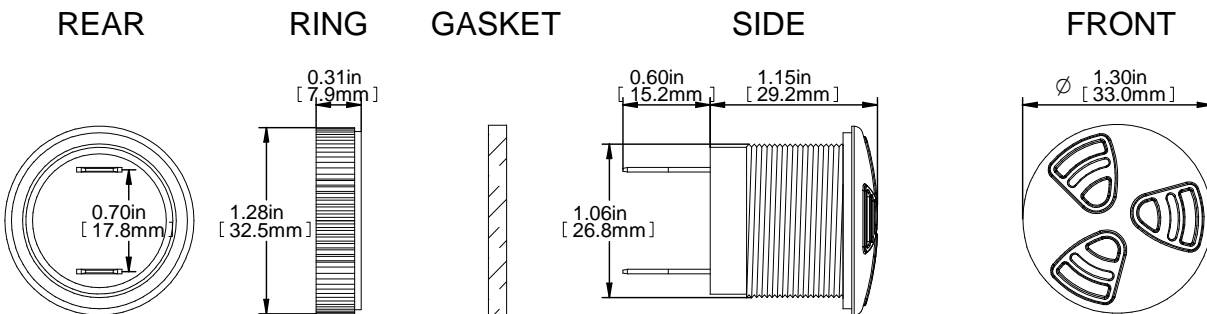
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

# TLHS-88R-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

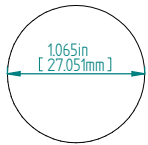
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

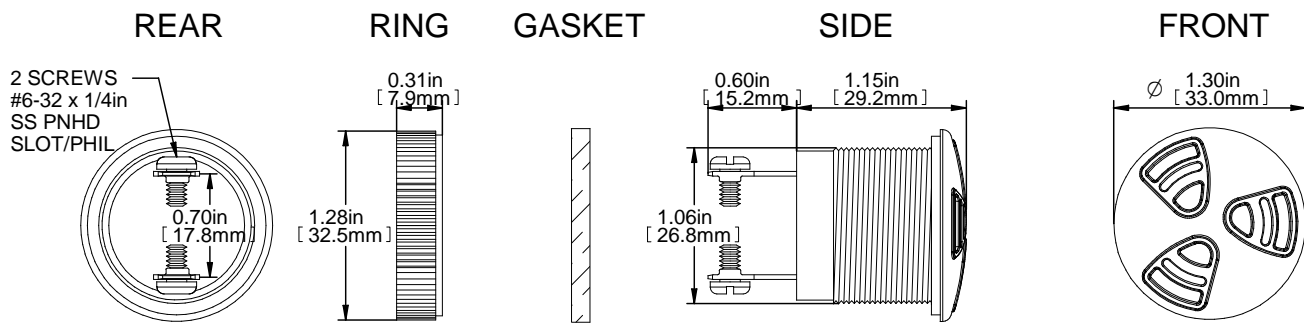
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.11



# TLHS-88R-930-W

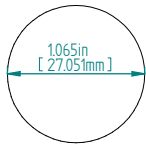
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

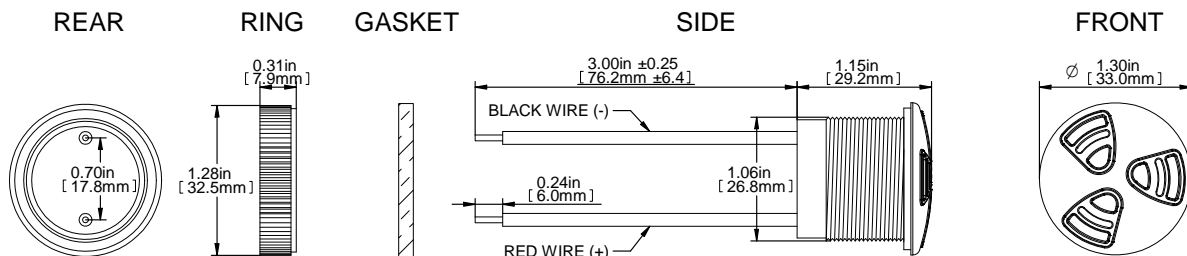
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

# TLHS-88W-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

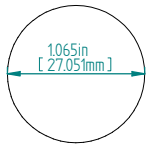
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

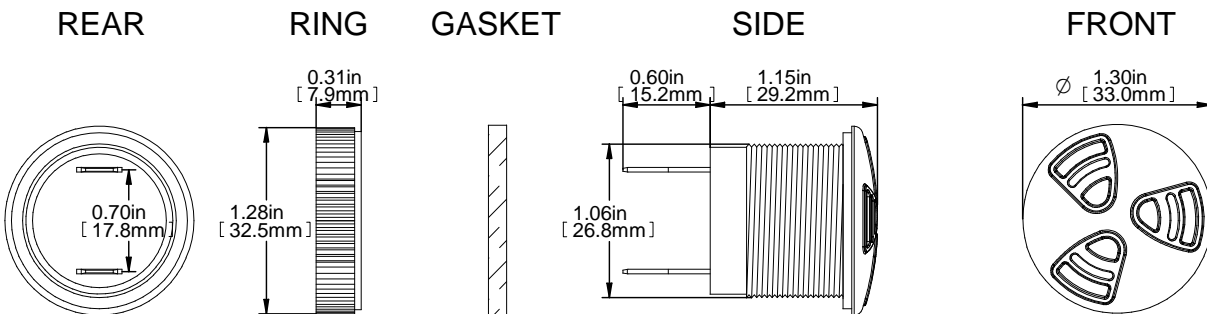
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHS-88W-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

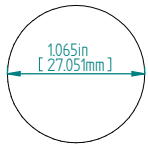
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

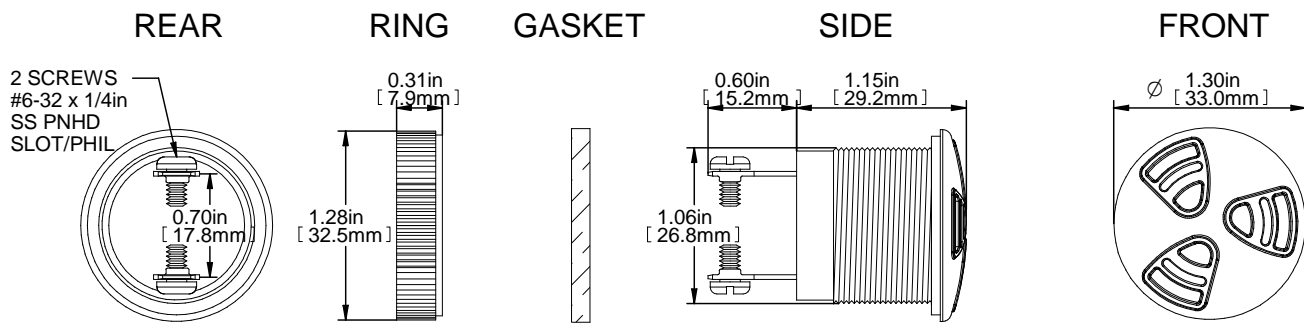
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 10.12

# TLHS-88W-930-W

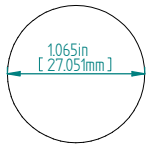
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

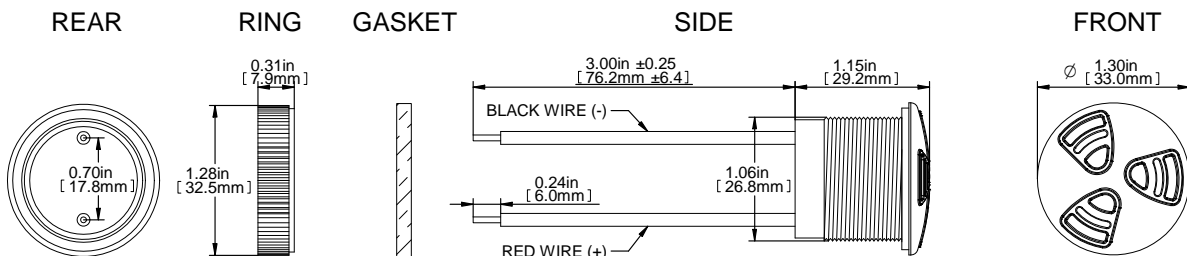
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHS-88Y-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

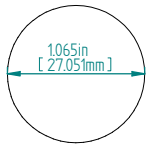
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

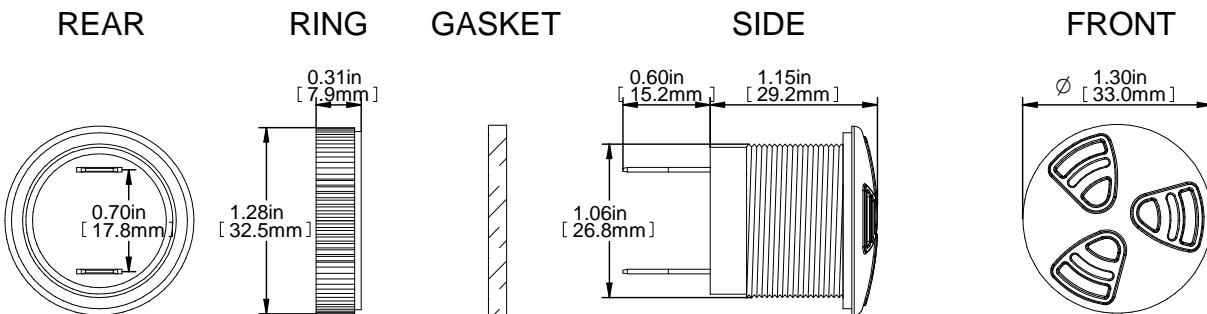
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHS-88Y-930-S

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- High Intensity LED Light
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- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

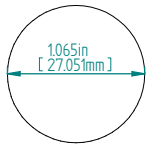
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

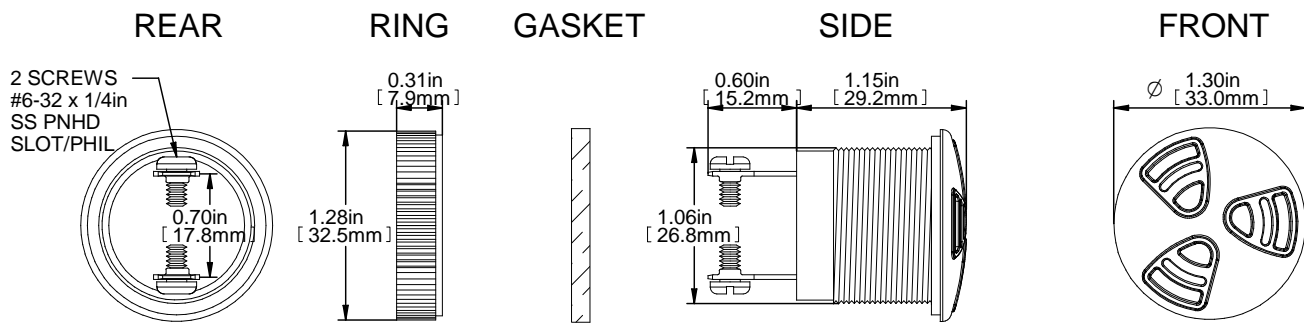
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHS-88Y-930-W

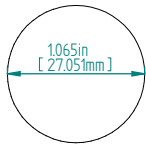
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

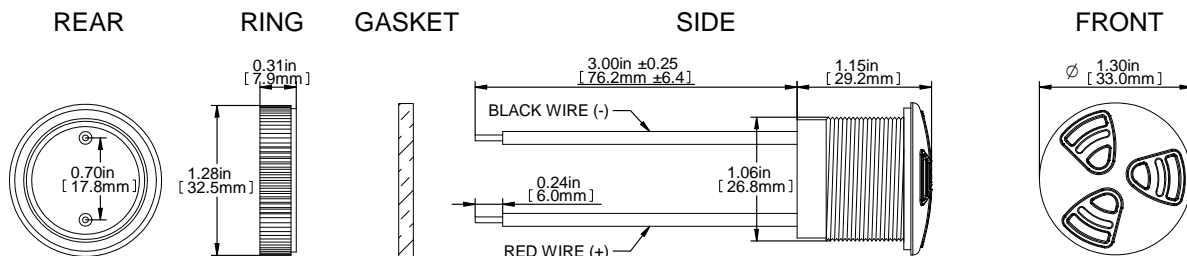
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHS-88R-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

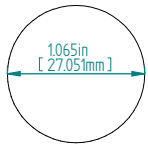
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Siren Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: *85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

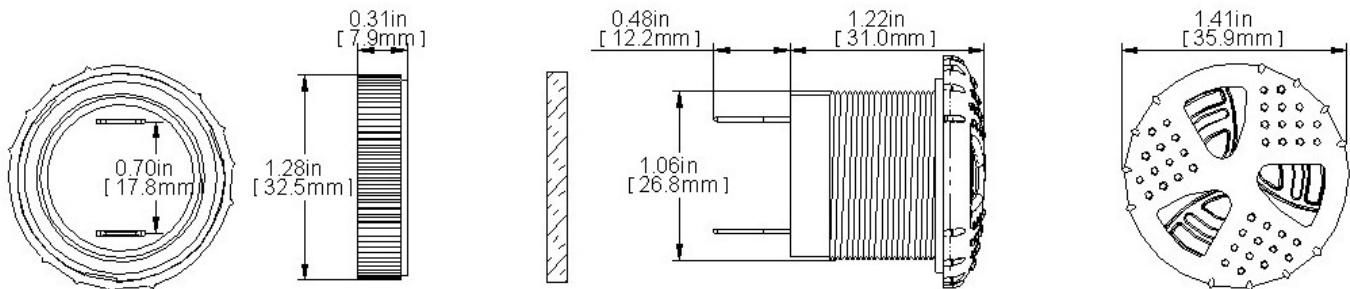
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED  
Dimensions shown with volume control installed on unit.

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Revision: 1.20

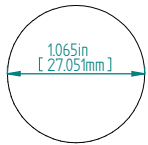
# TLHT-88B-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

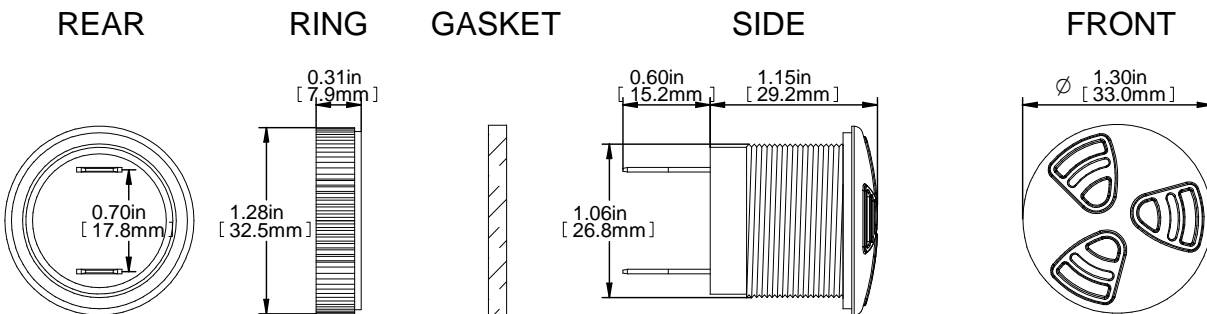
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHT-88B-930-W

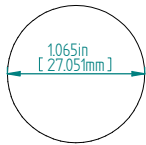
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

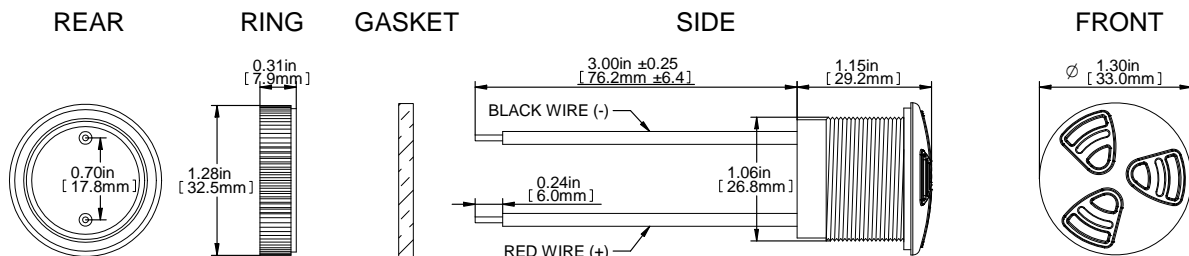
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12



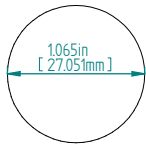
# TLHT-88G-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

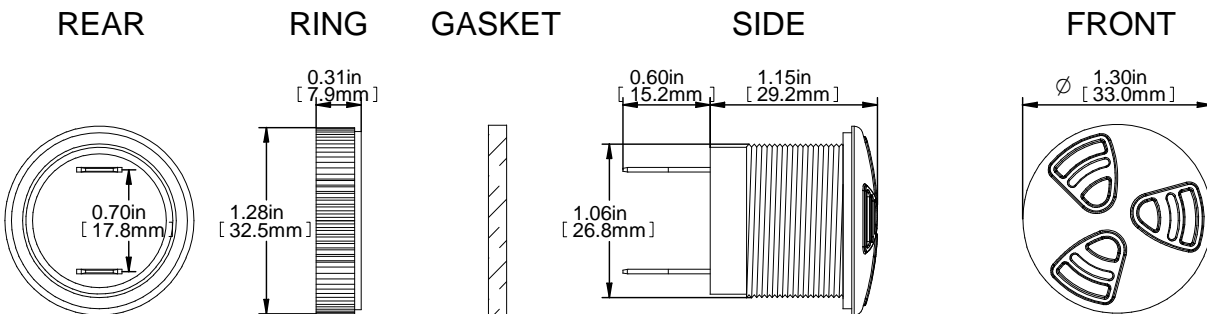
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHT-88G-930-W

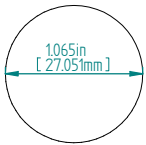
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

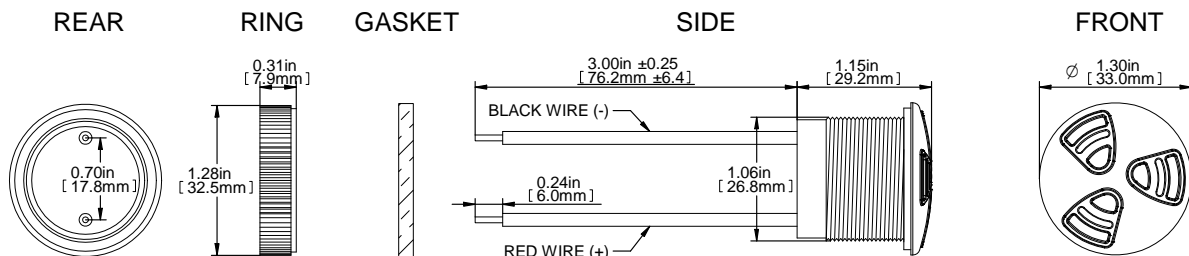
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

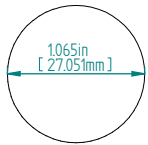
# TLHT-88R-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

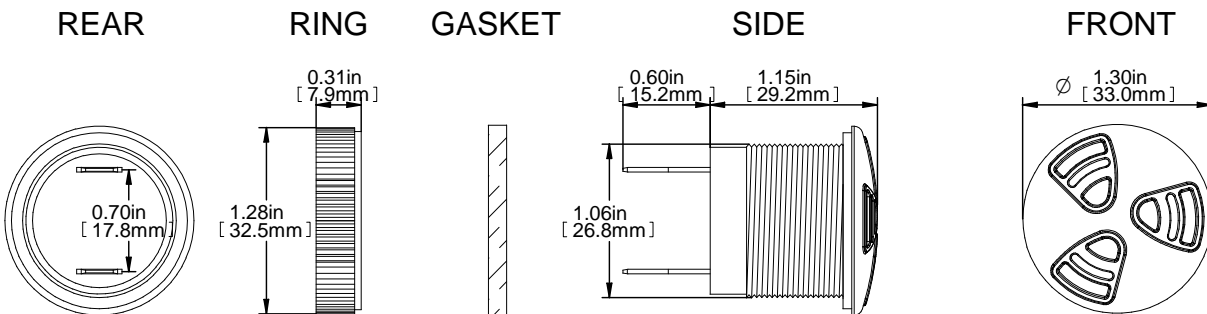
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

# TLHT-88R-930-S

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

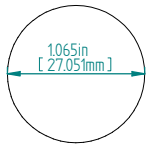
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

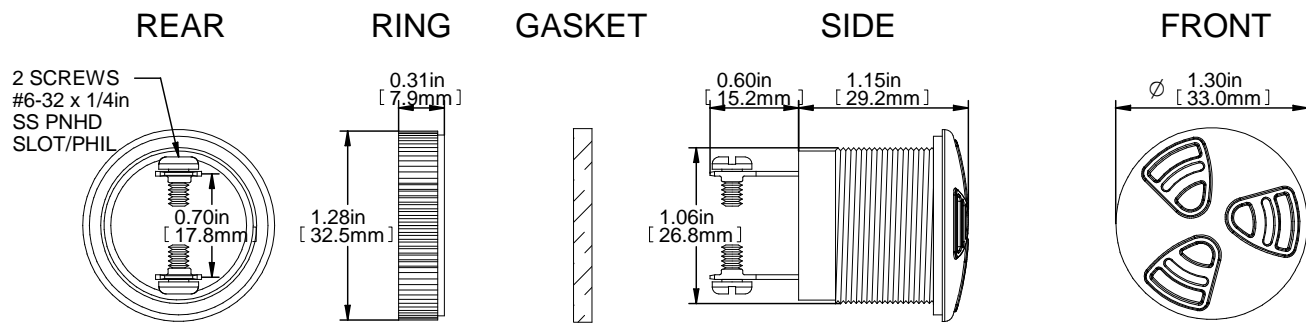
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

# TLHT-88R-930-W

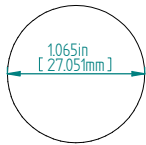
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

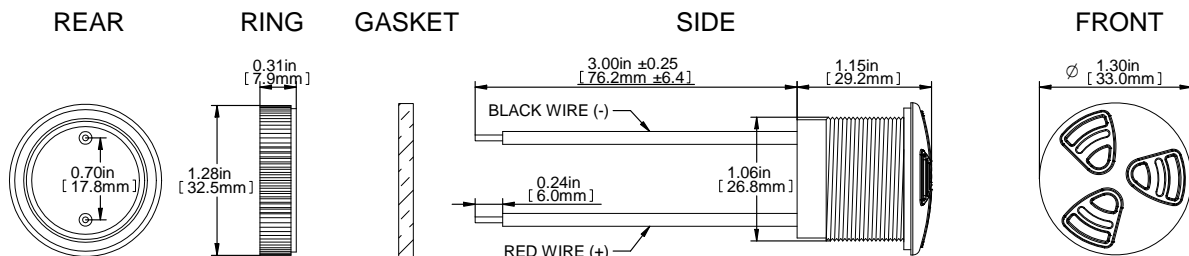
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11



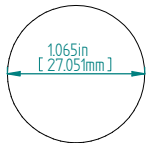
# TLHT-88W-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

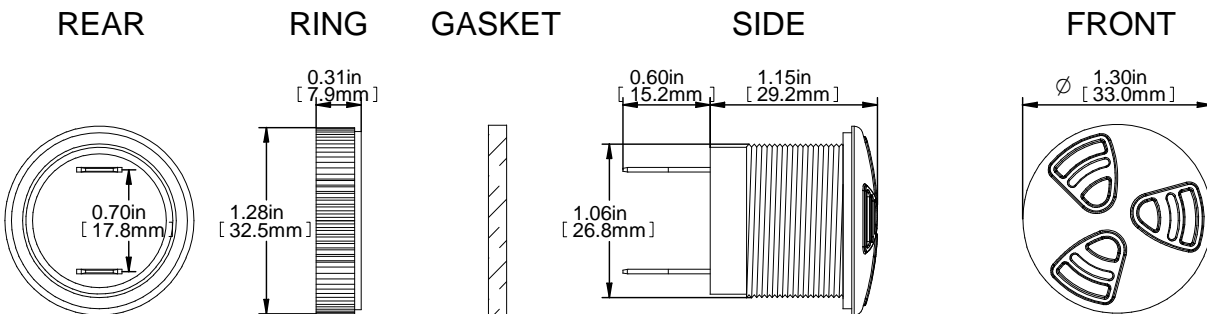
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHT-88W-930-W

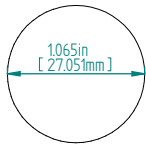
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

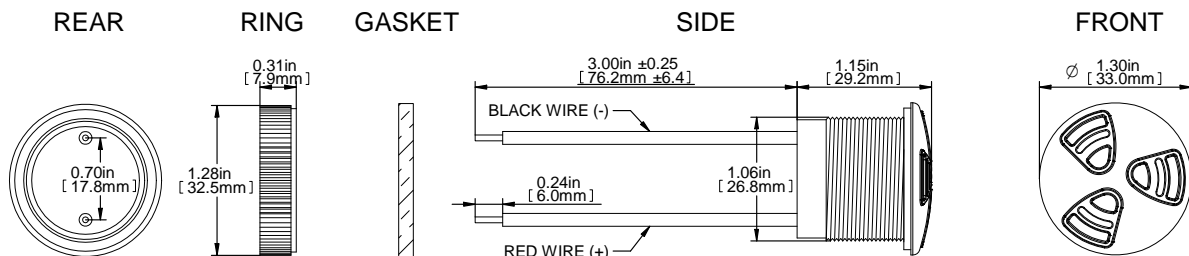
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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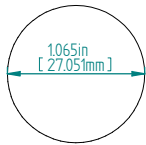
# TLHT-88Y-930-Q

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

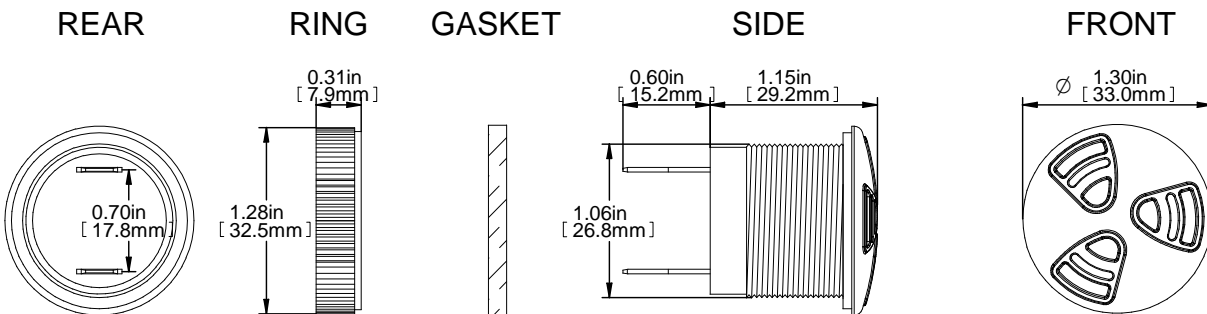
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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www.floydbell.com

Revision: 10.12

# TLHT-88Y-930-W

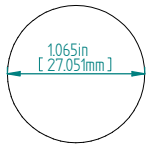
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

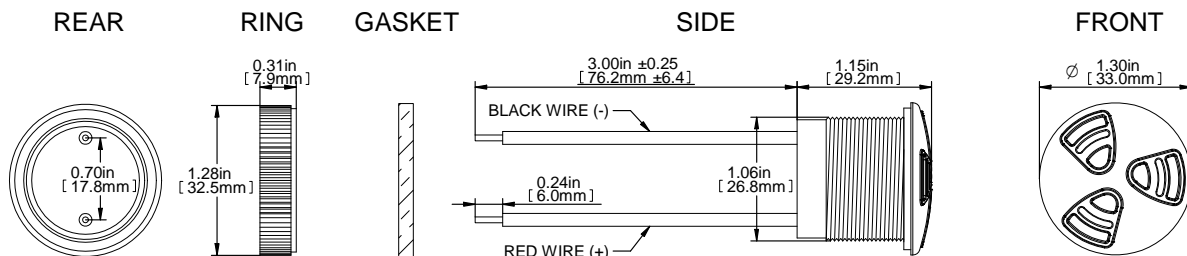
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Staccato Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



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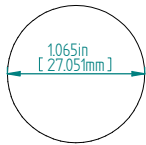
# TLHW-88B-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

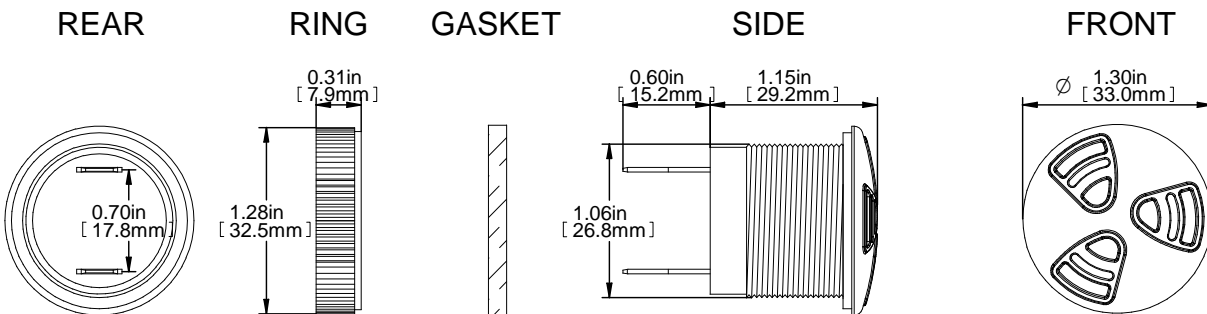
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



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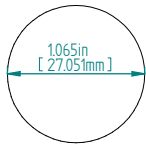
# TLHW-88B-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

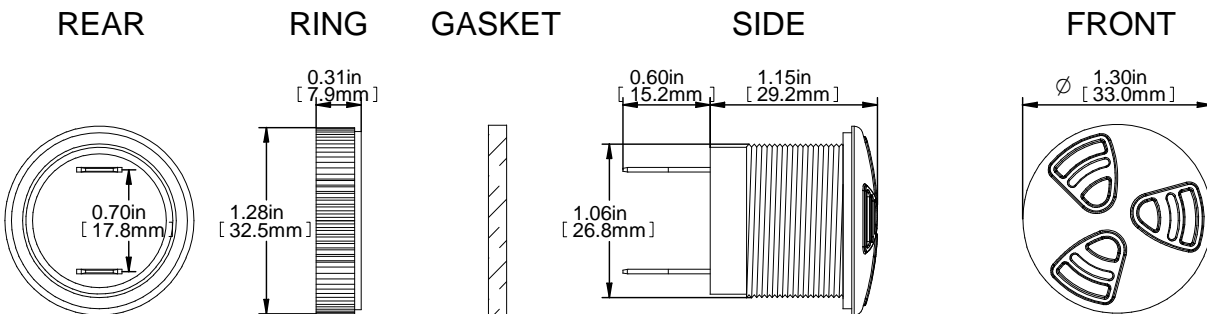
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

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## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHW-88B-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

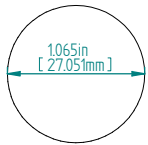
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

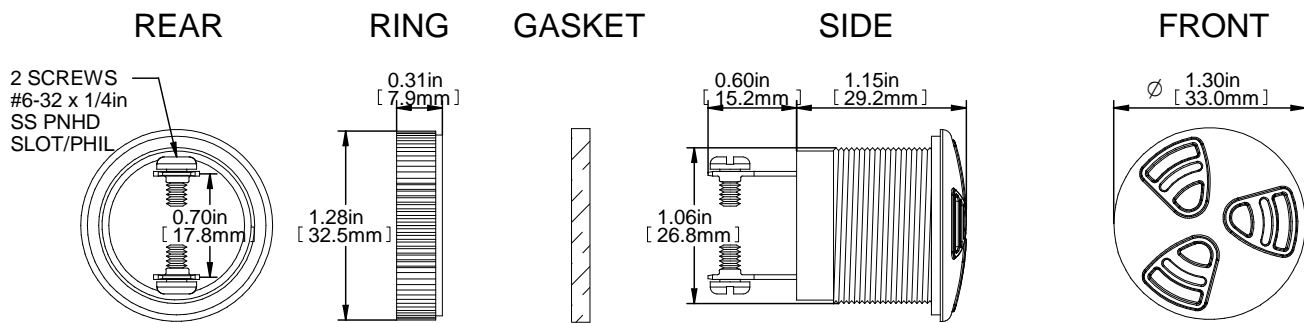
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHW-88B-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

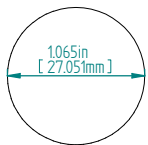
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

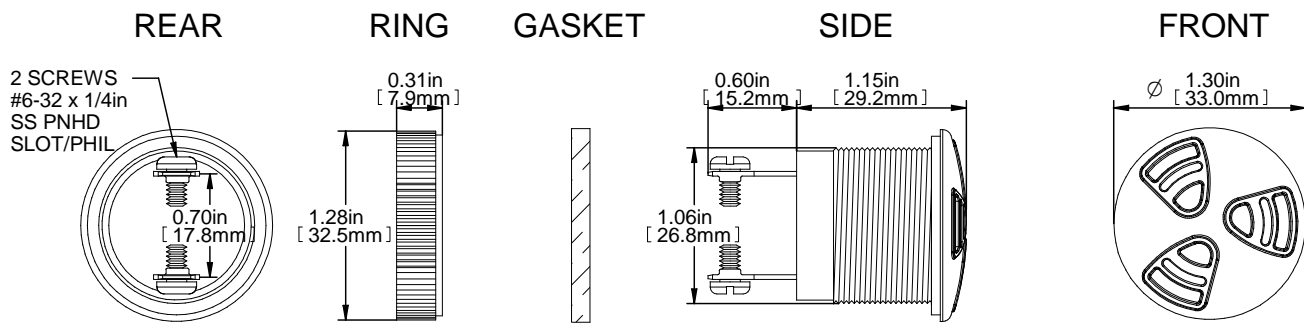
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHW-88B-930-WF

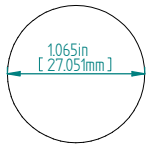
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

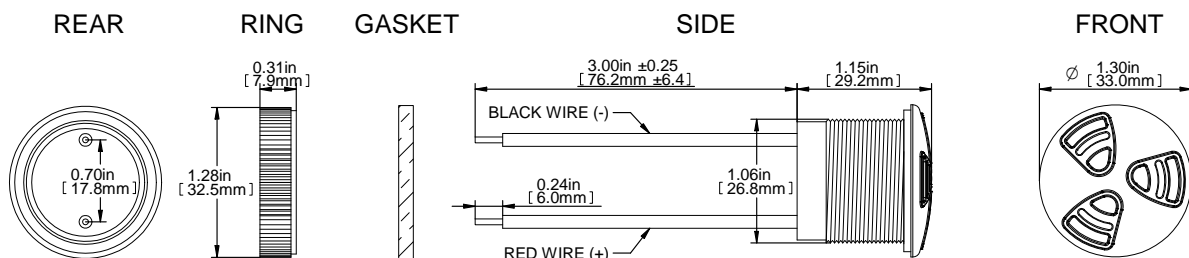
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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# TLHW-88B-930-WS

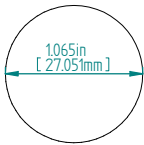
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

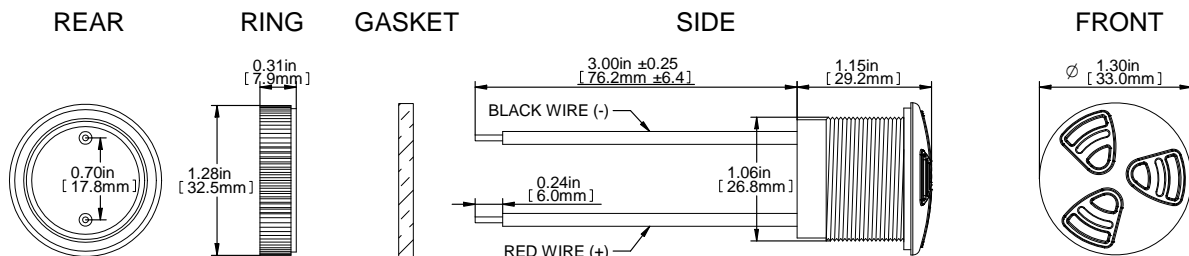
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Blue light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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Revision: 10.12



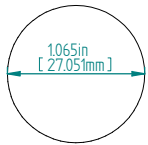
# TLHW-88G-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

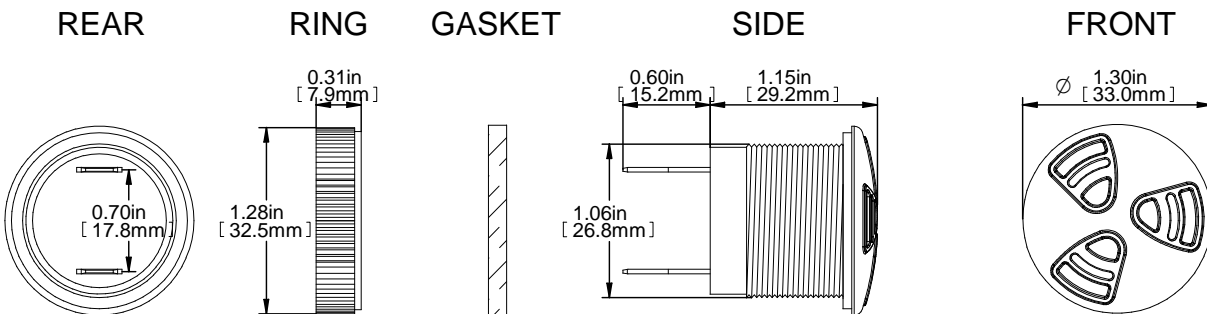
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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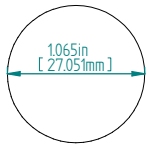
# TLHW-88G-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

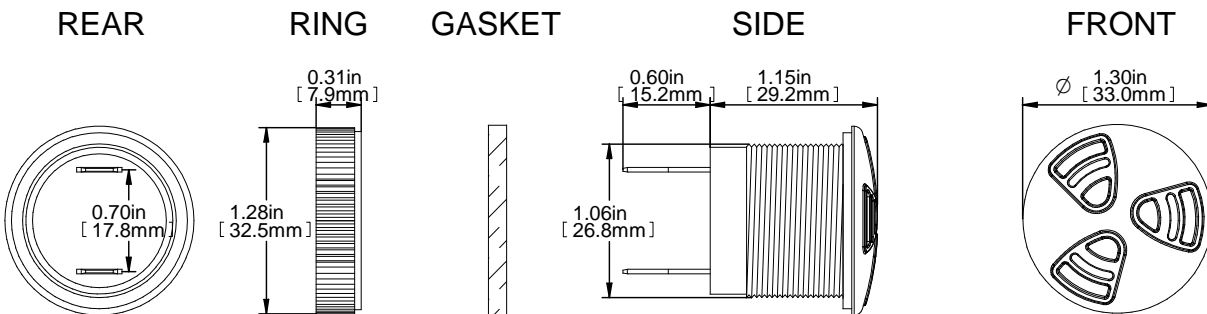
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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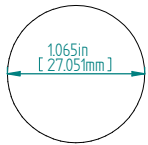
# TLHW-88G-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

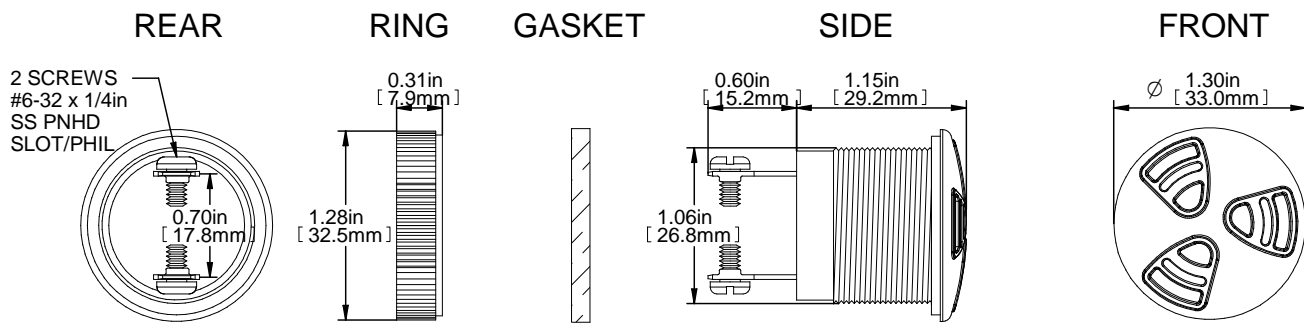
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
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<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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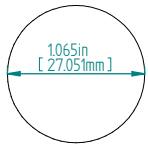
# TLHW-88G-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

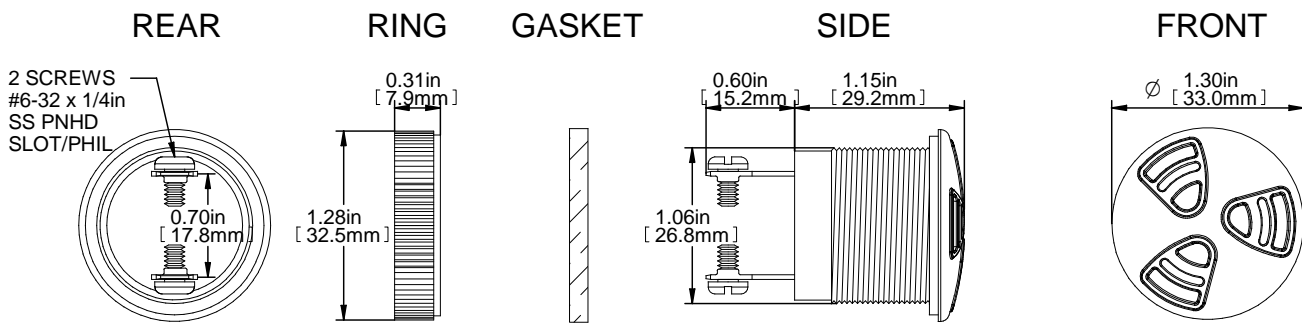
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
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<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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## DIMENSIONS



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Revision: 10.12

# TLHW-88G-930-WF

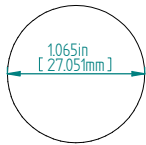
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

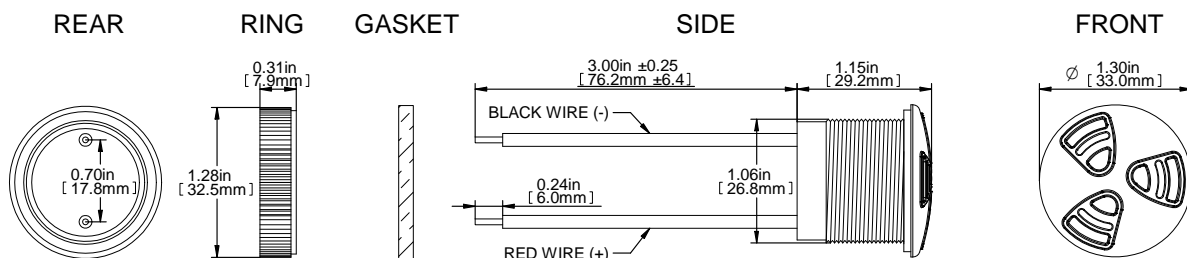
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

**Floyd Bell Inc**  
An ISO 9001:2000 Registered Company

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www.floydbell.com

Revision: 10.12



# TLHW-88G-930-WS

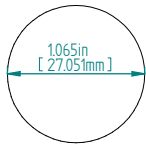
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

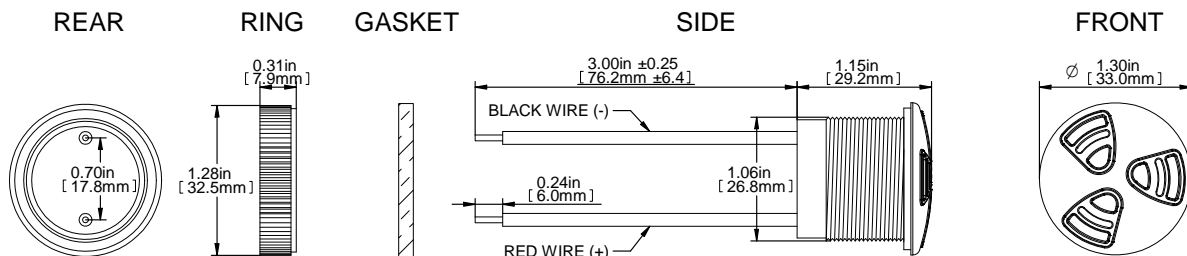
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Green light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

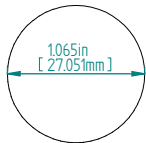
# TLHW-88R-930-QF

**Made in  
USA**



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- RoHS Compliant

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

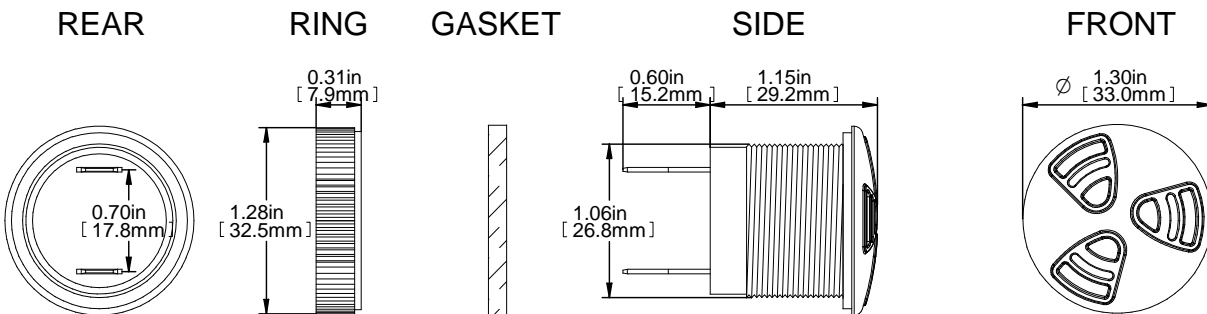
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

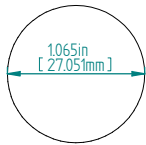
# TLHW-88R-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

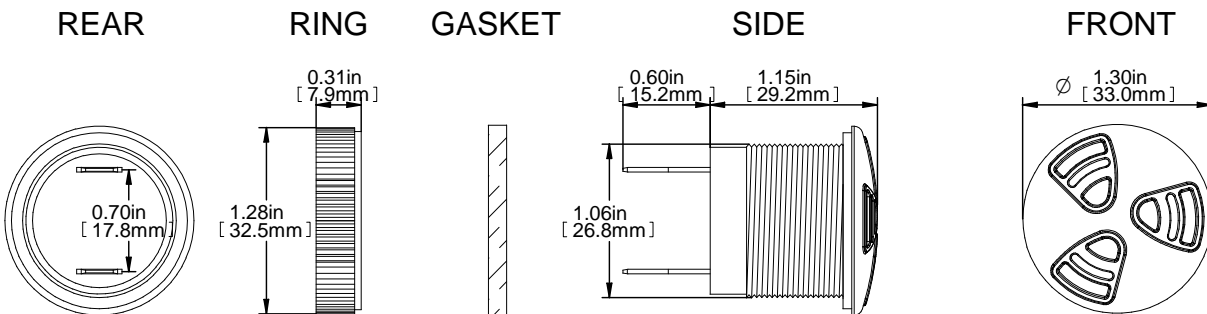
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.11

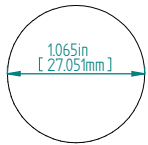
# TLHW-88R-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

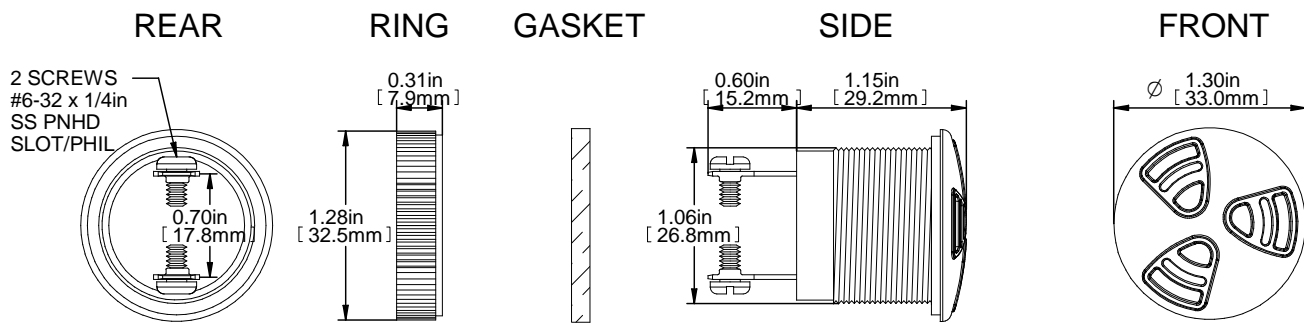
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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www.floydbell.com

Revision: 4.11

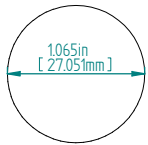
# TLHW-88R-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

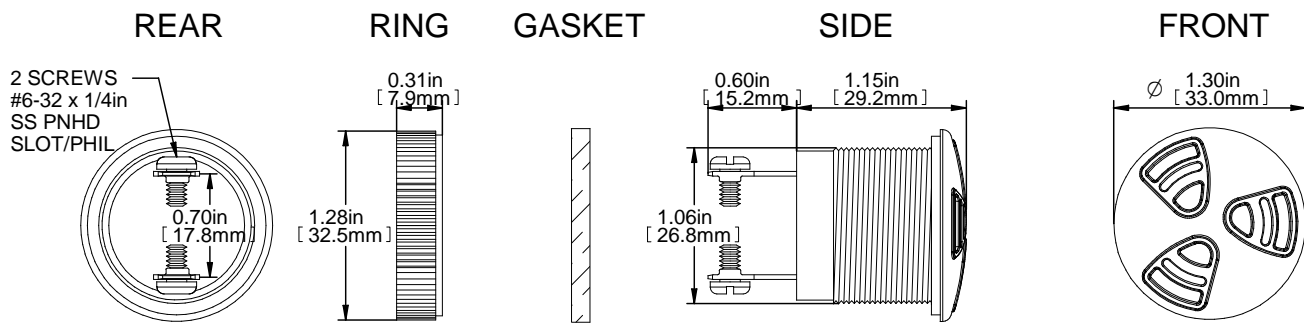
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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## DIMENSIONS



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Revision: 4.11



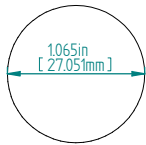
# TLHW-88R-930-WF

Made in  
USA

Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- RoHS Compliant

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

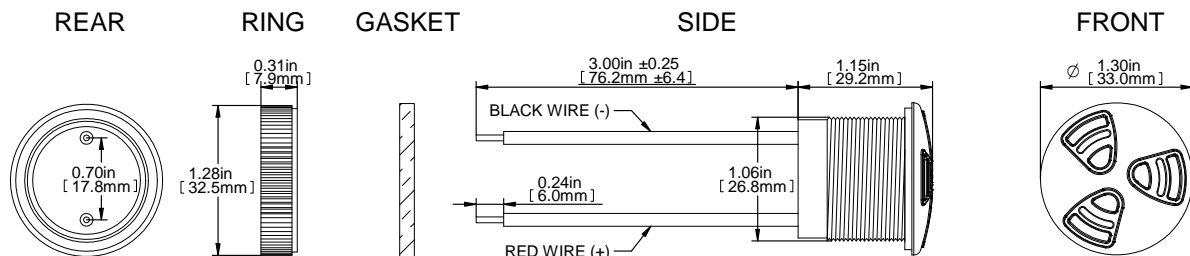
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
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<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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## DIMENSIONS



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www.floydbell.com

Revision: 10.12

# TLHW-88R-930-WS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

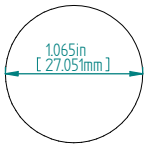
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## SPECIFICATIONS

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<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

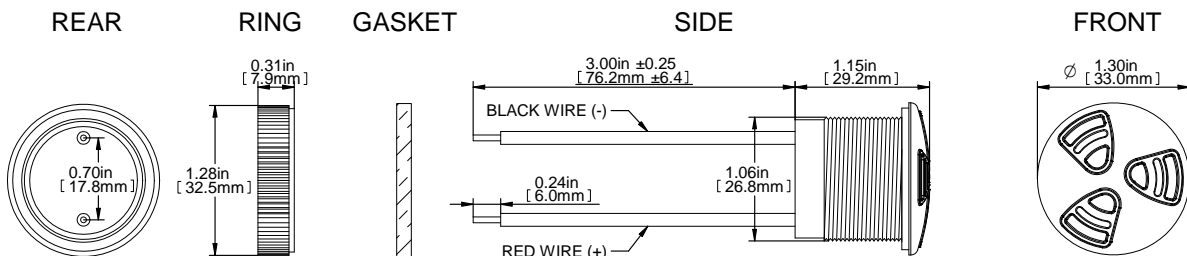
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 8.13

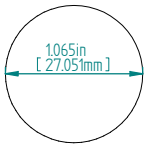
# TLHW-88W-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

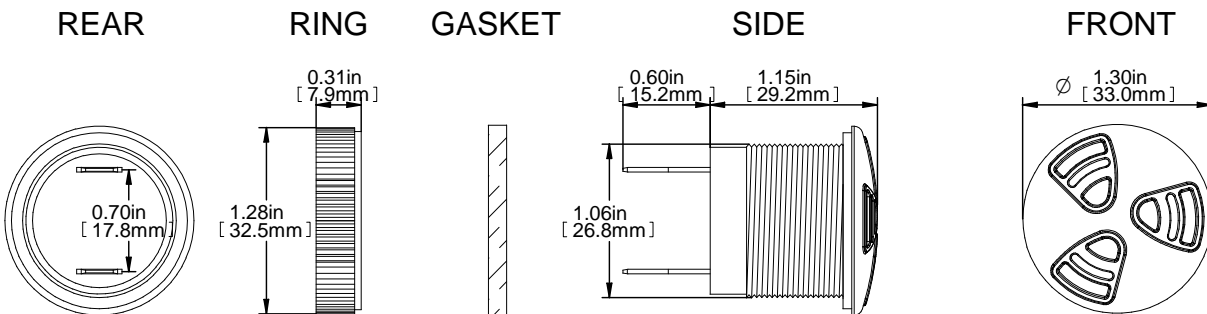
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

**Floyd Bell Inc**  
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Revision: 10.12

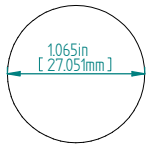
# TLHW-88W-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

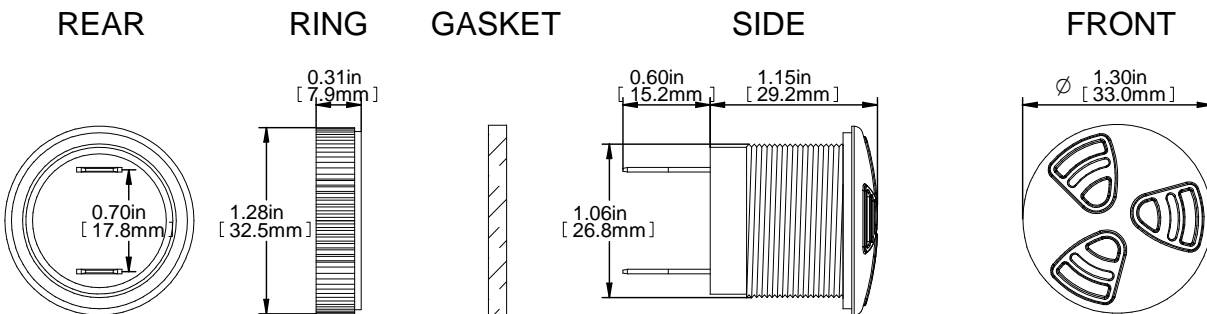
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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# TLHW-88W-930-SF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

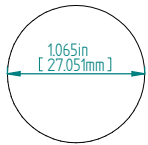
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

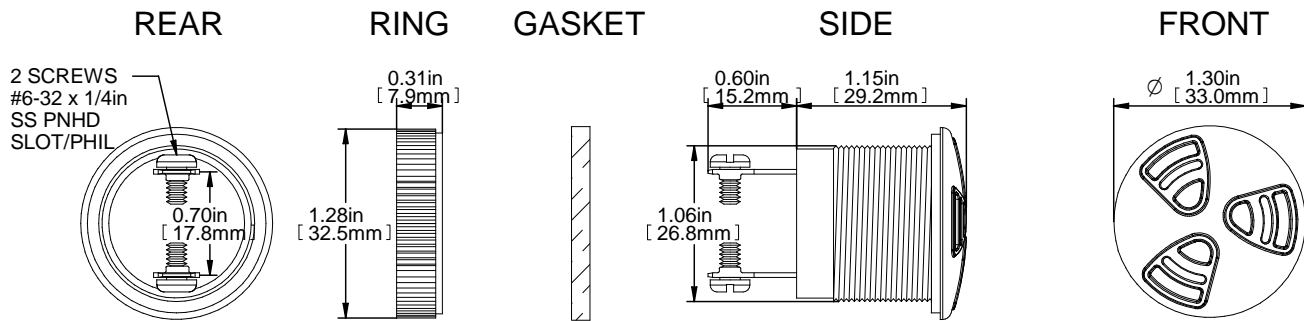
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



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# TLHW-88W-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

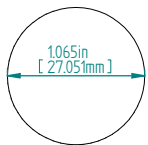
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

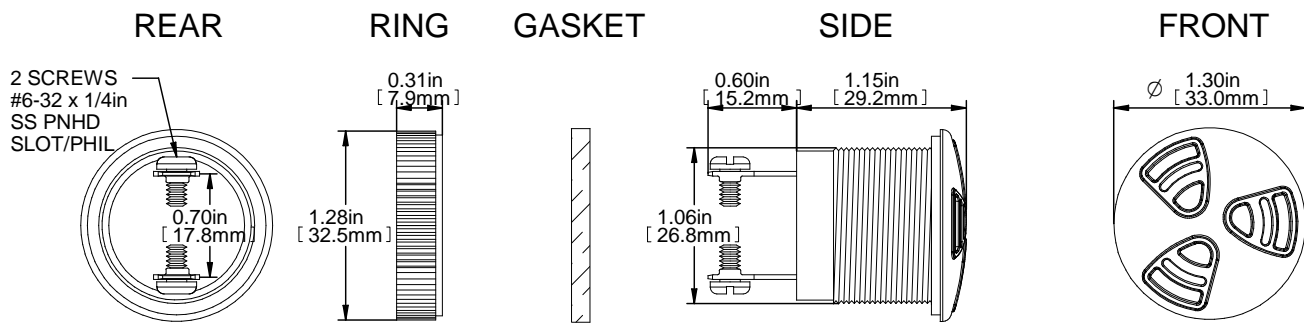
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHW-88W-930-WF

Made in  
USA



Image Not  
Available

Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

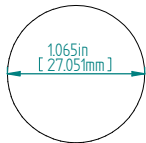
## SPECIFICATIONS

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

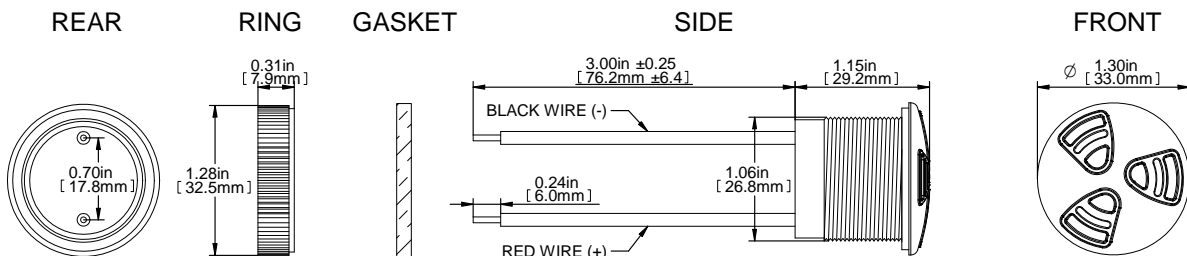
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TLHW-88W-930-WS

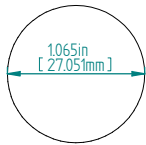
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

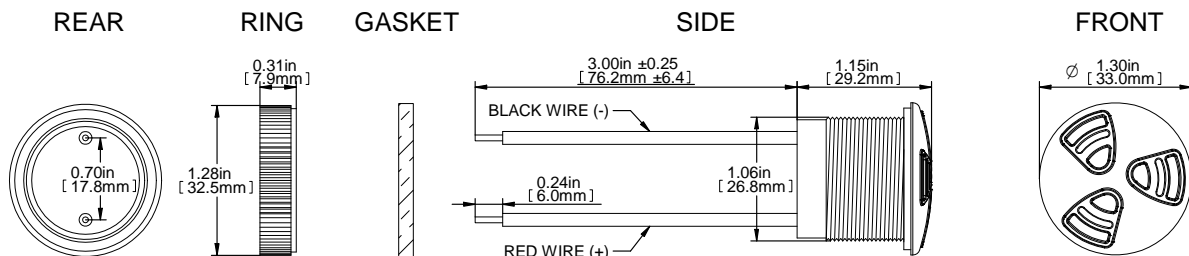
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright White light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Cycles per second  
**Typical Operating Current:** 110 mA at 9 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3", 18AWG, GXL, Red and Black Wires  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 \*IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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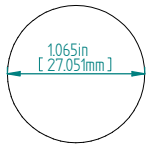
# TLHW-88Y-930-QF

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

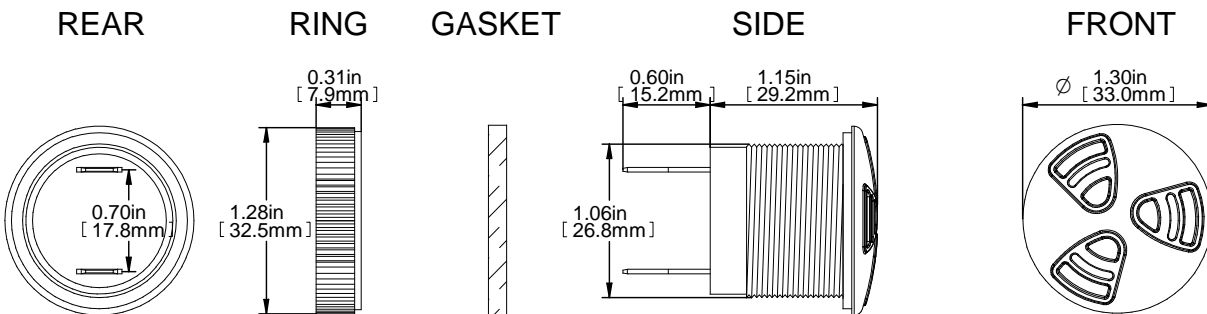
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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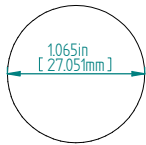
# TLHW-88Y-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

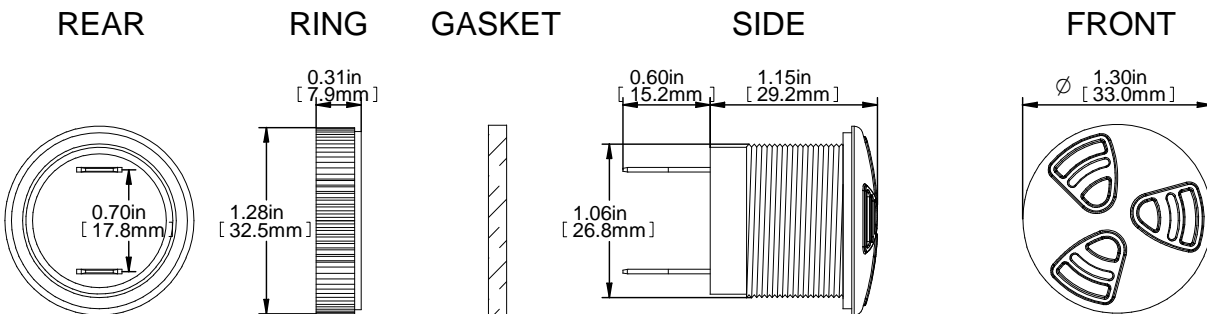
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



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# TLHW-88Y-930-SF

Made in  
USA



- High Intensity LED Light
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- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

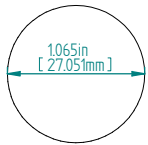
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

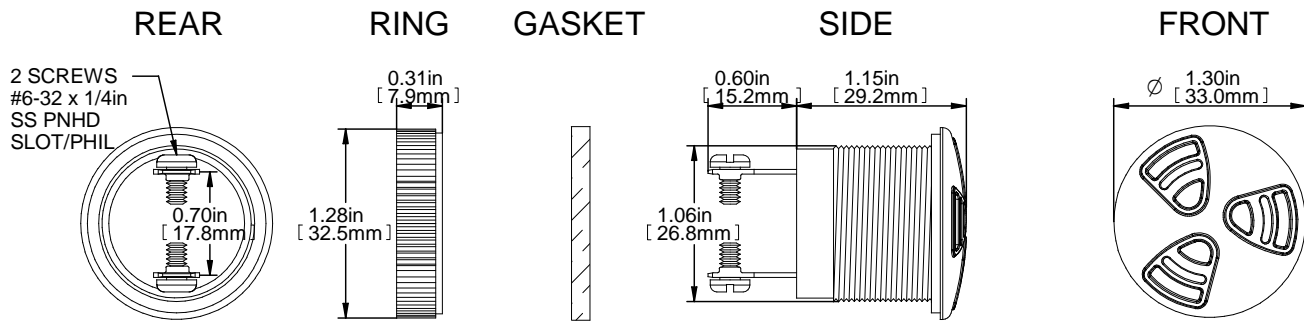
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 10.12

# TLHW-88Y-930-SS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

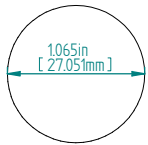
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

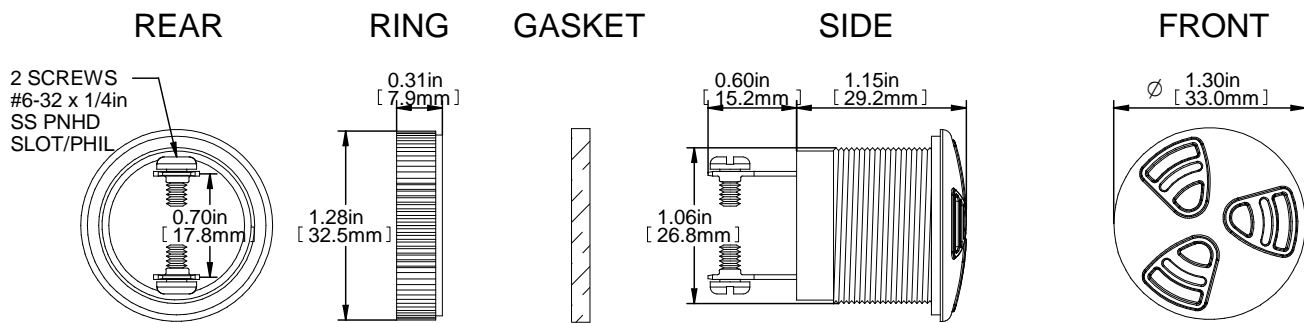
\*Not Evaluated by UL

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHW-88Y-930-WF

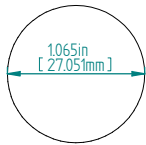
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

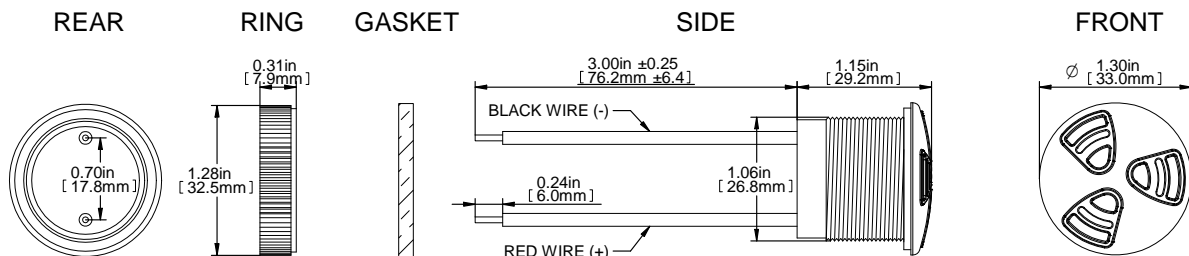
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

# TLHW-88Y-930-WS

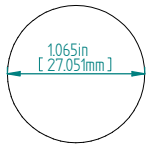
Made in  
USA



Image Not  
Available

- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

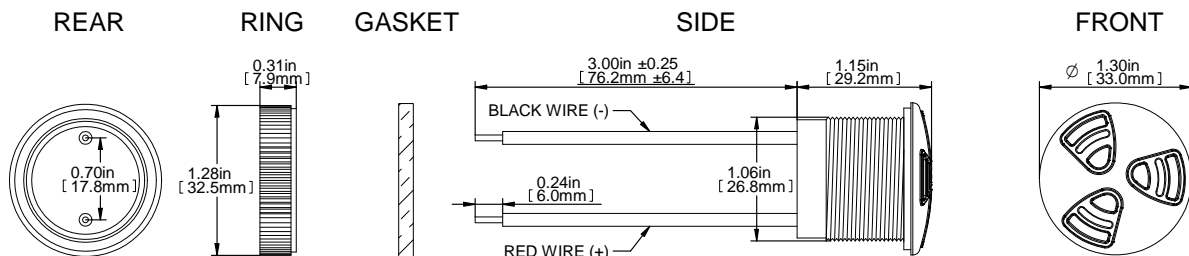
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright Yellow light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3", 18AWG, GXL, Red and Black Wires
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.12

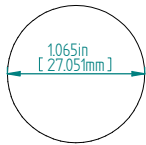
# TLHW-V88R-930-QS

Made in  
USA



- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

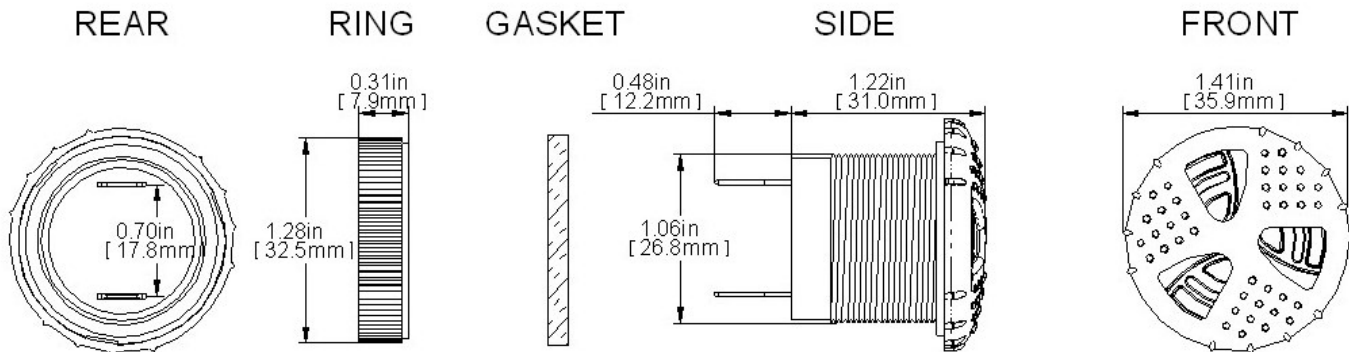
Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount piezoelectric alert that emits a bright red light when activated, effectively combining Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators into one convenient multi-sensory alarm device.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Bright LED Plus Extra Loud Warble Tone
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	110 mA at 9 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C (with volume control open) *103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. (with volume control open)
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours *IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

\*Not Evaluated by UL

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED  
Dimensions shown with volume control installed on unit.

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Revision: 4.11



# TLL-87B-12V-Q



**Made in  
USA**



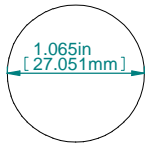
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	250 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

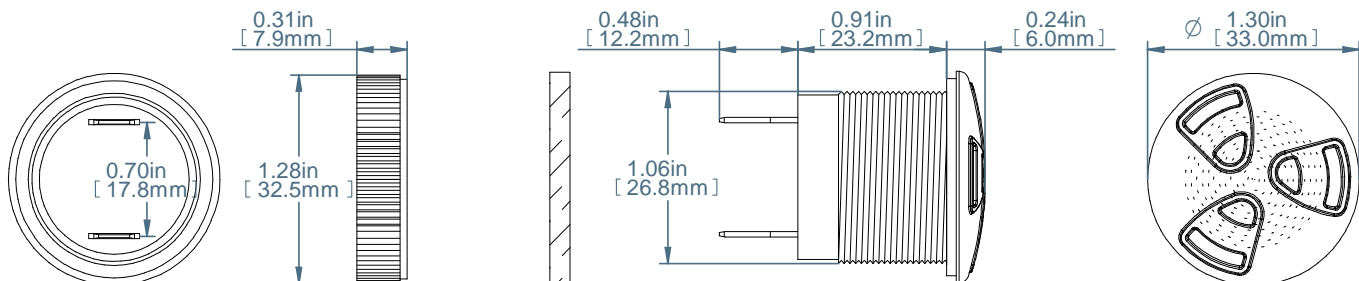
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE  $\pm$ 0.03in [ $\pm$ 0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.10

# TLL-87B-12V-S



**Made in  
USA**



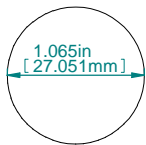
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	250 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

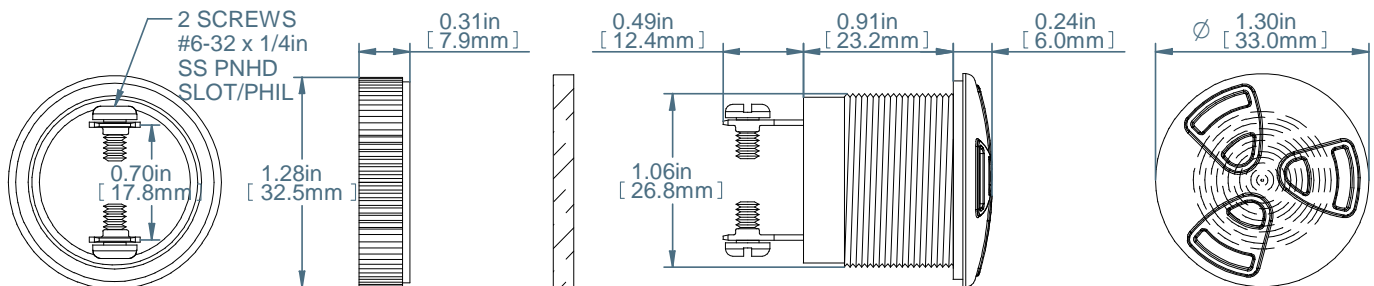
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE  $\pm$ 0.03in [ $\pm$ 0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.10

# TLL-87B-24V-Q

Made in  
USA



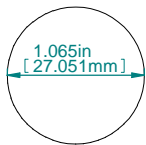
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	250 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

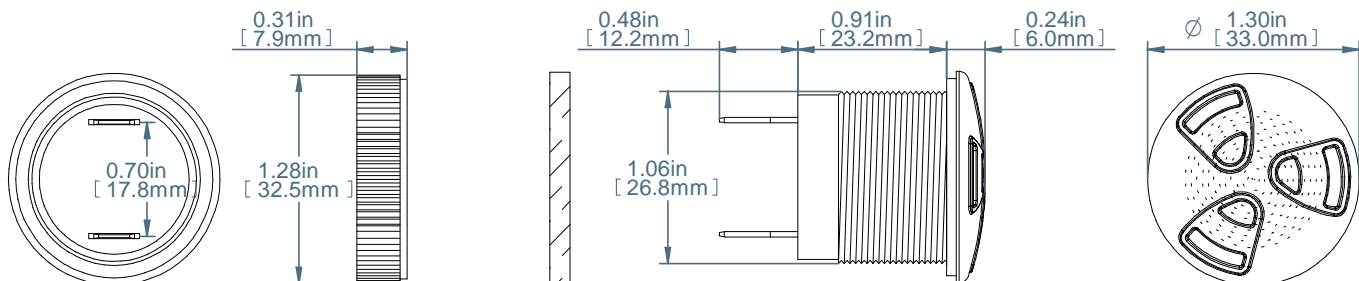
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE  $\pm$ 0.03in [ $\pm$ 0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.10

# TLL-87B-24V-S

**Made in  
USA**



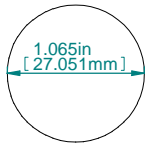
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	250 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

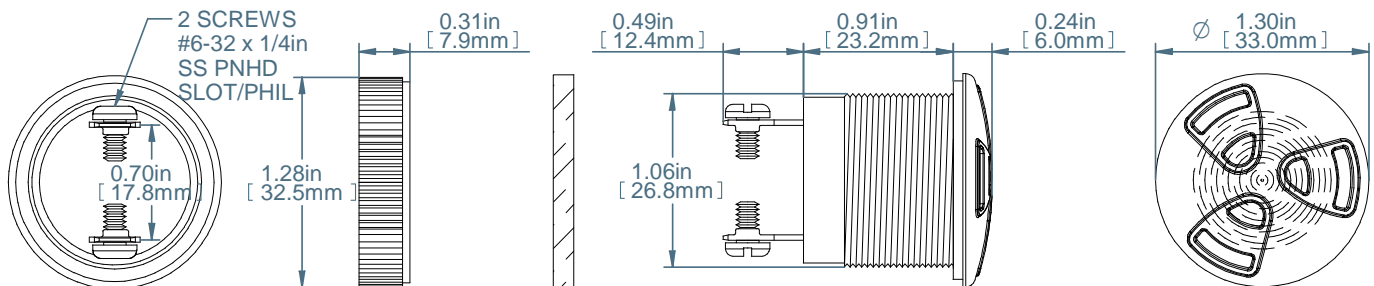
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE  $\pm$ 0.03in [ $\pm$ 0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.10

# TLL-87G-12V-Q

**Made in  
USA**



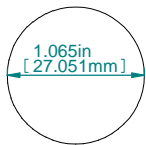
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	350 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

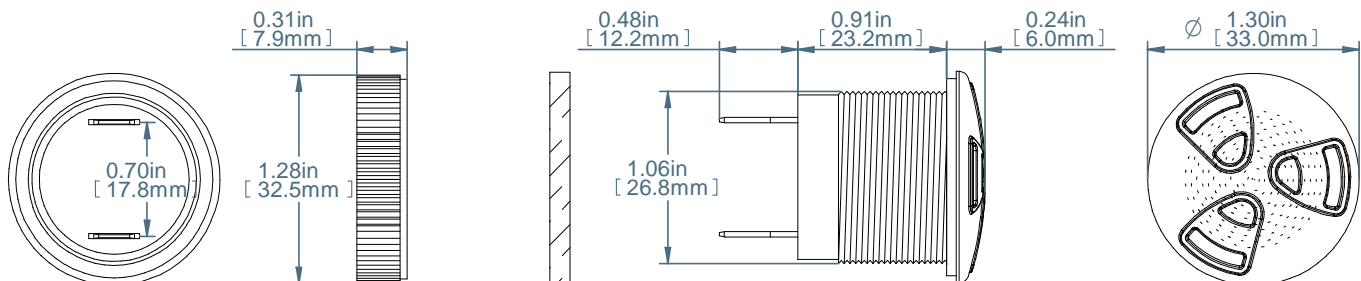
REAR

RING

GASKET

SIDE

FRONT



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Revision: 10.10



# TLL-87G-12V-S

**Made in  
USA**



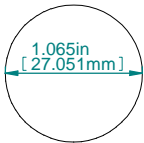
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	350 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

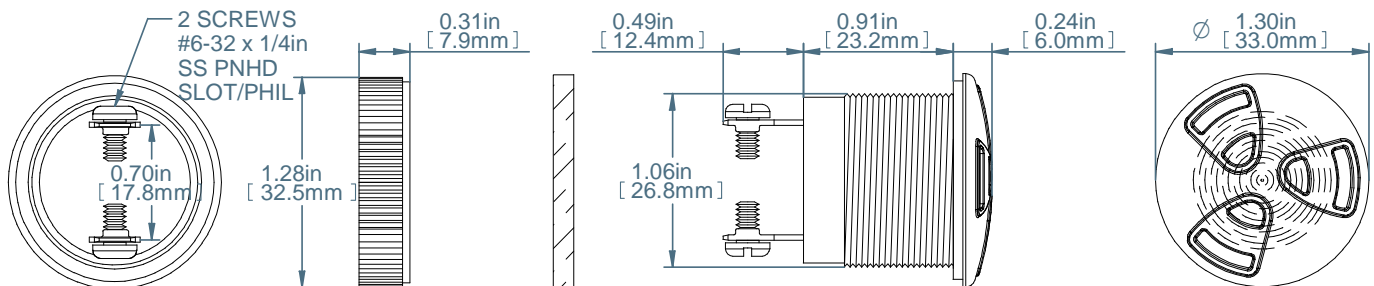
REAR

RING

GASKET

SIDE

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**Revision: 10.10**

# TLL-87G-24V-Q



**Made in  
USA**



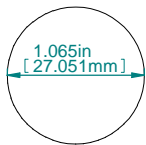
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	350 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

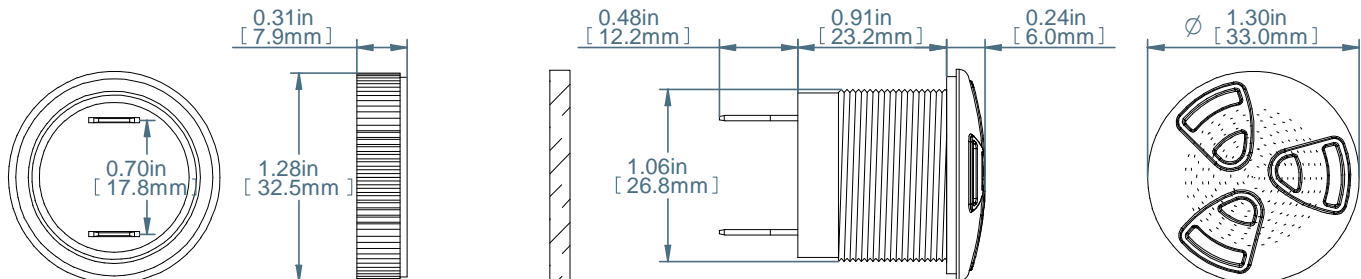
REAR

RING

GASKET

SIDE

FRONT



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Revision: 10.10

# TLL-87G-24V-S

Made in  
USA



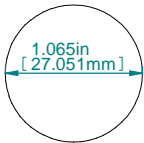
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	350 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

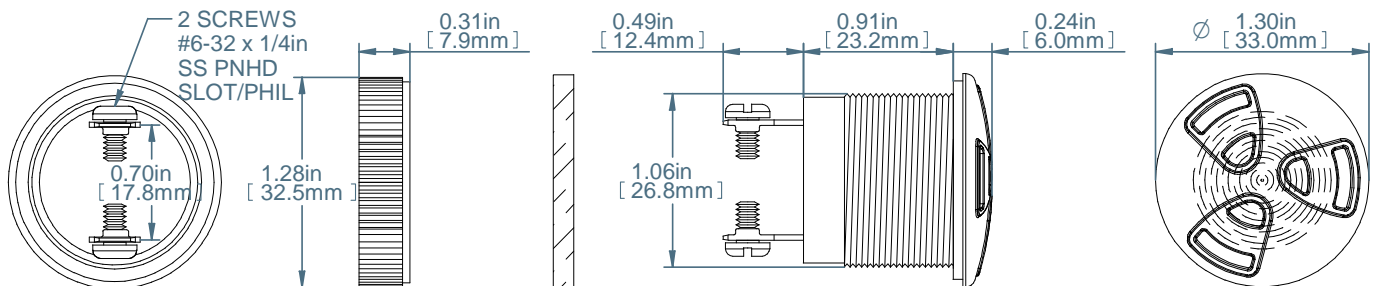
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RING

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# TLL-87R-12V-Q



**Made in  
USA**



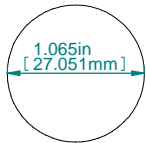
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	1000 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

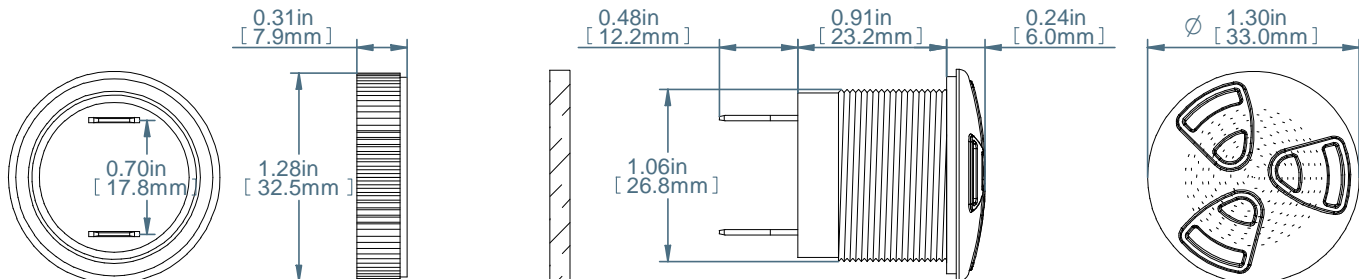
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GASKET

SIDE

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Revision: 10.10

# TLL-87R-12V-S



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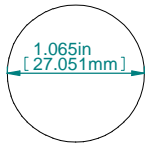
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	1000 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
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## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

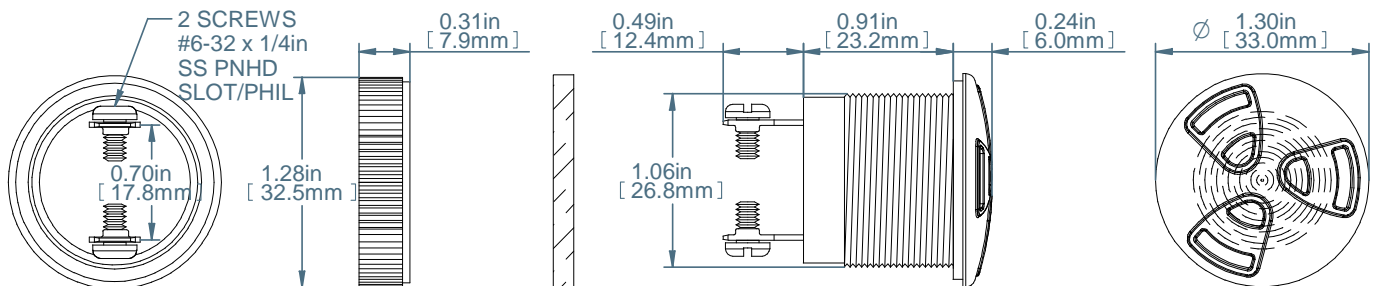
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# TLL-87R-24V-Q

Made in  
USA



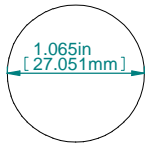
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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## SPECIFICATIONS

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<b>Color:</b>	Red
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	1000 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
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<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
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<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
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## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

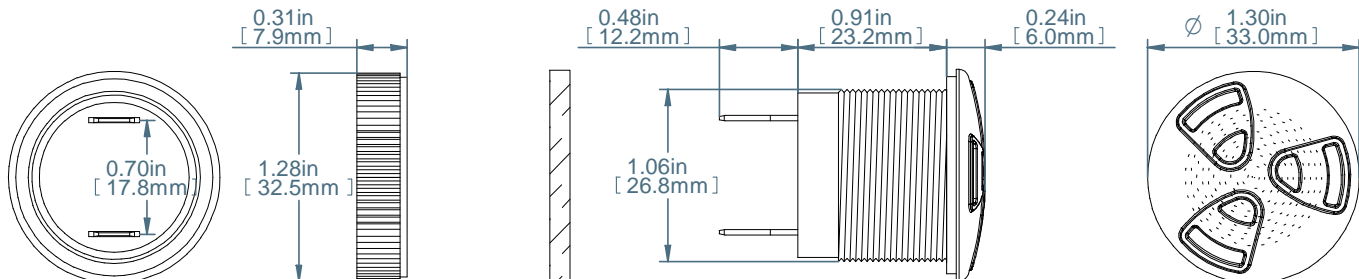
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# TLL-87R-24V-S

Made in  
USA



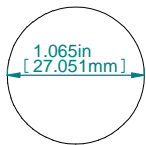
- 180° Viewable LED light
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- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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## SPECIFICATIONS

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<b>Color:</b>	Red
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	1000 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
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<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
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## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

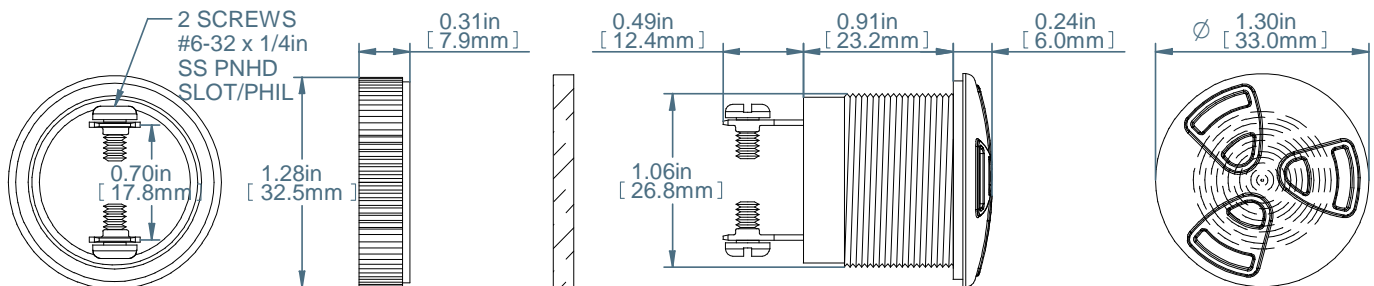
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE  $\pm$ 0.03in [ $\pm$ 0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 10.10

# TLL-87W-12V-Q



**Made in  
USA**



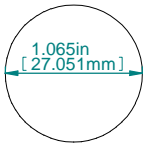
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

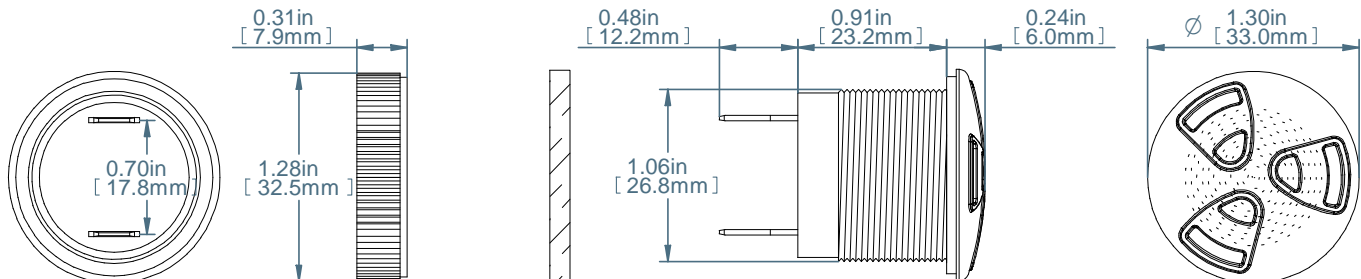
REAR

RING

GASKET

SIDE

FRONT



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Revision: 10.10

# TLL-87W-12V-S



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USA**



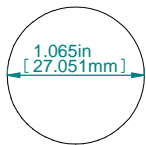
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

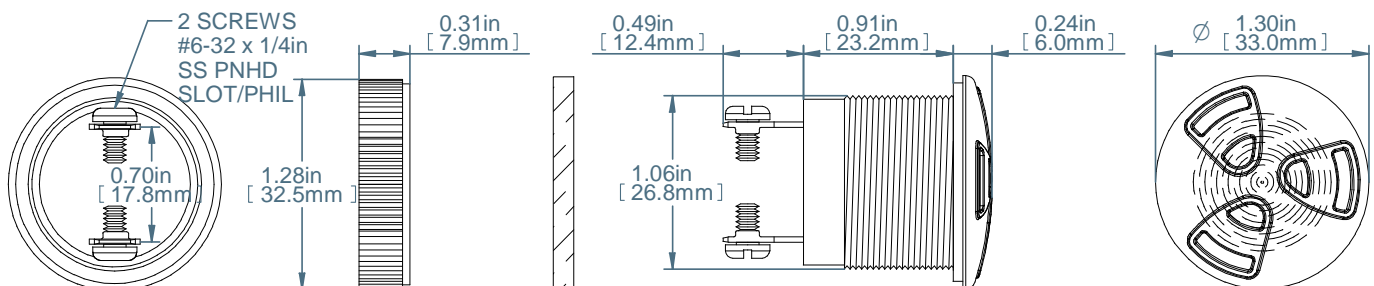
REAR

RING

GASKET

SIDE

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Revision: 10.10

# TLL-87W-24V-Q

Made in  
USA



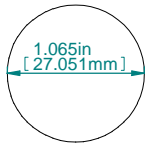
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

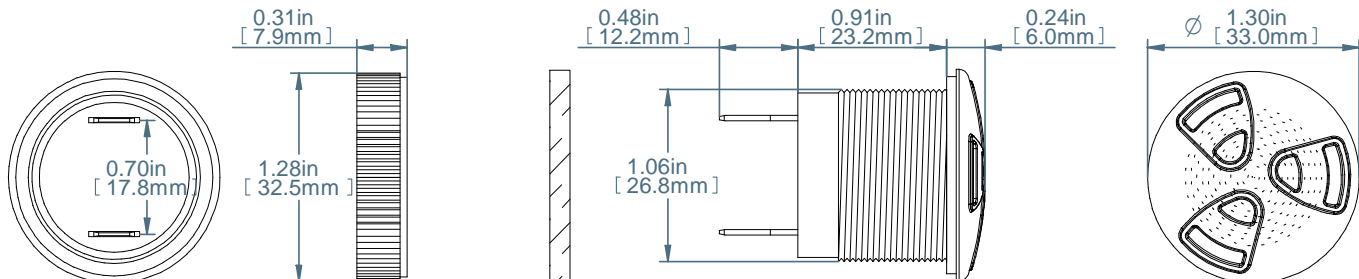
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RING

GASKET

SIDE

FRONT



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# TLL-87W-24V-S

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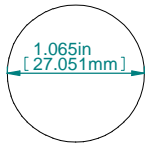
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

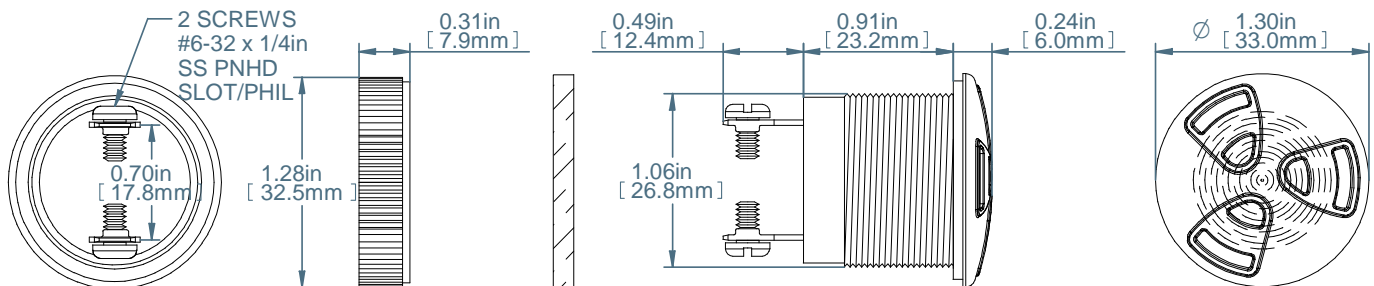
REAR

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Revision: 10.10

# TLL-87Y-12V-Q



**Made in  
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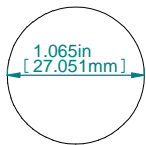
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	750 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

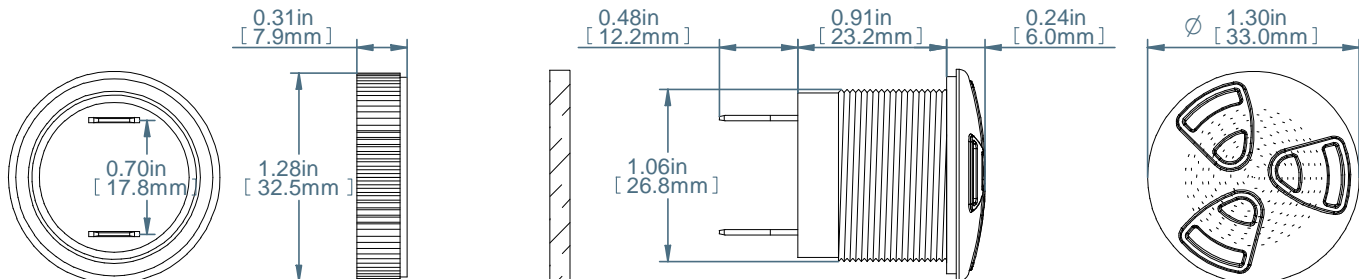
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# TLL-87Y-12V-S

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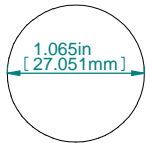
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	12 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	750 cd/m <sup>2</sup> $\pm$ 20% at 12 Vdc
<b>Max. Operating Current:</b>	80 mA at 12 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

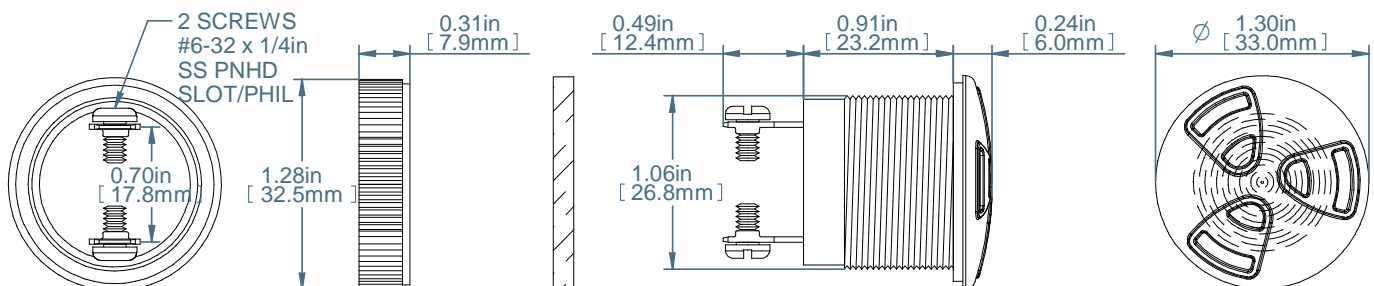
REAR

RING

GASKET

SIDE

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# TLL-87Y-24V-Q



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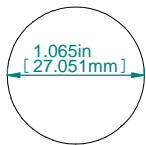
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	750 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

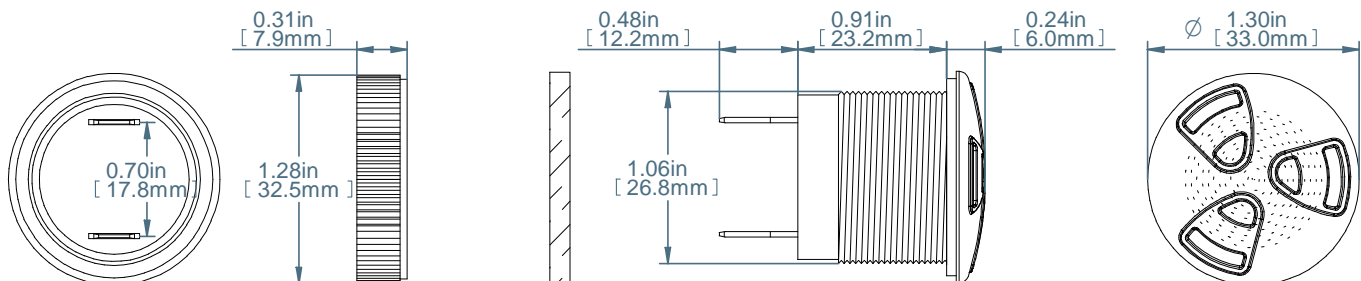
REAR

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# TLL-87Y-24V-S



**Made in  
USA**



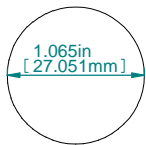
- 180° Viewable LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLL Series are continuous output LED panel indicators. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	24 Vdc $\pm$ 20%
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	750 cd/m <sup>2</sup> $\pm$ 20% at 24 Vdc
<b>Max. Operating Current:</b>	80 mA at 24 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +80°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case— Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified— Withstands water submergence and dust exposure Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

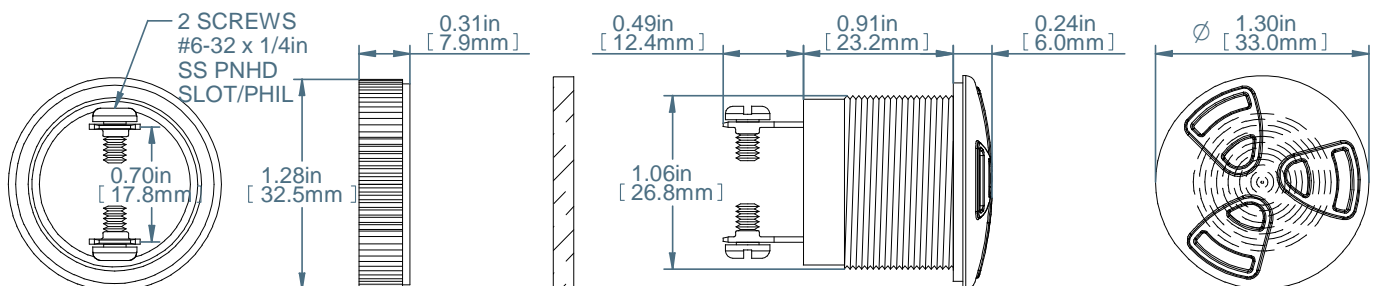
REAR

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# TLM-87B-930-Q



**Made in  
USA**



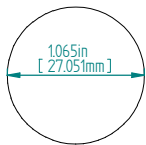
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> ± 20% at 9 Vdc 1000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

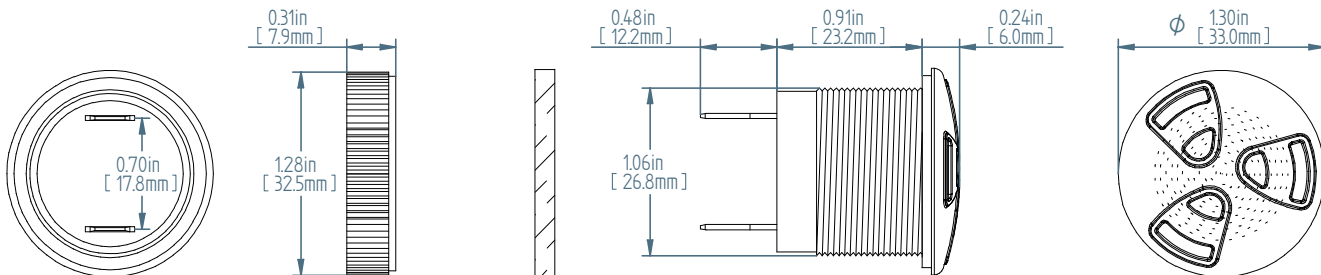
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 6.13

# TLM-87B-930-S



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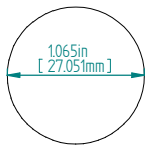
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Blue
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> ± 20% at 9 Vdc 1000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

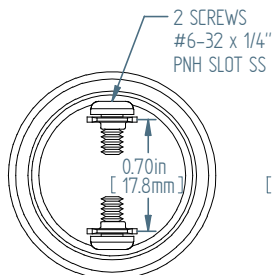
## PANEL MOUNTING



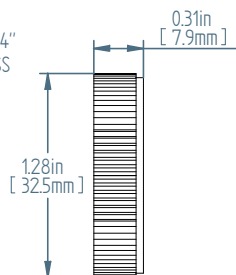
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



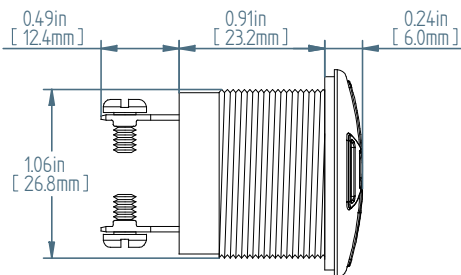
### RING



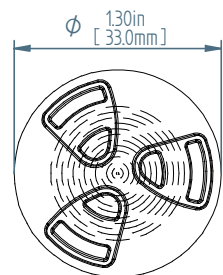
### GASKET



### SIDE



### FRONT



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Revision: 6.13

# TLM-87G-930-Q



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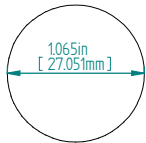
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> ± 20% at 9 Vdc 1000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

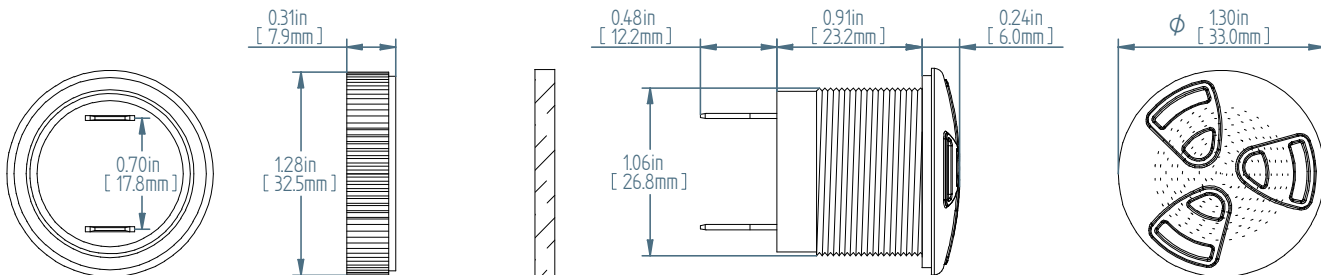
REAR

RING

GASKET

SIDE

FRONT



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Revision: 6.13

# TLM-87G-930-S



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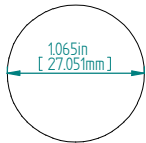
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Green
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	900 cd/m <sup>2</sup> ± 20% at 9 Vdc 1000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Green Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

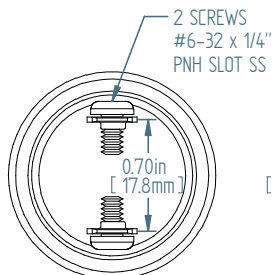
## PANEL MOUNTING



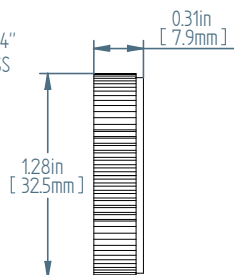
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



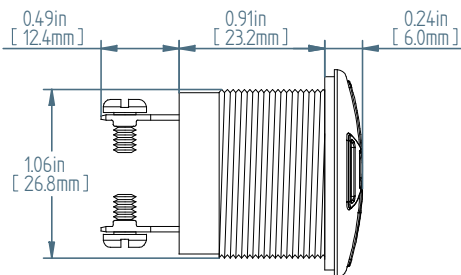
### RING



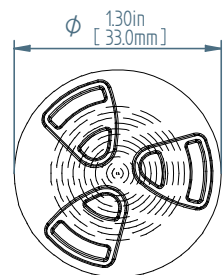
### GASKET



### SIDE



### FRONT



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Revision: 6.13

# TLM-87R-930-Q



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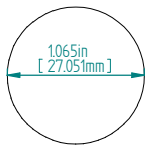
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	2000 cd/m <sup>2</sup> ± 20% at 9 Vdc 2200 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

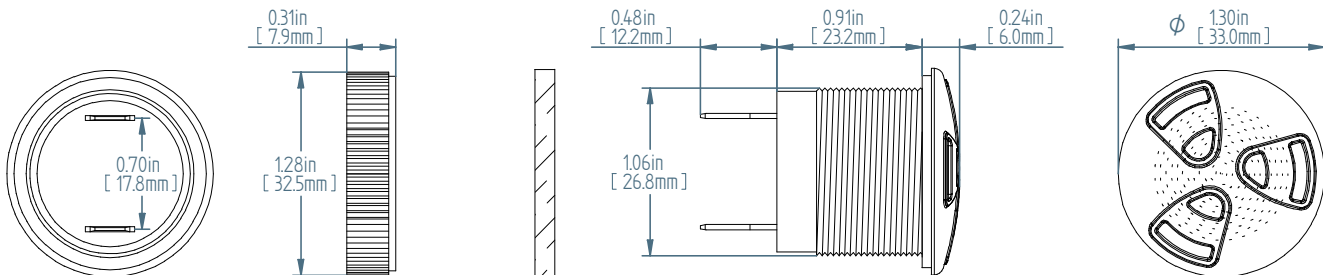
REAR

RING

GASKET

SIDE

FRONT



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# TLM-87R-930-S



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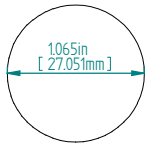
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Red
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	2000 cd/m <sup>2</sup> ± 20% at 9 Vdc 2200 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Red Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

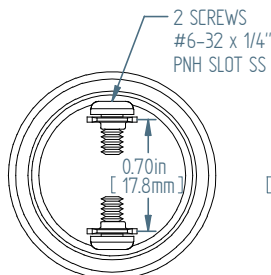
## PANEL MOUNTING



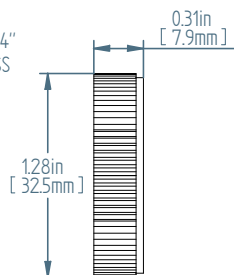
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



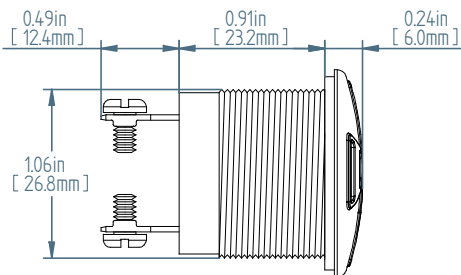
### RING



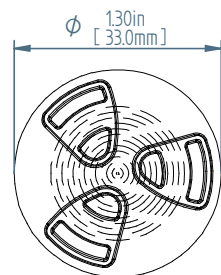
### GASKET



### SIDE



### FRONT



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# TLM-87W-930-Q



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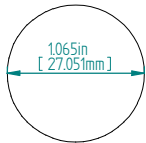
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	2500 cd/m <sup>2</sup> ± 20% at 9 Vdc 3000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## PANEL MOUNTING



FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

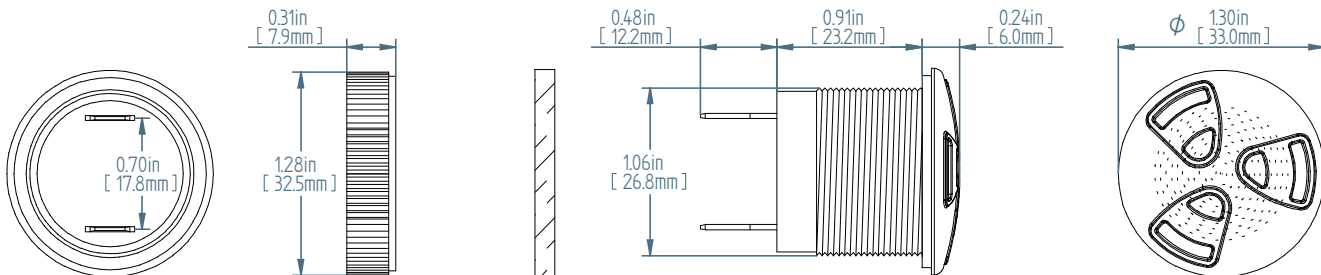
REAR

RING

GASKET

SIDE

FRONT



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Revision: 6.13

# TLM-87W-930-S



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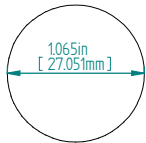
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	White
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	2500 cd/m <sup>2</sup> ± 20% at 9 Vdc 3000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

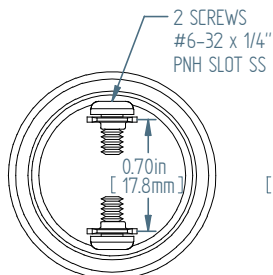
## PANEL MOUNTING



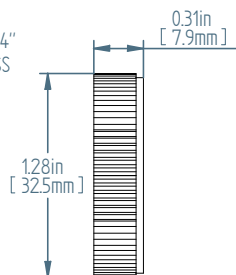
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

### REAR



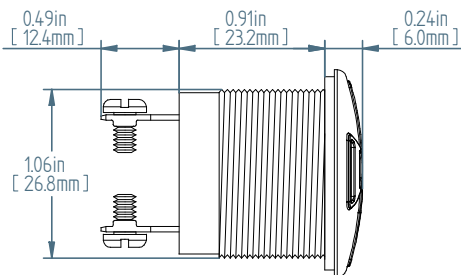
### RING



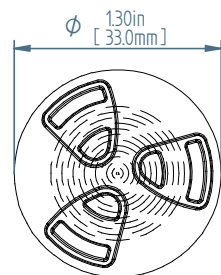
### GASKET



### SIDE



### FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 6.13

# TLM-87Y-930-Q



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USA**



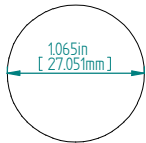
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	1800 cd/m <sup>2</sup> ± 20% at 9 Vdc 2000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

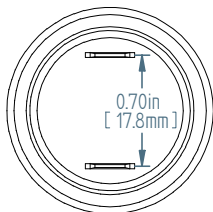
## PANEL MOUNTING



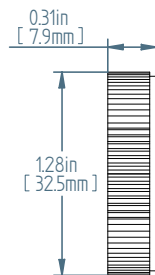
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

REAR



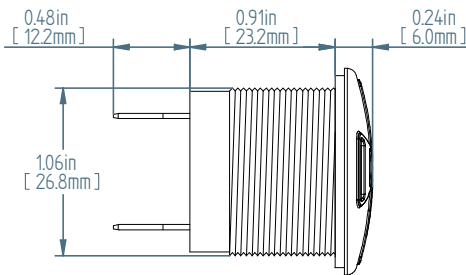
RING



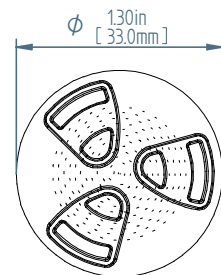
GASKET



SIDE



FRONT



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Revision: 6.13

# TLM-87Y-930-S



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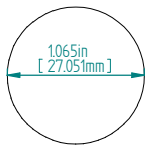
- High Intensity LED light
- Indoor or Outdoor Use
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light TLM Series are bright, continuous output, LED panel indicators for operating voltages of 9-30VDC. The Turbo Light design features a regulated power supply and a low profile, tamper resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

<b>Operating Mode:</b>	Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Yellow
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	1800 cd/m <sup>2</sup> ± 20% at 9 Vdc 2000 cd/m <sup>2</sup> ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	80 mA at 9 Vdc 40 mA at 30 Vdc
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

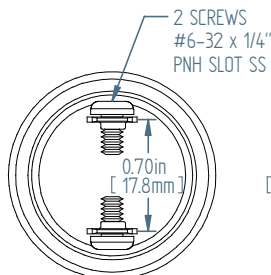
## PANEL MOUNTING



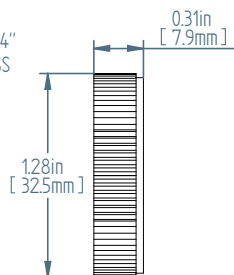
FITS PANELS UP TO  
0.60in [15.2mm] THICK

## DIMENSIONS

REAR



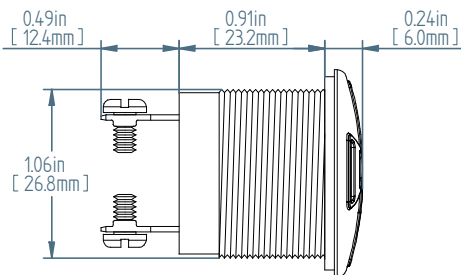
RING



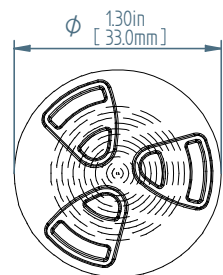
GASKET



SIDE



FRONT



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Revision: 6.13



# TLSH-87B-12V-Q

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USA



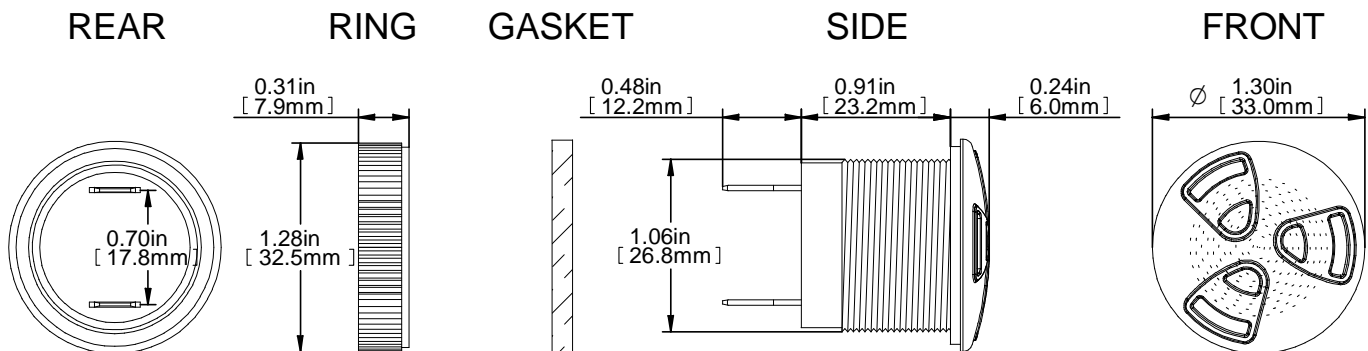
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-12V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 12VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Blue Light
<b>Operating Voltage:</b>	5-12Vdc
<b>Nominal Operating Voltage:</b>	12Vdc
<b>Typical Brightness:</b>	4000 cd/m <sup>2</sup> Red ± 20% at 12Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	110mA at 12Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 04.14

# TLSH-87B-24V-Q

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USA



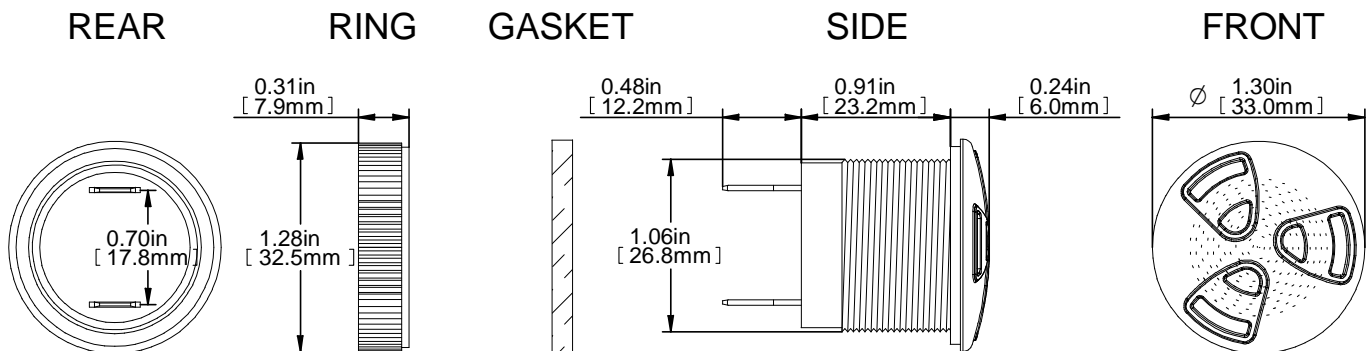
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-24V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 24VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Blue Light
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	4000 cd/m <sup>2</sup> Red ± 20% at 24 Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	170mA at 24 Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 04.14

# TLSH-87G-12V-Q

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USA



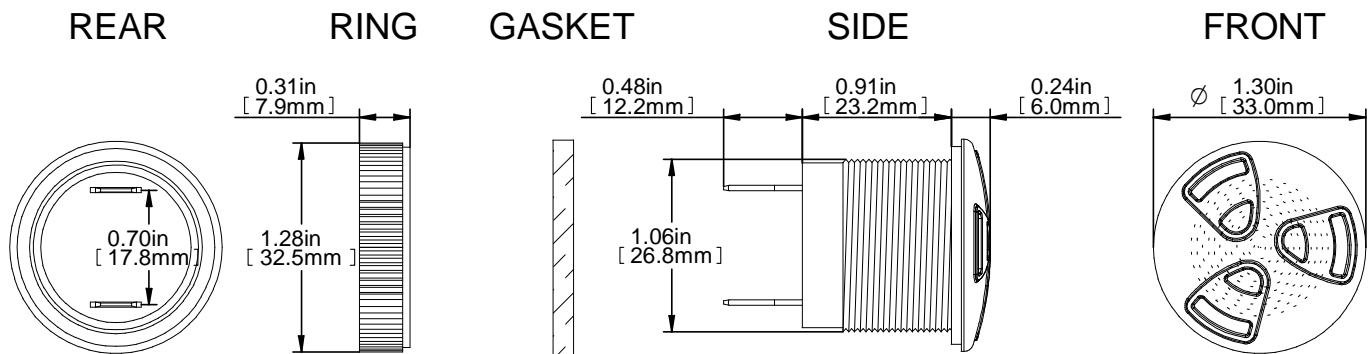
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-12V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 12VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Green Light
<b>Operating Voltage:</b>	5-12Vdc
<b>Nominal Operating Voltage:</b>	12Vdc
<b>Typical Brightness:</b>	12000 cd/m <sup>2</sup> Red ± 20% at 12Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	110mA at 12Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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# TLSH-87G-24V-Q

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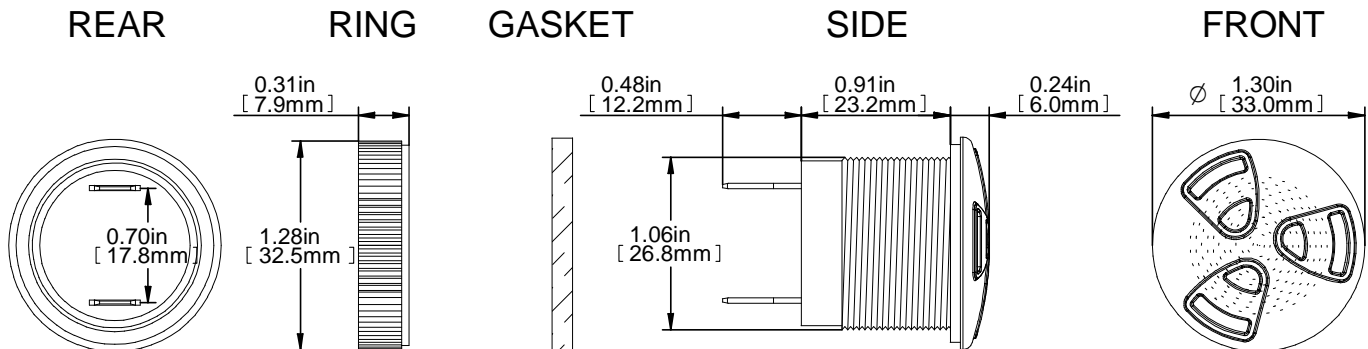
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-24V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 24VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Green Light
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	12000 cd/m <sup>2</sup> Red ± 20% at 24 Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	170mA at 24 Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 04.14

# TLSH-87R-12V-Q

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USA



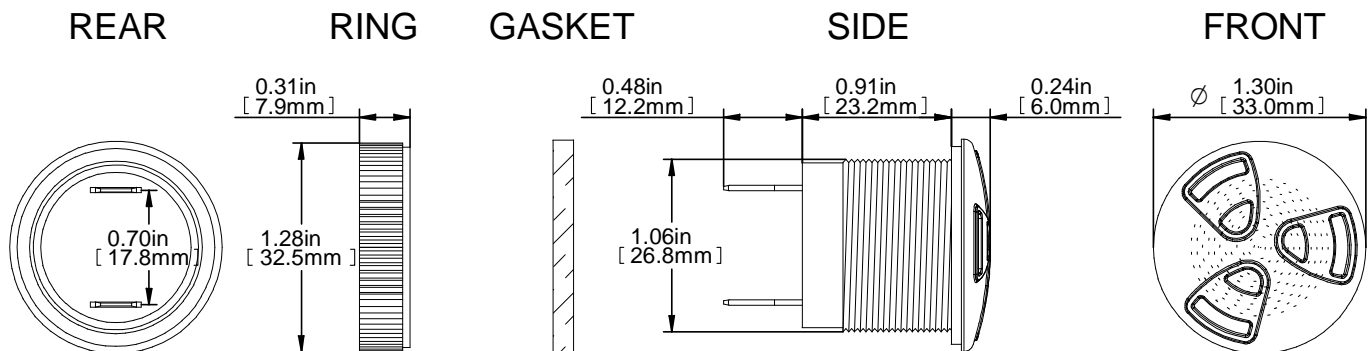
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-12V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 12VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Red Light
<b>Operating Voltage:</b>	5-12Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	15000 cd/m <sup>2</sup> Red ± 20% at 12Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	110mA at 12Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 08.13



# TLSH-87R-24V-Q

Made in  
USA



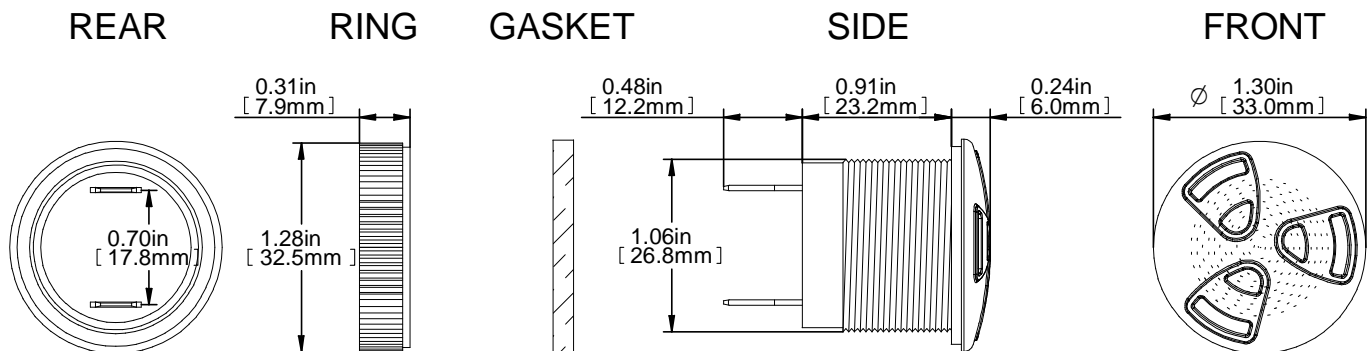
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-24V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 24VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Red Light
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	15000 cd/m <sup>2</sup> Red ± 20% at 24 Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	170mA at 24 Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 08.13

# TLSH-87W-12V-Q

Made in  
USA



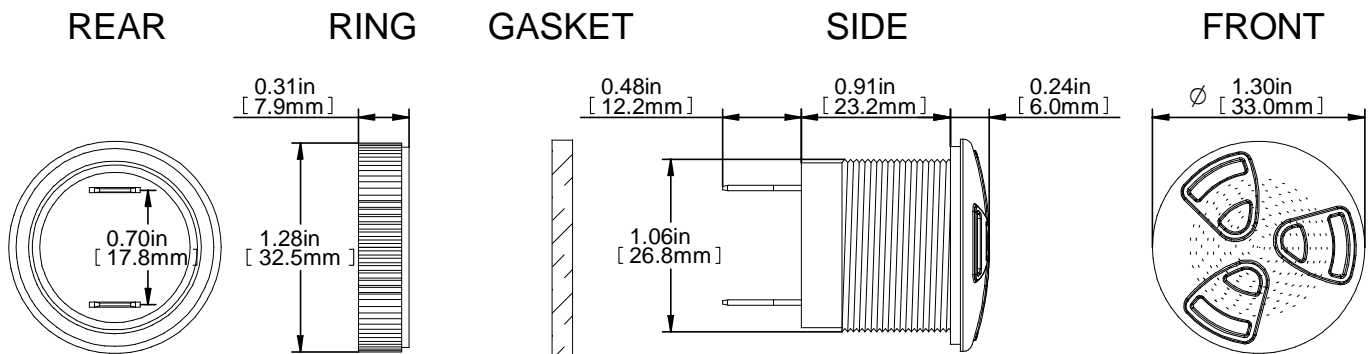
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-12V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 12VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits White Light
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Typical Brightness:</b>	25000 cd/m <sup>2</sup> Red ± 20% at 12 Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	110mA at 12 Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 04.14

# TLSH-87W-24V-Q

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USA



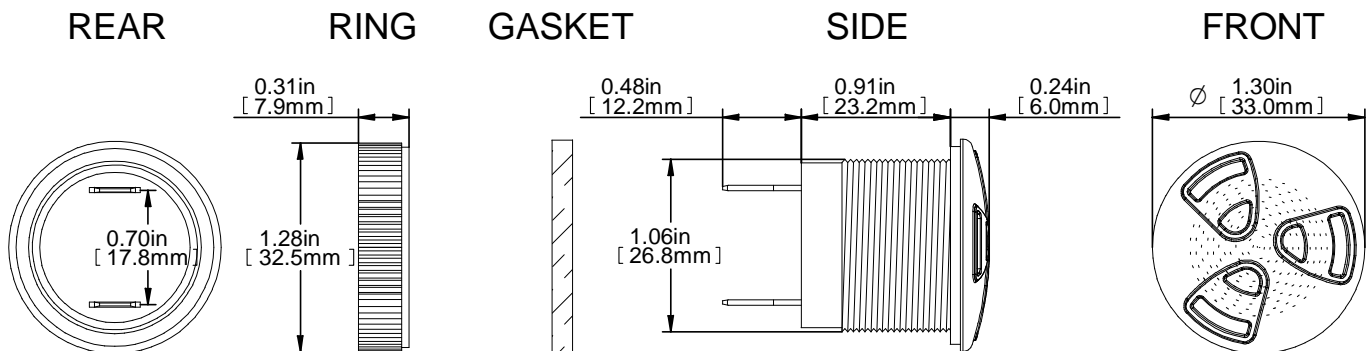
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-24V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 24VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits White Light
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	25000 cd/m <sup>2</sup> Red ± 20% at 24 Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	170mA at 24 Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 04.14

# TLSH-87Y-12V-Q

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USA



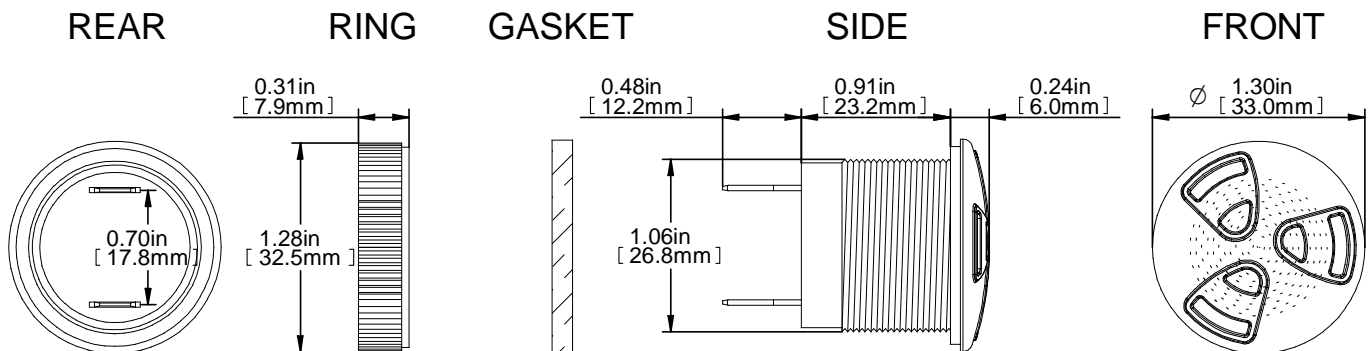
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-12V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 12VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Yellow Light
<b>Operating Voltage:</b>	5-12Vdc
<b>Nominal Operating Voltage:</b>	12Vdc
<b>Typical Brightness:</b>	25000 cd/m <sup>2</sup> Red ± 20% at 12Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	110mA at 12Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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# TLSH-87Y-24V-Q

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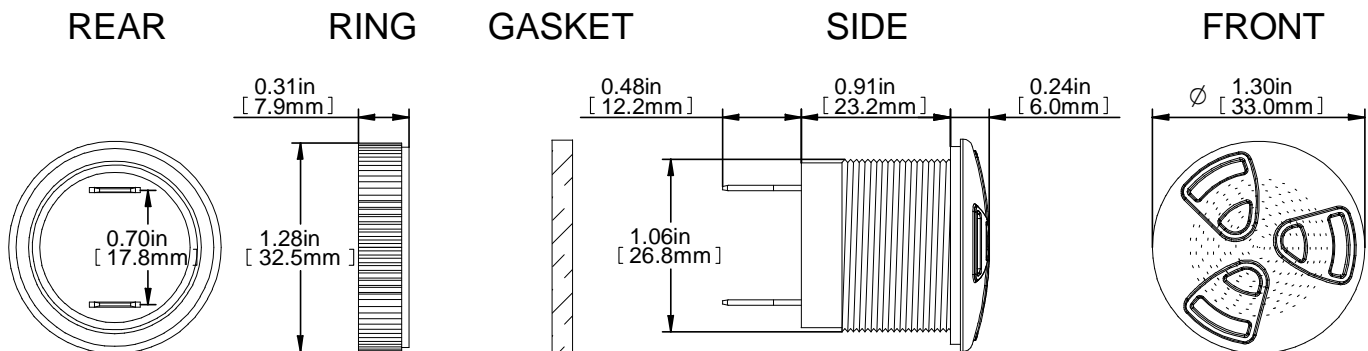
- Emits BRIGHT strobe flash
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Strobe TLSH-24V Series are extra-bright Strobe Output LED panel indicators for nominal operating voltage of 24VDC. The Turbo Light Strobe design features 180° viewing range and high intensity Strobe Output. The Turbo Light Strobe includes tamper resistant case and polycarbonate housing with quick connect (.25") for ease of installation in your application.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra-Bright Strobe LED Panel Indicator
<b>Color:</b>	Emits Yellow Light
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	25000 cd/m <sup>2</sup> Red ± 20% at 24 Vdc
<b>Typical Flash Rate:</b>	1 pulse per second ± 20%
<b>Typical Operating Current:</b>	170mA at 24 Vdc <small>Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.</small>
<b>Termination:</b>	2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 04.14



# TLTH-87RYG-930-Q

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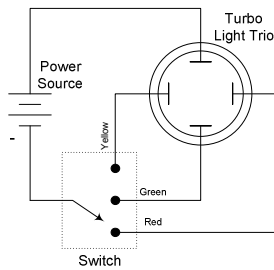
- Emits BRIGHT Green, Yellow or Red Light
- Indoor or Outdoor Use
- Viewable in Direct Sunlight
- NEMA 4X and IP68
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

The Turbo Light Trio TLTH Series are continuous, multi-color, extra-bright output LED panel indicators for operating voltages of 9-30VDC. The Turbo Light Trio design features a regulated power supply, 3 light colors, low profile, tamper resistant case and easy to use active low switch inputs. This clear-lens polycarbonate panel light is rugged and ideal for indoor and outdoor industrial applications.

## SPECIFICATIONS

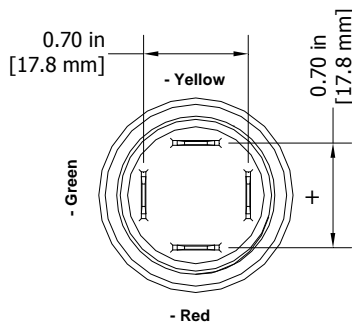
<b>Operating Mode:</b>	Extra-Bright Continuous Output LED Panel Indicator
<b>Color:</b>	Emits Red, Yellow or Green Light (Individually)
<b>Operating Voltage:</b>	9-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Typical Brightness:</b>	(8000 cd/m <sup>2</sup> Red) (2000 cd/m <sup>2</sup> Yellow) (9000 cd/m <sup>2</sup> Green) ± 20% at 30 Vdc
<b>Max. Operating Current:</b>	145 mA at 9 Vdc 50 mA at 30 Vdc
<b>Termination:</b>	4 Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness, One positive Blade and three negative Blades for color select.
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +100°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Lens/Case- Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

### Application Circuit

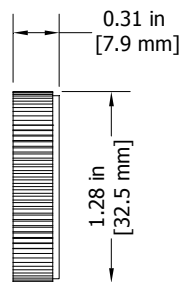


## DIMENSIONS

### BACK



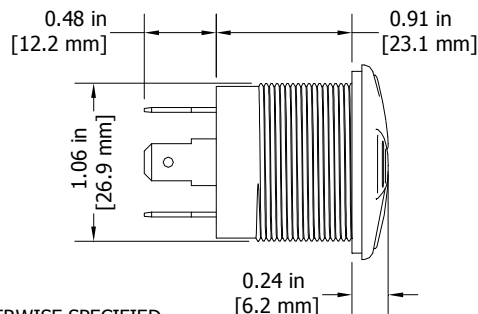
### RING



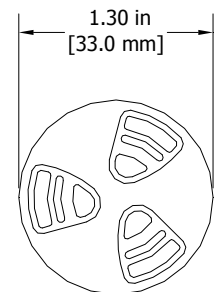
### GASKET



### SIDE



### FRONT



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Revision: 08.13

# TMB-82-948-Q(F)

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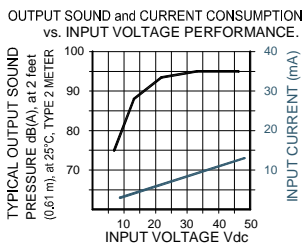
- Patent-Pending Revolutionary Turbo Design
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-82-948-Q(F) is a medium loud output, flange mounted alarm for operating voltages of 9-48VDC.

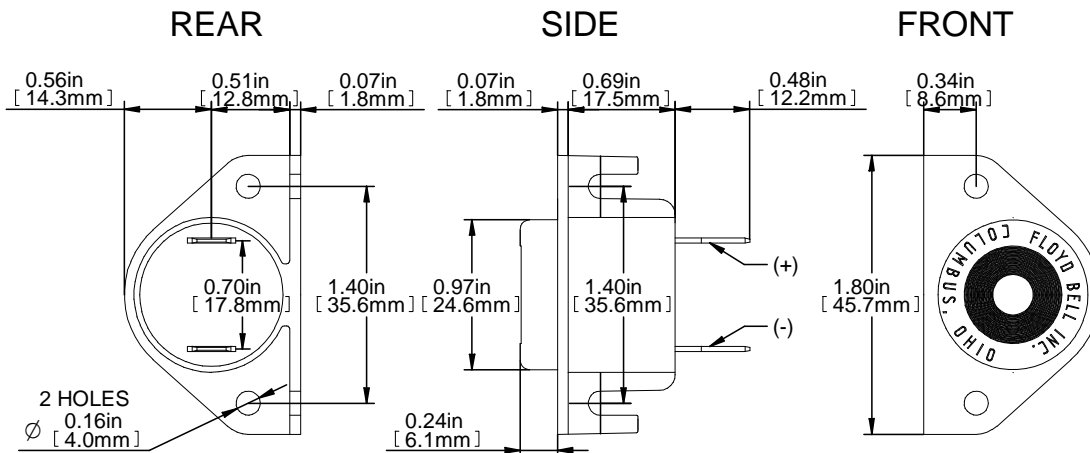
## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 2.14

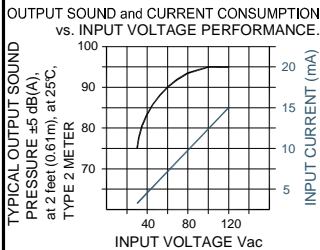
# TMB-86-201-Q(F)



**Made in  
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- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

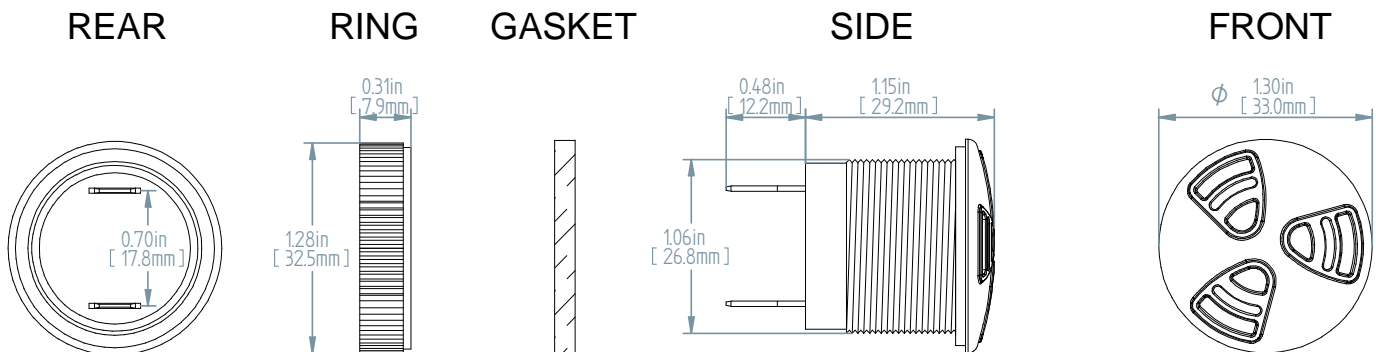


The Turbo TMB-86-201-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 30-120 Vac  
**Nominal Operating Voltage:** 110 Vac  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 30 Vac  
 15 mA at 120 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**

# TMB-86-201-Q(M)



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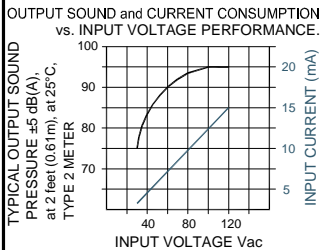


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

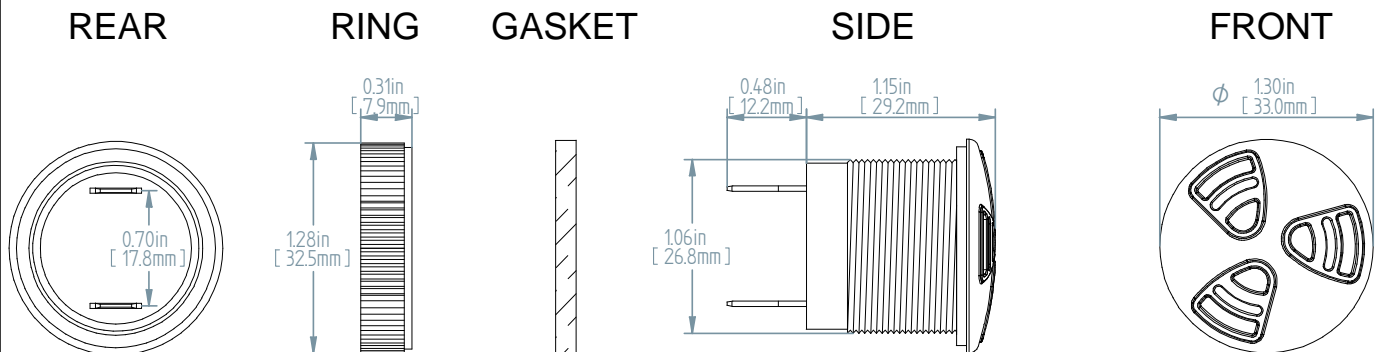
The Turbo TMB-86-201-Q(M) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	



## DIMENSIONS



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Revision: 2.14

# TMB-86-201-Q(S)



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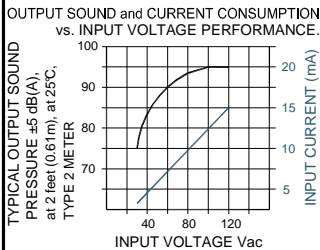


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

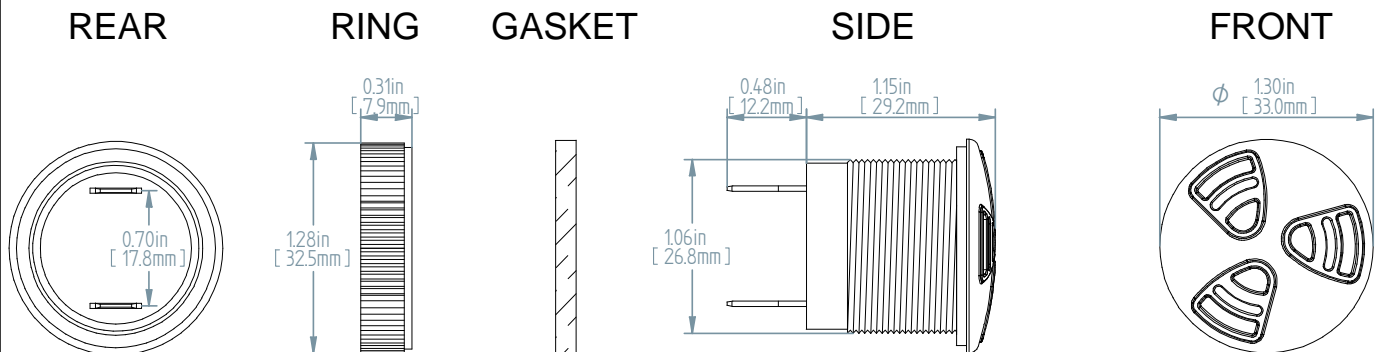
The Turbo TMB-86-201-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**



# TMB-86-201-S(F)



**Made in  
USA**

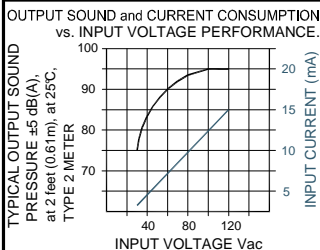


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-201-S(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

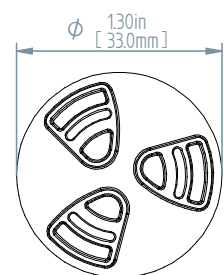
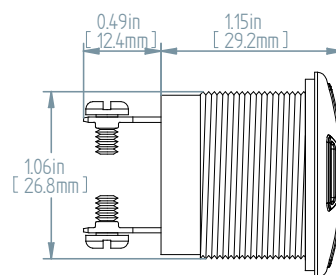
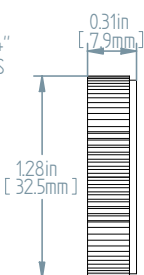
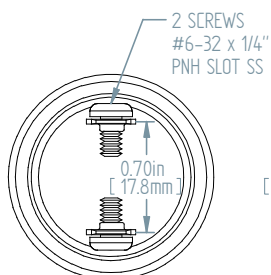
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-201-S(S)



**Made in  
USA**

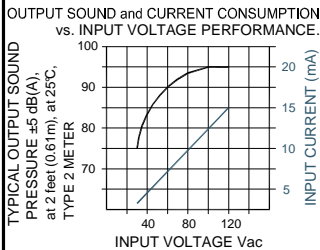


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- Reliable Piezoelectric Technology

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## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

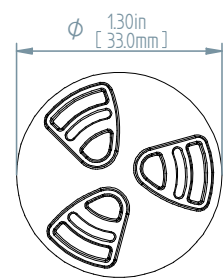
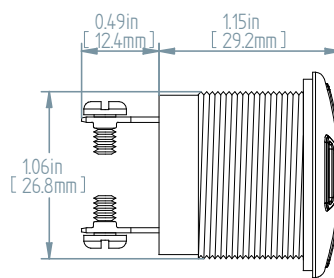
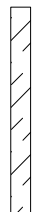
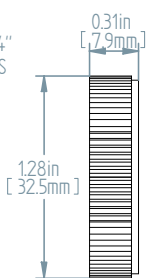
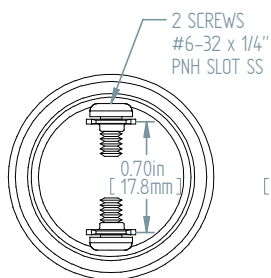
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-530-P(F)

Made in  
USA

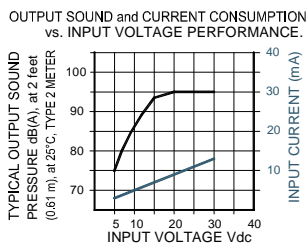


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

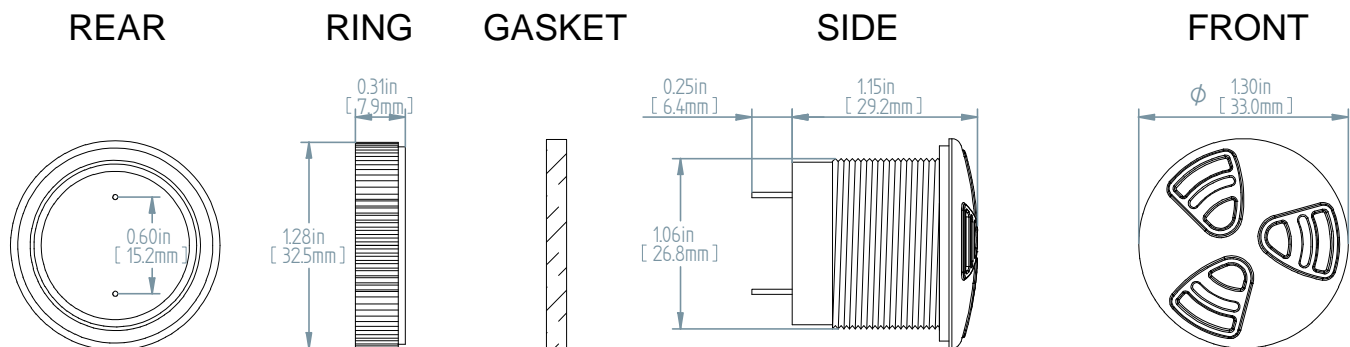
The Turbo TMB-86-530-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 9.09

# TMB-86-530-P(S)



**Made in  
USA**



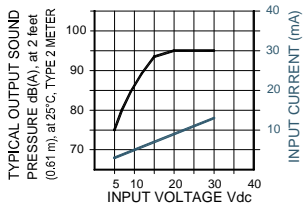
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-530-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

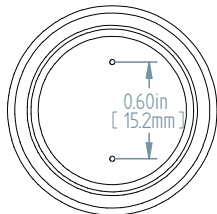
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

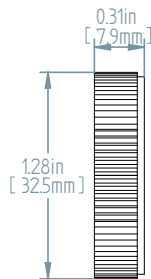


## DIMENSIONS

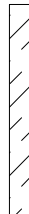
REAR



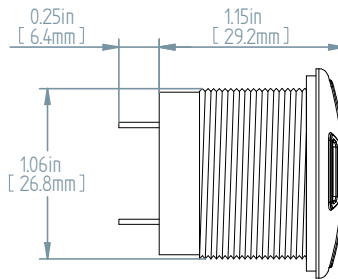
RING



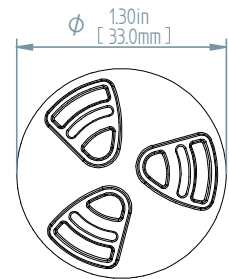
GASKET



SIDE



FRONT



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Revision: 9.09

# TMB-86-530-Q(F)

Made in  
USA



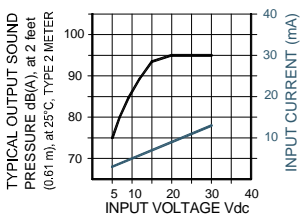
- Patented Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-530-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

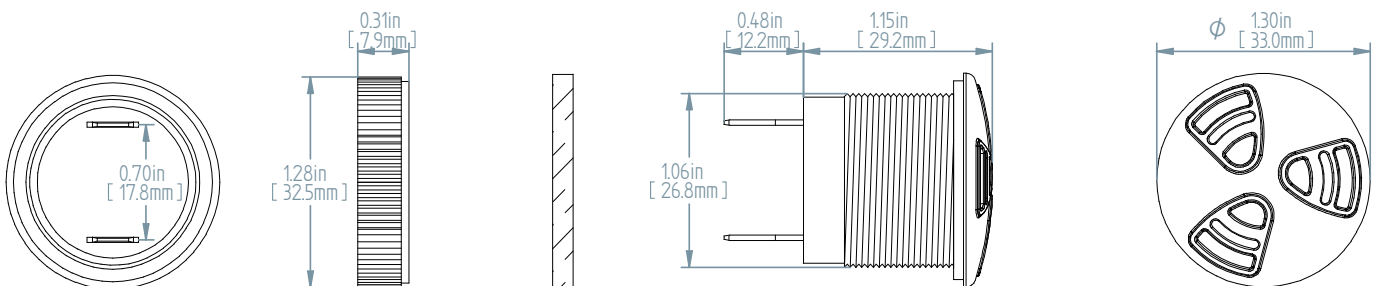
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09



# TMB-86-530-Q(S)



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USA**



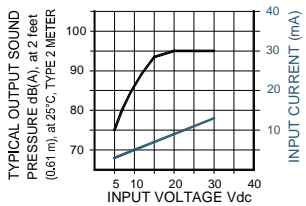
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## SPECIFICATIONS

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<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
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<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
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OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

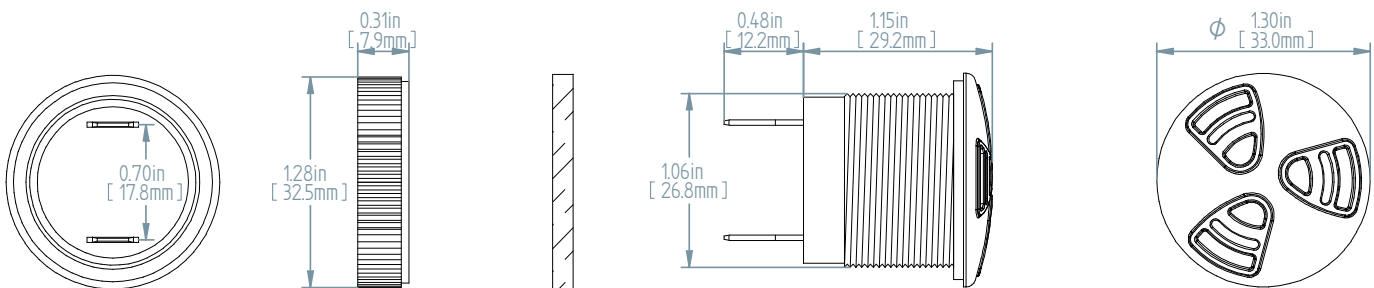
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-530-S(F)



**Made in  
USA**



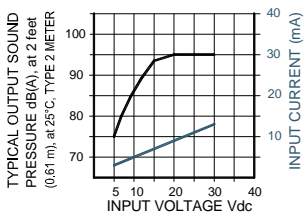
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- Reliable Piezoelectric Technology

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## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
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<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

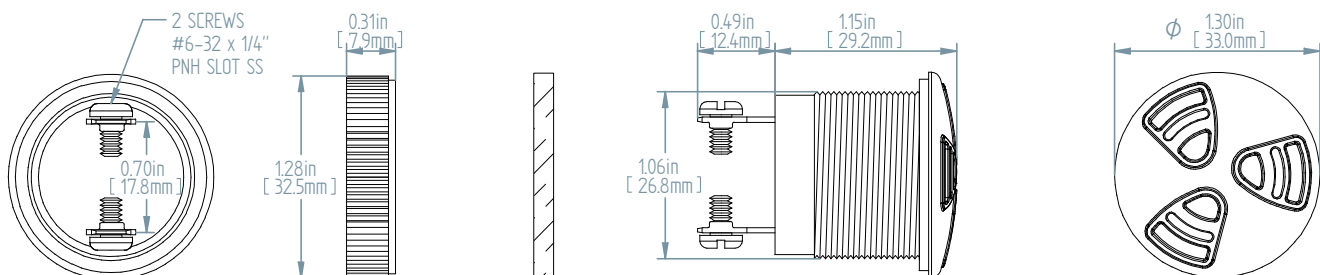
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMB-86-530-S(S)



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USA



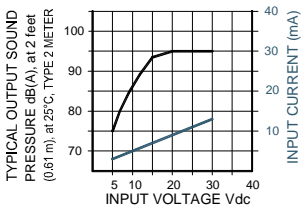
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-530-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C. 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

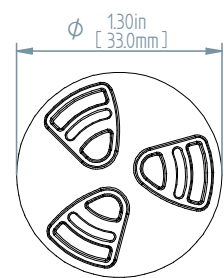
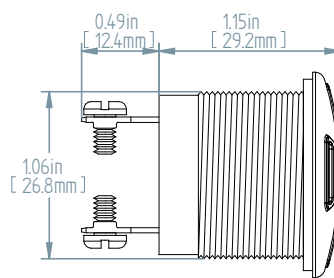
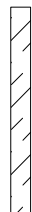
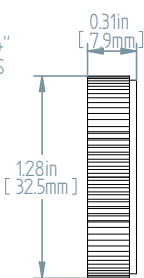
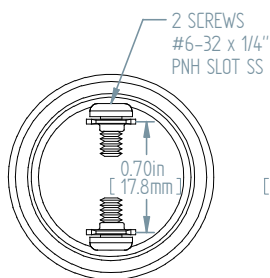
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-530-W(F)

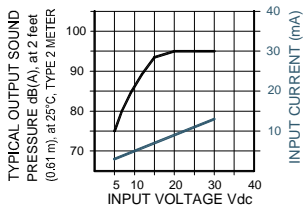


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

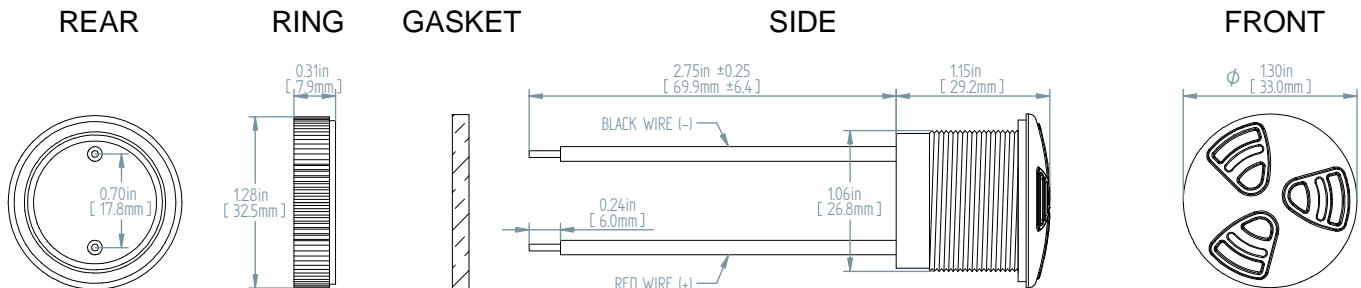


The Turbo TMB-86-530-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMB-86-530-W(S)

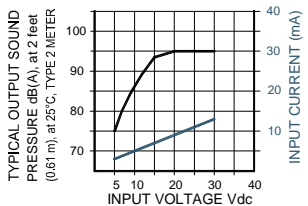


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

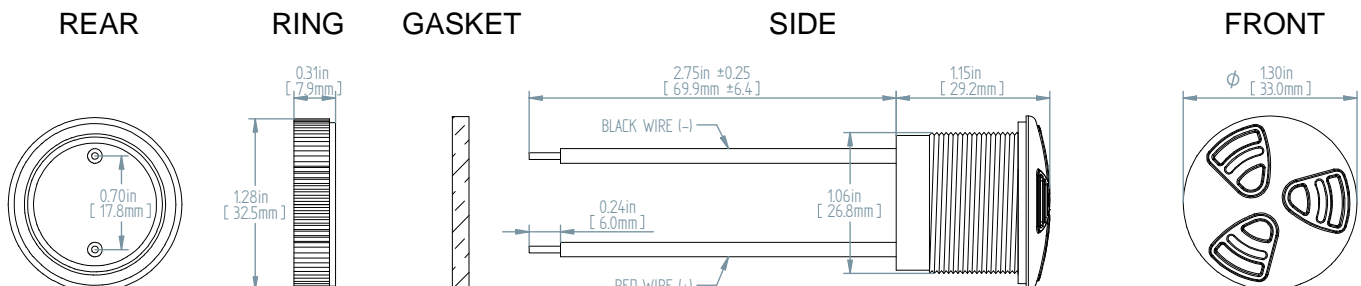


The Turbo TMB-86-530-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 9.09



# TMB-86-531-P(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

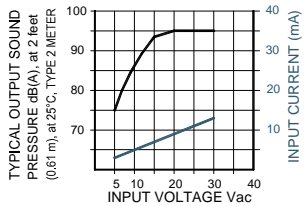
The Turbo TMB-86-531-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

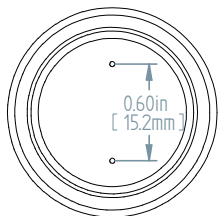
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

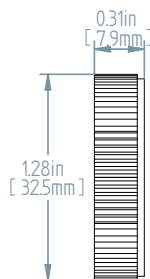


## DIMENSIONS

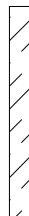
REAR



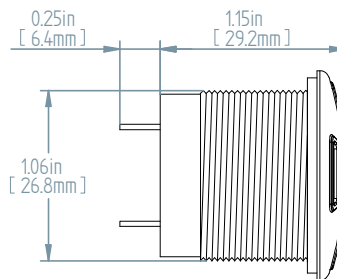
RING



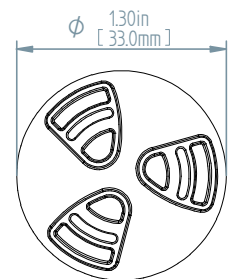
GASKET



SIDE



FRONT



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# TMB-86-531-P(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

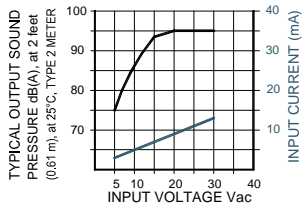
The Turbo TMB-86-531-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

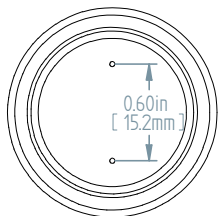
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

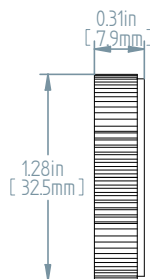


## DIMENSIONS

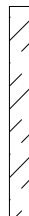
REAR



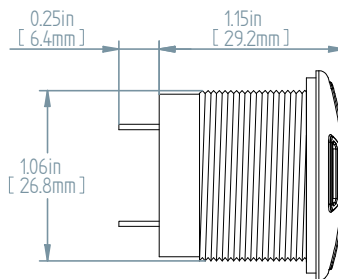
RING



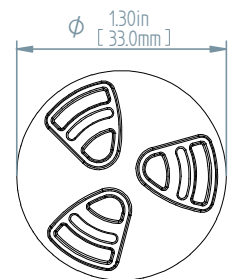
GASKET



SIDE



FRONT



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Revision: 9.09

# TMB-86-531-Q(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

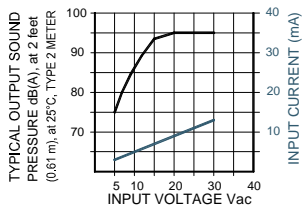
The Turbo TMB-86-531-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

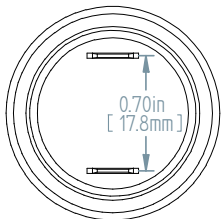
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

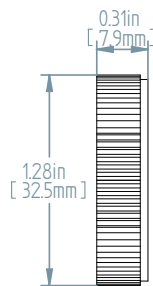


## DIMENSIONS

REAR



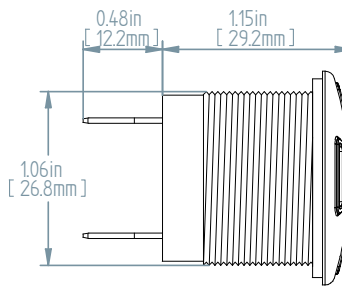
RING



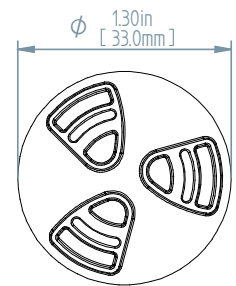
GASKET



SIDE



FRONT



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# TMB-86-531-Q(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

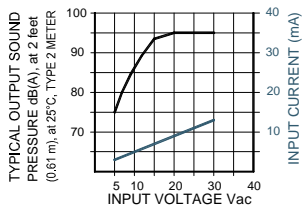
The Turbo TMB-86-531-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
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**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
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**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

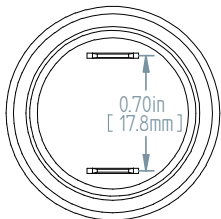
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

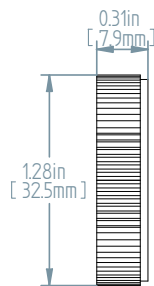


## DIMENSIONS

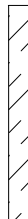
REAR



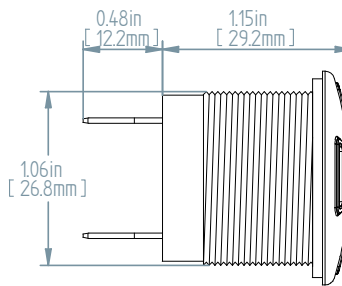
RING



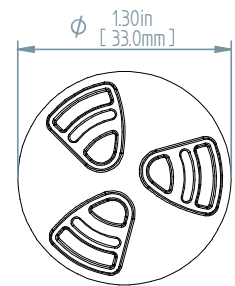
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMB-86-531-S(F)



**Made in  
USA**



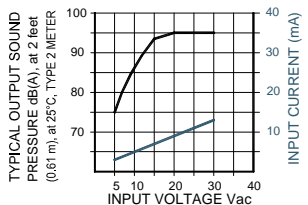
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-531-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

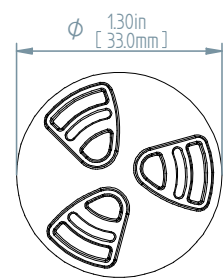
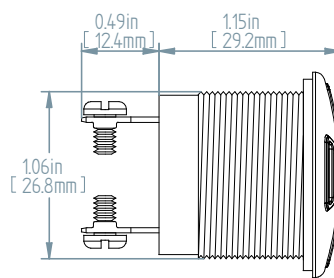
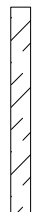
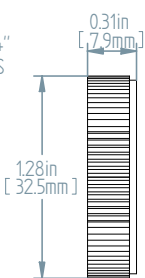
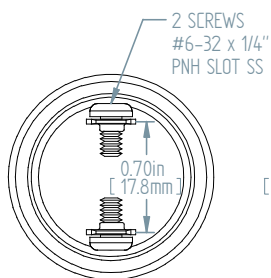
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09



# TMB-86-531-S(S)



**Made in  
USA**



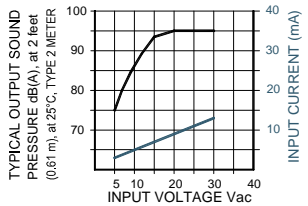
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-531-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

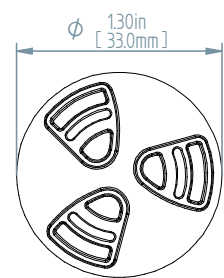
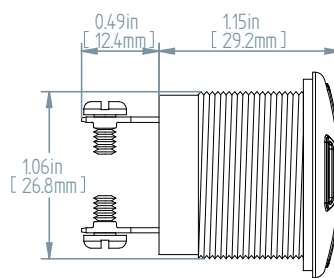
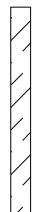
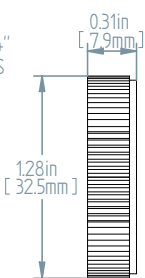
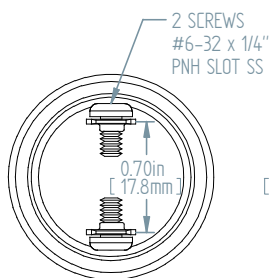
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-531-W(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

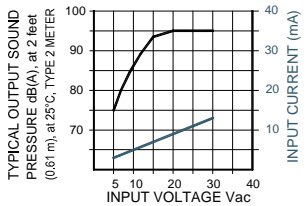
The Turbo TMB-86-531-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

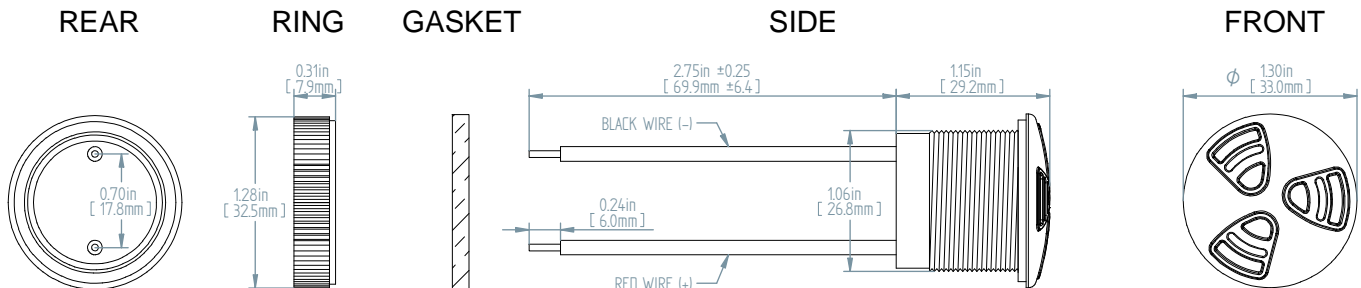
**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**

# TMB-86-531-W(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

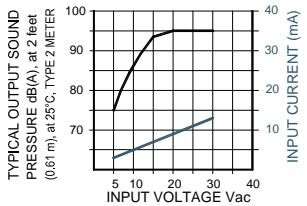
The Turbo TMB-86-531-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

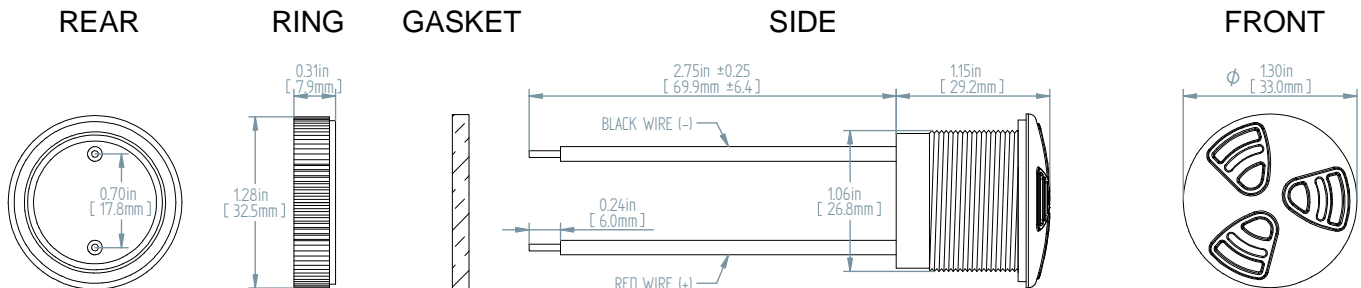
**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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**Revision: 9.09**

# TMB-86-948-P(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

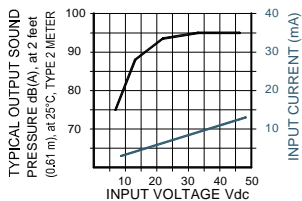
The Turbo TMB-86-948-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304

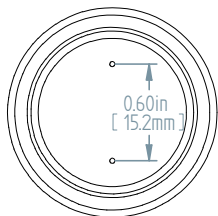
**Environmental Durability:** NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

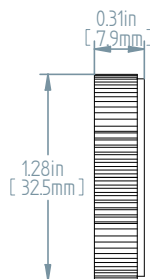


## DIMENSIONS

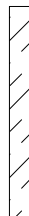
REAR



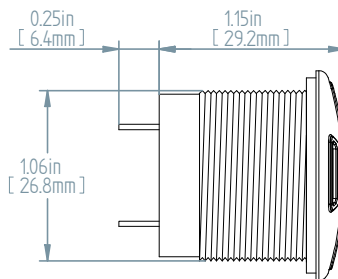
RING



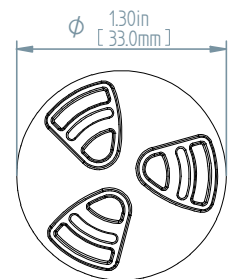
GASKET



SIDE



FRONT



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# TMB-86-948-P(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

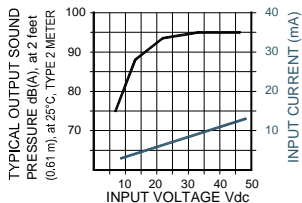
The Turbo TMB-86-948-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304

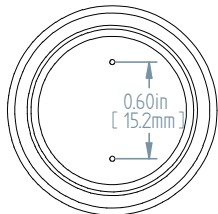
**Environmental Durability:** NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

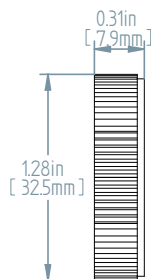


## DIMENSIONS

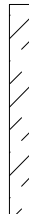
REAR



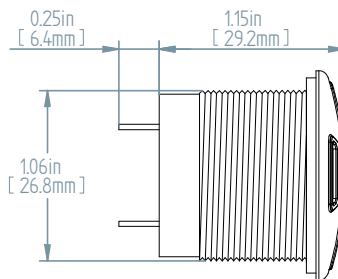
RING



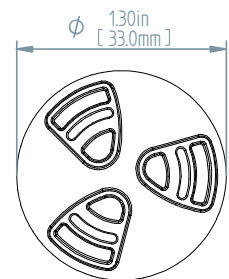
GASKET



SIDE



FRONT



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Revision: 9.09



# TMB-86-948-Q(F)



Made in  
USA



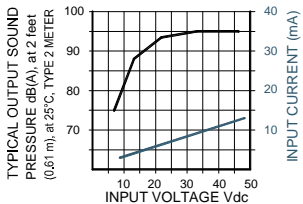
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-948-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

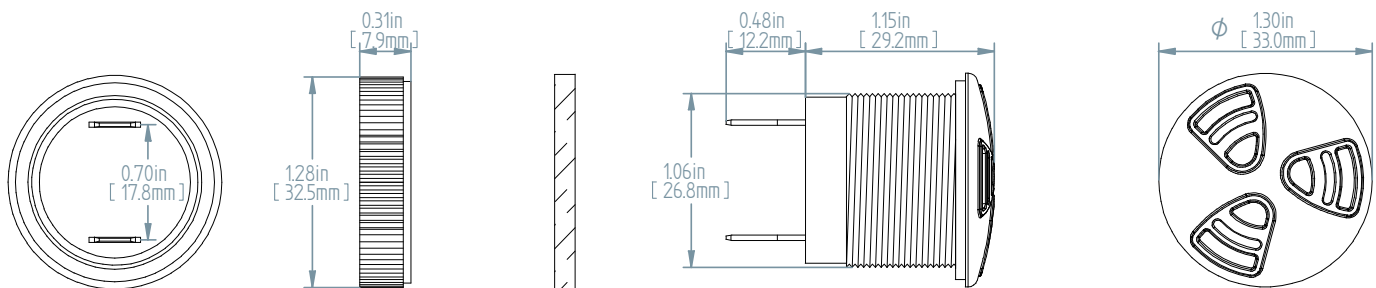
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMB-86-948-Q(S)



Made in  
USA



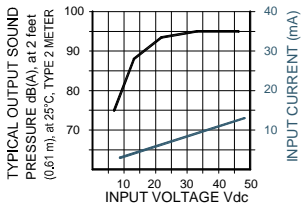
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-948-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
	1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc
	10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C
	95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

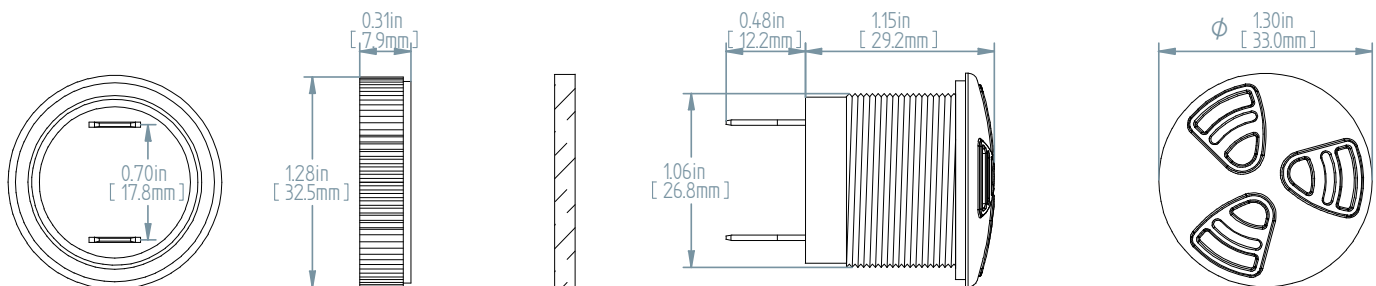
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-948-S(F)

Made in  
USA

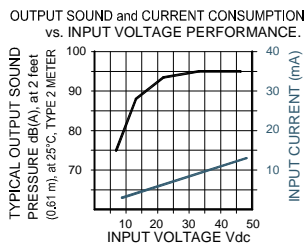


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-948-S(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

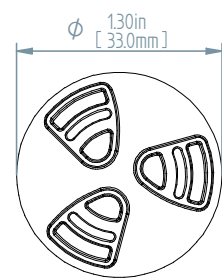
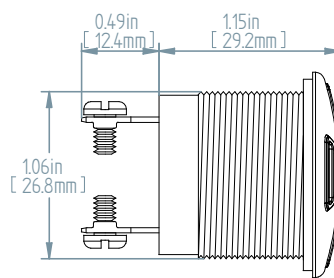
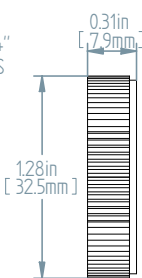
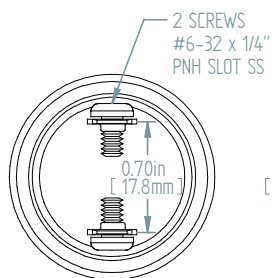
REAR

RING

GASKET

SIDE

FRONT



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# TMB-86-948-S(S)

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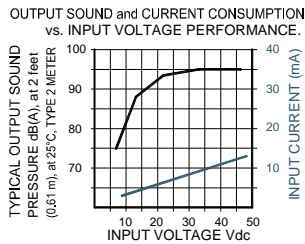


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-948-S(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

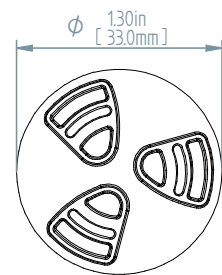
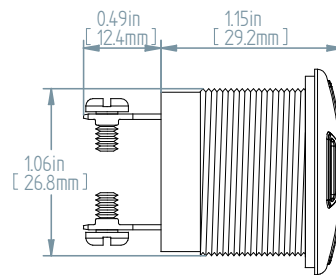
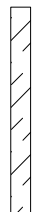
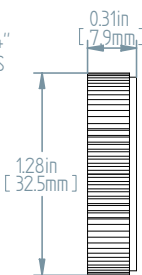
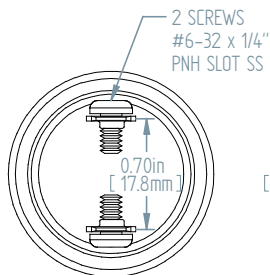
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMB-86-948-W(F)



Made in  
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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-86-948-W(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

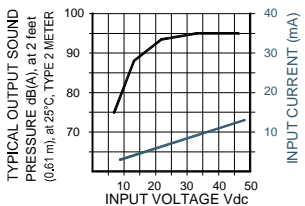
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
IP 68 Certified- Withstands water submergence and dust exposure  
Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

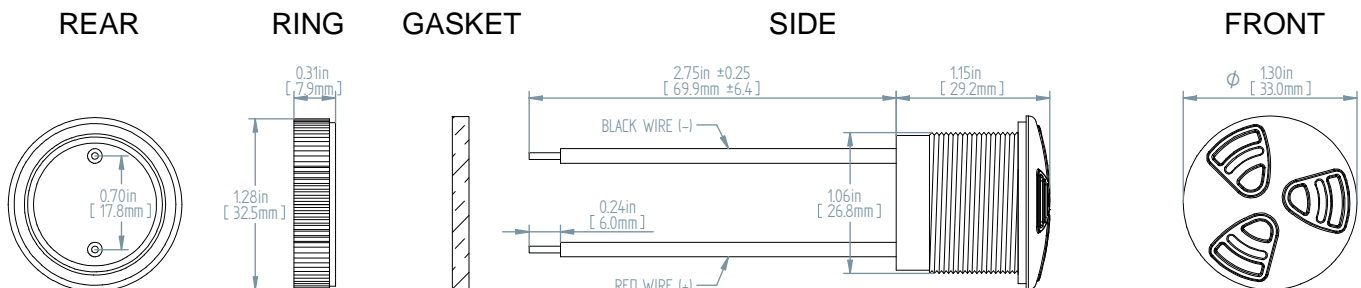
**Life Expectancy:** 10 years under normal operating conditions.

**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMB-86-948-W(S)



Made in  
USA



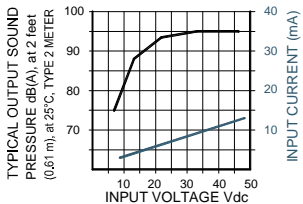
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

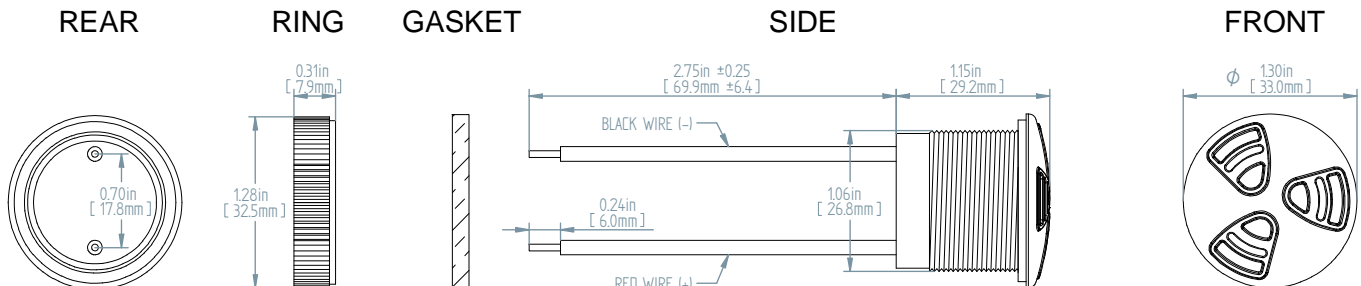
**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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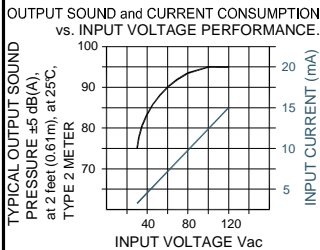
# TMB-V86-201-Q(F)



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

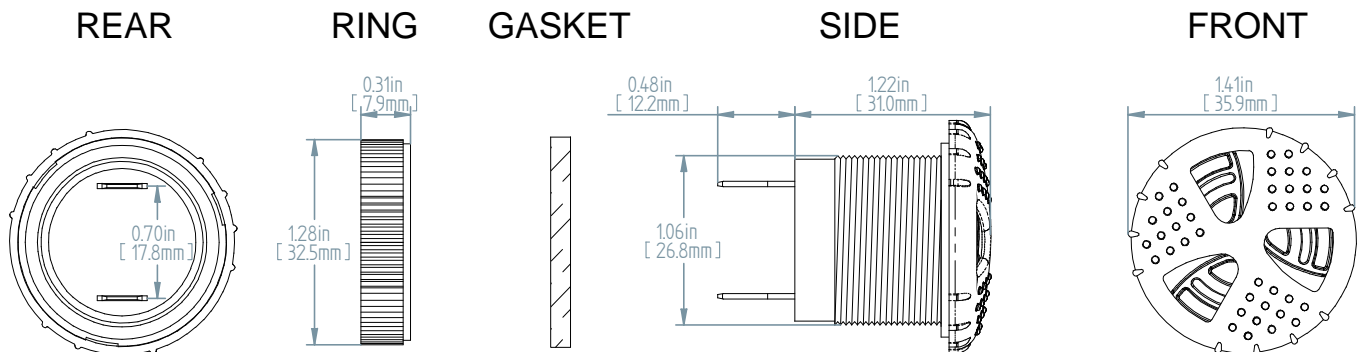


The Turbo TMB-V86-201-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 30-120 Vac  
**Nominal Operating Voltage:** 110 Vac  
**Operating Frequency:** 2900 $\pm$ 250 Hz.  
 3 $\pm$ 25% Beeps per second  
**Typical Operating Current:** 2 mA at 30 Vac  
 15 mA at 120 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75 $\pm$ 5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C  
 95 $\pm$ 5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 9.09**

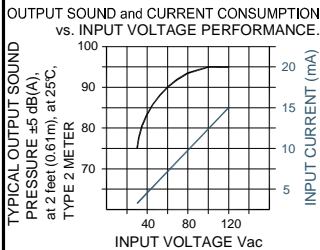
# TMB-V86-201-Q(S)



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

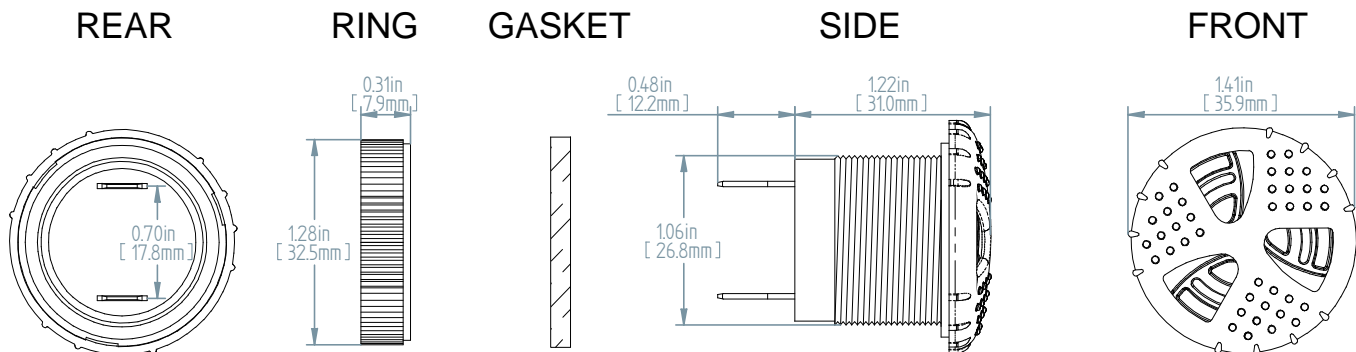


The Turbo TMB-V86-201-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 30-120 Vac  
**Nominal Operating Voltage:** 110 Vac  
**Operating Frequency:** 2900 $\pm$ 250 Hz.  
 1 $\pm$ 25% Beeps per second  
**Typical Operating Current:** 2 mA at 30 Vac  
 15 mA at 120 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75 $\pm$ 5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C  
 95 $\pm$ 5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

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720 Dearborn Park Lane • Columbus, OH 43085  
 Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
 www.floydbell.com

Revision: 9.09

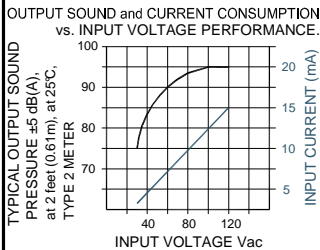
# TMB-V86-201-S(F)



Made in  
USA



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

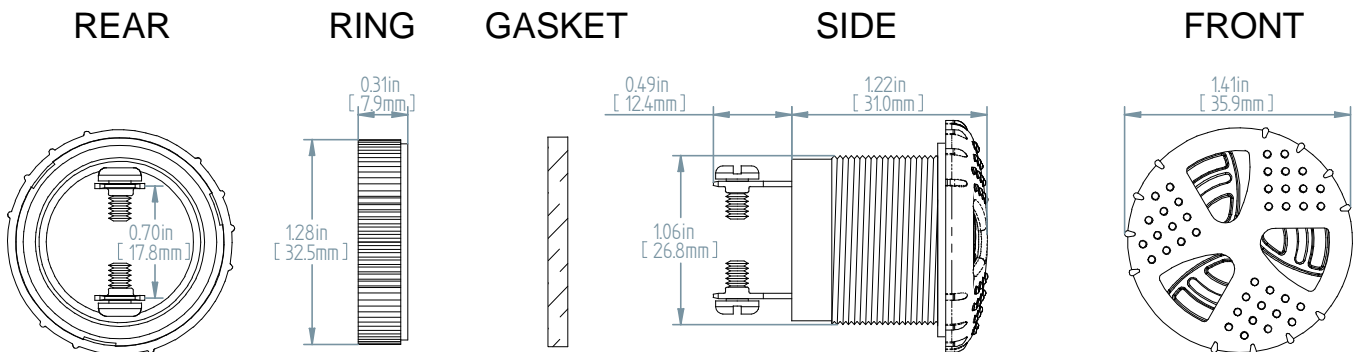


The Turbo TMB-V86-201-S(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 30-120 Vac  
**Nominal Operating Voltage:** 110 Vac  
**Operating Frequency:** 2900 $\pm$ 250 Hz.  
 3 $\pm$ 25% Beeps per second  
**Typical Operating Current:** 2 mA at 30 Vac  
 15 mA at 120 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75 $\pm$ 5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C  
 95 $\pm$ 5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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# TMB-V86-201-S(S)



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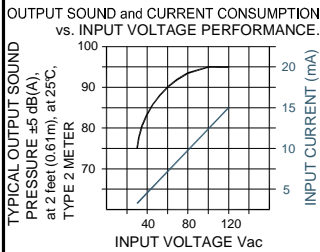


- Patented Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
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The Turbo TMB-V86-201-S(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

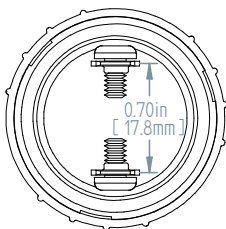
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

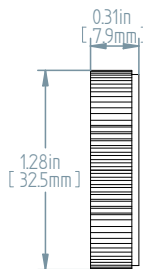


## DIMENSIONS

REAR



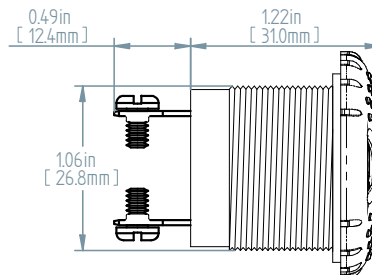
RING



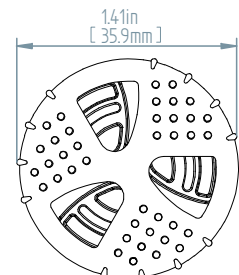
GASKET



SIDE



FRONT



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Revision: 9.09



# TMB-V86-530-P(F)

Made in  
USA



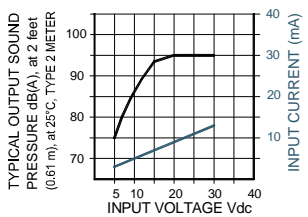
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-530-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

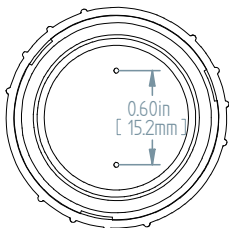
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

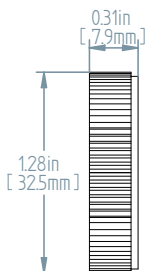


## DIMENSIONS

REAR



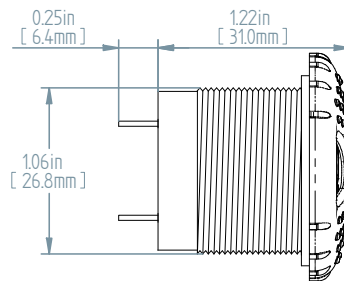
RING



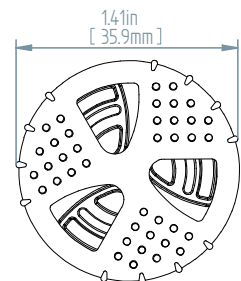
GASKET



SIDE



FRONT



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# TMB-V86-530-P(S)



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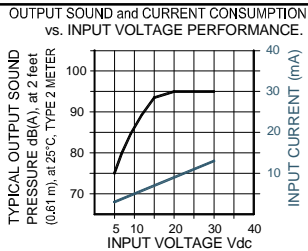


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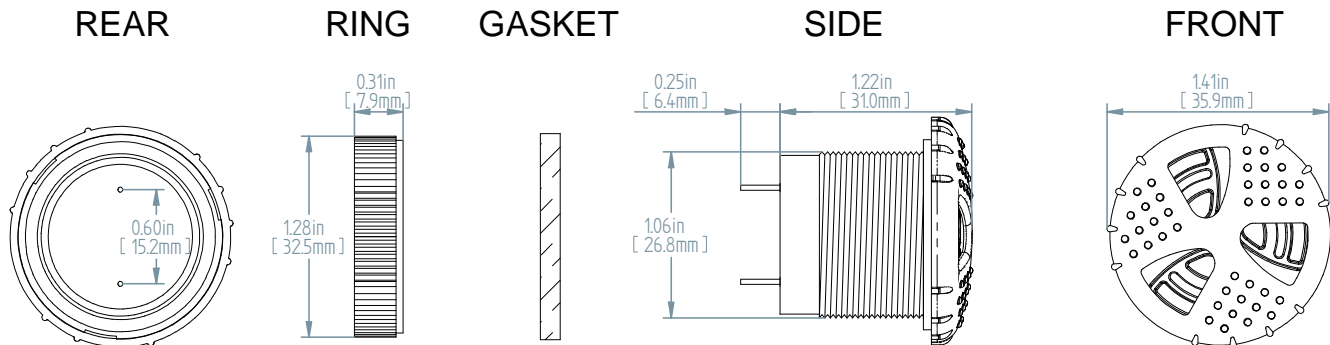
The Turbo TMB-V86-530-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TMB-V86-530-Q(F)



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USA**



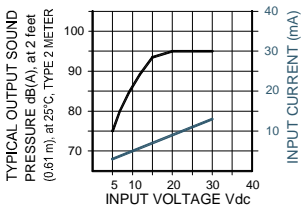
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-530-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

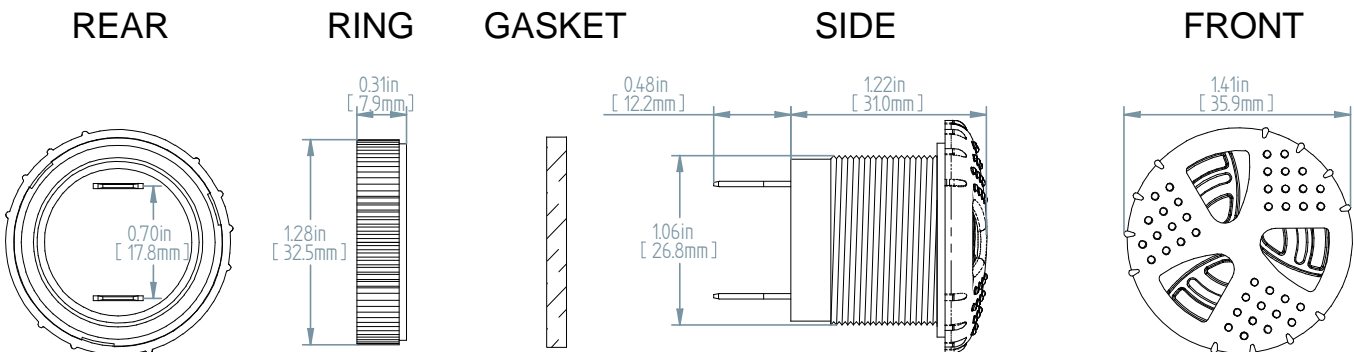
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TMB-V86-530-Q(S)



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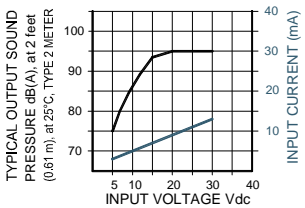
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The Turbo TMB-V86-530-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

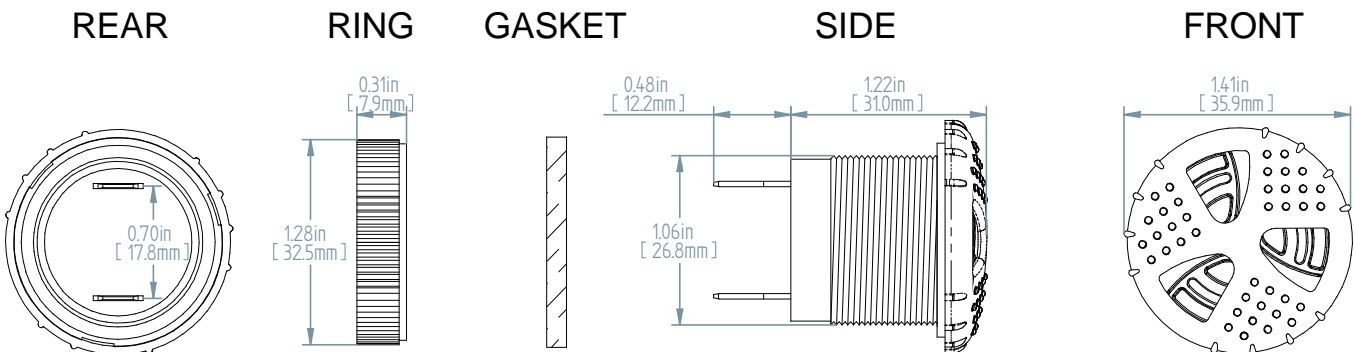
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



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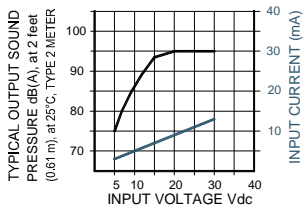


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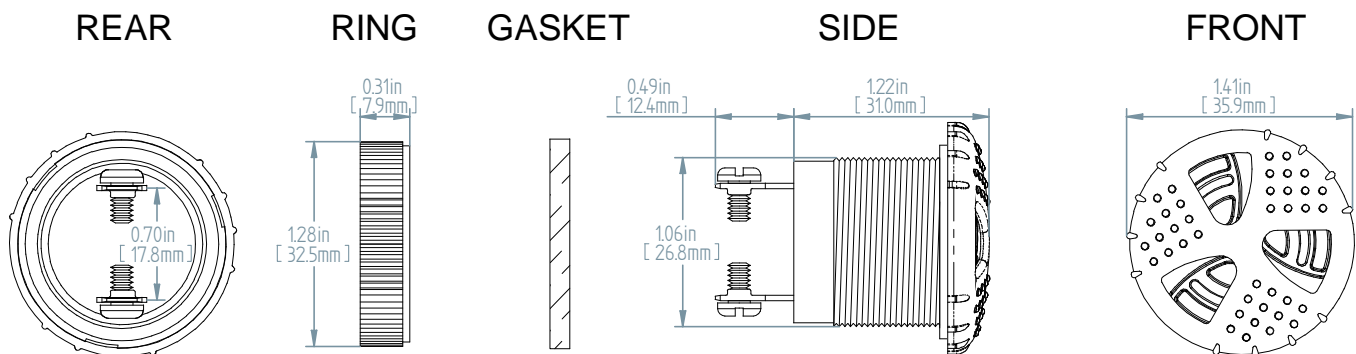


The Turbo TMB-V86-530-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
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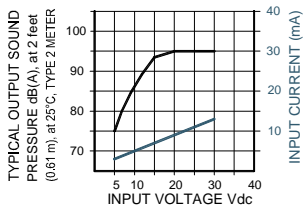


**Made in  
USA**



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- Corrosion Resistant Stainless Steel Diaphragm
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OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

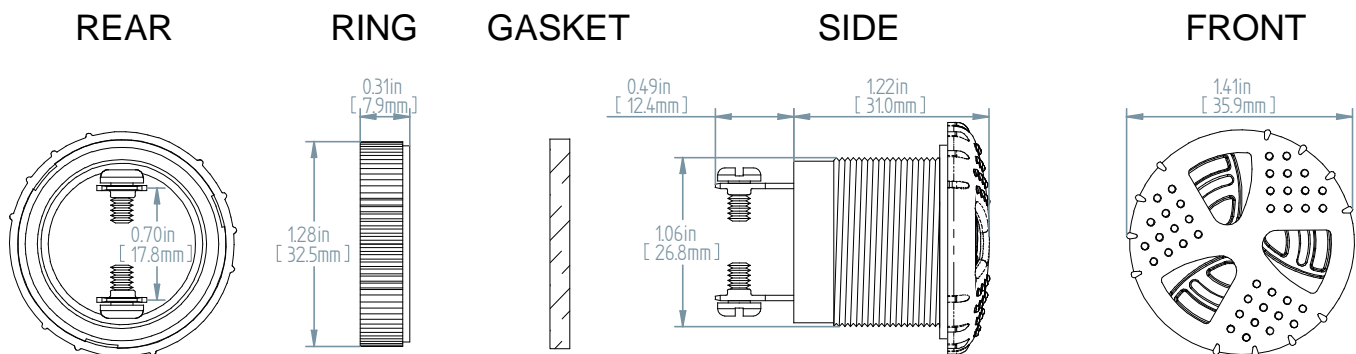


The Turbo TMB-V86-530-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMB-V86-530-W(F)

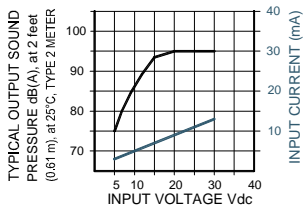


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

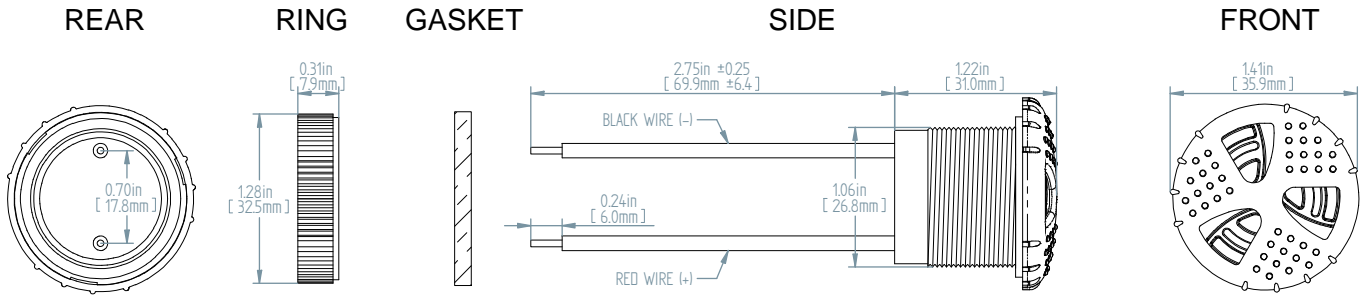


The Turbo TMB-V86-530-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 9.09

# TMB-V86-530-W(S)

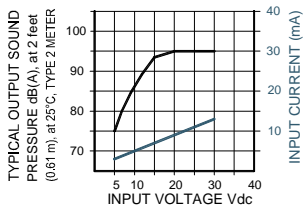


Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

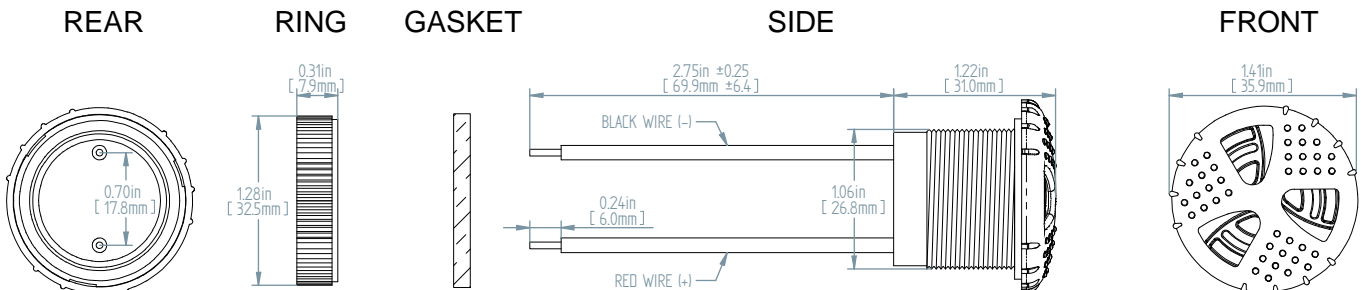


The Turbo TMB-V86-530-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
	1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc
	10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open:
	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C
	95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black
	Internal Circuit- Audio-oscillator and piezoelectric driver
	Potting- 2 parts epoxy resin or silicone, black
	Diaphragm- Stainless Steel 304
	NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours
	IP 68 Certified- Withstands water submergence and dust exposure
	Humidity- 95% relative humidity at +40°C continuously for 100 hours.
	Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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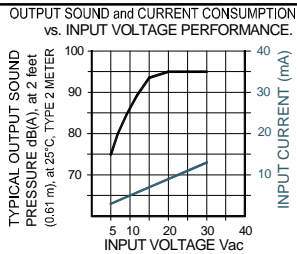
# TMB-V86-531-P(F)



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

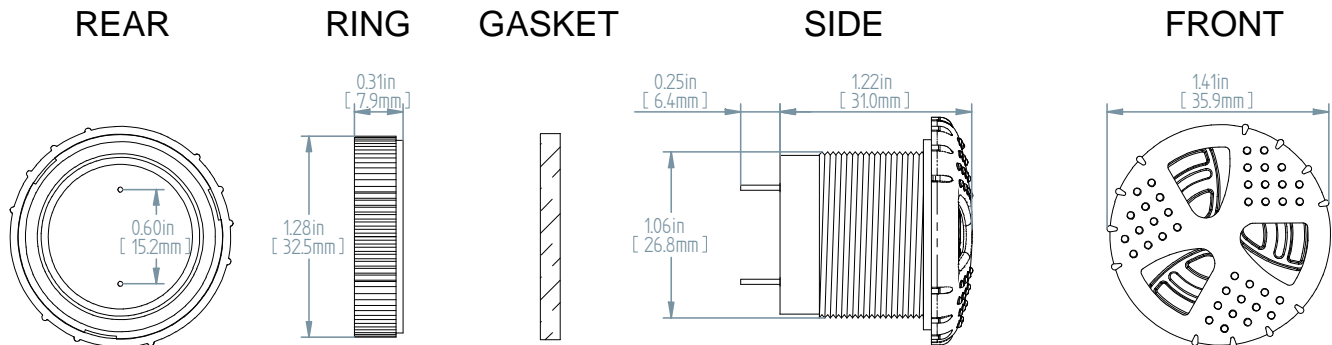


The Turbo TMB-V86-531-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz, on all axes.  
 10 years under normal operating conditions.  
**Environmental Durability:** For a period of two years from the date of manufacture under normal operating conditions.  
**Life Expectancy:**  
**Warranty:**

## DIMENSIONS



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# TMB-V86-531-P(S)

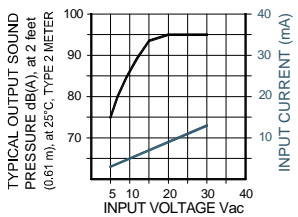


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

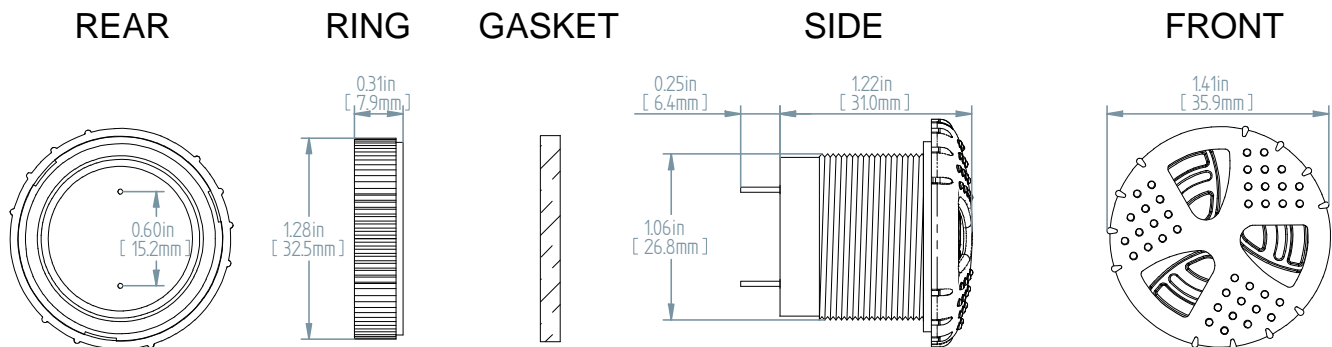


The Turbo TMB-V86-531-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Environmental Durability:** For a period of two years from the date of manufacture under normal operating conditions.  
**Life Expectancy:**  
**Warranty:**

## DIMENSIONS



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# TMB-V86-531-Q(F)



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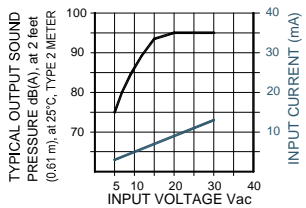
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-531-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

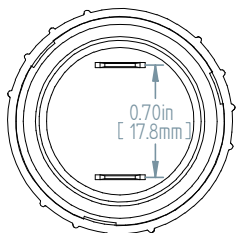
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

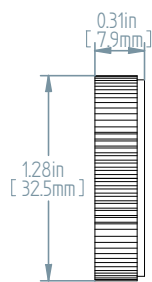


## DIMENSIONS

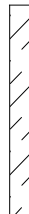
REAR



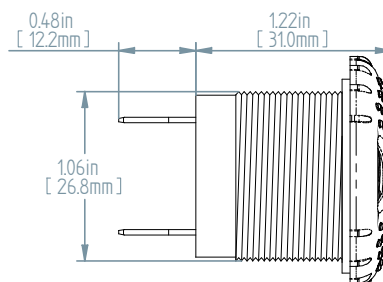
RING



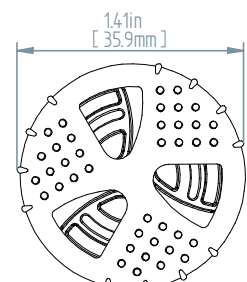
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMB-V86-531-Q(S)



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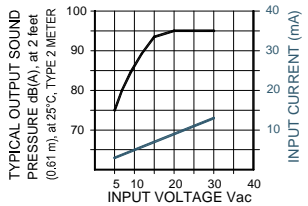
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-531-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

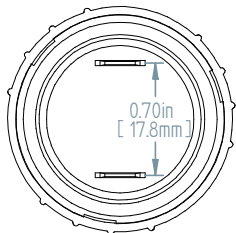
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
	1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac
	15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open:
	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C
	95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

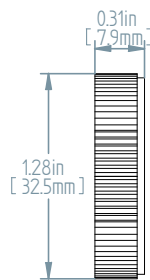


## DIMENSIONS

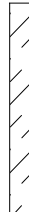
REAR



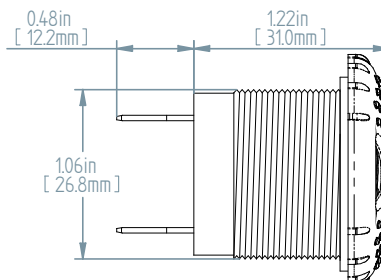
RING



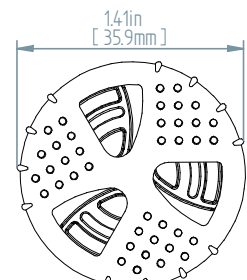
GASKET



SIDE



FRONT



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Revision: 9.09

# TMB-V86-531-S(F)

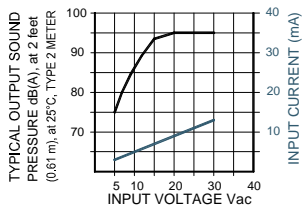


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USA**



- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

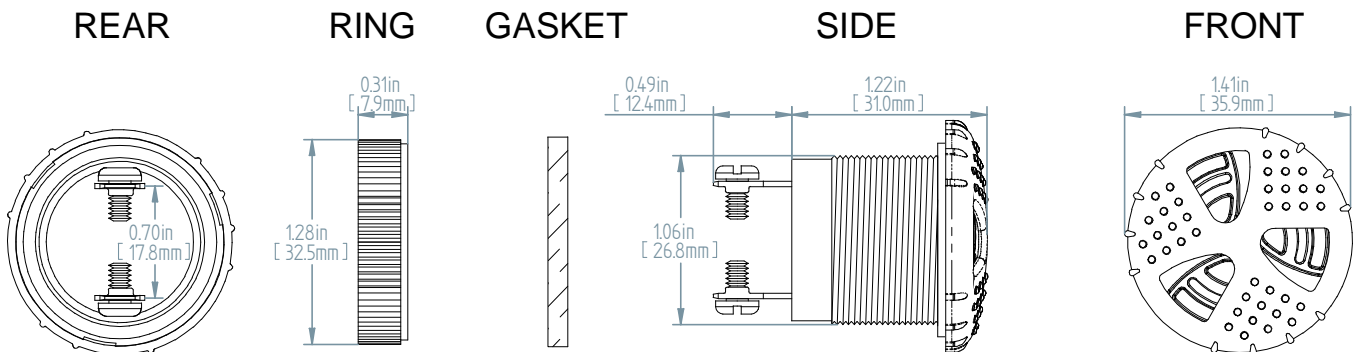


The Turbo TMB-V86-531-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 9.09

# TMB-V86-531-S(S)



**Made in  
USA**



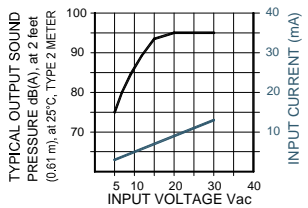
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-531-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

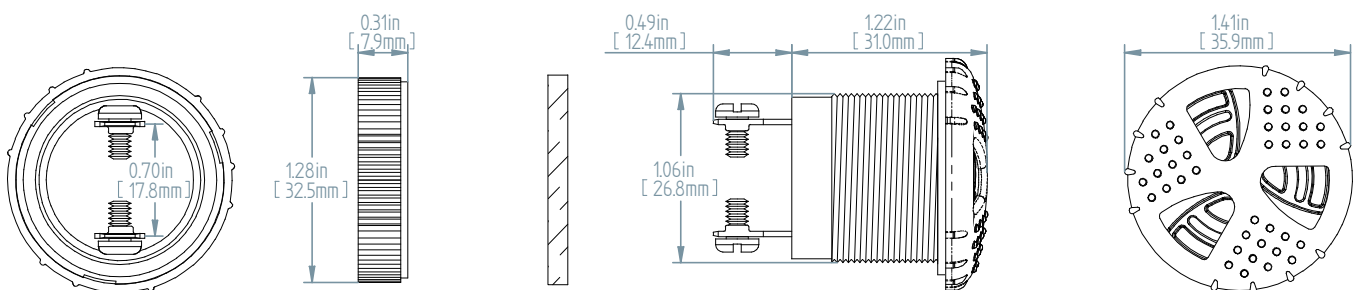
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMB-V86-531-W(F)



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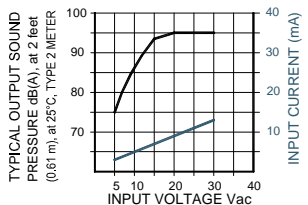
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-531-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

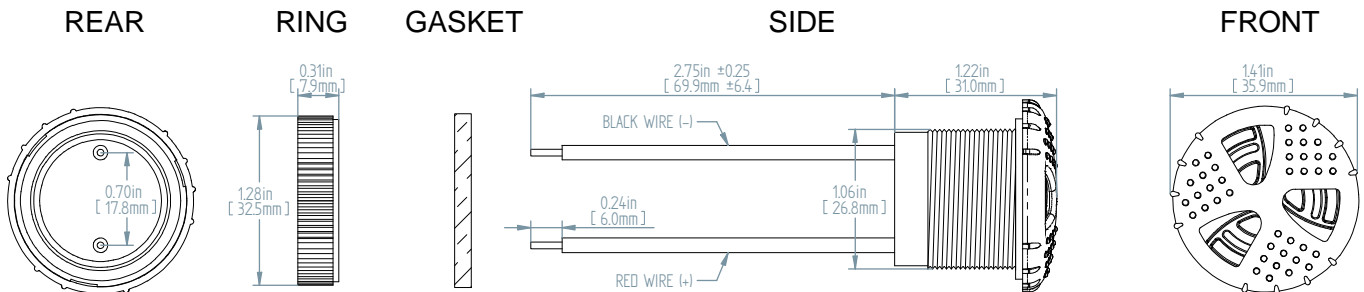
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMB-V86-531-W(S)



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USA**



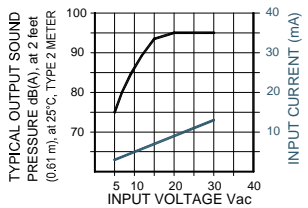
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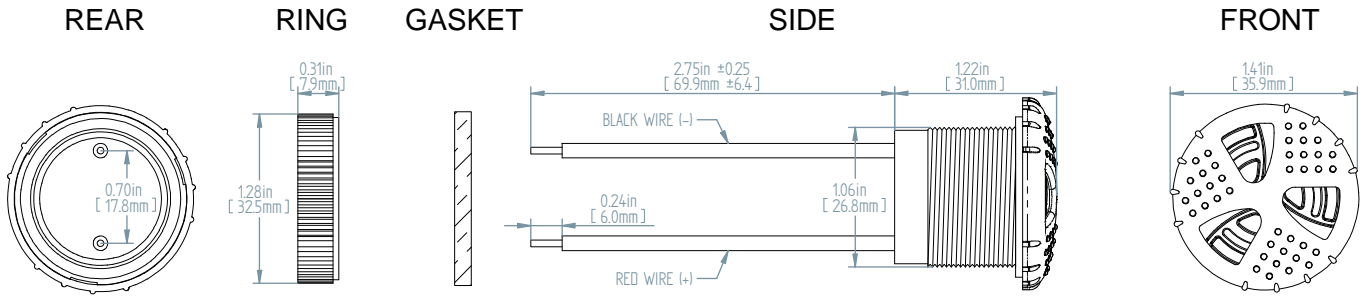
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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**Revision: 9.09**

# TMB-V86-948-P(F)

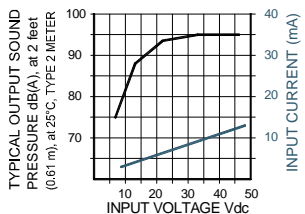


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



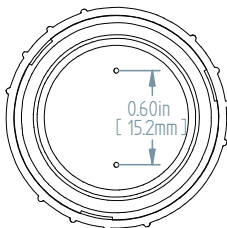
The Turbo TMB-V86-948-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

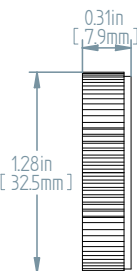
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



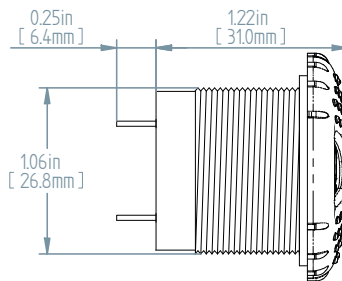
RING



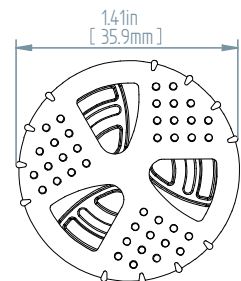
GASKET



SIDE



FRONT



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Revision: 9.09

# TMB-V86-948-P(S)

Made in  
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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-948-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second

**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc

**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.

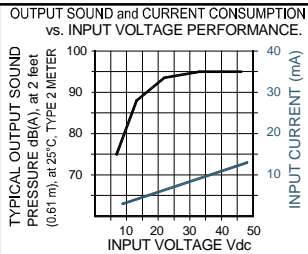
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.

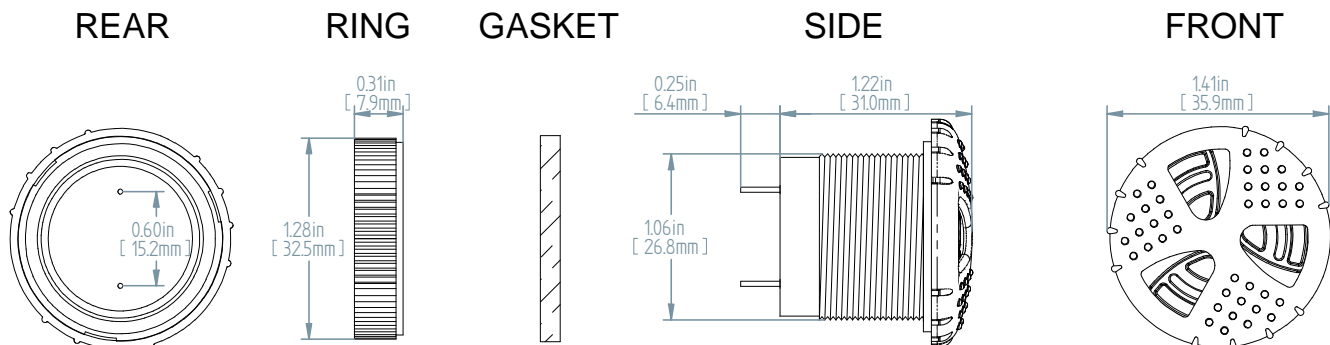
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 9.09

# TMB-V86-948-Q(F)



Made in  
USA



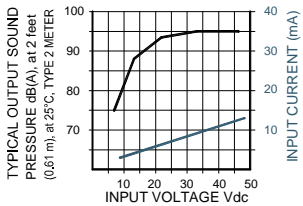
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-948-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

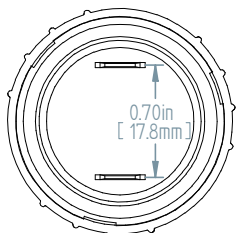
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

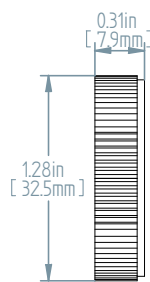


## DIMENSIONS

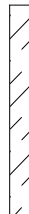
REAR



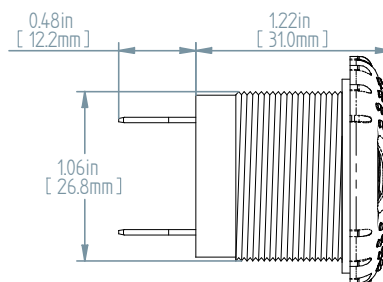
RING



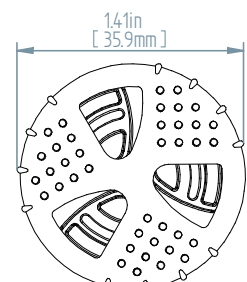
GASKET



SIDE



FRONT



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Revision: 9.09

# TMB-V86-948-Q(S)



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

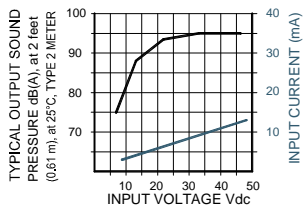
The Turbo TMB-V86-948-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

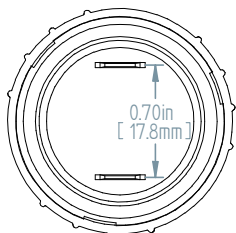
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
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**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

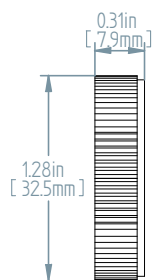


## DIMENSIONS

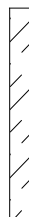
REAR



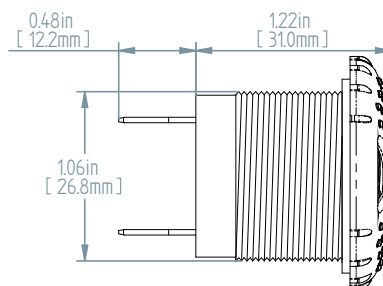
RING



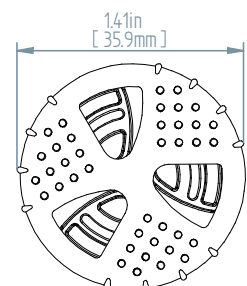
GASKET



SIDE



FRONT



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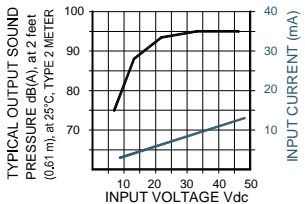
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The Turbo TMB-V86-948-S(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

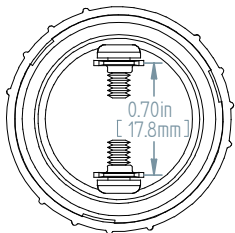
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

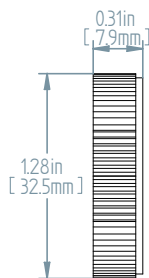


## DIMENSIONS

REAR



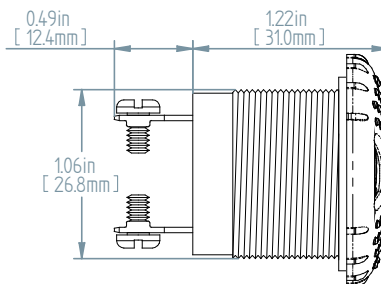
RING



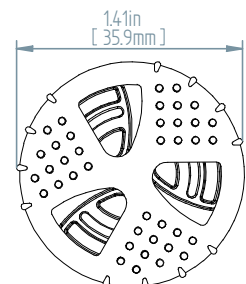
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMB-V86-948-S(S)



Made in  
USA



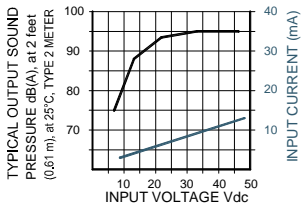
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMB-V86-948-S(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

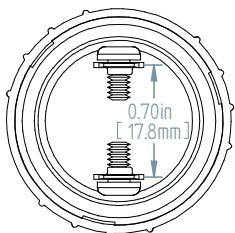
<b>Operating Mode:</b>	Medium Loud Beep Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

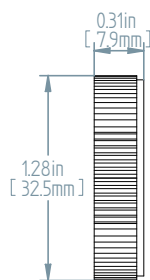


## DIMENSIONS

REAR



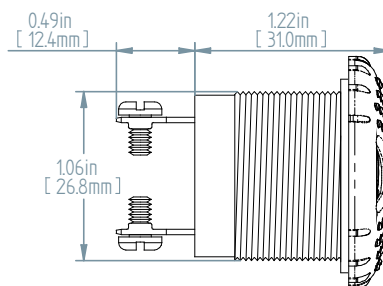
RING



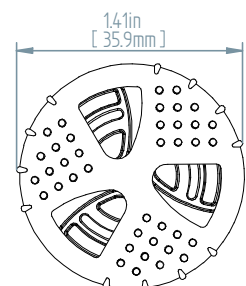
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMB-V86-948-W(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

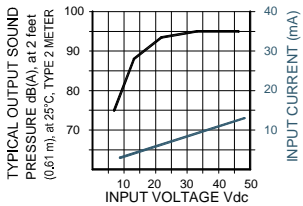
The Turbo TMB-V86-948-W(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

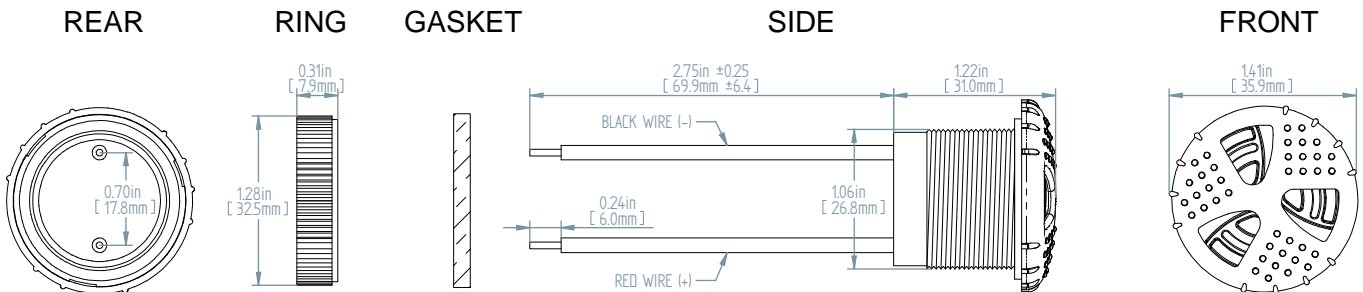
**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMB-V86-948-W(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

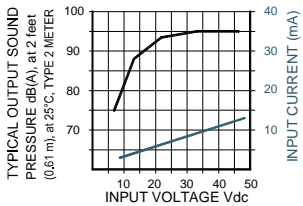
The Turbo TMB-V86-948-W(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

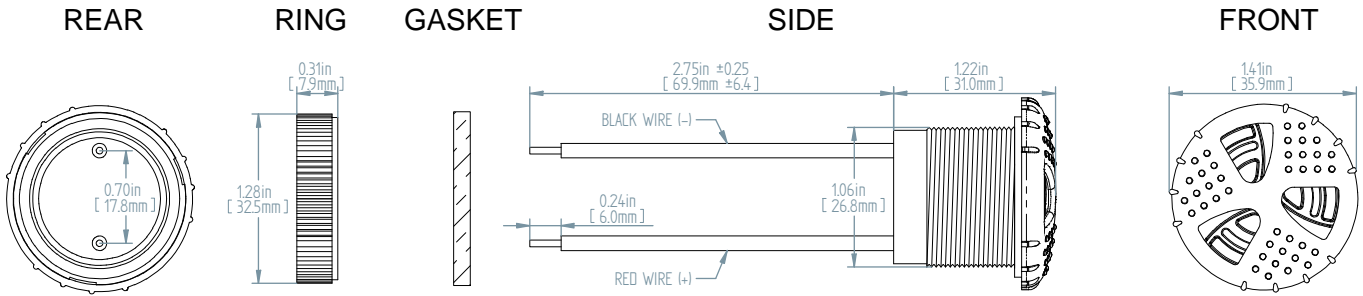
**Operating Mode:** Medium Loud Beep Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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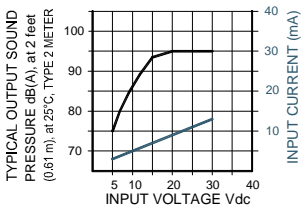
# TMC-80-530-W

**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The Turbo TMC-80-530-W is a medium loud output, M-80 style alarm for operating voltages of 5-30VDC. The Turbo circuit design features wide operating voltage range and low input current consumption.

## SPECIFICATIONS

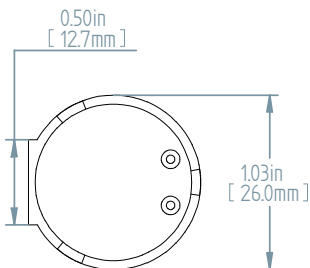
**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

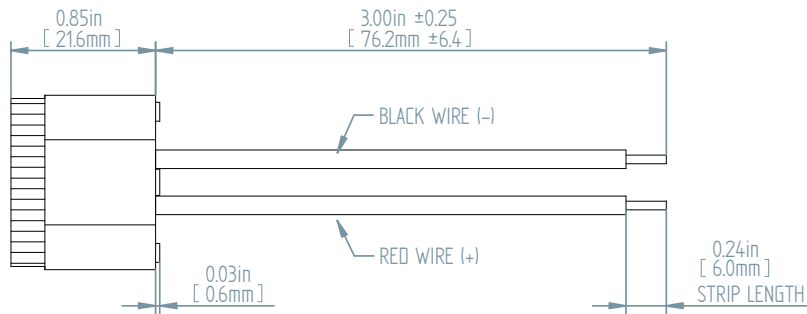
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

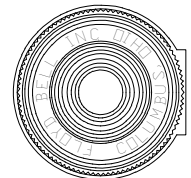
REAR



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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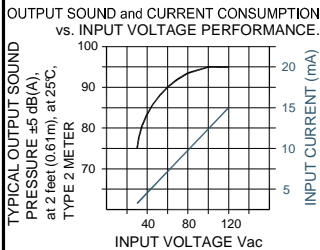
# TMC-86-201-Q



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

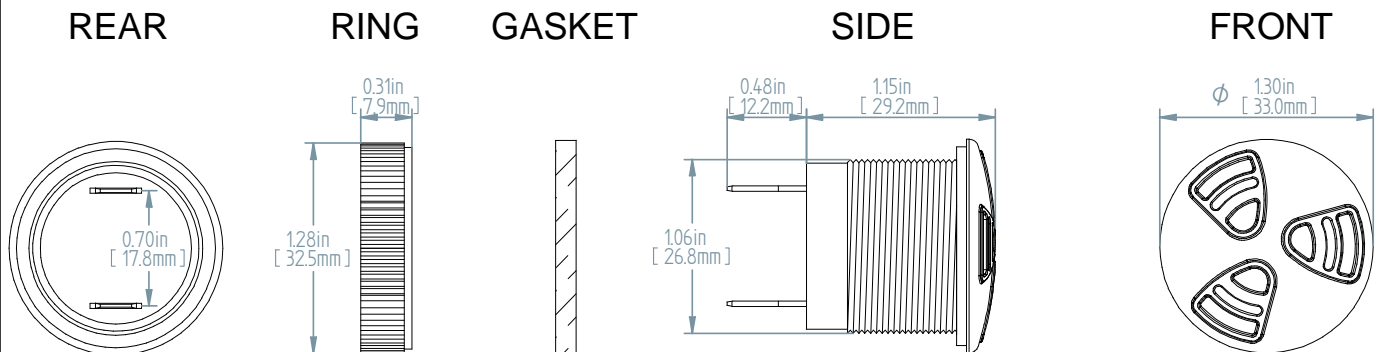


The Turbo TMC-86-201-Q is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMC-86-201-S

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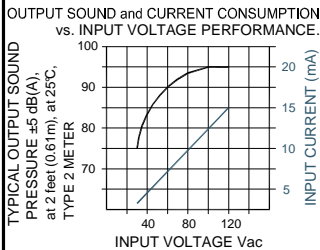


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-201-S is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	



## DIMENSIONS

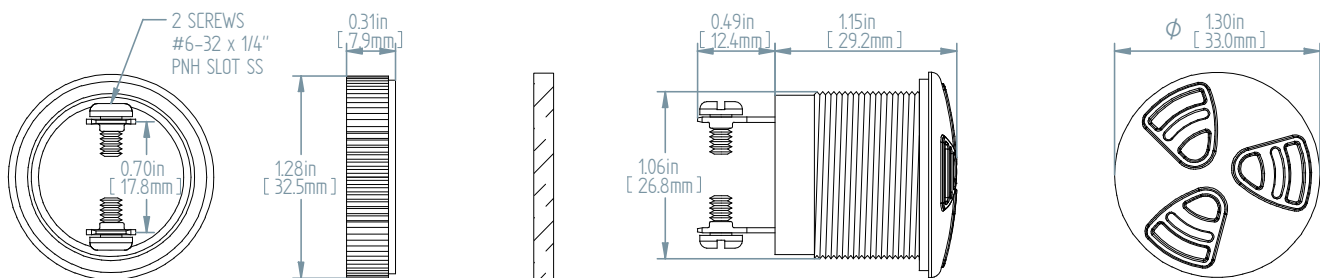
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMC-86-530-P

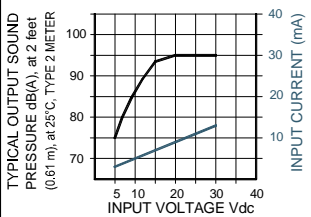


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



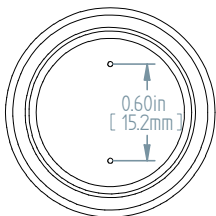
The Turbo TMC-86-530-P is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

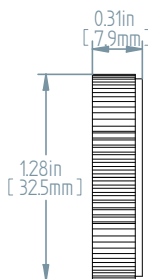
<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

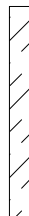
REAR



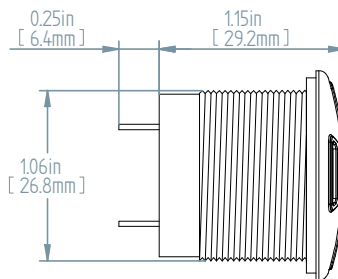
RING



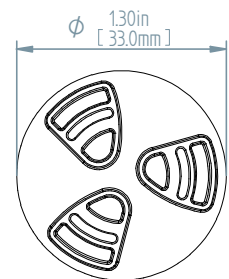
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMC-86-530-Q



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

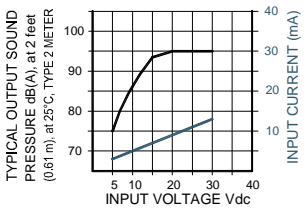
The Turbo TMC-86-530-Q is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

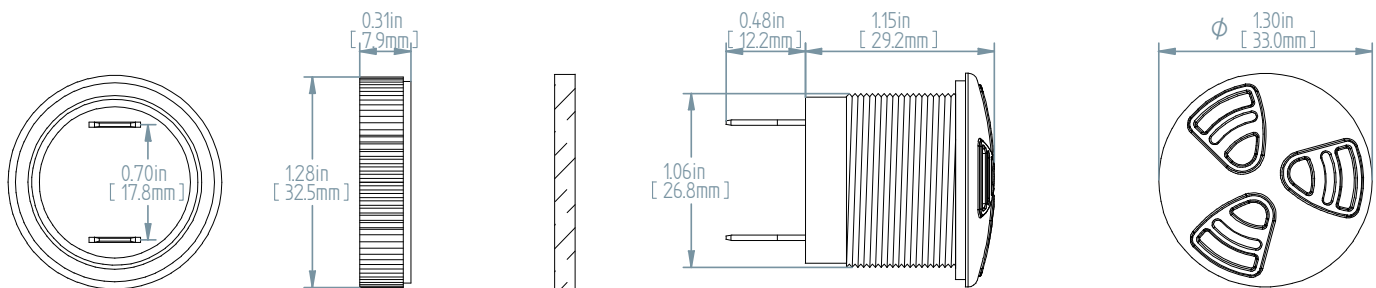
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMC-86-530-S

Made in  
USA



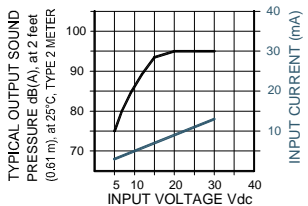
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-530-S is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

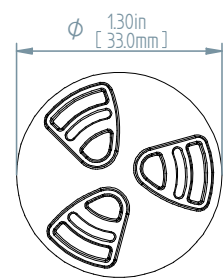
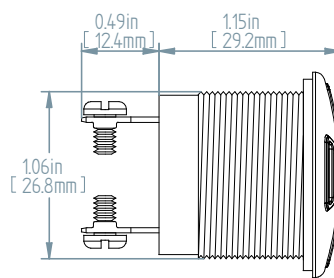
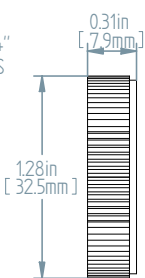
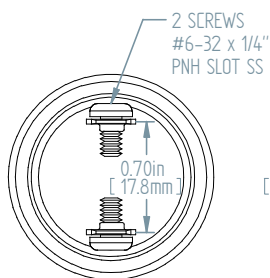
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09



# TMC-86-530-W



**Made in  
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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

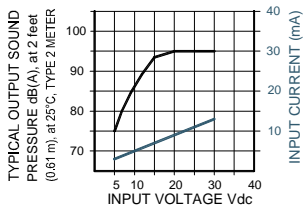
The Turbo TMC-86-530-W is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

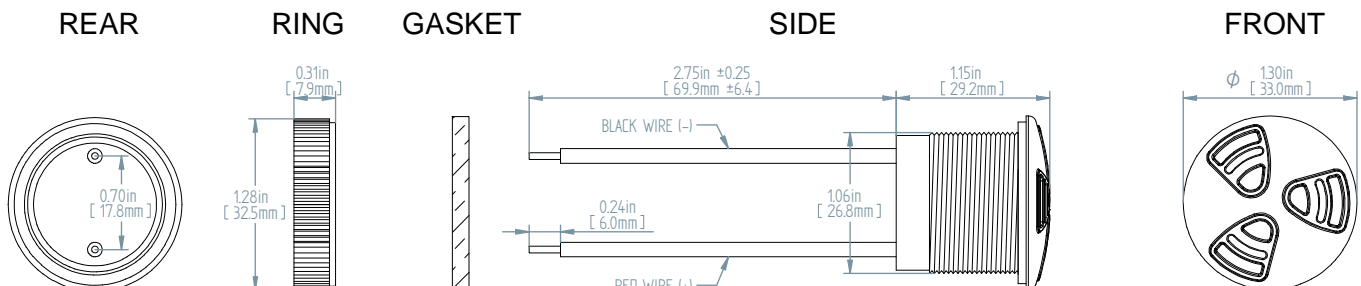
**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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**Revision: 9.09**

# TMC-86-531-P



**Made in  
USA**



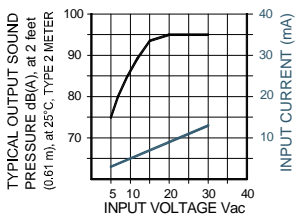
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-531-P is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

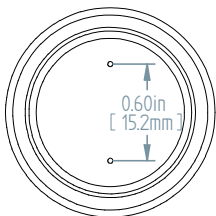
<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

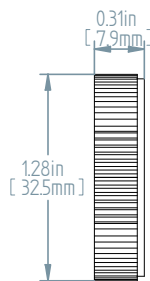


## DIMENSIONS

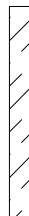
REAR



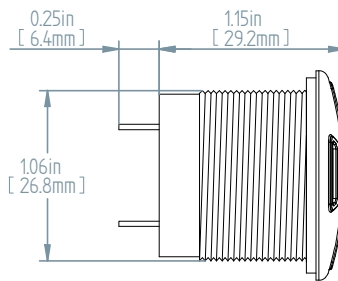
RING



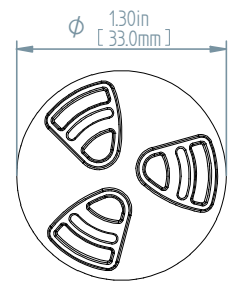
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMC-86-531-Q



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USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-531-Q is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

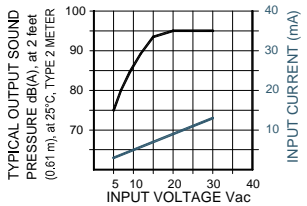
## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac

**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

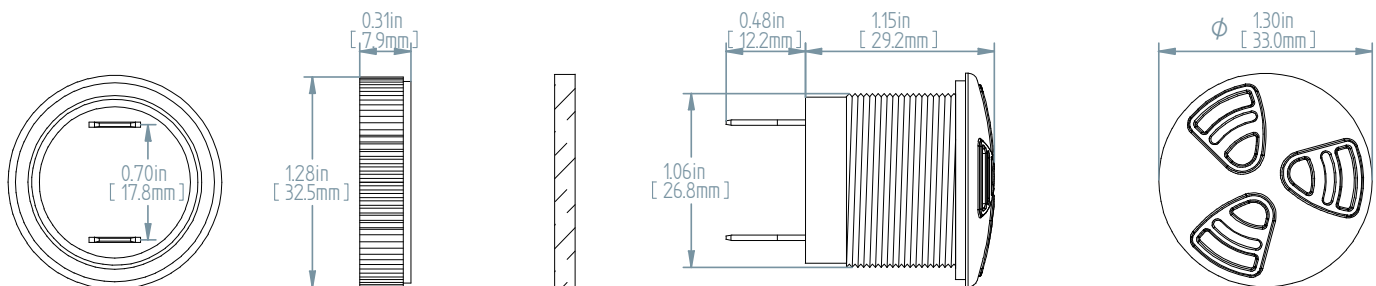
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMC-86-531-S



**Made in  
USA**



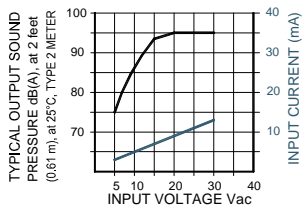
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-531-S is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

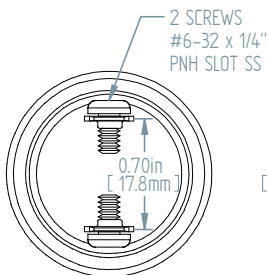
<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

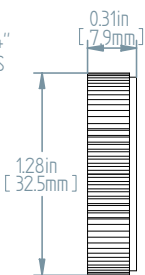


## DIMENSIONS

REAR



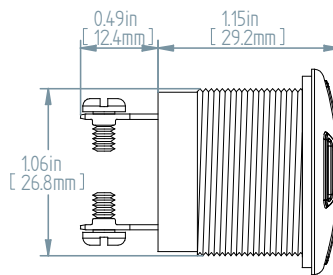
RING



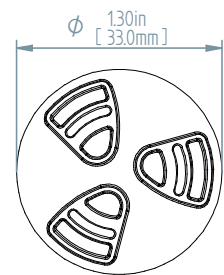
GASKET



SIDE



FRONT



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Revision: 9.09

# TMC-86-531-W

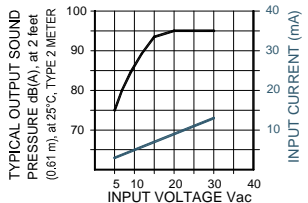


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

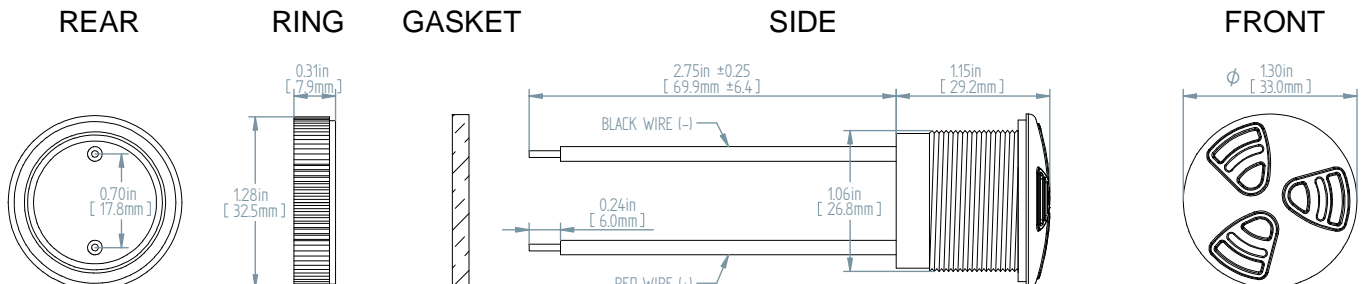


The Turbo TMC-86-531-W is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**



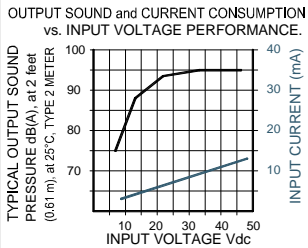
# TMC-86-948-P



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

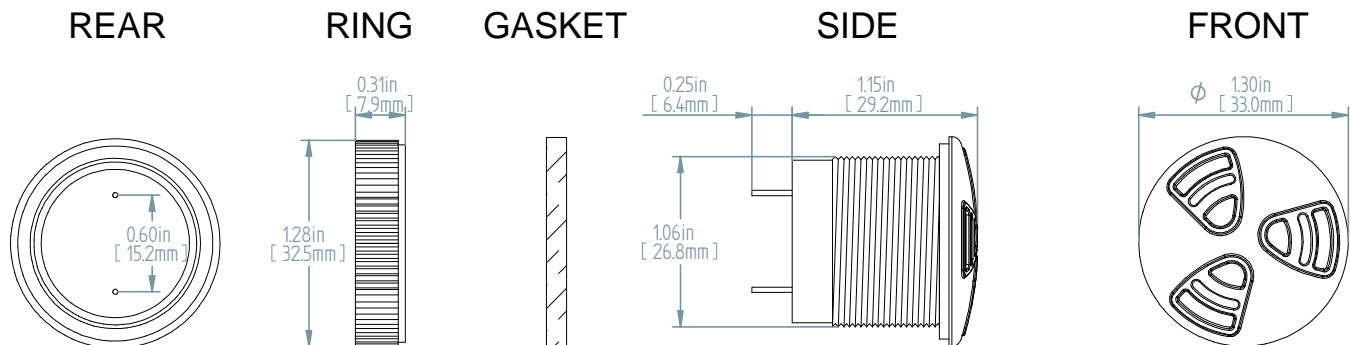


The Turbo TMC-86-948-P is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMC-86-948-Q



**Made in  
USA**



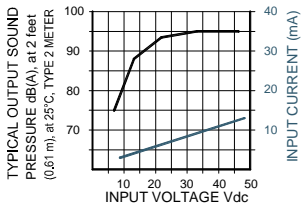
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-948-Q is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

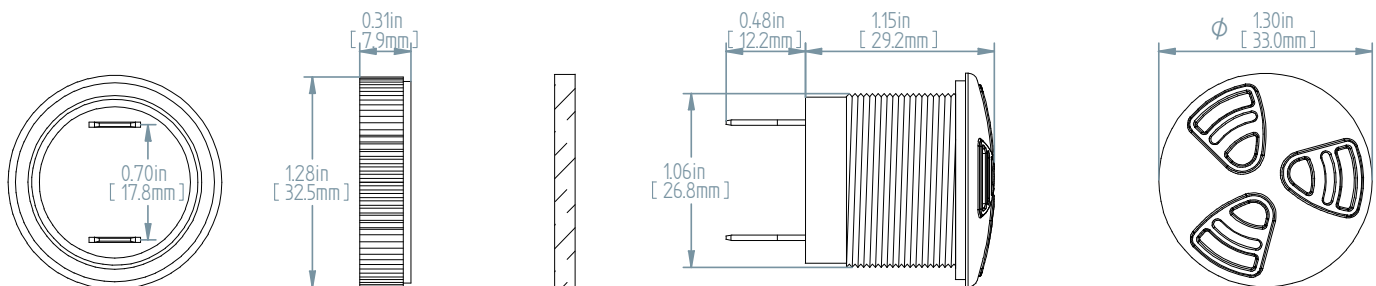
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMC-86-948-S

Made in  
USA



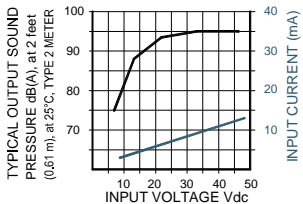
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-86-948-S is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

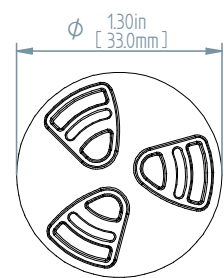
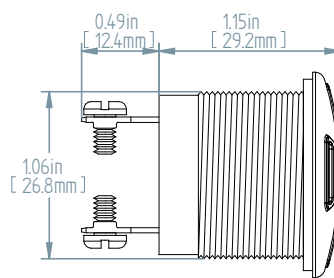
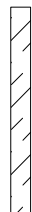
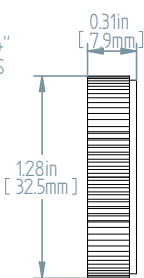
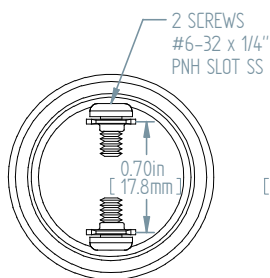
REAR

RING

GASKET

SIDE

FRONT



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# TMC-86-948-W



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

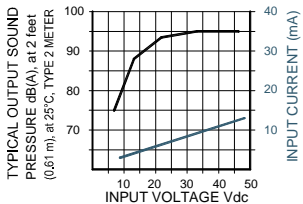
The Turbo TMC-86-948-W is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

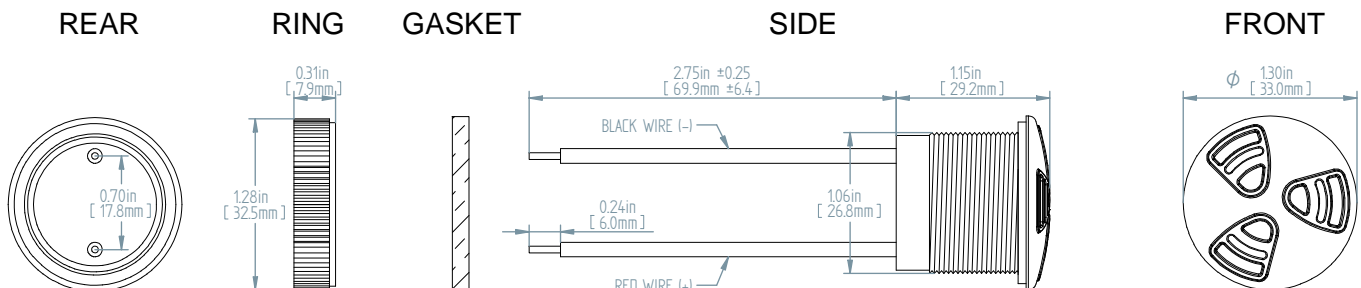
**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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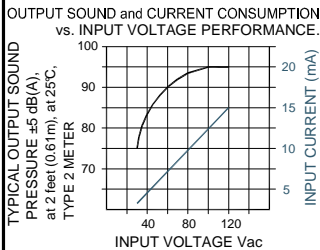
# TMC-V86-201-Q



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

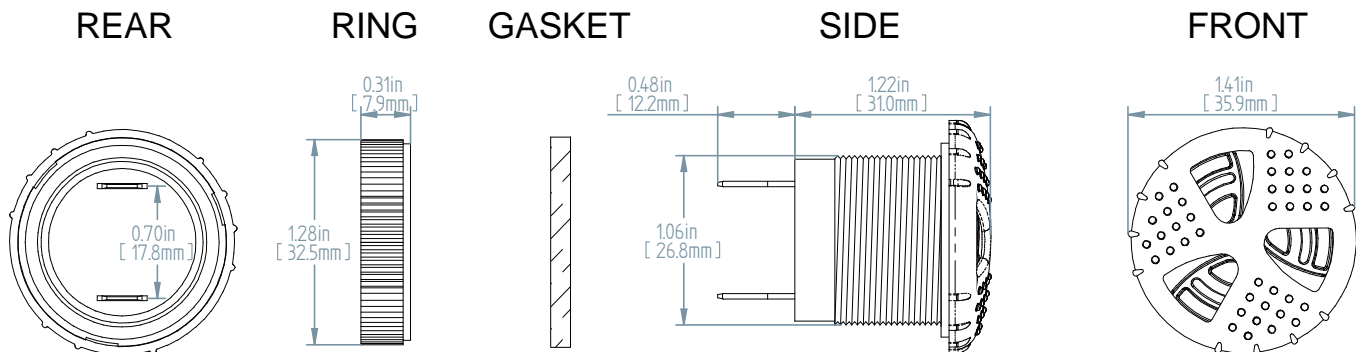


The Turbo TMC-V86-201-Q is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz.
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75 $\pm$ 5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95 $\pm$ 5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**



# TMC-V86-201-S



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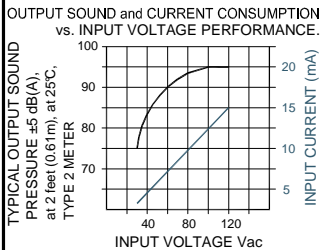


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-201-S is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

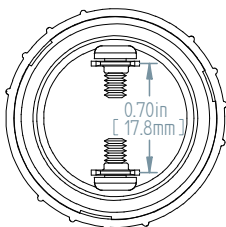
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

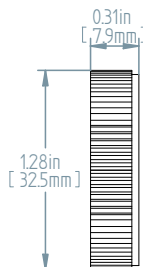


## DIMENSIONS

REAR



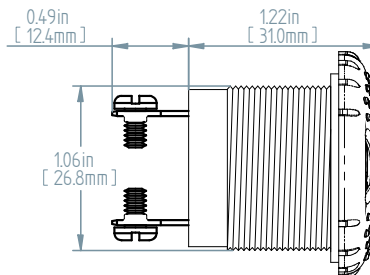
RING



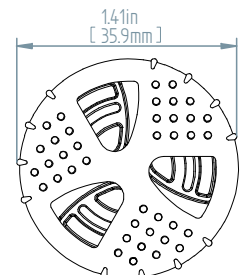
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMC-V86-530-P



**Made in  
USA**



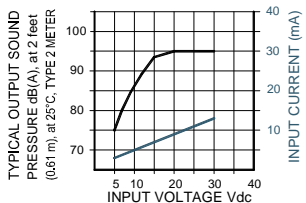
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-530-P is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

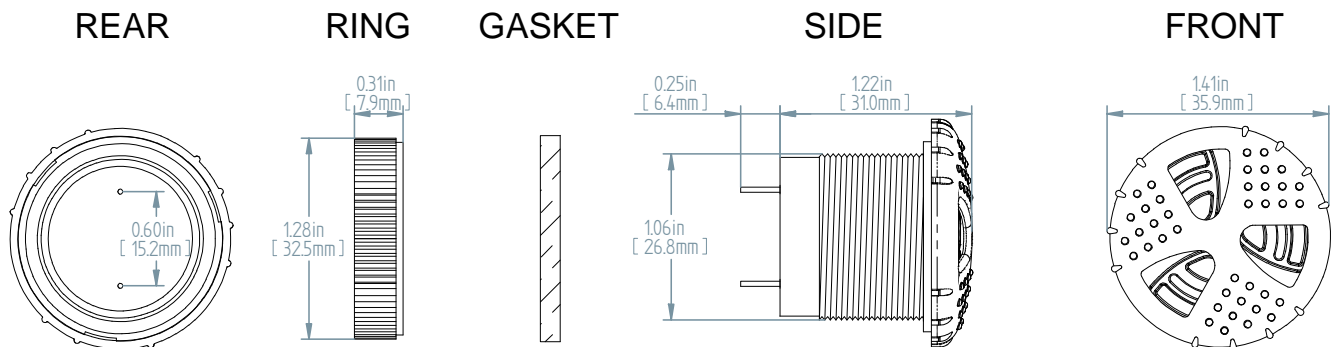
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMC-V86-530-Q



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-530-Q is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc

**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

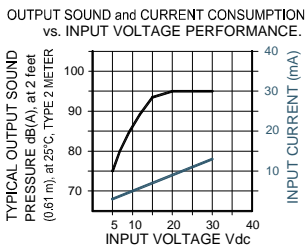
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.

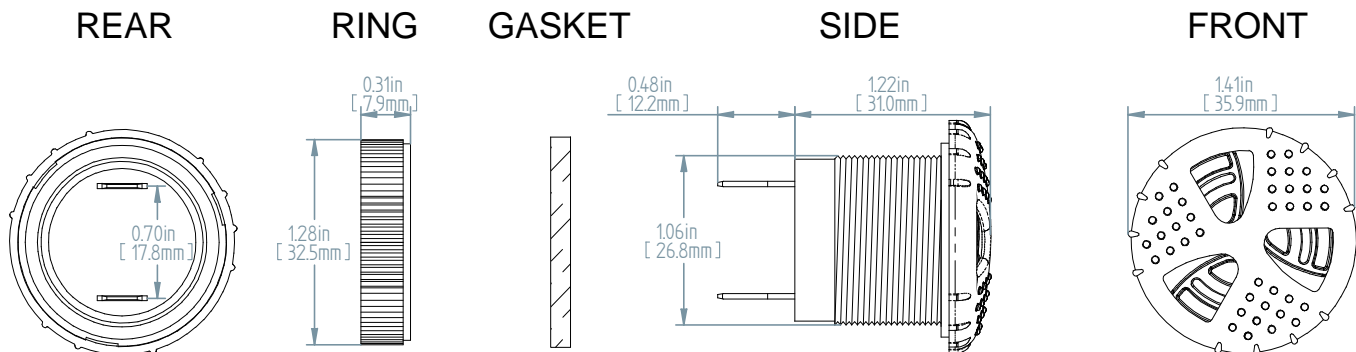
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**

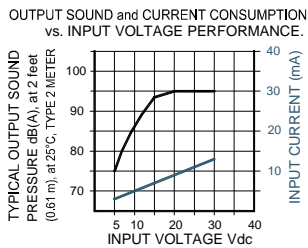
# TMC-V86-530-S



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



The Turbo TMC-V86-530-S is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc

**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.

**Reverse Voltage Protection:** To the maximum operating voltage.

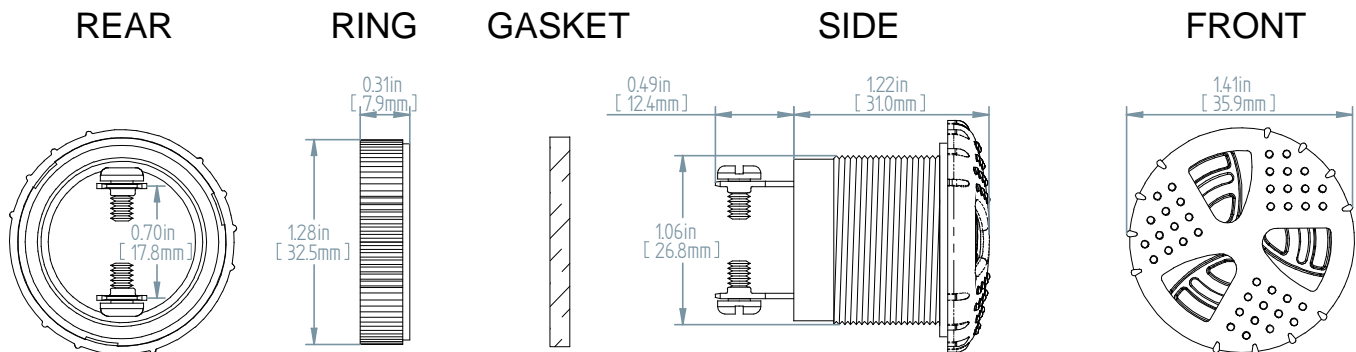
**Part Recognized By:** Underwriters Laboratory

**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 9.09**

# TMC-V86-530-W



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

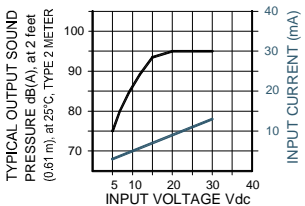
The Turbo TMC-V86-530-W is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

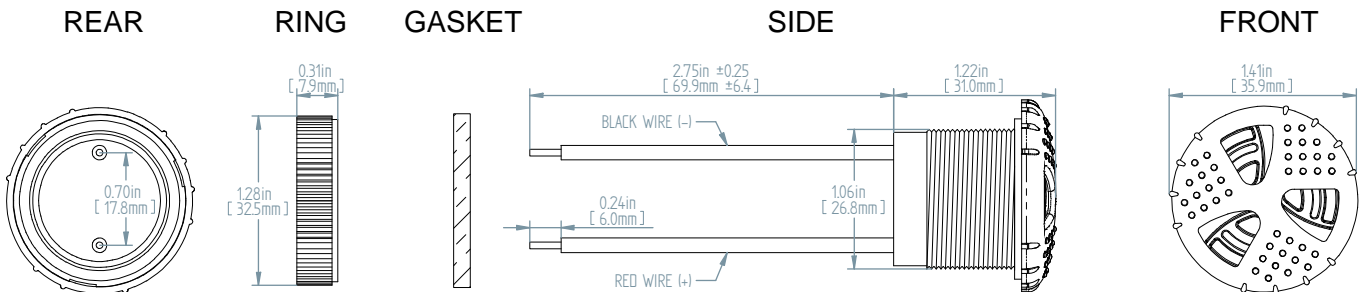
**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TMC-V86-531-P

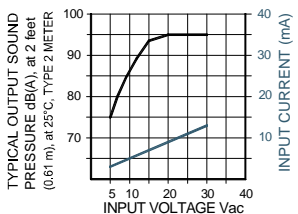


Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



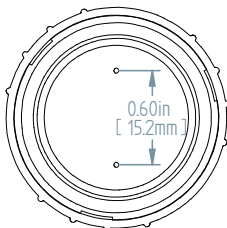
The Turbo TMC-V86-531-P is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

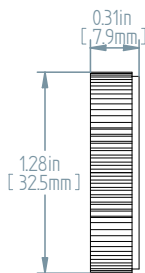
<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



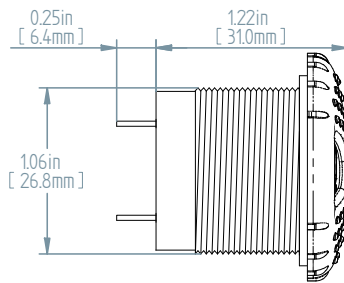
RING



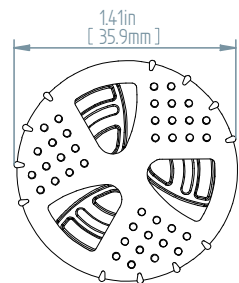
GASKET



SIDE



FRONT



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# TMC-V86-531-Q



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-531-Q is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

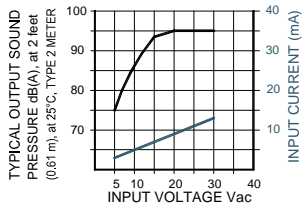
## SPECIFICATIONS

**Operating Mode:** Medium Loud Continuous Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac

**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

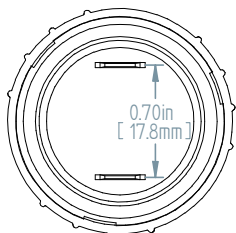
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

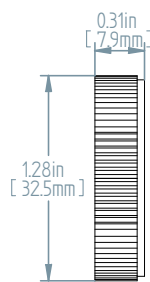


## DIMENSIONS

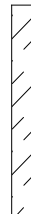
REAR



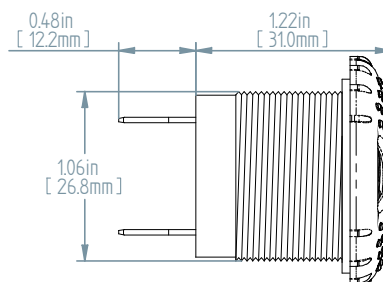
RING



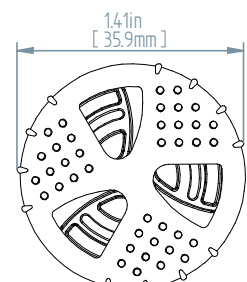
GASKET



SIDE



FRONT



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Revision: 9.09

# TMC-V86-531-S



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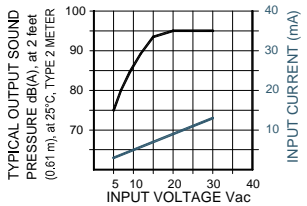
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-531-S is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

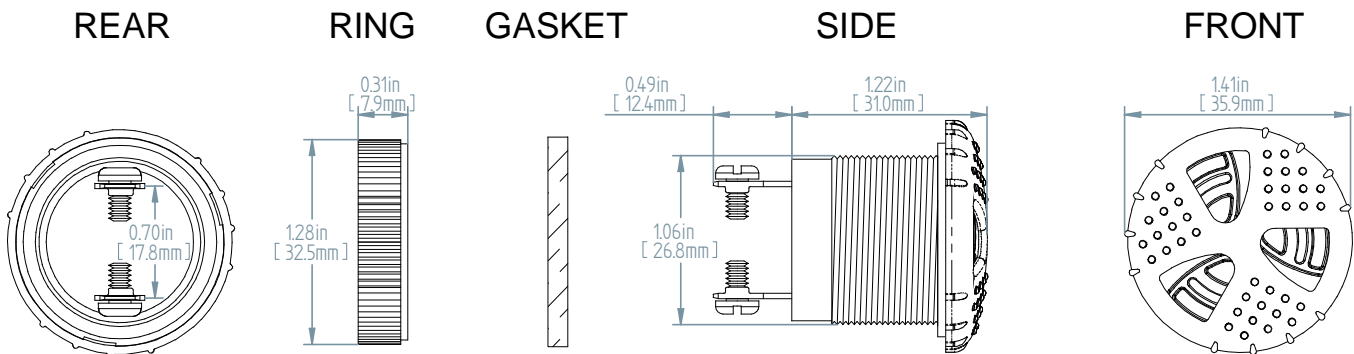
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMC-V86-531-W



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USA**



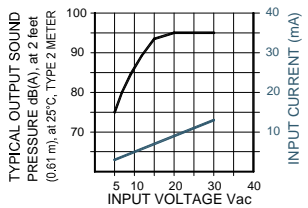
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-531-W is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

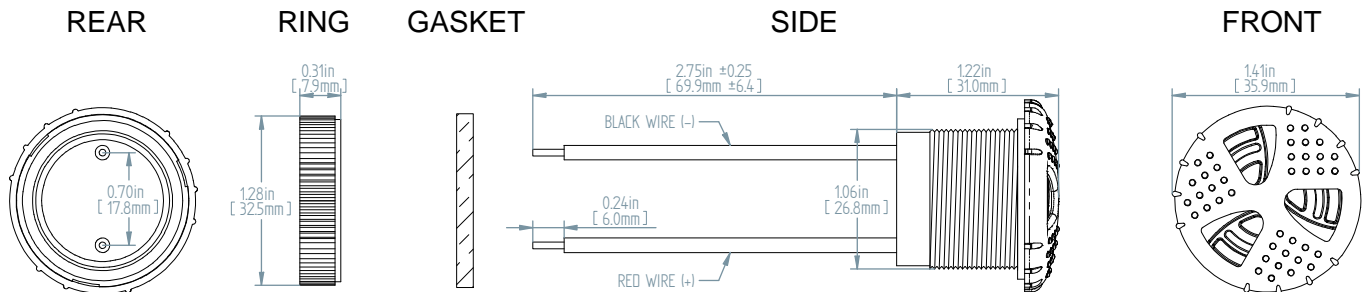
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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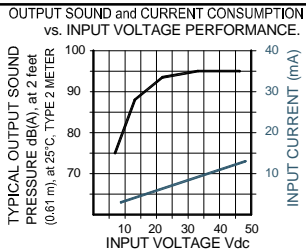
# TMC-V86-948-P



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

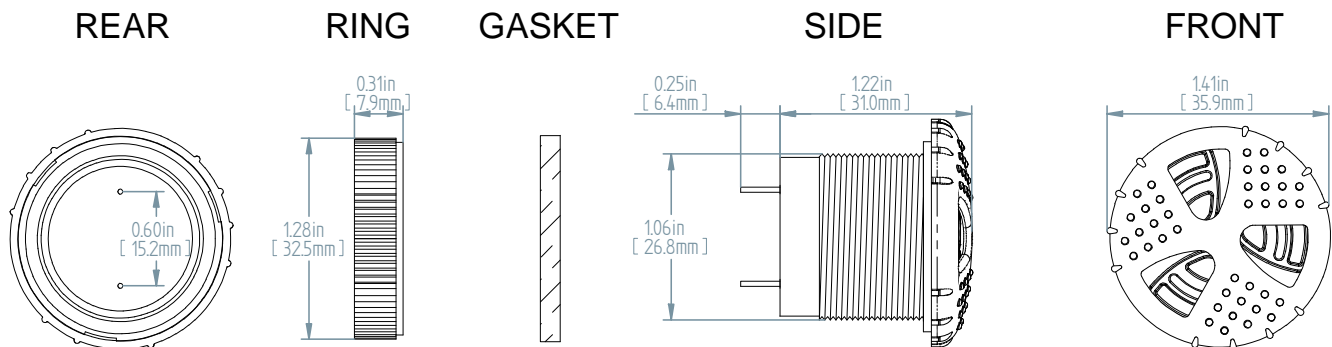


The Turbo TMC-V86-948-P is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMC-V86-948-Q



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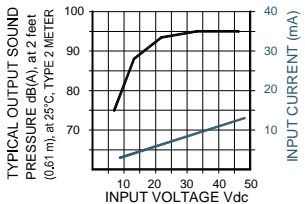
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-948-Q is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

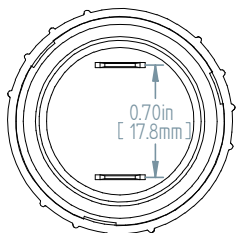
<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

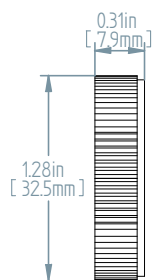


## DIMENSIONS

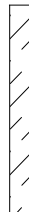
REAR



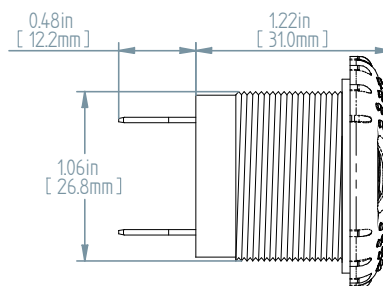
RING



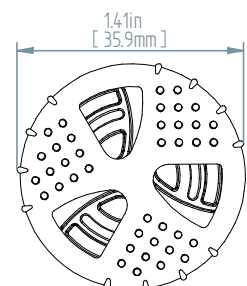
GASKET



SIDE



FRONT



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Revision: 9.09

# TMC-V86-948-S



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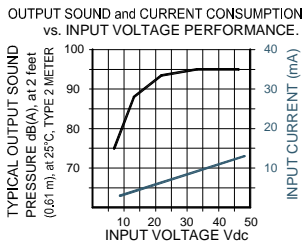


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

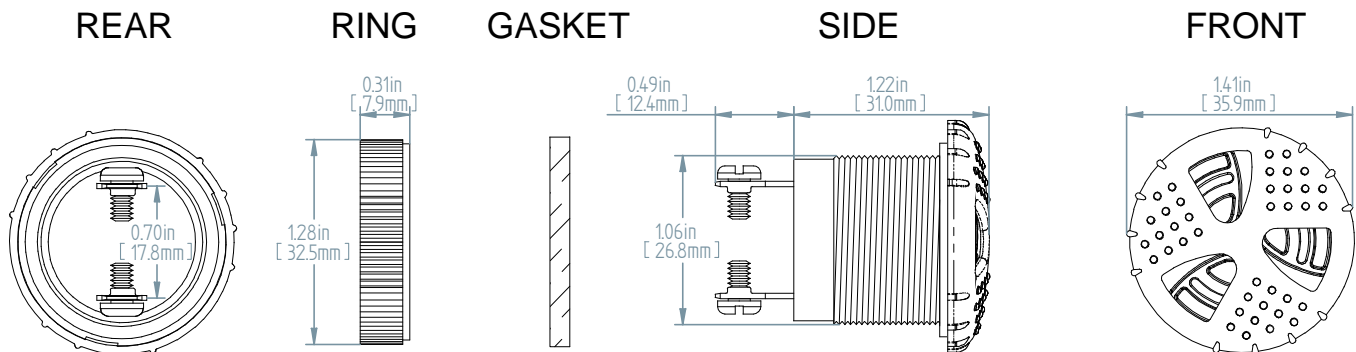
The Turbo TMC-V86-948-S is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 9.09

# TMC-V86-948-W



Made in  
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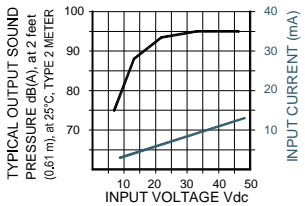
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMC-V86-948-W is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

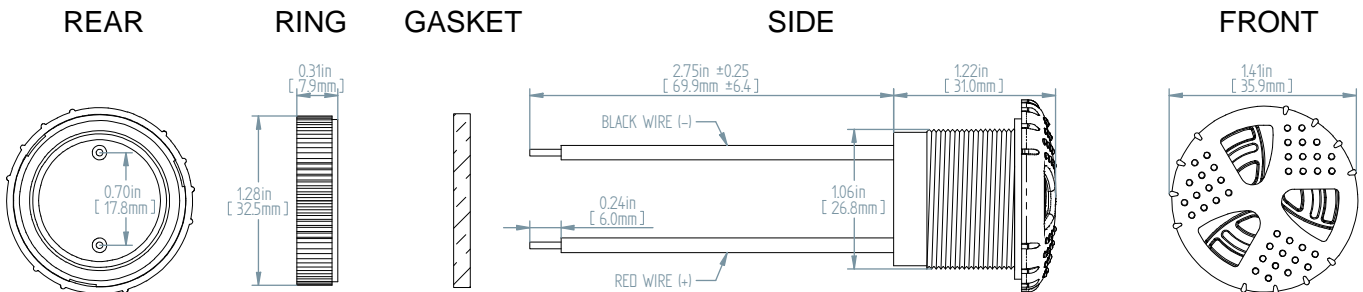
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Continuous Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09

# TMS-86-948-S(F)

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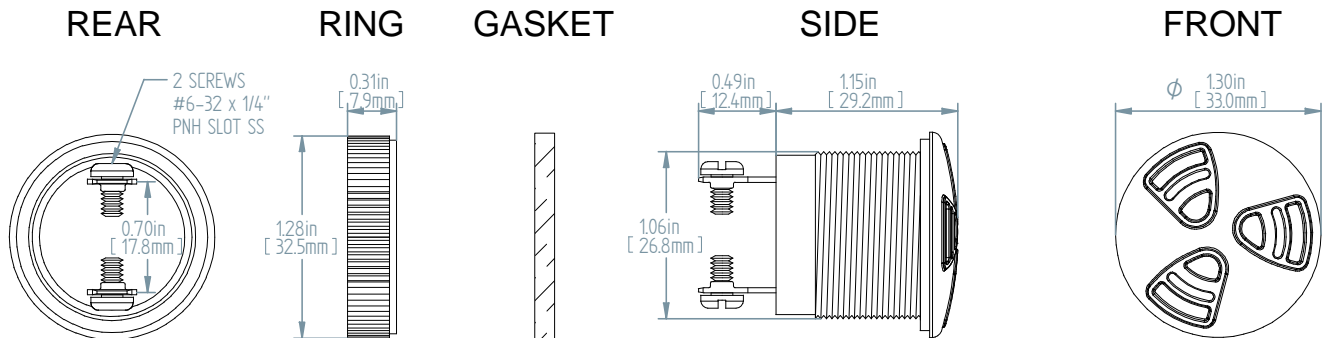
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMS-86-948-S(F) is an medium loud output, panel mounted alarm for operating voltages of 9-50VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Siren Tone
<b>Operating Voltage:</b>	9-50 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	Sweep 2.7Khz $\pm$ 250Hz -to- 3.5Khz $\pm$ 250Hz (3.1Khz Center)
<b>Typical Sweep Rate:</b>	5 $\pm$ 25% Cycles per second (Fast Rate)
<b>Typical Operating Current:</b>	30 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	80 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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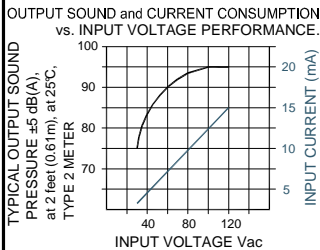
# TMW-86-201-Q(F)



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

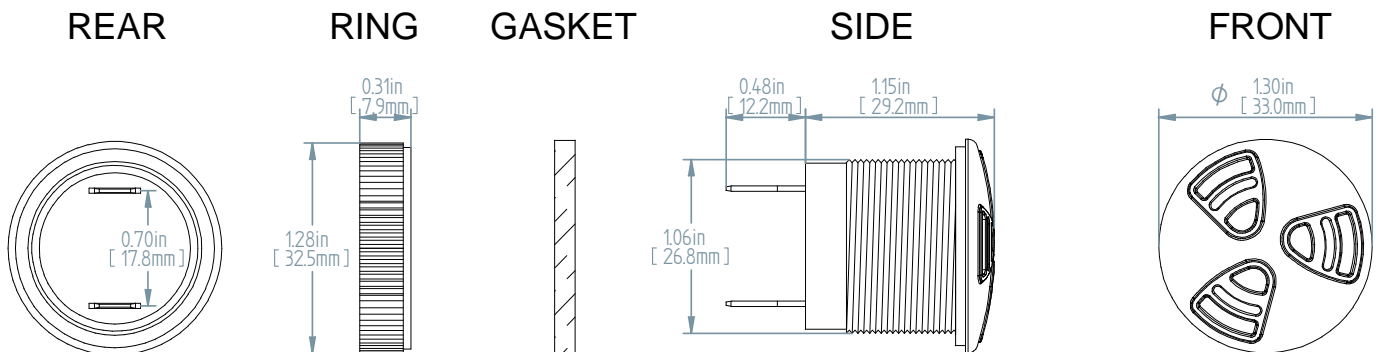


The Turbo TMW-86-201-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 10 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75 $\pm$ 5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95 $\pm$ 5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



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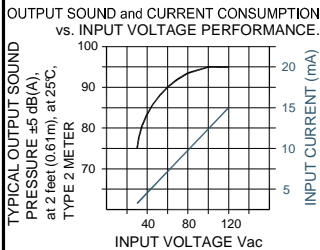
# TMW-86-201-Q(S)



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

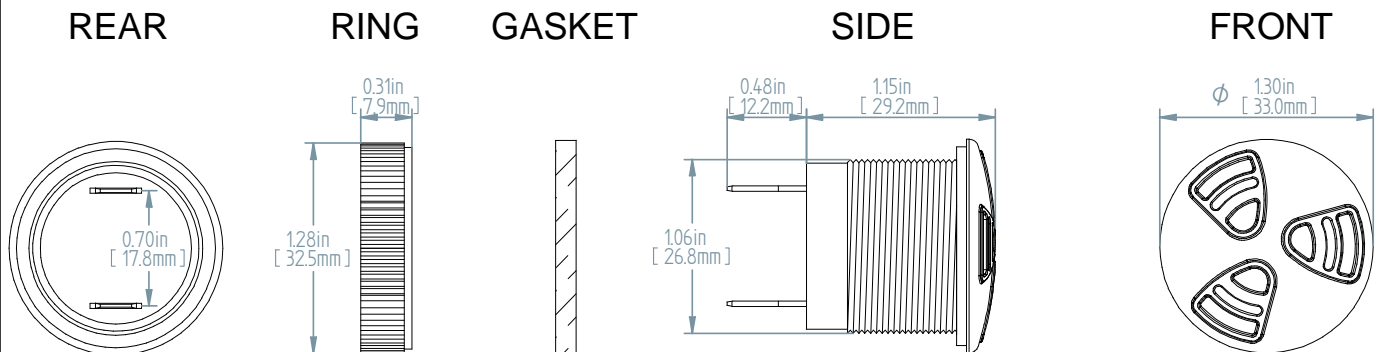


The Turbo TMW-86-201-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 2 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75 $\pm$ 5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95 $\pm$ 5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

## DIMENSIONS



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# TMW-86-201-S(F)



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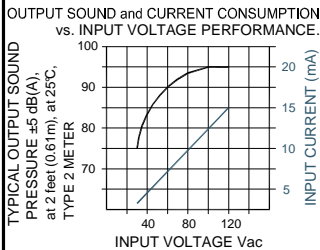


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-201-S(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

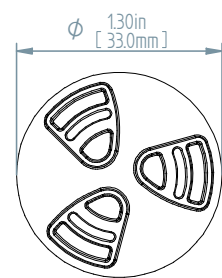
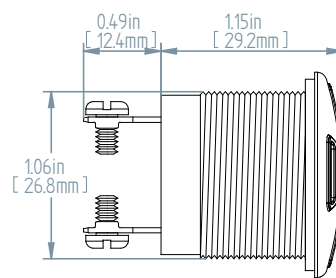
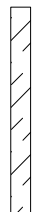
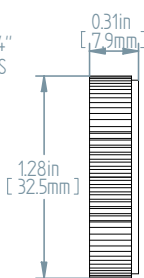
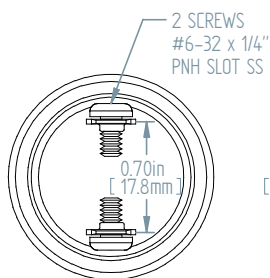
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-201-S(S)



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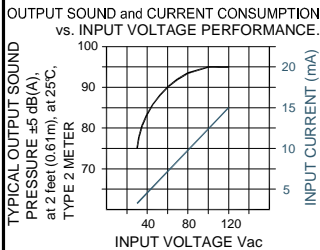


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-201-S(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

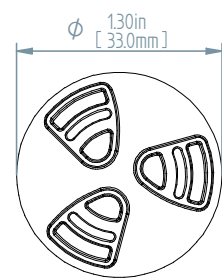
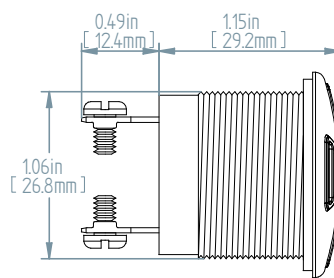
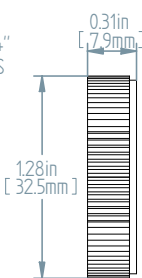
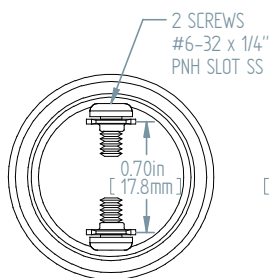
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMW-86-530-P(F)



Made in  
USA

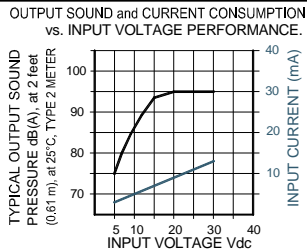


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-530-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

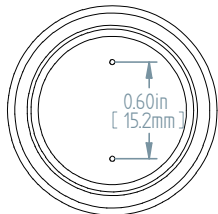
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

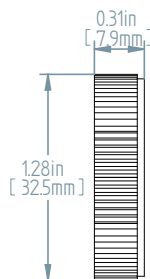


## DIMENSIONS

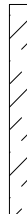
REAR



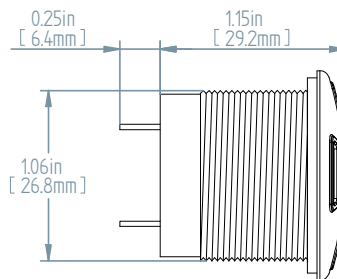
RING



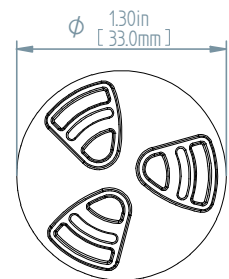
GASKET



SIDE



FRONT



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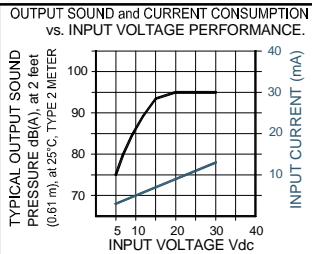
# TMW-86-530-P(S)



**Made in USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

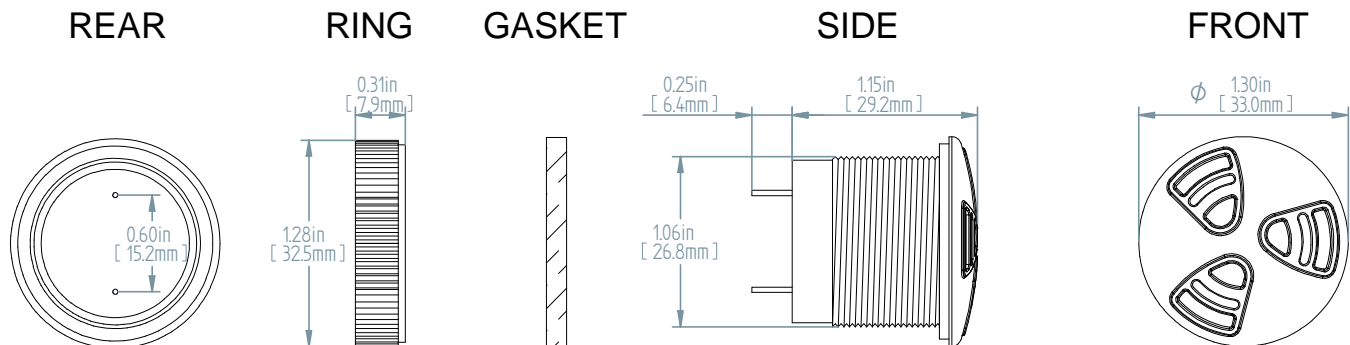


The Turbo TMW-86-530-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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# TMW-86-530-Q(F)



**Made in  
USA**



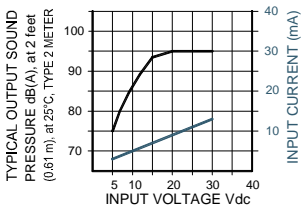
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-530-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

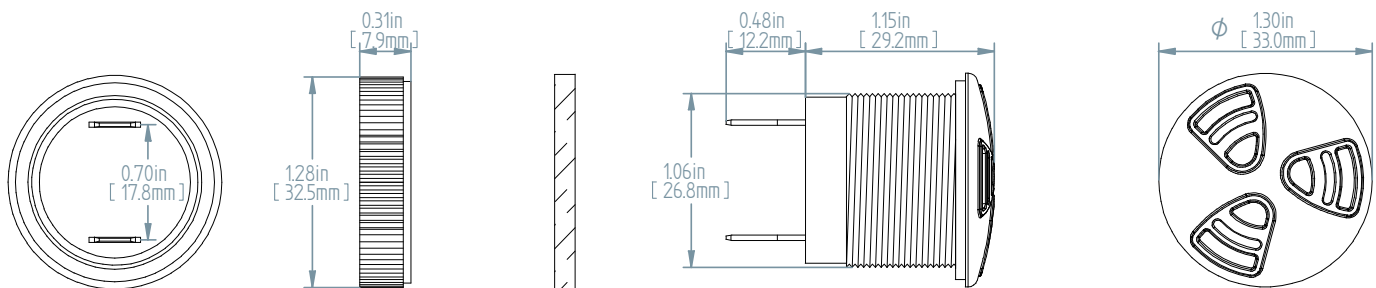
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMW-86-530-Q(S)

Made in  
USA



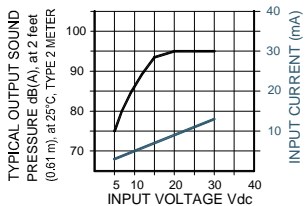
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-530-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

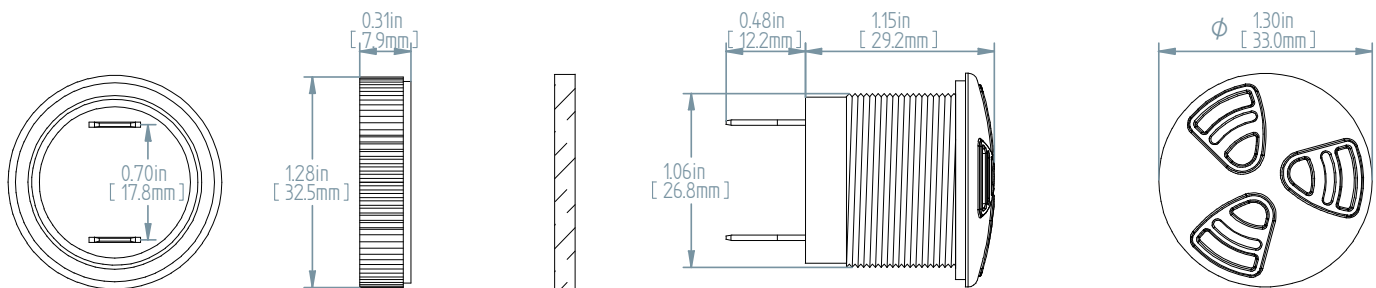
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-530-S(F)



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USA**



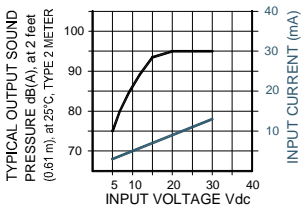
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

The Turbo TMW-86-530-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 10±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

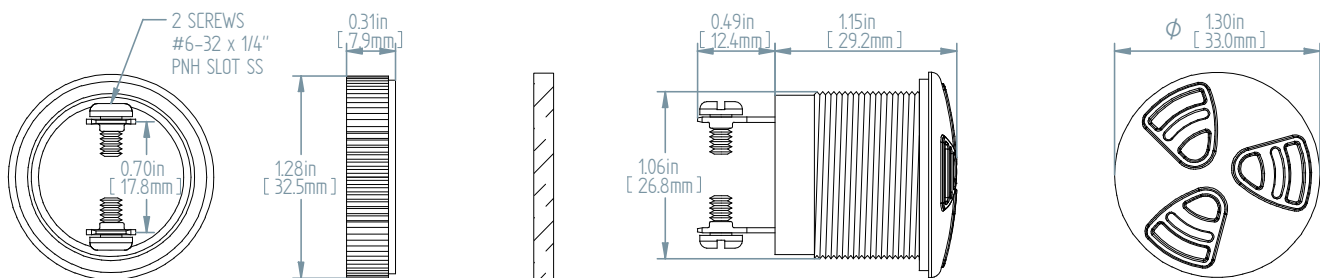
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-530-S(S)



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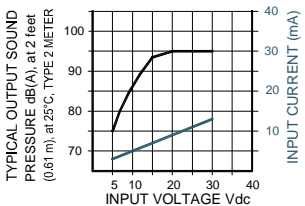
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-530-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

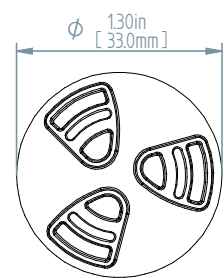
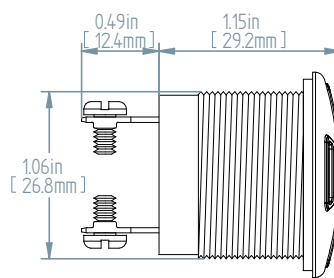
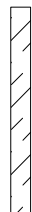
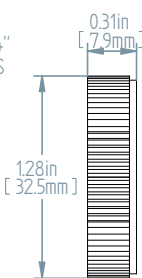
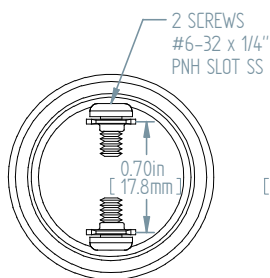
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMW-86-530-W(F)



Made in  
USA



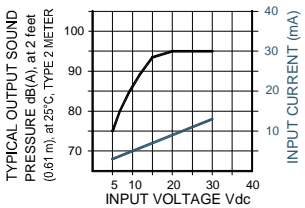
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-530-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

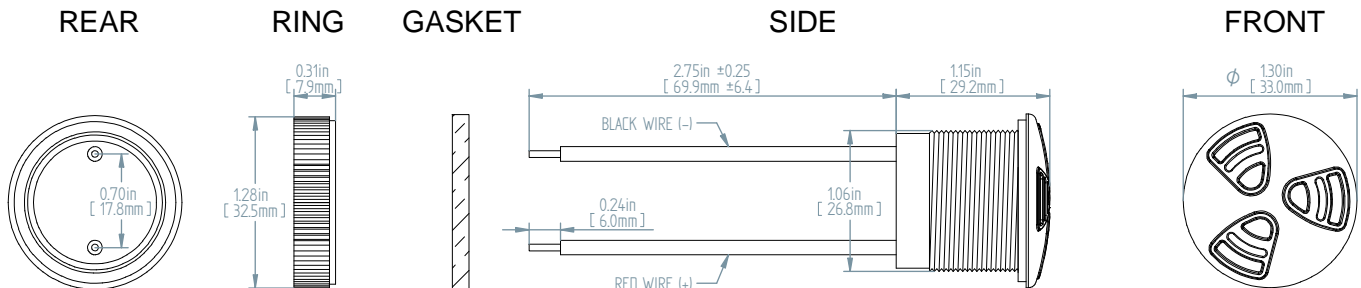
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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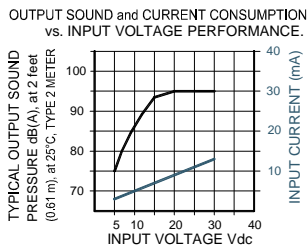
# TMW-86-530-W(S)



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

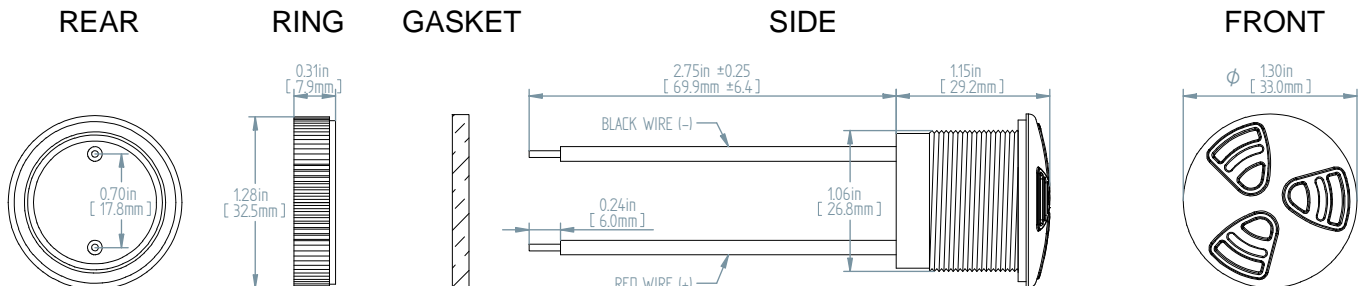


The Turbo TMW-86-530-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vdc  
 10 mA at 30 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMW-86-531-P(F)



**Made in  
USA**



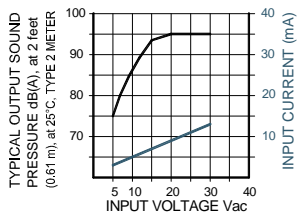
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-531-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

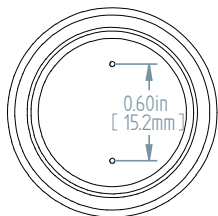
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

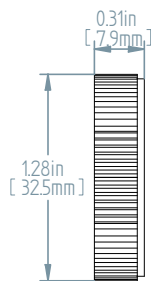


## DIMENSIONS

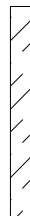
REAR



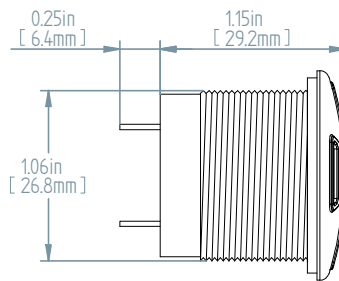
RING



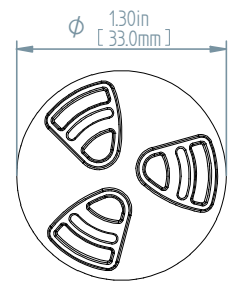
GASKET



SIDE



FRONT



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# TMW-86-531-P(S)



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USA



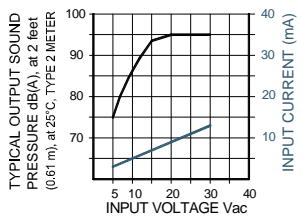
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-531-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

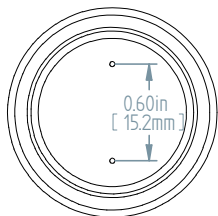
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

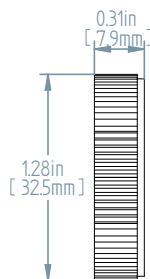


## DIMENSIONS

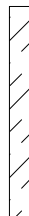
REAR



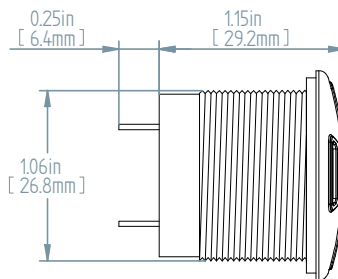
RING



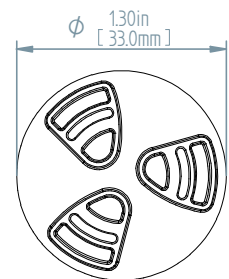
GASKET



SIDE



FRONT



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# TMW-86-531-Q(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

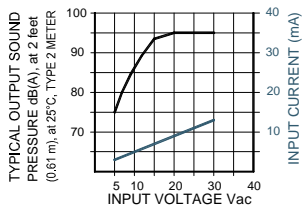
The Turbo TMW-86-531-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 10±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

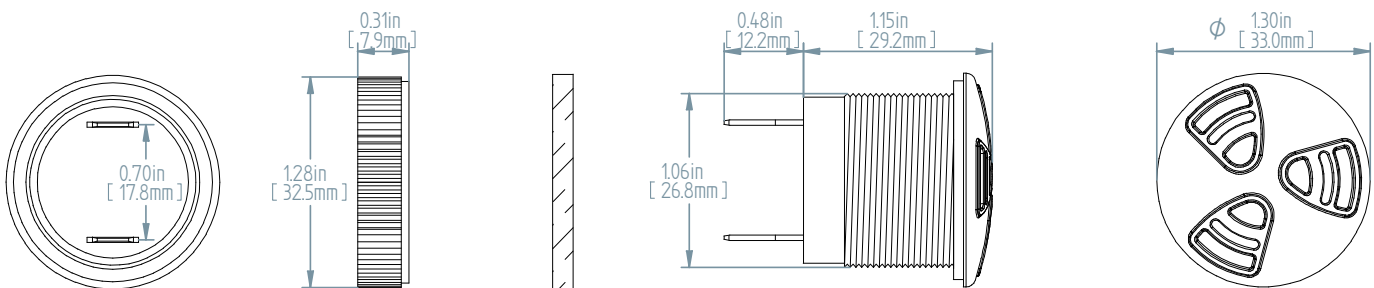
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-531-Q(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

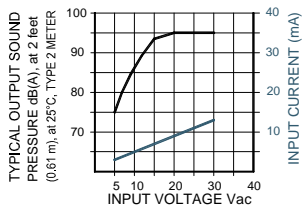
The Turbo TMW-86-531-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

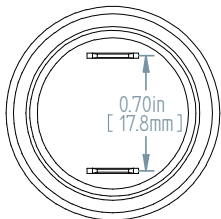
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

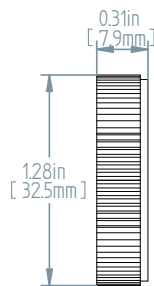


## DIMENSIONS

REAR



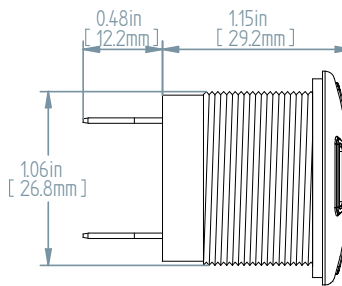
RING



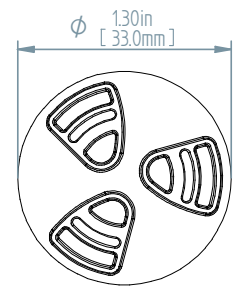
GASKET



SIDE



FRONT



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Revision: 9.09



# TMW-86-531-S(F)



**Made in  
USA**



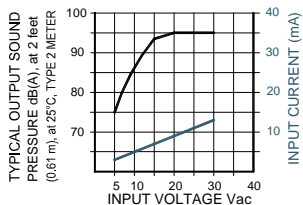
- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-531-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

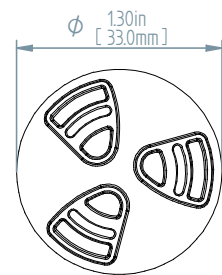
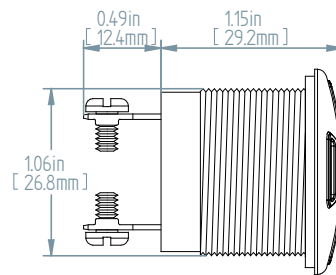
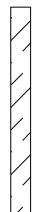
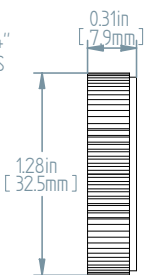
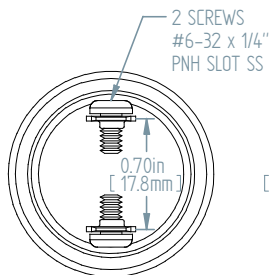
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TMW-86-531-S(S)



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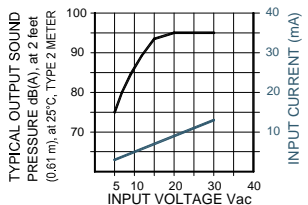
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

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## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

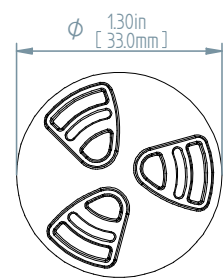
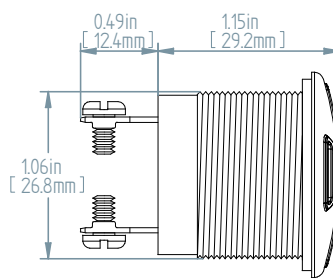
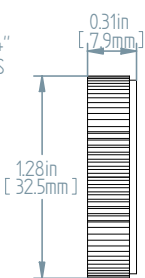
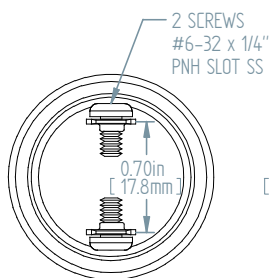
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-531-W(F)



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USA**



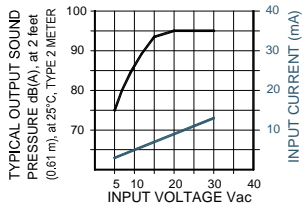
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

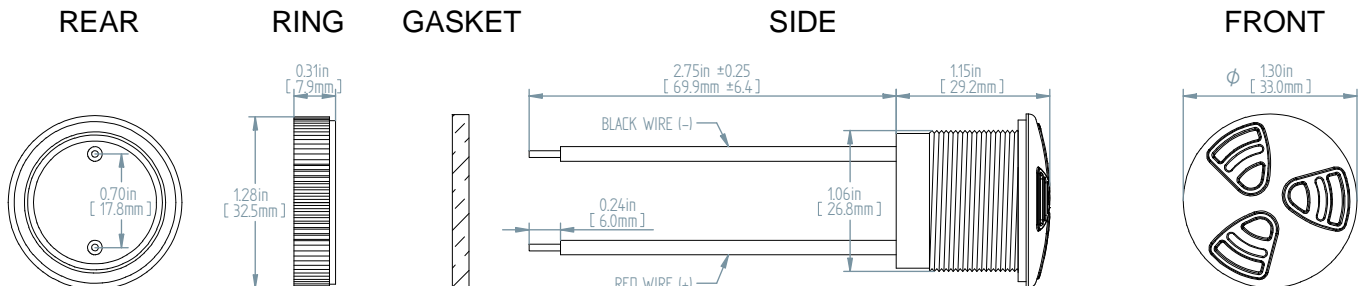
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 10±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**

# TMW-86-531-W(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

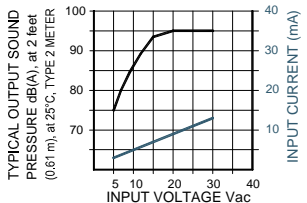
The Turbo TMW-86-531-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

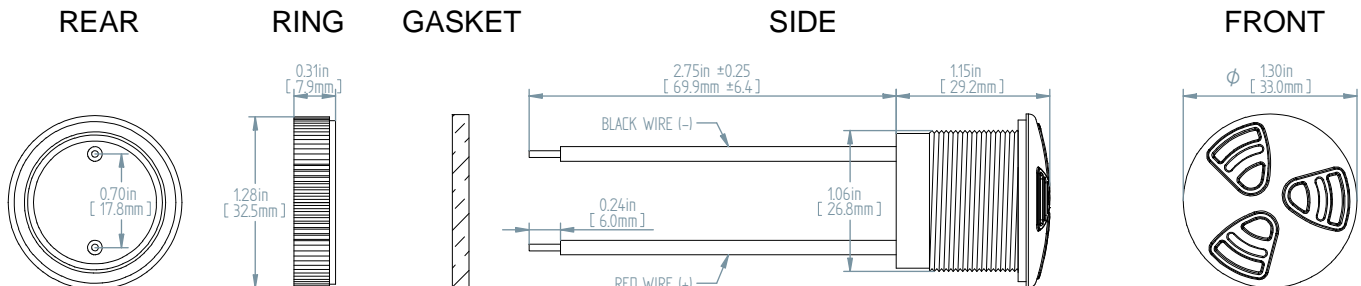
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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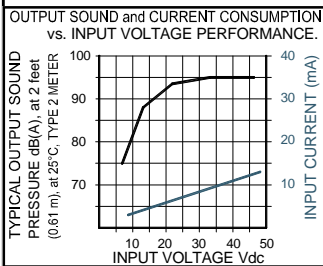
# TMW-86-948-P(F)



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

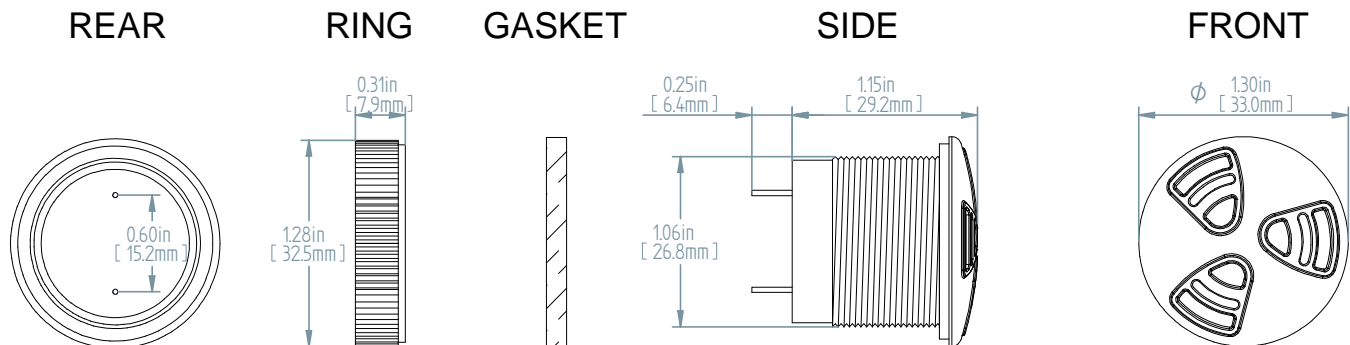


The Turbo TMW-86-948-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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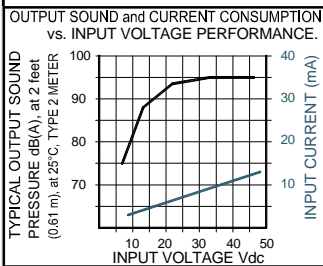
# TMW-86-948-P(S)



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

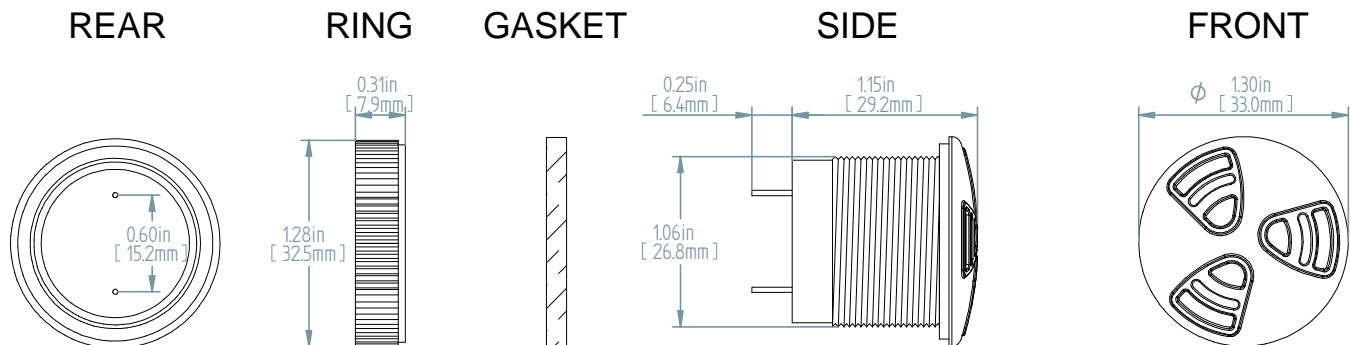


The Turbo TMW-86-948-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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# TMW-86-948-Q(F)



**Made in  
USA**



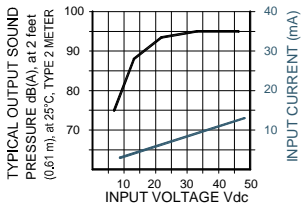
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-948-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

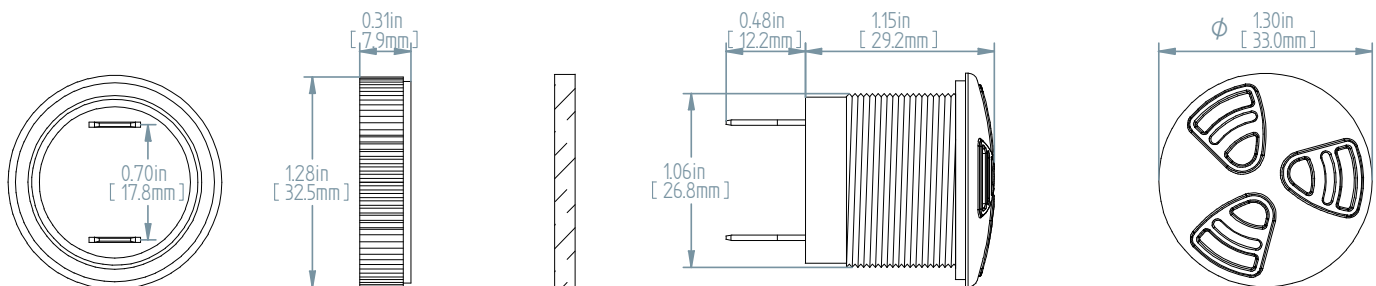
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-948-Q(S)

Made in  
USA



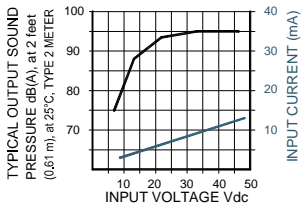
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-948-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

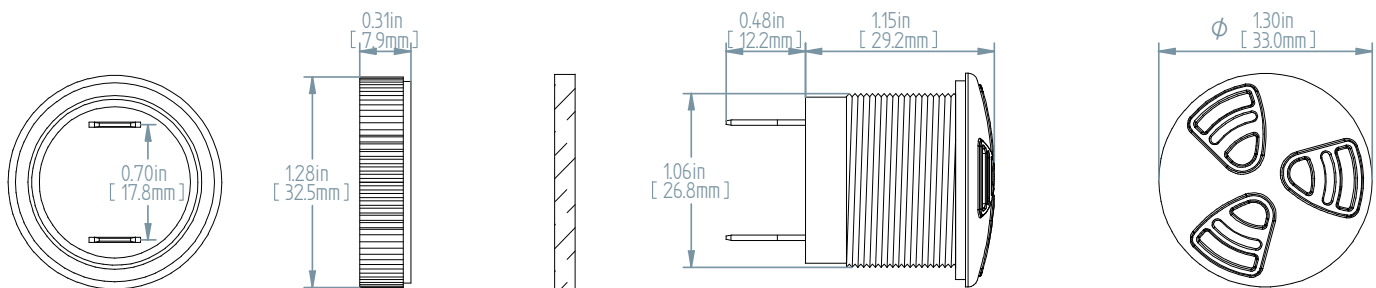
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-948-S(F)



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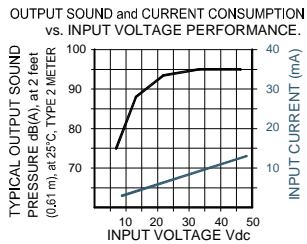


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-948-S(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

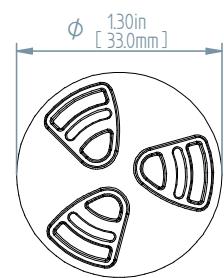
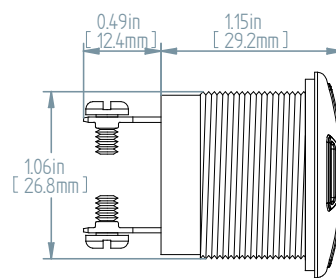
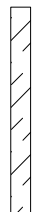
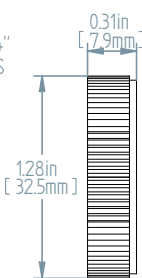
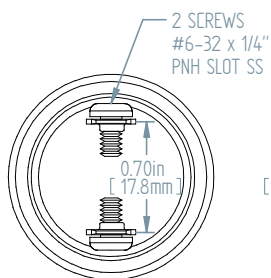
REAR

RING

GASKET

SIDE

FRONT



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# TMW-86-948-S(S)



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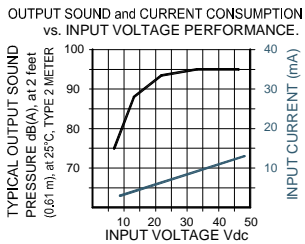


- Patent-Pending Revolutionary Turbo Design
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- Reliable Piezoelectric Technology

The Turbo TMW-86-948-S(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS

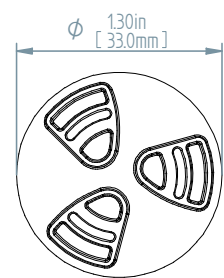
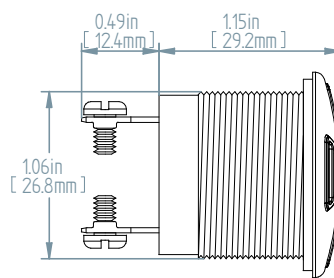
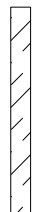
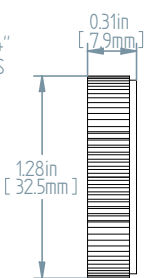
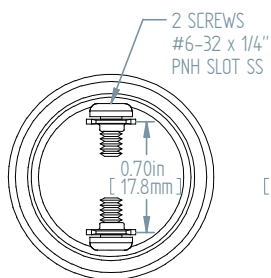
REAR

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- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-86-948-W(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

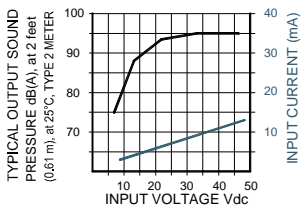
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

## Environmental Durability:

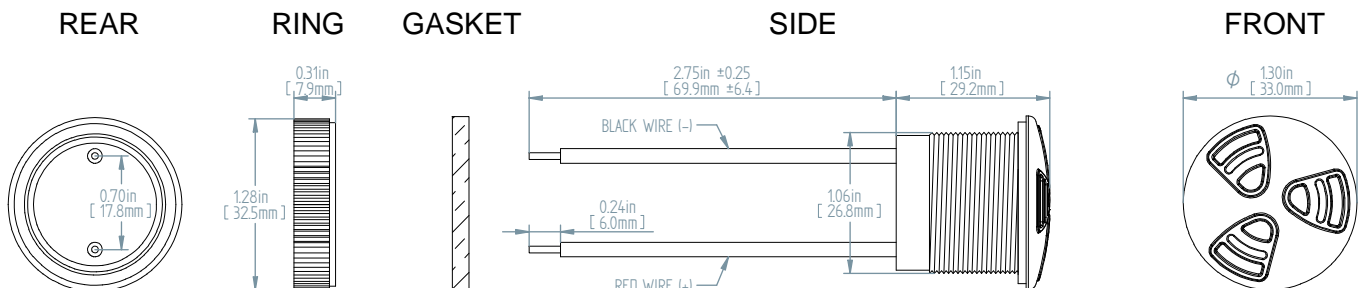
## Life Expectancy: Warranty:

ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
IP 68 Certified- Withstands water submergence and dust exposure  
Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
10 years under normal operating conditions.  
For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TMW-86-948-W(S)



Made in  
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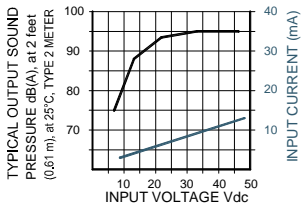
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

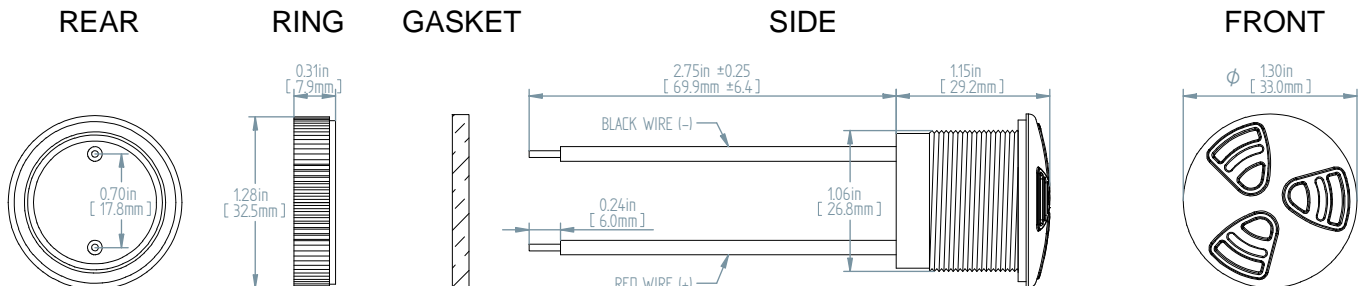
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMW-V86-201-Q(F)



Made in  
USA

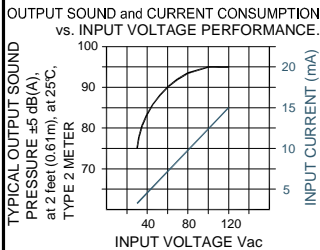


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

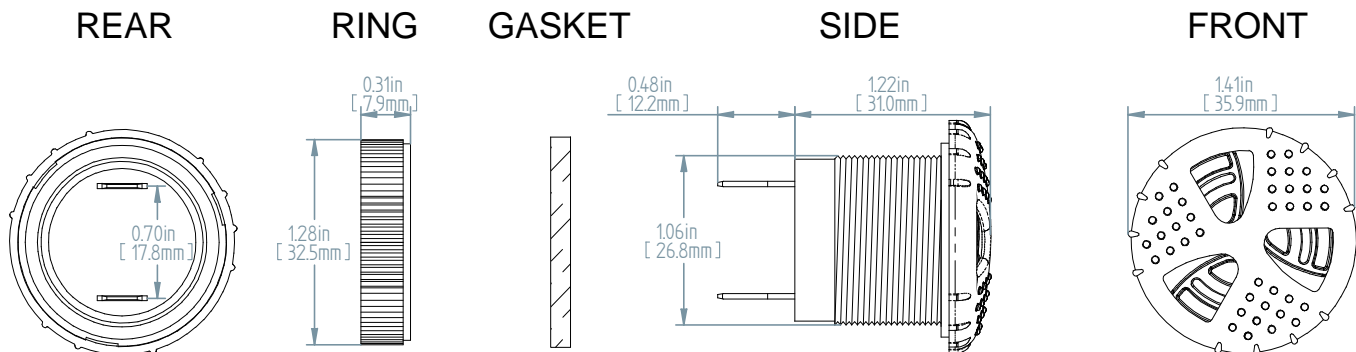
The Turbo TMW-V86-201-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TMW-V86-201-Q(S)



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- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-201-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 30-120 Vac  
**Nominal Operating Voltage:** 110 Vac  
**Operating Frequency:** 2900±250 Hz.

**Typical Operating Current:** 2±25% Cycles per second  
 2 mA at 30 Vac  
 15 mA at 120 Vac

**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.

**Storage Temperature:** -40°C to +85°C.

**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.

**Reverse Voltage Protection:** To the maximum operating voltage.

**Part Recognized By:** Underwriters Laboratory

**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black

Internal Circuit- Audio-oscillator and piezoelectric driver

Potting- 2 parts epoxy resin or silicone, black

Diaphragm- Stainless Steel 304

NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours

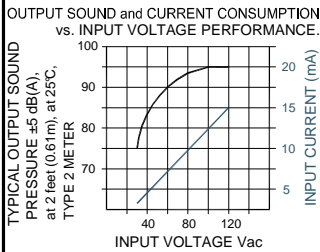
IP 68 Certified- Withstands water submergence and dust exposure

Humidity- 95% relative humidity at +40°C continuously for 100 hours.

Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

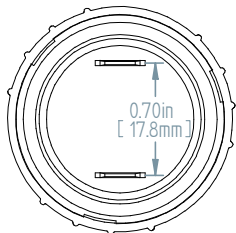
**Life Expectancy:** 10 years under normal operating conditions.

**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

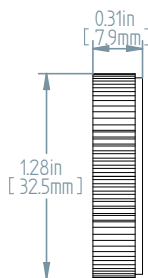


## DIMENSIONS

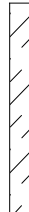
REAR



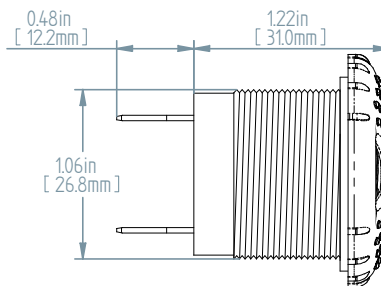
RING



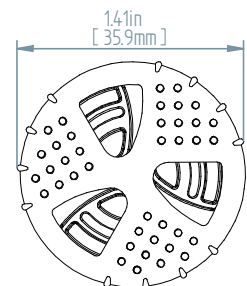
GASKET



SIDE



FRONT



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# TMW-V86-201-S(F)



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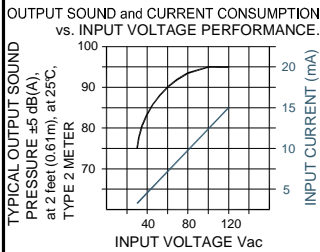


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-201-S(F) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

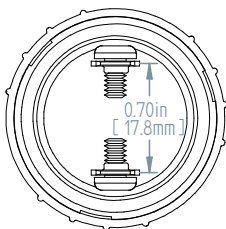
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

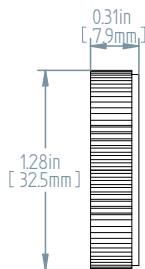


## DIMENSIONS

REAR



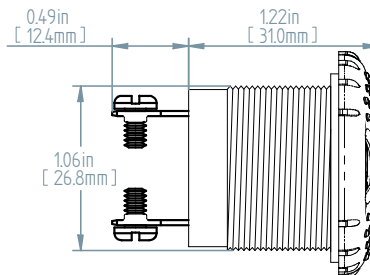
RING



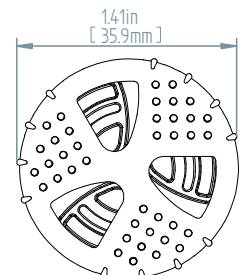
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09



# TMW-V86-201-S(S)



**Made in  
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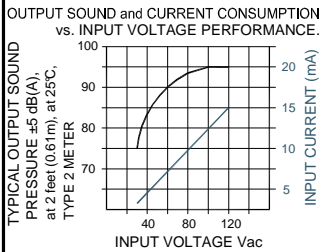


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-201-S(S) is a medium loud output, panel mounted alarm for operating voltages of 30-120VAC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

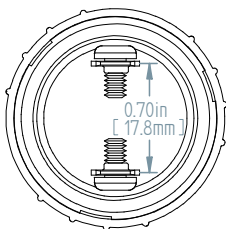
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 30 Vac 15 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

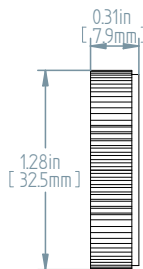


## DIMENSIONS

REAR



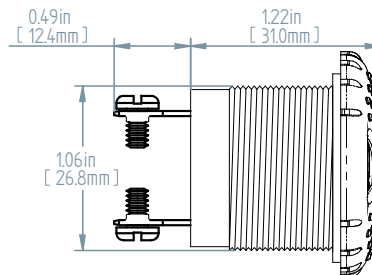
RING



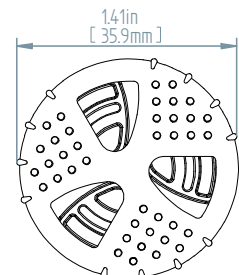
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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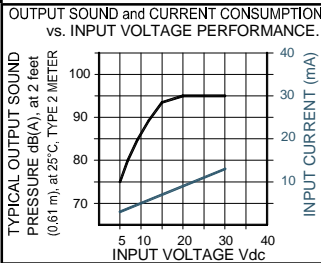
# TMW-V86-530-P(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

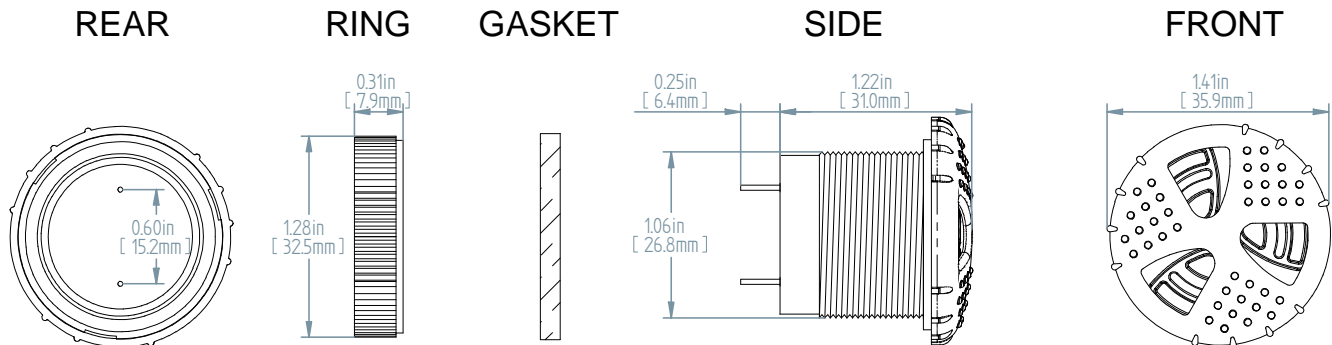


The Turbo TMW-V86-530-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMW-V86-530-P(S)



**Made in  
USA**

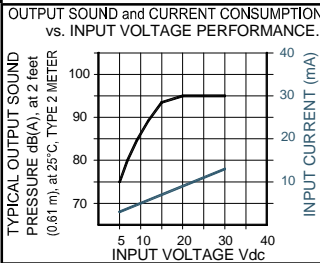


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-530-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

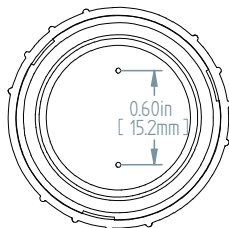
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

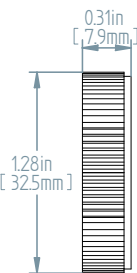


## DIMENSIONS

REAR



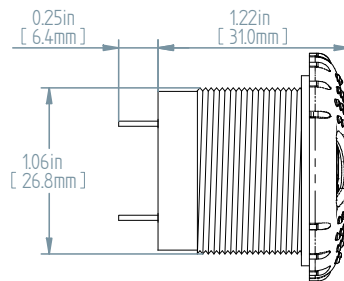
RING



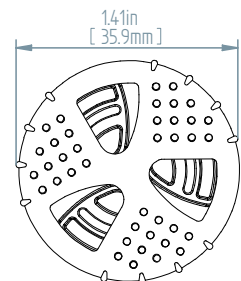
GASKET



SIDE



FRONT



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Revision: 9.09

# TMW-V86-530-Q(F)



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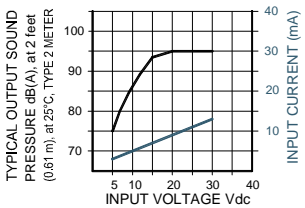
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-530-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

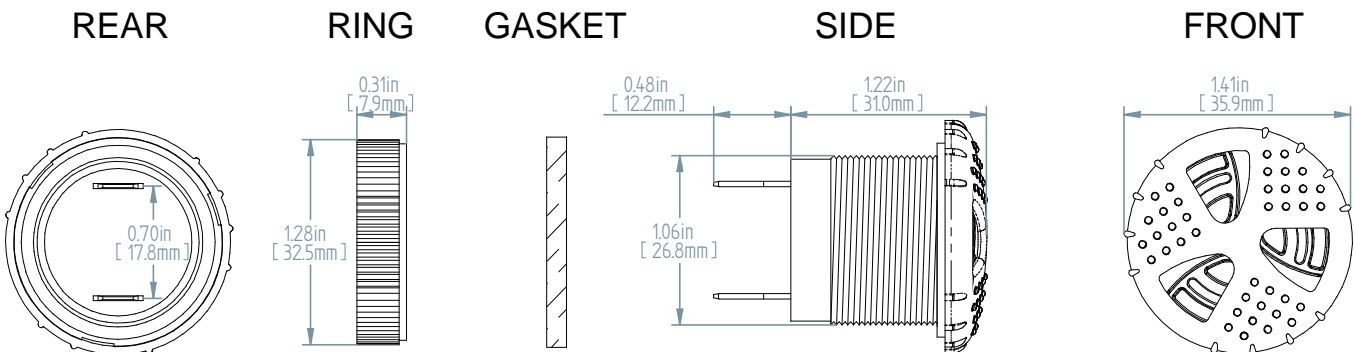
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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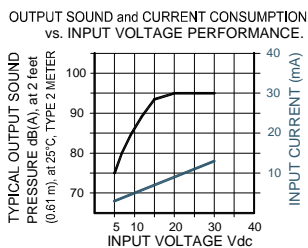
# TMW-V86-530-Q(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

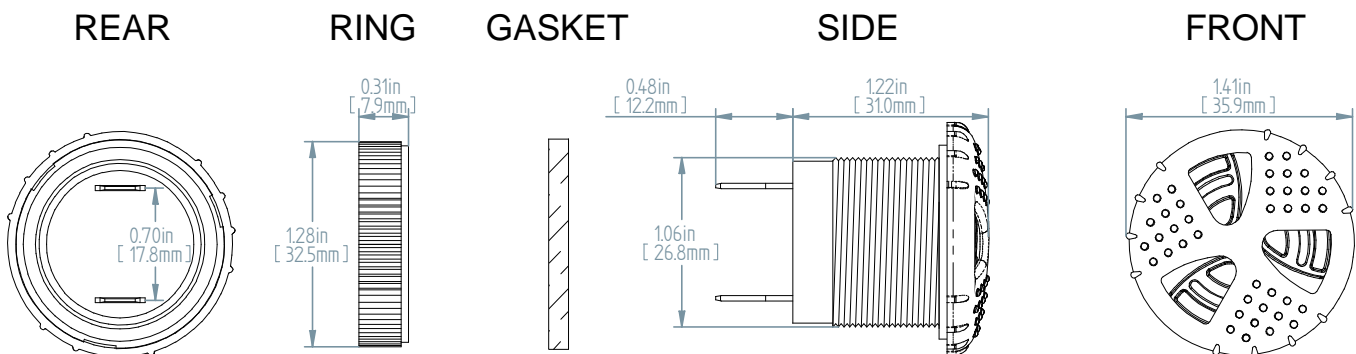


The Turbo TMW-V86-530-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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# TMW-V86-530-S(F)



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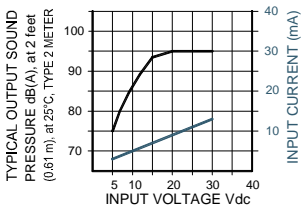
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-530-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

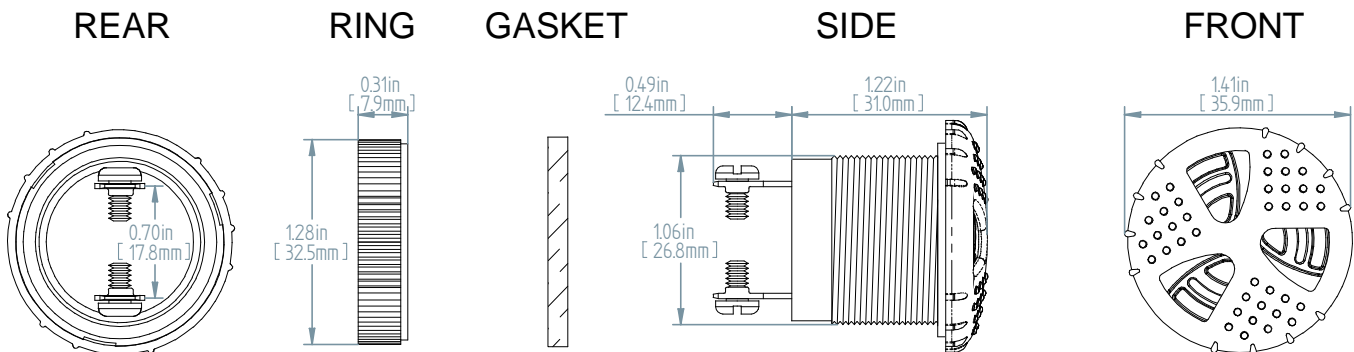
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TMW-V86-530-S(S)



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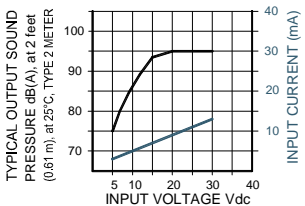
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-530-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

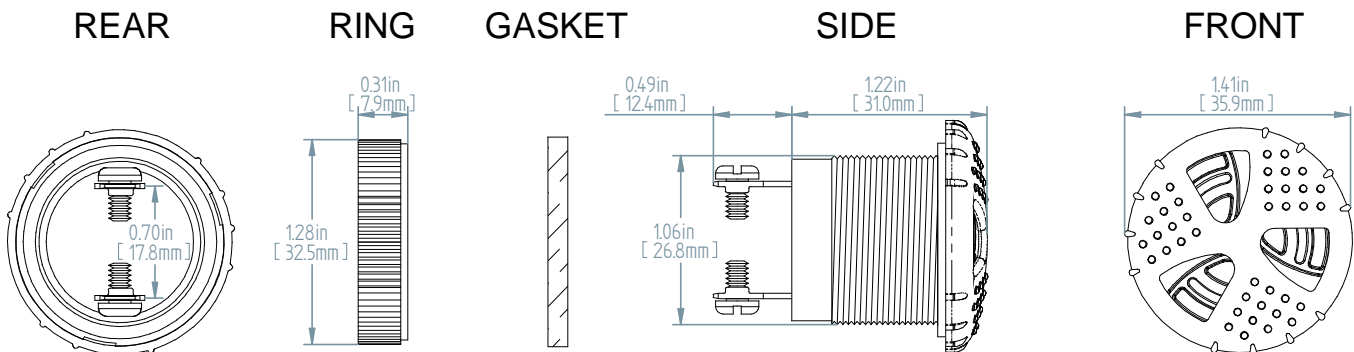
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TMW-V86-530-W(F)



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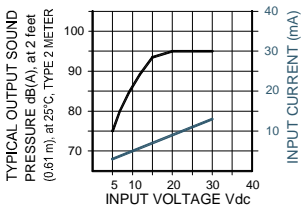
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-530-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

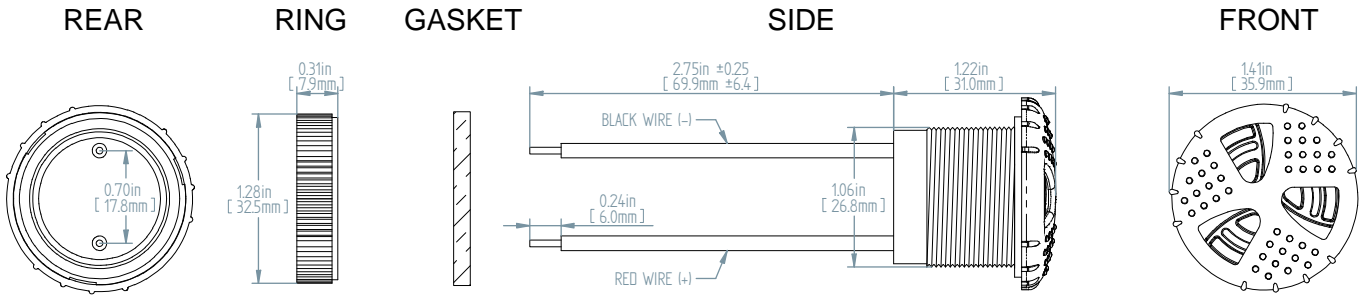
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TMW-V86-530-W(S)



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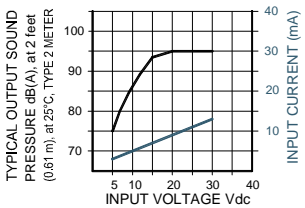
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-530-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

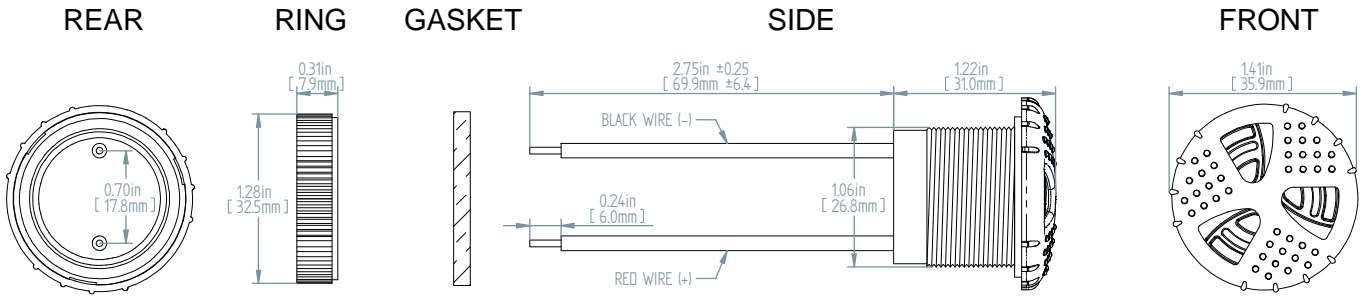
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vdc 10 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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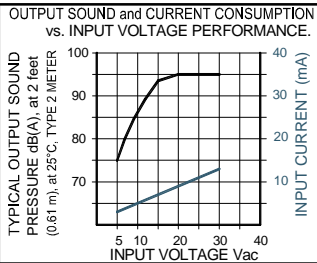
# TMW-V86-531-P(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

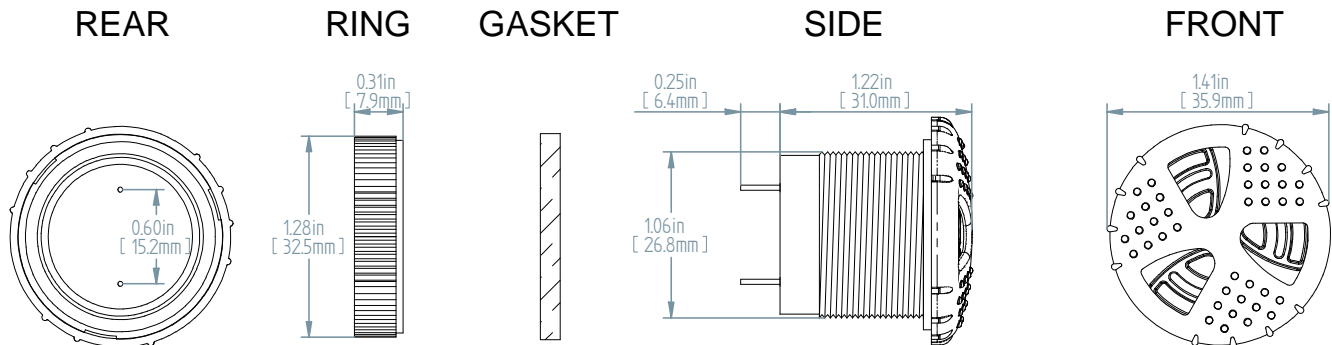


The Turbo TMW-V86-531-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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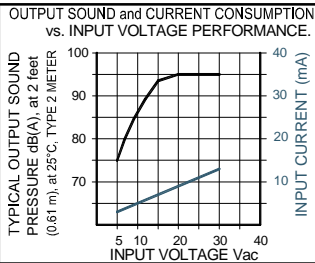
# TMW-V86-531-P(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

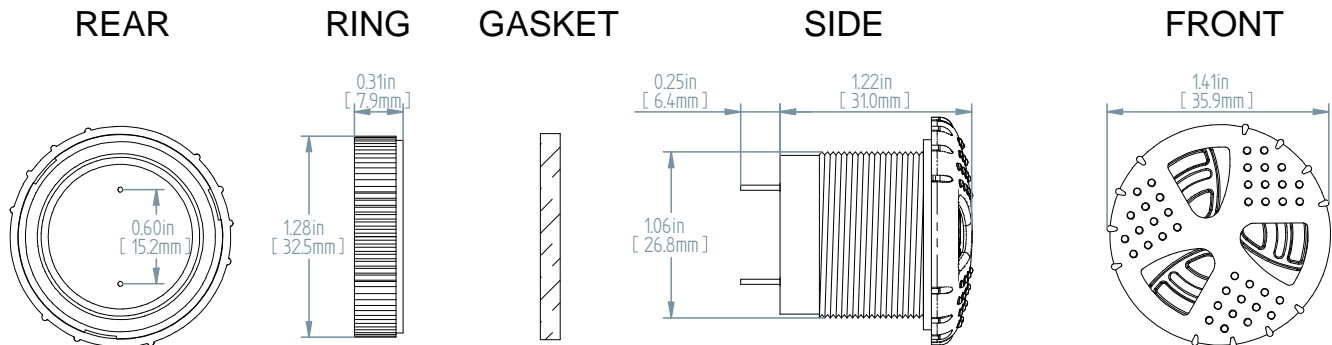


The Turbo TMW-V86-531-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TMW-V86-531-Q(F)



**Made in  
USA**



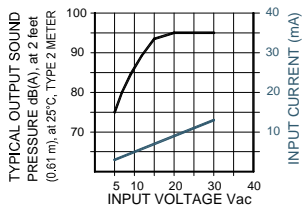
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-531-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

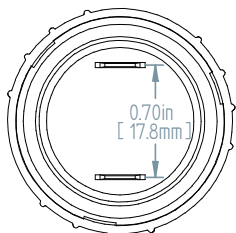
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

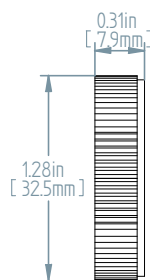


## DIMENSIONS

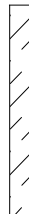
REAR



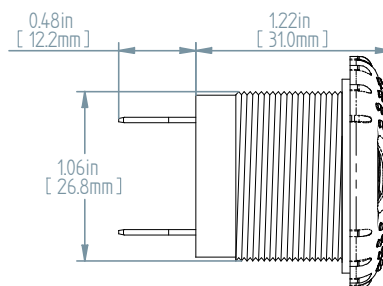
RING



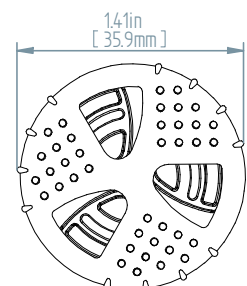
GASKET



SIDE



FRONT



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Revision: 9.09

# TMW-V86-531-Q(S)



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USA**



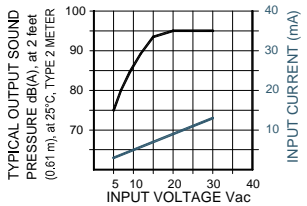
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-531-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

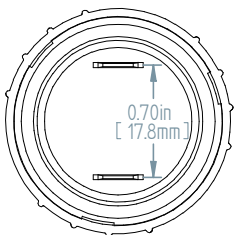
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

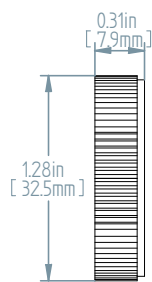


## DIMENSIONS

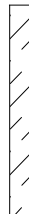
REAR



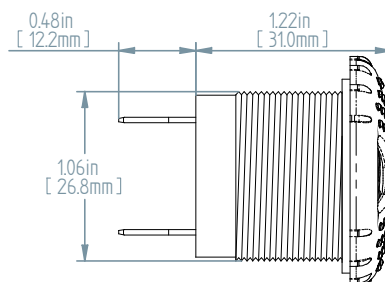
RING



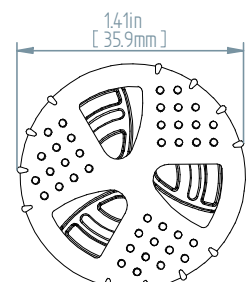
GASKET



SIDE



FRONT



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# TMW-V86-531-S(F)



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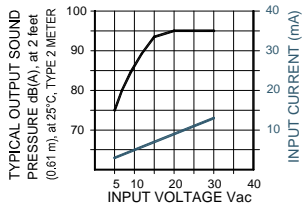
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-531-S(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

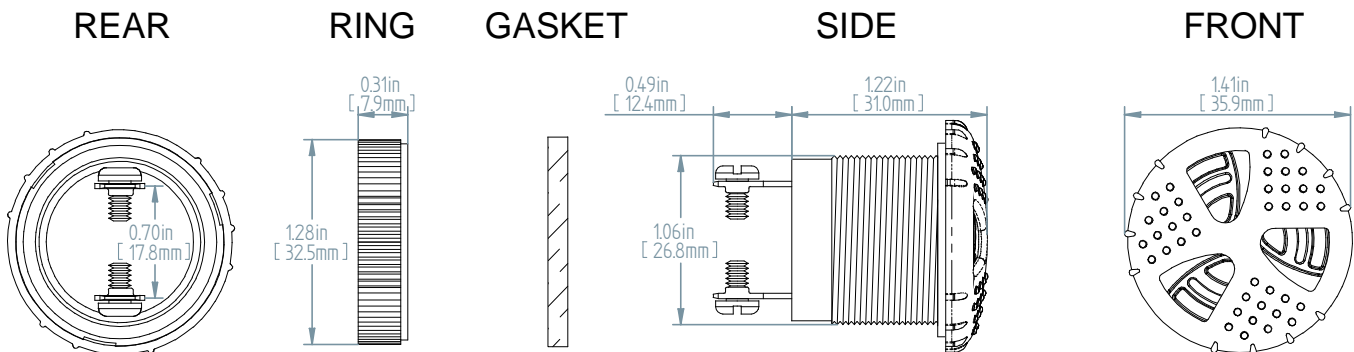
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMW-V86-531-S(S)



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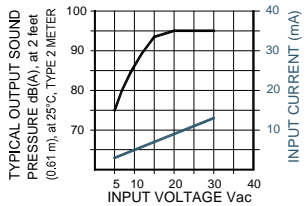
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

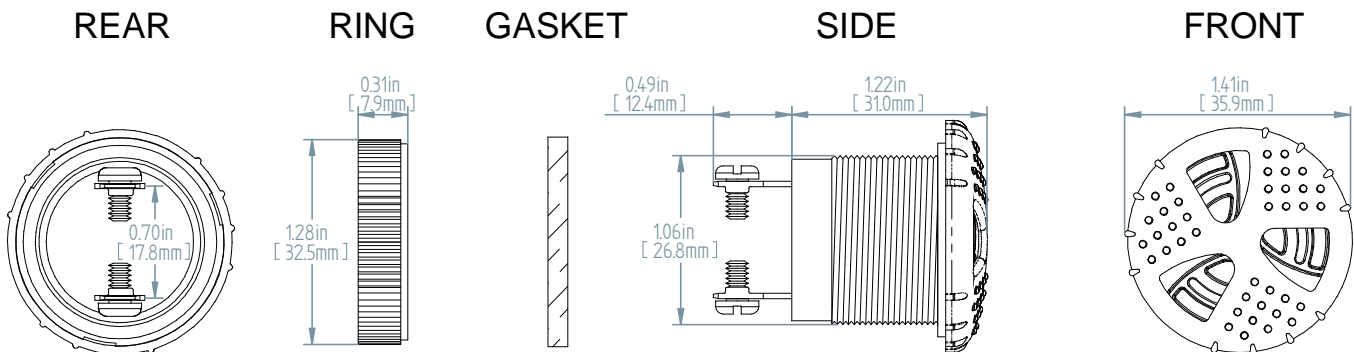
The Turbo TMW-V86-531-S(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMW-V86-531-W(F)



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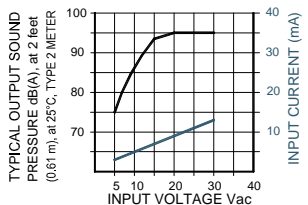
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-531-W(F) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

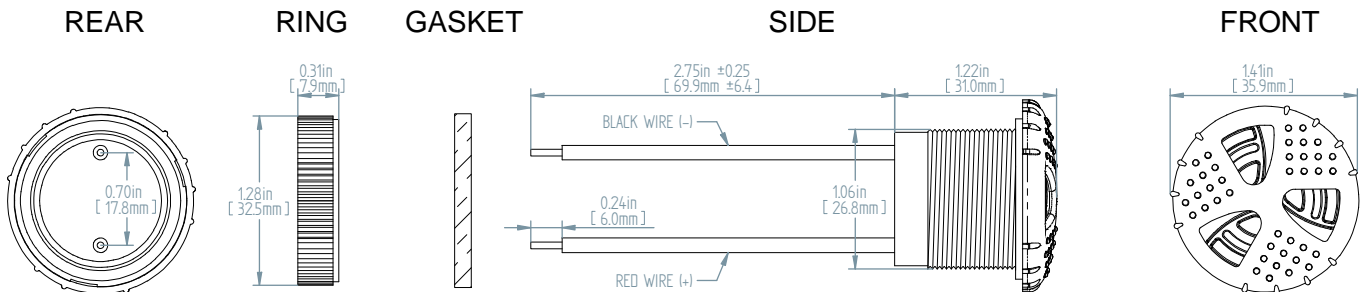
## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	5-24 Vac/dc
<b>Nominal Operating Voltage:</b>	24 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 5 Vac 15 mA at 24 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09

# TMW-V86-531-W(S)



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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

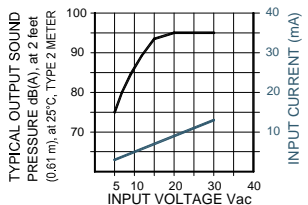
The Turbo TMW-V86-531-W(S) is a medium loud output, panel mounted alarm for operating voltages of 5-24VAC/DC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

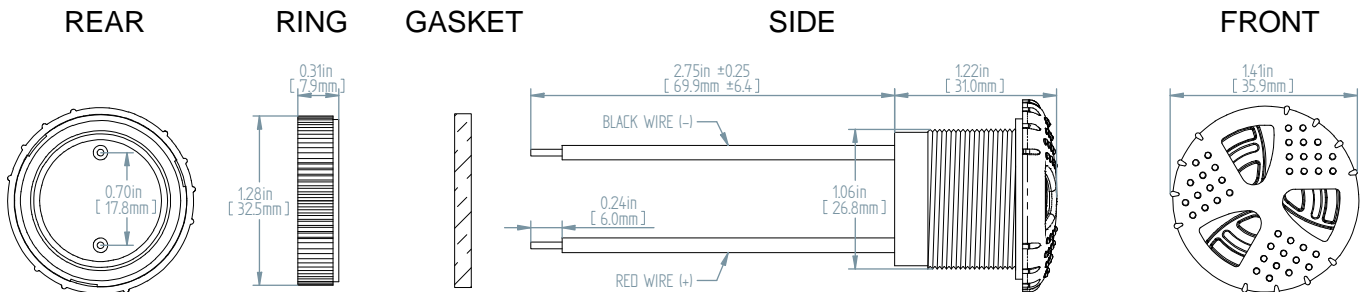
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 5-24 Vac/dc  
**Nominal Operating Voltage:** 24 Vac  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 5 Vac  
 15 mA at 24 Vac  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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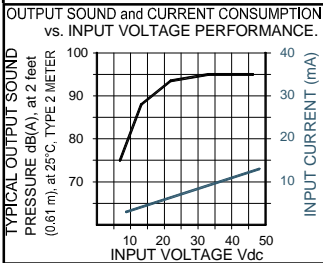
# TMW-V86-948-P(F)



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

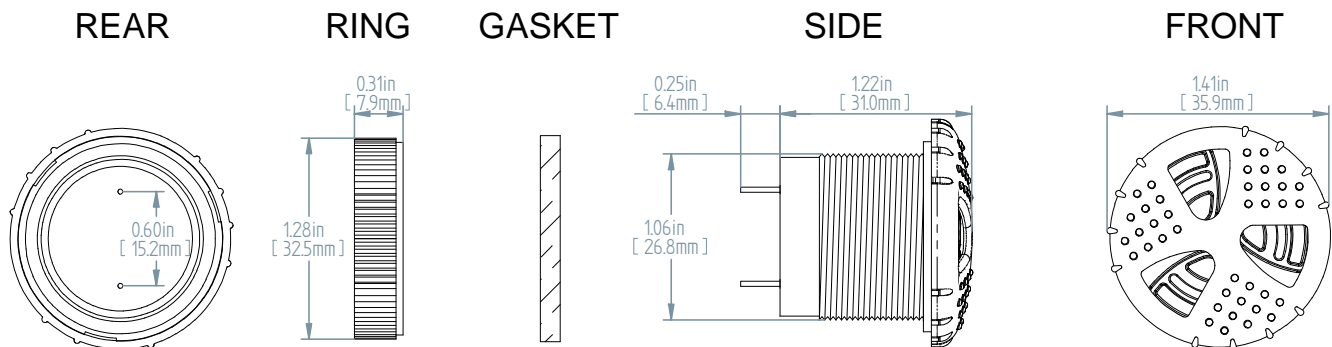


The Turbo TMW-V86-948-P(F) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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www.floydbell.com

Revision: 9.09

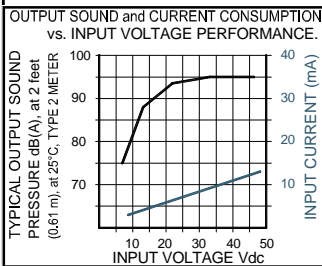
# TMW-V86-948-P(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

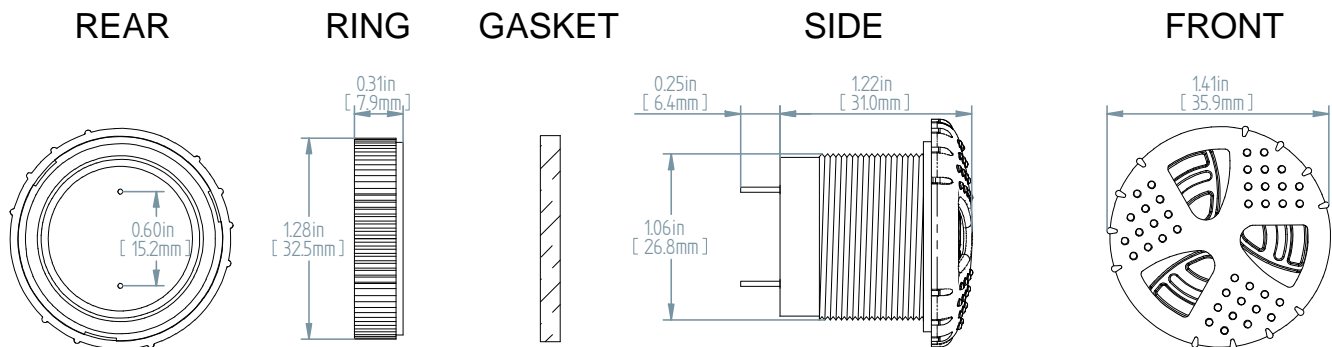


The Turbo TMW-V86-948-P(S) is a medium loud output, panel or circuit board mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TMW-V86-948-Q(F)



Made in  
USA

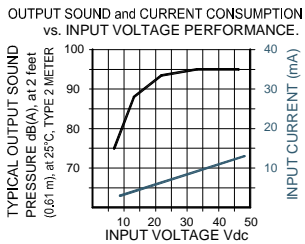


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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

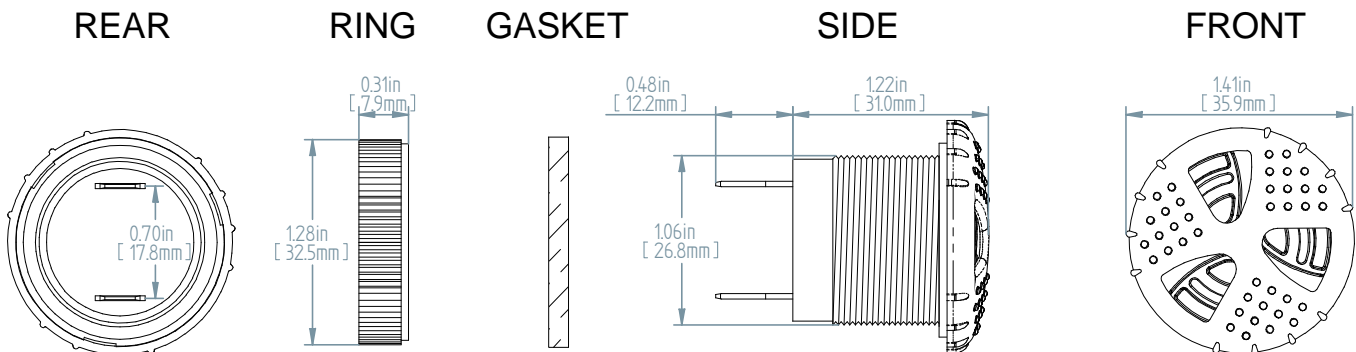
The Turbo TMW-V86-948-Q(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TMW-V86-948-Q(S)



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USA

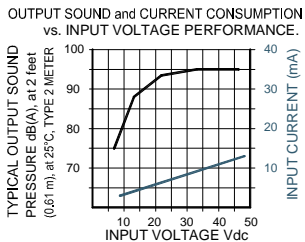


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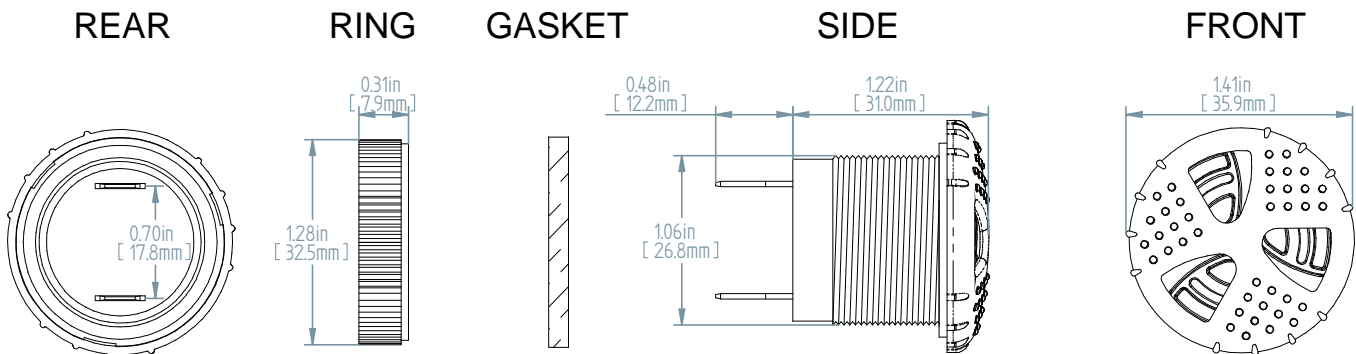
The Turbo TMW-V86-948-Q(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TMW-V86-948-S(F)



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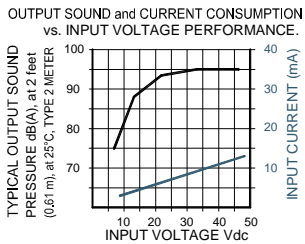


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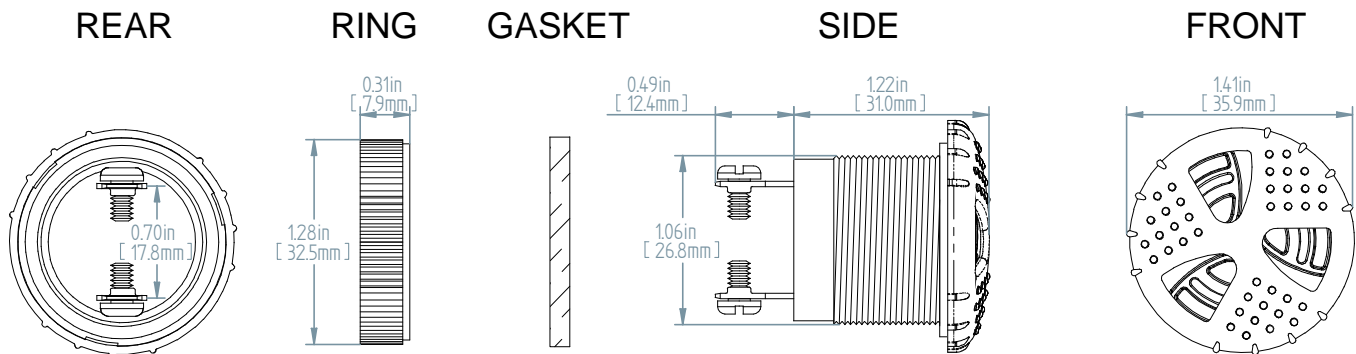
The Turbo TMW-V86-948-S(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 10±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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# TMW-V86-948-S(S)



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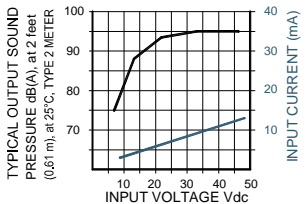
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TMW-V86-948-S(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

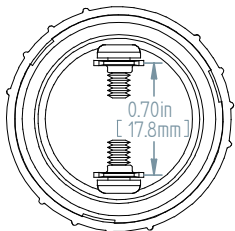
<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	9-48 Vdc
<b>Nominal Operating Voltage:</b>	48 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	2 mA at 9 Vdc 10 mA at 48 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

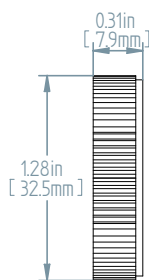


## DIMENSIONS

REAR



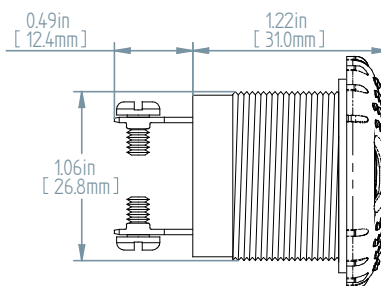
RING



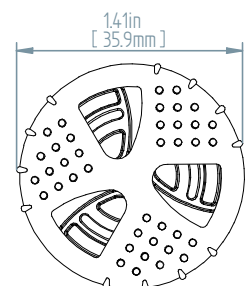
GASKET



SIDE



FRONT



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Revision: 9.09

# TMW-V86-948-W(F)



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USA



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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

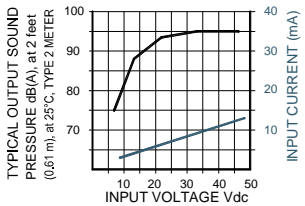
The Turbo TMW-V86-948-W(F) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

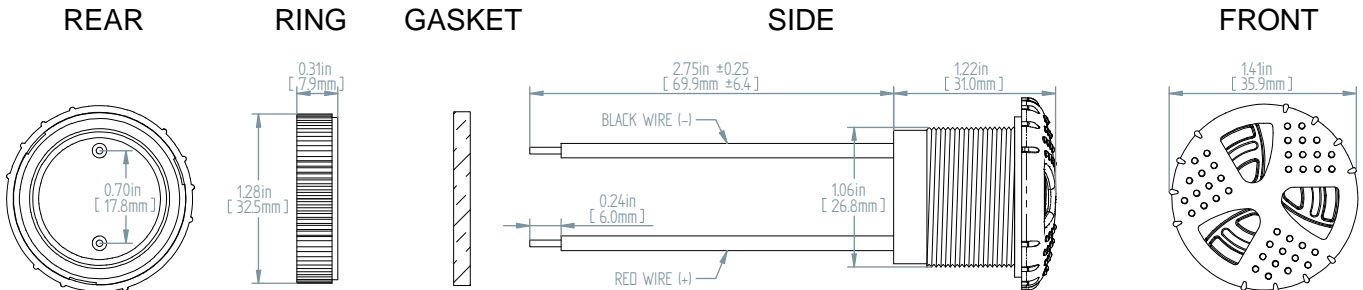
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 10±25% Cycles per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TMW-V86-948-W(S)



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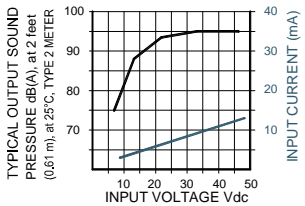
The Turbo TMW-V86-948-W(S) is a medium loud output, panel mounted alarm for operating voltages of 9-48VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

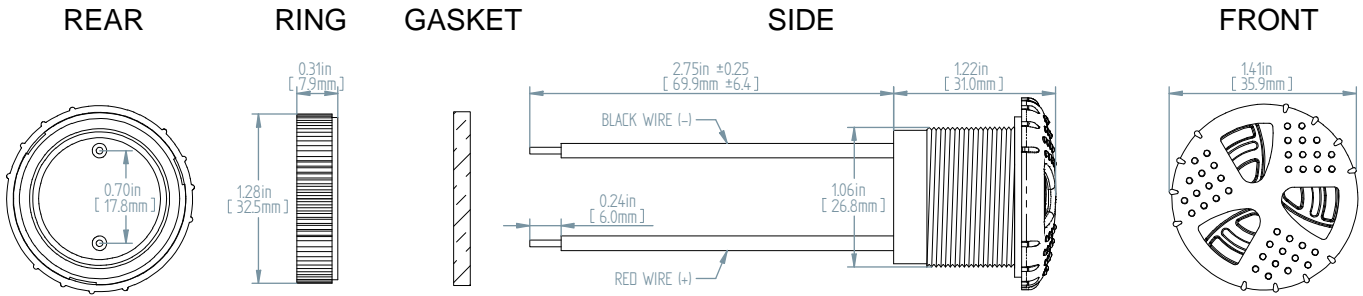
**Operating Mode:** Medium Loud Warble Tone  
**Operating Voltage:** 9-48 Vdc  
**Nominal Operating Voltage:** 48 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 2 mA at 9 Vdc  
 10 mA at 48 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09



# TT-I-39

**Made in  
USA**

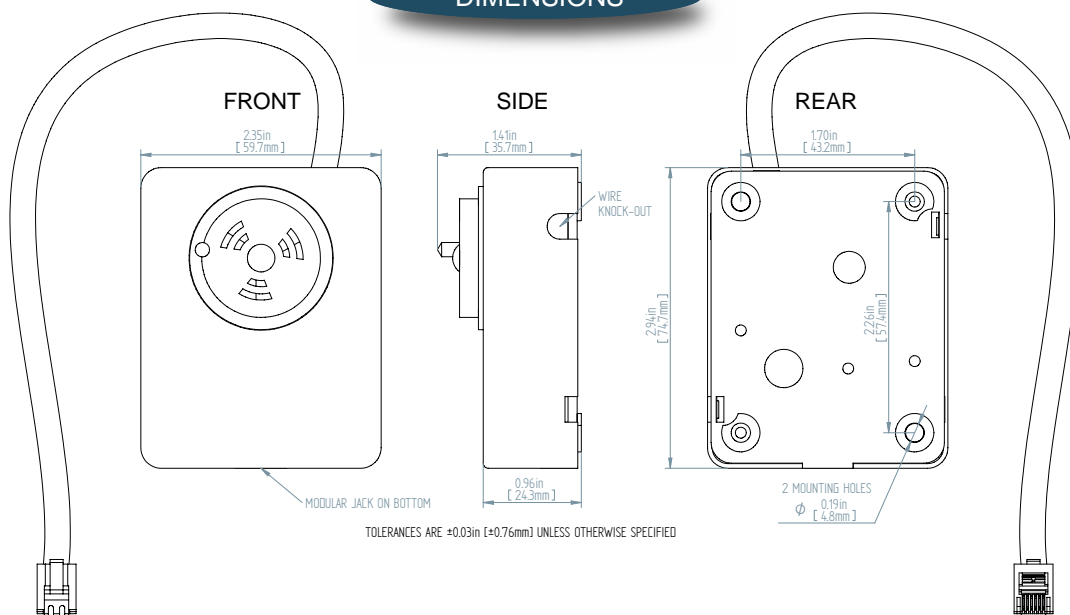
- Durable Stainless Steel 304 Diaphragm
- Wide Range Volume Control
- Tough, High-Impact Plastic Case
- Standard Modular Connector
- Accesses for External Wire Runs
- Installs Easily
- Not intended for frequency selective ringing systems

The TT-I-39 is a Tel-A-Tone™ remote extension ringer. Plug into any telephone extension outlet for a pleasant, distinctive ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Medium Loud Warble Tone
<b>Operating Voltage:</b>	40-120 Vrms, 16-67 Hz
<b>Nominal Operating Voltage:</b>	90 Vrms, 20 to 30 Hz
<b>Operating Frequency:</b>	High Frequency Peak: 2900±250 Hz. Low Frequency Peak: 2200±250 Hz. (Dominant) 15±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 90 Vrms at 20 Hz
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 90 Vrms at 20 Hz, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Telephone-standard Modular Jack and Plug, RJ-11
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-30°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Bell Tapping Suppression:</b>	Dialing, hook switch, and random line impulses up to 800 V, 2 mS
<b>Construction Materials:</b>	Case- ABS or Norpex Plastic, Beige Internal Circuit- Audio-oscillator and piezoelectric driver Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibrations- Withstand vibrations between 0 and 55 Hz. on all axis. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



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Revision: 4.08

# TUHB-88B-930-Q(F)

Made in  
USA



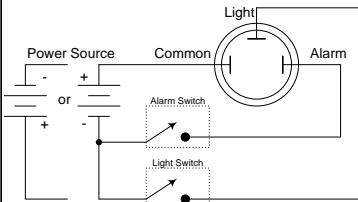
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

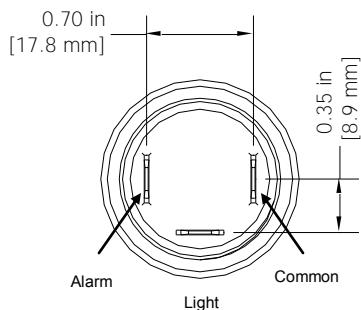
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

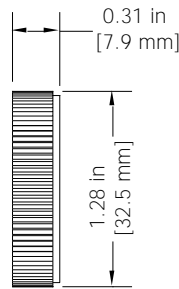


## DIMENSIONS

BACK



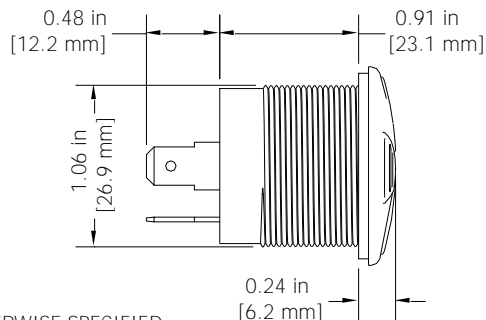
RING



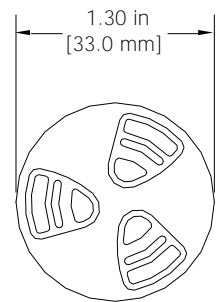
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHB-88B-930-Q(M)

Made in  
USA



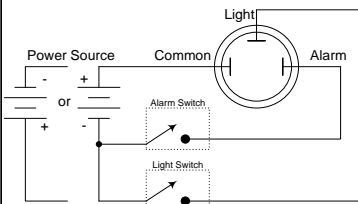
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

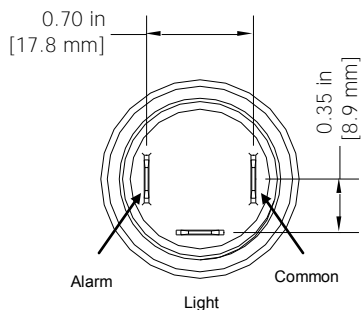
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

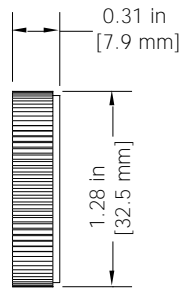


## DIMENSIONS

BACK



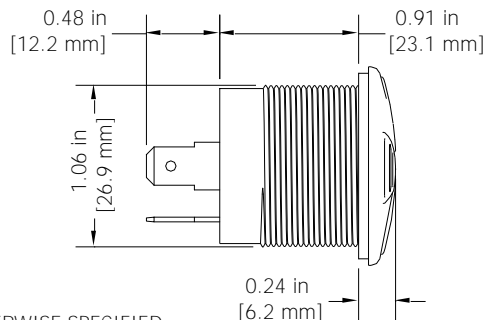
RING



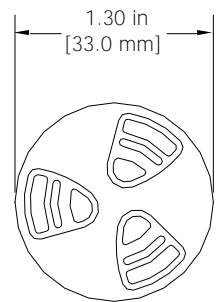
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHB-88B-930-Q(S)

Made in  
USA



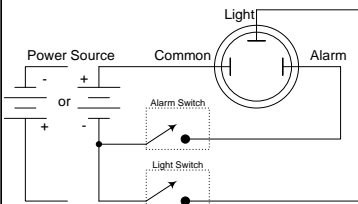
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

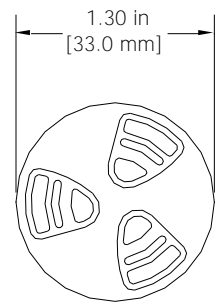
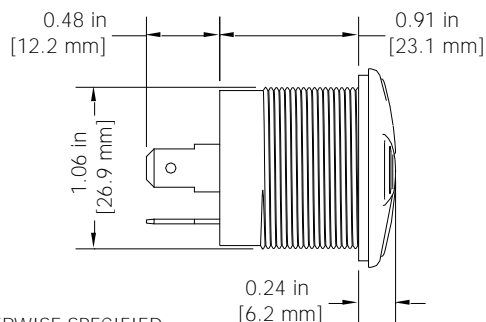
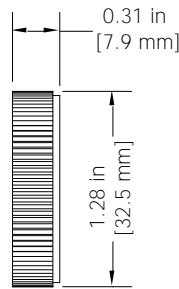
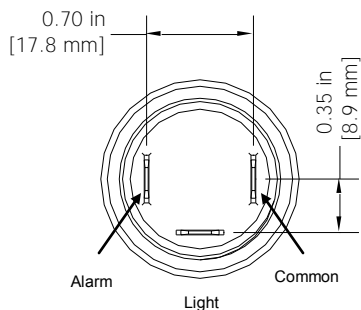
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHB-88B-930-Q(U)

Made in  
USA



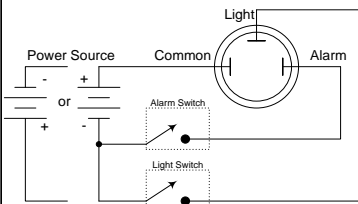
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 6±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 6±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

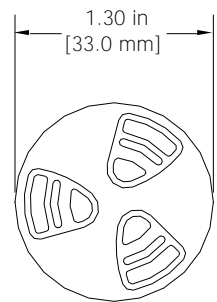
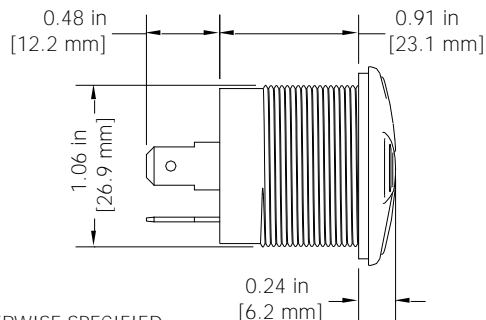
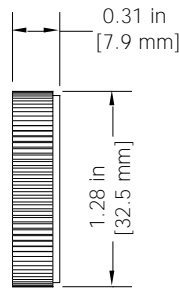
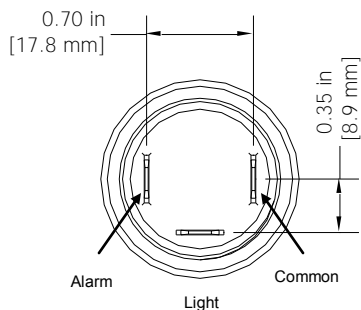
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14



# TUHB-88G-930-Q(F)

Made in  
USA



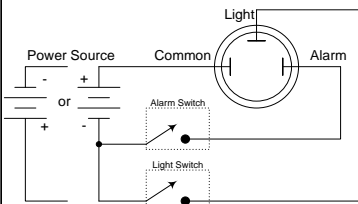
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

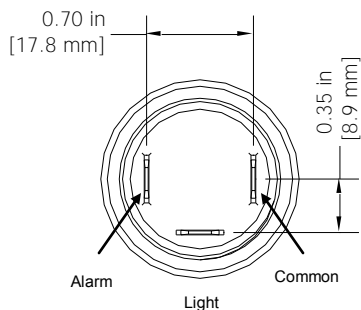
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

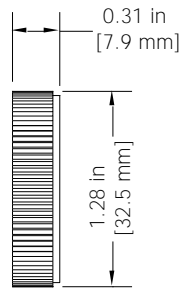


## DIMENSIONS

BACK



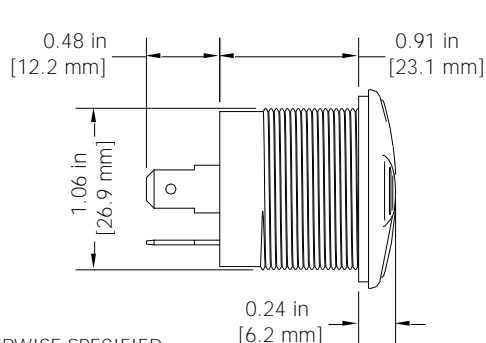
RING



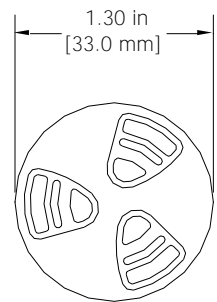
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHB-88G-930-Q(M)

Made in  
USA



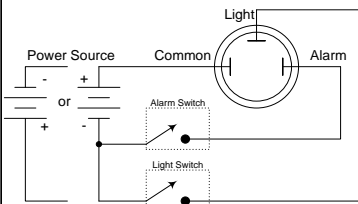
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

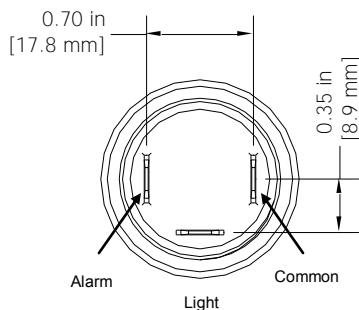
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

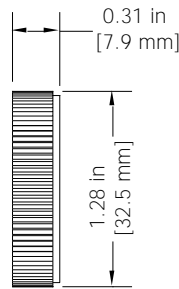


## DIMENSIONS

BACK



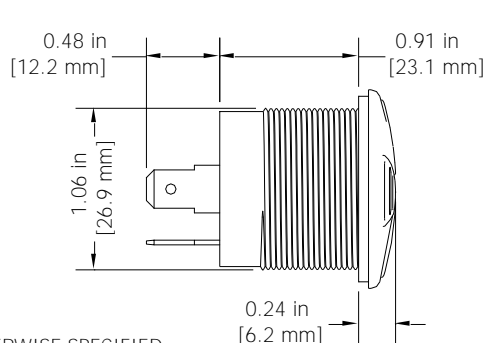
RING



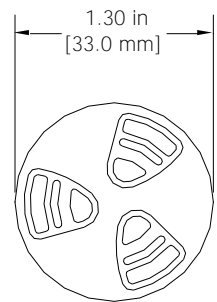
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHB-88G-930-Q(S)

Made in  
USA



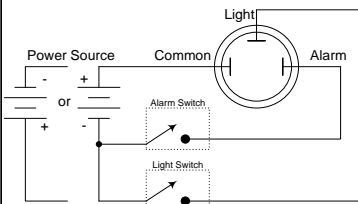
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

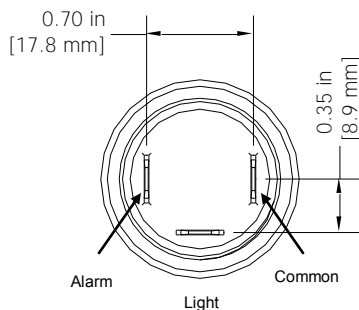
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

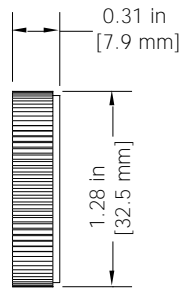


## DIMENSIONS

BACK



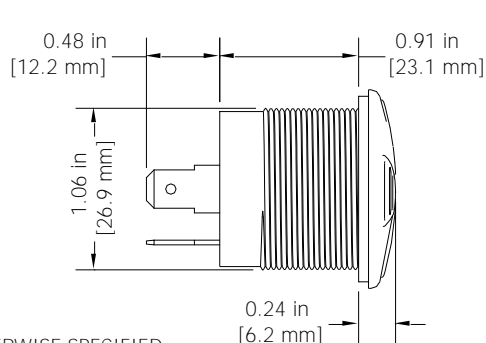
RING



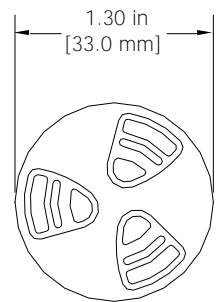
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHB-88G-930-Q(U)

Made in  
USA



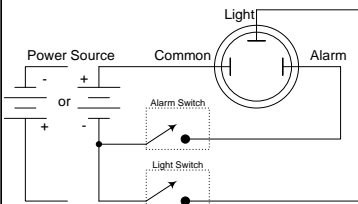
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

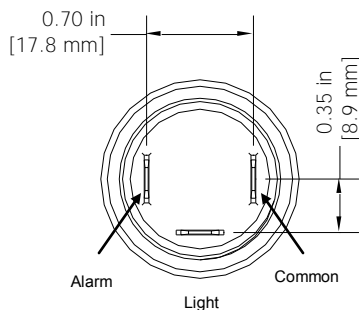
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 6±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 6±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

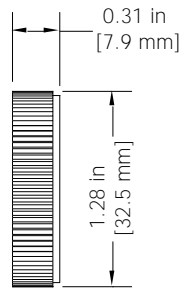


## DIMENSIONS

BACK



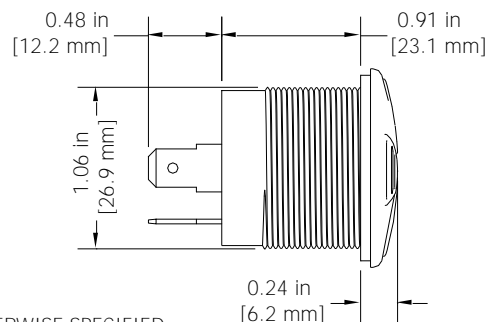
RING



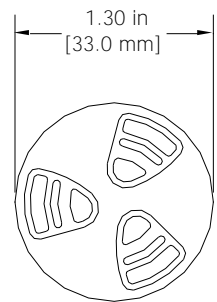
GASKET



SIDE



FRONT



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Revision: 4.14



# TUHB-88R-930-Q(F)

Made in  
USA



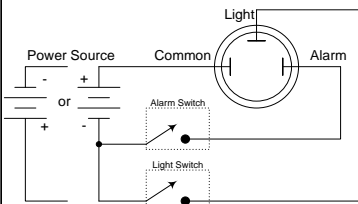
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

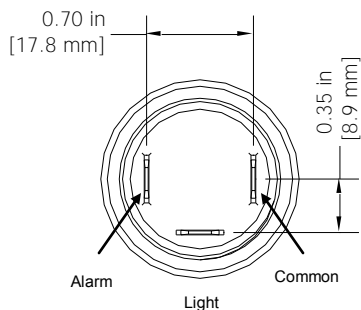
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

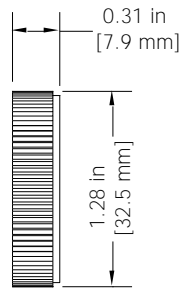


## DIMENSIONS

BACK



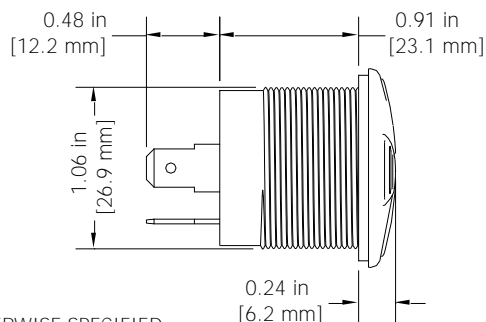
RING



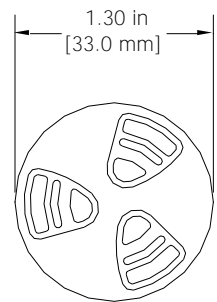
GASKET



SIDE



FRONT



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**Floyd Bell Inc**

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Revision: 4.14



# TUHB-88R-930-Q(M)

Made in  
USA



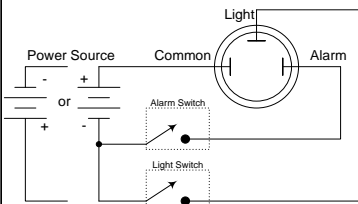
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

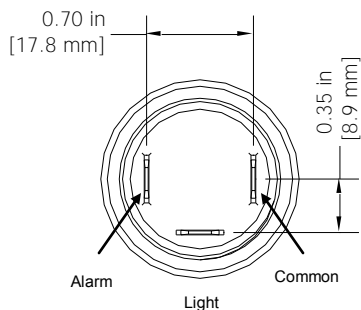
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

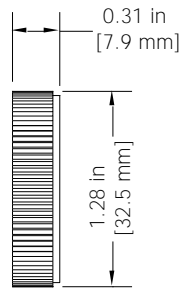


## DIMENSIONS

BACK



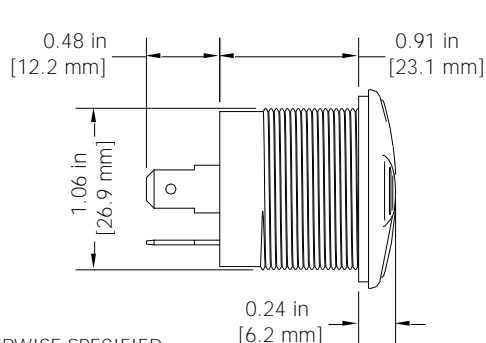
RING



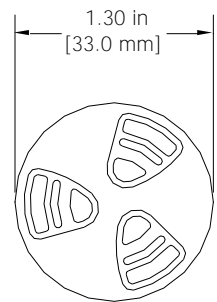
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHB-88R-930-Q(S)

Made in  
USA



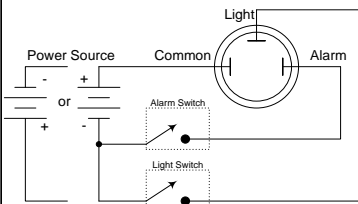
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

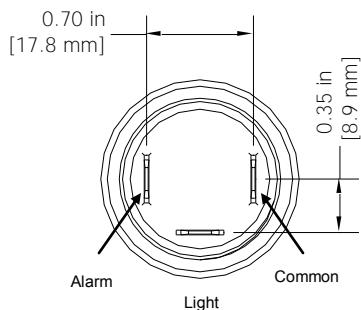
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

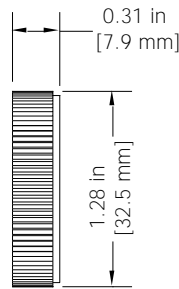


## DIMENSIONS

BACK



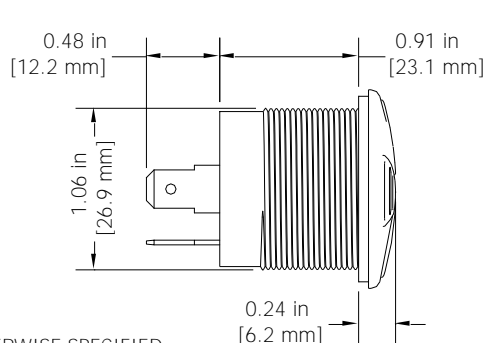
RING



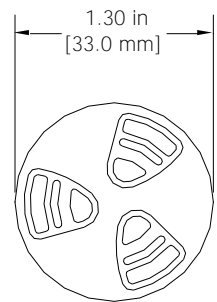
GASKET



SIDE



FRONT



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Revision: 1.14

# TUHB-88R-930-Q(F)

Made in  
USA



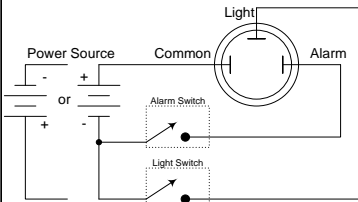
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

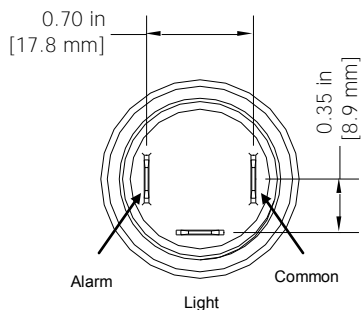
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 6±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 6±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

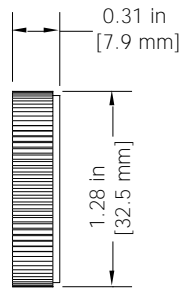


## DIMENSIONS

BACK



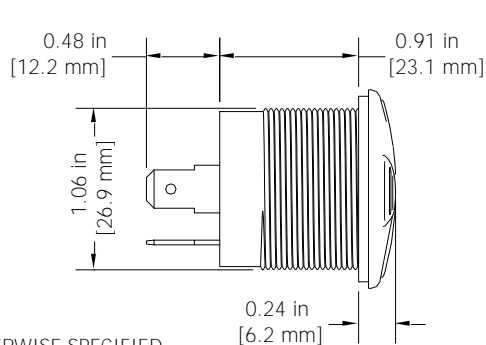
RING



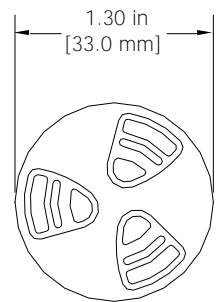
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHB-88W-930-Q(F)

Made in  
USA



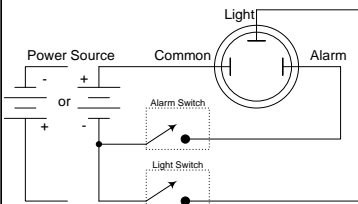
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

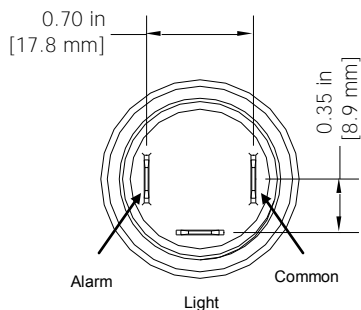
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

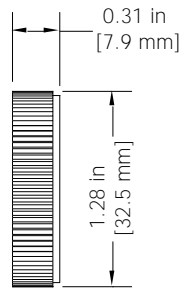


## DIMENSIONS

BACK



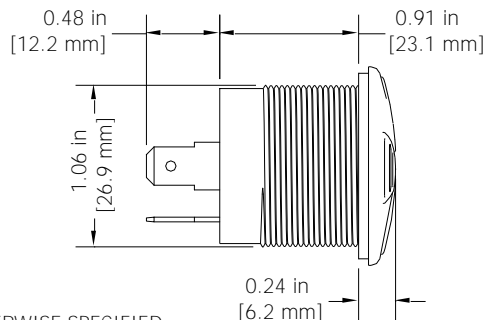
RING



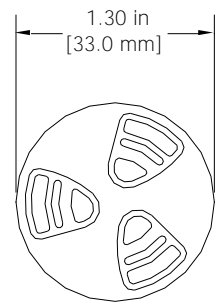
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHB-88W-930-Q(M)

Made in  
USA



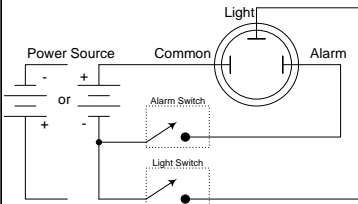
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

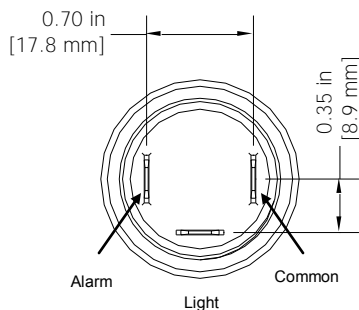
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

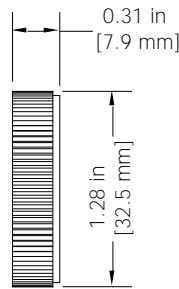


## DIMENSIONS

BACK



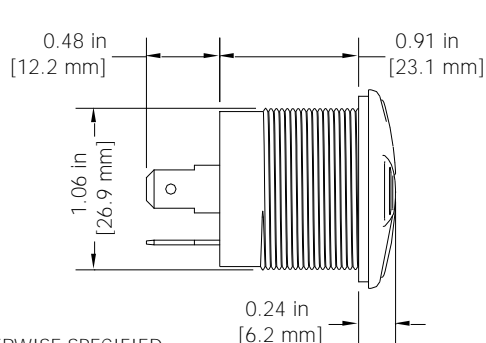
RING



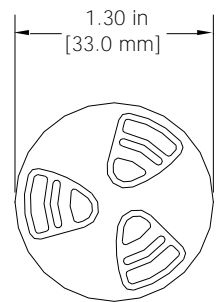
GASKET



SIDE



FRONT



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# TUHB-88W-930-Q(S)

Made in  
USA



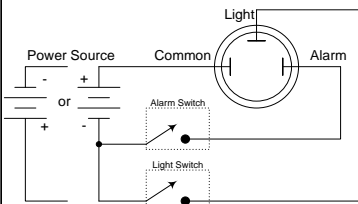
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

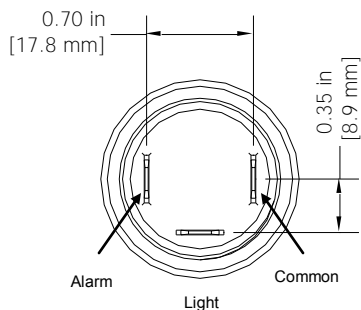
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

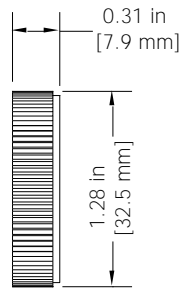


## DIMENSIONS

BACK



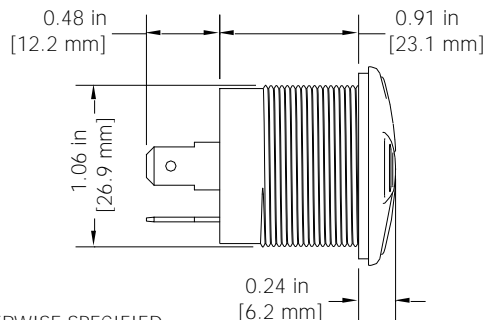
RING



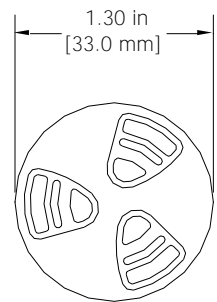
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHB-88W-930-Q(U)

Made in  
USA



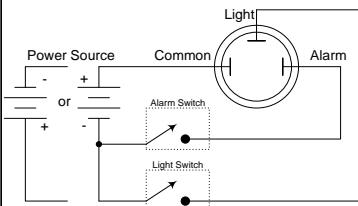
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

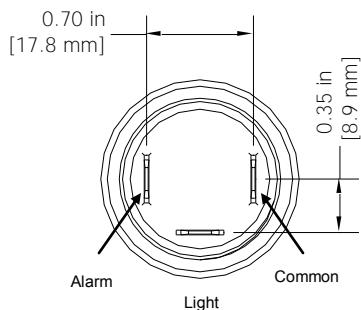
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 6±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 6±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

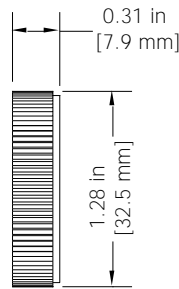


## DIMENSIONS

BACK



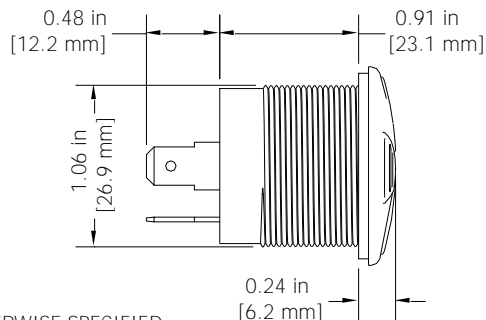
RING



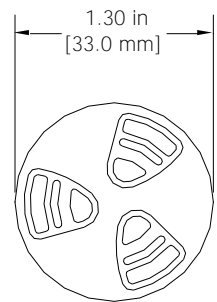
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHB-88Y-930-Q(F)

Made in  
USA



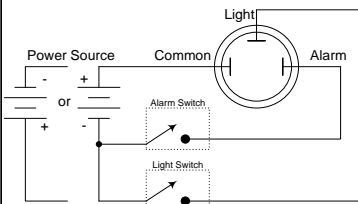
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

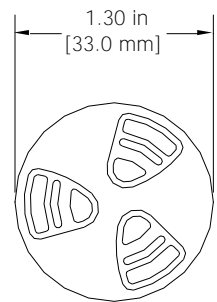
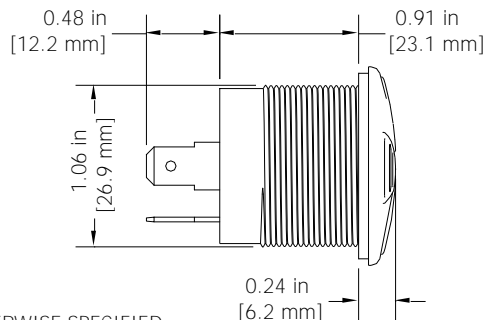
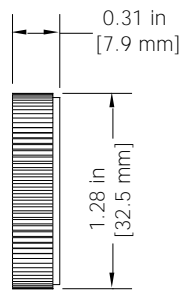
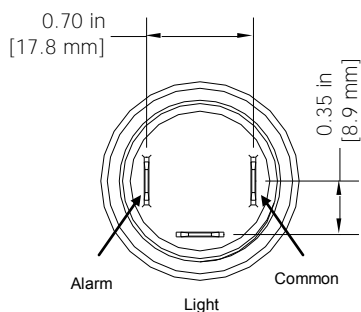
BACK

RING

GASKET

SIDE

FRONT



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# TUHB-88Y-930-Q(M)

Made in  
USA



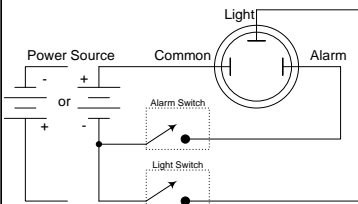
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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## SPECIFICATIONS

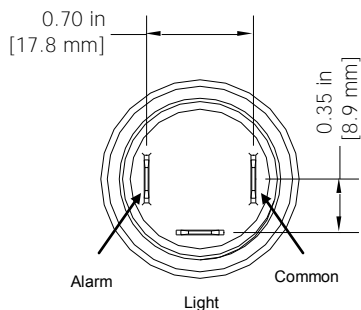
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
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**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
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**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
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**Life Expectancy:** 10 years under normal operating conditions.  
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Application Circuits

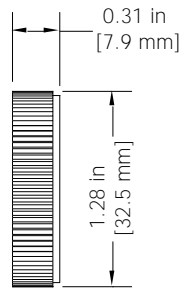


## DIMENSIONS

BACK



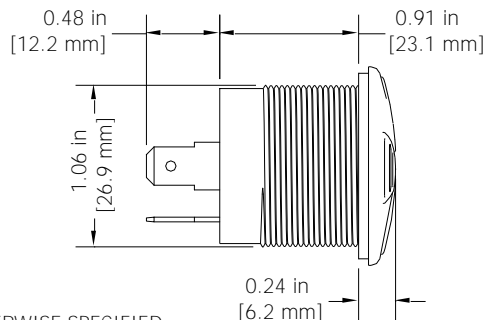
RING



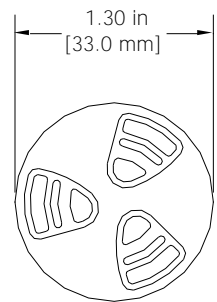
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHB-88Y-930-Q(S)

Made in  
USA



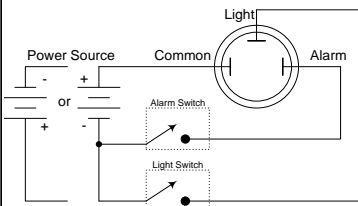
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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## SPECIFICATIONS

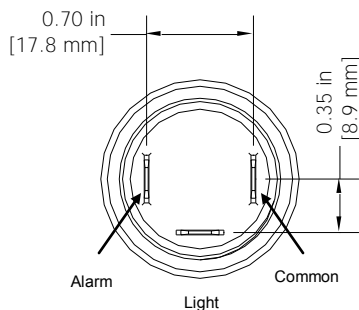
**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
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Application Circuits

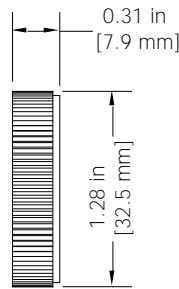


## DIMENSIONS

BACK



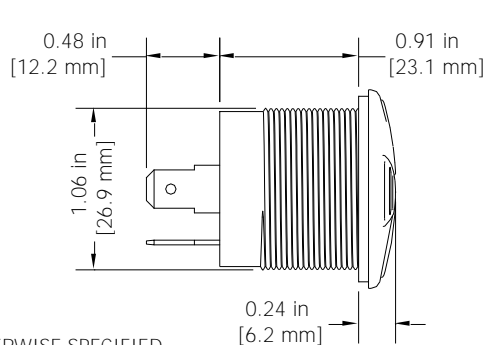
RING



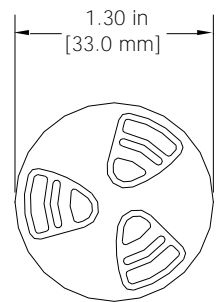
GASKET



SIDE



FRONT



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Revision: 4.14



# TUHB-88Y-930-Q(U)

Made in  
USA



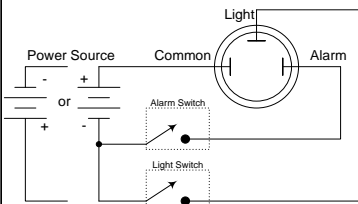
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Beep Tone.  
**Tone Pulse Rate:** 6±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 6±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

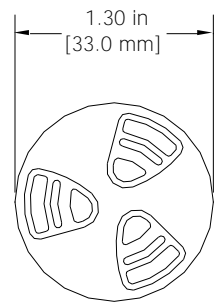
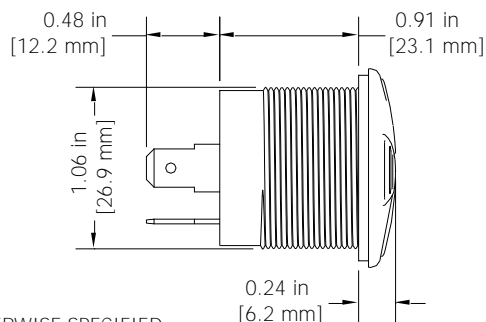
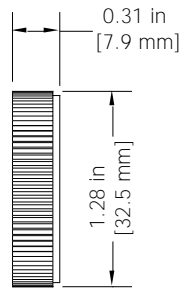
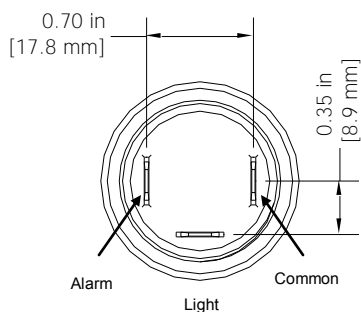
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHC-88B-930-Q

Made in  
USA



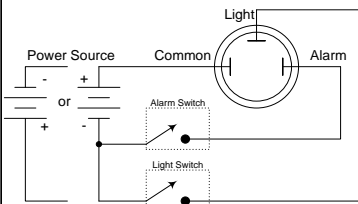
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. .  
**Tone Pulse Rate:** N/A  
**Light Flash Rate:** Constant  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

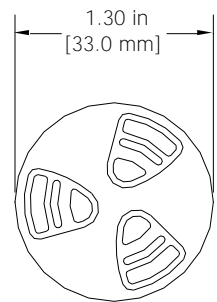
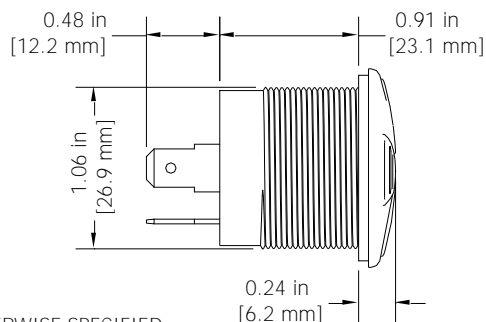
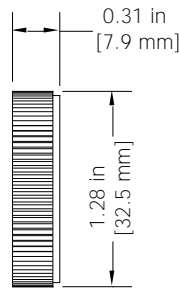
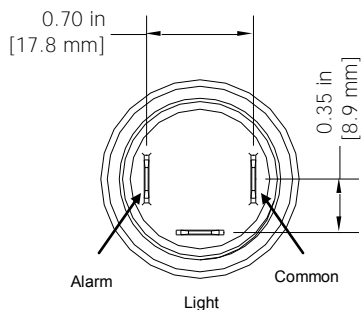
BACK

RING

GASKET

SIDE

FRONT



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# TUHC-88G-930-Q

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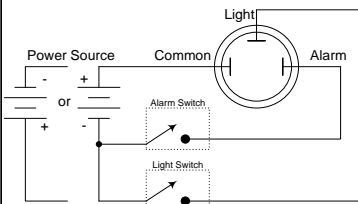
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz.  
**Tone Pulse Rate:** N/A  
**Light Flash Rate:** Constant  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

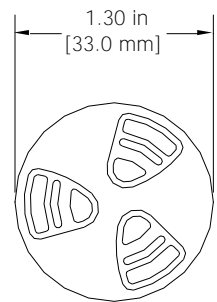
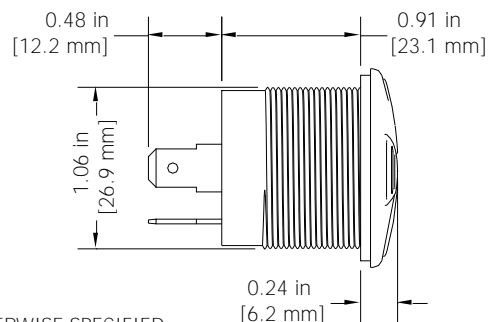
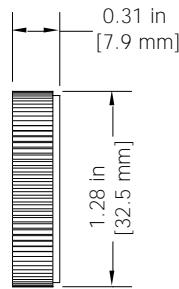
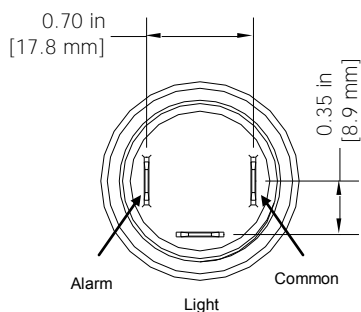
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHC-88R-930-Q

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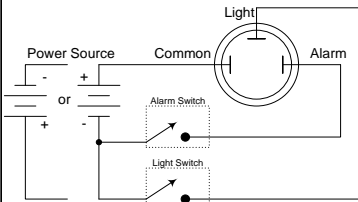
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

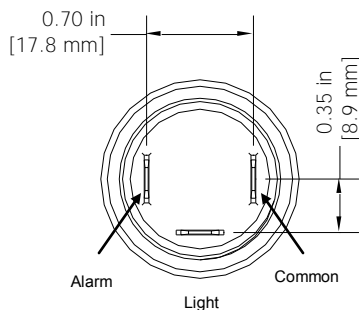
**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz.  
**Tone Pulse Rate:** N/A  
**Light Flash Rate:** Constant  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

BACK



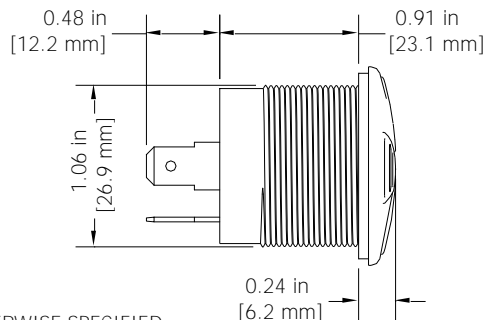
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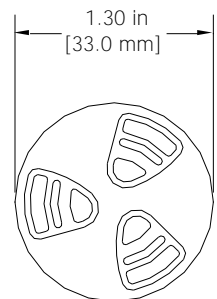
GASKET



SIDE



FRONT



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# TUHC-88W-930-Q

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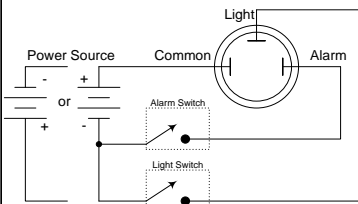
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

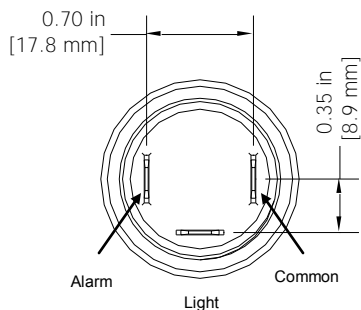
**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz.  
**Tone Pulse Rate:** N/A  
**Light Flash Rate:** Continuous  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

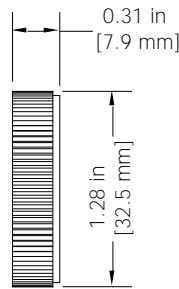


## DIMENSIONS

BACK



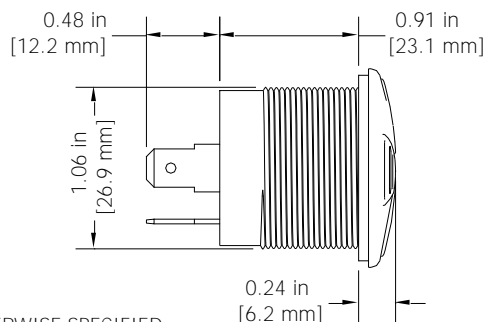
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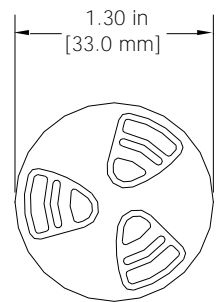
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHC-88Y-930-Q

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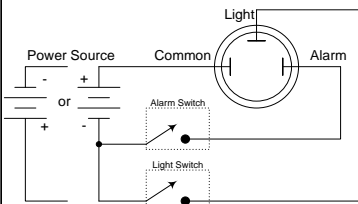
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

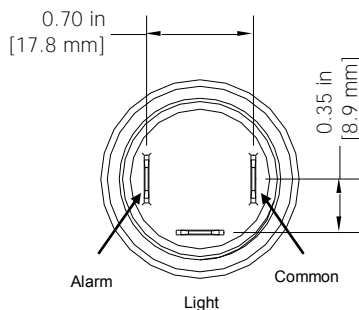
**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz.  
**Tone Pulse Rate:** N/A  
**Light Flash Rate:** Constant  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

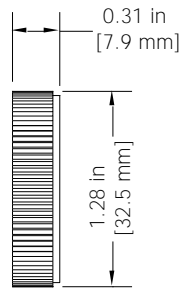


## DIMENSIONS

BACK



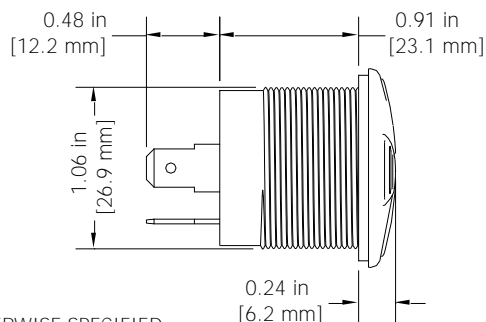
RING



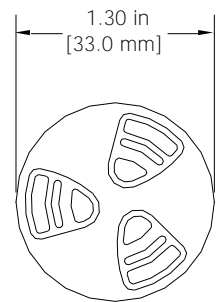
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHCH-88B-930-Q(F)

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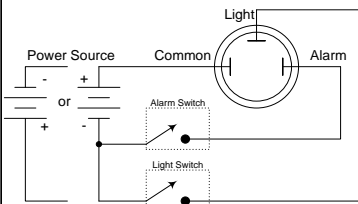
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

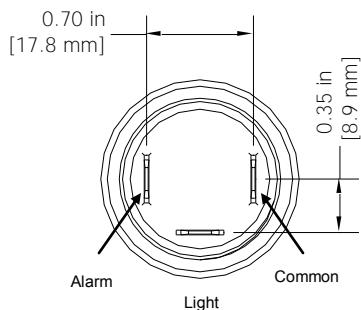
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

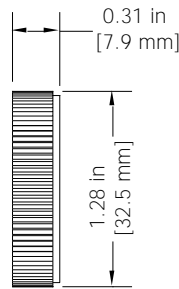


## DIMENSIONS

BACK



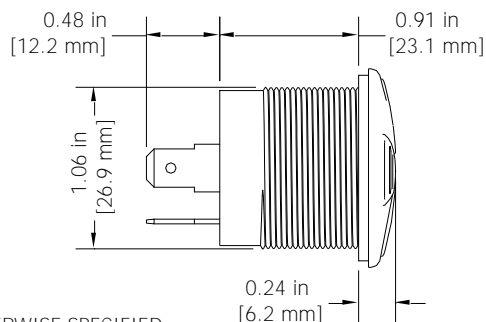
RING



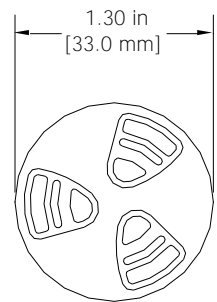
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHCH-88B-930-Q(M)

Made in  
USA



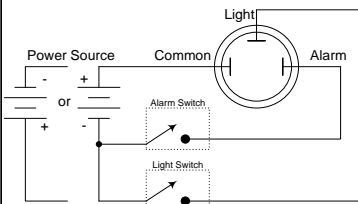
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

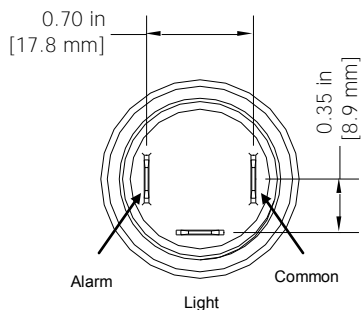
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

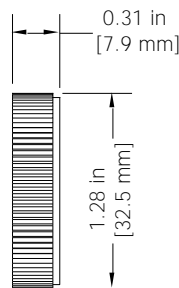


## DIMENSIONS

BACK



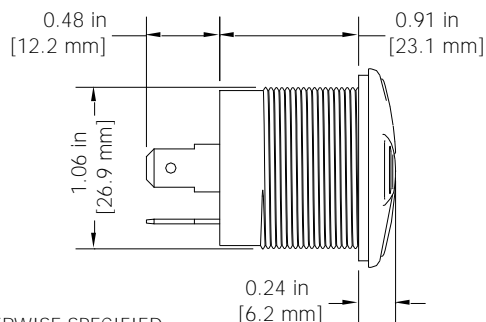
RING



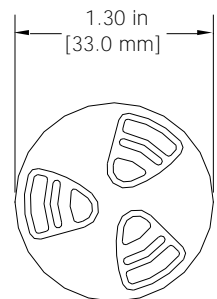
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHCH-88B-930-Q(S)

Made in  
USA



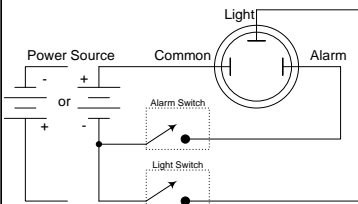
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

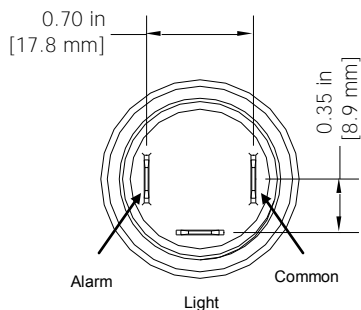
**Operating Mode:** Extra Bright LED Plus Extra Loud Single Shot Chime Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Single Shot Chime Tone.  
**Tone Pulse Rate:** Single Shot, reset occurs when power is removed.  
**Light Flash Rate:** Constant "on"  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

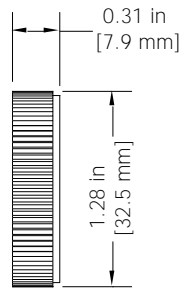


## DIMENSIONS

BACK



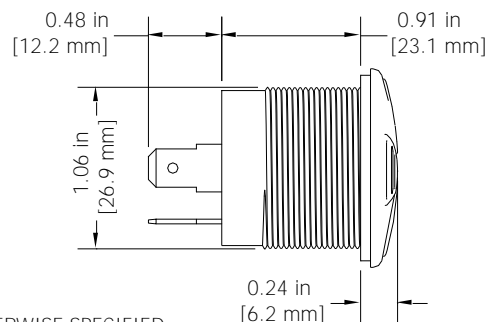
RING



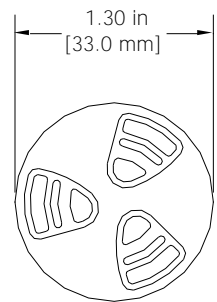
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHCH-88G-930-Q(F)

Made in  
USA



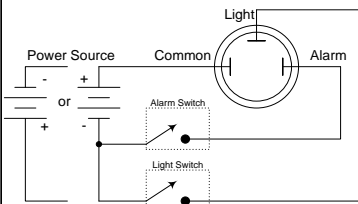
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

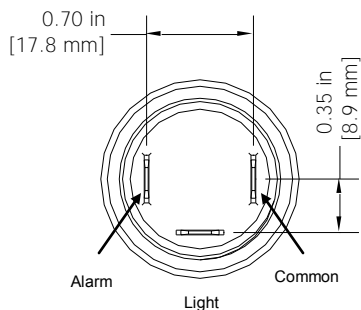
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

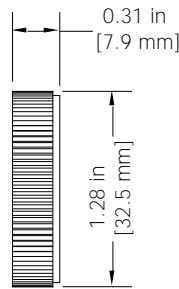


## DIMENSIONS

BACK



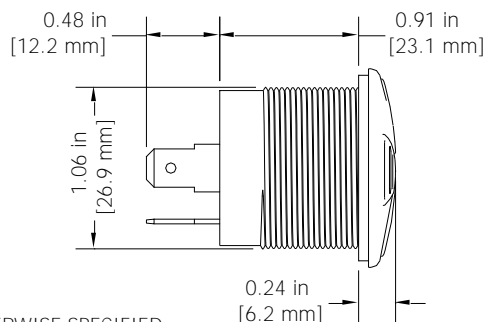
RING



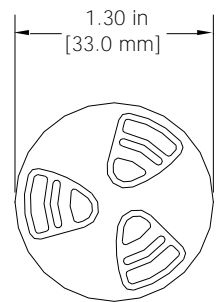
GASKET



SIDE



FRONT



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Revision: 4.14



# TUHCH-88G-930-Q(M)

Made in  
USA



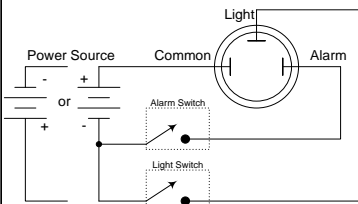
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

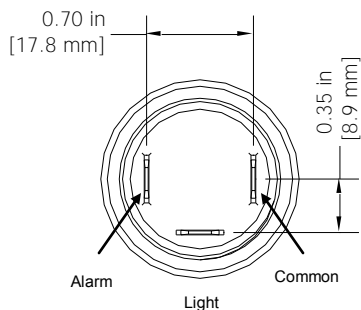
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

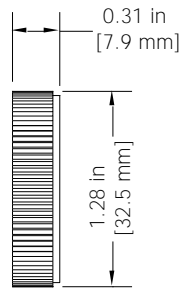


## DIMENSIONS

BACK



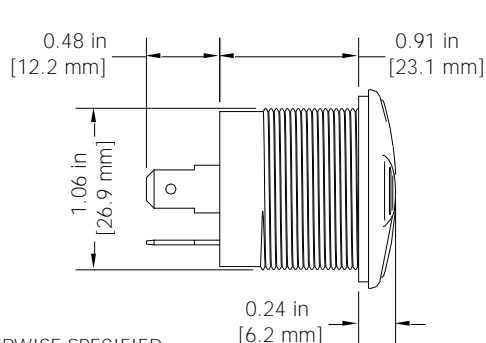
RING



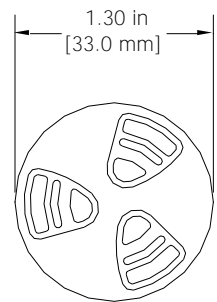
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHCH-88G-930-Q(S)

Made in  
USA



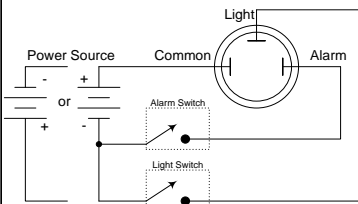
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

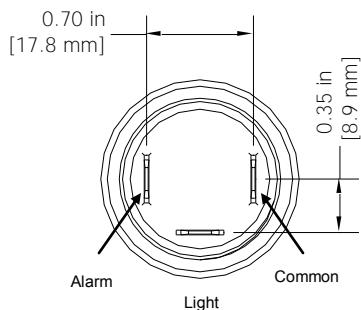
**Operating Mode:** Extra Bright LED Plus Extra Loud Single Shot Chime Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** Single Shot, reset occurs when power is removed.  
**Light Flash Rate:** Constant "on"  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
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**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
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 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

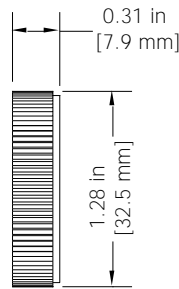


## DIMENSIONS

BACK



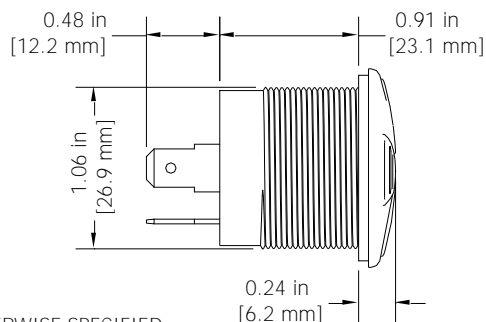
RING



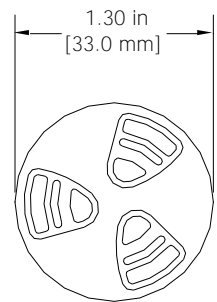
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHCH-88R-930-Q(F)

Made in  
USA



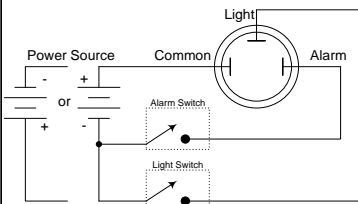
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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## SPECIFICATIONS

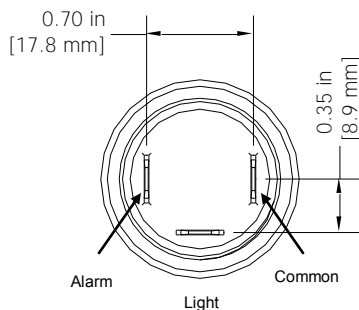
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
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**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

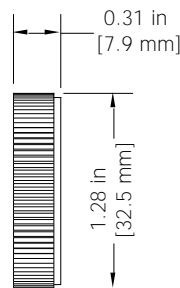


## DIMENSIONS

BACK



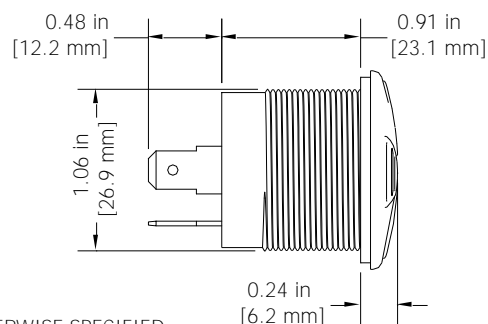
RING



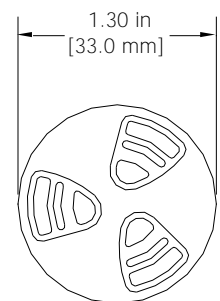
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHCH-88R-930-Q(M)

Made in  
USA



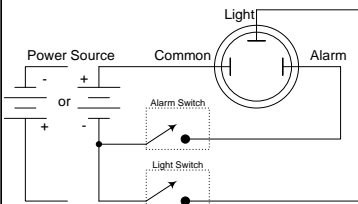
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

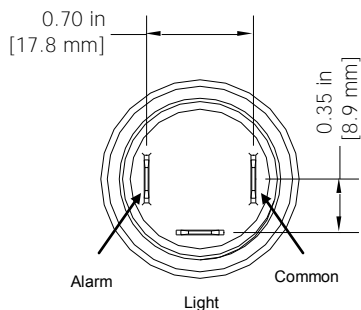
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

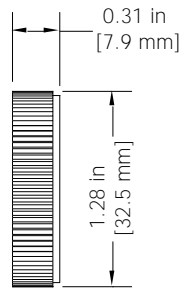


## DIMENSIONS

BACK



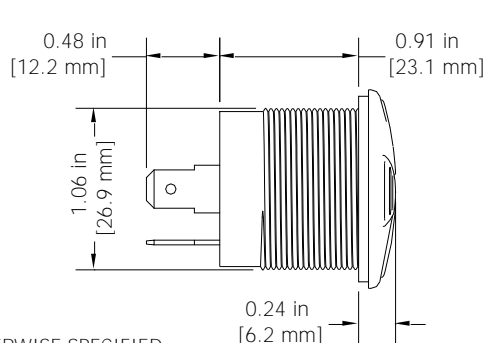
RING



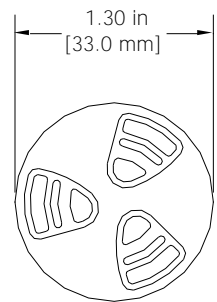
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHCH-88R-930-Q(S)

Made in  
USA



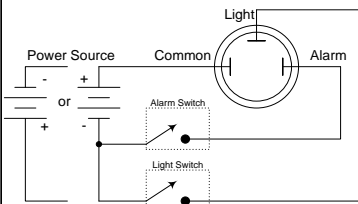
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

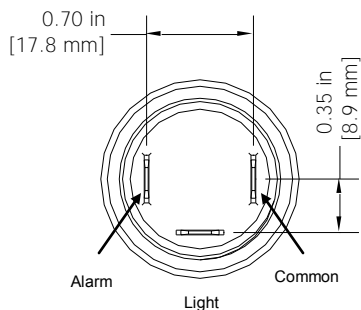
**Operating Mode:** Extra Bright LED Plus Extra Loud Single Shot Chime Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Single Shot Chime Tone.  
**Tone Pulse Rate:** Single Shot, reset occurs when power is removed.  
**Light Flash Rate:** Constant "on"  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

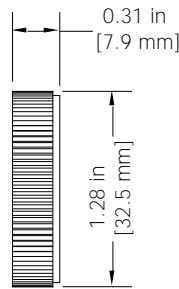


## DIMENSIONS

BACK



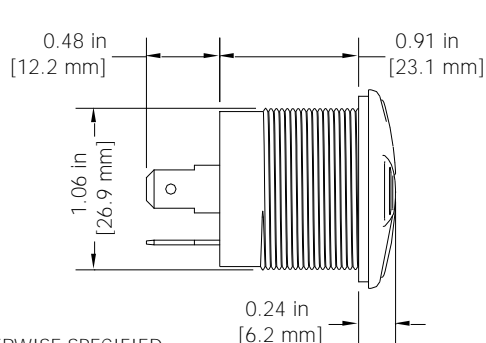
RING



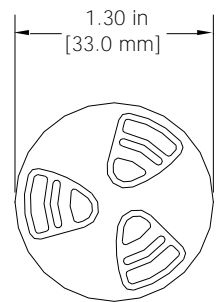
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14



# TUHCH-88W-930-Q(F)

Made in  
USA



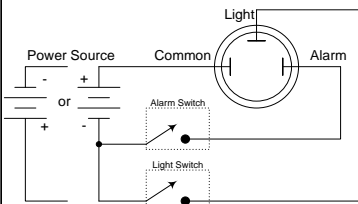
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

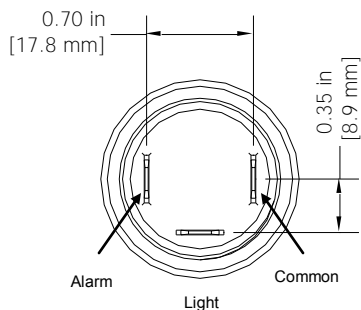
**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

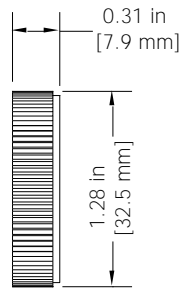


## DIMENSIONS

BACK



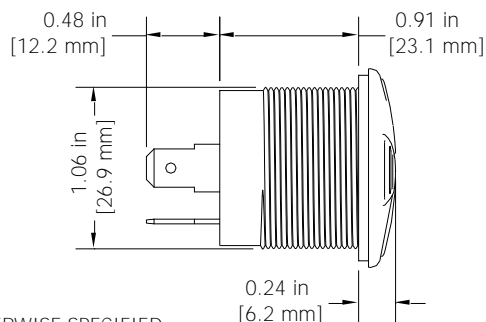
RING



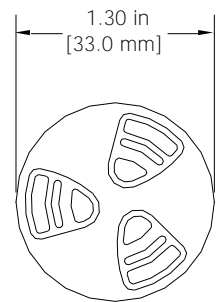
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHCH-88W-930-Q(M)

Made in  
USA



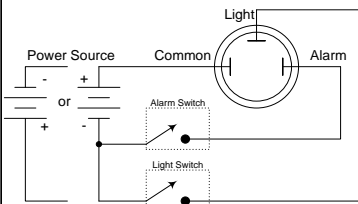
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

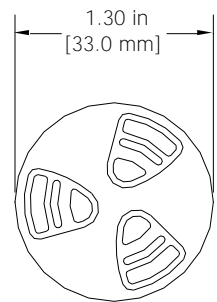
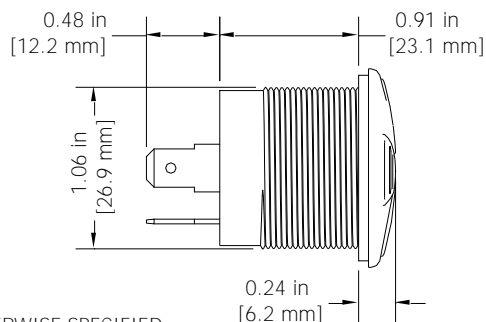
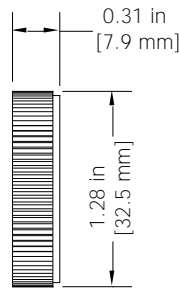
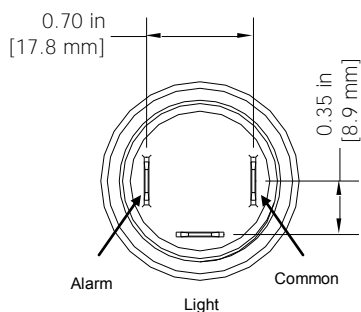
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHCH-88W-930-Q(S)

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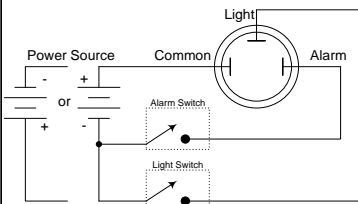
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

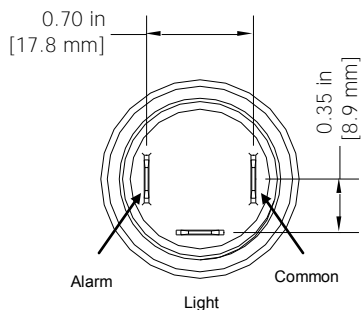
**Operating Mode:** Extra Bright LED Plus Extra Loud Single Shot Chime Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Single Shot Chime Tone.  
**Tone Pulse Rate:** Single Shot, reset occurs when power is removed  
**Light Flash Rate:** Constant "on"  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

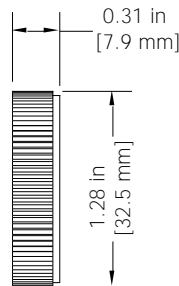


## DIMENSIONS

BACK



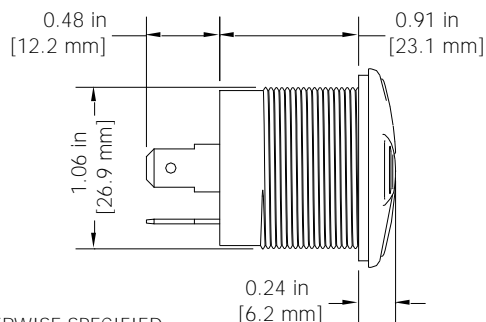
RING



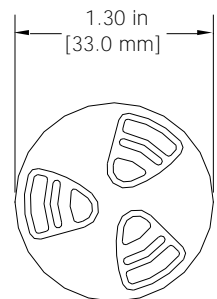
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHCH-88Y-930-Q(F)

Made in  
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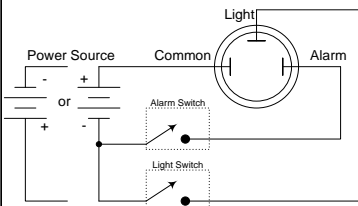
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 2±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

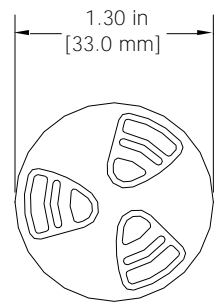
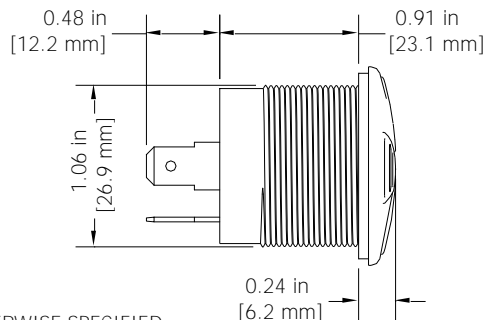
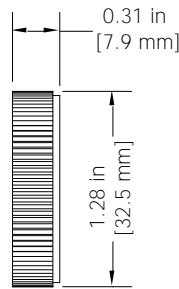
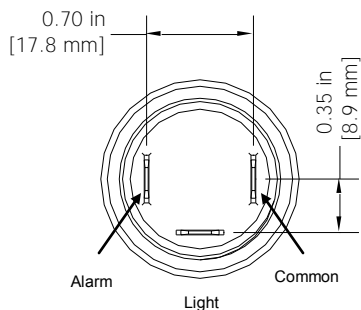
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHCH-88Y-930-Q(M)

Made in  
USA



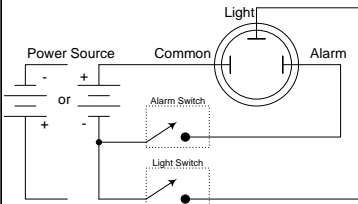
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Chime Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Chime Tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

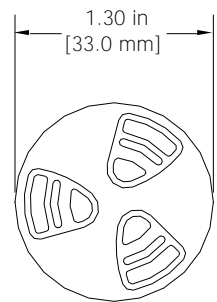
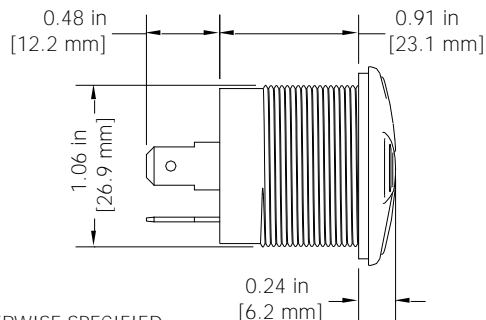
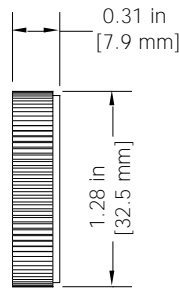
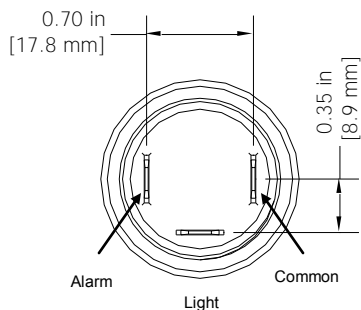
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHCH-88Y-930-Q(S)

Made in  
USA



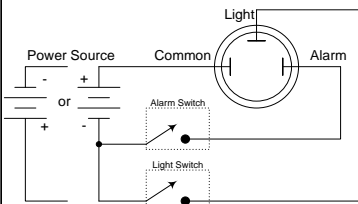
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

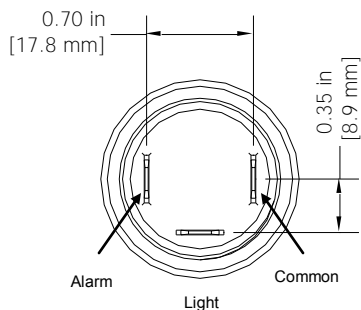
**Operating Mode:** Extra Bright LED Plus Extra Loud Single Shot Chime Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±500 Hz. Single Shot Chime Tone.  
**Tone Pulse Rate:** Single Shot, reset occurs when power is removed  
**Light Flash Rate:** Constant "on"  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

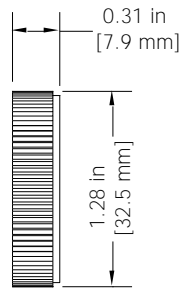


## DIMENSIONS

BACK



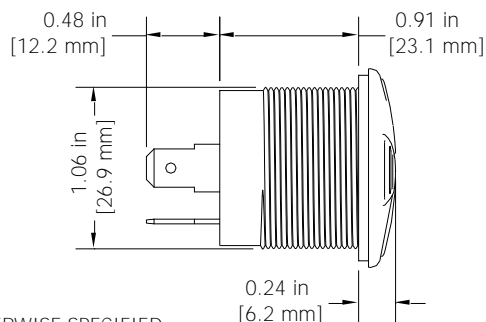
RING



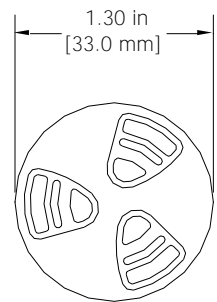
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHO-88B-930-Q

Made in  
USA



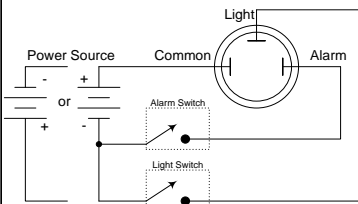
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Whoop Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

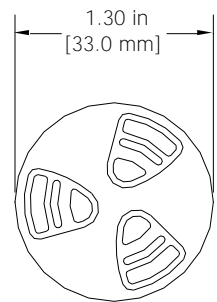
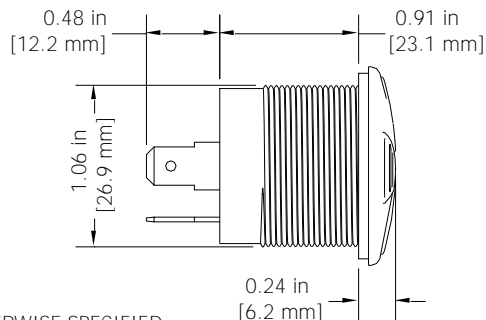
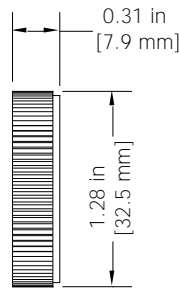
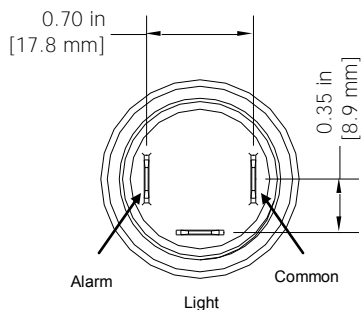
BACK

RING

GASKET

SIDE

FRONT



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# TUHO-88G-930-Q

Made in  
USA



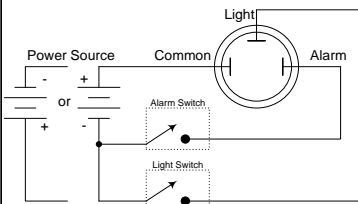
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

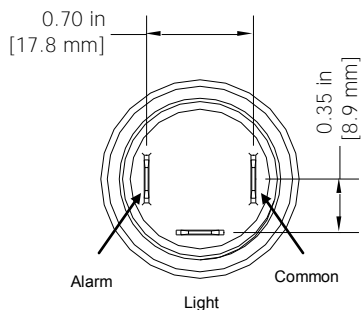
**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Whoop Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

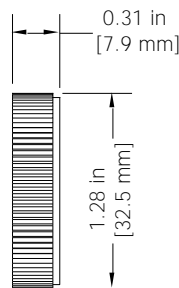


## DIMENSIONS

BACK



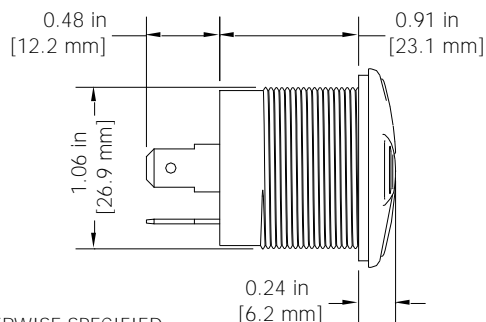
RING



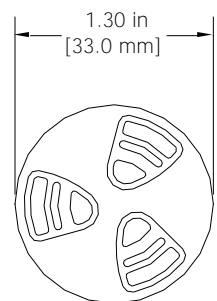
GASKET



SIDE



FRONT



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# TUHO-88R-930-Q

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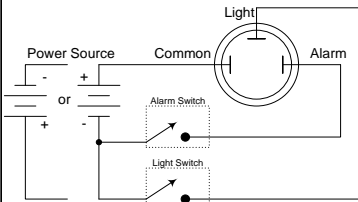
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

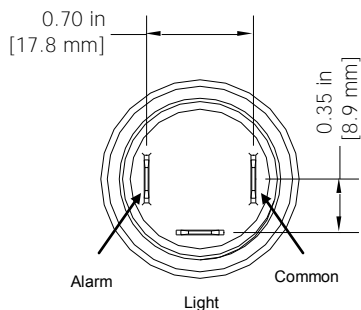
**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Whoop Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second,  
 1±25% Cycles per second, 50% Duty cycle  
**Light Flash Rate:** 125 mA at 9 Vdc  
**Typical Operating Current:** 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

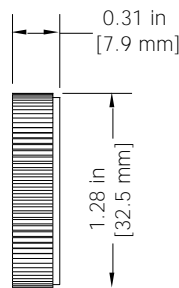


## DIMENSIONS

BACK



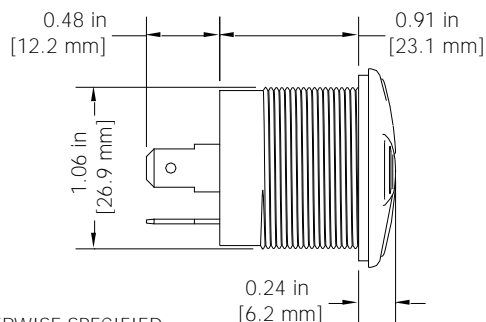
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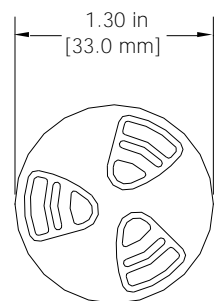
GASKET



SIDE



FRONT



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# TUHS-88W-930-Q

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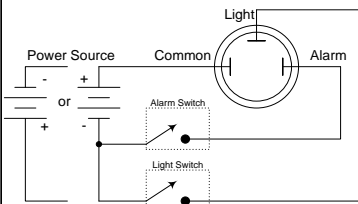
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

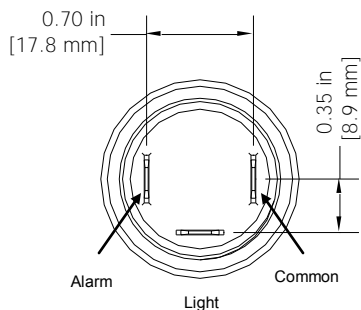
**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Whoop Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

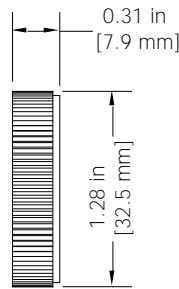


## DIMENSIONS

BACK



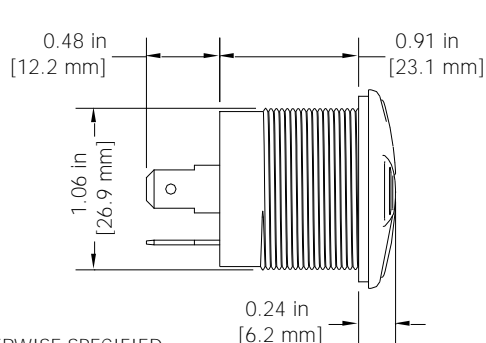
RING



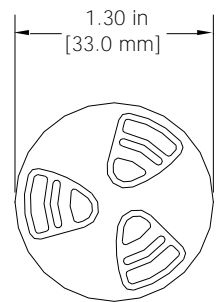
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHO-88Y-930-Q

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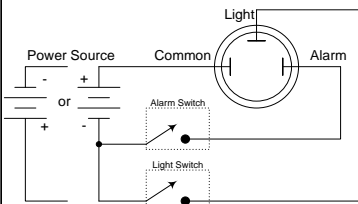
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

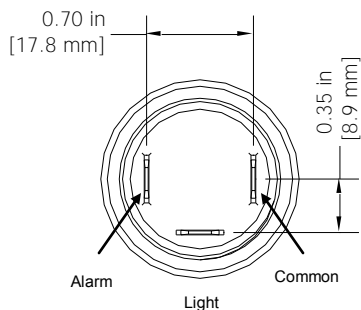
**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250Hz. Whoop Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
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**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

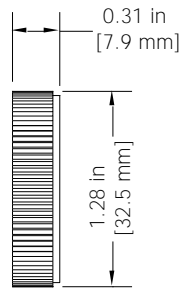


## DIMENSIONS

BACK



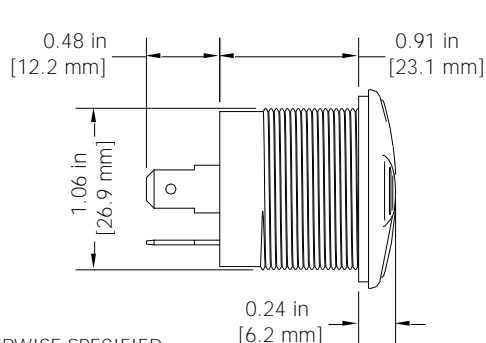
RING



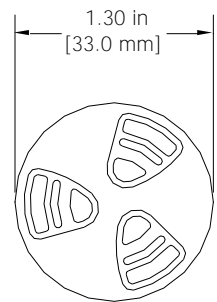
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHO-V88R-930-Q

Made in  
USA



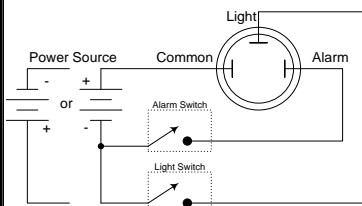
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit). The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Whoop Tone.  
**Tone Pulse Rate:** 2±25% Cycles per second,  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

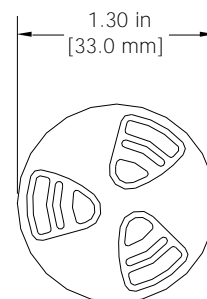
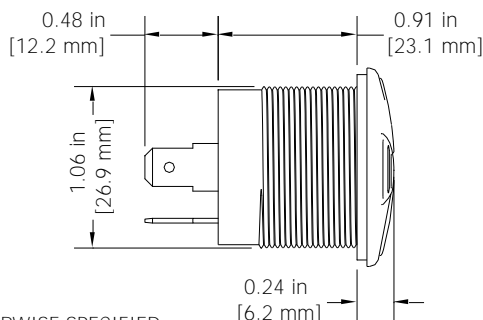
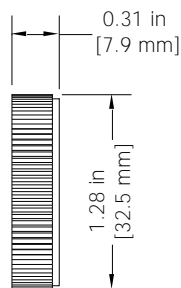
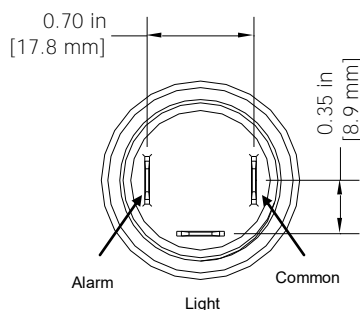
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHS-88B-930-Q

Made in  
USA



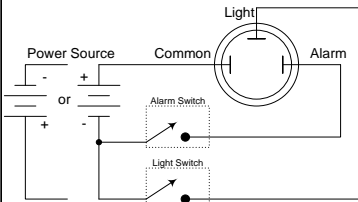
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

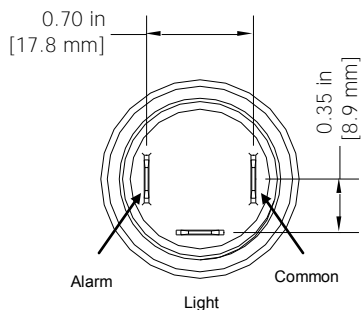
**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Siren Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

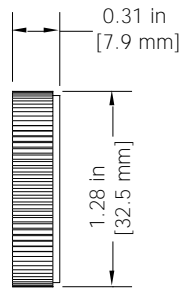


## DIMENSIONS

BACK



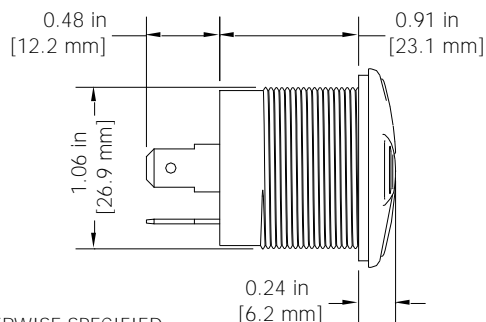
RING



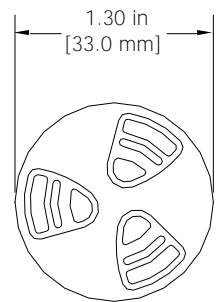
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHS-88G-930-Q

Made in  
USA



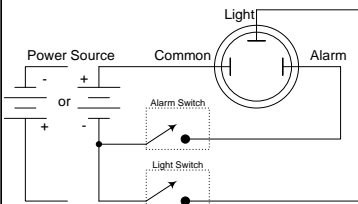
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

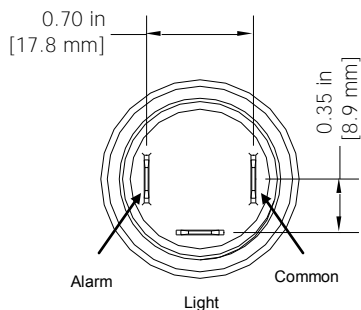
**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Siren Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

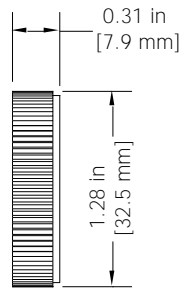


## DIMENSIONS

BACK



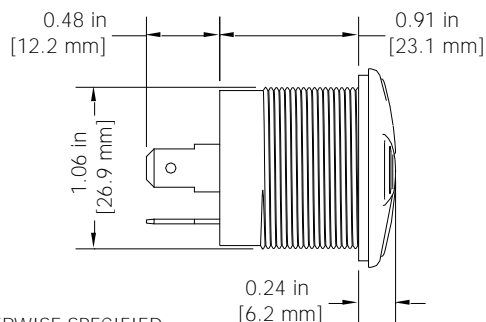
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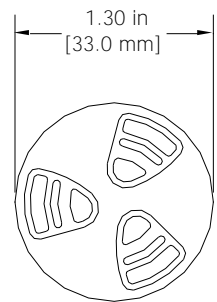
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHS-88R-930-Q

Made in  
USA



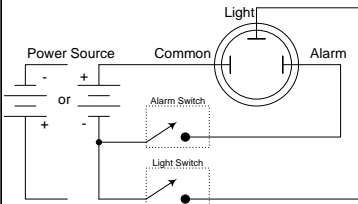
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

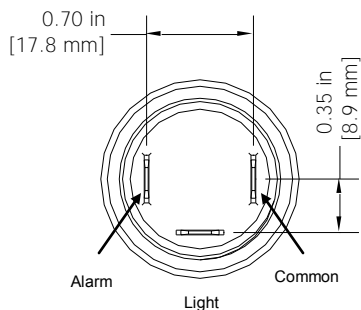
**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Siren Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

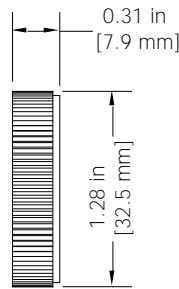


## DIMENSIONS

BACK



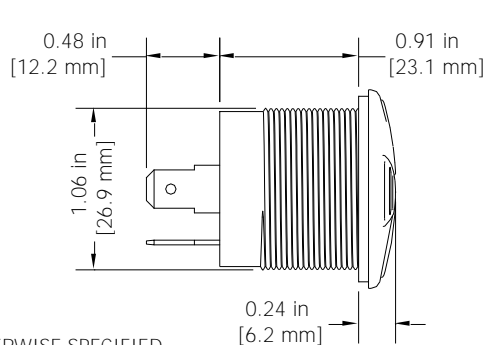
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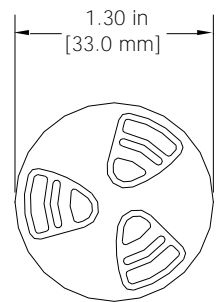
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHS-88W-930-Q

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USA



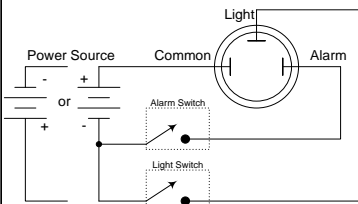
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

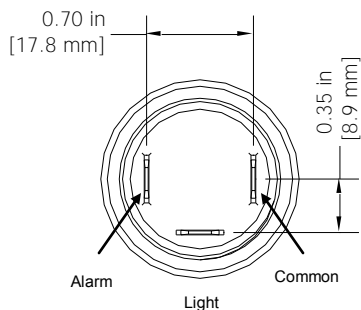
**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Siren Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

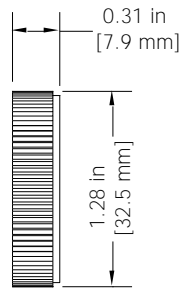


## DIMENSIONS

BACK



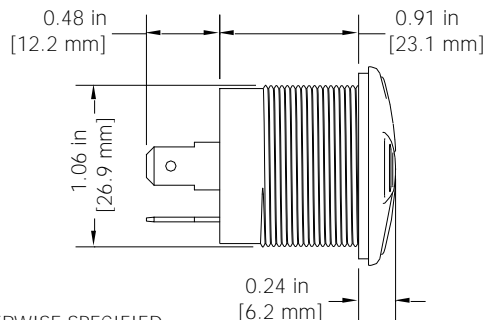
RING



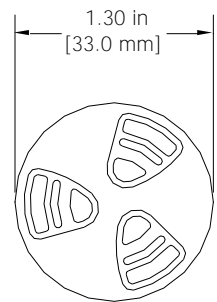
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHS-88Y-930-Q

Made in  
USA



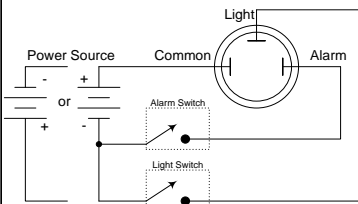
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

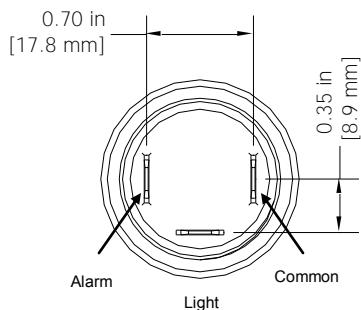
**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250Hz. Siren Tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

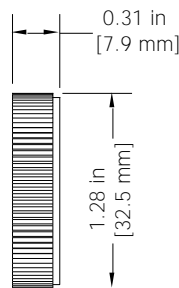


## DIMENSIONS

BACK



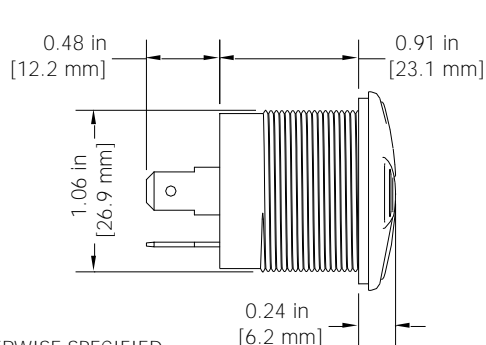
RING



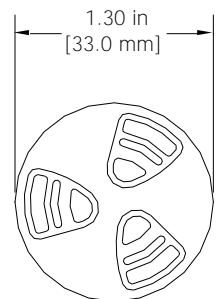
GASKET



SIDE



FRONT



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Revision: 4.14

# TUHT-88B-930-Q

Made in  
USA



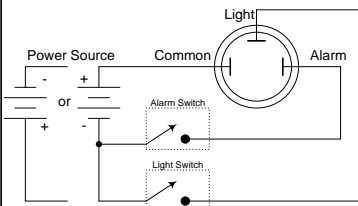
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

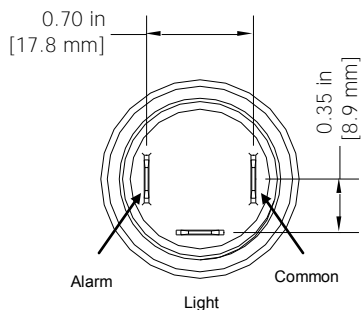
**Operating Mode:** Extra Bright LED Plus Extra Loud StaccatoTone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Staccato Tone.  
**Tone Pulse Rate:** 8±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 8±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

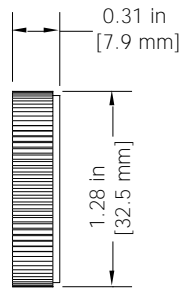


## DIMENSIONS

BACK



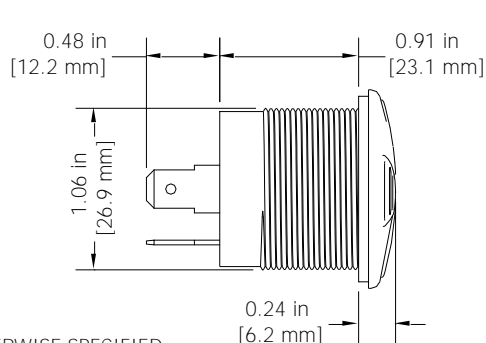
RING



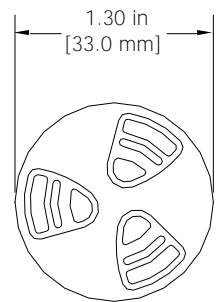
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHT-88G-930-Q

Made in  
USA



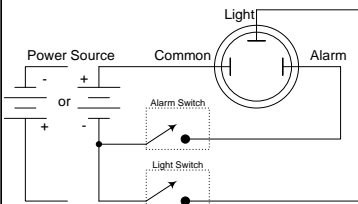
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

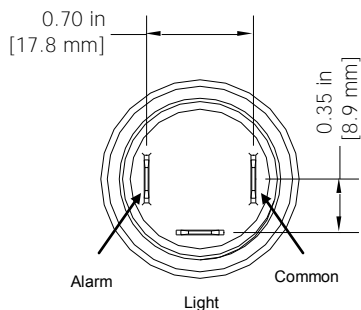
**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Staccato Tone.  
**Tone Pulse Rate:** 8±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 8±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

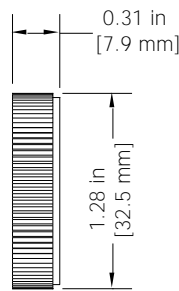


## DIMENSIONS

BACK



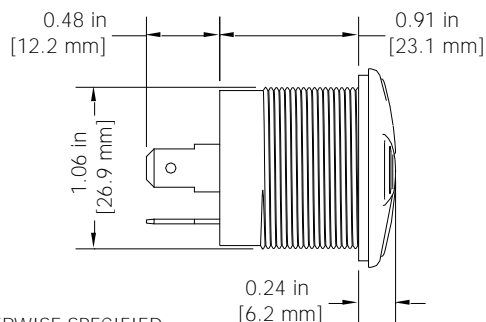
RING



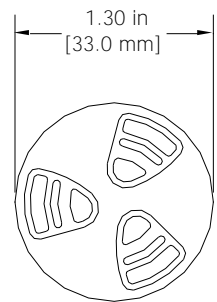
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHT-88R-930-Q

Made in  
USA



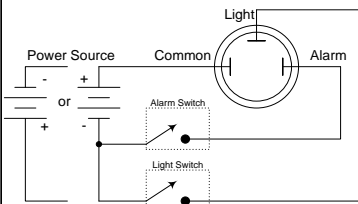
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

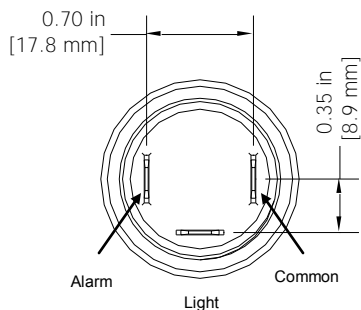
**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Staccato Tone.  
**Tone Pulse Rate:** 8±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 8±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

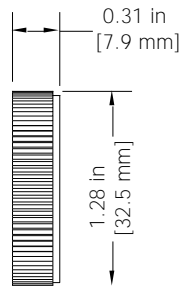


## DIMENSIONS

BACK



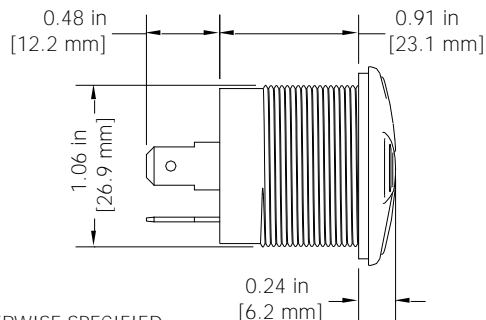
RING



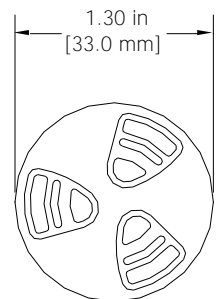
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHT-88W-930-Q

Made in  
USA



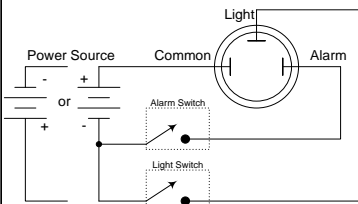
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz. Staccato Tone.  
**Tone Pulse Rate:** 8±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 8±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

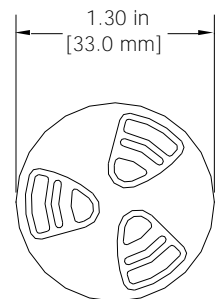
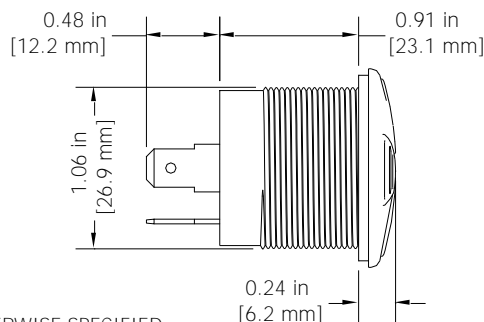
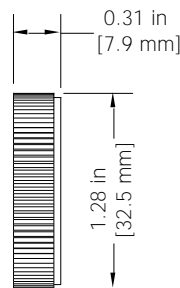
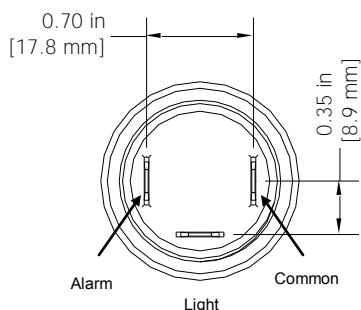
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHT-88Y-930-Q

Made in  
USA



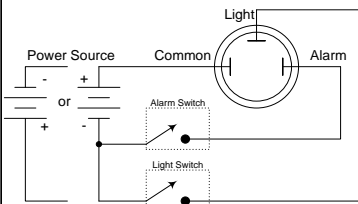
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

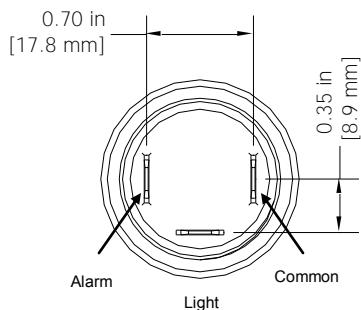
**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250Hz. Staccato Tone.  
**Tone Pulse Rate:** 8±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 8±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

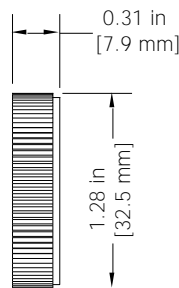


## DIMENSIONS

BACK



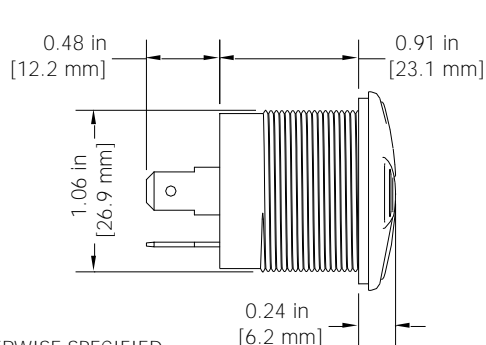
RING



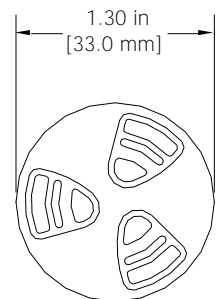
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHW-88B-930-Q(F)

Made in  
USA



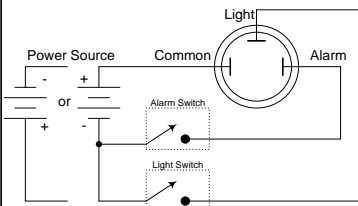
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

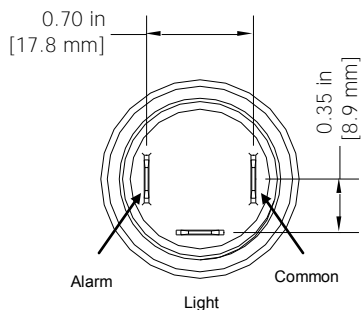
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 10±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 10±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

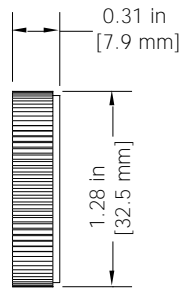


## DIMENSIONS

BACK



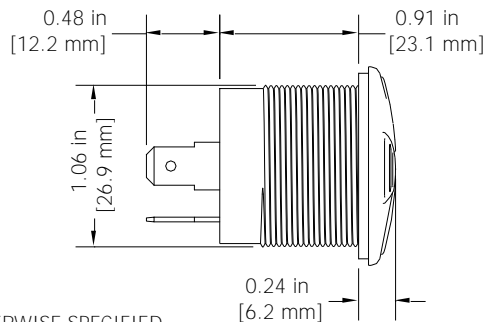
RING



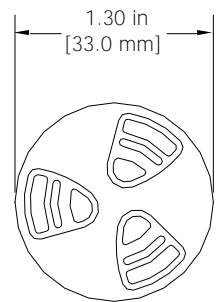
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHW-88B-930-Q(M)

Made in  
USA



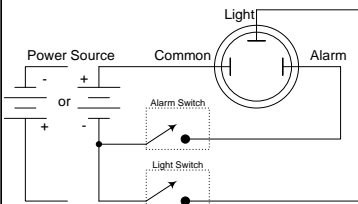
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

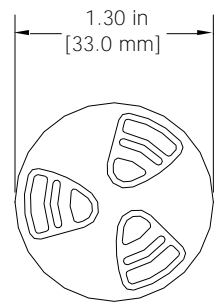
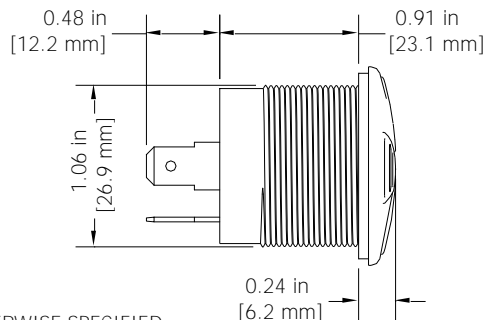
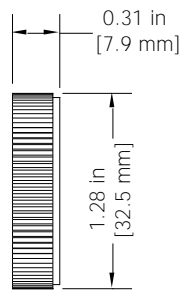
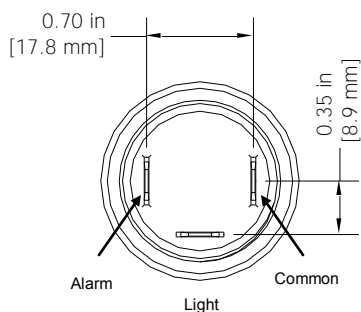
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

**Floyd Bell Inc**  
An ISO 9001:2000 Registered Company

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Revision: 4.14

# TUHW-88B-930-Q(S)

Made in  
USA



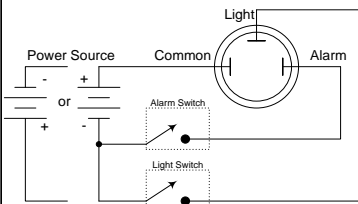
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

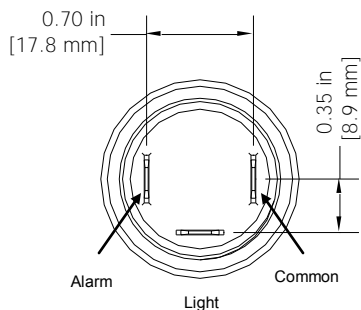
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Blue  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

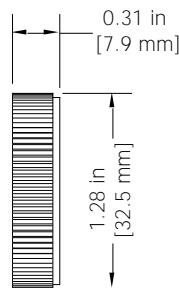


## DIMENSIONS

BACK



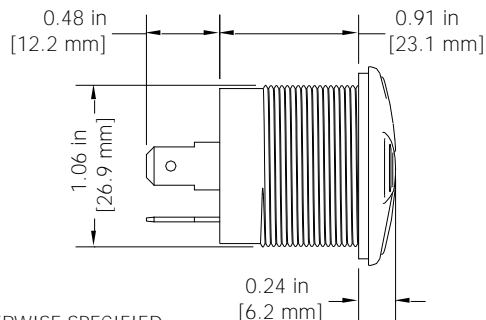
RING



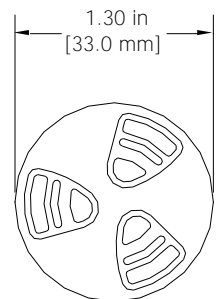
GASKET



SIDE



FRONT



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Revision: 4.14



# TUHW-88G-930-Q(F)

Made in  
USA



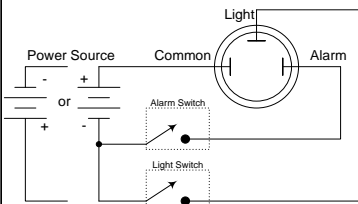
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

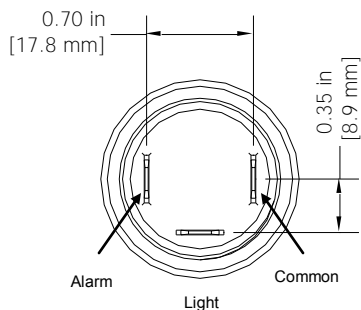
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 10±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 10±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

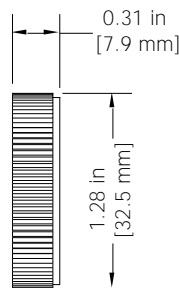


## DIMENSIONS

BACK



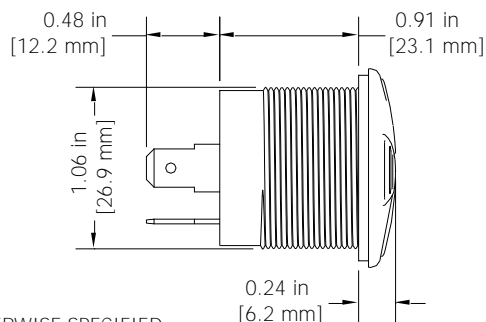
RING



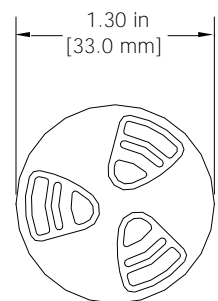
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHW-88G-930-Q(M)

Made in  
USA



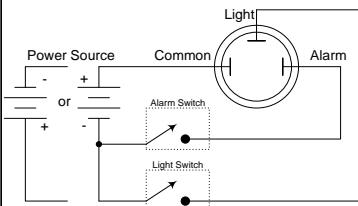
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

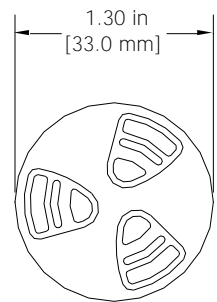
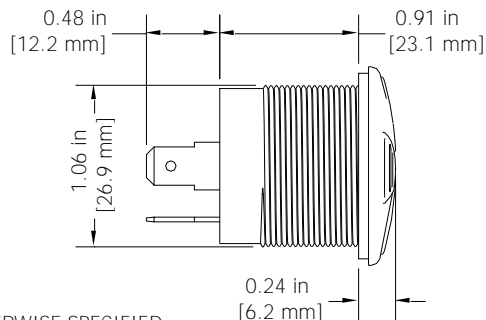
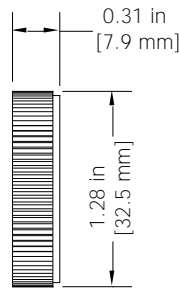
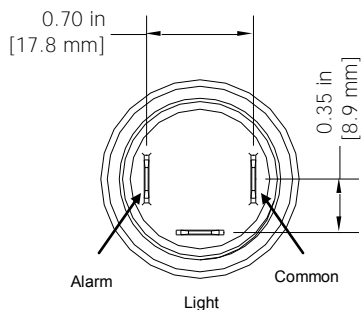
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14

# TUHW-88G-930-Q(S)

Made in  
USA



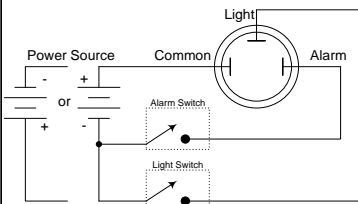
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

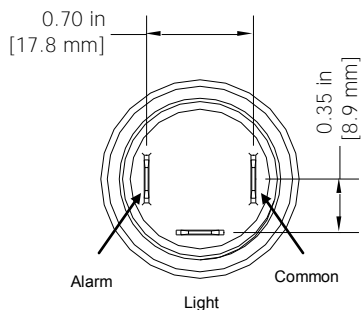
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Green  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

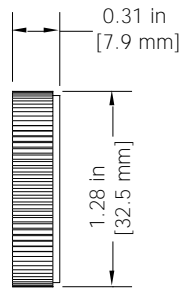


## DIMENSIONS

BACK



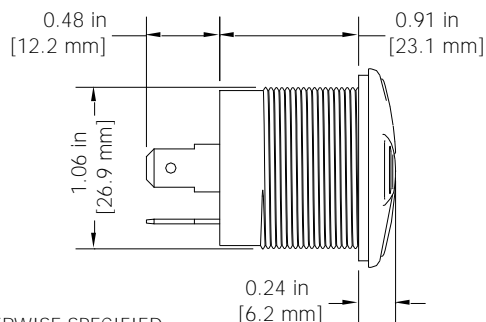
RING



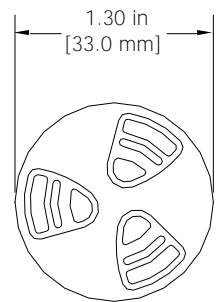
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHW-88R-930-Q(F)

Made in  
USA



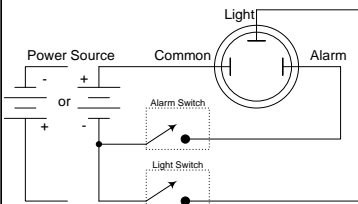
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

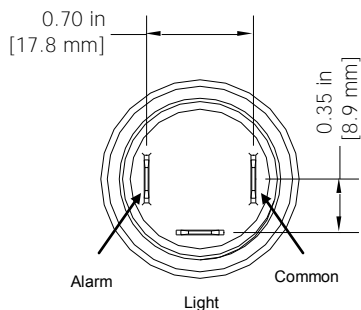
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 10±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 10±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

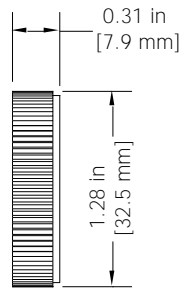


## DIMENSIONS

BACK



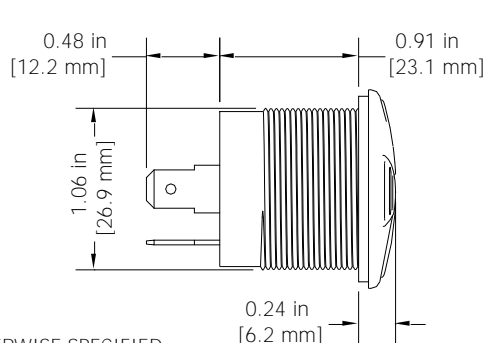
RING



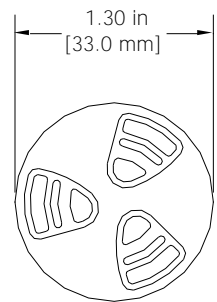
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 4.14



# TUHW-88R-930-Q(M)

Made in  
USA



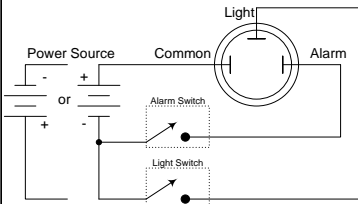
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

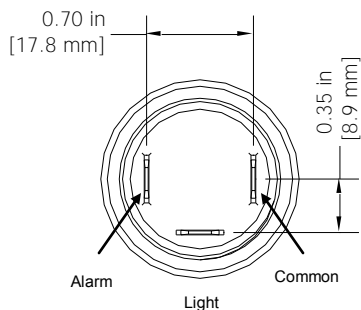
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

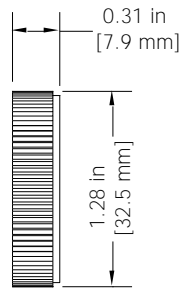


## DIMENSIONS

BACK



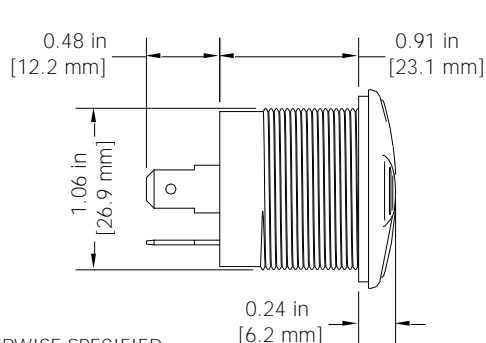
RING



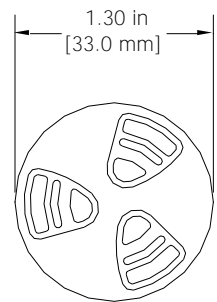
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHW-88R-930-Q(S)

Made in  
USA



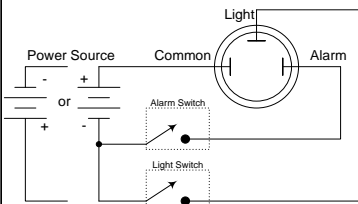
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

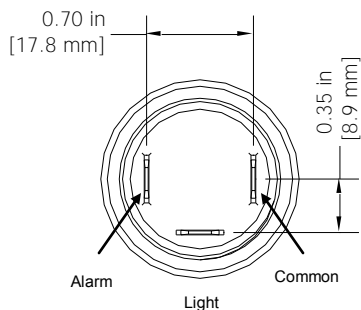
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Red  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

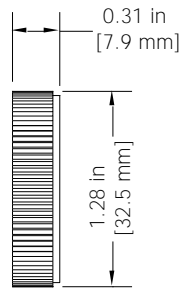


## DIMENSIONS

BACK



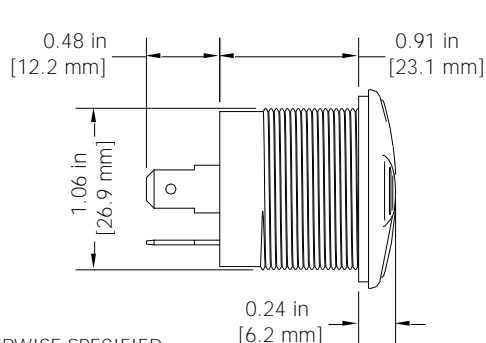
RING



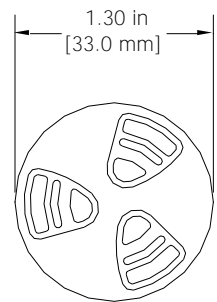
GASKET



SIDE



FRONT



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# TUHW-88W-930-Q(F)

Made in  
USA



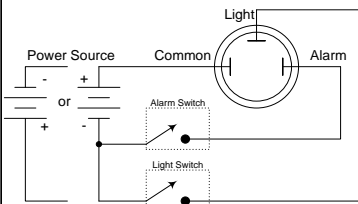
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

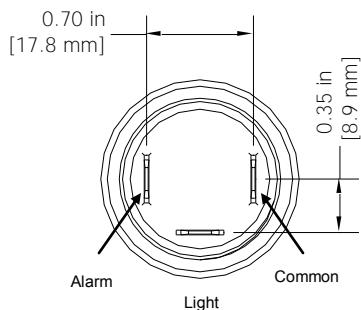
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 10±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 10±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

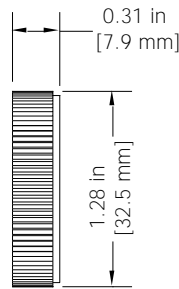


## DIMENSIONS

BACK



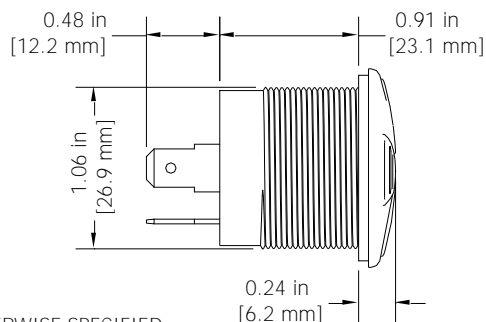
RING



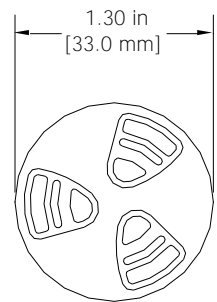
GASKET



SIDE



FRONT



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# TUHW-88W-930-Q(M)

Made in  
USA



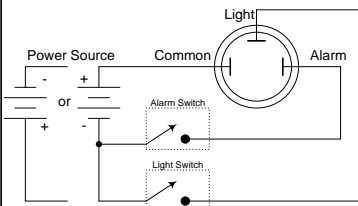
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

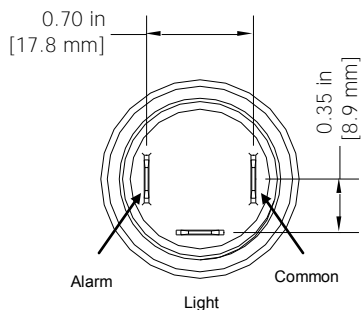
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

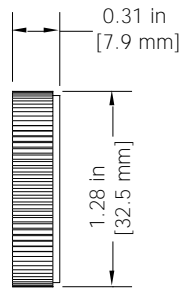


## DIMENSIONS

BACK



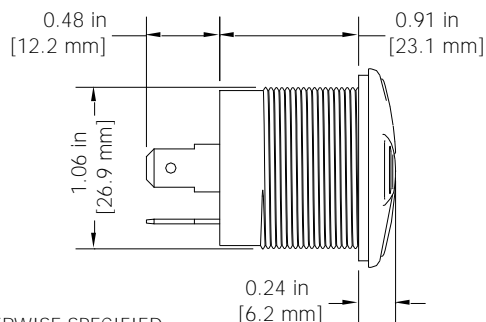
RING



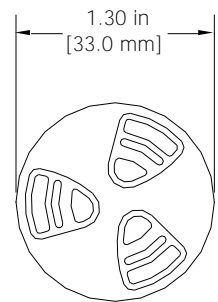
GASKET



SIDE



FRONT



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# TUHW-88W-930-Q(S)

Made in  
USA



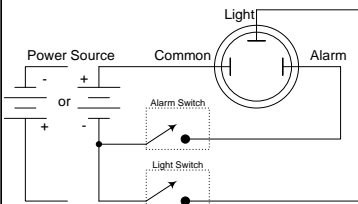
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

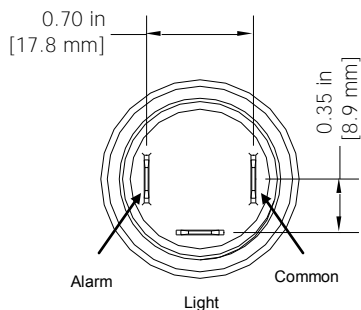
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** White  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

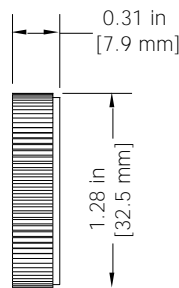


## DIMENSIONS

BACK



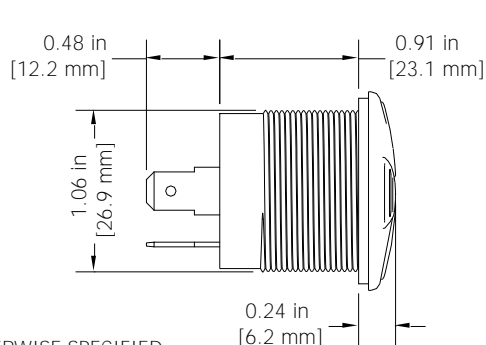
RING



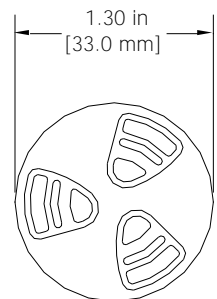
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHW-88Y-930-Q(F)

Made in  
USA



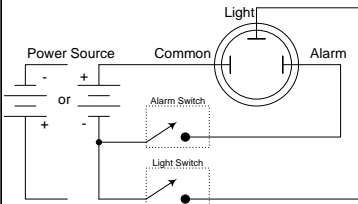
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

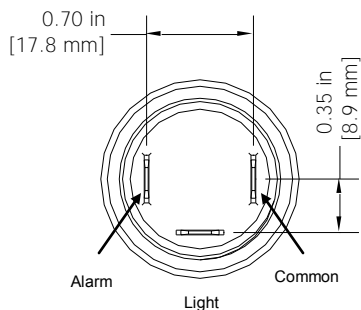
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 10±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 10±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

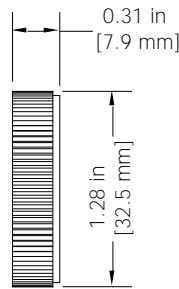


## DIMENSIONS

BACK



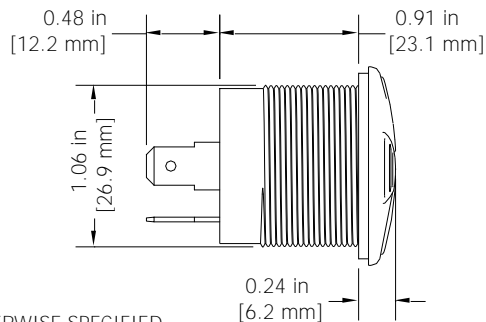
RING



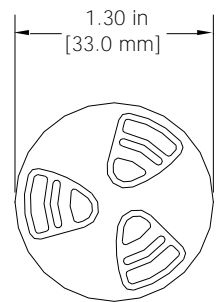
GASKET



SIDE



FRONT



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# TUHW-88Y-930-Q(M)

Made in  
USA



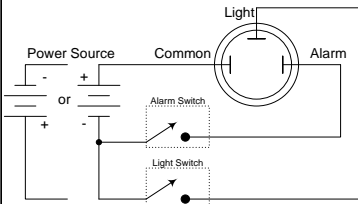
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

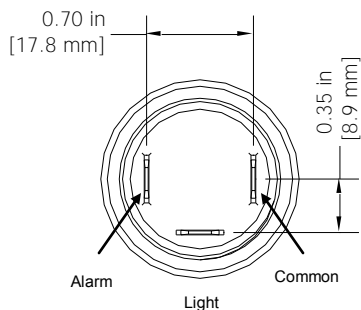
**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 3±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 3±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
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**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
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 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits

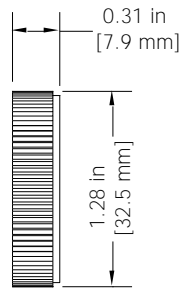


## DIMENSIONS

BACK



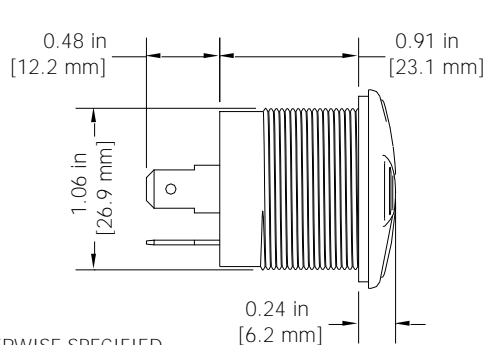
RING



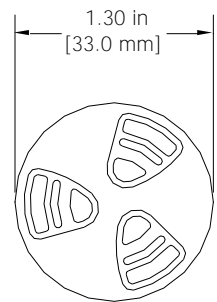
GASKET



SIDE



FRONT



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Made in  
USA



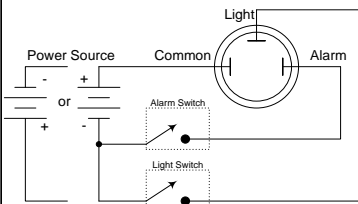
- High Intensity LED Light
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.065 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-electric alert that can also emit a bright red light when activated, effectively combining independent operation of Floyd Bell's popular Turbo™ Alarms with their Turbo Light™ Panel Indicators in one convenient multi-sensory alarm device. The required control inputs for the Twin Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit)

## SPECIFICATIONS

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone  
**Color:** Yellow  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Tone Frequency:** 3000±250 Hz, high tone and 2600±250Hz low tone.  
**Tone Pulse Rate:** 1±25% Cycles per second, Beep Tone  
**Light Flash Rate:** 1±25% Cycles per second, 50% Duty cycle  
**Typical Operating Current:** 125 mA at 9 Vdc  
 65mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Three Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Independent Control Inputs:** Control inputs for light and alarm are universal polarity. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

Application Circuits



## DIMENSIONS

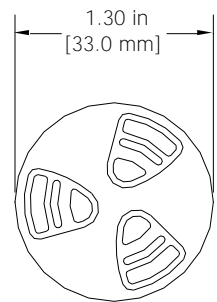
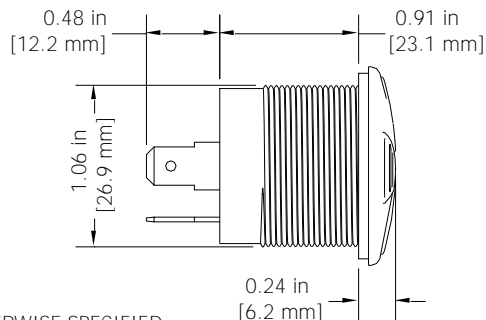
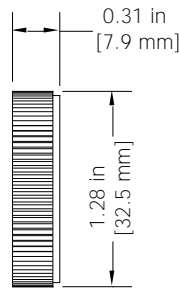
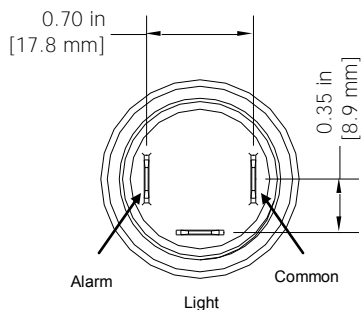
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 4.14

# TXB-86-515-P(F)

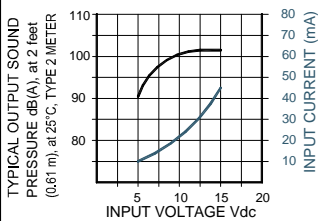


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USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



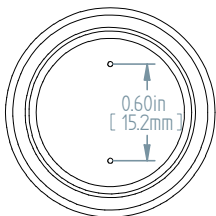
The Turbo TXB-86-515-P(F) is an extra loud output, panel or circuit board mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

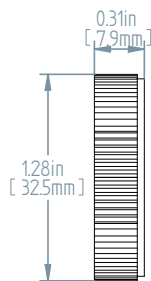
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

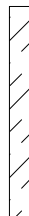
REAR



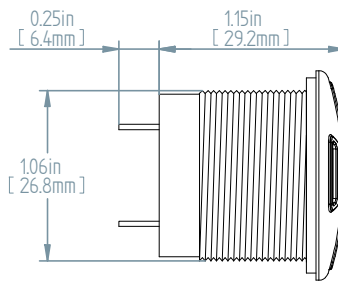
RING



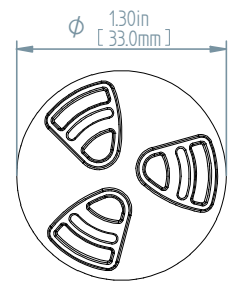
GASKET



SIDE



FRONT



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Revision: 9.09

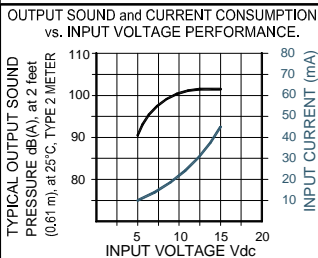
# TXB-86-515-P(S)



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USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

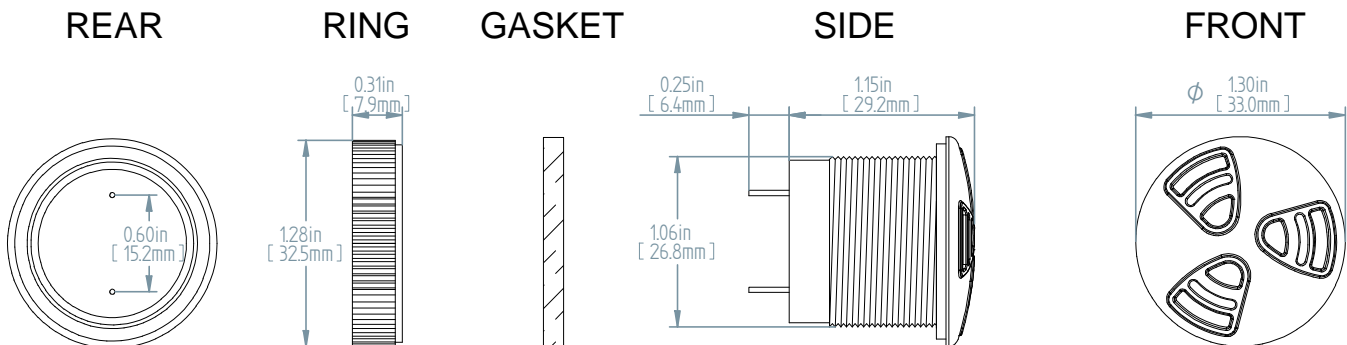


The Turbo TXB-86-515-P(S) is an extra loud output, panel or circuit board mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 9.09

# TXB-86-515-Q(F)



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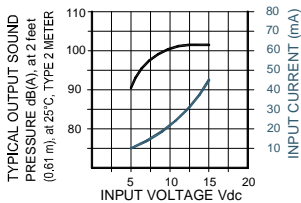
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-86-515-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
	3±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc
	50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C
	103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

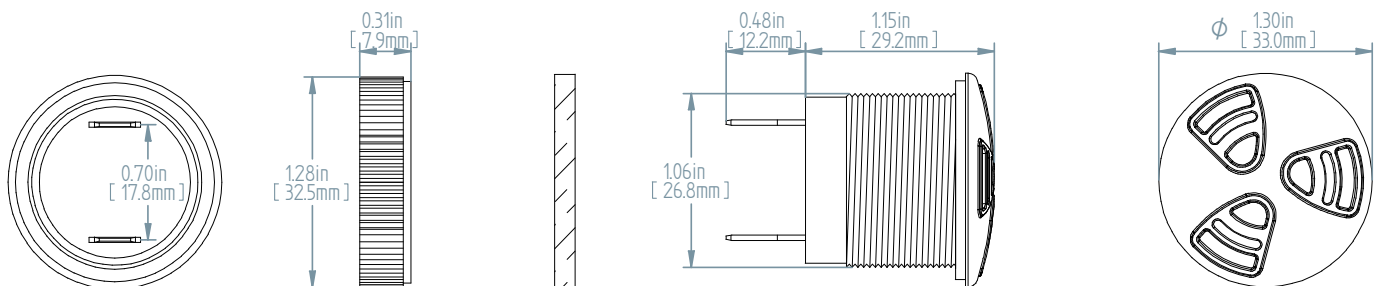
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09



# TXB-86-515-Q(S)



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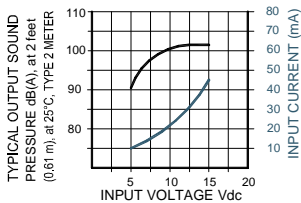
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-86-515-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

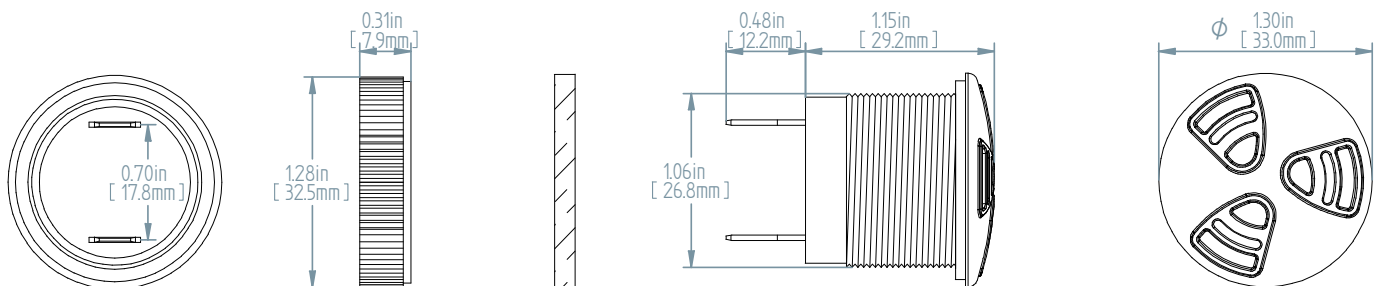
REAR

RING

GASKET

SIDE

FRONT



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# TXB-86-515-S(F)

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USA



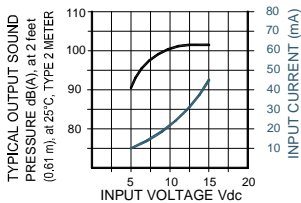
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-86-515-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

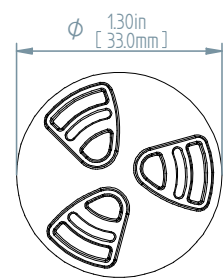
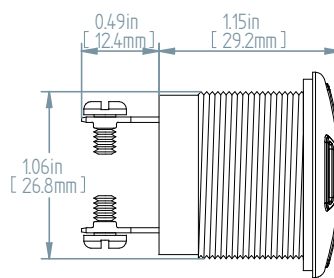
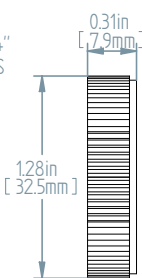
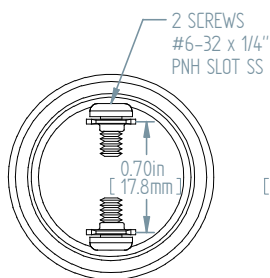
REAR

RING

GASKET

SIDE

FRONT



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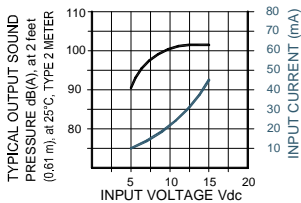
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The Turbo TXB-86-515-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
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<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
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<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

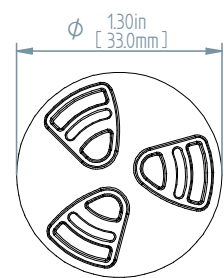
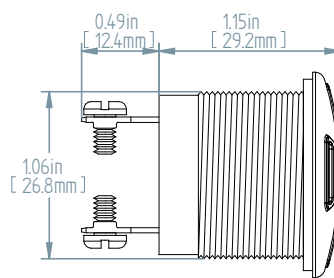
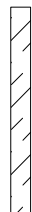
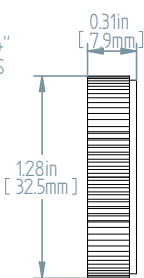
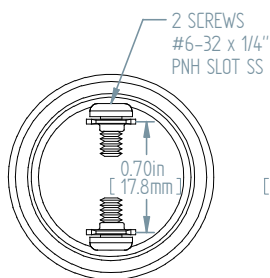
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

**Floyd Bell Inc**  
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720 Dearborn Park Lane • Columbus, OH 43085  
Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
www.floydbell.com

Revision: 9.09

# TXB-86-515-W(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

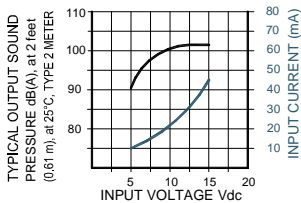
The Turbo TXB-86-515-W(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

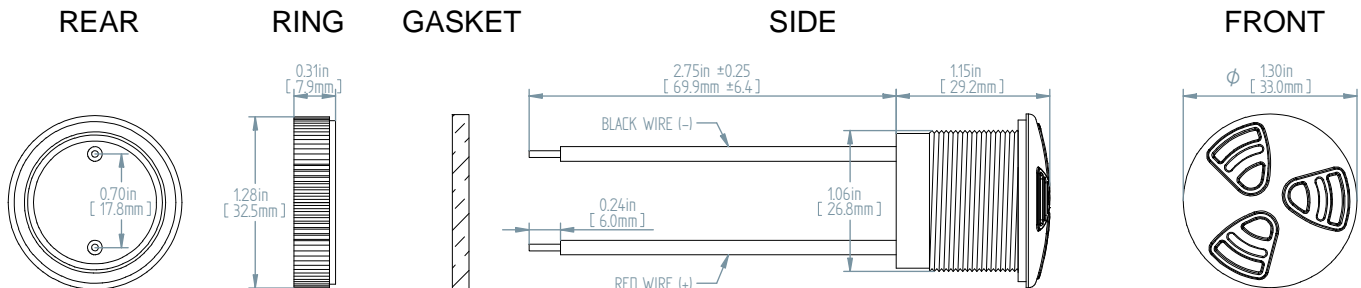
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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**Revision: 9.09**

# TXB-86-515-W(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

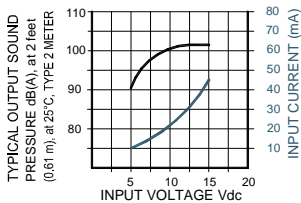
The Turbo TXB-86-515-W(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

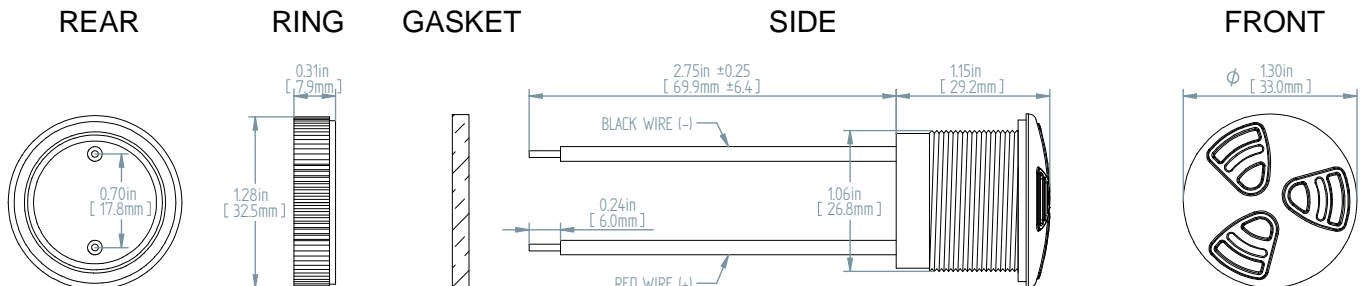
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09



# TXB-86-530-Q(F)



**Made in  
USA**

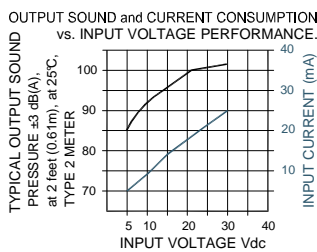


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-86-530-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

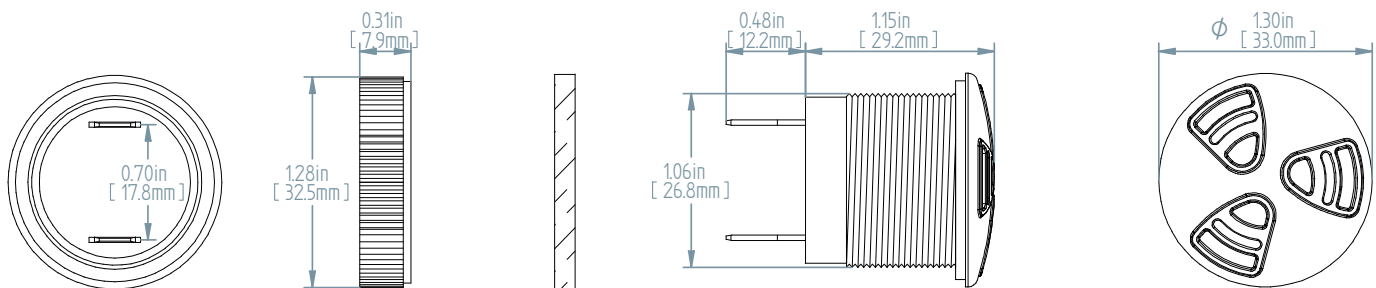
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09

# TXB-86-530-Q(S)



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USA**

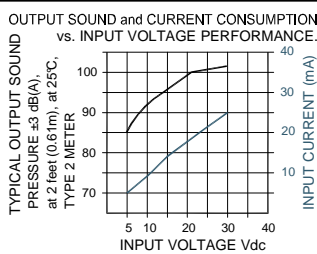


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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

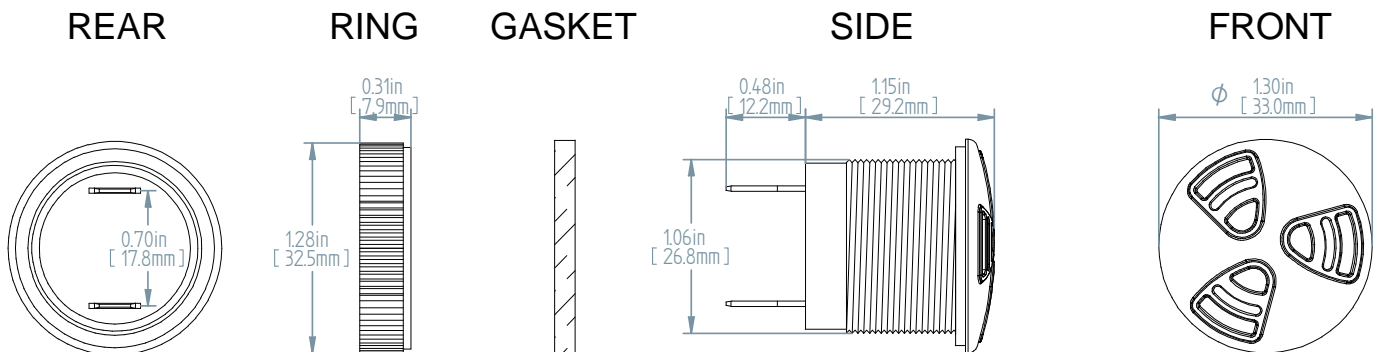
The Turbo TXB-86-530-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
	1±25% Beeps per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc
	25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C
	103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black
	Internal Circuit- Audio-oscillator and piezoelectric driver
	Potting- 2 parts epoxy resin or silicone, black
	Diaphragm- Stainless Steel 304
	NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours
	IP 68 Certified- Withstands water submergence and dust exposure
	Humidity- 95% relative humidity at +40°C continuously for 100 hours.
	Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TXB-86-530-S(F)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

The Turbo TXB-86-530-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second

**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc

**Typical Sound Pressure:** 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.

**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.

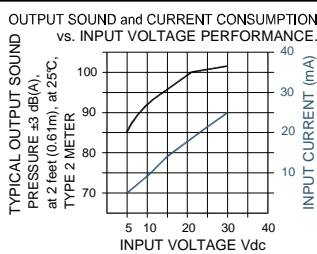
**Reverse Voltage Protection:** To the maximum operating voltage.

**Part Recognized By:** Underwriters Laboratory

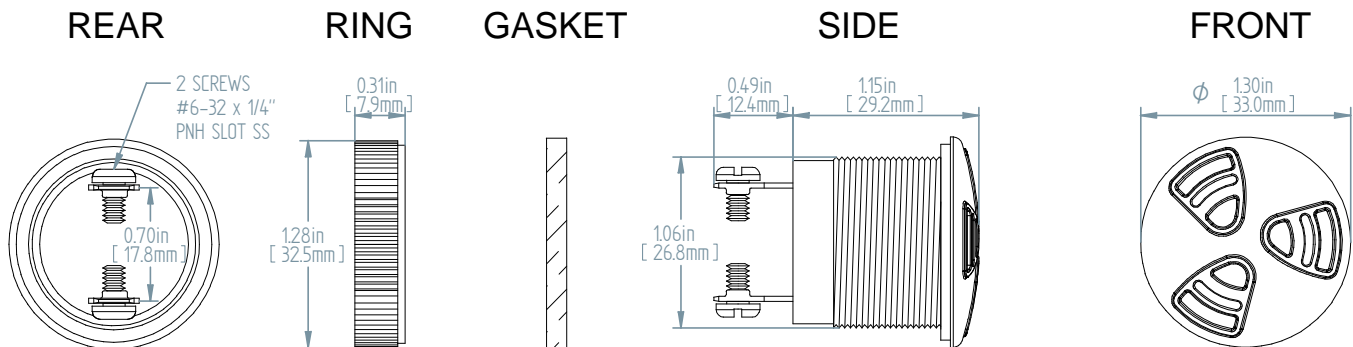
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



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# TXB-86-530-S(S)



**Made in  
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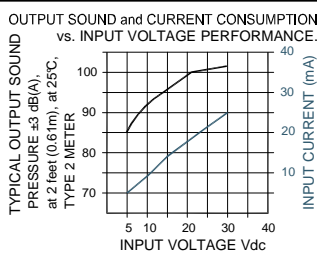


- Patent-Pending Revolutionary Turbo Design
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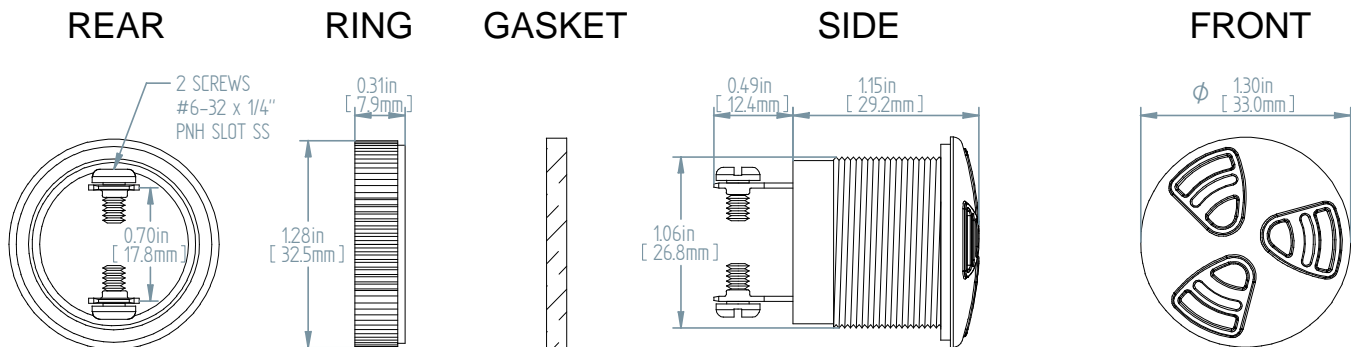
The Turbo TXB-86-530-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
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## DIMENSIONS



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Revision: 9.09

# TXB-V86-515-P(F)

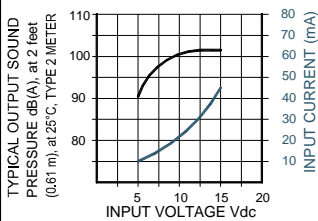


Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



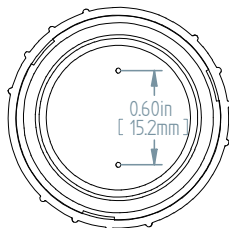
The Turbo TXB-V86-515-P(F) is an extra loud output, panel or circuit board mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

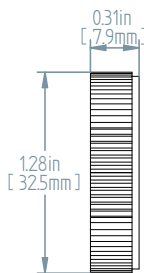
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



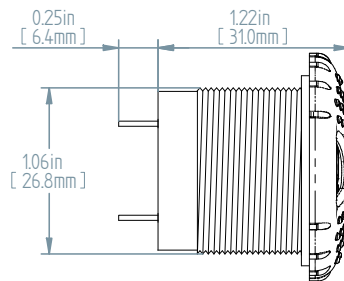
RING



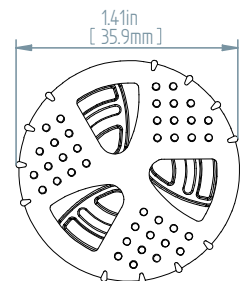
GASKET



SIDE



FRONT



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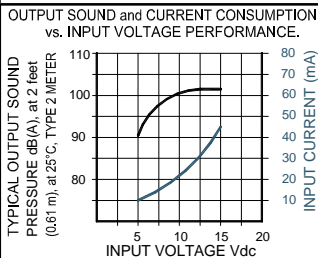
# TXB-V86-515-P(S)



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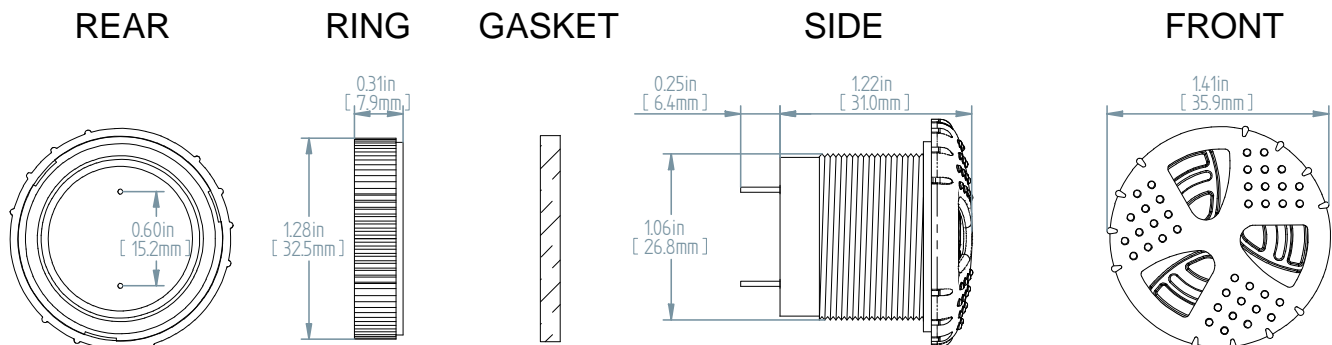


The Turbo TXB-V86-515-P(S) is an extra loud output, panel or circuit board mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
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**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
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Made in  
USA



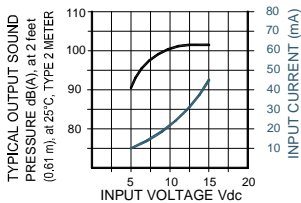
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-V86-515-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

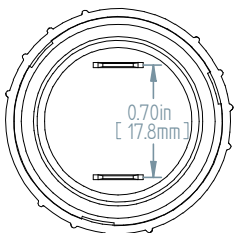
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

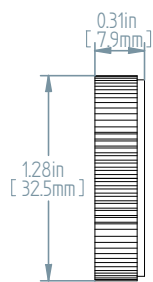


## DIMENSIONS

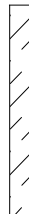
REAR



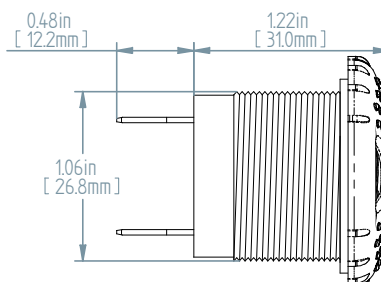
RING



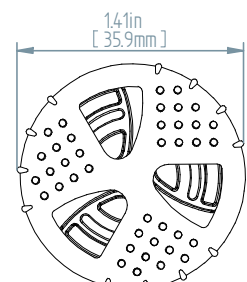
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TXB-V86-515-Q(S)



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USA**



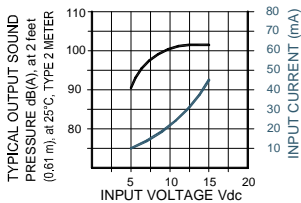
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-V86-515-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

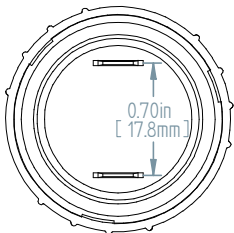
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

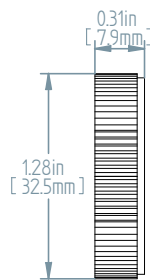


## DIMENSIONS

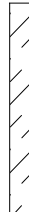
REAR



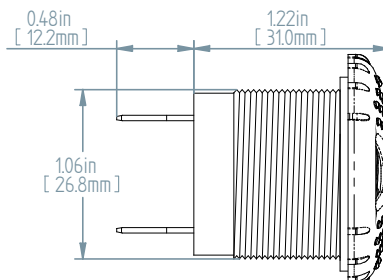
RING



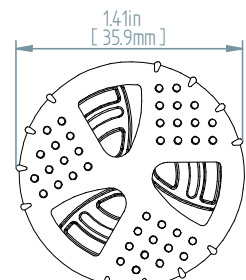
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TXB-V86-515-S(F)



**Made in  
USA**



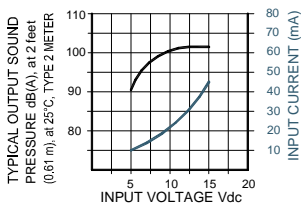
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-V86-515-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

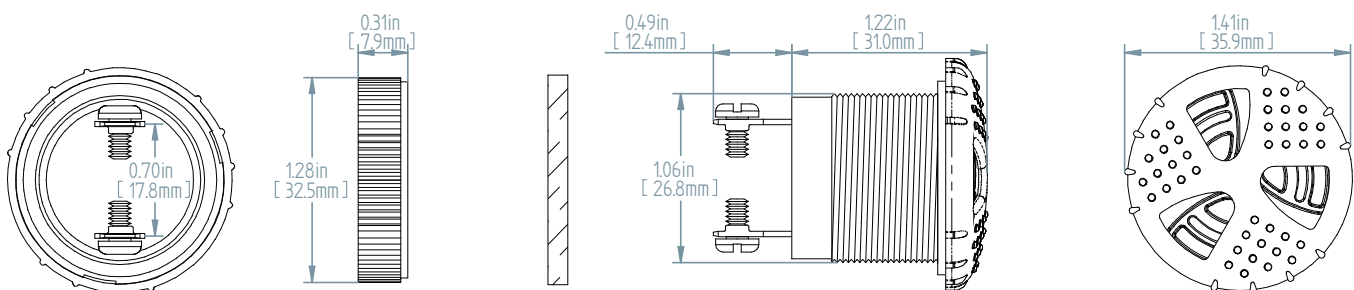
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXB-V86-515-S(S)



**Made in  
USA**



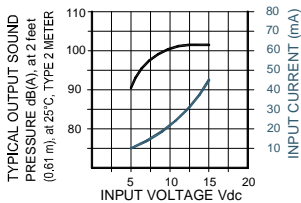
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-V86-515-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

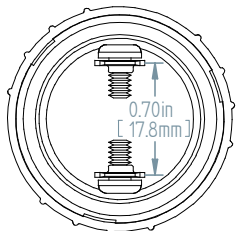
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

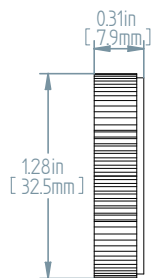


## DIMENSIONS

REAR



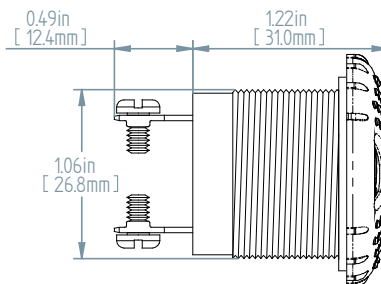
RING



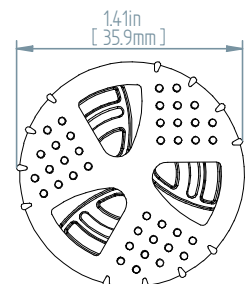
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09



# TXB-V86-515-W(F)



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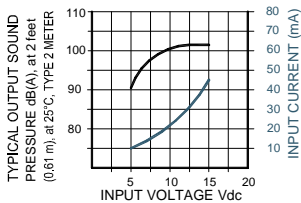
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXB-V86-515-W(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

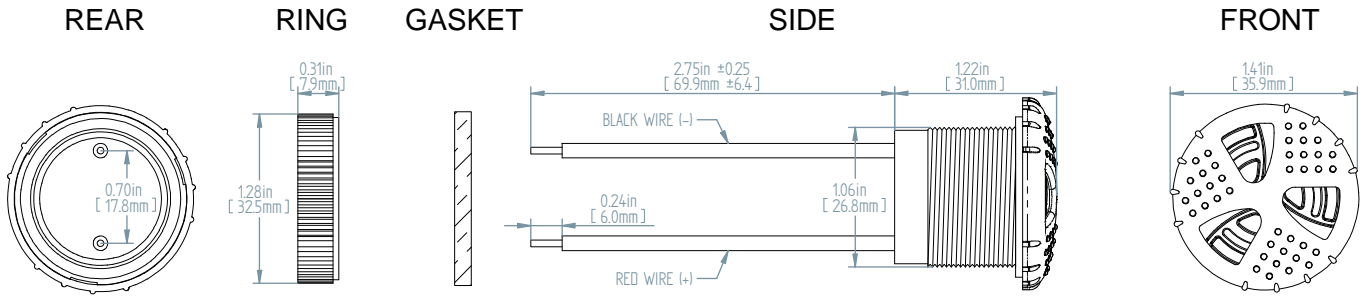
## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09

# TXB-V86-515-W(S)



**Made in  
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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

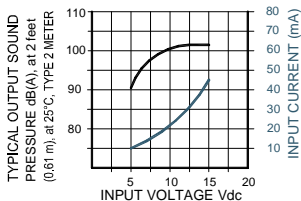
The Turbo TXB-V86-515-W(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

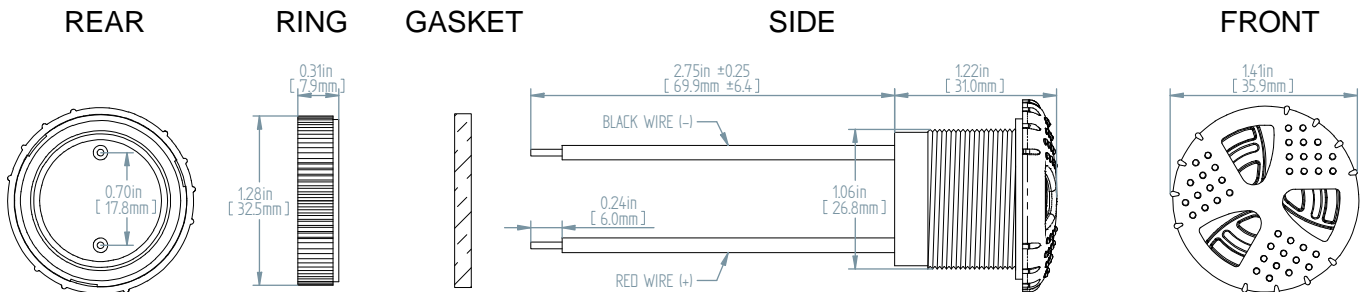
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09

# TXB-V86-530-Q(F)



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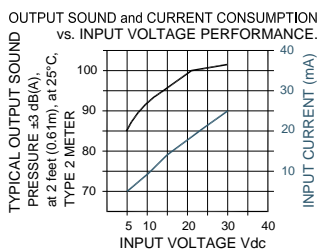


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- Reliable Piezoelectric Technology

The Turbo TXB-V86-530-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

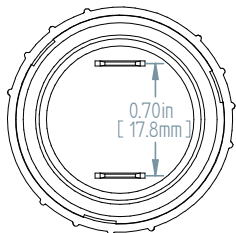
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

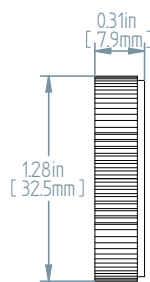


## DIMENSIONS

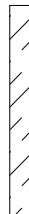
REAR



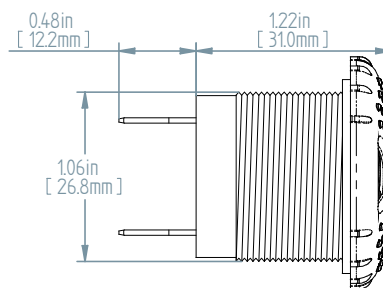
RING



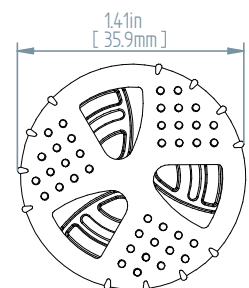
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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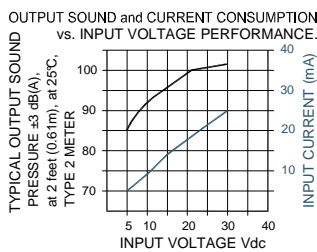
# TXB-V86-530-Q(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



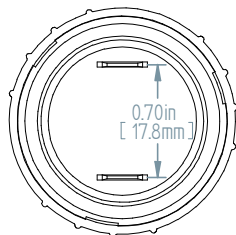
The Turbo TXB-V86-530-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

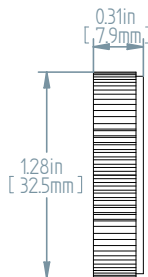
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Beeps per second  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



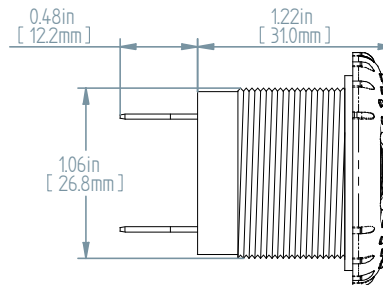
RING



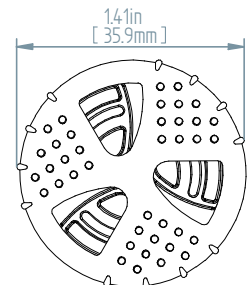
GASKET



SIDE



FRONT



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# TXB-V86-530-S(F)

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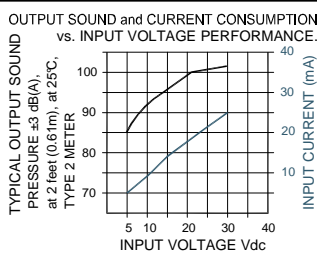


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

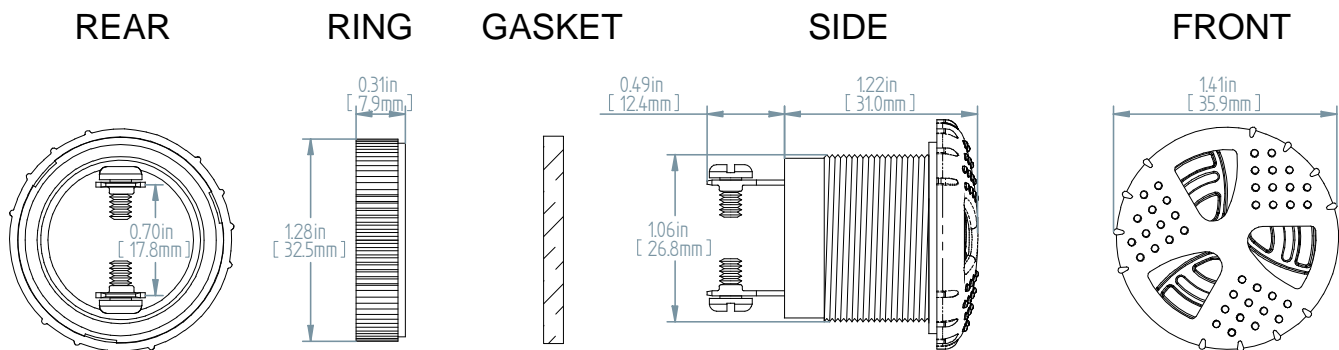
The Turbo TXB-V86-530-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TXB-V86-530-S(S)



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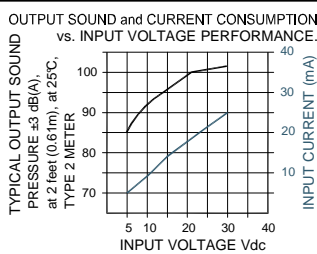


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

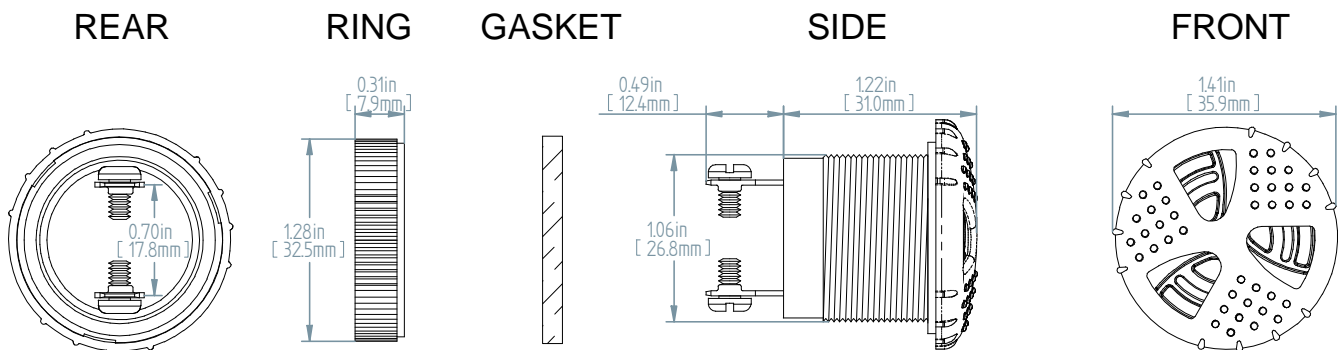
The Turbo TXB-V86-530-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TXC-86-515-P



**Made in USA**

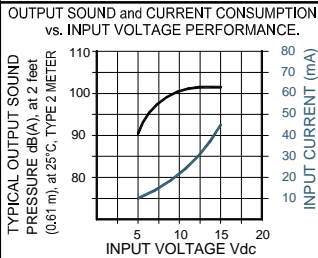


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

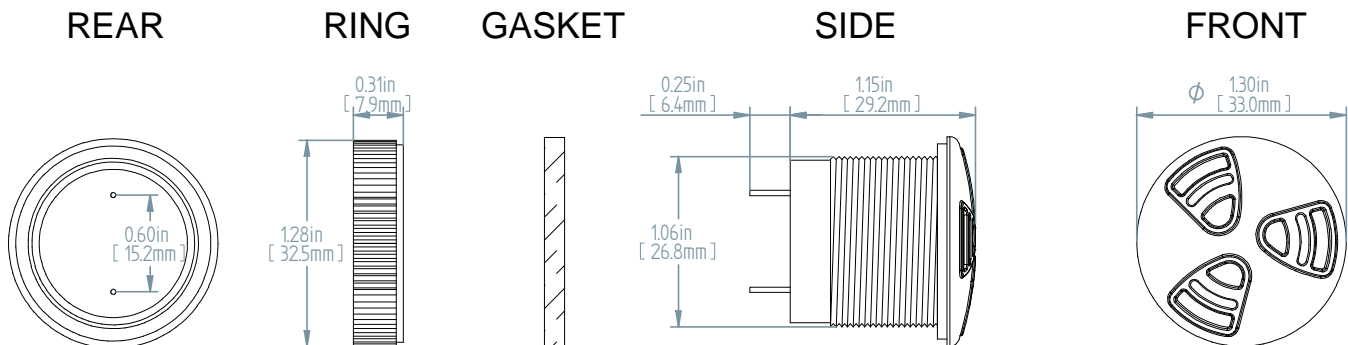
The Turbo TXC-86-515-P is an extra loud output, panel or circuit board mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TXC-86-515-Q



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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

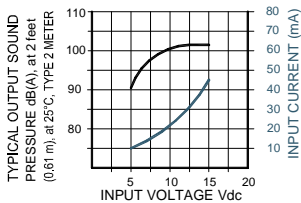
The Turbo TXC-86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

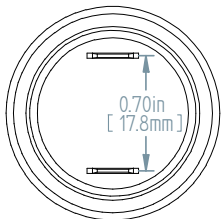
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

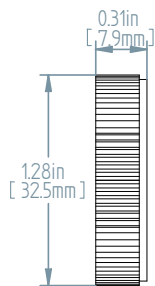


## DIMENSIONS

REAR



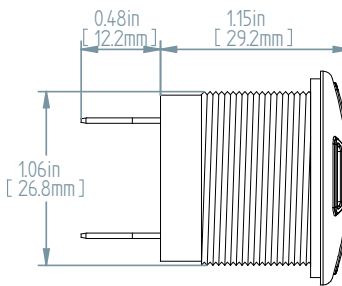
RING



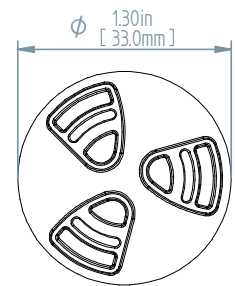
GASKET



SIDE



FRONT



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# TXC-86-515-S

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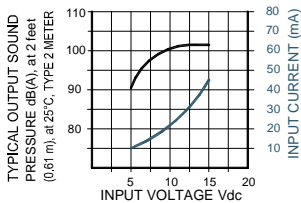
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXC-86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

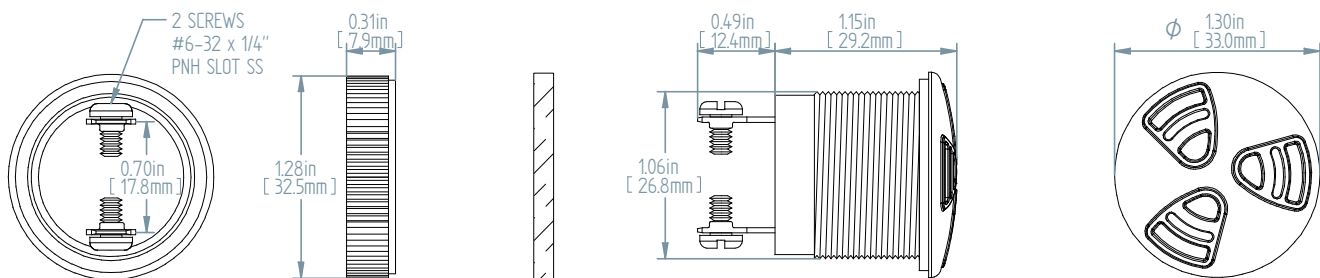
REAR

RING

GASKET

SIDE

FRONT



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# TXC-86-515-W

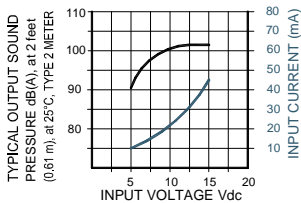


**Made in USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



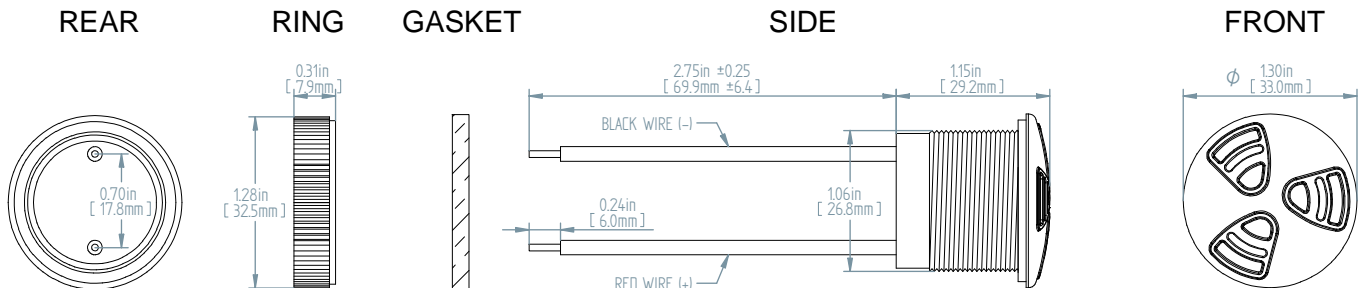
The Turbo TXC-86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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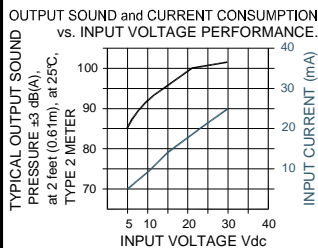
# TXC-86-530-Q



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



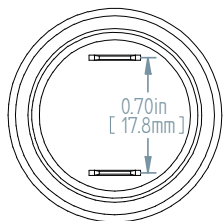
The Turbo TXC-86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

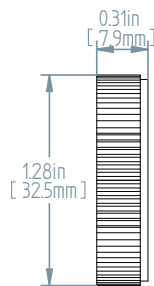
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz.
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

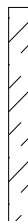
REAR



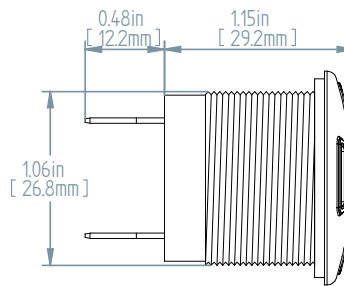
RING



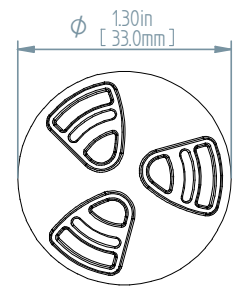
GASKET



SIDE



FRONT



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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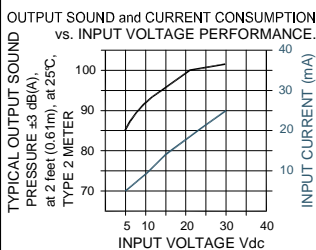
# TXC-86-530-S



**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

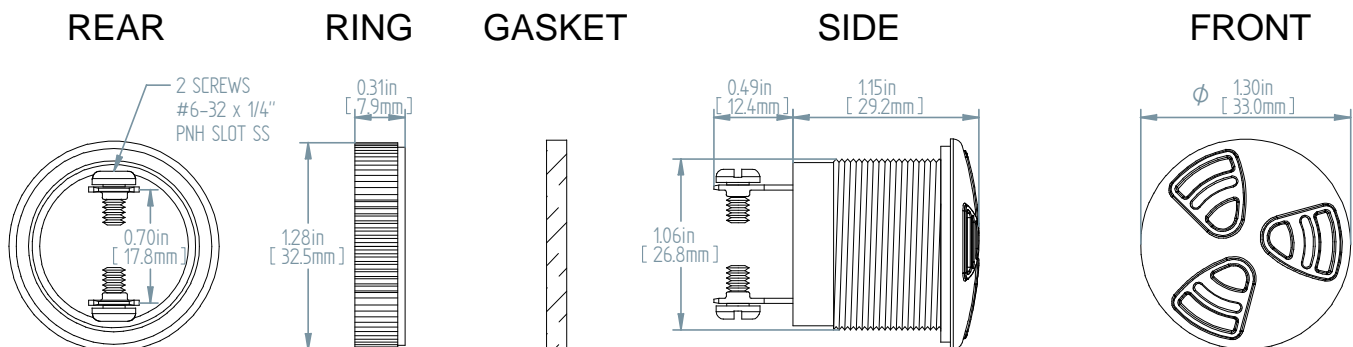


The Turbo TXC-86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	
<b>Life Expectancy:</b>	
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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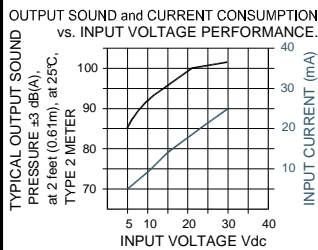
# TXC-86-530-W



Made in  
USA



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant

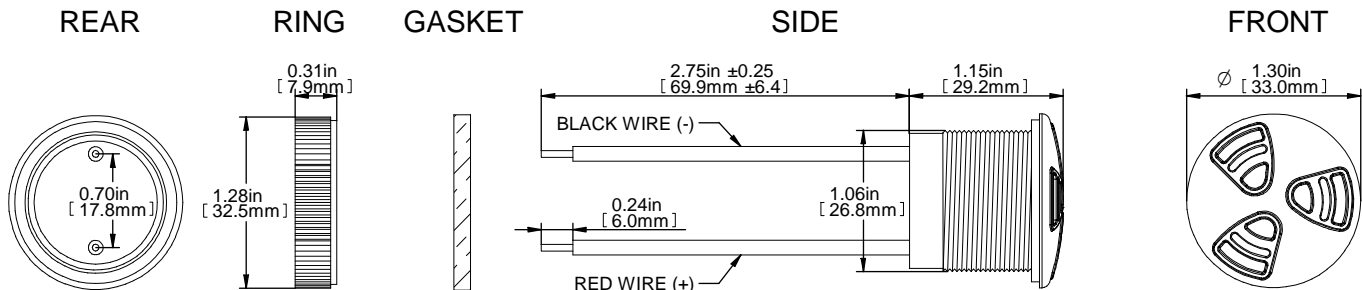


The Turbo TXC-86-530-W is an extra loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz.
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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Revision: 12.13

# TXC-V86-515-P

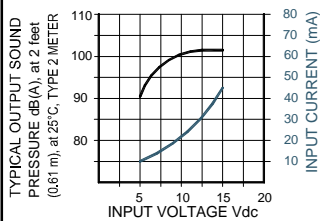


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USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



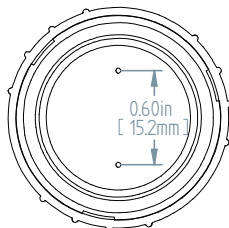
The Turbo TXC-V86-515-P is an extra loud output, panel or circuit board mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

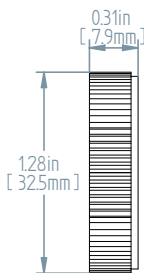
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C
<b>Storage Temperature:</b>	-40°C to +85°C
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

REAR



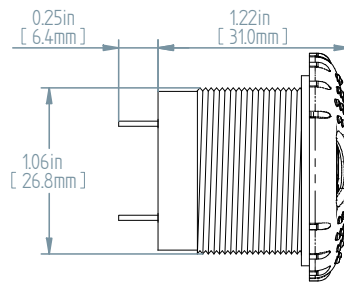
RING



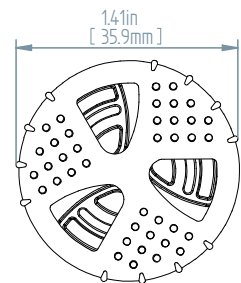
GASKET



SIDE



FRONT



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Revision: 9.09

# TXC-V86-515-Q



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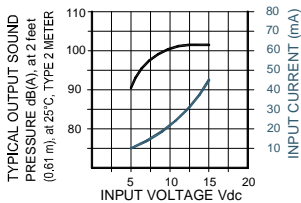
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXC-V86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

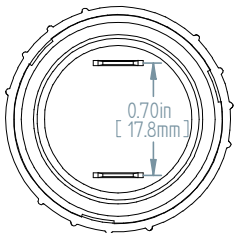
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C
<b>Storage Temperature:</b>	-40°C to +85°C
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

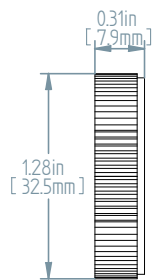


## DIMENSIONS

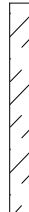
REAR



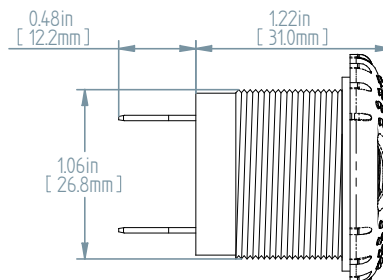
RING



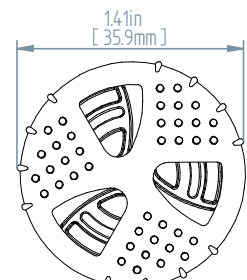
GASKET



SIDE



FRONT



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Revision: 9.09



# TXC-V86-515-S



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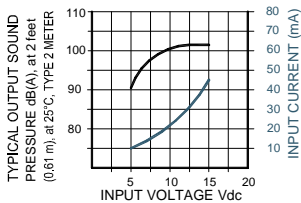
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXC-V86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

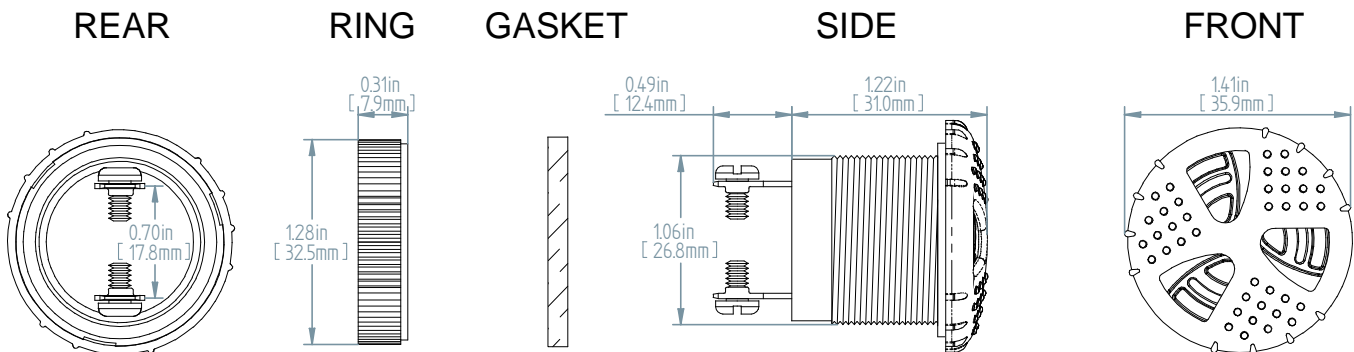
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C
<b>Storage Temperature:</b>	-40°C to +85°C
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXC-V86-515-W

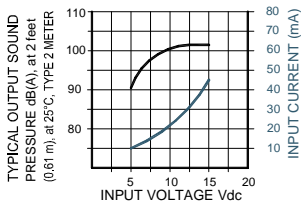


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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

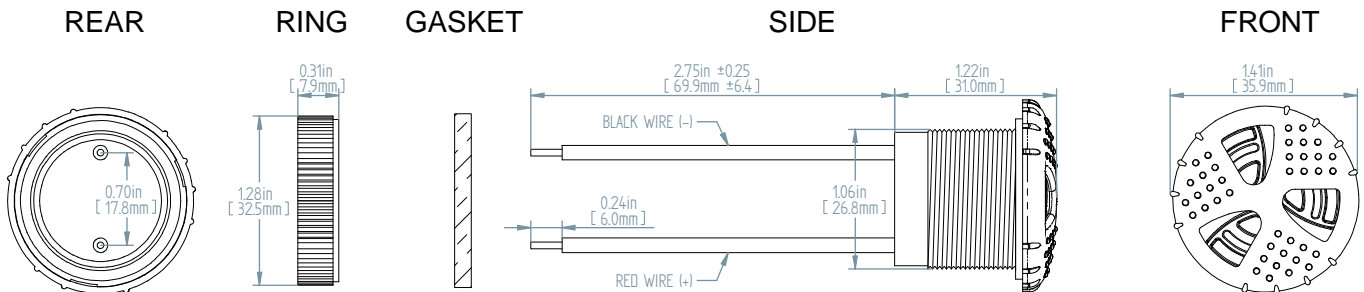


The Turbo TXC-V86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXC-V86-530-Q



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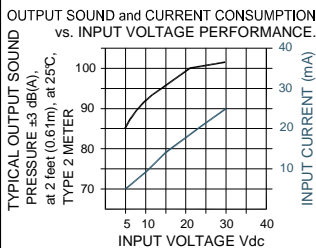


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXC-V86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

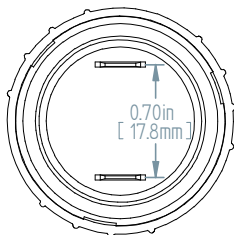
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Environmental Durability:</b>	10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

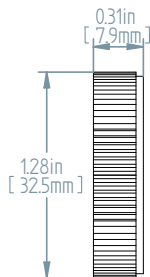


## DIMENSIONS

REAR



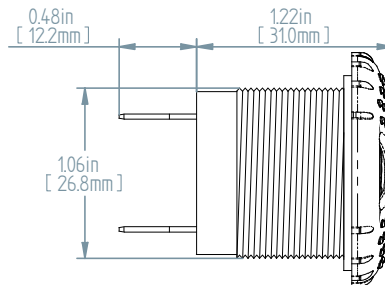
RING



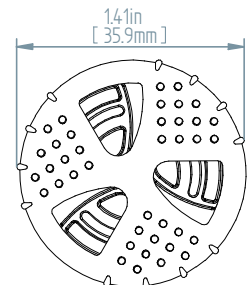
GASKET



SIDE



FRONT



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Revision: 9.09

# TXC-V86-530-S



**Made in  
USA**

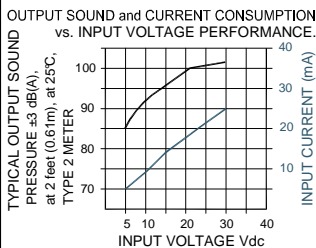


- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

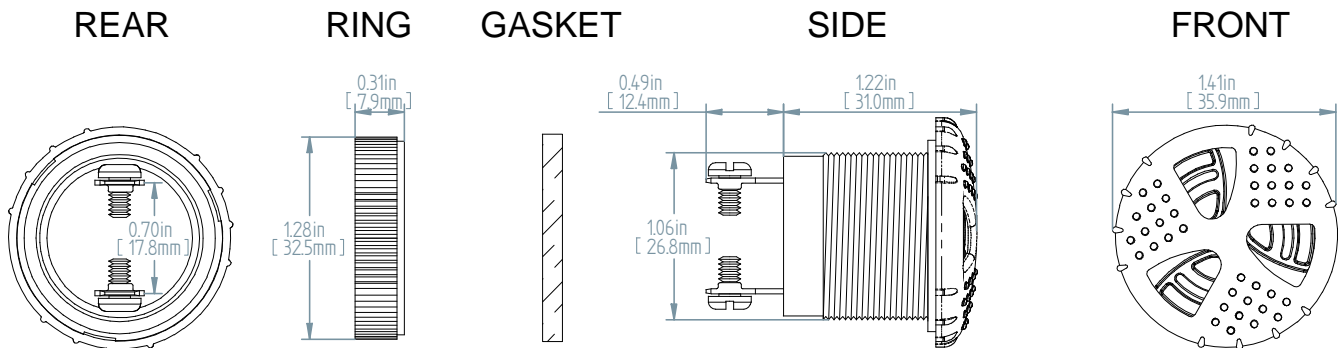
The Turbo TXC-V86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 9.09

# TXC-V86-530-W



**Made in  
USA**



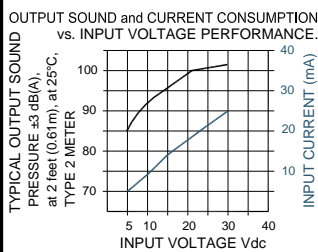
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXC-V86-530-W is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

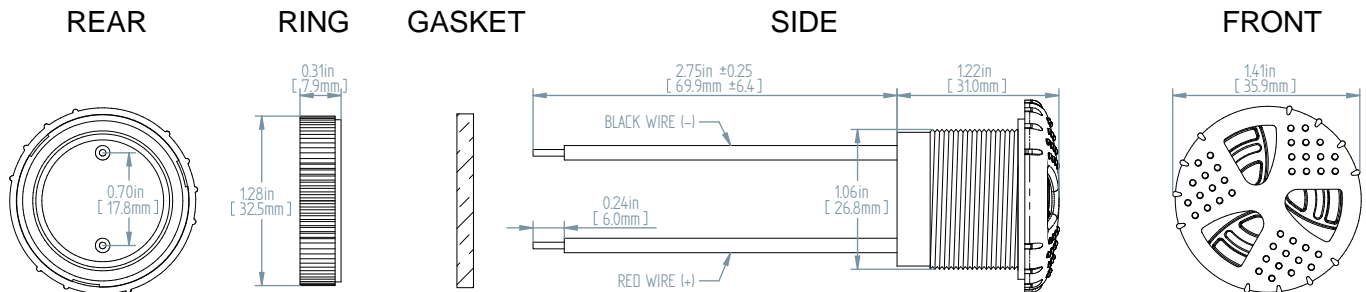
## SPECIFICATIONS

**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 9.09

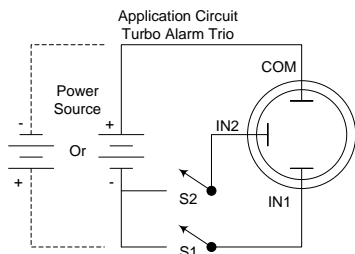


# TXCBW-86-530-Q(F)

**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



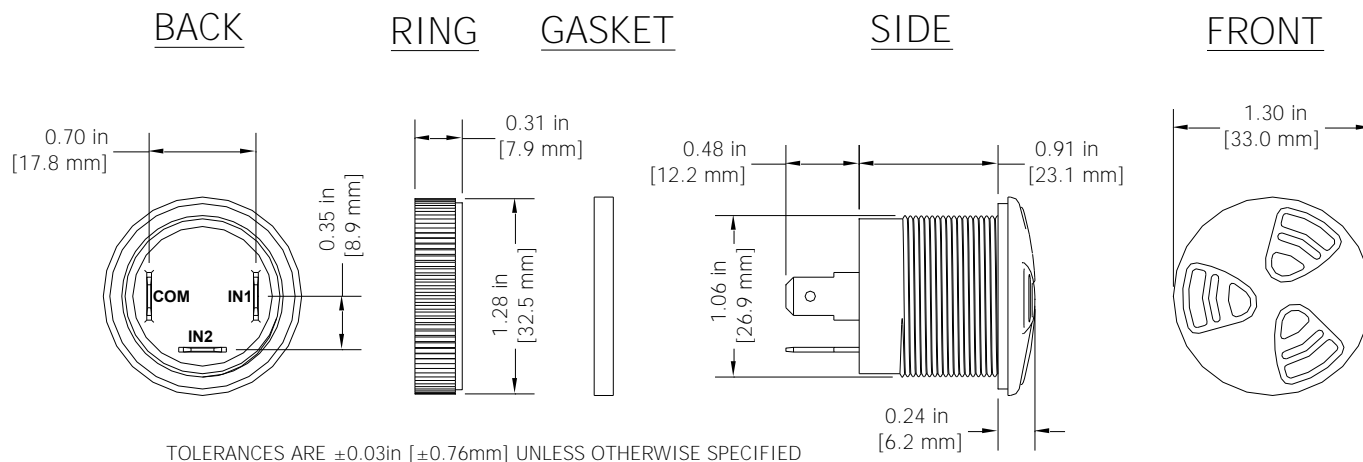
S2	S1	Sound	Rate	Frequency
Off	On	Constant	X	3000 Hz
On	Off	Beep	1 Hz	3000 Hz
On	On	Warble	2 Hz	2900 - 3000 Hz

The TXCBW-86-530-Q(F) is an extra loud, **Triple tone**, panel mounted alarm for operating voltages of 5-30Vdc. The alarm functions as an Continuous tone, or Beep tone or a Warble tone. See application circuit and truth table below. The Turbo design features environmental robustness coupled with tamper resistant front mounting case and threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 3Khz  $\pm$ 250 Hz. (Warble tone 2.9Khz to 3Khz)  
**Typical Pulse Rate:** 3Hz Beep tone, 2Hz Warble tone  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc  
**Typical Sound Pressure:** 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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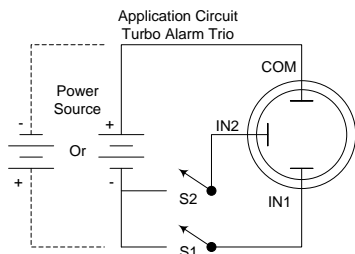
Revision: 5.20

# TXCBW-86-530-Q(S)

**Made in  
USA**



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



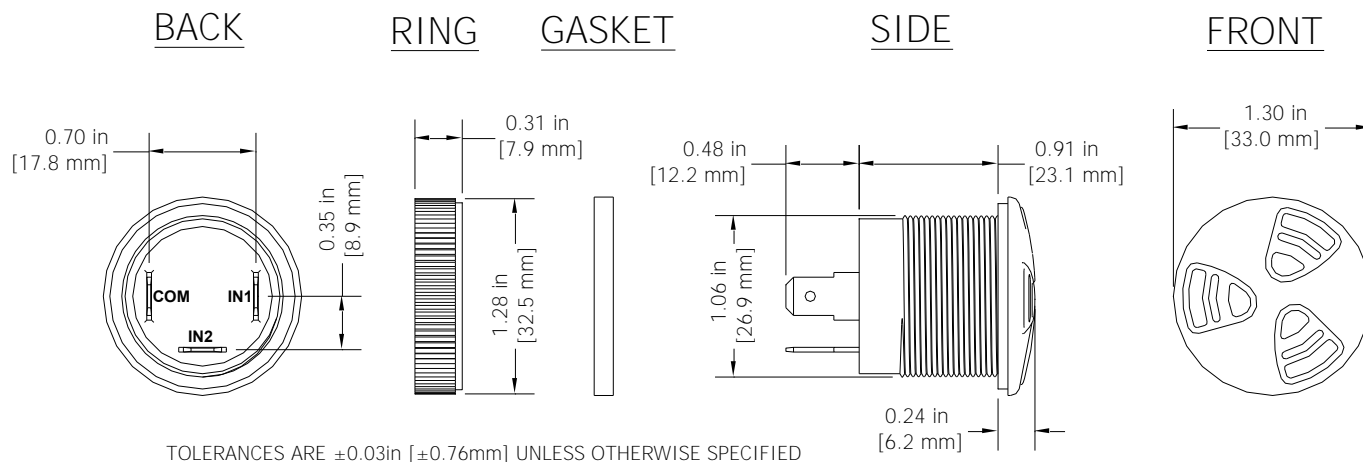
S2	S1	Sound	Rate	Frequency
Off	On	Constant	X	3000 Hz
On	Off	Beep	1 Hz	3000 Hz
On	On	Warble	2 Hz	2900 - 3000 Hz

The TXCBW-86-530-Q(S) is an extra loud, **Triple tone**, panel mounted alarm for operating voltages of 5-30Vdc. The alarm functions as an Continuous tone, or Beep tone or a Warble tone. See application circuit and truth table below. The Turbo design features environmental robustness coupled with tamper resistant front mounting case and threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	3Khz $\pm$ 250 Hz. (Warble tone 2.9Khz to 3Khz)
<b>Typical Pulse Rate:</b>	1Hz Beep tone, 2Hz Warble tone
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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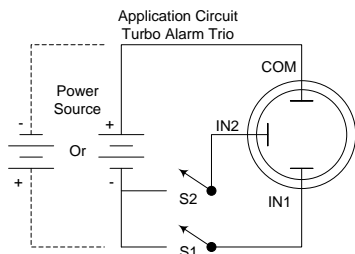
Revision: 5.20

# TXCBW-V86-530-Q(F)

Made in  
USA



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm



S2	S1	Sound	Rate	Frequency
Off	On	Constant	X	3000 Hz
On	Off	Beep	1 Hz	3000 Hz
On	On	Warble	2 Hz	2900 - 3000 Hz

The TXCBW-V86-530-Q(F) is an extra loud, **Triple tone**, panel mounted alarm for operating voltages of 5-30Vdc. The alarm functions as an Continuous tone, or Beep tone or a Warble tone. See application circuit and truth table below. The Turbo design features environmental robustness coupled with tamper resistant front mounting case and threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 3Khz  $\pm$ 250 Hz. (Warble tone 2.9Khz to 3Khz)  
**Typical Pulse Rate:** 3Hz Beep tone, 2Hz Warble tone  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc

**Typical Sound Pressure:** (With volume control fully open) 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.

**Storage Temperature:** -40°C to +85°C.

**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.

**Reverse Voltage Protection:** To the maximum operating voltage.

**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304

**Environmental Durability:**

NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

ASTM B117 Certified- Withstands exposure to salt spray for 300 hours

IP 68 Certified- Withstands water submergence and dust exposure

Humidity- 95% relative humidity at +40°C continuously for 100 hours.

Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**Life Expectancy:**

10 years under normal operating conditions.

**Warranty:**

For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

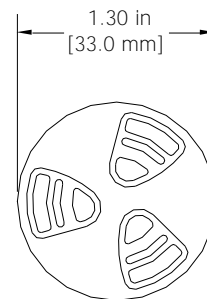
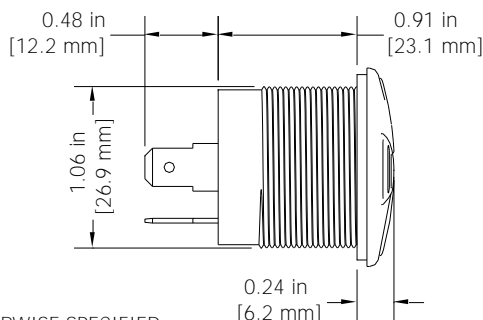
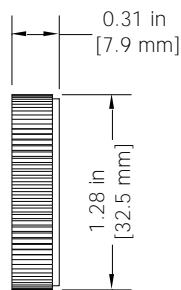
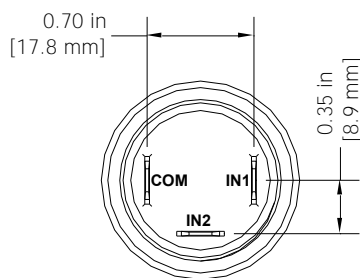
BACK

RING

GASKET

SIDE

FRONT



TOLERANCES ARE  $\pm$ 0.03in [ $\pm$ 0.76mm] UNLESS OTHERWISE SPECIFIED

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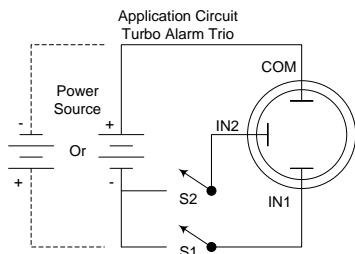
Revision: 5.20

# TXCBW-V86-530-Q(S)

Made in  
USA



- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm



S2	S1	Sound	Rate	Frequency
Off	On	Constant	X	3000 Hz
On	Off	Beep	1 Hz	3000 Hz
On	On	Warble	2 Hz	2900 - 3000 Hz

The TXCBW-V86-530-Q(S) is an extra loud, **Triple tone**, panel mounted alarm for operating voltages of 5-30Vdc. The alarm functions as an Continuous tone, or Beep tone or a Warble tone. See application circuit and truth table below. The Turbo design features environmental robustness coupled with tamper resistant front mounting case and threaded attachment ring.

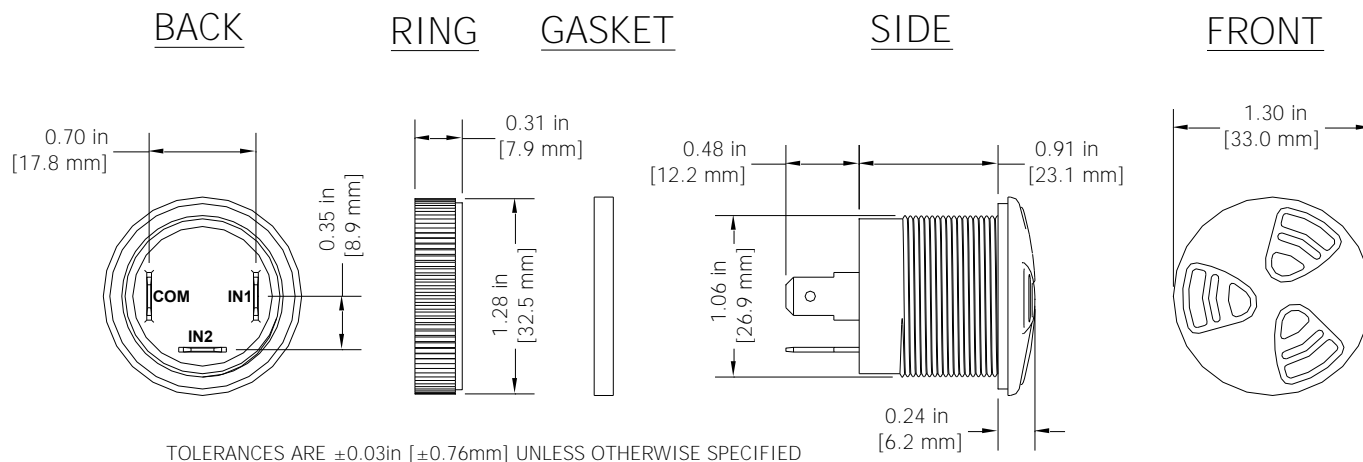
## SPECIFICATIONS

**Operating Mode:** Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 3Khz  $\pm$ 250 Hz. (Warble tone 2.9Khz to 3Khz)  
**Typical Pulse Rate:** 1Hz Beep tone, 2Hz Warble tone  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc

**Typical Sound Pressure:** (With volume control fully open) 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 5.20

# TXL7-96-930-Q

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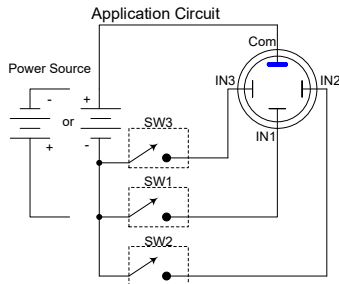


- 7 unique sounds one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXL7 alarm is capable of seven unique, attention getting tones all in one alarm. (see tone chart below) Each tone can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo XL series features lower frequency and louder output than most conventional piezo alarms. The lower frequency and loud output ensure that this alarm will be heard even in noisy environments.

## SPECIFICATIONS

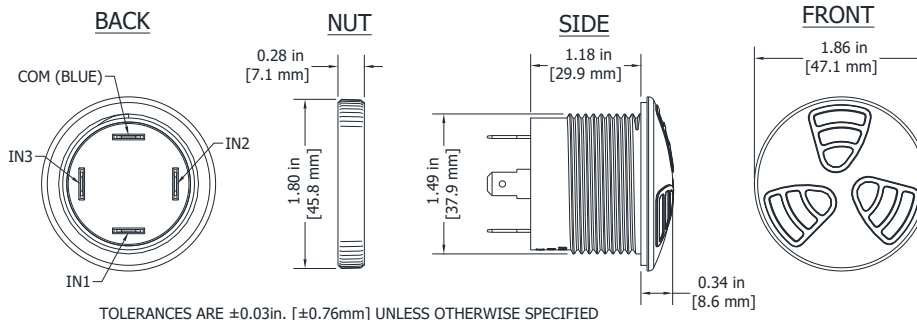
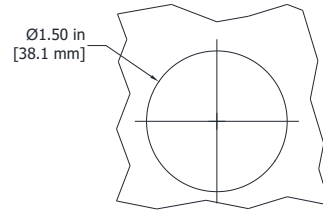
**Operating Mode:** 1 of 7 tones. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer.  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C.  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black, UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket – 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified– Withstands water submergence and dust exposure  
 Humidity– Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**



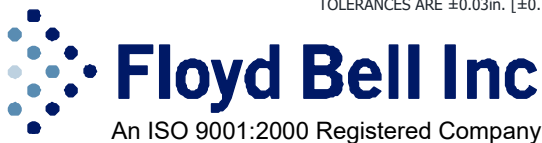
Tone Chart						
IN3	IN2	IN1	Sound	Rate	Frequency	
0	0	0	Off	X	X	
0	0	1	Constant	X	1800 Hz	
0	1	0	Beep	2 Hz	1800 Hz	
0	1	1	Siren	3 Hz	1600 - 2000 Hz	
1	0	0	Warble	2 Hz	1700 - 1800 Hz	
1	0	1	Chime	1 Hz	1800 Hz	
1	1	0	Whoop	3 Hz	1600 - 2000 Hz	
1	1	1	Ringer	10 Hz	1700 - 1800 Hz	

## DIMENSIONS

### MOUNTING HOLE



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Revision: 5.19



# TXL7-V96-930-Q

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USA

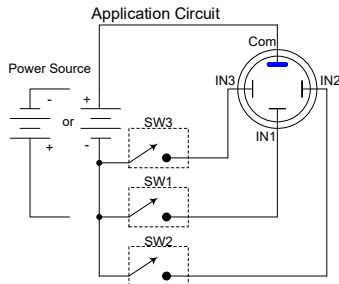


- 7 unique sounds one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXL7 alarm is capable of seven unique, attention getting tones all in one alarm. (see tone chart below) Each tone can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo XL series features lower frequency and louder output than most conventional piezo alarms. The lower frequency and loud output ensure that this alarm will be heard even in noisy environments.

## SPECIFICATIONS

**Operating Mode:** 1 of 7 tones. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer.  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C.  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black, UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket – 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified– Withstands water submergence and dust exposure  
 Humidity– Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

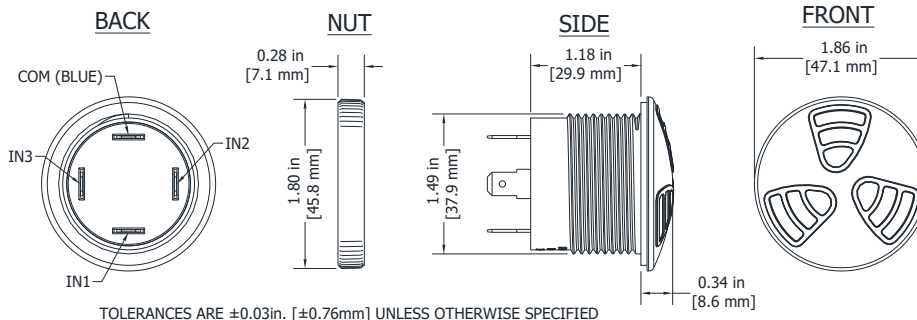
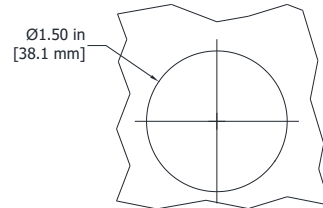


Tone Chart

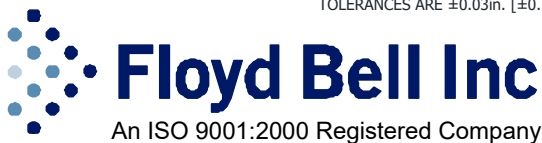
IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	X	1800 Hz
0	1	0	Beep	2 Hz	1800 Hz
0	1	1	Siren	3 Hz	1600 - 2000 Hz
1	0	0	Warble	2 Hz	1700 - 1800 Hz
1	0	1	Chime	1 Hz	1800 Hz
1	1	0	Whoop	3 Hz	1600 - 2000 Hz
1	1	1	Ringer	10 Hz	1700 - 1800 Hz

## DIMENSIONS

### MOUNTING HOLE



TOLERANCES ARE ±0.03in. [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 5.19

# TXLL7-98B-930-Q

Made in  
USA

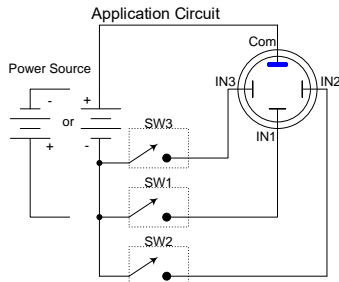


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

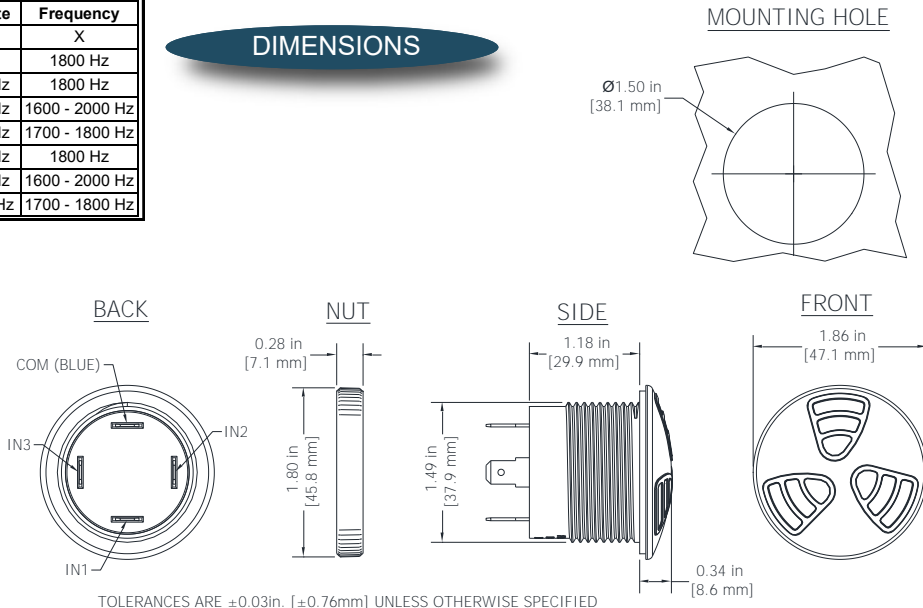
## SPECIFICATIONS

**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
 ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

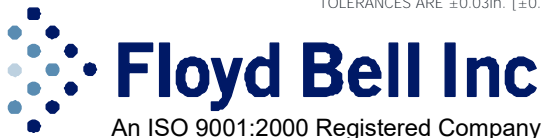


Tone Chart						
IN3	IN2	IN1	Sound	Rate	Frequency	
0	0	0	Off	X	X	
0	0	1	Constant	X	1800 Hz	
0	1	0	Beep	2 Hz	1800 Hz	
0	1	1	Siren	3 Hz	1600 - 2000 Hz	
1	0	0	Warble	2 Hz	1700 - 1800 Hz	
1	0	1	Chime	1 Hz	1800 Hz	
1	1	0	Whoop	3 Hz	1600 - 2000 Hz	
1	1	1	Ringer	10 Hz	1700 - 1800 Hz	

## DIMENSIONS



TOLERANCES ARE ±0.03in. [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 1.20

# TXLL7-98G-930-Q

Made in  
USA

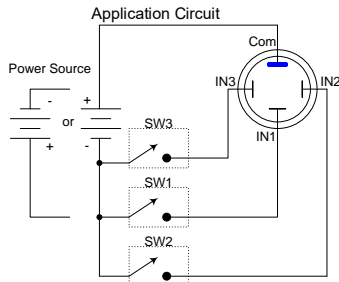


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

## SPECIFICATIONS

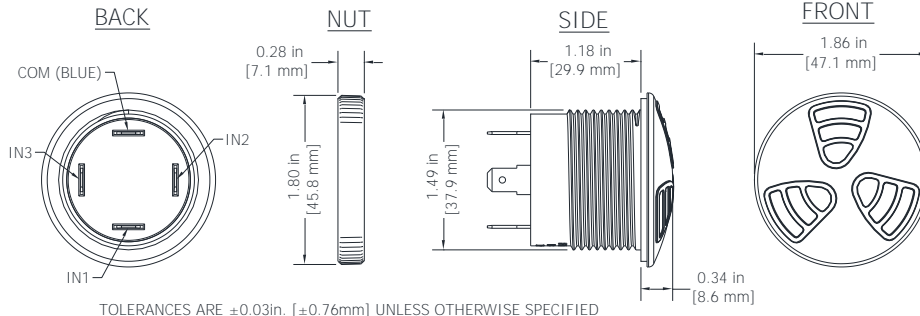
**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
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**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
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 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	X	1800 Hz
0	1	0	Beep	2 Hz	1800 Hz
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1	0	0	Warble	2 Hz	1700 - 1800 Hz
1	0	1	Chime	1 Hz	1800 Hz
1	1	0	Whoop	3 Hz	1600 - 2000 Hz
1	1	1	Ringer	10 Hz	1700 - 1800 Hz

## MOUNTING HOLE

## DIMENSIONS



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Revision: 1.20

# TXLL7-98R-930-Q

Made in  
USA

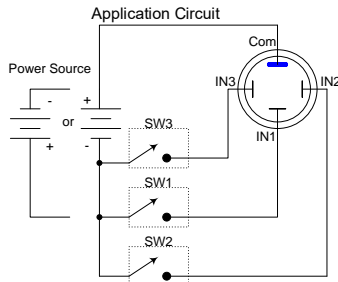


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

## SPECIFICATIONS

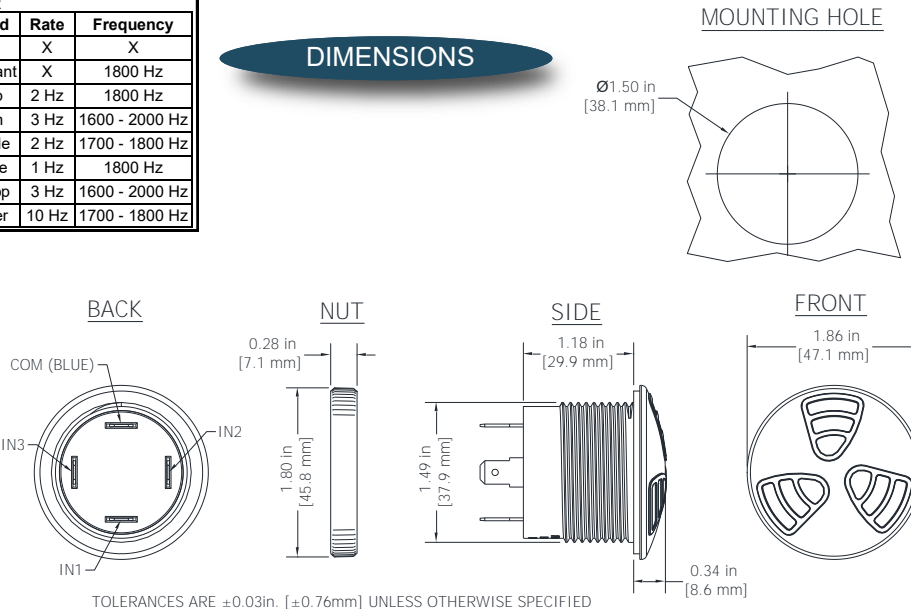
**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
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 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
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**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



Tone Chart

IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	X	1800 Hz
0	1	0	Beep	2 Hz	1800 Hz
0	1	1	Siren	3 Hz	1600 - 2000 Hz
1	0	0	Warble	2 Hz	1700 - 1800 Hz
1	0	1	Chime	1 Hz	1800 Hz
1	1	0	Whoop	3 Hz	1600 - 2000 Hz
1	1	1	Ringer	10 Hz	1700 - 1800 Hz

## DIMENSIONS



TOLERANCES ARE ±0.03in. [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TXLL7-98W-930-Q

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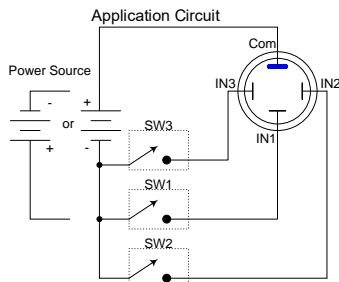


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

## SPECIFICATIONS

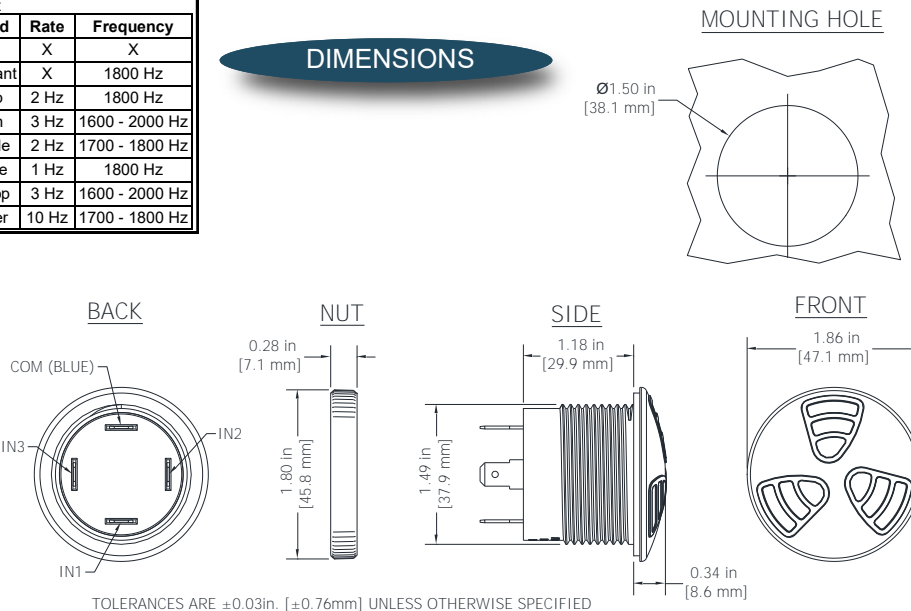
**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
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Tone Chart

IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	X	1800 Hz
0	1	0	Beep	2 Hz	1800 Hz
0	1	1	Siren	3 Hz	1600 - 2000 Hz
1	0	0	Warble	2 Hz	1700 - 1800 Hz
1	0	1	Chime	1 Hz	1800 Hz
1	1	0	Whoop	3 Hz	1600 - 2000 Hz
1	1	1	Ringer	10 Hz	1700 - 1800 Hz

## DIMENSIONS



TOLERANCES ARE ±0.03in. [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 1.20



# TXLL7-98Y-930-Q

Made in  
USA

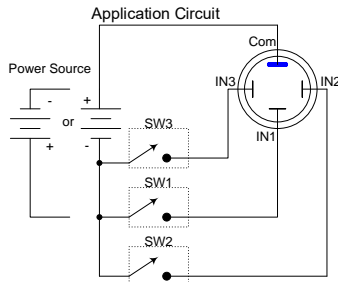


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

## SPECIFICATIONS

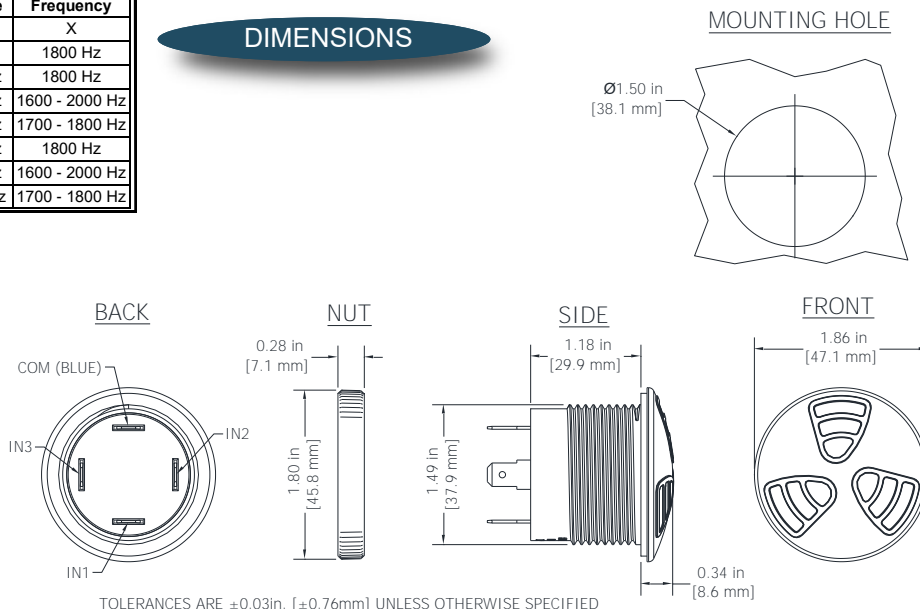
**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
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 10 years under normal operating conditions.  
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**Warranty:**



Tone Chart

IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	X	1800 Hz
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## DIMENSIONS



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Revision: 1.20

# TXLL7-V98B-930-Q

Made in  
USA

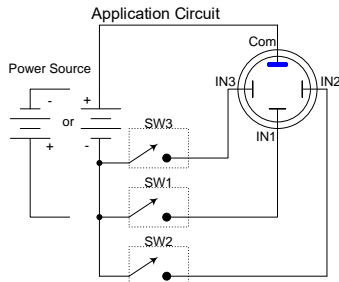


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
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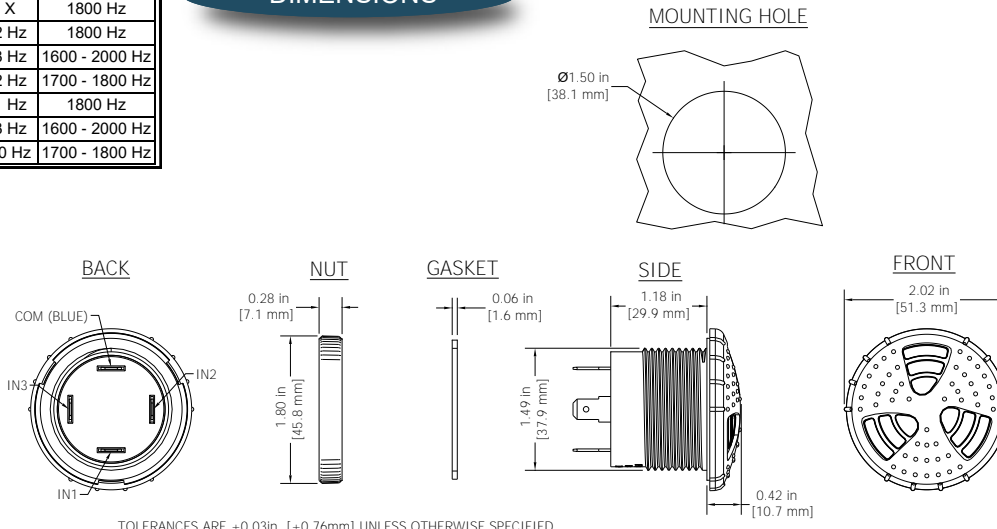
## SPECIFICATIONS

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Tone Chart						
IN3	IN2	IN1	Sound	Rate	Frequency	
0	0	0	Off	X	X	
0	0	1	Constant	X	1800 Hz	
0	1	0	Beep	2 Hz	1800 Hz	
0	1	1	Siren	3 Hz	1600 - 2000 Hz	
1	0	0	Warble	2 Hz	1700 - 1800 Hz	
1	0	1	Chime	1 Hz	1800 Hz	
1	1	0	Whoop	3 Hz	1600 - 2000 Hz	
1	1	1	Ringer	10 Hz	1700 - 1800 Hz	

## DIMENSIONS



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Revision: 1.20

# TXLL7-V98G-930-Q

Made in  
USA

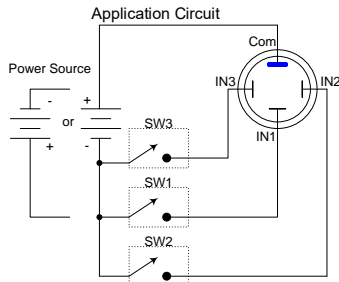


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

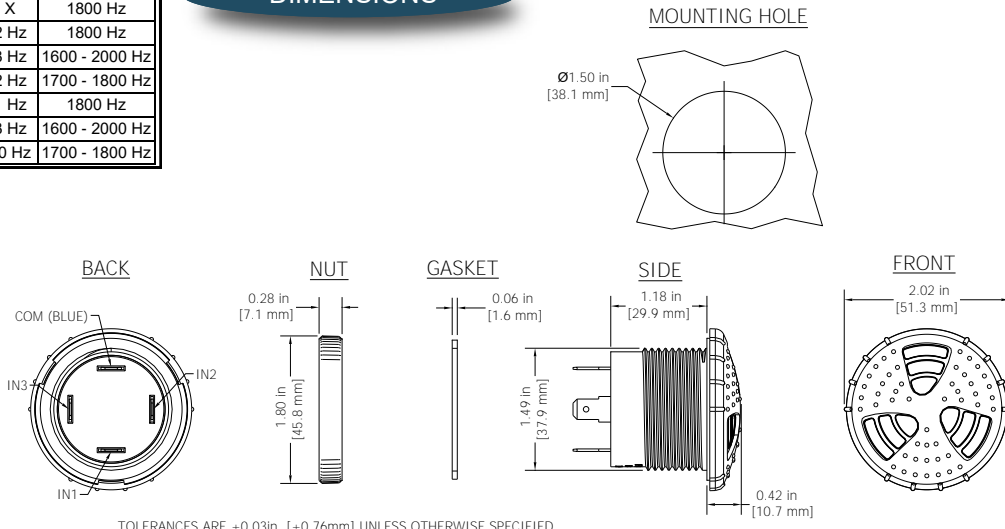
## SPECIFICATIONS

**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



Tone Chart						
IN3	IN2	IN1	Sound	Rate	Frequency	
0	0	0	Off	X	X	
0	0	1	Constant	X	1800 Hz	
0	1	0	Beep	2 Hz	1800 Hz	
0	1	1	Siren	3 Hz	1600 - 2000 Hz	
1	0	0	Warble	2 Hz	1700 - 1800 Hz	
1	0	1	Chime	1 Hz	1800 Hz	
1	1	0	Whoop	3 Hz	1600 - 2000 Hz	
1	1	1	Ringer	10 Hz	1700 - 1800 Hz	

## DIMENSIONS



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# TXLL7-V98R-930-Q

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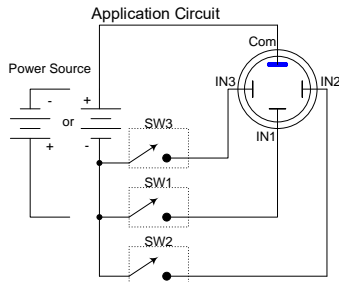


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

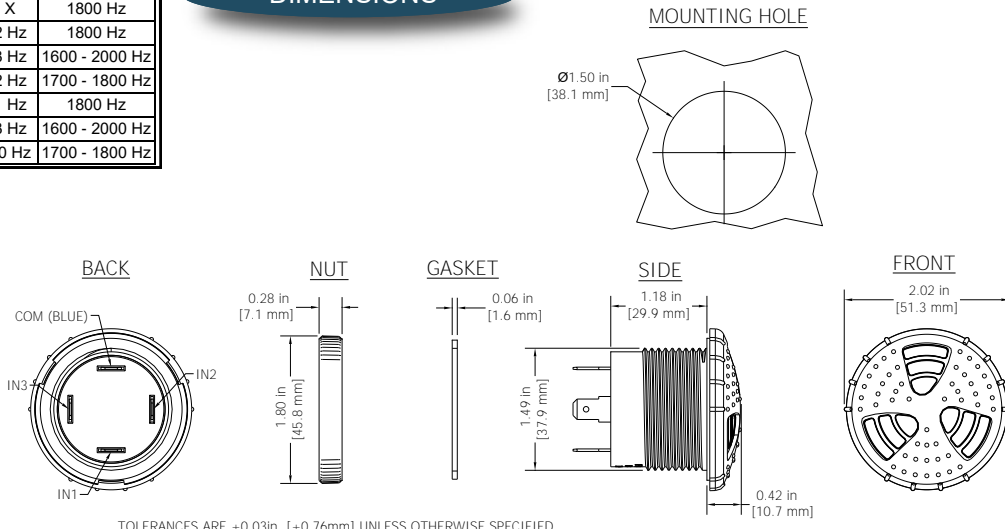
## SPECIFICATIONS

**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	X	1800 Hz
0	1	0	Beep	2 Hz	1800 Hz
0	1	1	Siren	3 Hz	1600 - 2000 Hz
1	0	0	Warble	2 Hz	1700 - 1800 Hz
1	0	1	Chime	1 Hz	1800 Hz
1	1	0	Whoop	3 Hz	1600 - 2000 Hz
1	1	1	Ringer	10 Hz	1700 - 1800 Hz

## DIMENSIONS



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Revision: 1.20



# TXLL7-V98W-930-Q

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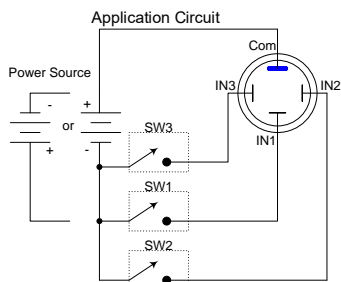


- 7 unique sounds and light in one alarm
- Indoor or Outdoor Use
- NEMA 4X and IP68 Rated
- Mounts in 1.5 inch Panel Hole
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's new Turbo TXLL7 alarm/Light is capable of seven unique, attention getting tones and lights all in one alarm. Each tone and light combination can be electrically selected via 4 input connections to the alarm. To make wiring easy and convenient, the inputs are non polarized. The common connection can be ground or Positive. (see application circuit) The new Turbo TXLL7 series features lower frequency, louder output than most conventional piezo alarms along with a sequenced light illumination. The lower frequency, loud output and light ensure that this alarm will be heard or seen even in noisy environments.

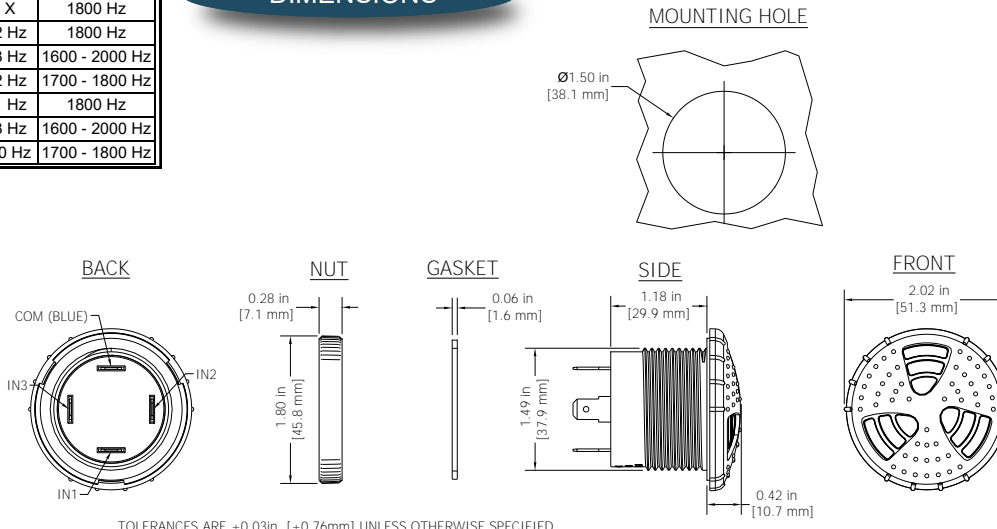
## SPECIFICATIONS

**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



Tone Chart						
IN3	IN2	IN1	Sound	Rate	Frequency	
0	0	0	Off	X	X	
0	0	1	Constant	X	1800 Hz	
0	1	0	Beep	2 Hz	1800 Hz	
0	1	1	Siren	3 Hz	1600 - 2000 Hz	
1	0	0	Warble	2 Hz	1700 - 1800 Hz	
1	0	1	Chime	1 Hz	1800 Hz	
1	1	0	Whoop	3 Hz	1600 - 2000 Hz	
1	1	1	Ringer	10 Hz	1700 - 1800 Hz	

## DIMENSIONS



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# TXLL7-V98Y-930-Q

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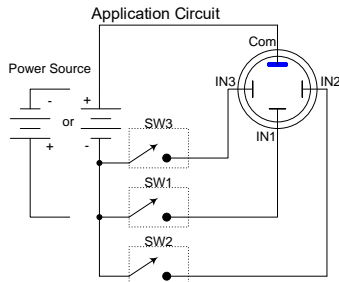


- 7 unique sounds and light in one alarm
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## SPECIFICATIONS

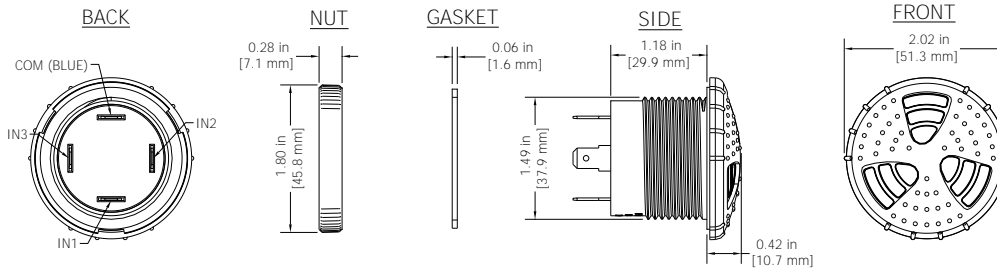
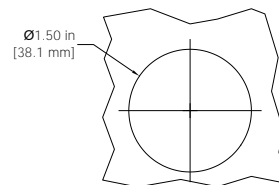
**Operating Mode:** 1 of 7 tones with light. Constant, Beep, Siren, Warble, Chime, Whoop, Ringer  
**Operating Voltage:** 9-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Resonant Frequency:** 1.8Khz±500 Hz.  
**Tone and Light Pulse Rate:** See chart for nom pulse rate ±25% Cycles per second  
**Typical Operating Current:** 15 mA at 9 Vdc  
 45 mA at 30 Vdc  
**Typical Sound Pressure:** 100±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C  
 108±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Four Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Control Inputs:** The Control inputs are universal polarity and are used to select which tone the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs.  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -30°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Construction Materials:** Lens/Case- Red Translucent Polycarbonate UL94V-0  
 Potting- 2 parts epoxy resin or silicone, black  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- Withstands 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.



Tone Chart						
IN3	IN2	IN1	Sound	Rate	Frequency	
0	0	0	Off	X	X	
0	0	1	Constant	X	1800 Hz	
0	1	0	Beep	2 Hz	1800 Hz	
0	1	1	Siren	3 Hz	1600 - 2000 Hz	
1	0	0	Warble	2 Hz	1700 - 1800 Hz	
1	0	1	Chime	1 Hz	1800 Hz	
1	1	0	Whoop	3 Hz	1600 - 2000 Hz	
1	1	1	Ringer	10 Hz	1700 - 1800 Hz	

## DIMENSIONS

### MOUNTING HOLE



TOLERANCES ARE ±0.03in. [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 1.20

# TXO-86-515-P



Made in  
USA

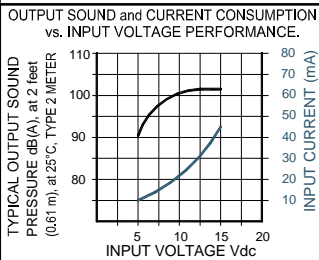


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-86-515-P is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

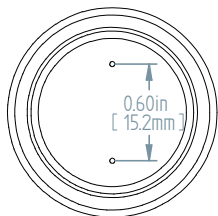
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

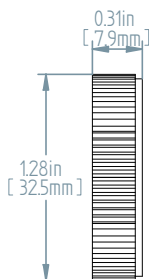


## DIMENSIONS

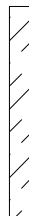
REAR



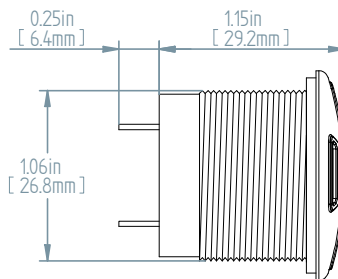
RING



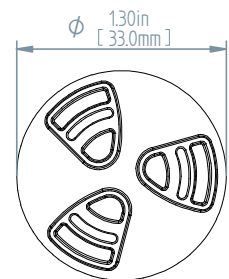
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXO-86-515-Q



**Made in  
USA**



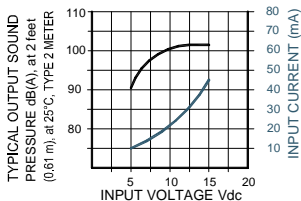
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

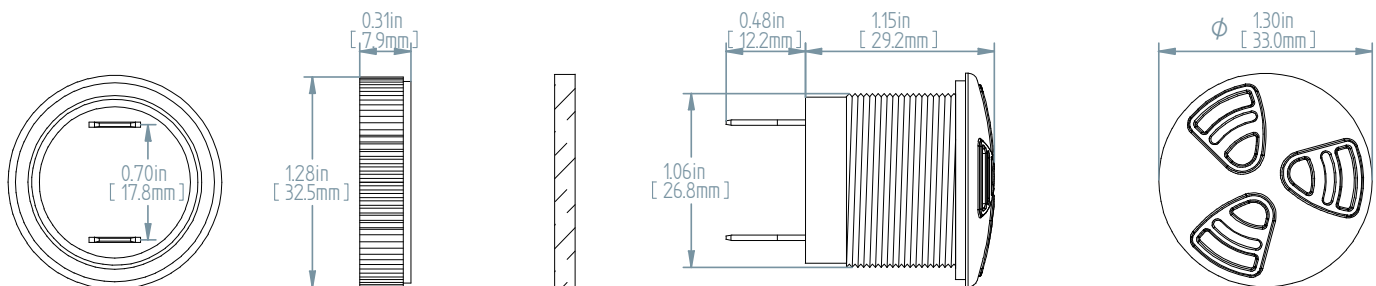
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXO-86-515-S



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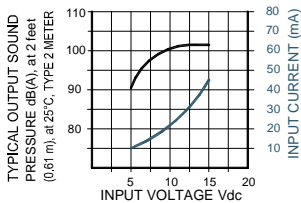
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

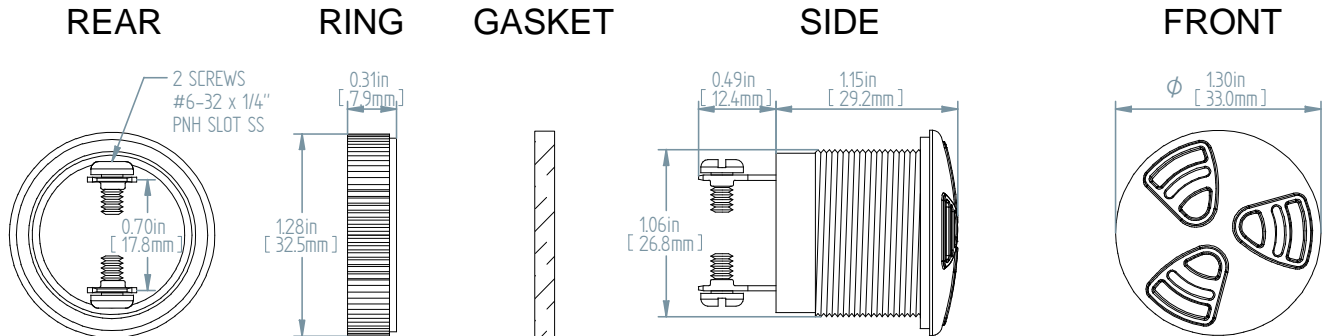
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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**Revision: 9.09**

# TXO-86-515-W

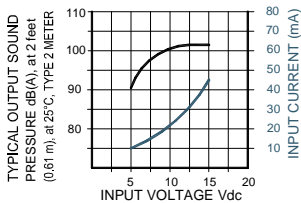


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

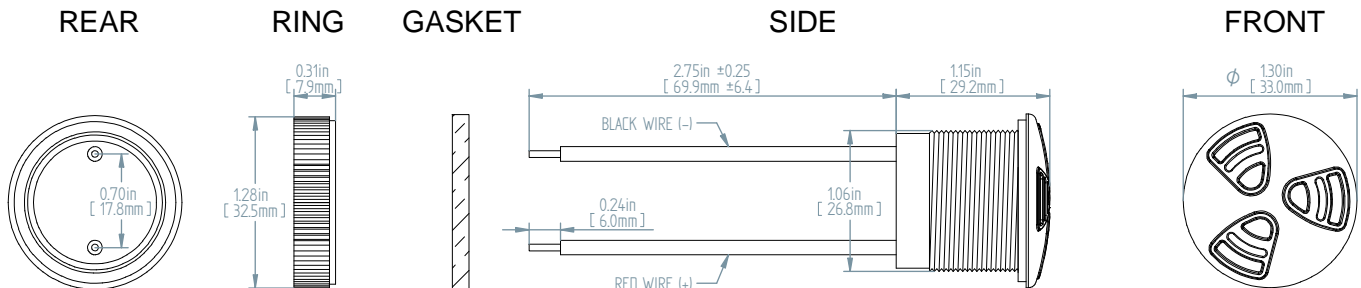


The Turbo TXO-86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09



# TXO-86-530-Q



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USA**

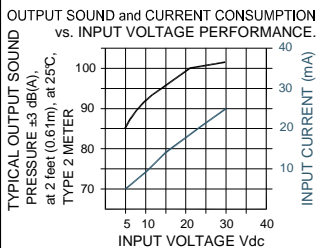


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

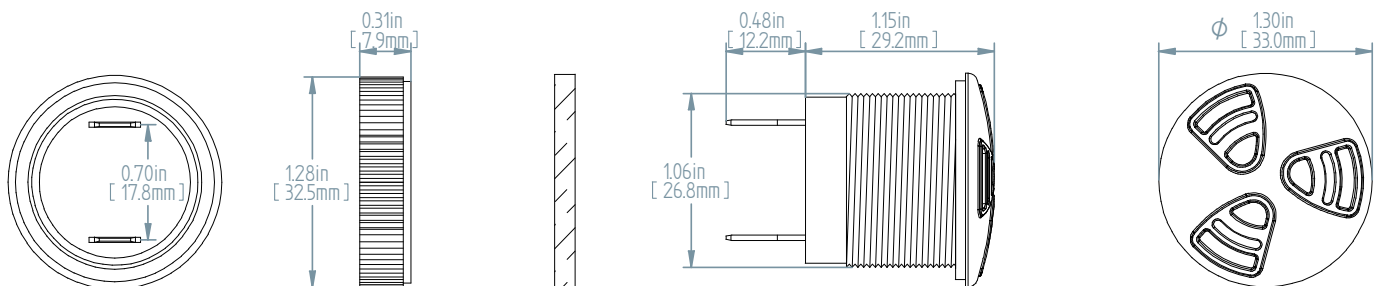
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXO-86-530-S



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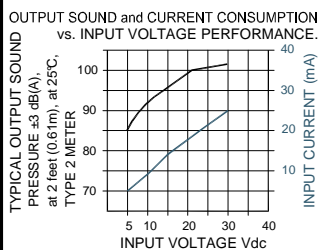


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

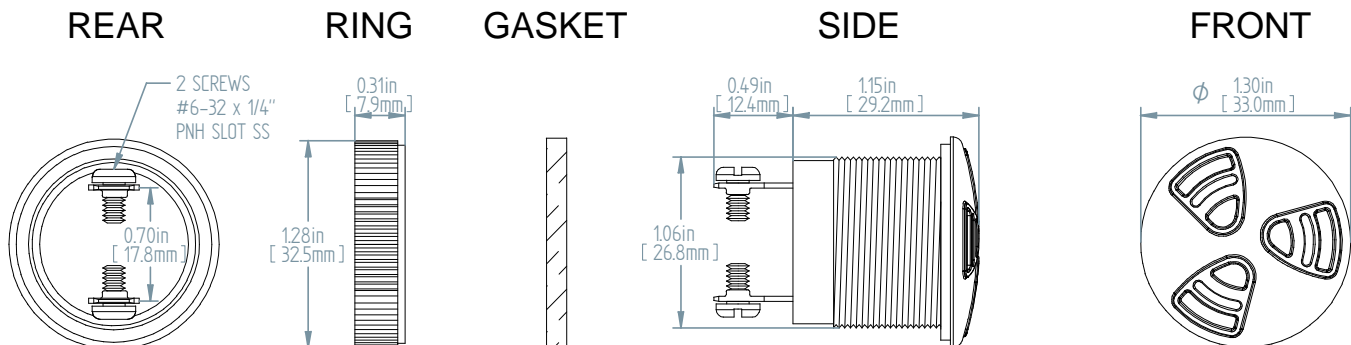
The Turbo TXO-86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 9.09

# TXO-V86-515-P



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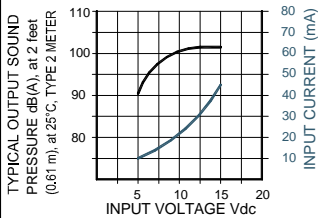
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-V86-515-P is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

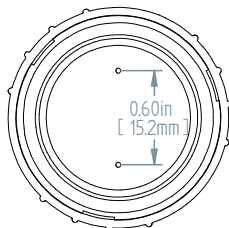
<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

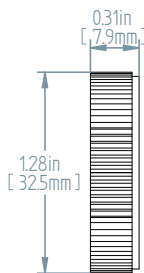


## DIMENSIONS

REAR



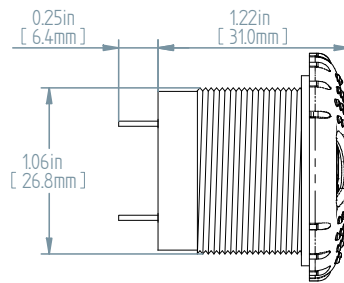
RING



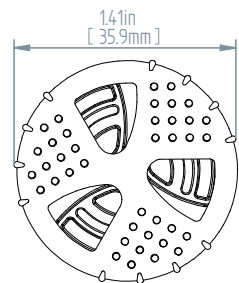
GASKET



SIDE



FRONT



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# TXO-V86-515-Q

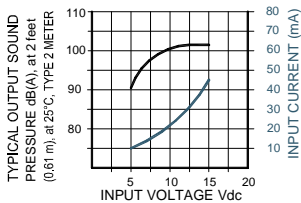


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

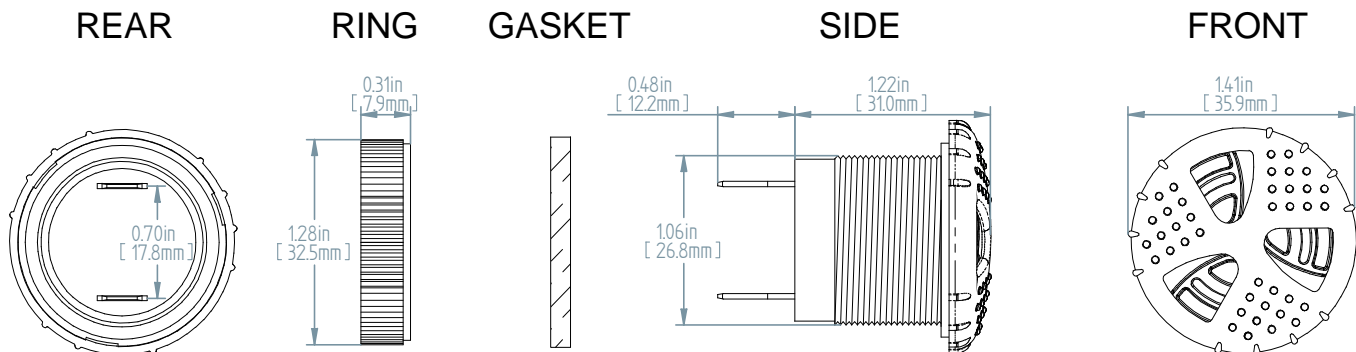


The Turbo TXO-V86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 9.09

# TXO-V86-515-S



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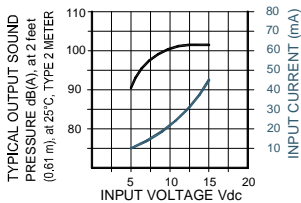
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-V86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

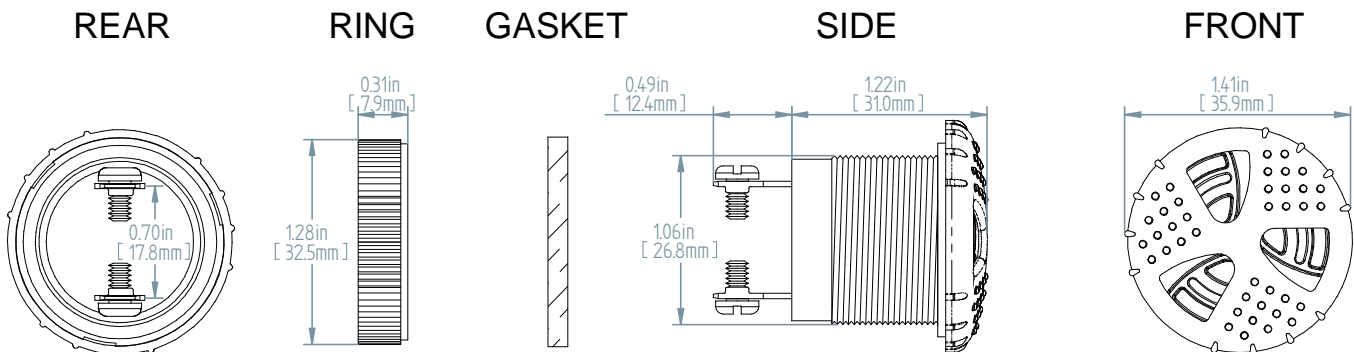
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09



# TXO-V86-515-W



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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

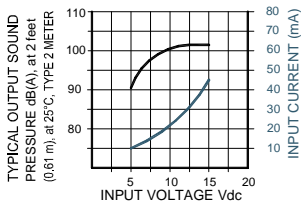
The Turbo TXO-V86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

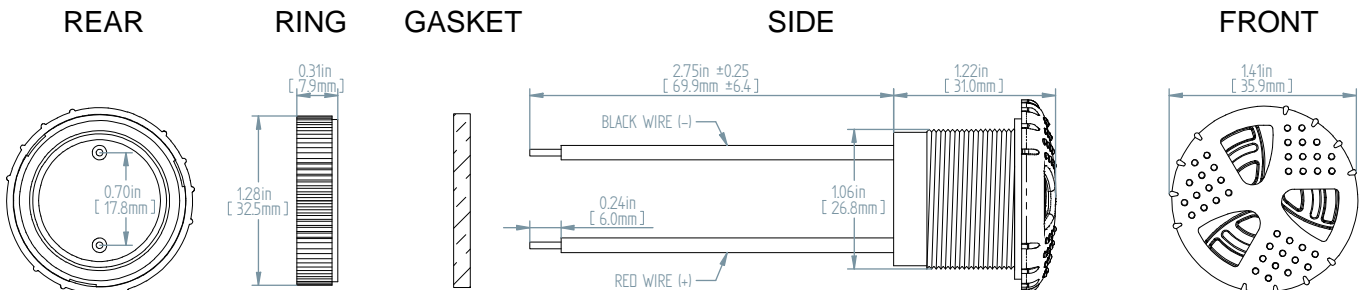
**Operating Mode:** Extra Loud Whoop Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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Revision: 9.09

# TXO-V86-530-Q



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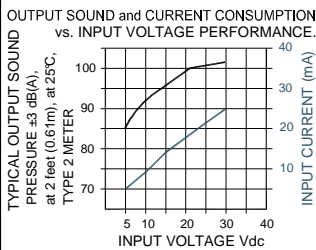


- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXO-V86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

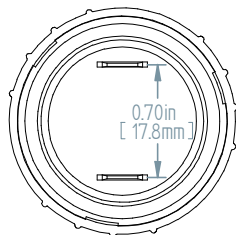
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

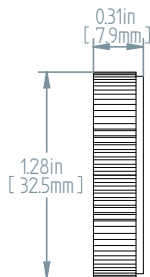


## DIMENSIONS

REAR



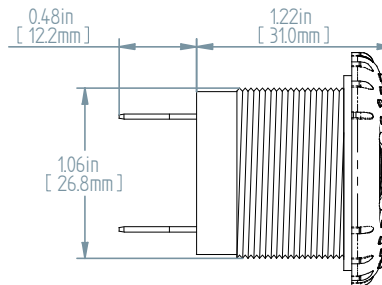
RING



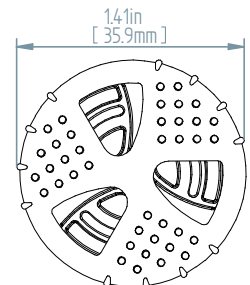
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

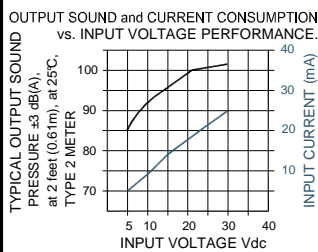
# TXO-V86-530-S



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

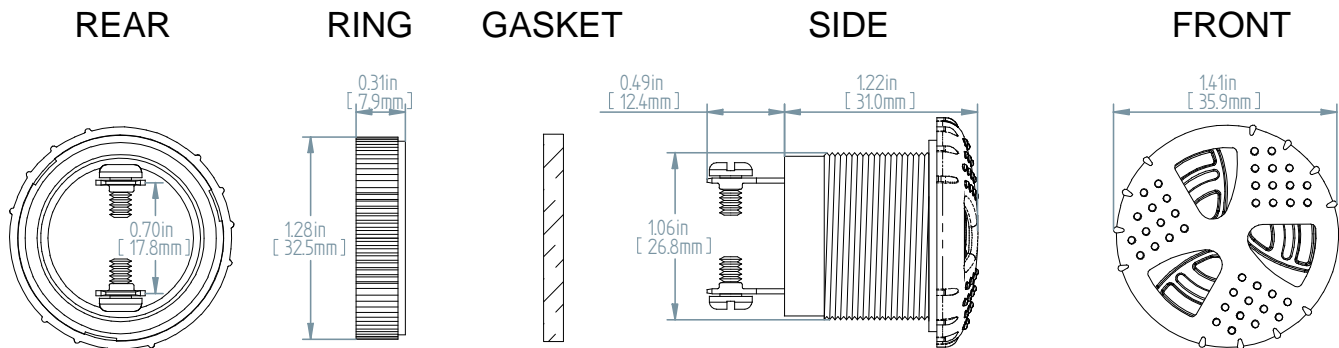


The Turbo TXO-V86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Whoop Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 2 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$  in [ $\pm 0.76$  mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXS-86-515-P



Made in  
USA

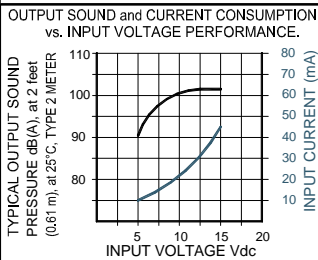


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-86-515-P is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

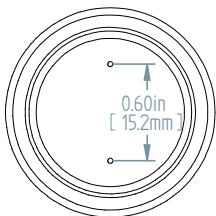
## SPECIFICATIONS

**Operating Mode:** Extra Loud Siren Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

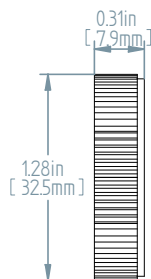


## DIMENSIONS

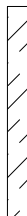
REAR



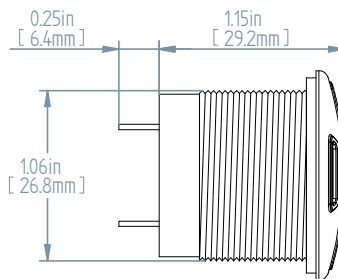
RING



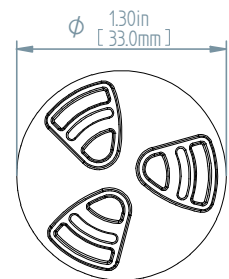
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TXS-86-515-Q



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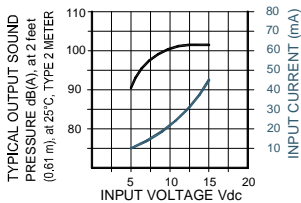
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

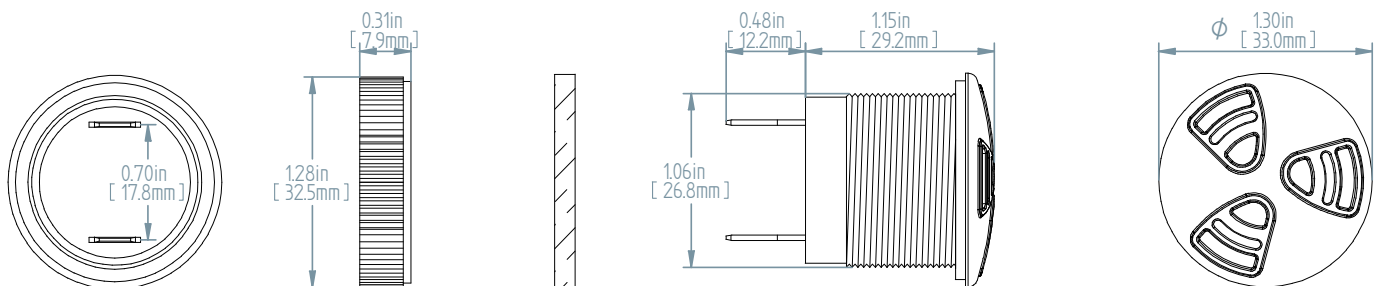
REAR

RING

GASKET

SIDE

FRONT



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# TXS-86-515-S

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USA



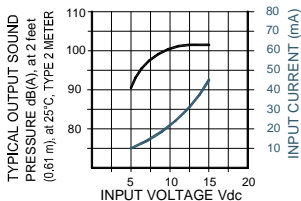
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

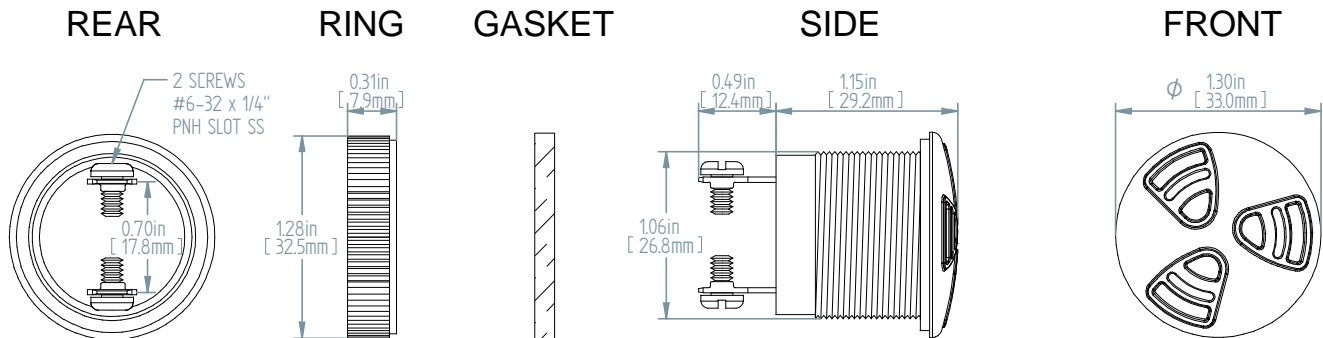
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXS-86-515-W

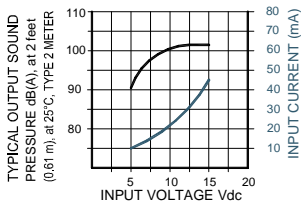


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



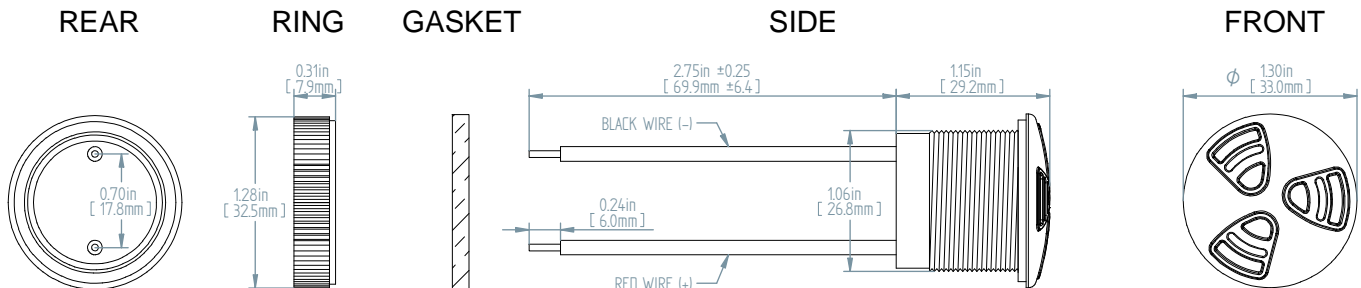
The Turbo TXS-86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Siren Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 9.09**

# TXS-86-530-Q



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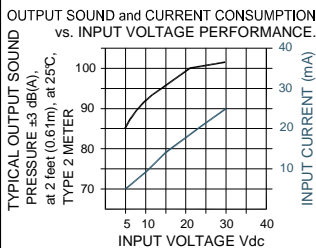


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS

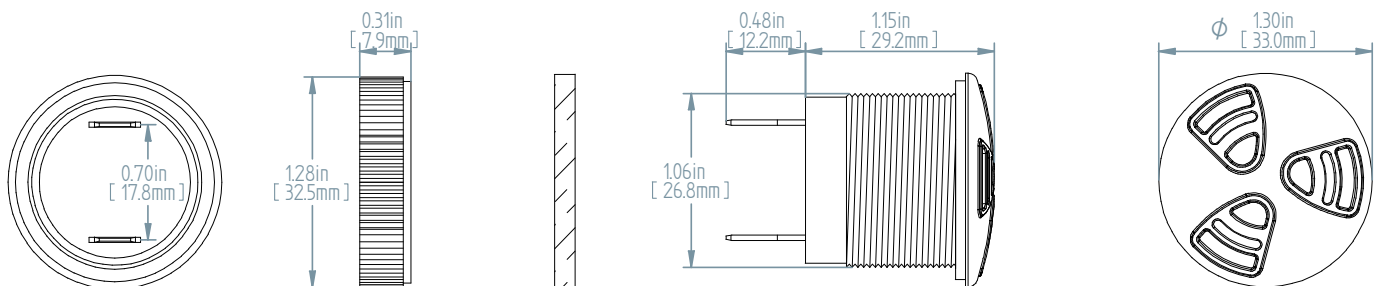
REAR

RING

GASKET

SIDE

FRONT



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# TXS-86-530-S



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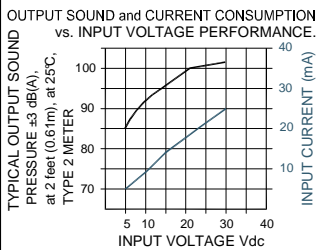


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

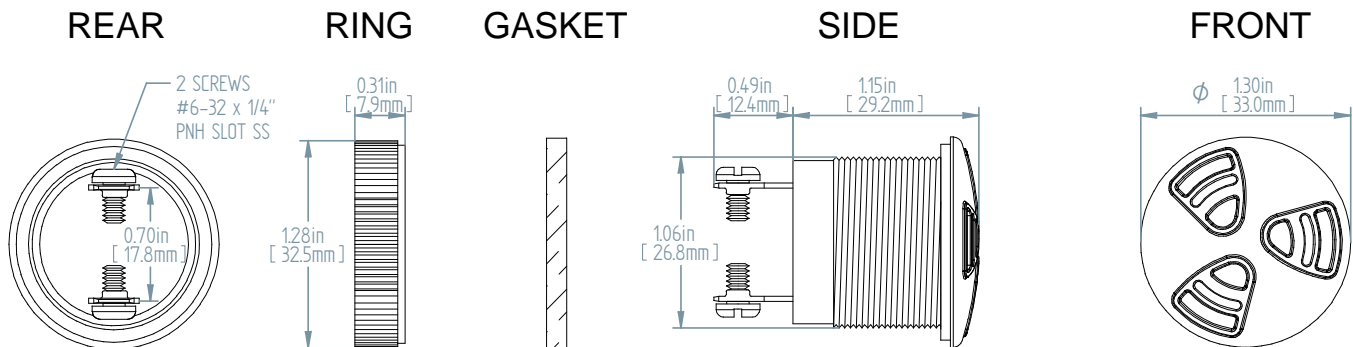
The Turbo TXS-86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TXS-V86-515-P



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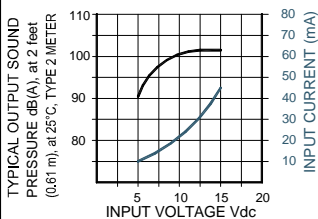
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-V86-515-P is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

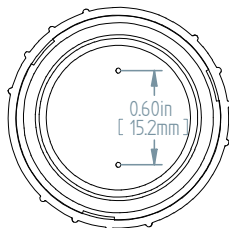
<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

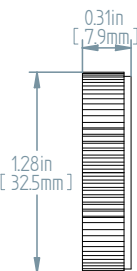


## DIMENSIONS

REAR



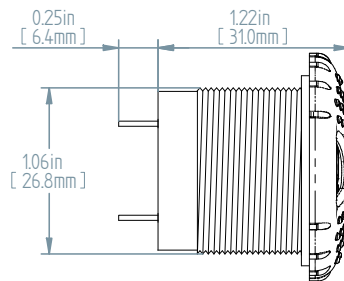
RING



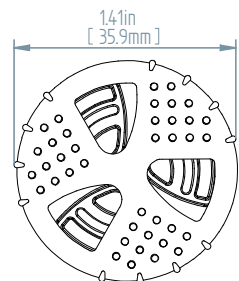
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09



# TXS-V86-515-Q



**Made in  
USA**



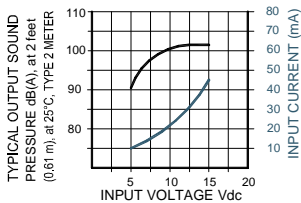
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-V86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

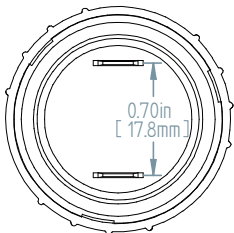
<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

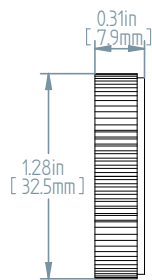


## DIMENSIONS

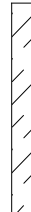
REAR



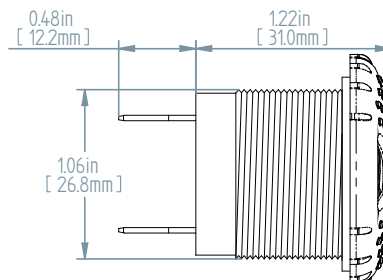
RING



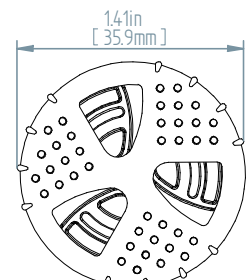
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TXS-V86-515-S

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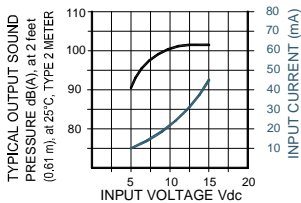
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-V86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

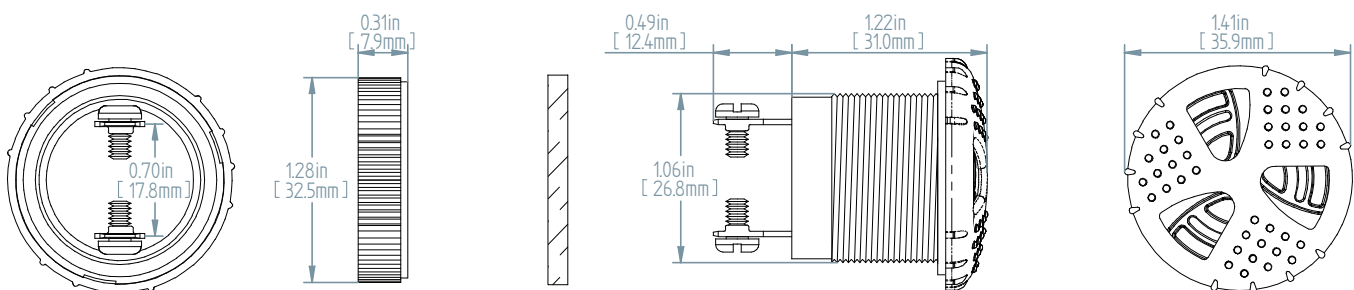
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXS-V86-515-W

Made in  
USA



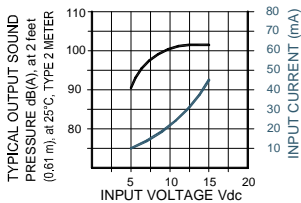
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXS-V86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

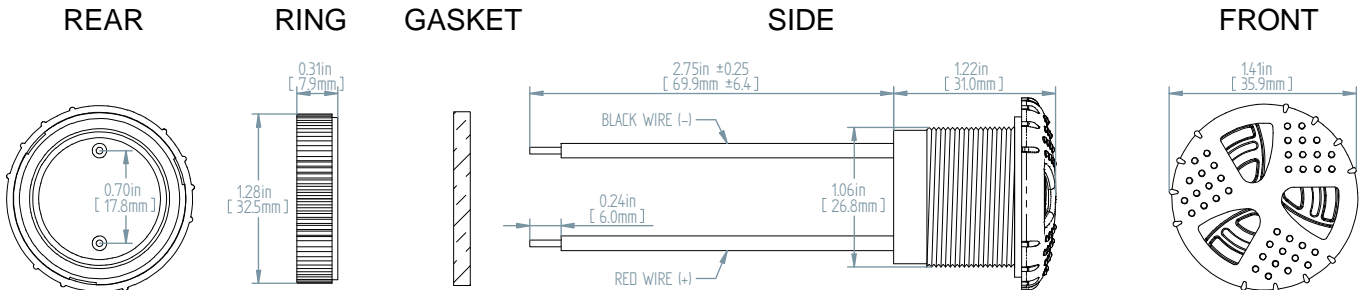
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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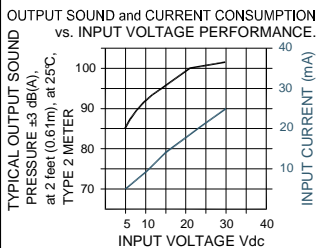
# TXS-V86-530-Q



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



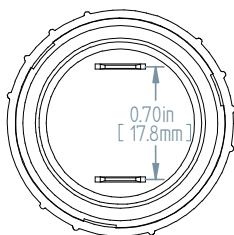
The Turbo TXS-V86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

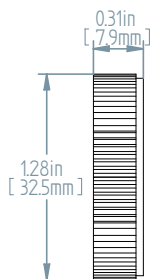
<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 3 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



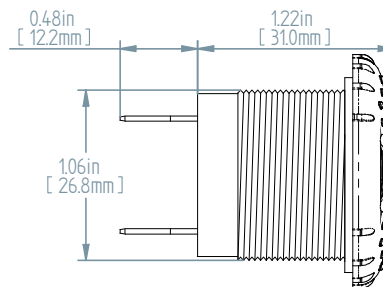
RING



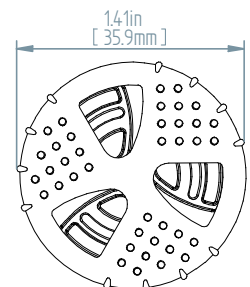
GASKET



SIDE



FRONT



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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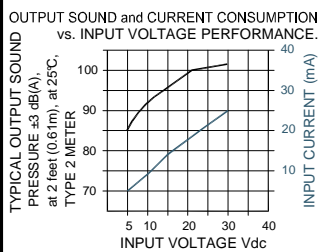
# TXS-V86-530-S



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

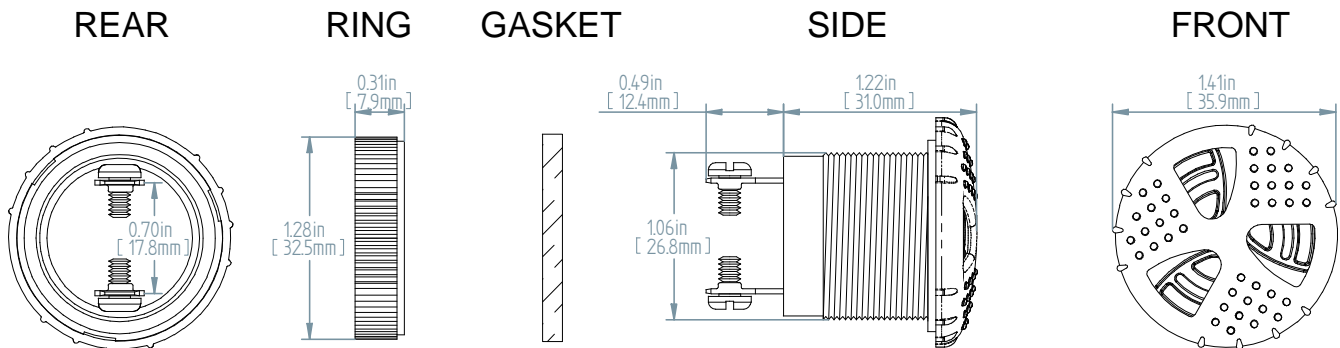


The Turbo TXS-V86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Siren Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 3 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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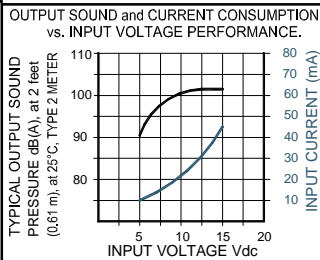
# TXT-86-515-P



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



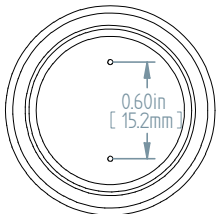
The Turbo TXT-86-515-P is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

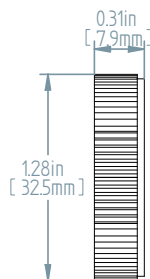
<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

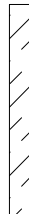
REAR



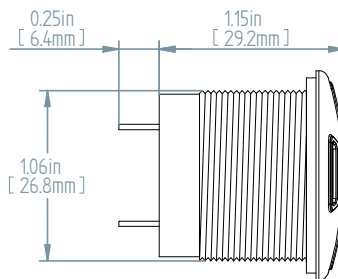
RING



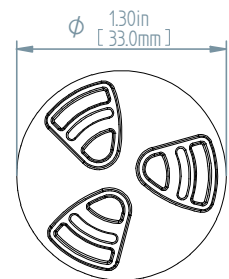
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TXT-86-515-Q



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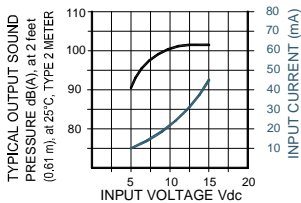
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXT-86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

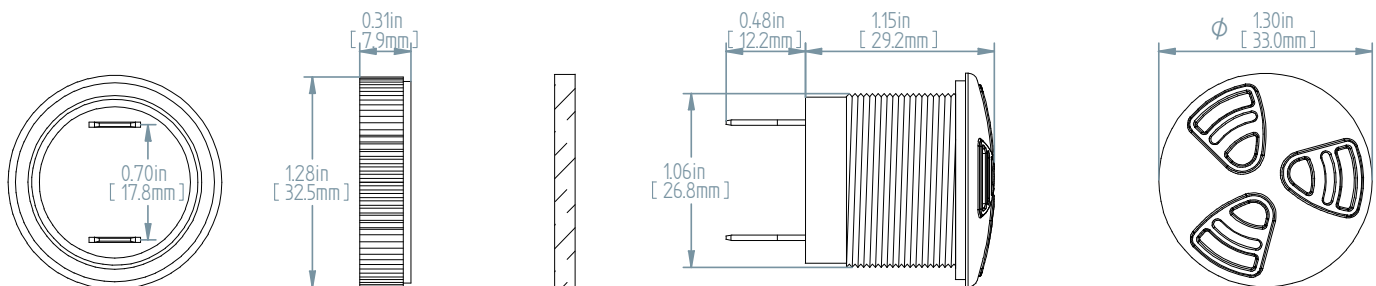
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXT-86-515-S



**Made in  
USA**



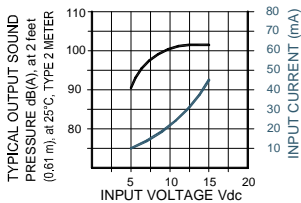
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXT-86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

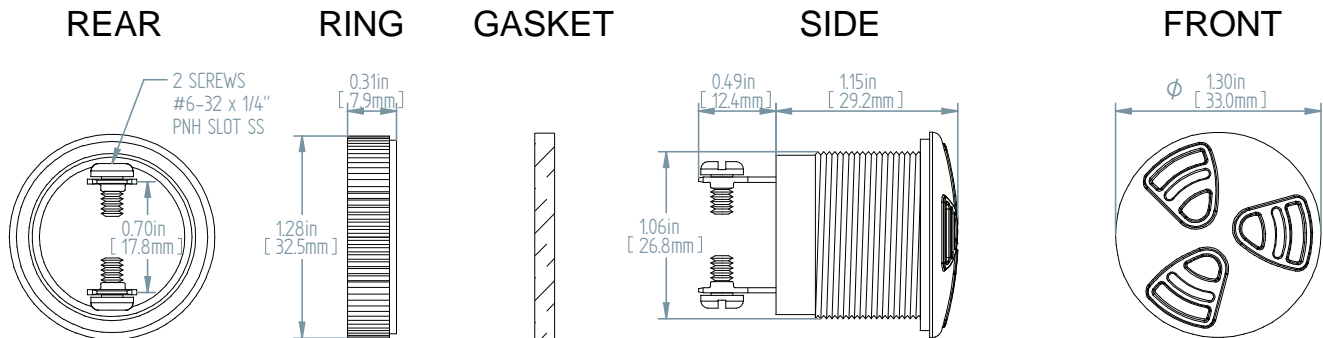
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TXT-86-515-W

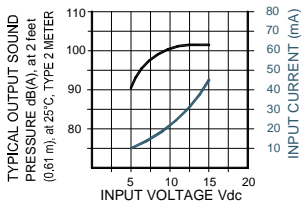


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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

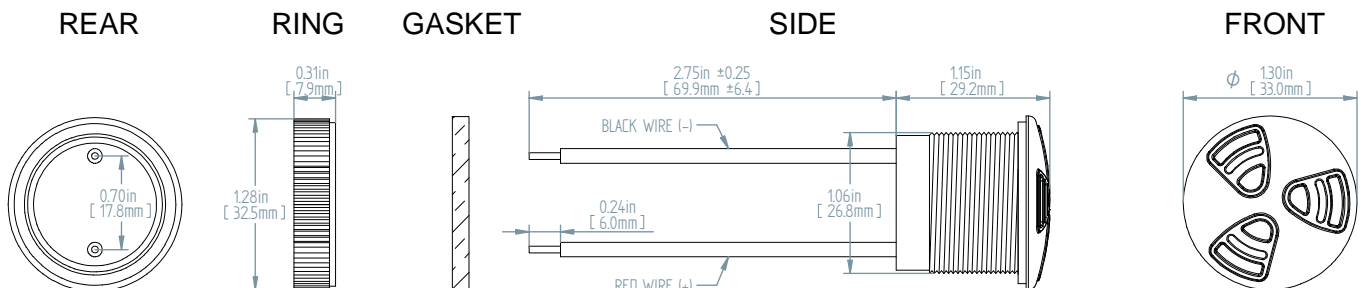


The Turbo TXT-86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TXT-86-530-Q



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USA**

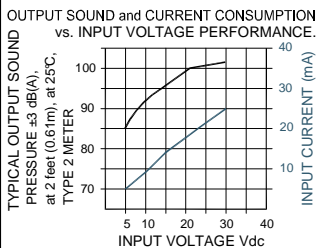


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXT-86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

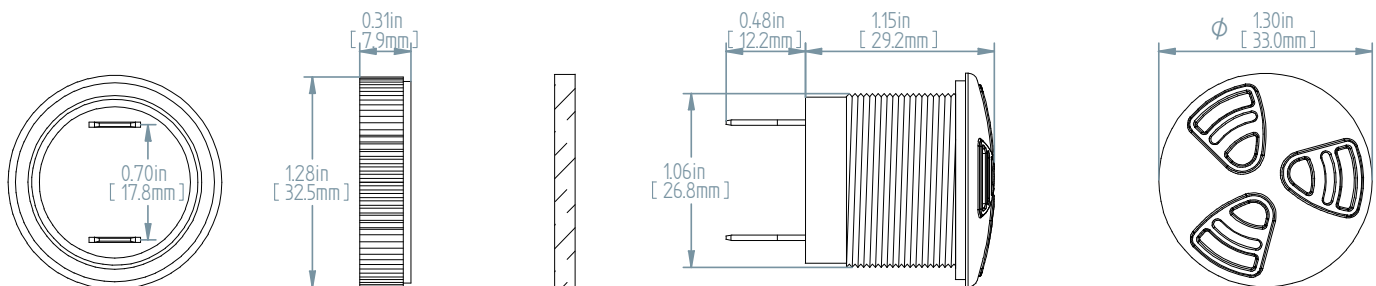
REAR

RING

GASKET

SIDE

FRONT



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Revision: 9.09



# TXT-86-530-S



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USA**

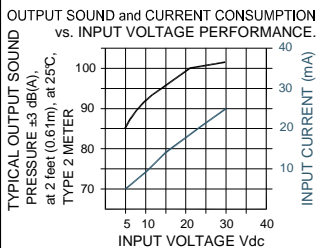


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

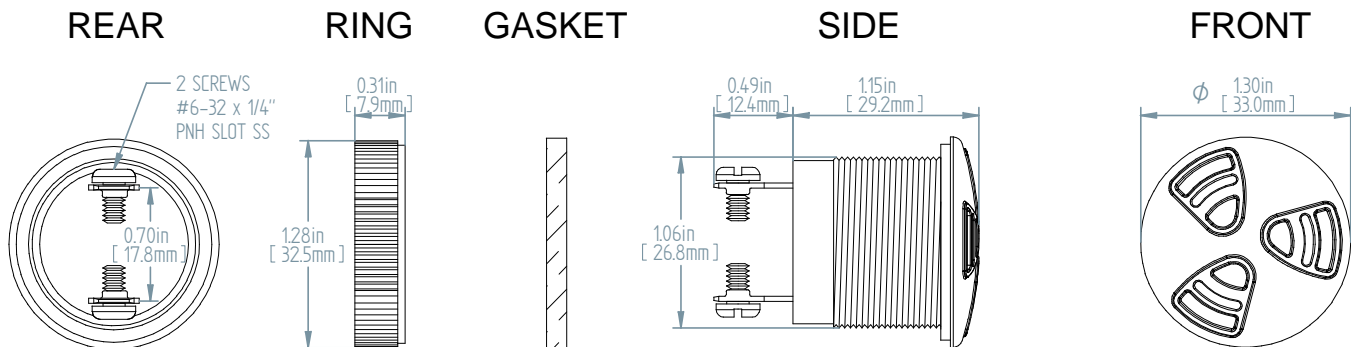
The Turbo TXT-86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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# TXT-V86-515-P



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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

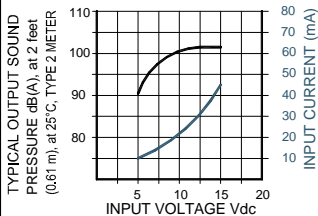
The Turbo TXT-V86-515-P is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume

## SPECIFICATIONS

**Operating Mode:** Extra Loud Staccato Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 8±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

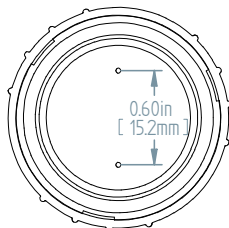
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

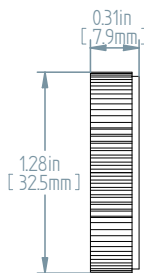


## DIMENSIONS

REAR



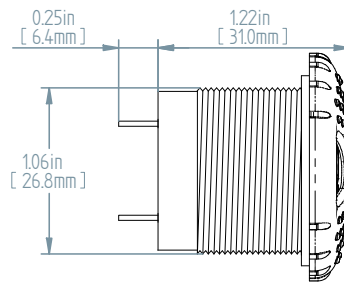
RING



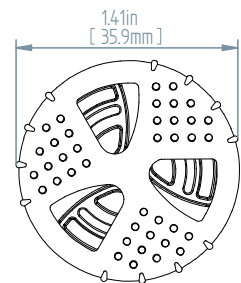
GASKET



SIDE



FRONT



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# TXT-V86-515-Q



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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

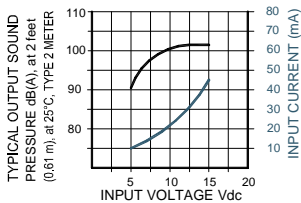
The Turbo TXT-V86-515-Q is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Staccato Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 8±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

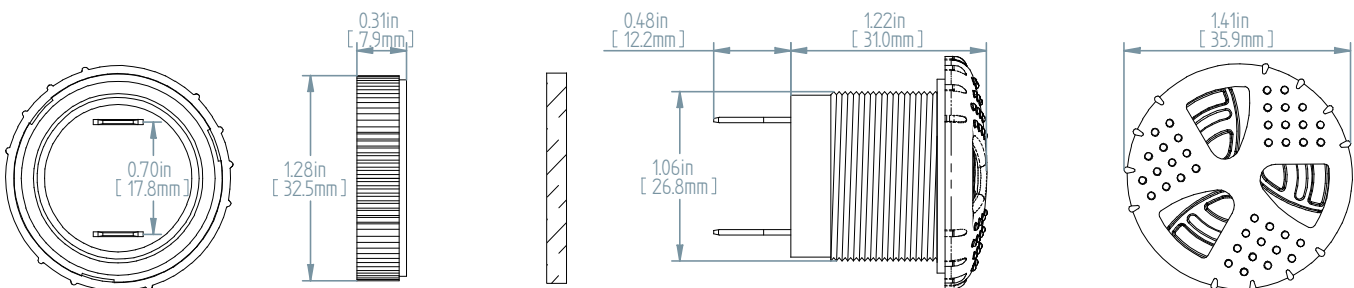
REAR

RING

GASKET

SIDE

FRONT



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# TXT-V86-515-S

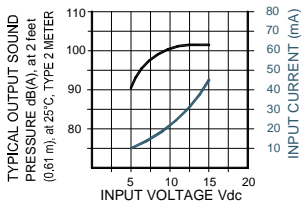


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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

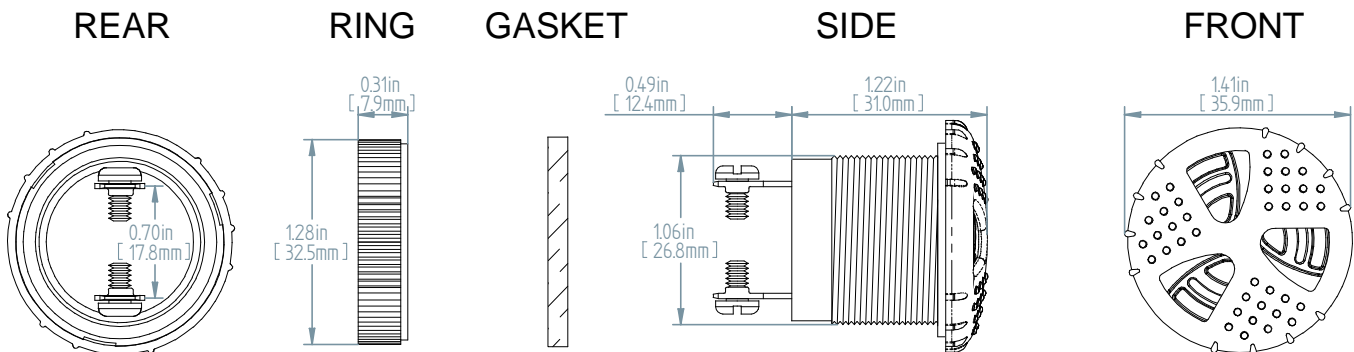


The Turbo TXT-V86-515-S is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 8±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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# TXT-V86-515-W

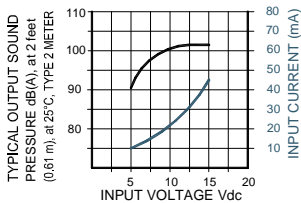


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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

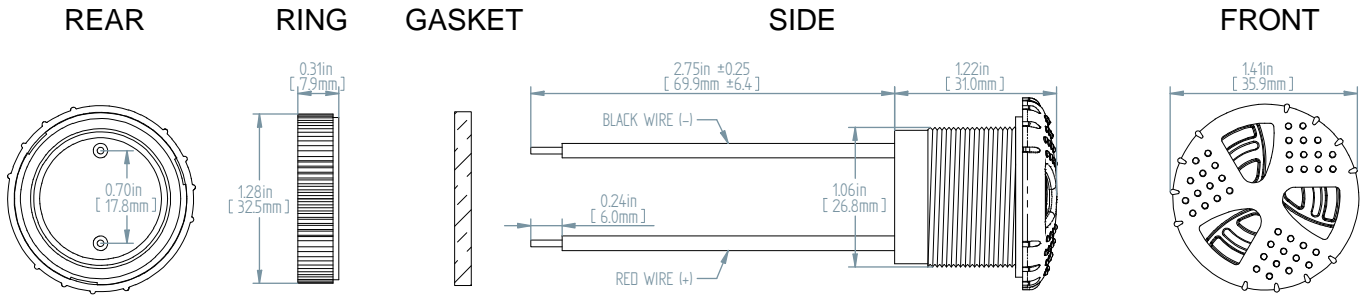


The Turbo TXT-V86-515-W is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Staccato Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 8±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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**Revision: 9.09**



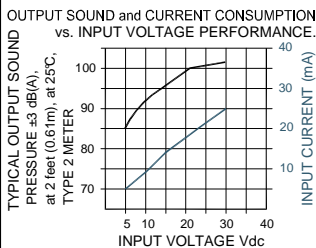
# TXT-V86-530-Q



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



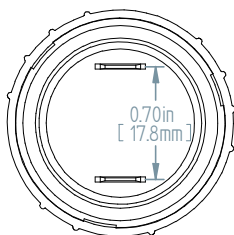
The Turbo TXT-V86-530-Q is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

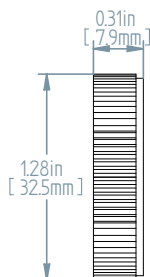
<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 8 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

REAR



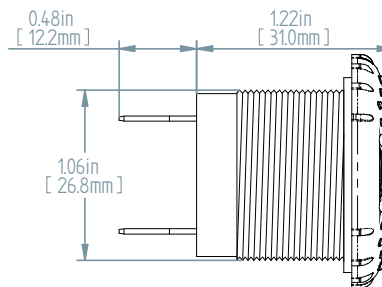
RING



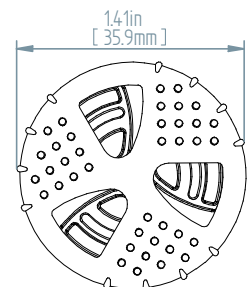
GASKET



SIDE



FRONT



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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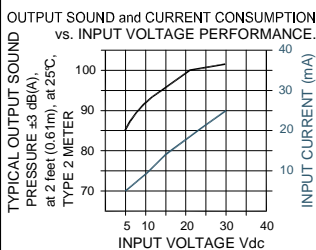
# TXT-V86-530-S



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

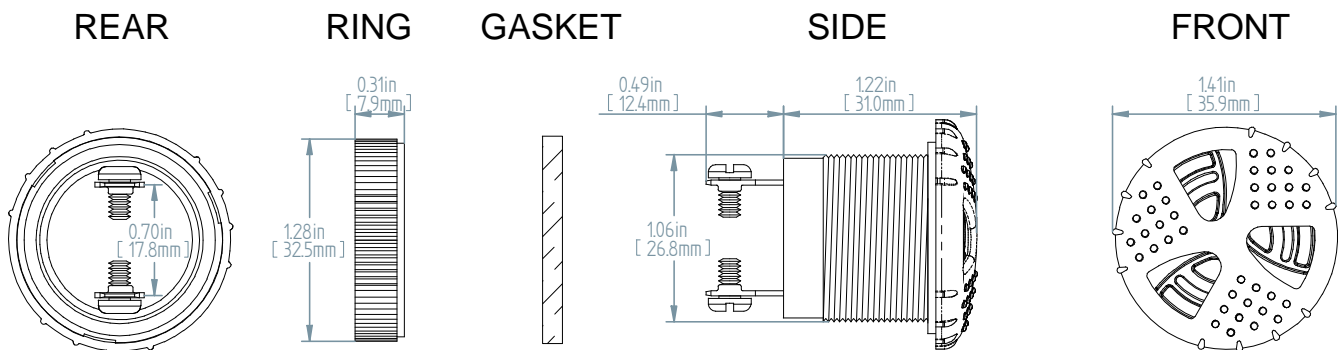


The Turbo TXT-V86-530-S is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Staccato Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	24 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 8 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

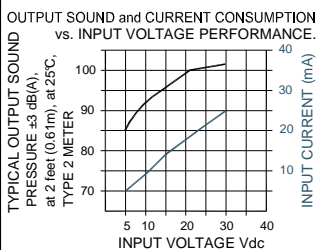
# TXT-V86-530-W



Made in  
USA



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

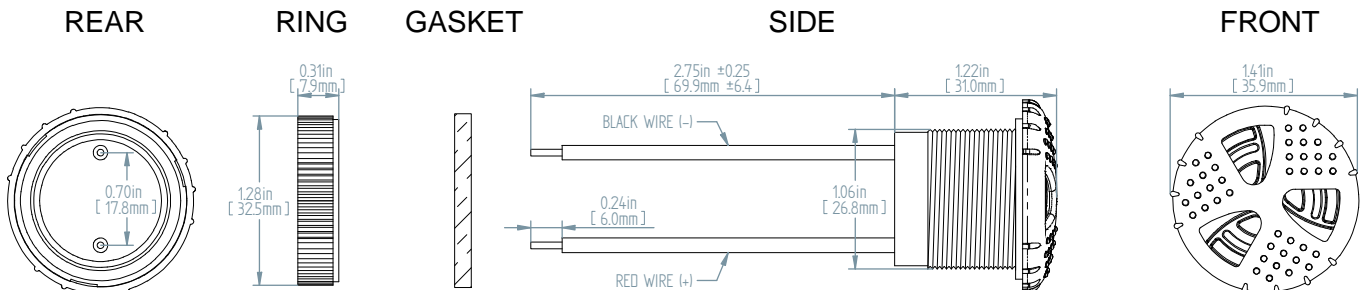


The Turbo TXT-V86-530-W is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Staccato Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 24 Vdc  
**Operating Frequency:** 2900 $\pm$ 250 Hz.  
 8 $\pm$ 25% Cycles per second  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

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Revision: 1.14

# TXW-86-515-P(F)



**Made in  
USA**



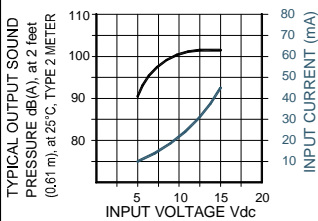
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-515-P(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

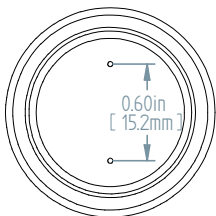
**Operating Mode:** Extra Loud Warble Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

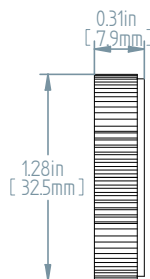


## DIMENSIONS

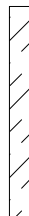
REAR



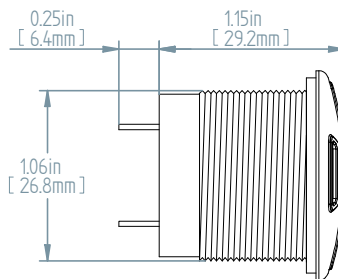
RING



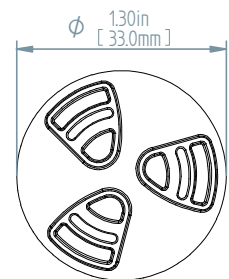
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXW-86-515-P(S)



**Made in  
USA**



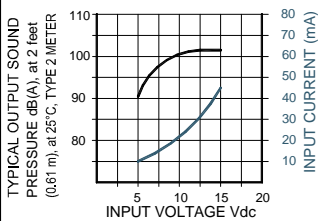
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-515-P(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

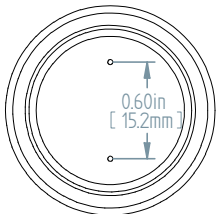
<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

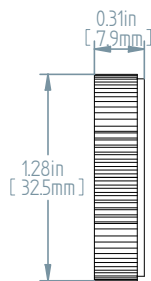


## DIMENSIONS

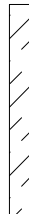
REAR



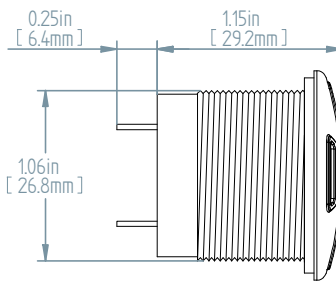
RING



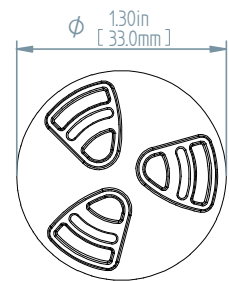
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09



# TXW-86-515-Q(F)



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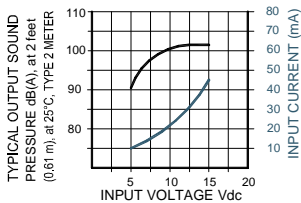
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-515-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

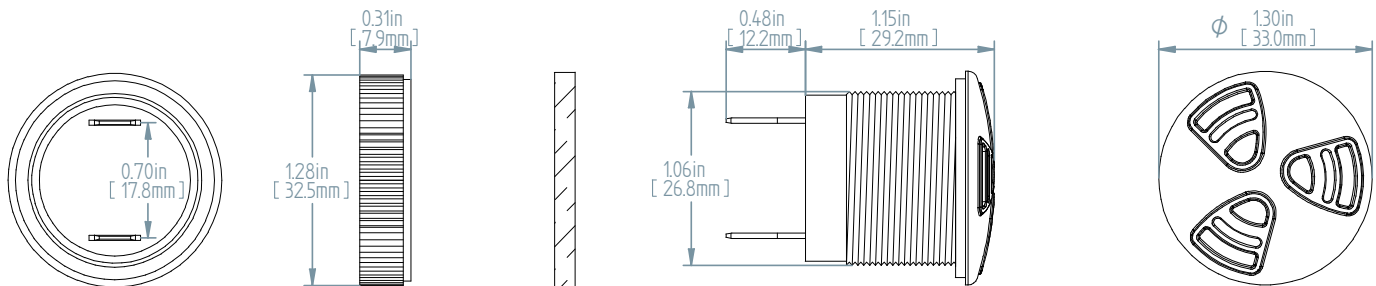
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXW-86-515-Q(S)



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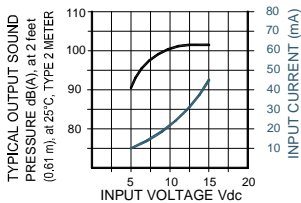
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-515-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

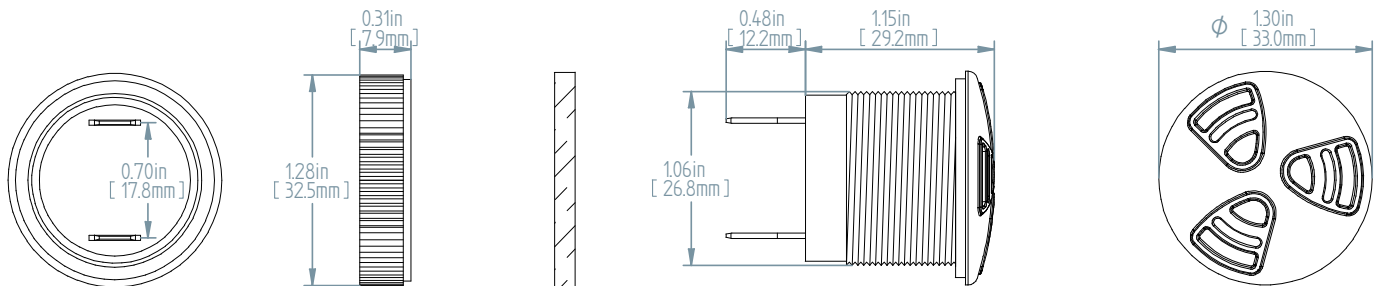
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXW-86-515-S(F)



**Made in  
USA**



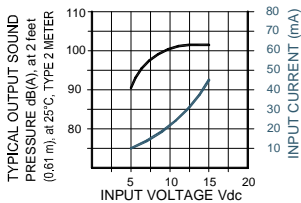
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-515-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Warble Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** Low Frequency— 2600±250 Hz  
 High Frequency— 2900±250 Hz  
 3±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

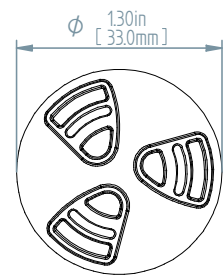
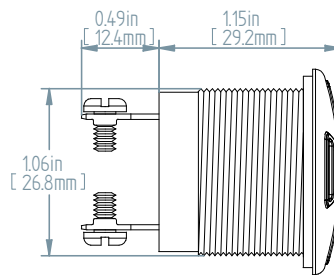
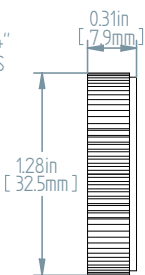
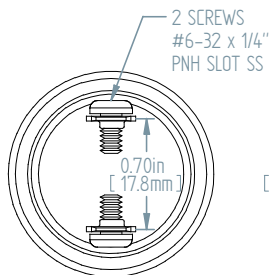
REAR

RING

GASKET

SIDE

FRONT



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# TXW-86-515-S(S)

Made in  
USA



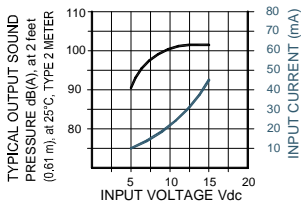
- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-515-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

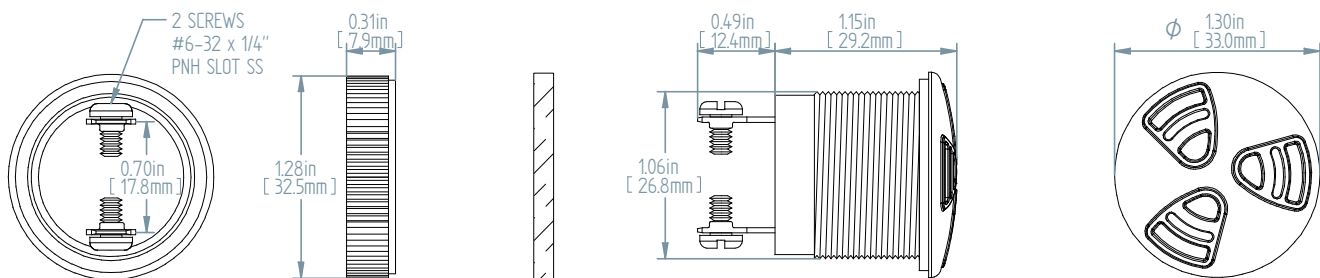
REAR

RING

GASKET

SIDE

FRONT



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# TXW-86-515-W(F)



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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

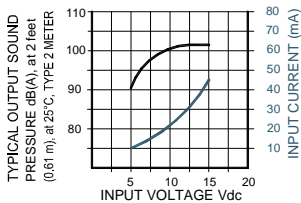
The Turbo TXW-86-515-W(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

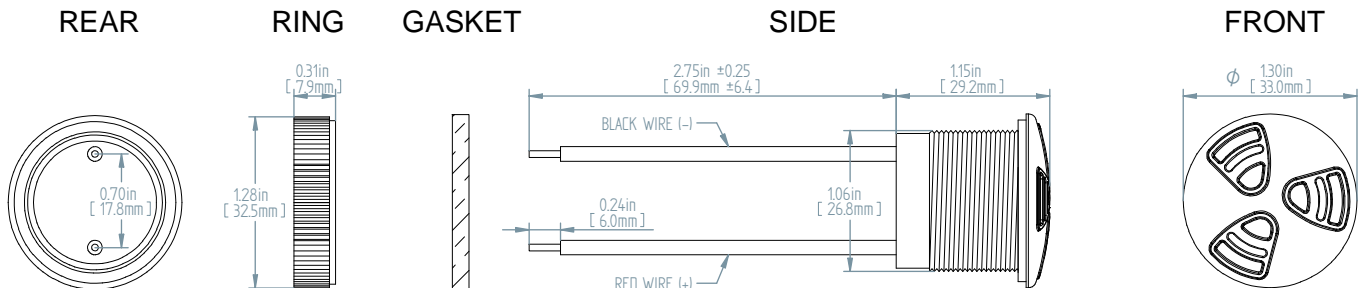
**Operating Mode:** Extra Loud Warble Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TXW-86-515-W(S)

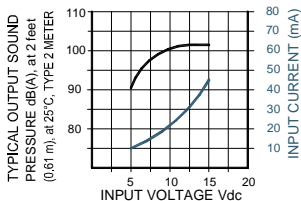


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- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



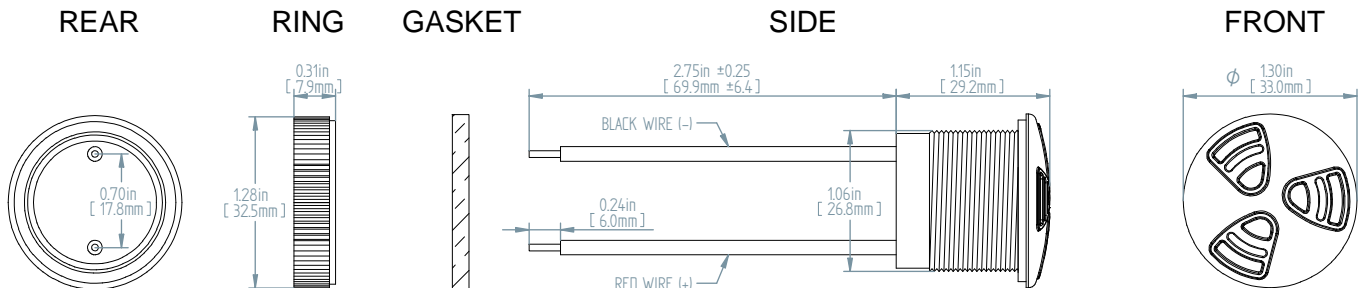
The Turbo TXW-86-515-W(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Warble Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 9.09**

# TXW-86-530-Q(F)



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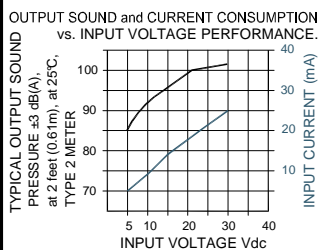


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-530-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

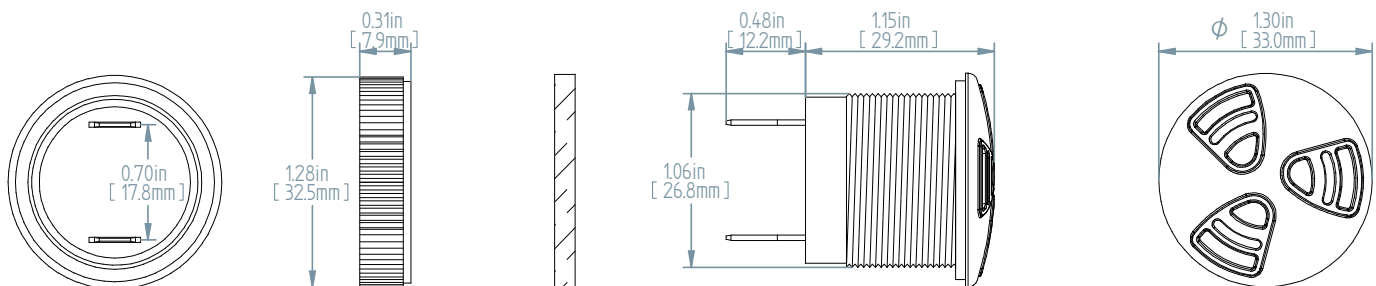
REAR

RING

GASKET

SIDE

FRONT



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# TXW-86-530-Q(S)



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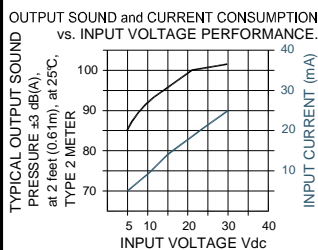


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-86-530-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

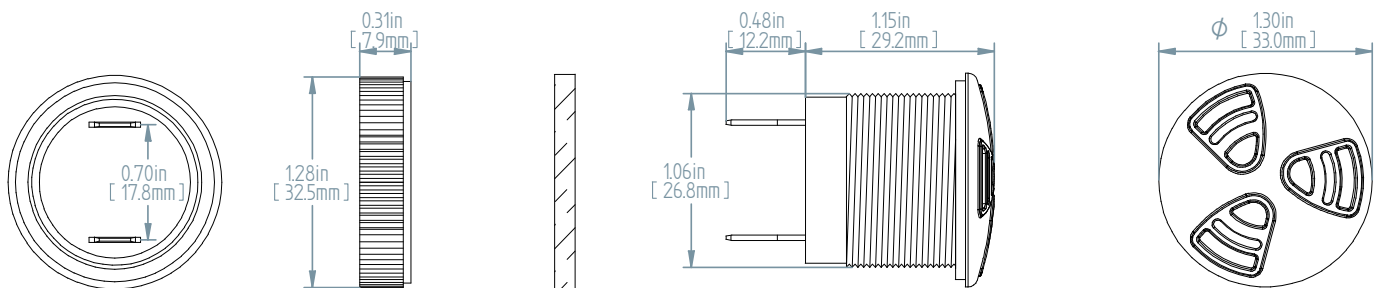
REAR

RING

GASKET

SIDE

FRONT



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# TXW-86-530-S(F)



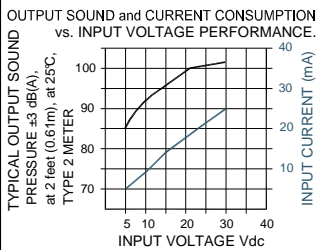
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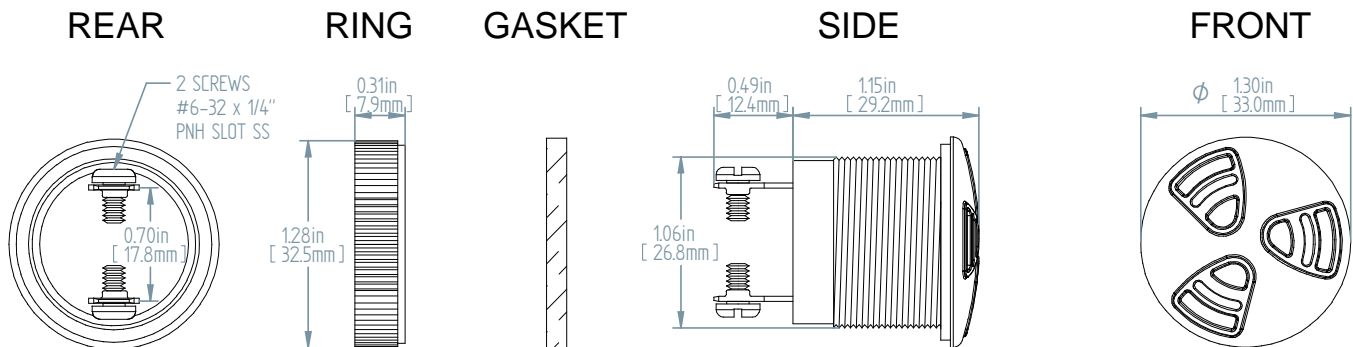
- Patent-Pending Revolutionary Turbo Design
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- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



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Revision: 9.09

# TXW-86-530-S(S)



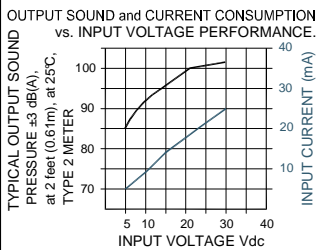
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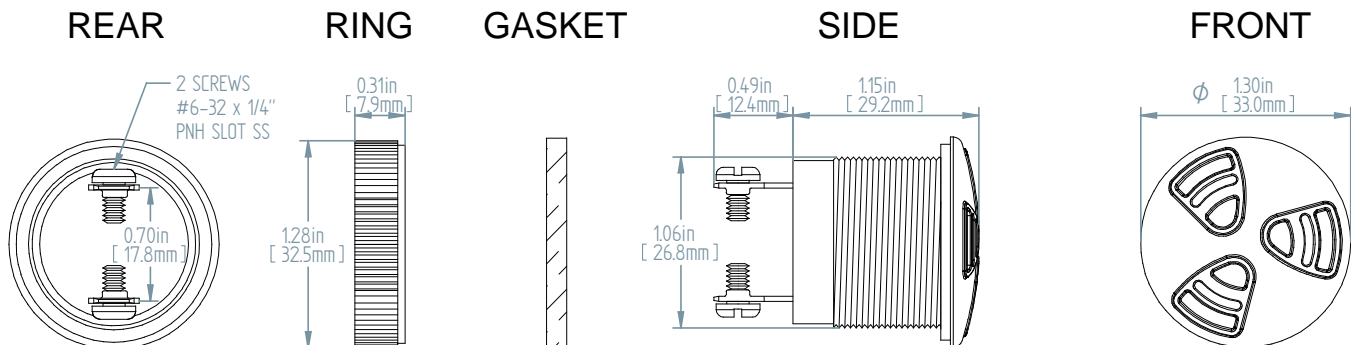
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## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09



# TXW-V86-515-P(F)



**Made in  
USA**



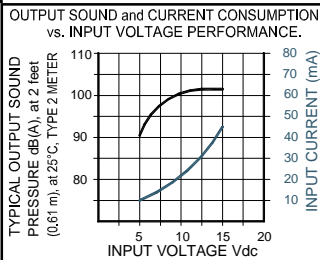
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-P(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

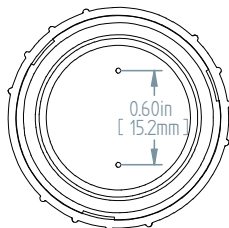
**Operating Mode:** Extra Loud Warble Tone  
**Operating Voltage:** 5-15 Vdc  
**Nominal Operating Voltage:** 15 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 10 mA at 5 Vdc  
 50 mA at 15 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene

**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

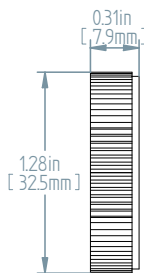


## DIMENSIONS

REAR



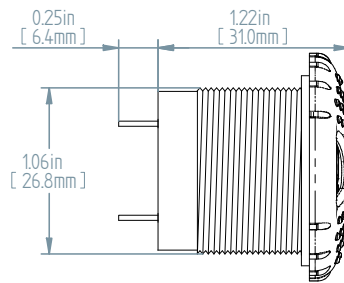
RING



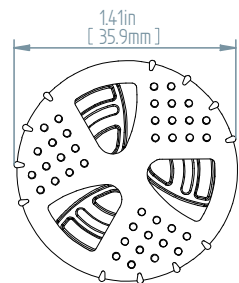
GASKET



SIDE



FRONT



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# TXW-V86-515-P(S)



**Made in  
USA**



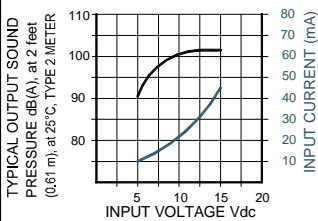
- Patented Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-P(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

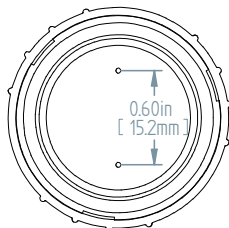
<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

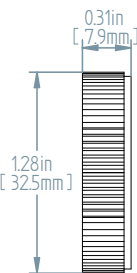


## DIMENSIONS

REAR



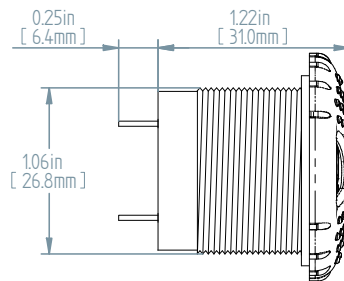
RING



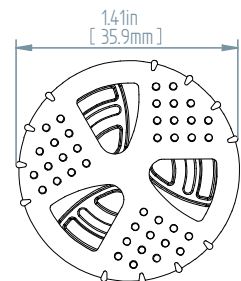
GASKET



SIDE



FRONT



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# TXW-V86-515-Q(F)



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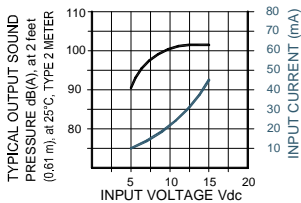
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

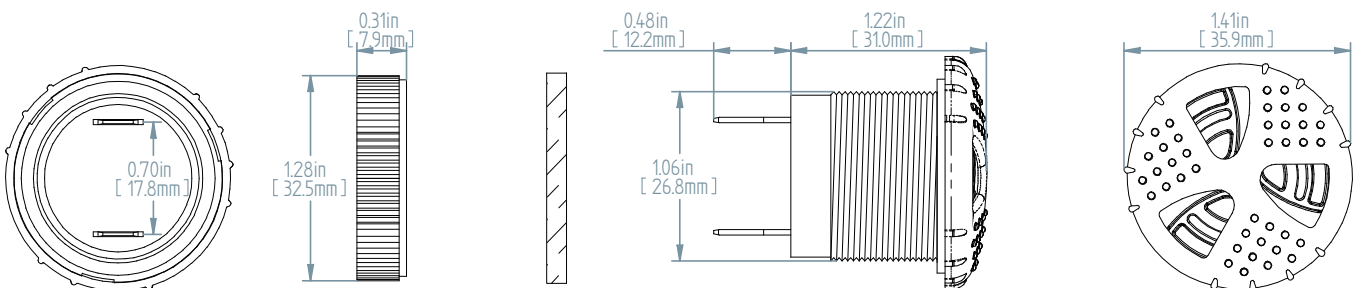
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TXW-V86-515-Q(S)



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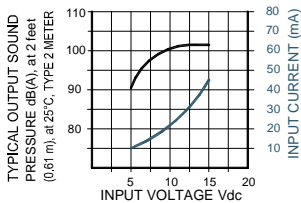
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15Vdc. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

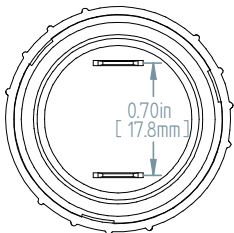
<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

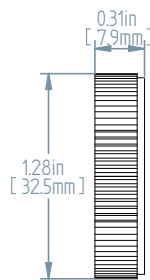


## DIMENSIONS

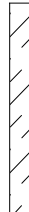
REAR



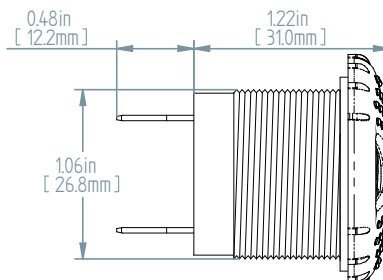
RING



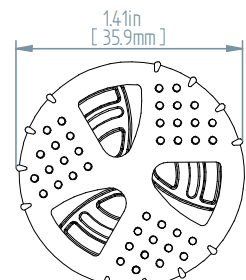
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TXW-V86-515-S(F)



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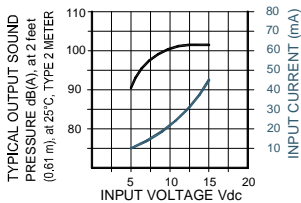
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

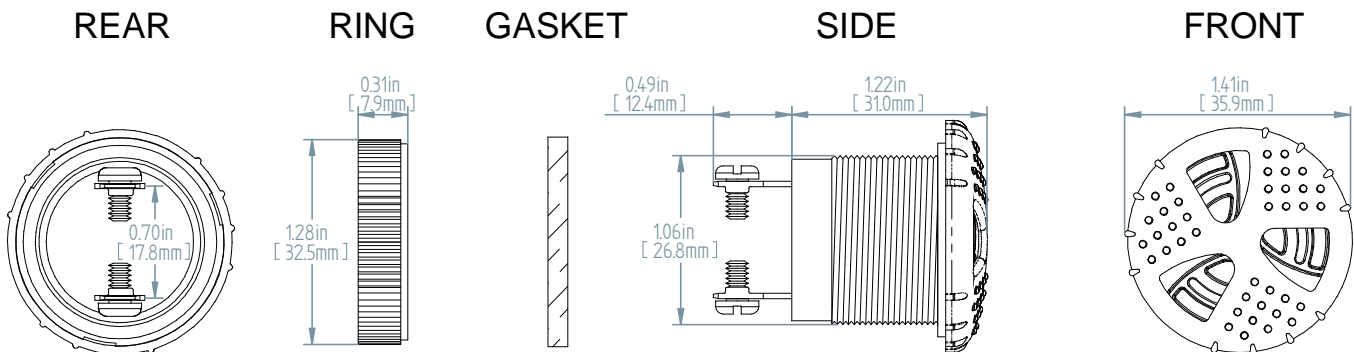
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



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# TXW-V86-515-S(S)



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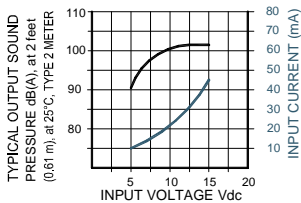
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS

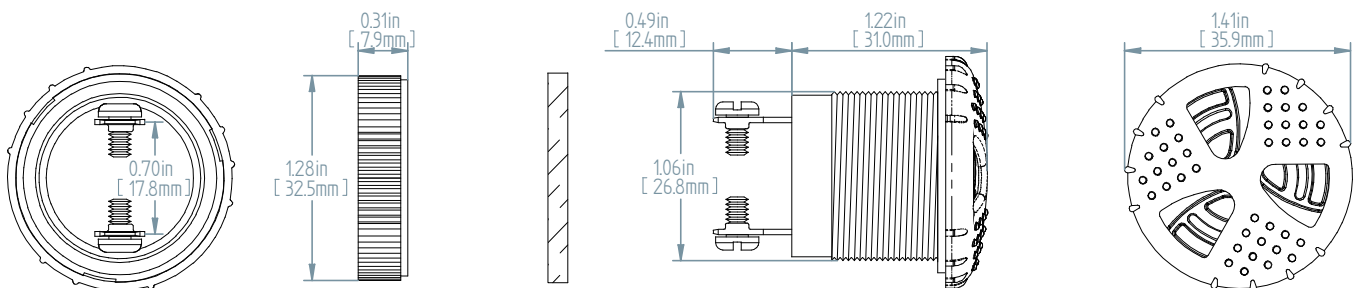
REAR

RING

GASKET

SIDE

FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TXW-V86-515-W(F)



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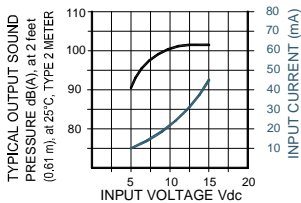
- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-515-W(F) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

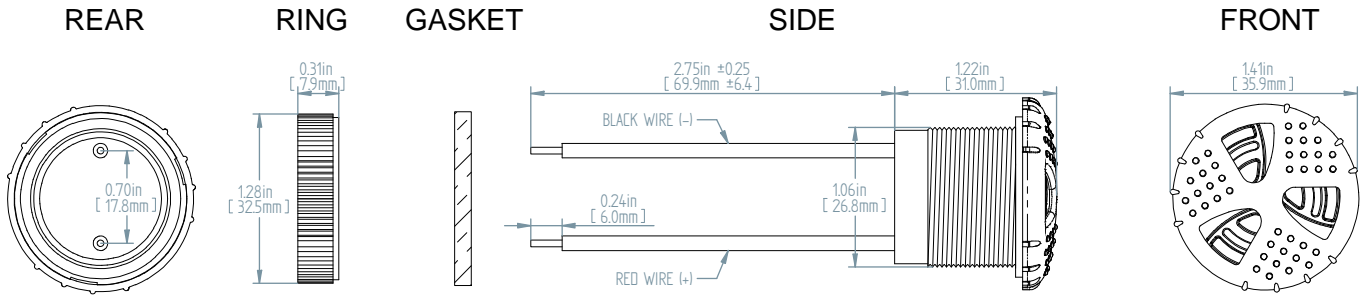
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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Revision: 9.09

# TXW-V86-515-W(S)

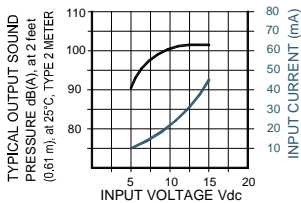


**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

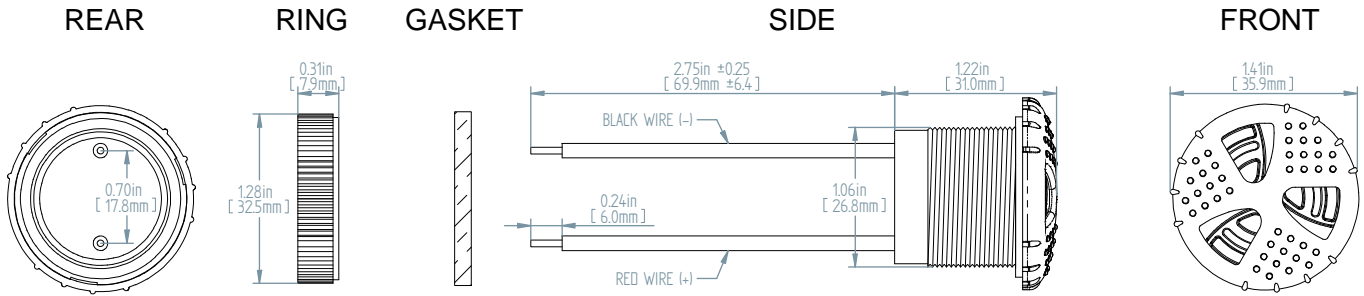


The Turbo TXW-V86-515-W(S) is an extra loud output, panel mounted alarm for operating voltages of 5-15VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	10 mA at 5 Vdc 50 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

# TXW-V86-530-Q(F)



**Made in  
USA**

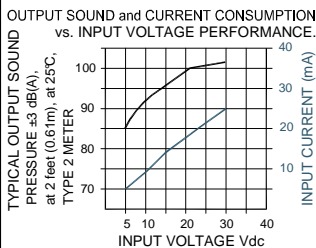


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-530-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

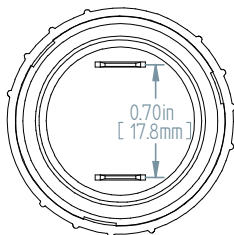
## SPECIFICATIONS

**Operating Mode:** Extra Loud Warble Tone  
**Operating Voltage:** 5-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Cycles per second  
**Typical Operating Current:** 5 mA at 5 Vdc  
 25 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene  
**Environmental Durability:** ASTM B117 Certified- Withstands exposure to salt spray for 300 hours  
 IP 68 Certified- Withstands water submergence and dust exposure  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

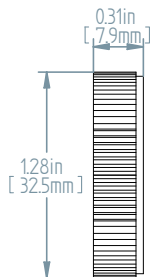


## DIMENSIONS

REAR



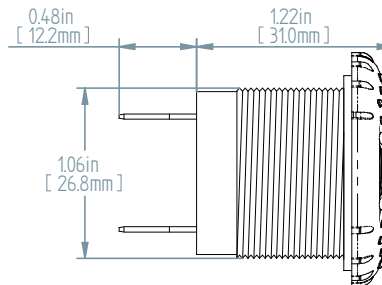
RING



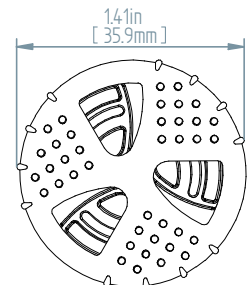
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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# TXW-V86-530-Q(S)



**Made in  
USA**

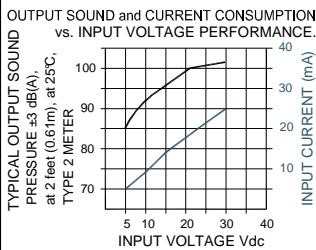


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

The Turbo TXW-V86-530-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

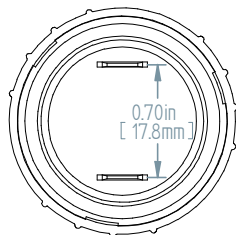
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

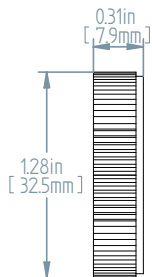


## DIMENSIONS

REAR



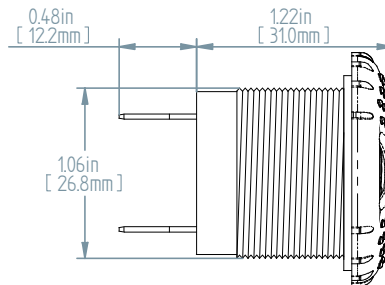
RING



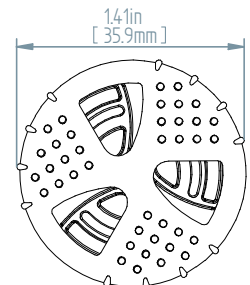
GASKET



SIDE



FRONT



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09



# TXW-V86-530-S(F)



**Made in  
USA**

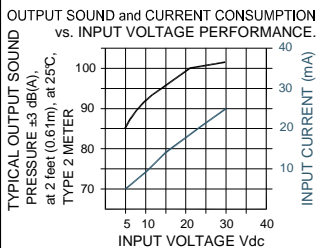


- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

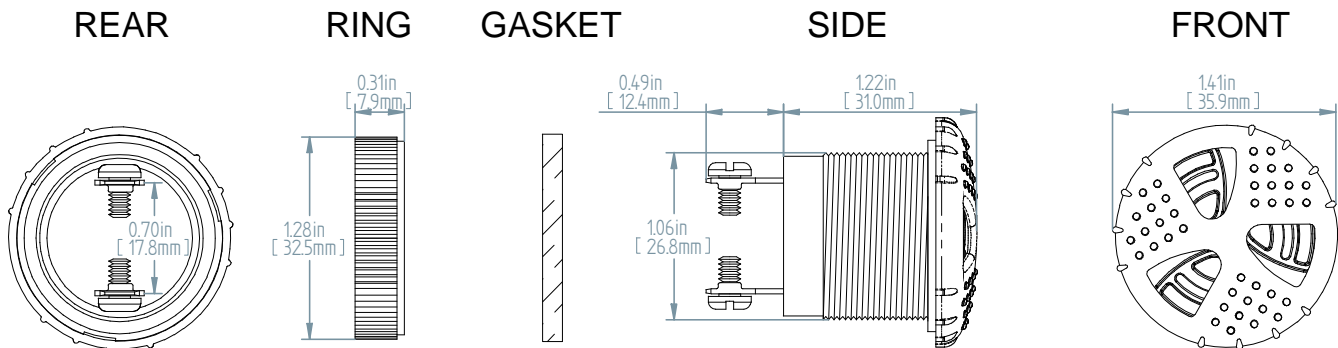
The Turbo TXW-V86-530-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C
<b>Storage Temperature:</b>	-40°C to +85°C
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 9.09

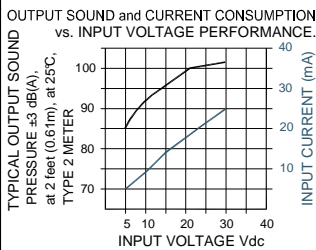
# TXW-V86-530-S(S)



**Made in  
USA**



- Patent-Pending Revolutionary Turbo Design
- Tamper Resistant Front-Mounting Case with Threaded Attachment Ring
- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology

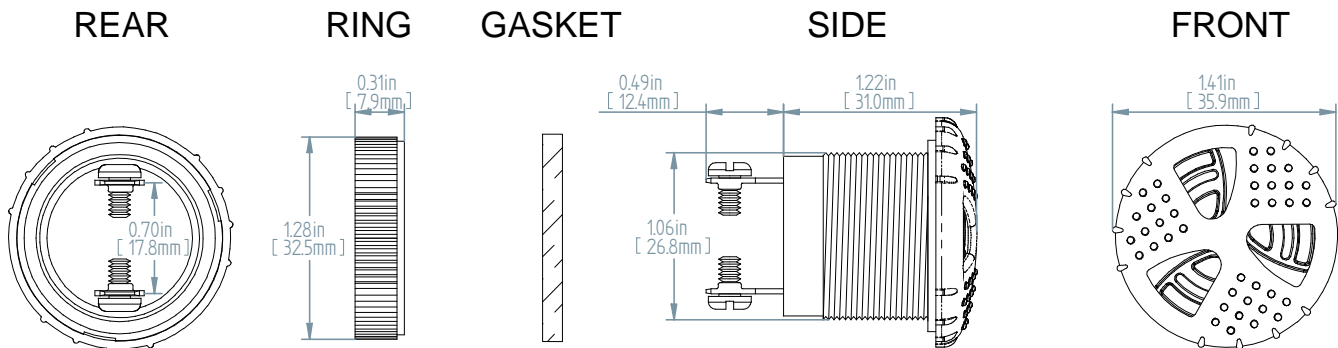


The Turbo TXW-V86-530-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-30VDC. The Turbo design features a tamper resistant front-mounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Warble Tone
<b>Operating Voltage:</b>	5-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900 $\pm$ 250 Hz. 1 $\pm$ 25% Cycles per second
<b>Typical Operating Current:</b>	5 mA at 5 Vdc 25 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified- Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

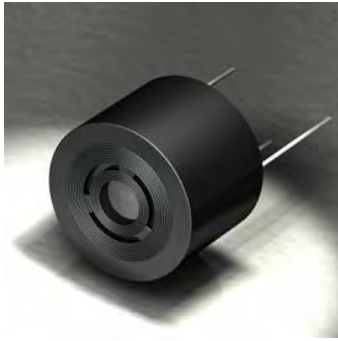
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Revision: 9.09

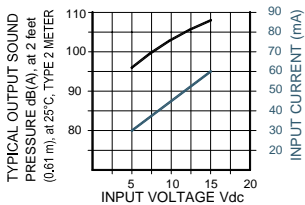
# UB-05-515-P(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- PCB Mountable
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

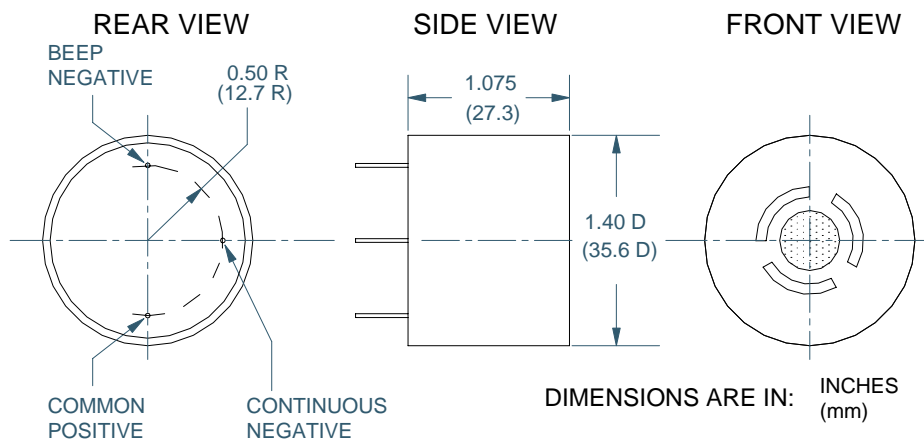


The UB-05-515-P(F)D is an ultra loud output, PCB mounted alarm for operating voltages of 5-15VDC. The alarm functions as a fast beep tone and as a continuous tone. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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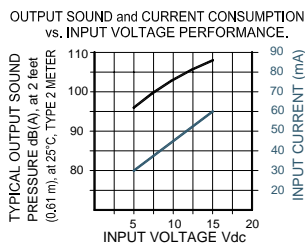
Revision: 2.07

# UB-09-515-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



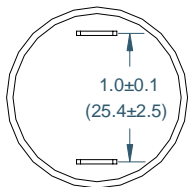
The UB-09-515-Q(F) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

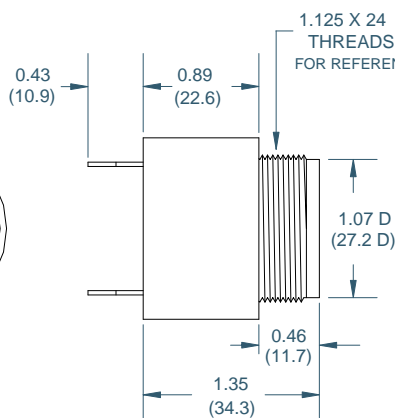
<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

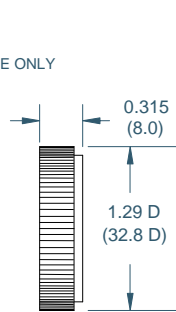
REAR VIEW



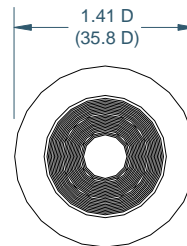
SIDE VIEW



RING

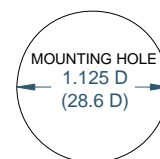


FRONT VIEW



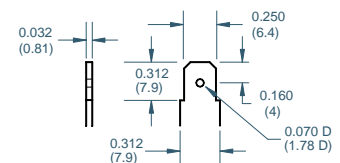
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



 **Floyd Bell Inc**  
An ISO 9001:2000 Registered Company

720 Dearborn Park Lane • Columbus, OH 43085  
Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
www.floydbell.com

Revision: 2.07

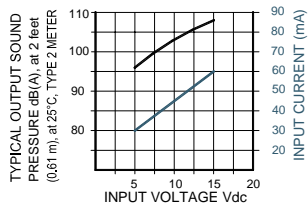
# UB-09-515-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

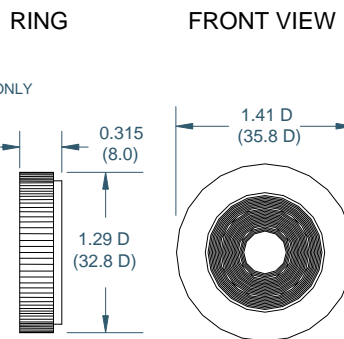
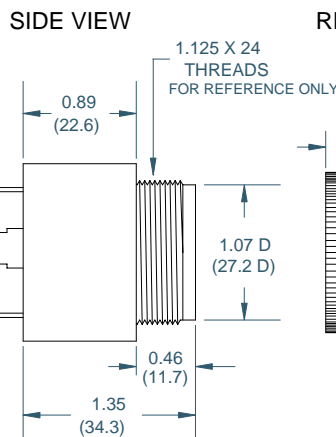
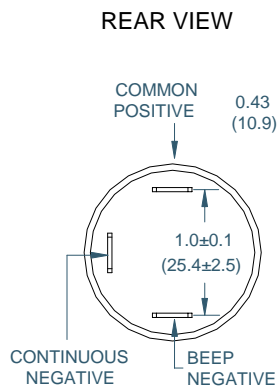


The UB-09-515-Q(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a fast beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

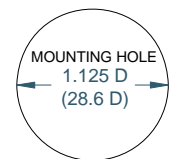
<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

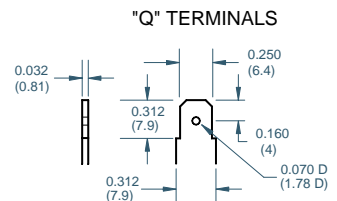


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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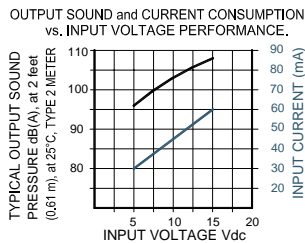


# UB-09-515-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



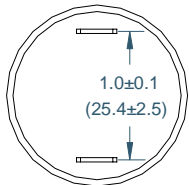
The UB-09-515-Q(S) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

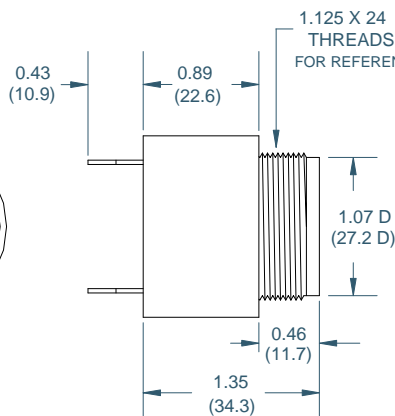
<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

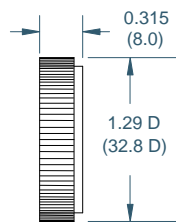
REAR VIEW



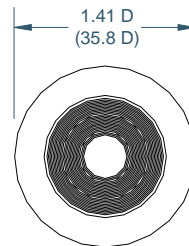
SIDE VIEW



RING

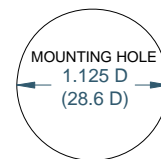


FRONT VIEW



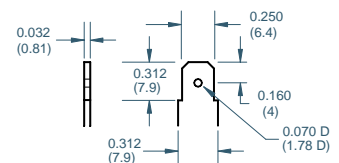
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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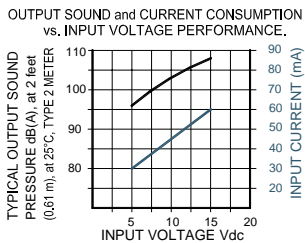
**Revision: 2.07**

# UB-09-515-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

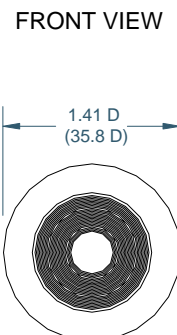
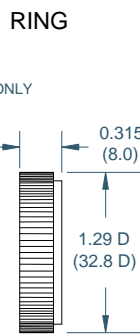
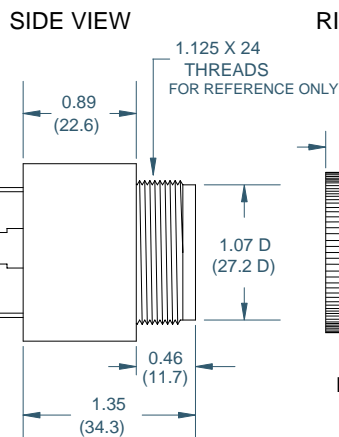
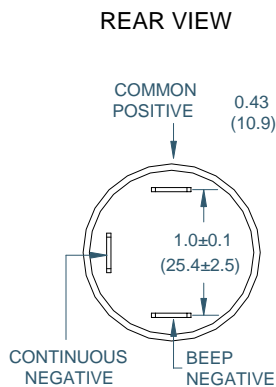


The UB-09-515-Q(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a slow beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

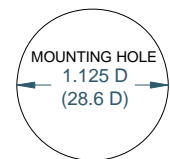
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

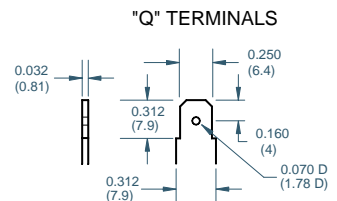
## DIMENSIONS



## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

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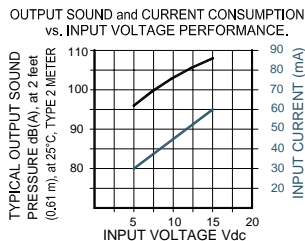
**Revision: 2.07**

# UB-09-515-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

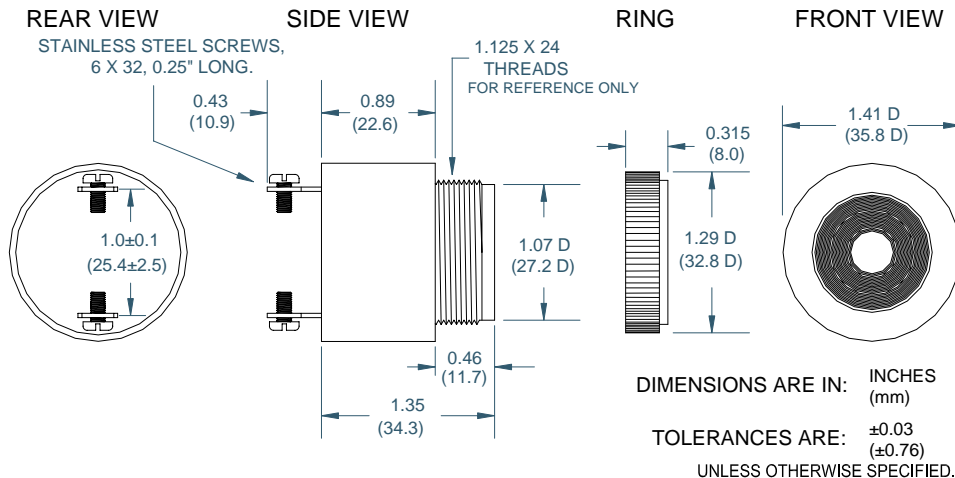


The UB-09-515-S(F) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

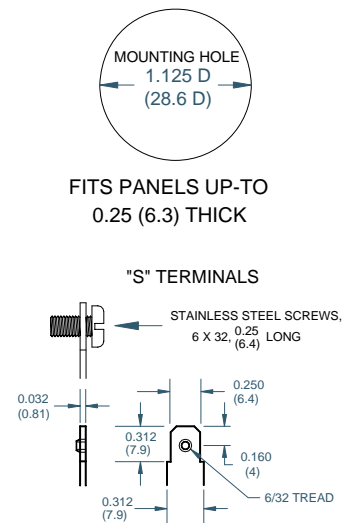
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
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<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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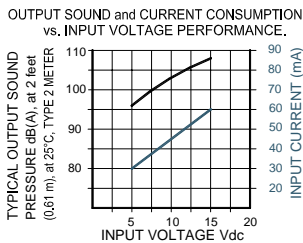
**Revision: 2.07**

# UB-09-515-S(F)D

**Made in  
USA**



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- Epoxy Encapsulated Electronics
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- Reliable Piezoelectric Technology
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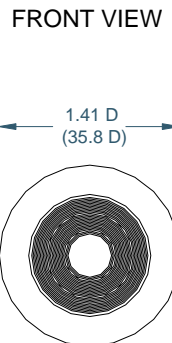
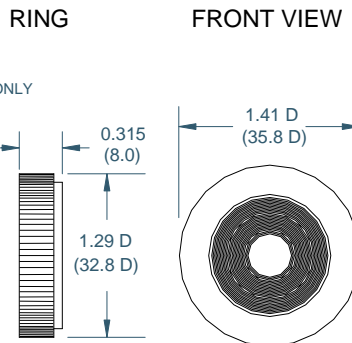
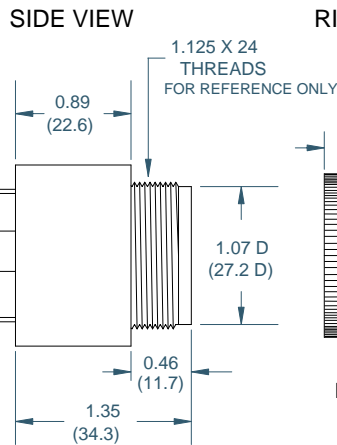
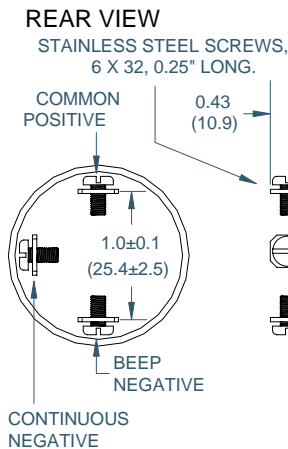


The UB-09-515-S(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a fast beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

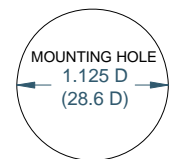
<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



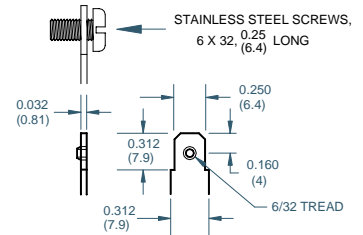
DIMENSIONS ARE IN: INCHES (mm)  
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UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 2.07**



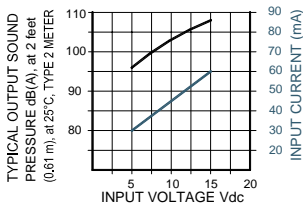
# UB-09-515-S(S)

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- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UB-09-515-S(S) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

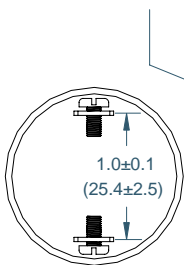
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
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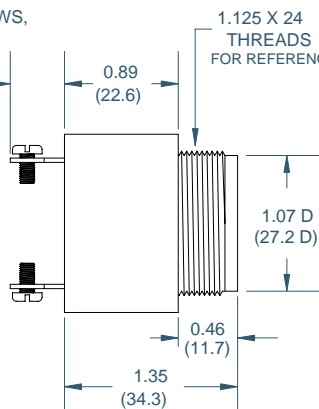
## DIMENSIONS

### REAR VIEW

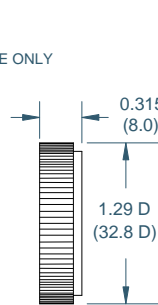
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



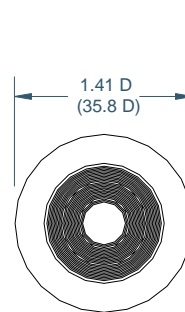
### SIDE VIEW



### RING

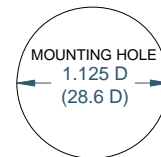


### FRONT VIEW



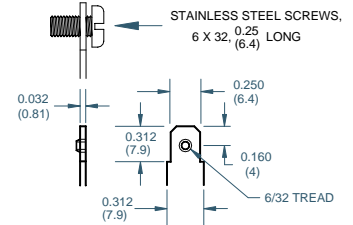
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



**Floyd Bell Inc**  
An ISO 9001:2000 Registered Company

720 Dearborn Park Lane • Columbus, OH 43085  
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www.floydbell.com

**Revision: 2.07**



# UB-09-515-S(S)D

**Made in  
USA**



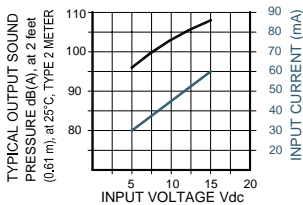
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

The UB-09-515-S(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a slow beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

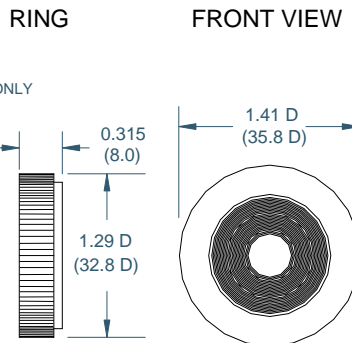
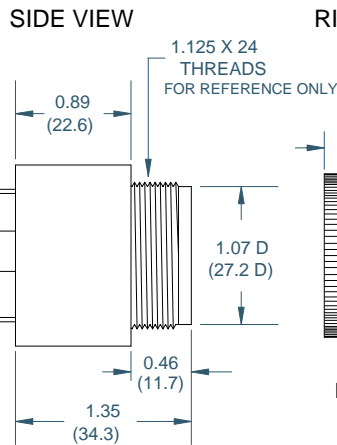
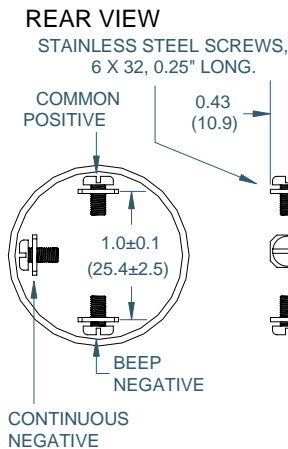
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

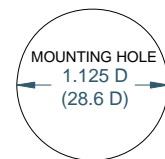


## DIMENSIONS



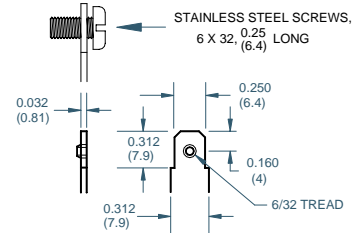
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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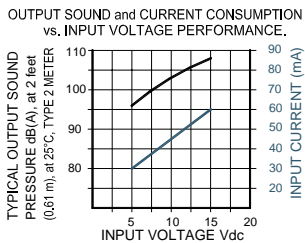
**Revision: 2.07**

# UB-09-515-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UB-09-515-W(F) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

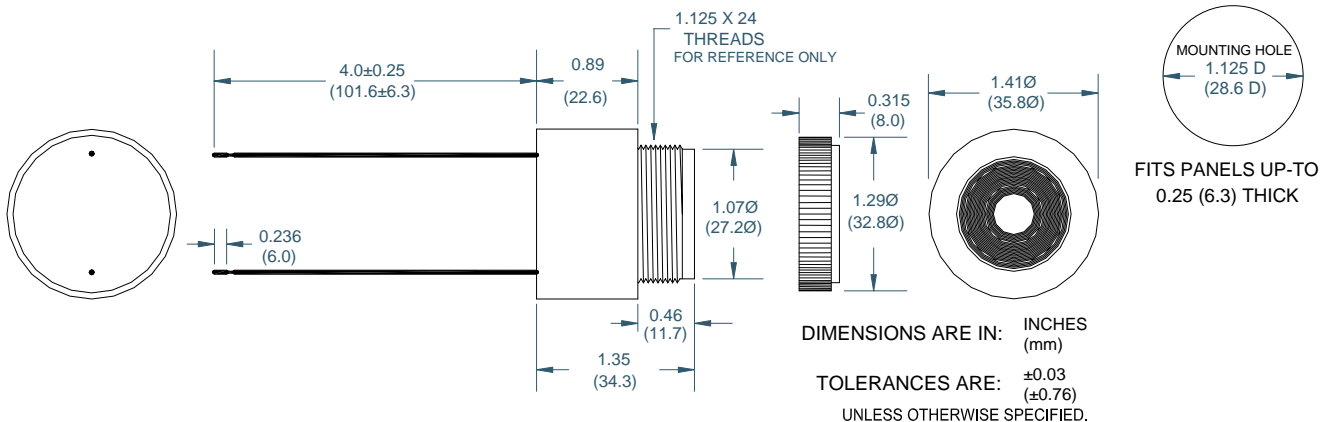
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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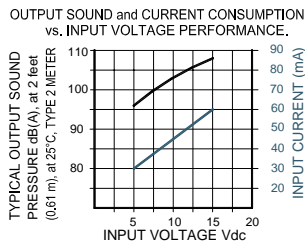
Revision: 2.07

# UB-09-515-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UB-09-515-W(S) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

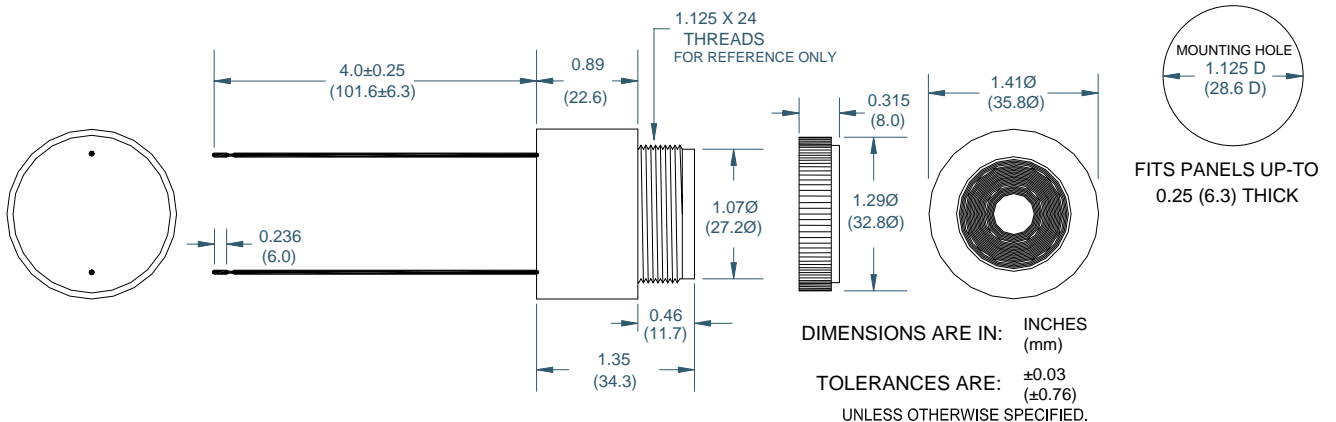
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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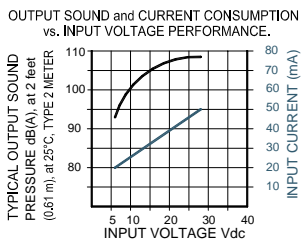
Revision: 2.07

# UB-09-628-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



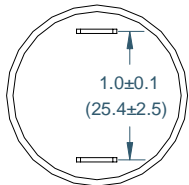
The UB-09-628-Q(F) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

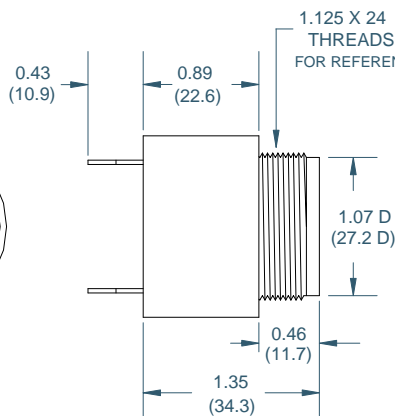
<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

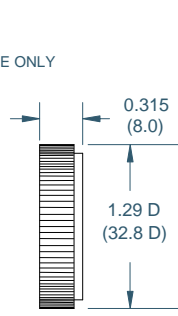
REAR VIEW



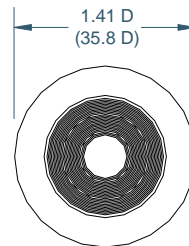
SIDE VIEW



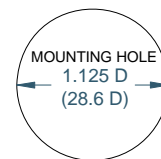
RING



FRONT VIEW

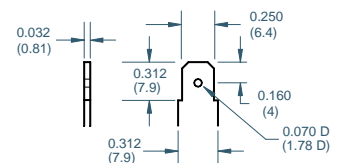


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

# UB-09-628-Q(F)D

**Made in  
USA**

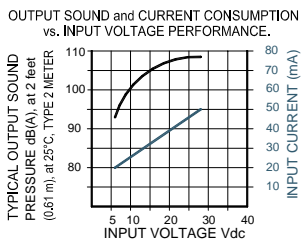


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

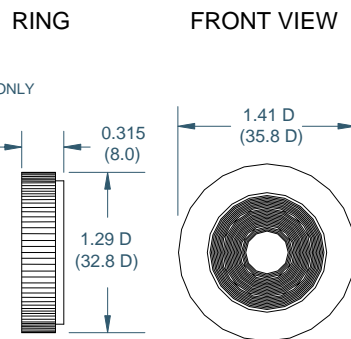
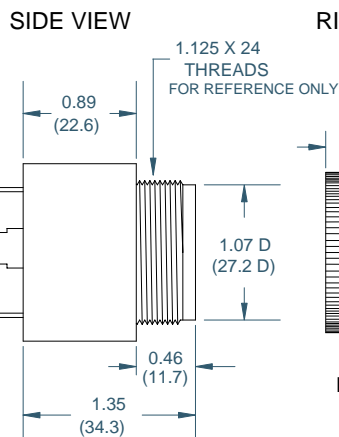
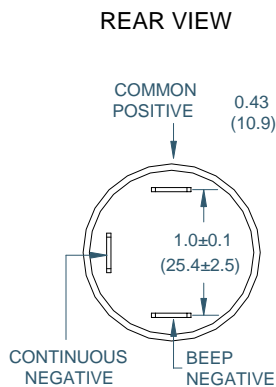
The UB-09-628-Q(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a fast beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

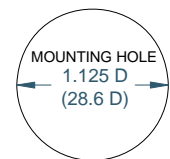


DIMENSIONS ARE IN: INCHES (mm)

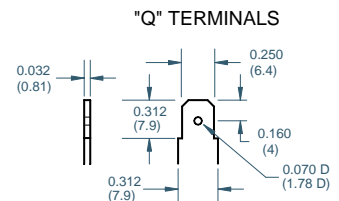
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UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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**Revision: 2.07**

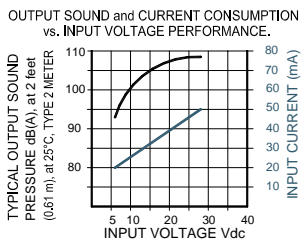


# UB-09-628-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



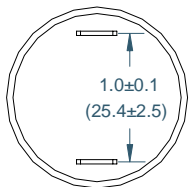
The UB-09-628-Q(S) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

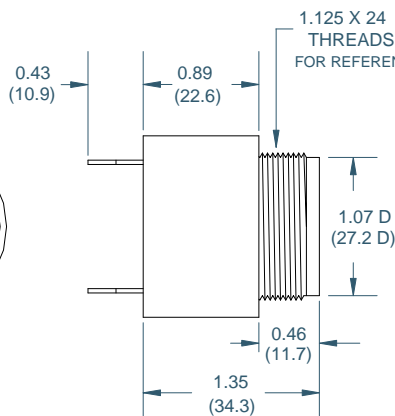
<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
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<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

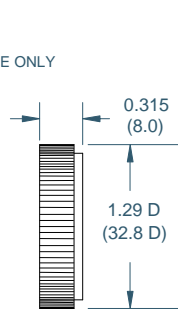
REAR VIEW



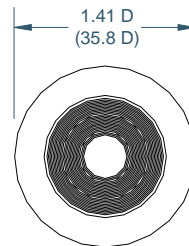
SIDE VIEW



RING

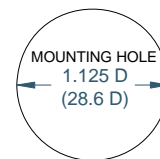


FRONT VIEW



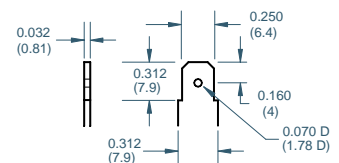
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

# UB-09-628-Q(S)D

**Made in  
USA**

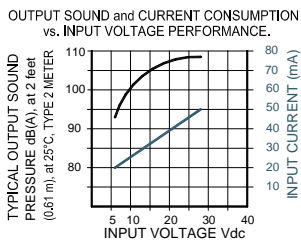


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

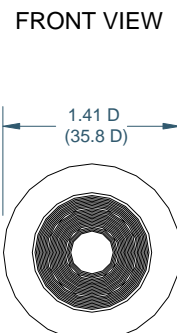
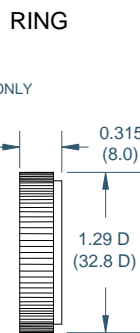
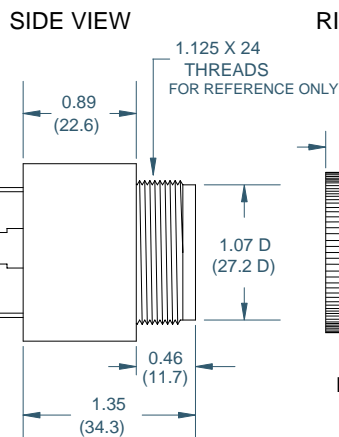
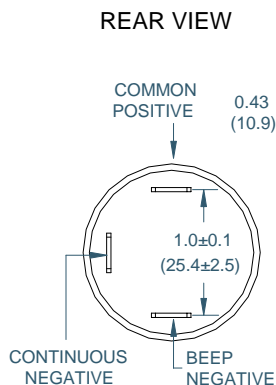
The UB-09-628-Q(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a slow beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

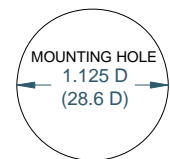
<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

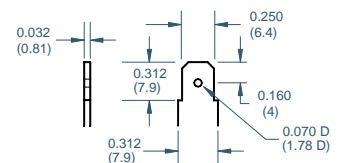


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

UNLESS OTHERWISE SPECIFIED.

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www.floydbell.com

**Revision: 2.07**

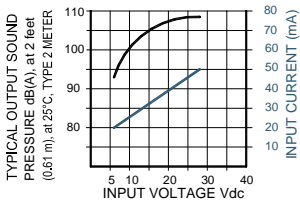
# UB-09-628-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UB-09-628-S(F) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

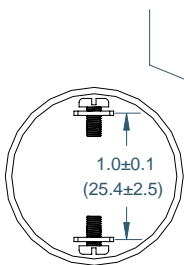
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

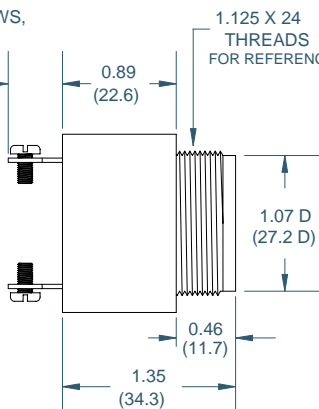
## DIMENSIONS

### REAR VIEW

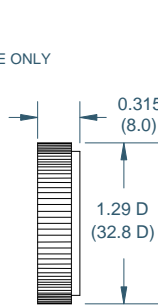
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



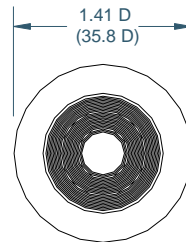
### SIDE VIEW



### RING

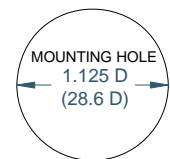


### FRONT VIEW



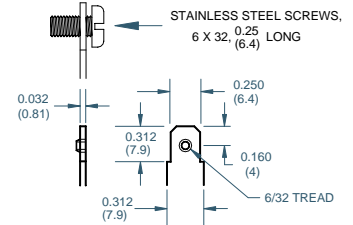
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 2.07**

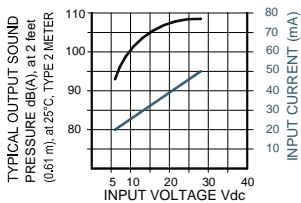
# UB-09-628-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

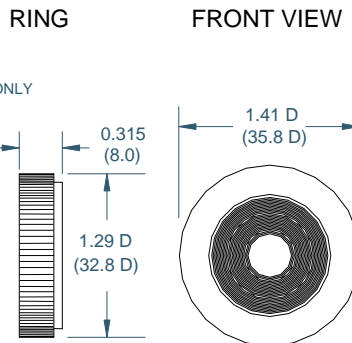
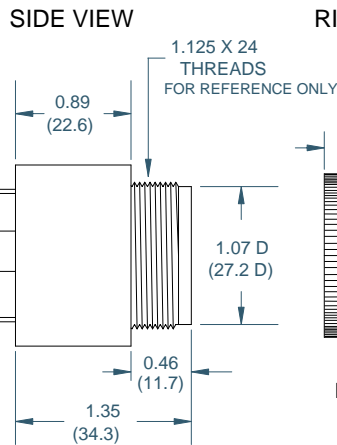
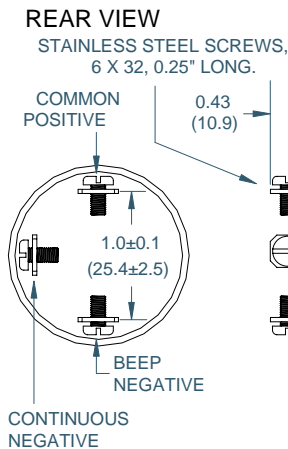


The UB-09-628-S(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a fast beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

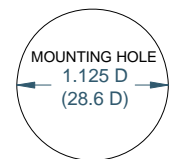


DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

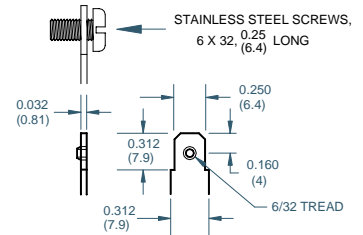
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 2.07**



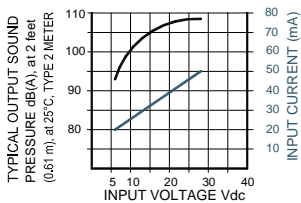
# UB-09-628-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UB-09-628-S(S) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

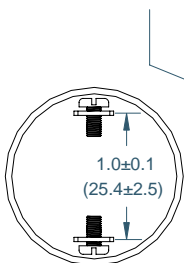
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

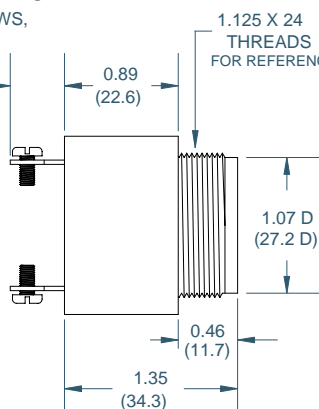
## DIMENSIONS

### REAR VIEW

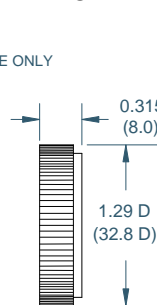
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



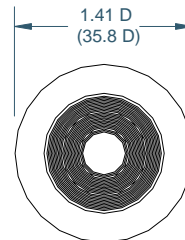
### SIDE VIEW



### RING

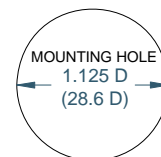


### FRONT VIEW



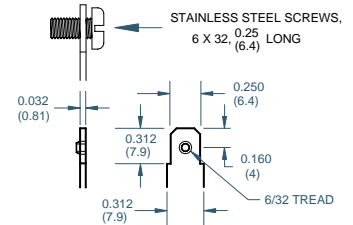
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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Revision: 2.07



# UB-09-628-S(S)D

**Made in  
USA**

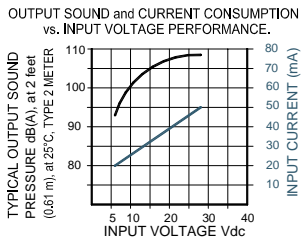


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

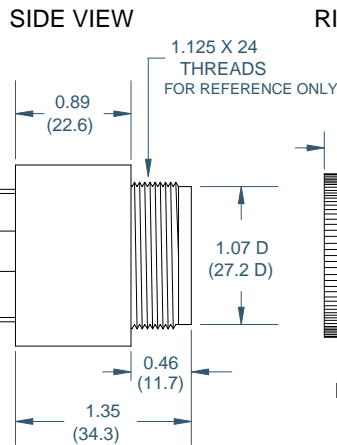
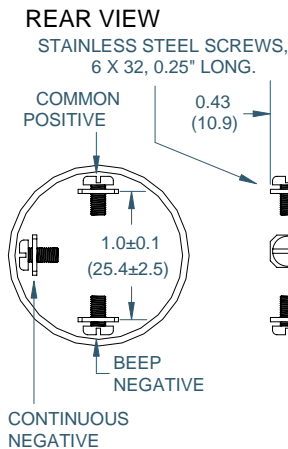
The UB-09-628-S(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a slow beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

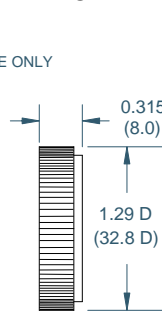
<b>Operating Mode:</b>	Ultra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



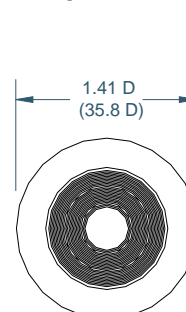
## DIMENSIONS



**RING**

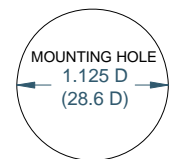


**FRONT VIEW**



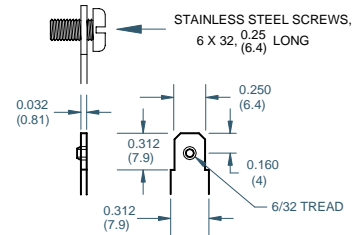
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

**"S" TERMINALS**



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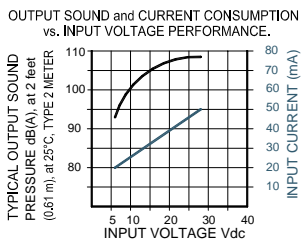
**Revision: 2.07**

# UB-09-628-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UB-09-628-W(F) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

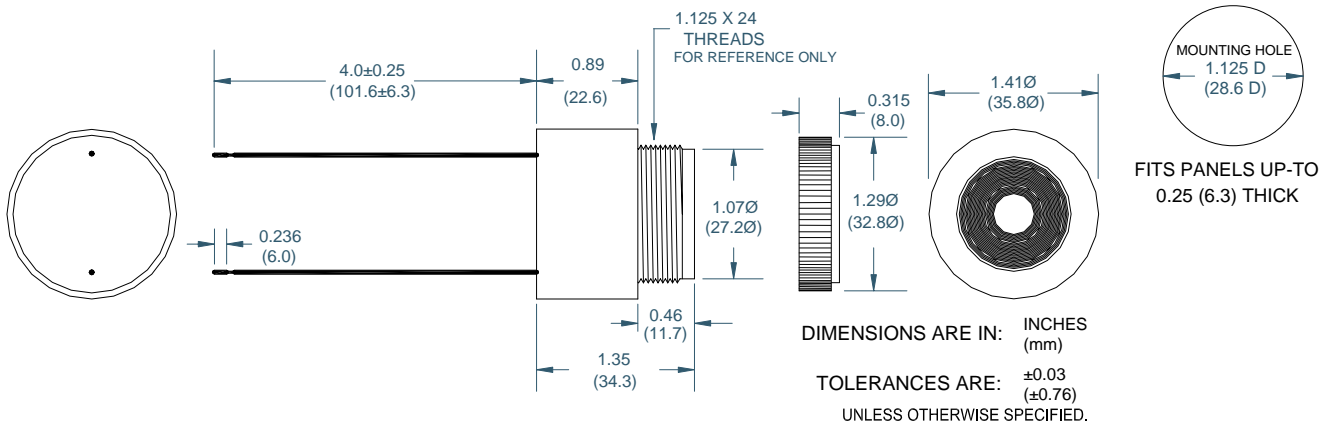
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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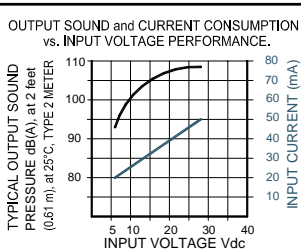
Revision: 2.07

# UB-09-628-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UB-09-628-W(S) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

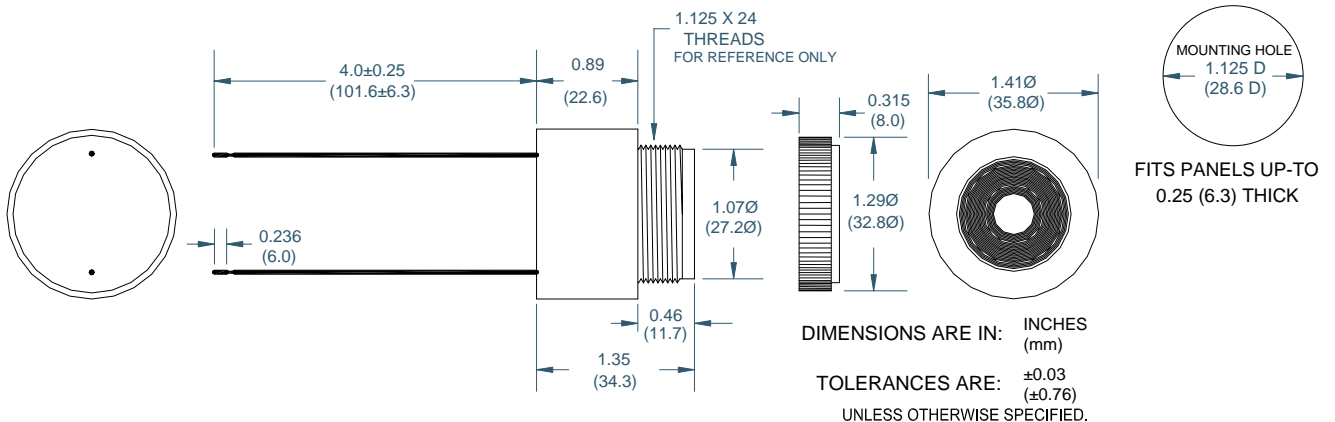
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07

# UB-19-230-Q(F)

**Made in  
USA**

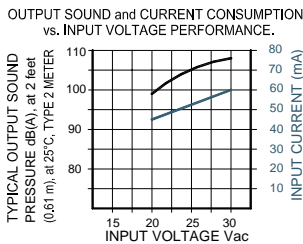


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

The UB-19-230-Q(F) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

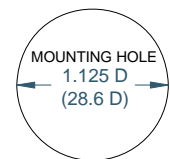
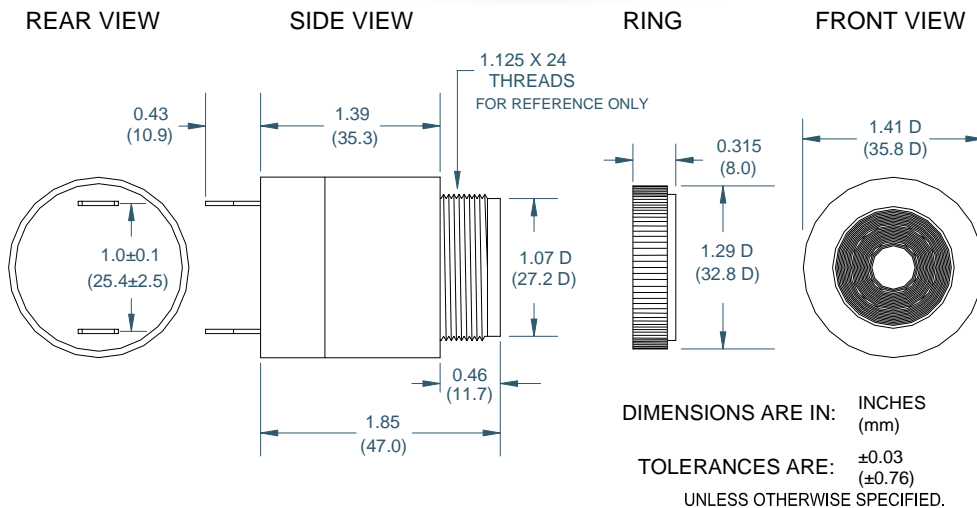
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	45 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

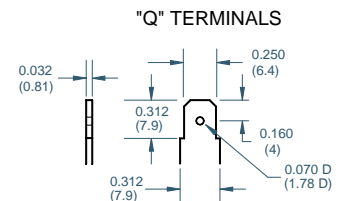


## DIMENSIONS

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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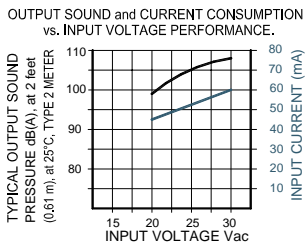
**Revision: 2.07**

# UB-19-230-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

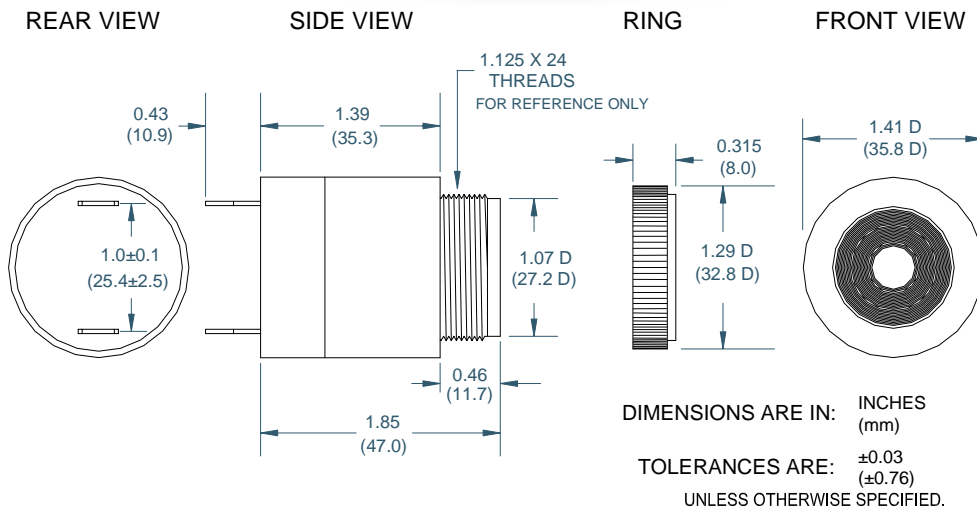


The UB-19-230-Q(S) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

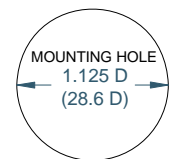
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	45 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

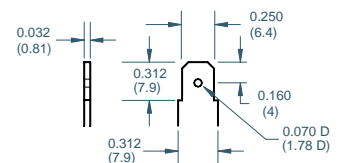


## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS



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**Revision: 2.07**



# UB-19-230-S(F)

**Made in  
USA**

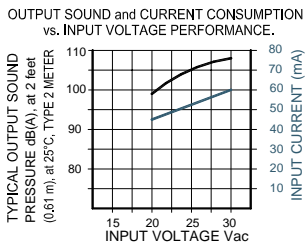


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

The UB-19-230-S(F) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. 3±25% Beeps per second
<b>Typical Operating Current:</b>	45 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

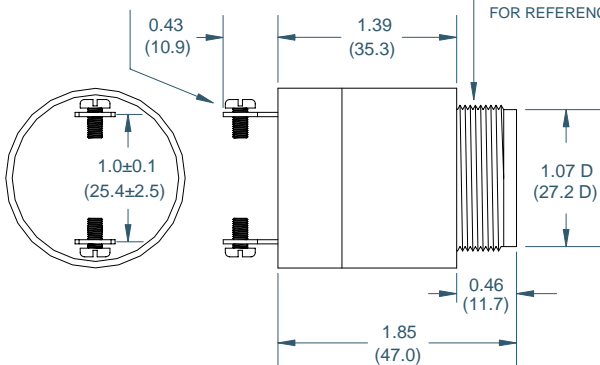


## DIMENSIONS

## PANEL MOUNTING

### REAR VIEW

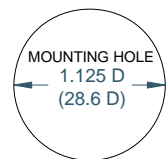
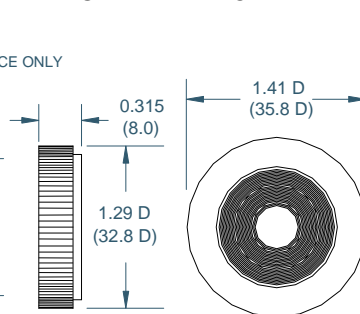
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



### SIDE VIEW

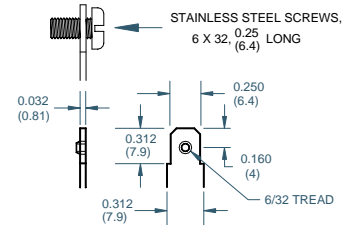
### RING

### FRONT VIEW



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

# UB-19-230-S(S)

**Made in  
USA**

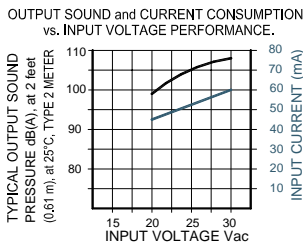


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

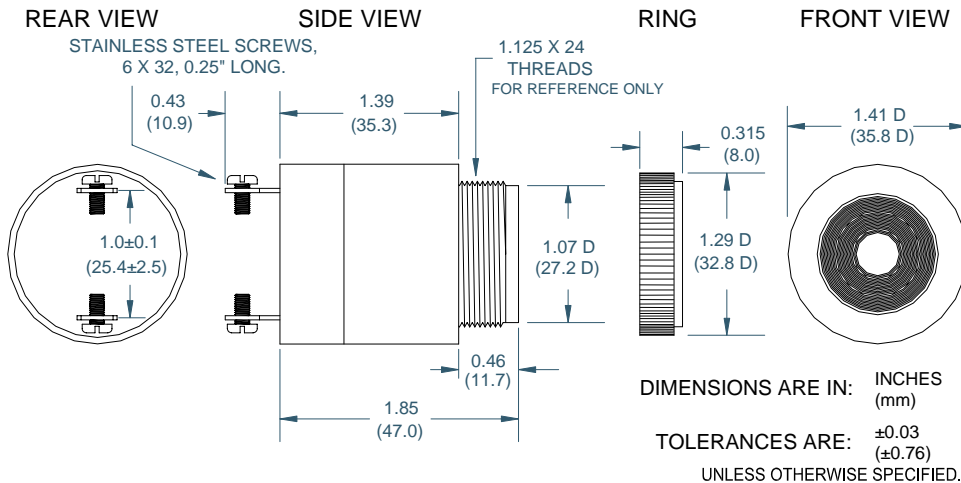
The UB-19-230-S(S) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

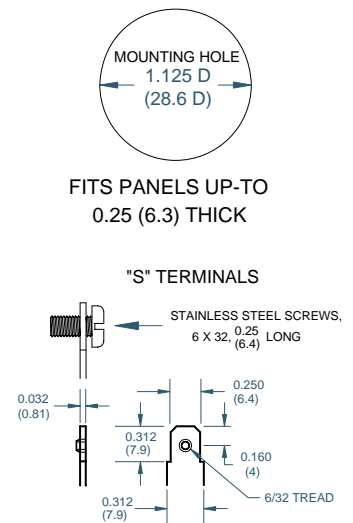
<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	45 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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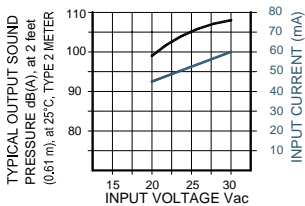
# UB-19-230-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UB-19-230-W(F) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The fast beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

**Operating Mode:** Ultra Loud Beep Tone  
**Operating Voltage:** 20-30 Vac/Vdc  
**Nominal Operating Voltage:** 30 Vac  
**Operating Frequency:** 2100±250 Hz.  
 3±25% Beeps per second  
**Typical Operating Current:** 45 mA at 20 Vac  
 60 mA at 30 Vac  
**Typical Sound Pressure:** 100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C  
 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

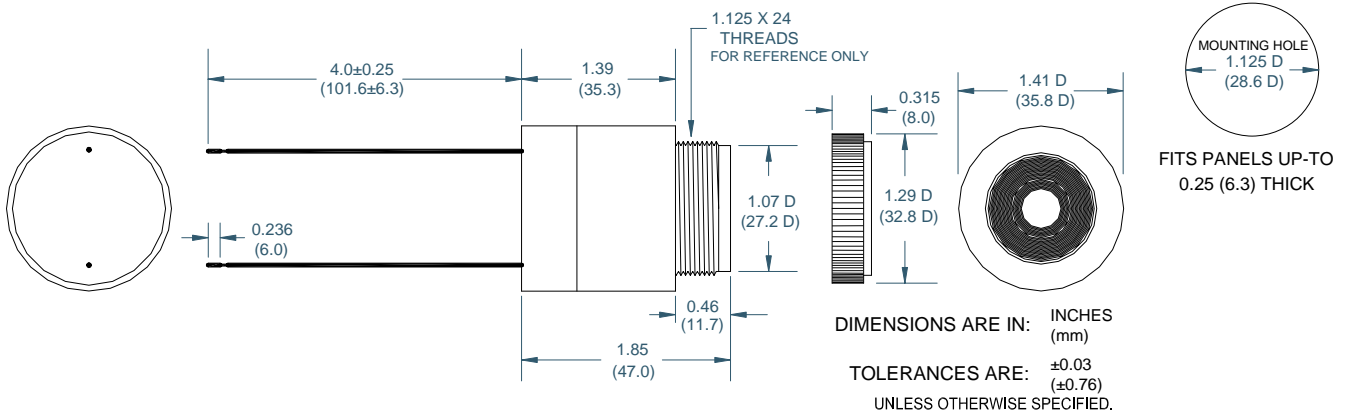
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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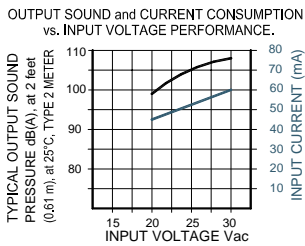
**Revision: 2.07**

# UB-19-230-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

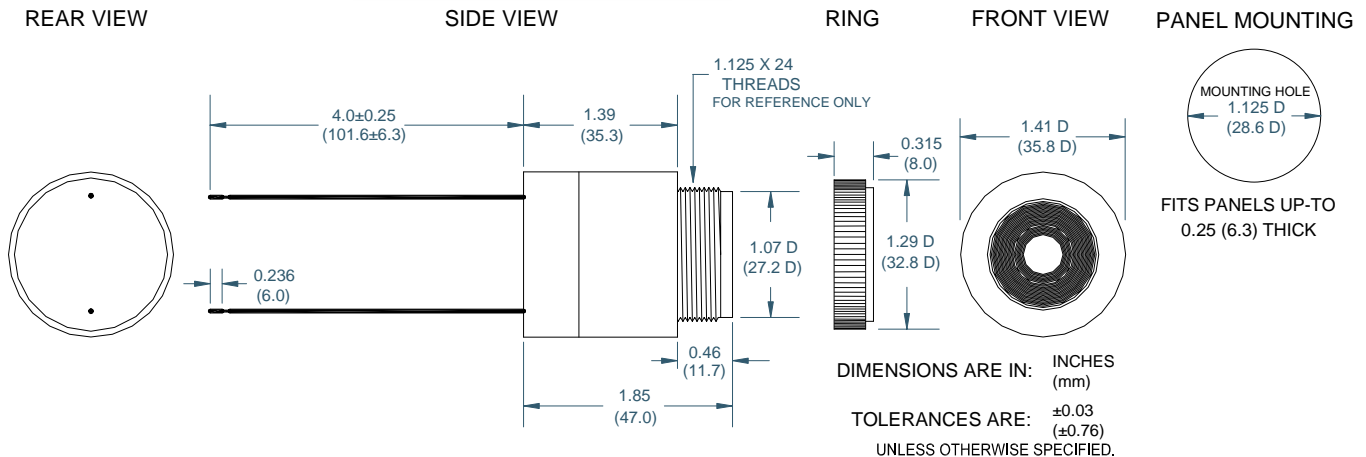


The UB-19-230-W(S) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The slow beep tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Beep Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. 1±25% Beeps per second
<b>Typical Operating Current:</b>	45 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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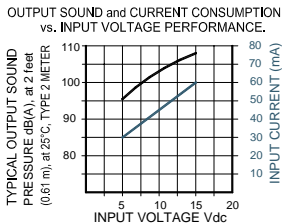
**Revision: 2.07**

# UC-09-515-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



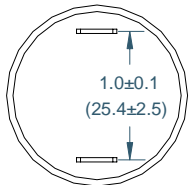
The UC-09-515-Q is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

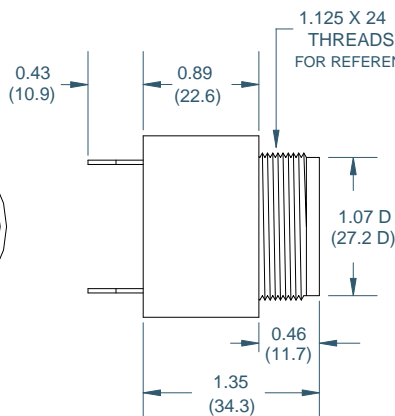
<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	96±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

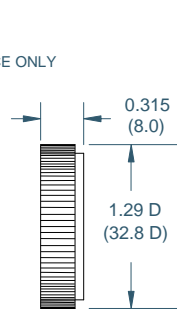
REAR VIEW



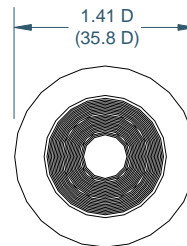
SIDE VIEW



RING



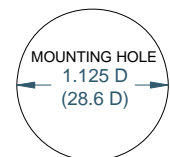
FRONT VIEW



DIMENSIONS ARE IN: INCHES (mm)

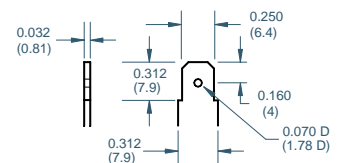
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



**Floyd Bell Inc**

An ISO 9001:2000 Registered Company

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Revision: 2.07

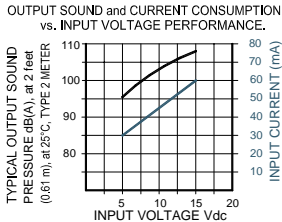


# UC-09-515-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UC-09-515-S is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

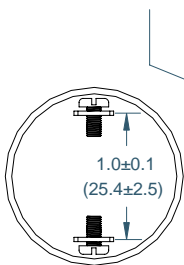
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	96±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

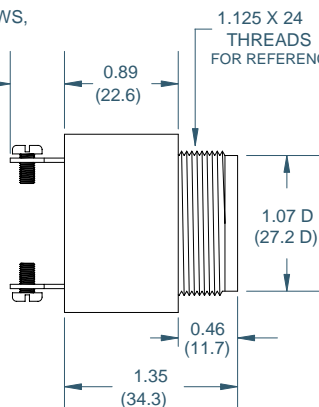
## DIMENSIONS

### REAR VIEW

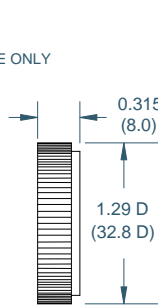
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



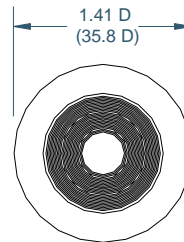
### SIDE VIEW



### RING

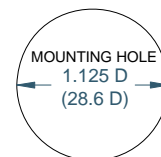


### FRONT VIEW



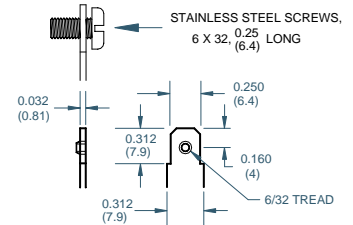
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 2.07**

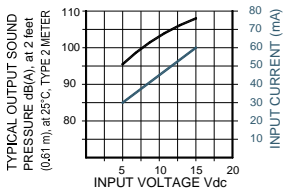
# UC-09-515-T

Made in  
USA

Image Not  
Available

- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

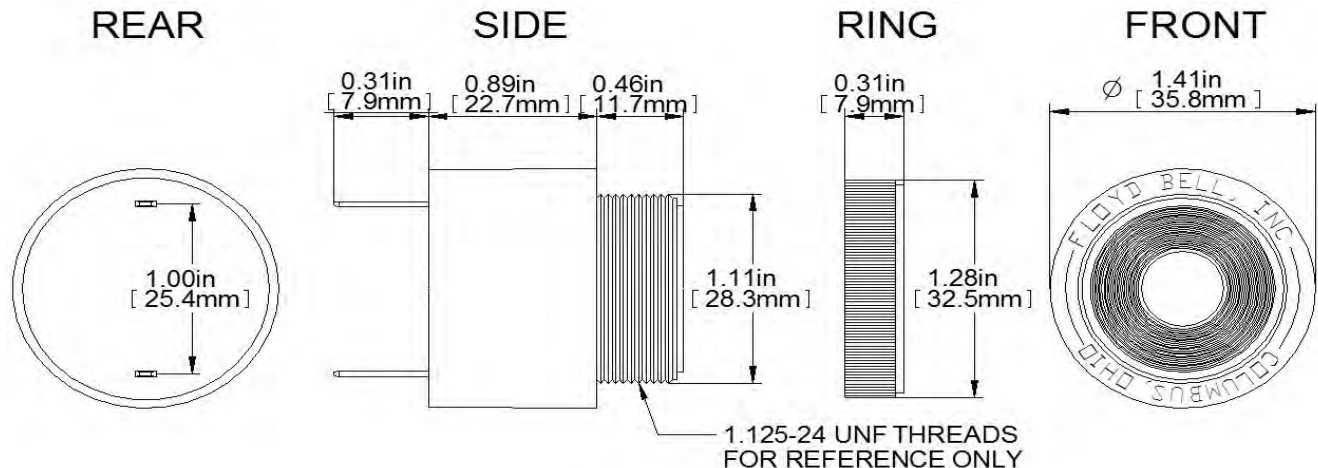


The UC-09-515-T is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	96±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C. Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	To the maximum operating voltage.
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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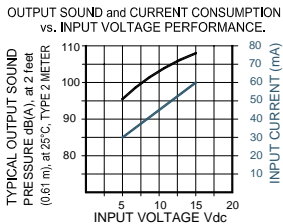
Revision: 2.07

# UC-09-515-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UC-09-515-W is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 60 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	96±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-V0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

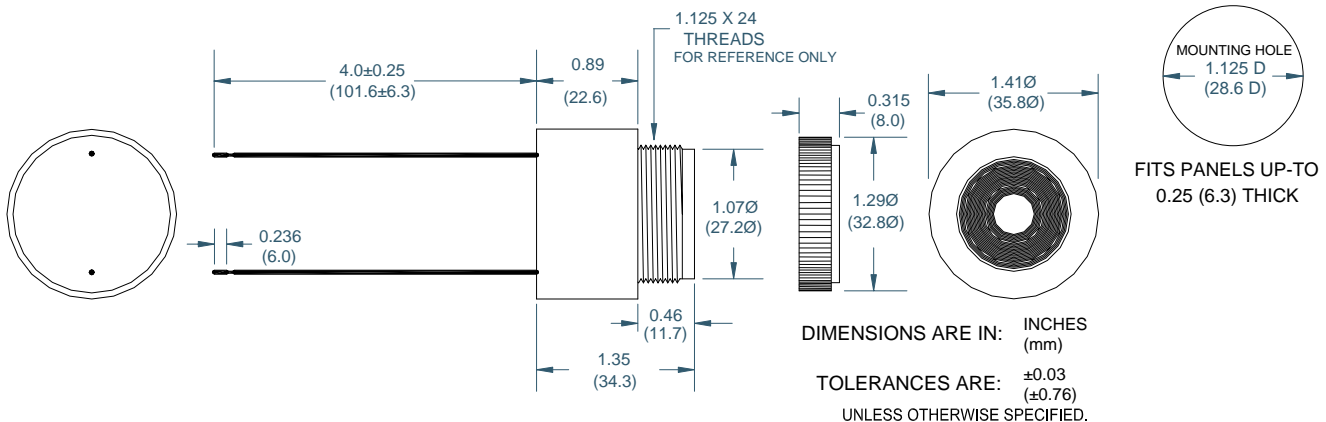
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07

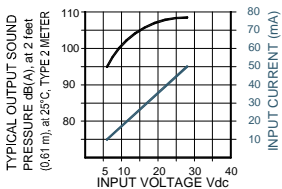
# UC-09-628-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UC-09-628-Q is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

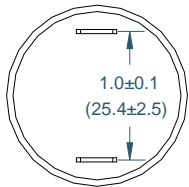
<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

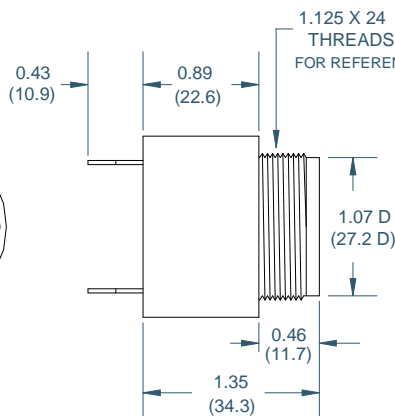
## DIMENSIONS

## PANEL MOUNTING

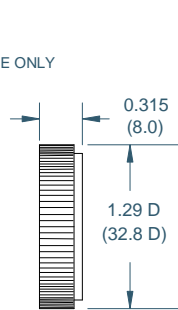
REAR VIEW



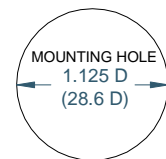
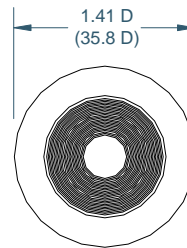
SIDE VIEW



RING

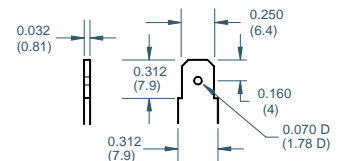


FRONT VIEW



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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Revision: 5.11

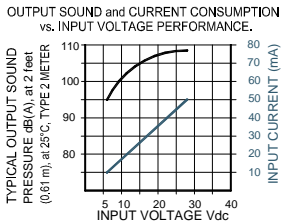


# UC-09-628-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UC-09-628-S is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

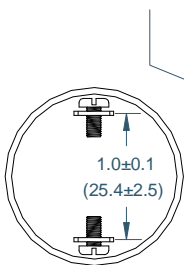
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-40°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

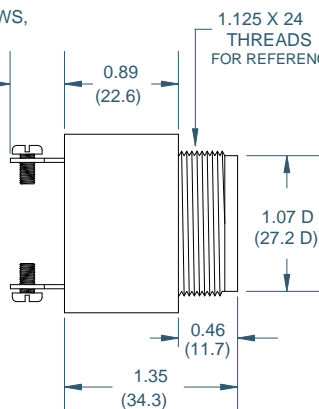
## DIMENSIONS

### REAR VIEW

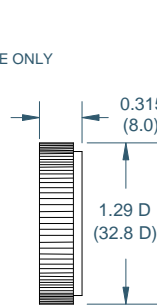
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



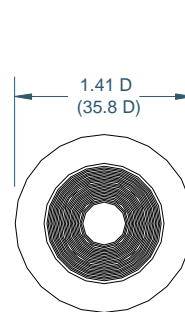
### SIDE VIEW



### RING

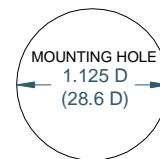


### FRONT VIEW



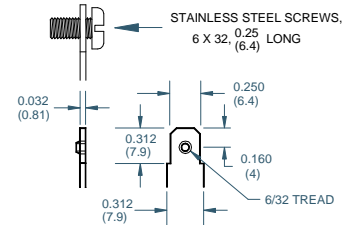
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 5.11**

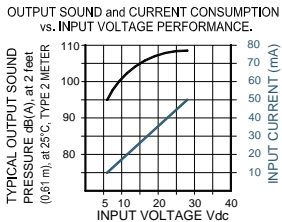


# UC-09-628-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UC-09-628-W is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

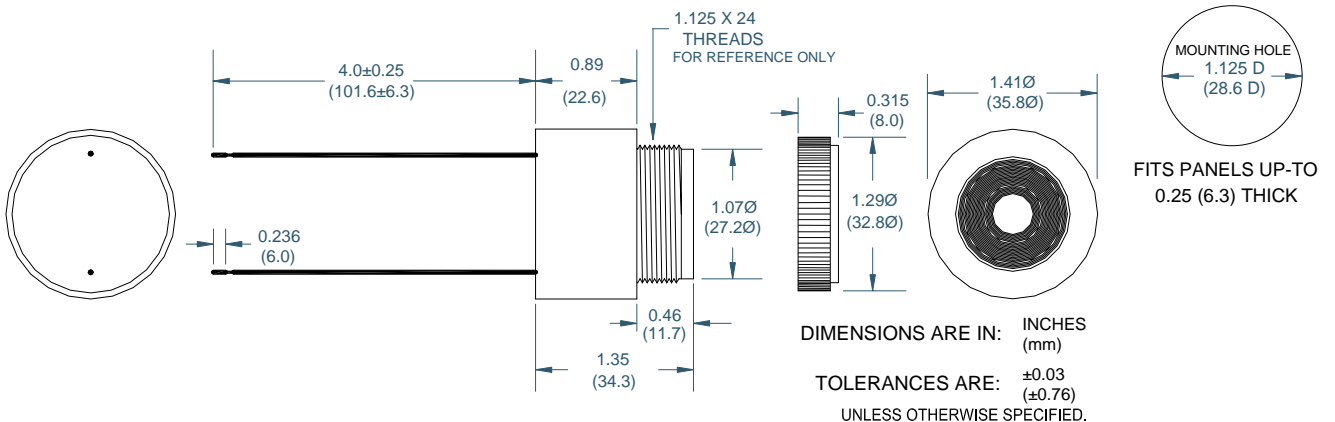
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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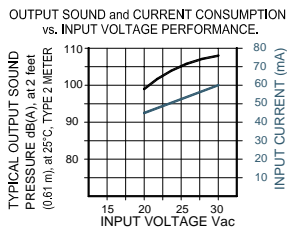
Revision: 2.07

# UC-19-230-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

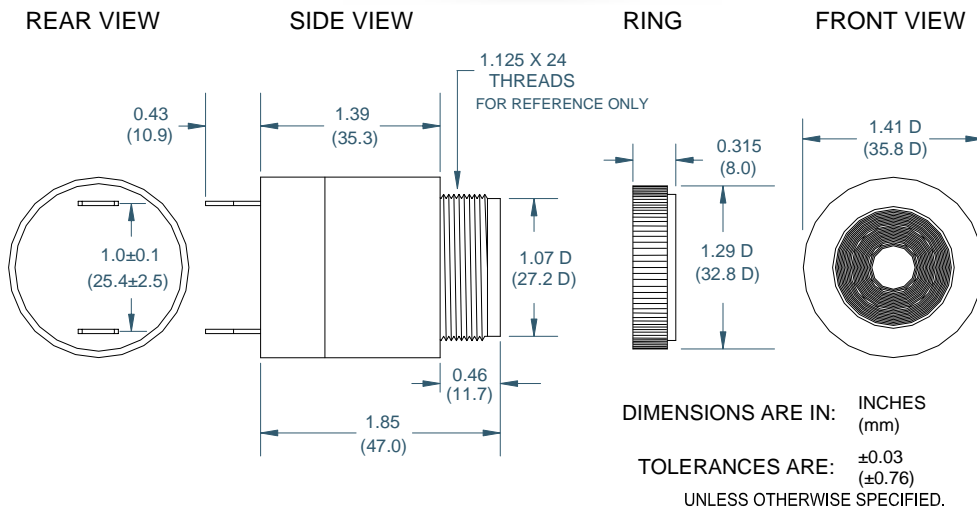


The UC-19-230-Q is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

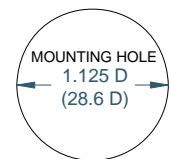
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	98±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

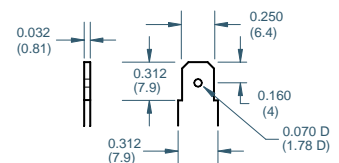


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



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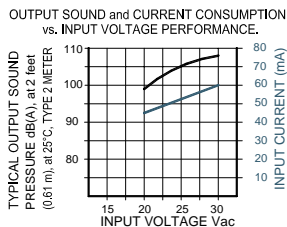
**Revision: 2.07**

# UC-19-230-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The UC-19-230-S is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

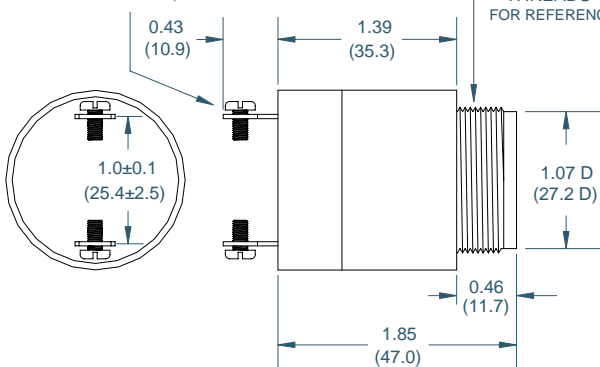
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	98±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

### REAR VIEW

STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.

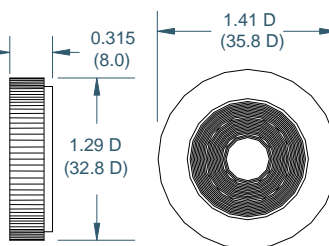


### SIDE VIEW

1.125 X 24  
THREADS  
FOR REFERENCE ONLY

### RING

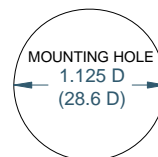
### FRONT VIEW



DIMENSIONS ARE IN: INCHES (mm)

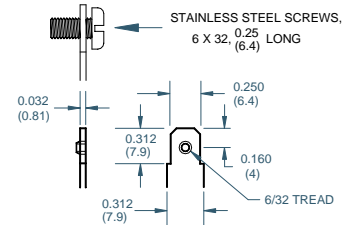
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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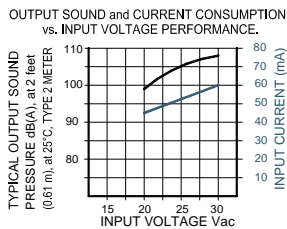
**Revision: 2.07**

# UC-19-230-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

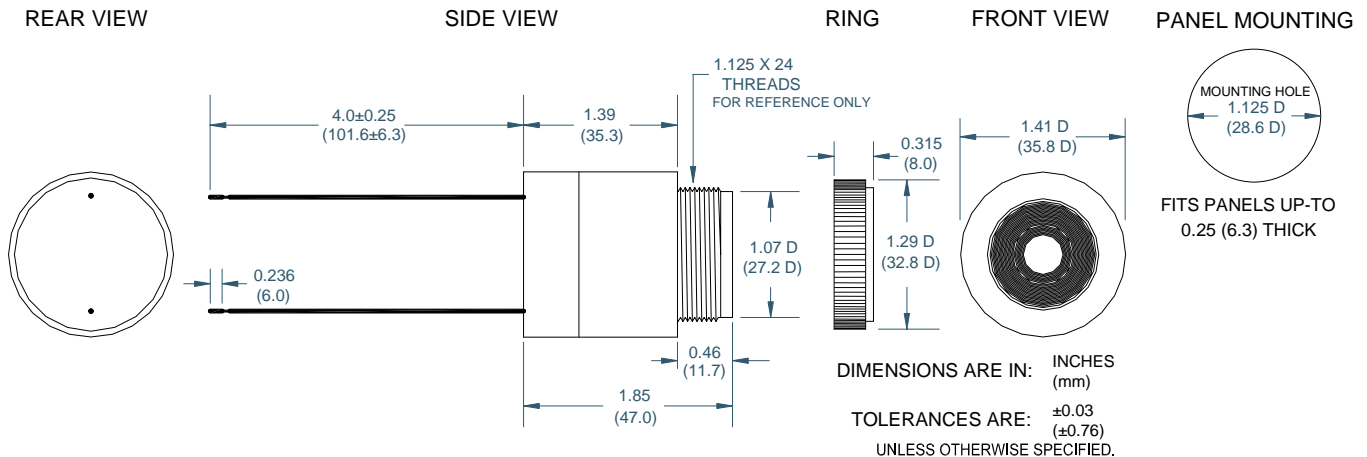


The UC-19-230-W is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The continuous tone has a typical sound pressure level of 108 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Continuous Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz.
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	98±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 108±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



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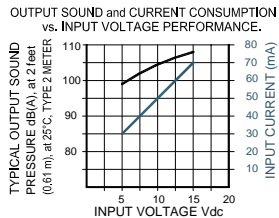
**Revision: 2.07**

# UO-05-515-P

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- PCB Mountable
- Reliable Piezoelectric Technology
- Polarity Protected

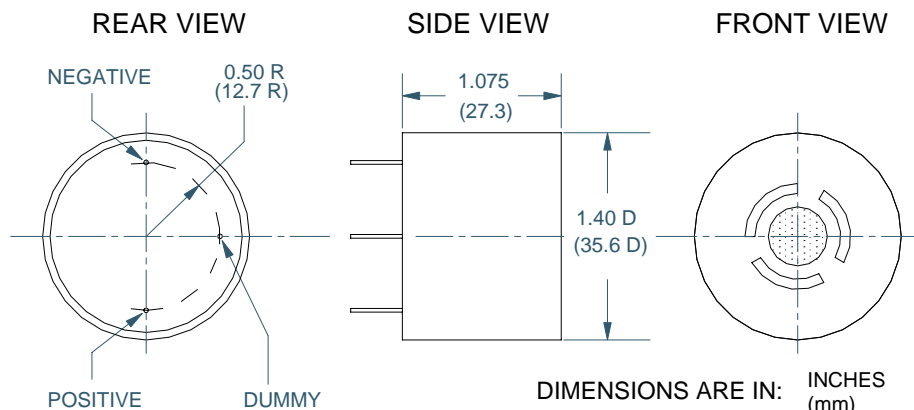


The UO-05-515-P is an ultra loud output, PCB mounted alarm for operating voltages of 5-15VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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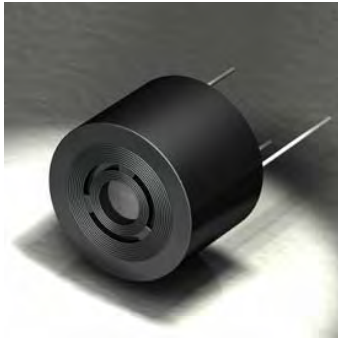
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Revision: 2.07

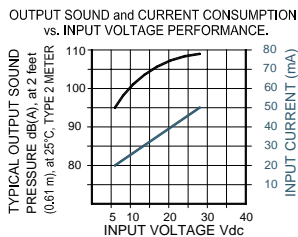


# UO-05-628-P

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- PCB Mountable
- Reliable Piezoelectric Technology
- Polarity Protected

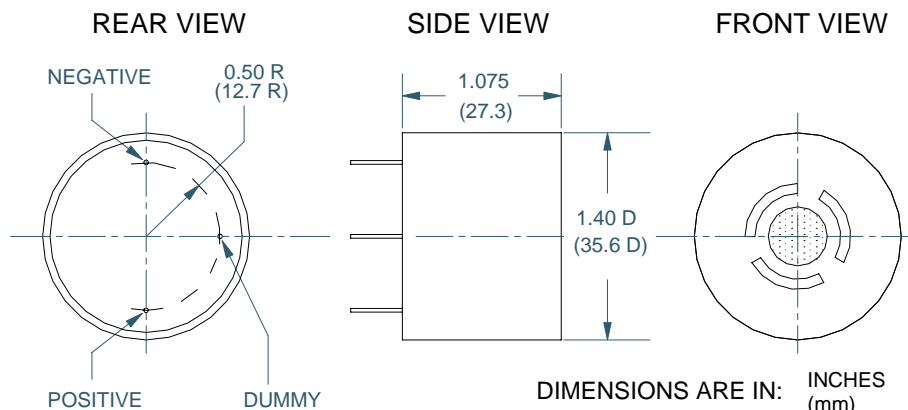


The UO-05-628-P is an ultra loud output, PCB mounted alarm for operating voltages of 6-28VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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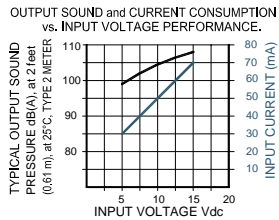
Revision: 2.07

# UO-09-515-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



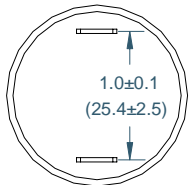
The UO-09-515-Q is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

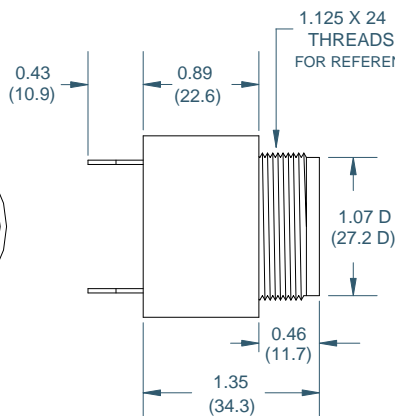
<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

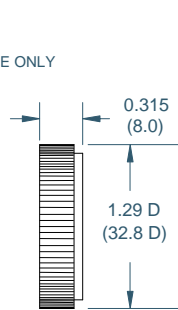
REAR VIEW



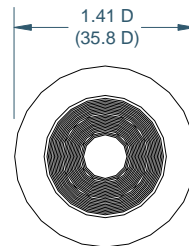
SIDE VIEW



RING

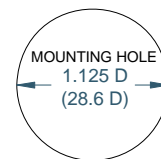


FRONT VIEW



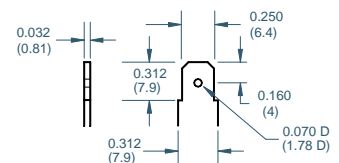
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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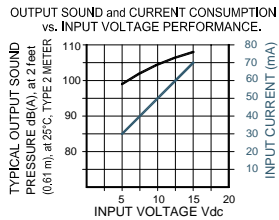
Revision: 2.07

# UO-09-515-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UO-09-515-S is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

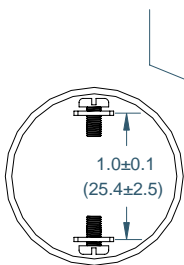
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

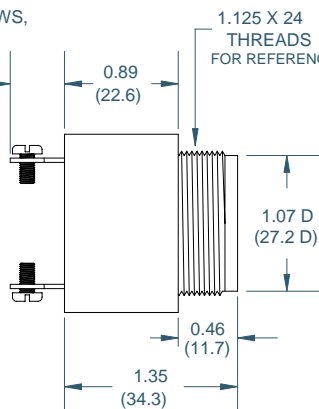
## DIMENSIONS

### REAR VIEW

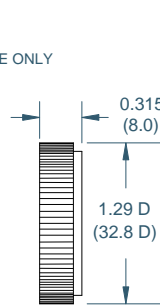
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



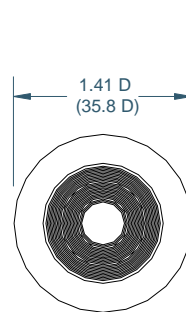
### SIDE VIEW



### RING

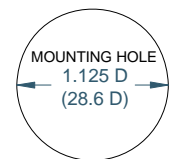


### FRONT VIEW



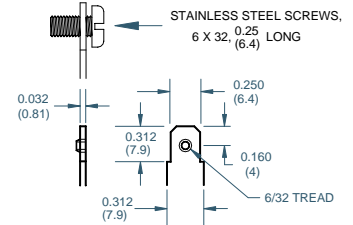
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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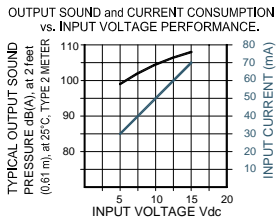
**Revision: 2.07**

# UO-09-515-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UO-09-515-W is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

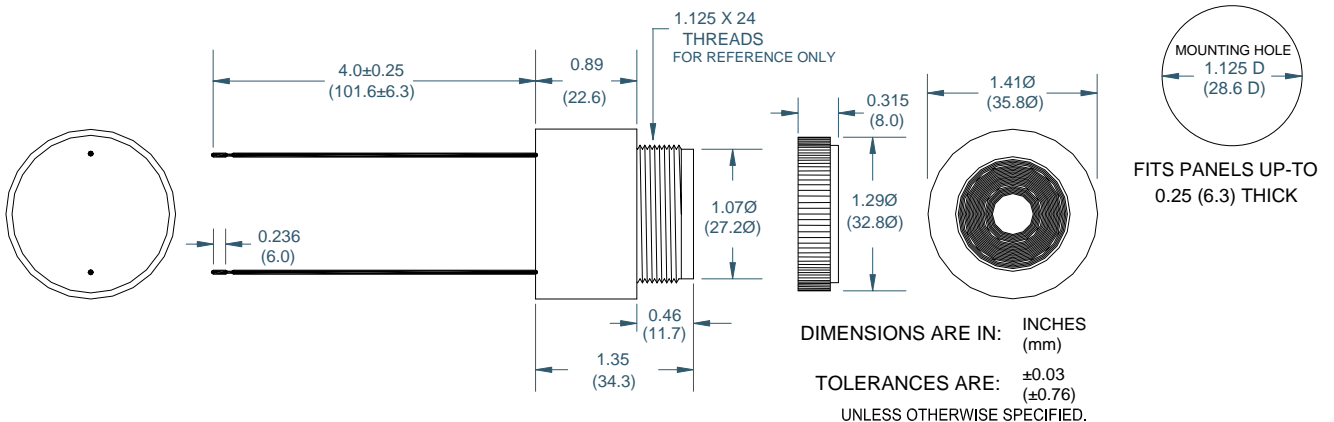
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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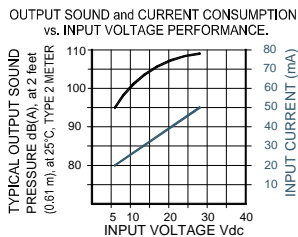
Revision: 2.07

# UO-09-628-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



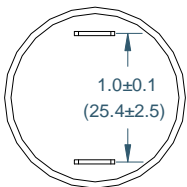
The UO-09-628-Q is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

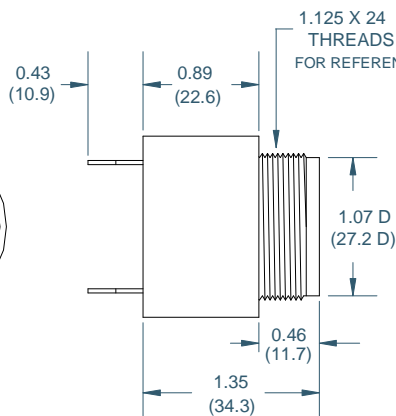
<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

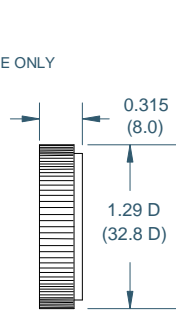
REAR VIEW



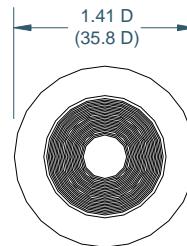
SIDE VIEW



RING

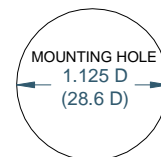


FRONT VIEW



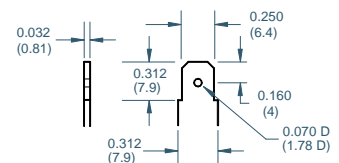
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

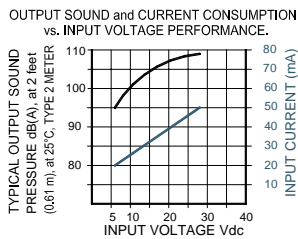


# UO-09-628-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

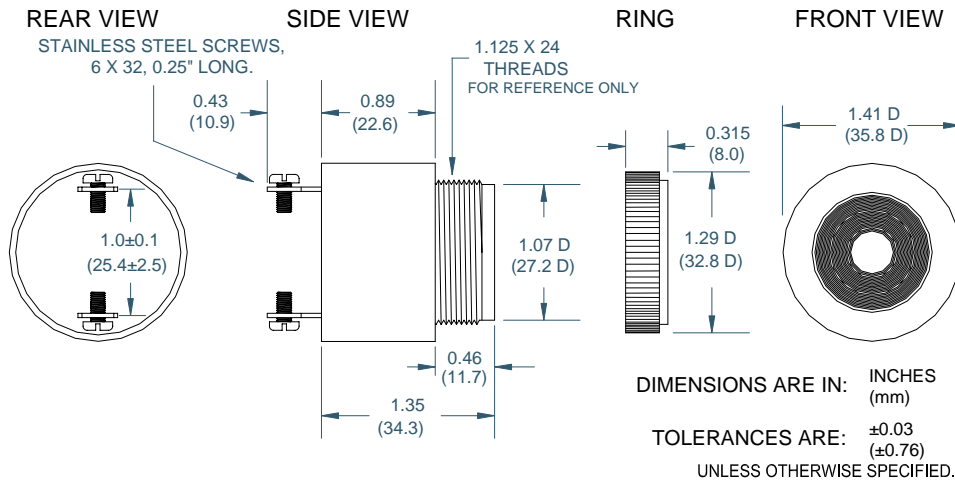


The UO-09-628-S is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

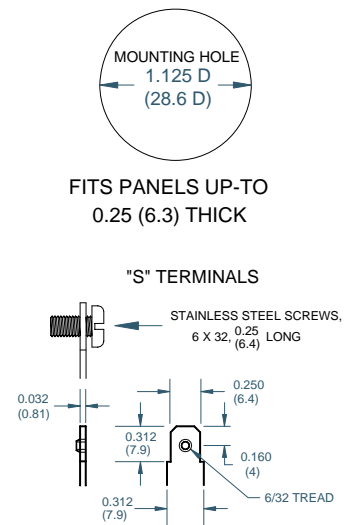
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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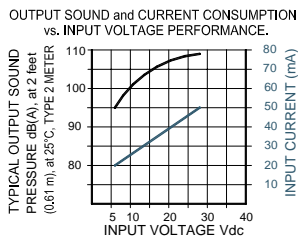
**Revision: 2.07**

# UO-09-628-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UO-09-628-W is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

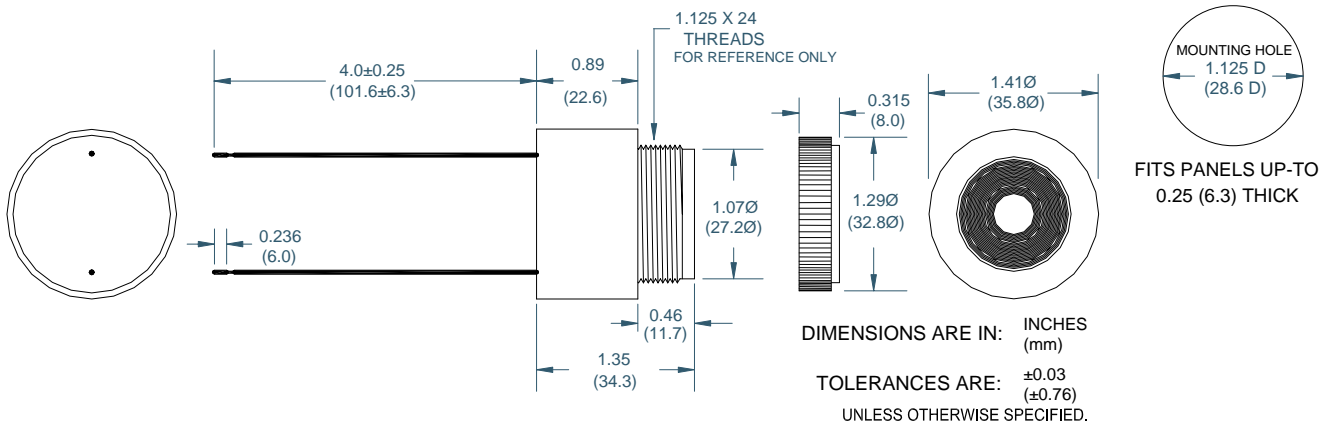
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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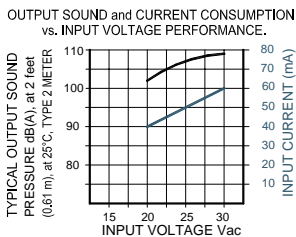
Revision: 2.07

# UO-19-230-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily



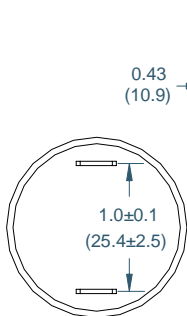
The UO-19-230-Q is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

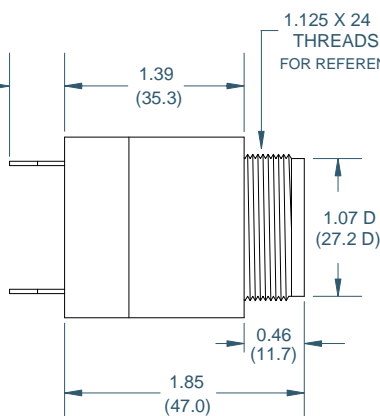
<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

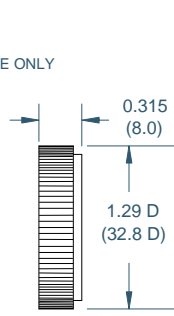
REAR VIEW



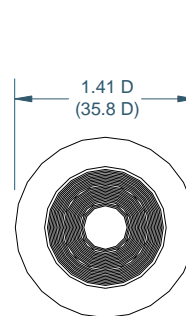
SIDE VIEW



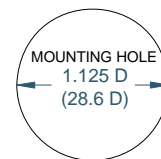
RING



FRONT VIEW

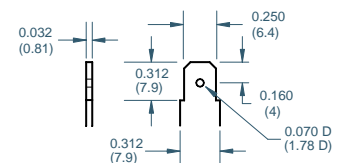


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
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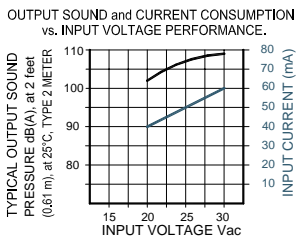
Revision: 2.07

# UO-19-230-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

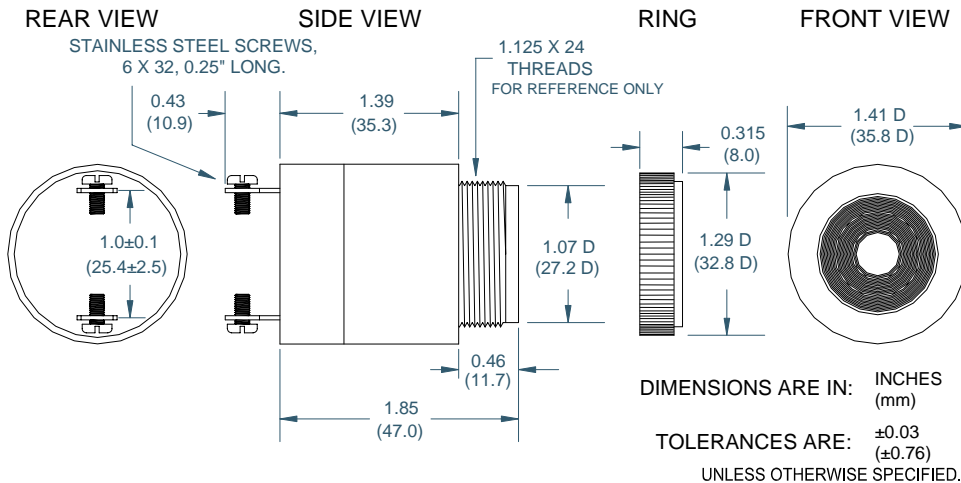


The UO-19-230-S is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

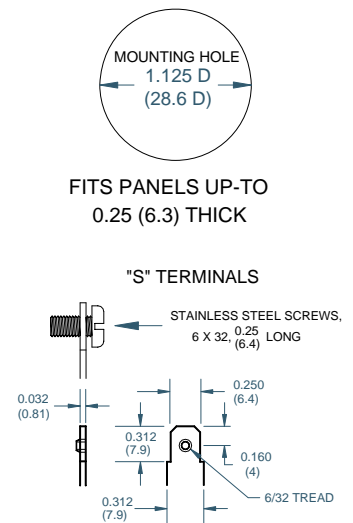
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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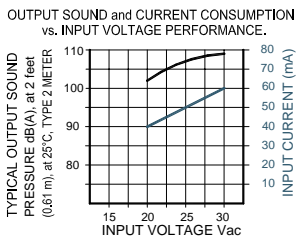
**Revision: 2.07**

# UO-19-230-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

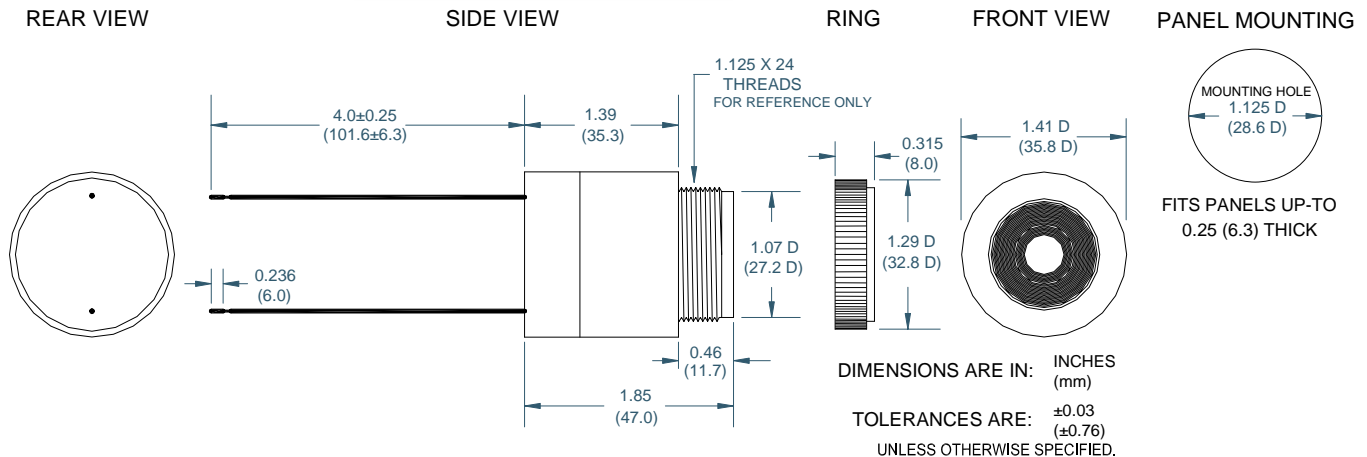


The UO-19-230-W is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The whoop tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Whoop Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 2±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

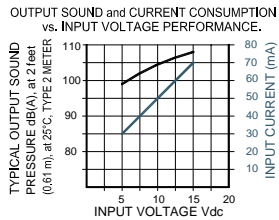


# US-09-515-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



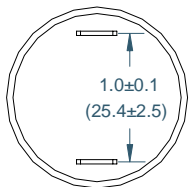
The US-09-515-Q is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

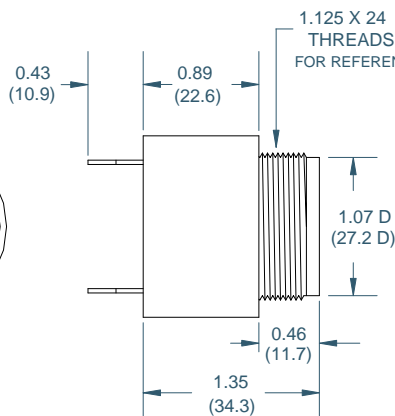
<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

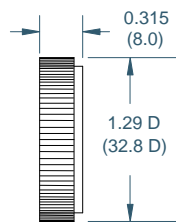
REAR VIEW



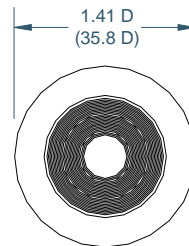
SIDE VIEW



RING

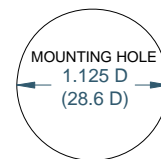


FRONT VIEW



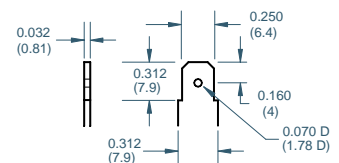
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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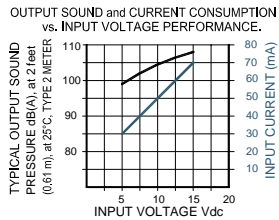
**Revision: 2.07**

# US-09-515-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The US-09-515-S is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

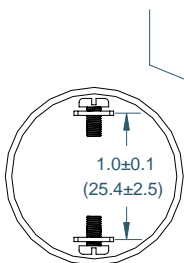
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

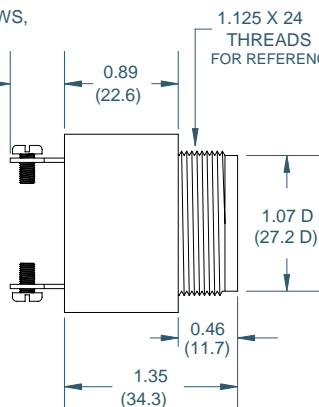
## DIMENSIONS

### REAR VIEW

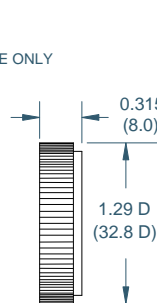
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



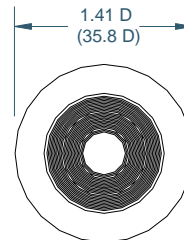
### SIDE VIEW



### RING

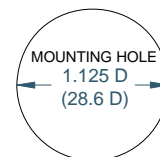


### FRONT VIEW



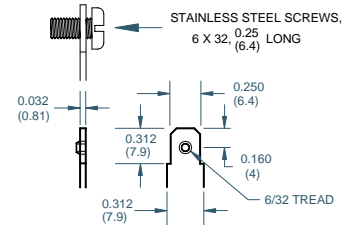
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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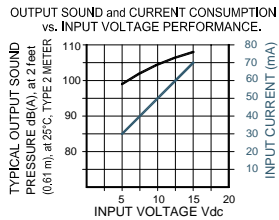
**Revision: 2.07**

# US-09-515-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The US-09-515-W is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

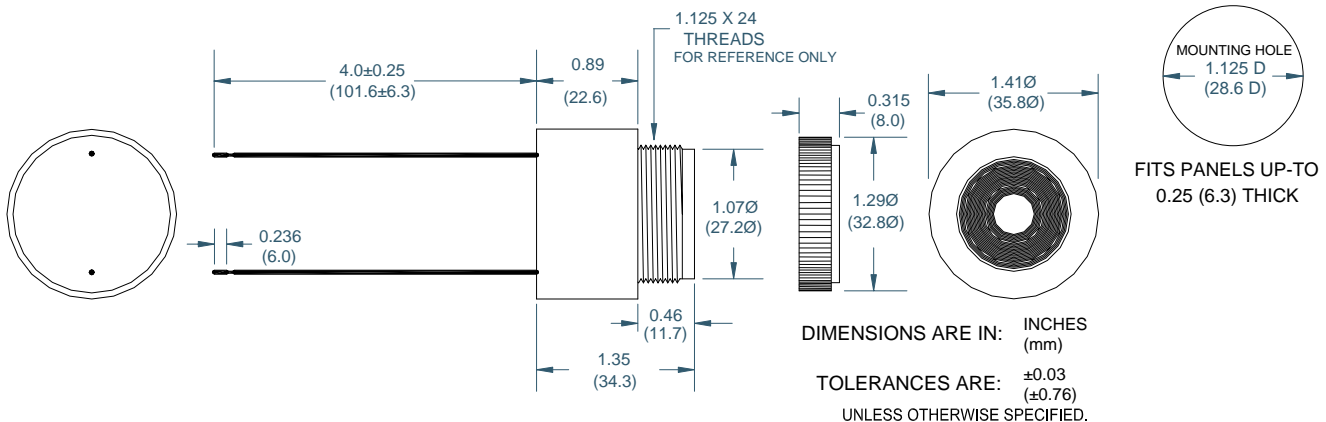
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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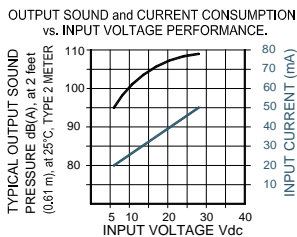
Revision: 2.07

# US-09-628-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



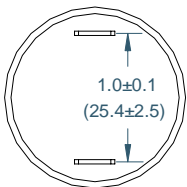
The US-09-628-Q is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

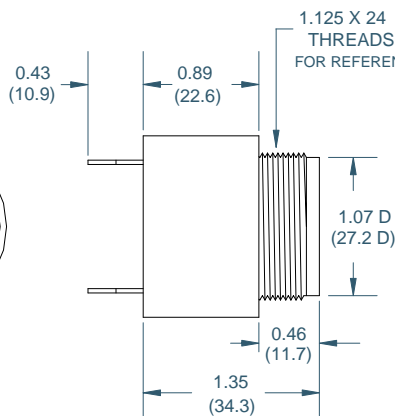
<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

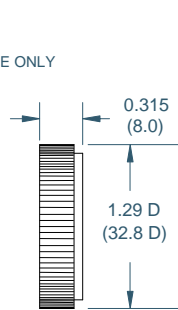
REAR VIEW



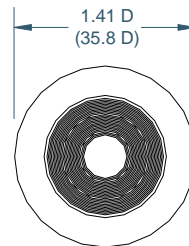
SIDE VIEW



RING

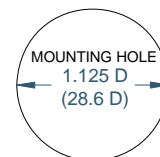


FRONT VIEW



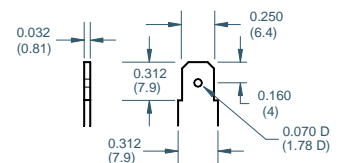
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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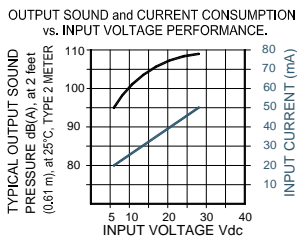
Revision: 2.07

# US-09-628-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

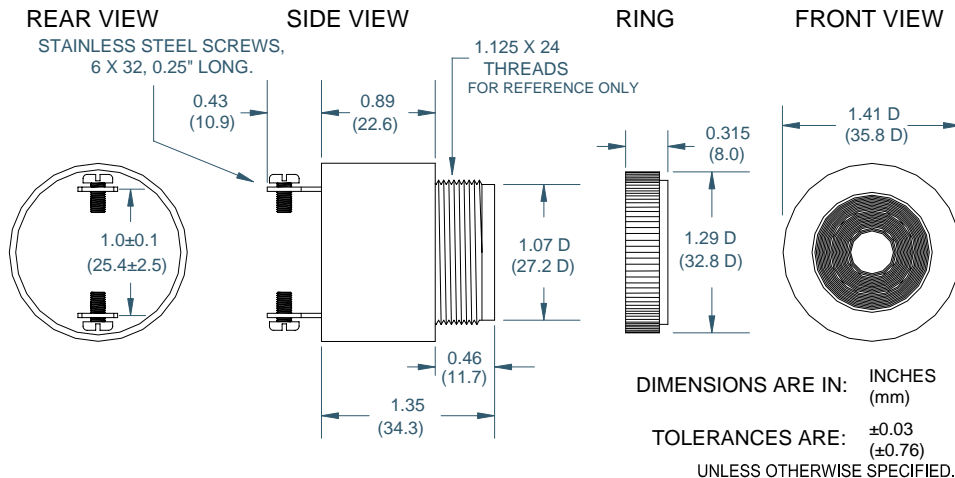


The US-09-628-S is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

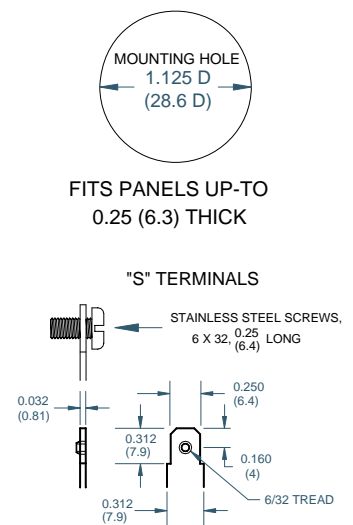
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

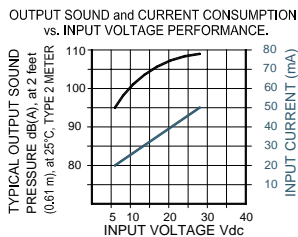


# US-09-628-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The US-09-628-W is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

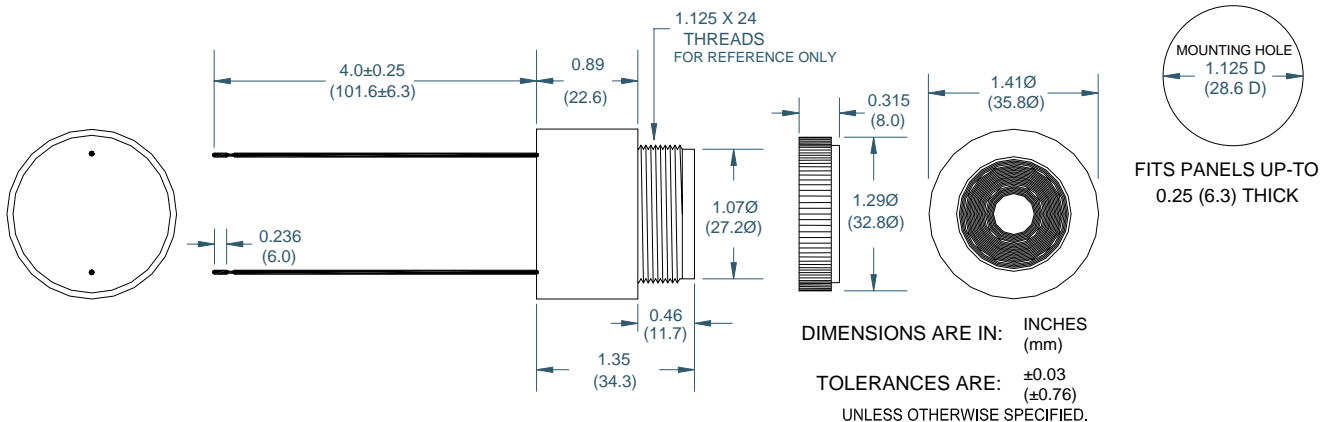
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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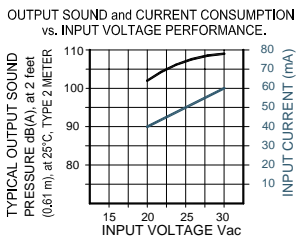
Revision: 2.07

# US-19-230-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily



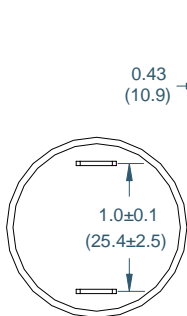
The US-19-230-Q is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

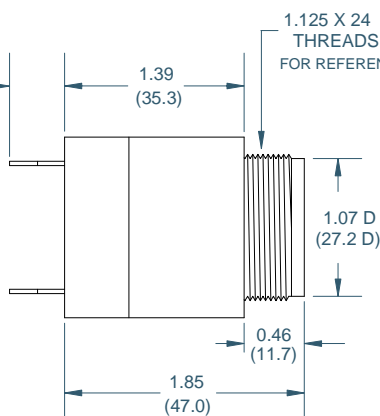
<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

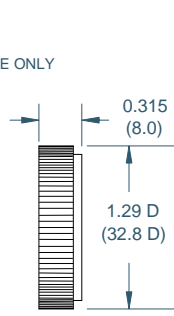
REAR VIEW



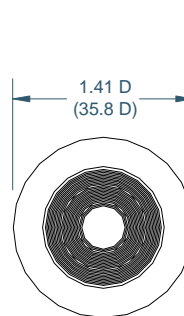
SIDE VIEW



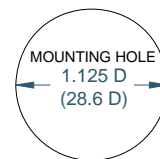
RING



FRONT VIEW

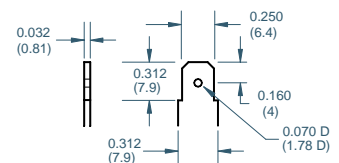


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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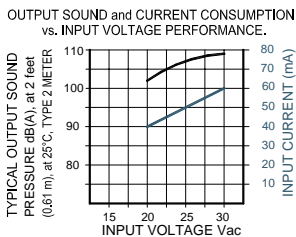
Revision: 2.07

# US-19-230-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

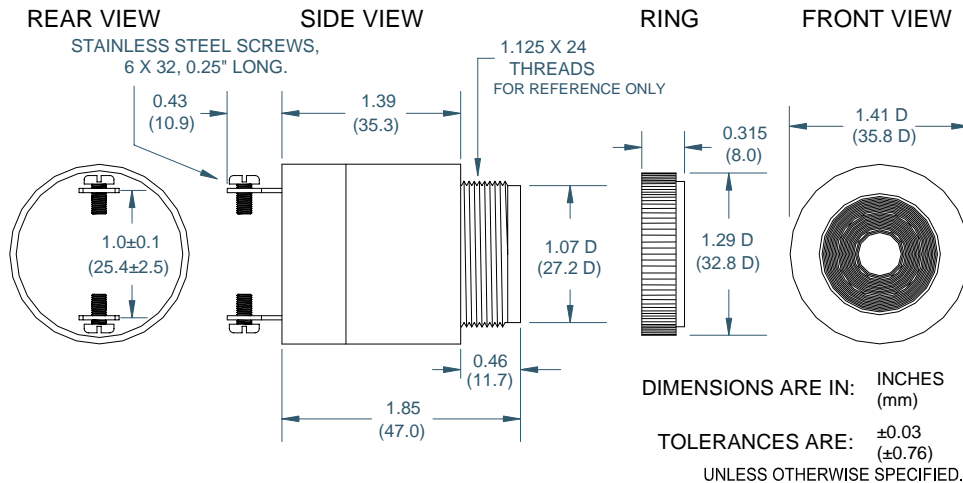


The US-19-230-S is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

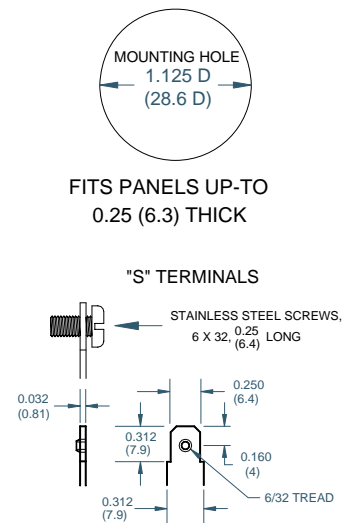
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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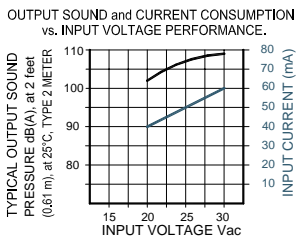
**Revision: 2.07**

# US-19-230-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

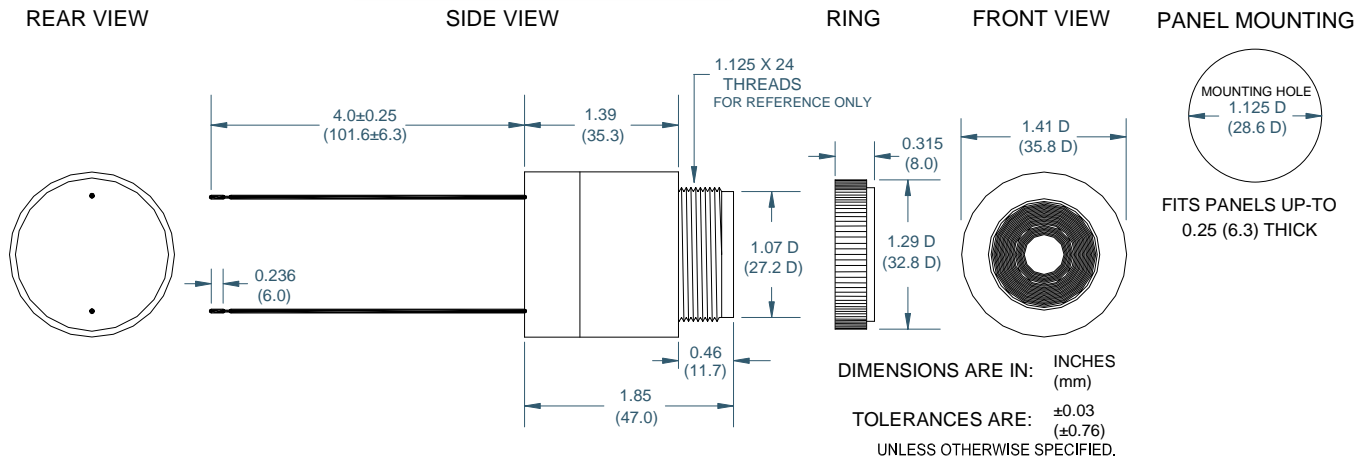


The US-19-230-W is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The siren tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Siren Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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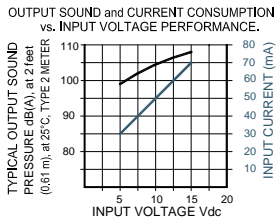
**Revision: 2.07**

# UT-05-515-P

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- PCB Mountable
- Reliable Piezoelectric Technology
- Polarity Protected

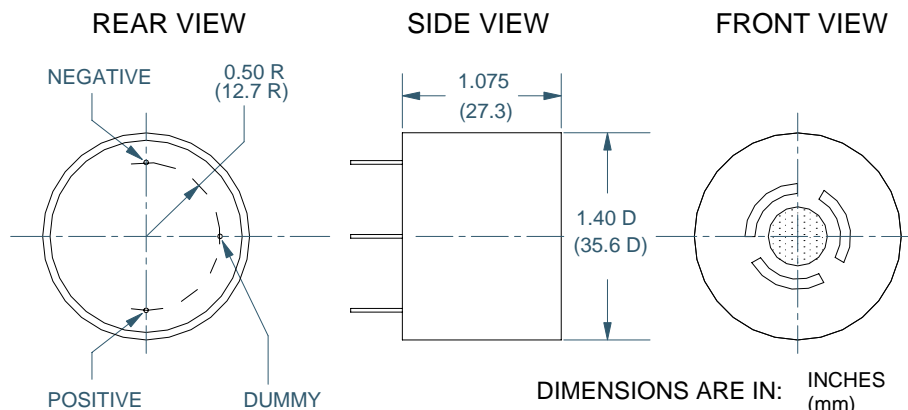


The UT-05-515-P is an ultra loud output, PCB mounted alarm for operating voltages of 5-15VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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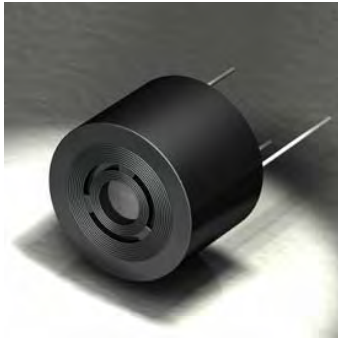
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www.floydbell.com

Revision: 2.07

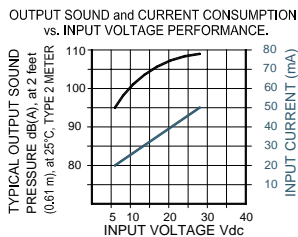


# UT-05-628-P

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- PCB Mountable
- Reliable Piezoelectric Technology
- Polarity Protected

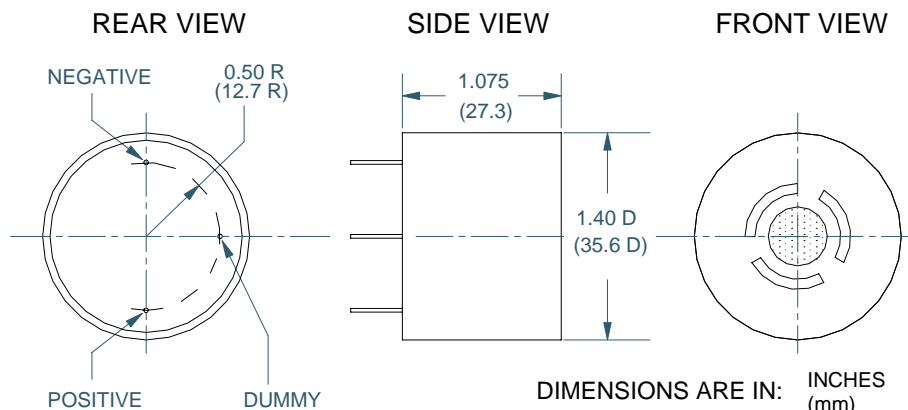


The UT-05-628-P is an ultra loud output, PCB mounted alarm for operating voltages of 6-28VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

UNLESS OTHERWISE SPECIFIED.

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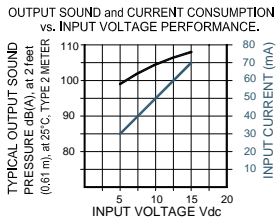
Revision: 2.07

# UT-09-515-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



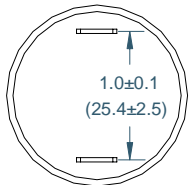
The UT-09-515-Q is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

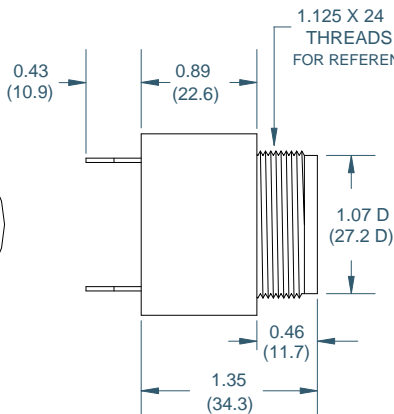
<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

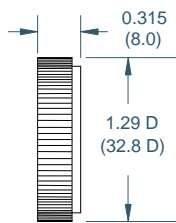
REAR VIEW



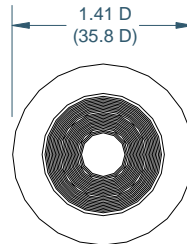
SIDE VIEW



RING

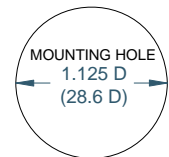


FRONT VIEW



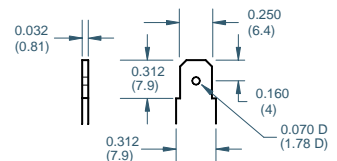
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



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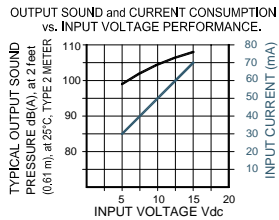
Revision: 2.07

# UT-09-515-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UT-09-515-S is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

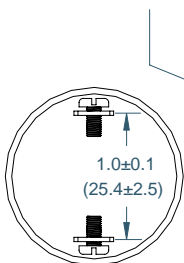
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

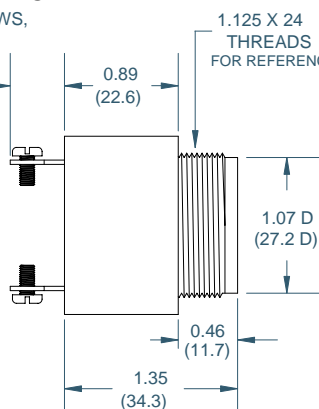
## DIMENSIONS

### REAR VIEW

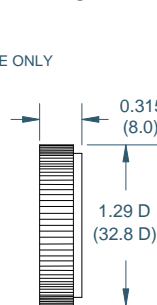
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



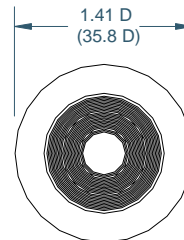
### SIDE VIEW



### RING

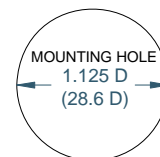


### FRONT VIEW



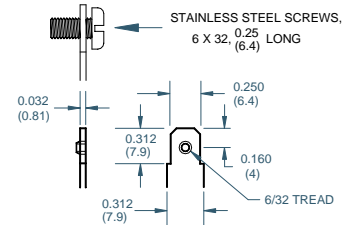
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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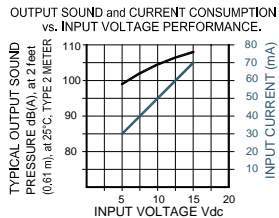
**Revision: 2.07**

# UT-09-515-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UT-09-515-W is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	30 mA at 5 Vdc 70 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

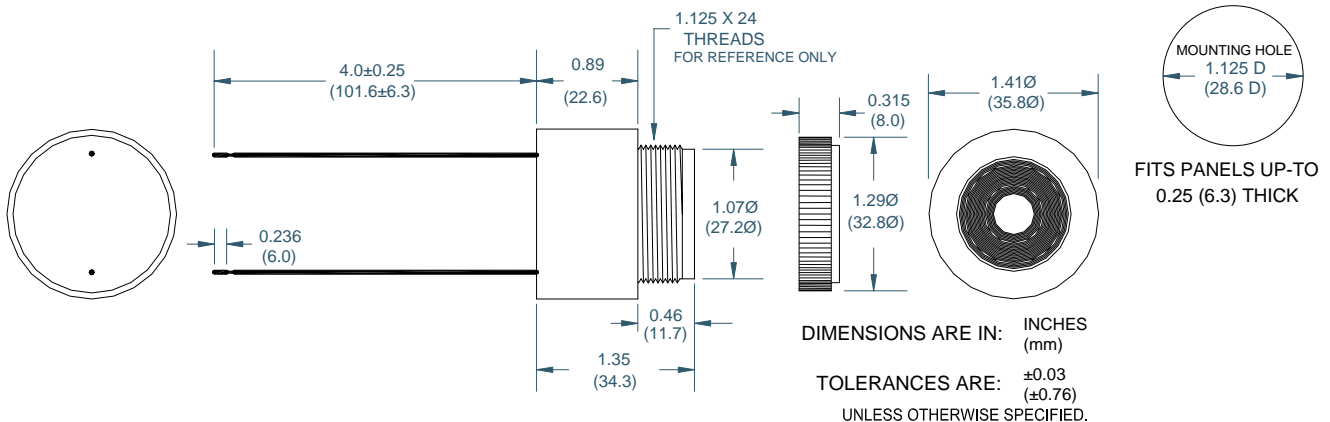
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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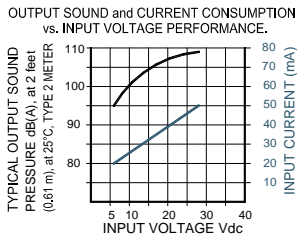
Revision: 2.07

# UT-09-628-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



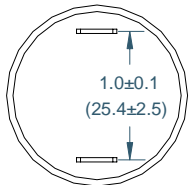
The UT-09-628-Q is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

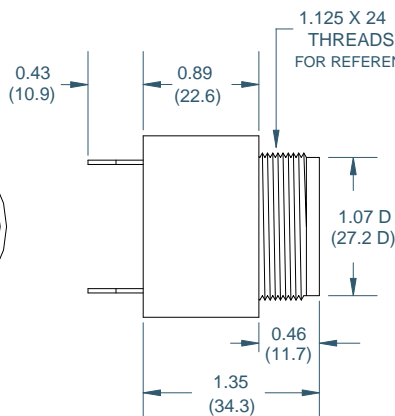
<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	To the maximum operating voltage.
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

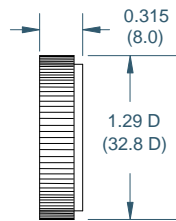
REAR VIEW



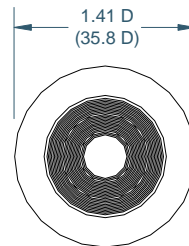
SIDE VIEW



RING

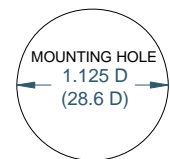


FRONT VIEW



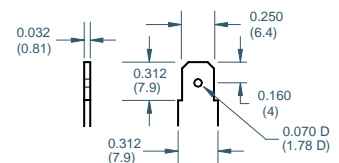
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

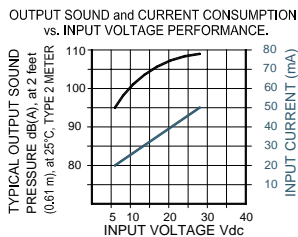


# UT-09-628-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

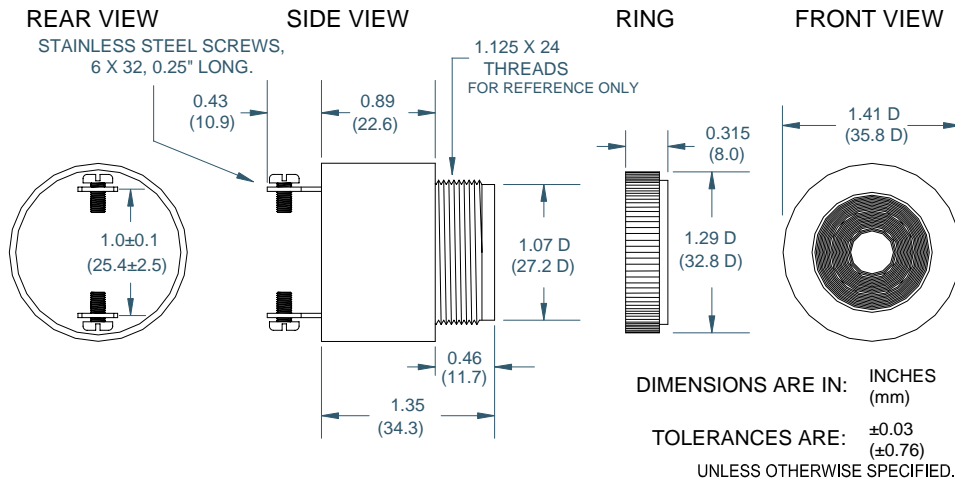


The UT-09-628-S is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

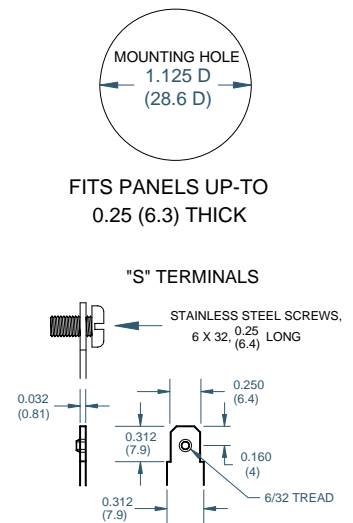
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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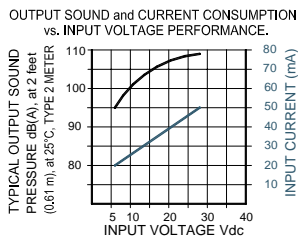
**Revision: 2.07**

# UT-09-628-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UT-09-628-W is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

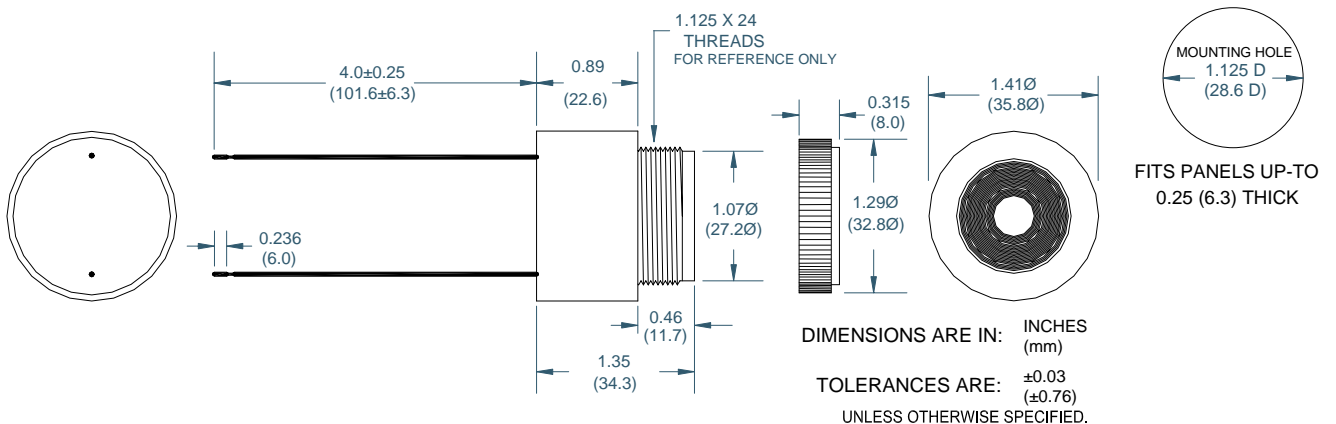
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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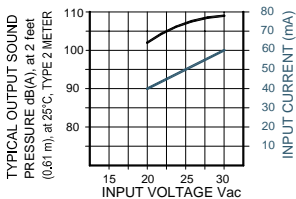
# UT-19-230-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



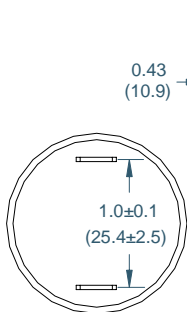
The UT-19-230-Q is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

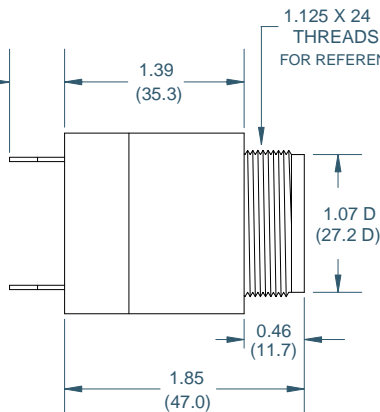
<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

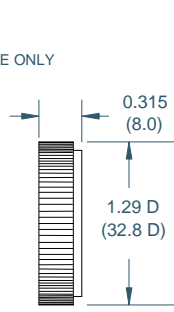
REAR VIEW



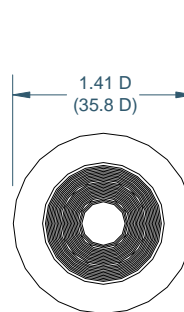
SIDE VIEW



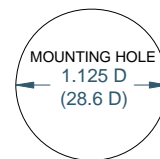
RING



FRONT VIEW

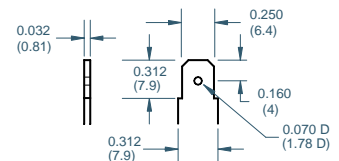


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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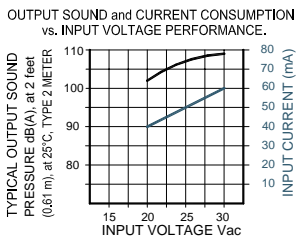
**Revision: 2.07**

# UT-19-230-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

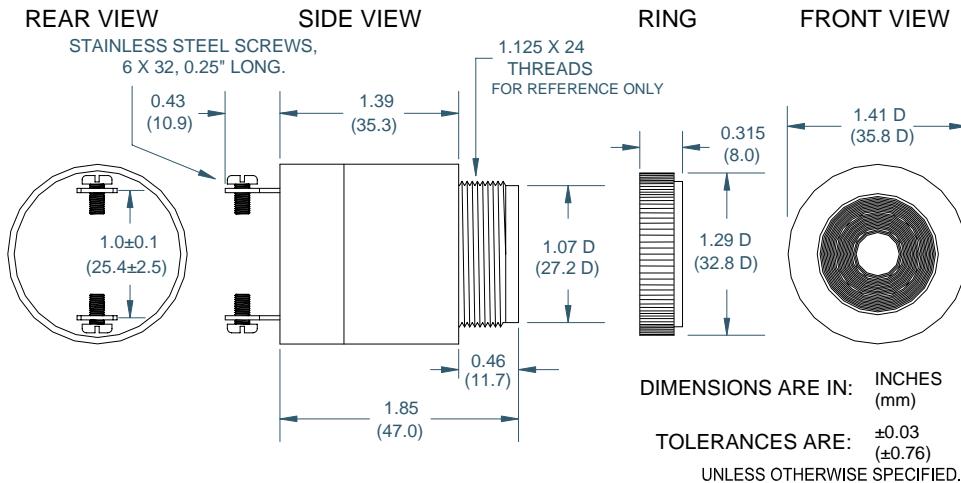


The UT-19-230-S is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

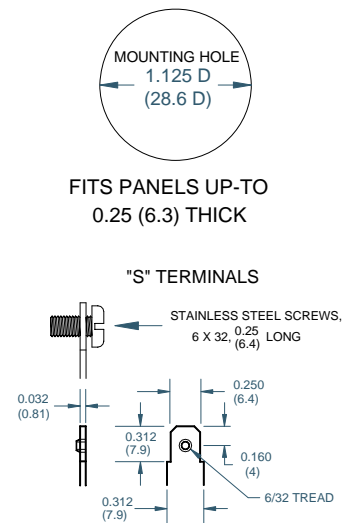
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

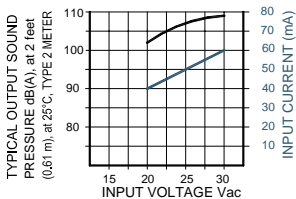
# UT-19-230-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

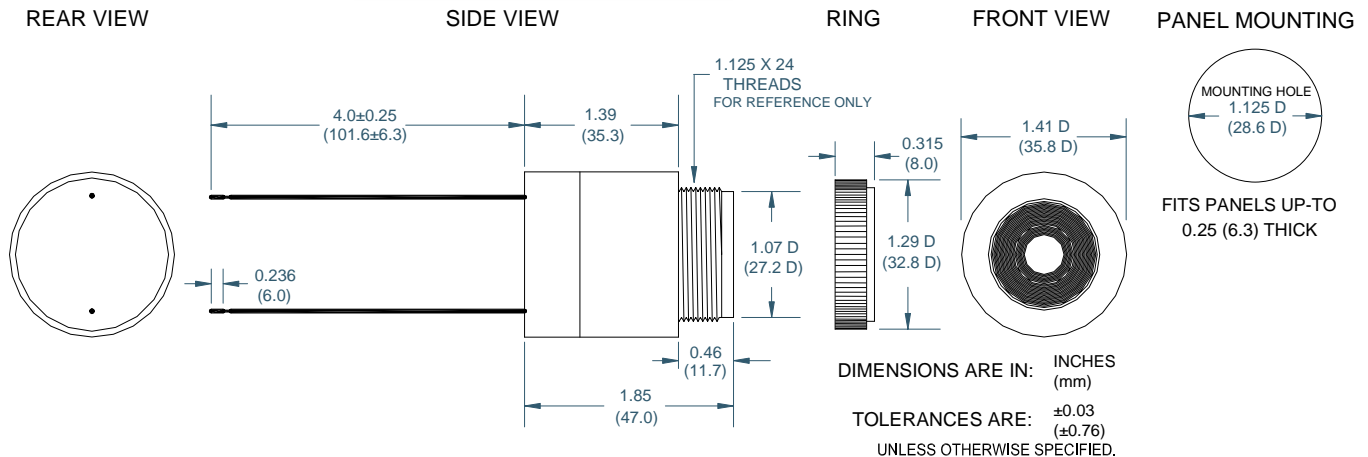


The UT-19-230-W is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The staccato tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Staccato Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 8±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

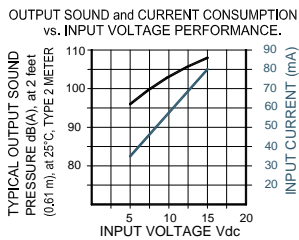


# UW-09-515-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



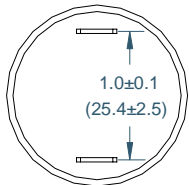
The UW-09-515-Q(F) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

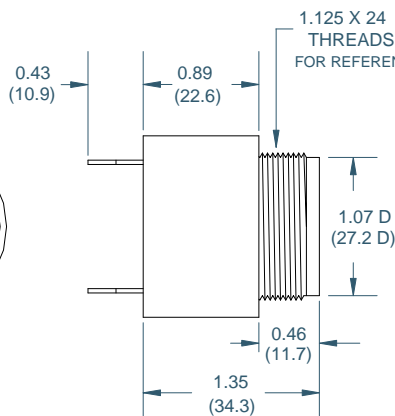
<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

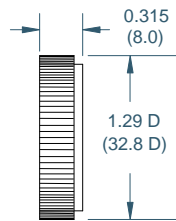
REAR VIEW



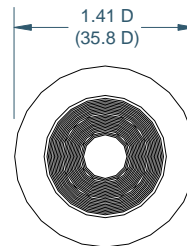
SIDE VIEW



RING

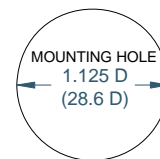


FRONT VIEW



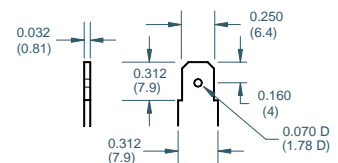
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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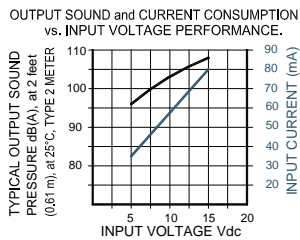
Revision: 2.07

# UW-09-515-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

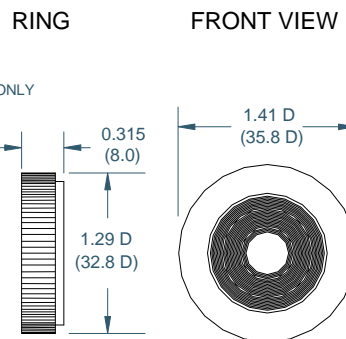
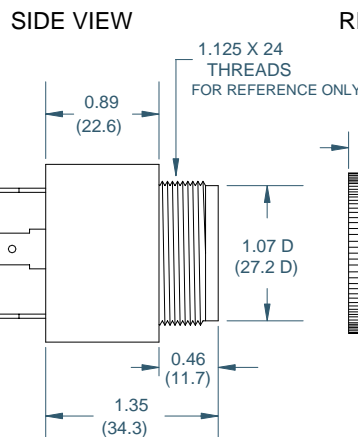
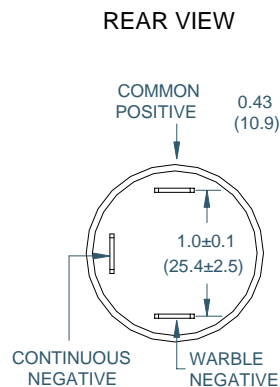


The UW-09-515-Q(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a fast warble tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

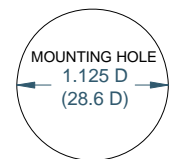
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

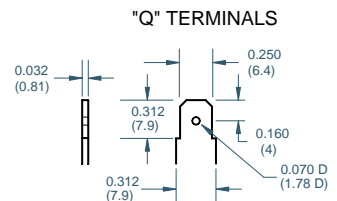
## DIMENSIONS



## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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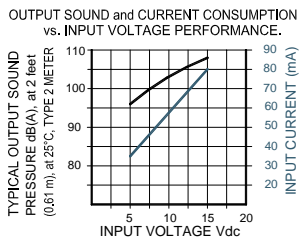
**Revision: 2.07**

# UW-09-515-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



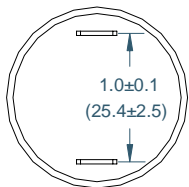
The UW-09-515-Q(S) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

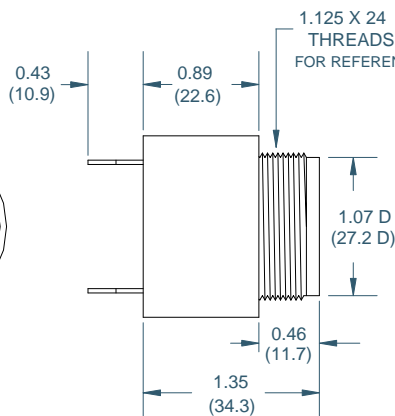
<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

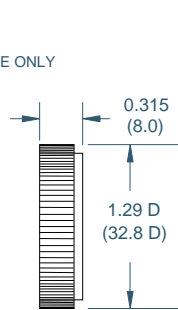
REAR VIEW



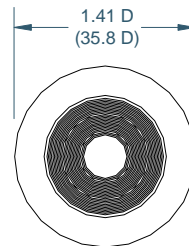
SIDE VIEW



RING

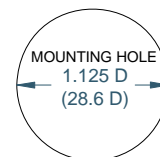


FRONT VIEW



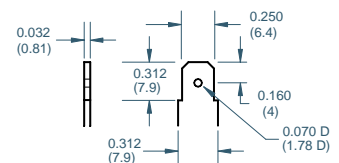
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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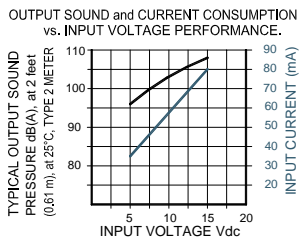
**Revision: 2.07**

# UW-09-515-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

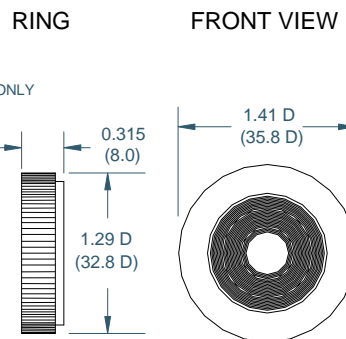
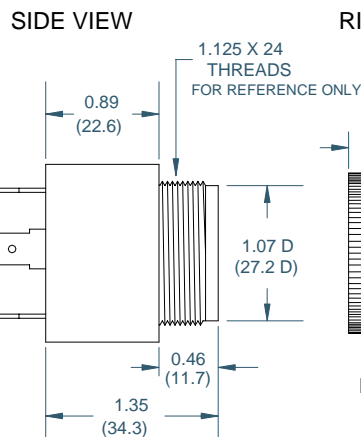
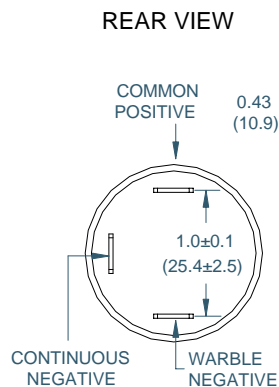


The UW-09-515-Q(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a slow warble tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

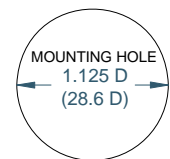
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

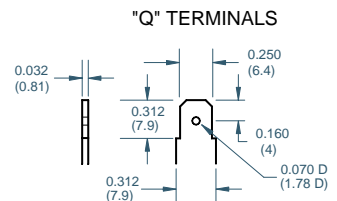
## DIMENSIONS



## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

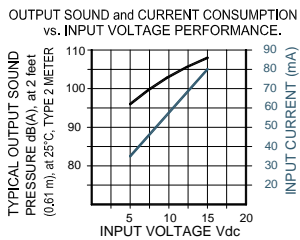


# UW-09-515-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UW-09-515-S(F) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

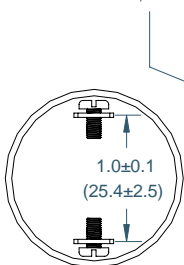
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

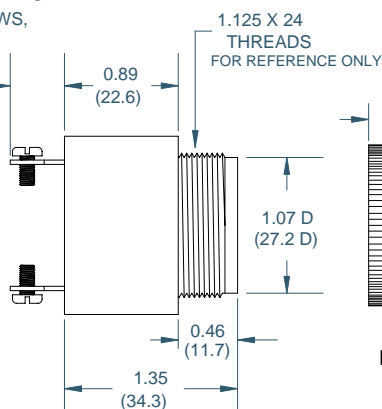
## DIMENSIONS

### REAR VIEW

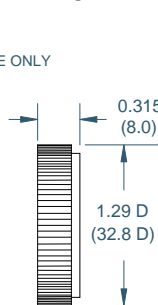
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



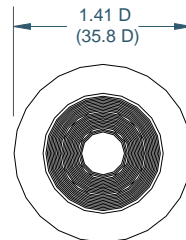
### SIDE VIEW



### RING

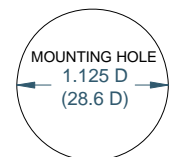


### FRONT VIEW



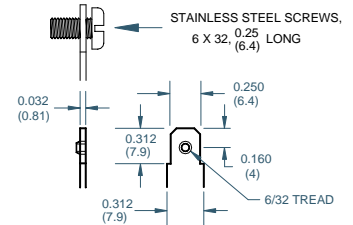
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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Revision: 2.07

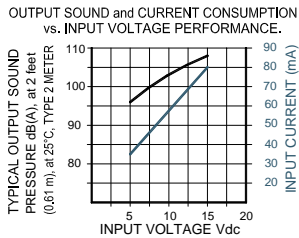


# UW-09-515-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

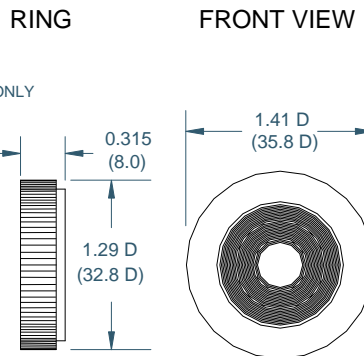
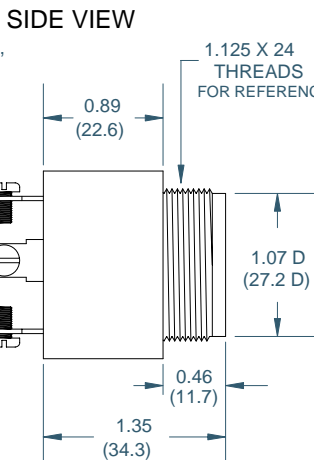
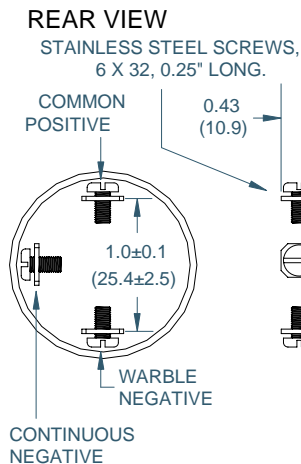


The UW-09-515-S(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a fast warble tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

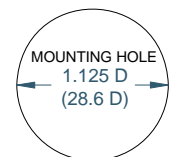
<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



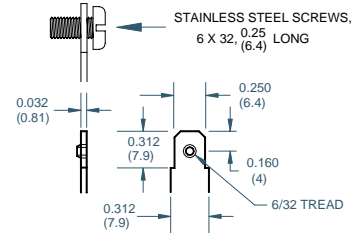
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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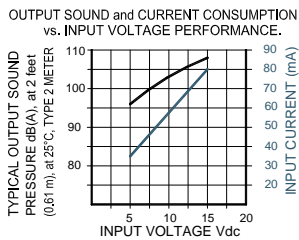
**Revision: 2.07**

# UW-09-515-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
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- Reliable Piezoelectric Technology
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The UW-09-515-S(S) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

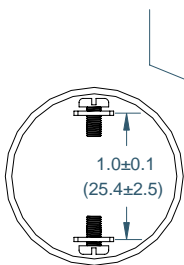
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

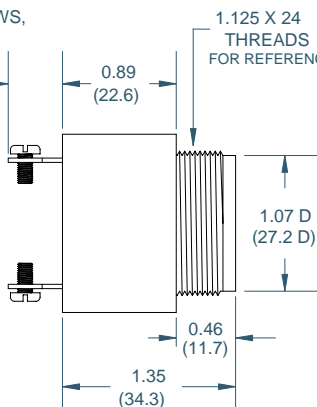
## DIMENSIONS

### REAR VIEW

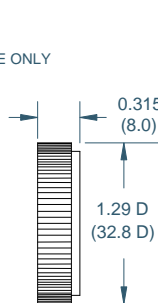
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



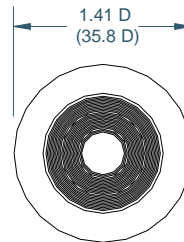
### SIDE VIEW



### RING

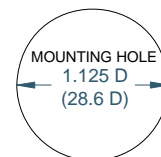


### FRONT VIEW



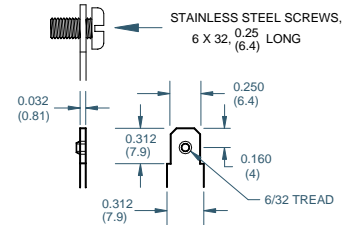
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



**Floyd Bell Inc**  
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720 Dearborn Park Lane • Columbus, OH 43085  
Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
www.floydbell.com

Revision: 2.07

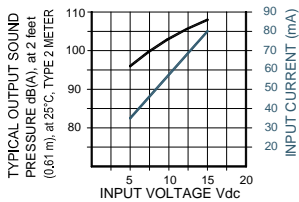
# UW-09-515-S(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

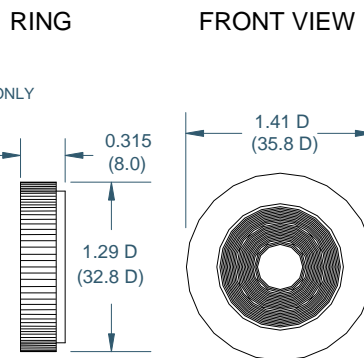
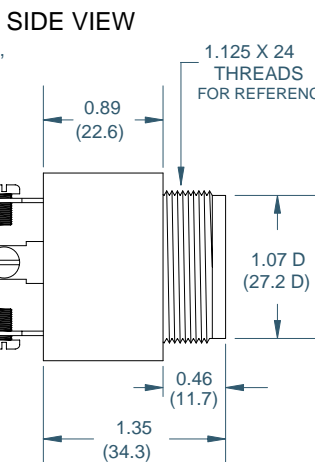
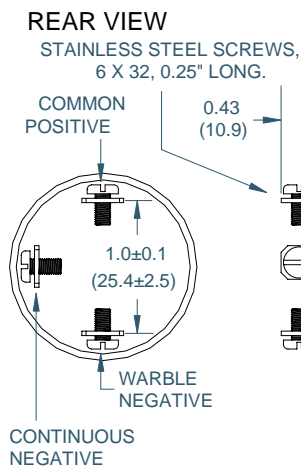


The UW-09-515-S(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 5-15VDC. The alarm functions as a slow warble tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

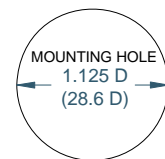
<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



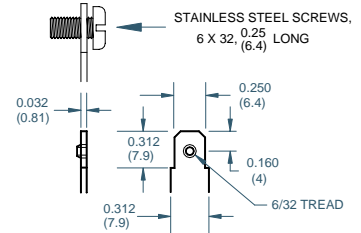
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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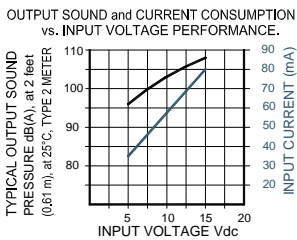
**Revision: 2.07**

# UW-09-515-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UW-09-515-W(F) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

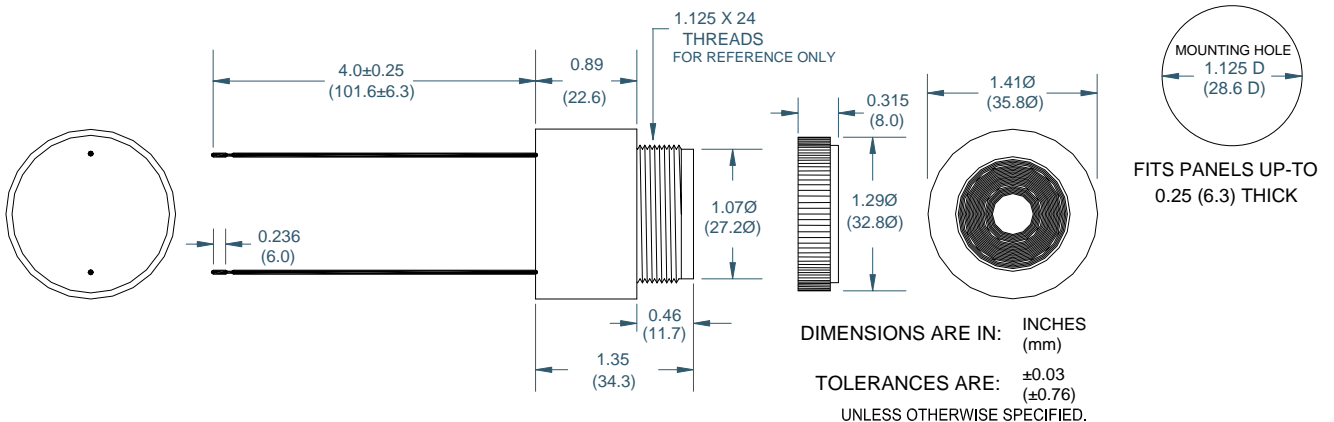
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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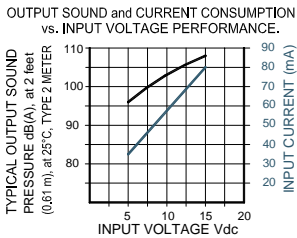


# UW-09-515-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UW-09-515-W(S) is an ultra loud output, panel mounted alarm for operating voltages of 5-15VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	5-15 Vdc
<b>Nominal Operating Voltage:</b>	15 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	35 mA at 5 Vdc 80 mA at 15 Vdc
<b>Typical Sound Pressure:</b>	97±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

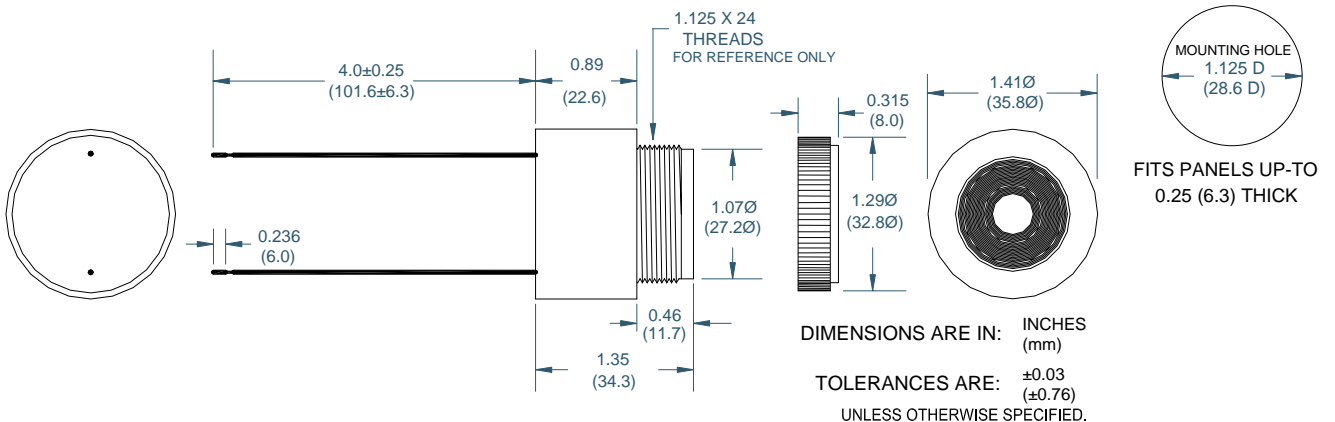
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07

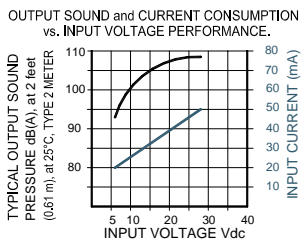


# UW-09-628-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UW-09-628-Q(F) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

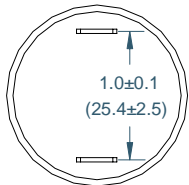
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

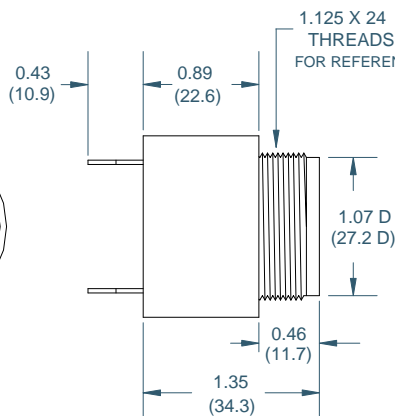
## DIMENSIONS

## PANEL MOUNTING

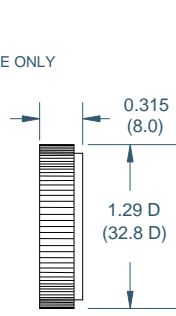
REAR VIEW



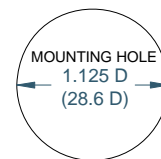
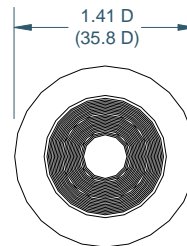
SIDE VIEW



RING

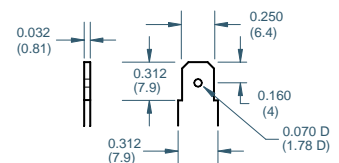


FRONT VIEW



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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Revision: 2.07

# UW-09-628-Q(F)D

**Made in  
USA**

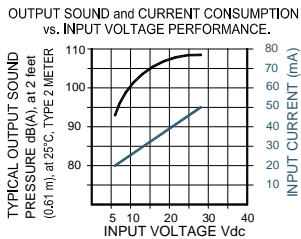


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

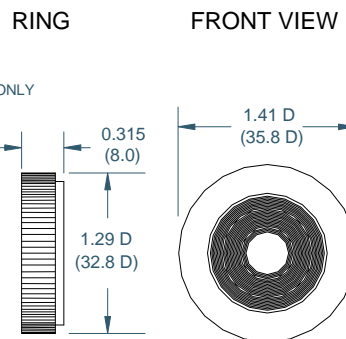
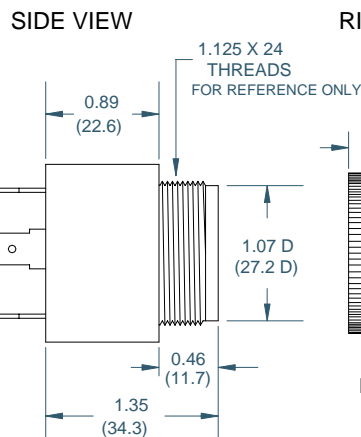
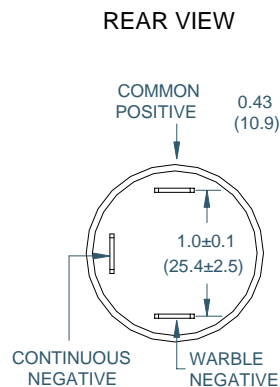
The UW-09-628-Q(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a fast warble tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

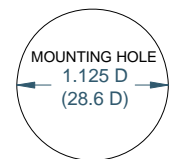
<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS

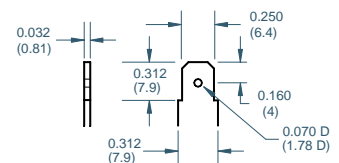


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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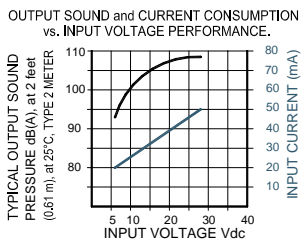
**Revision: 2.07**

# UW-09-628-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



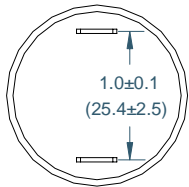
The UW-09-628-Q(S) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

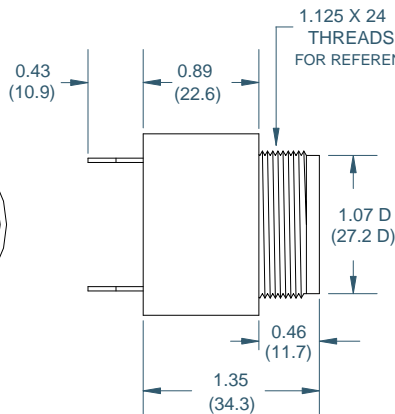
<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

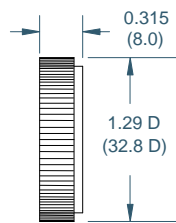
REAR VIEW



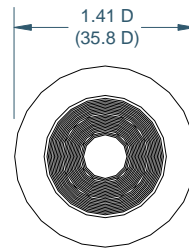
SIDE VIEW



RING

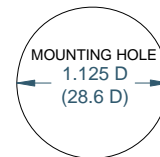


FRONT VIEW



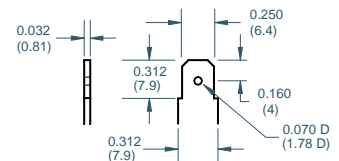
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
www.floydbell.com

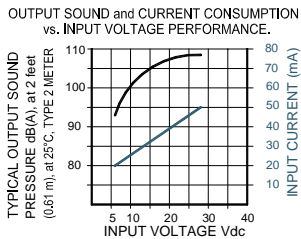
Revision: 2.07

# UW-09-628-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

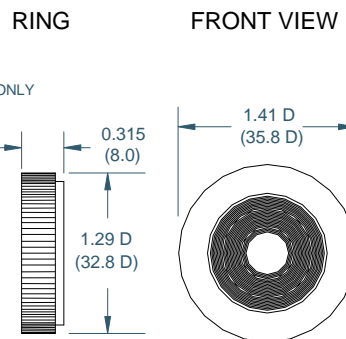
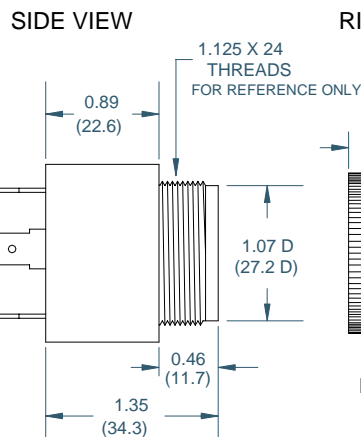
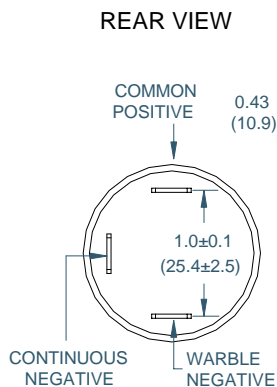


The UW-09-628-Q(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a slow warble tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

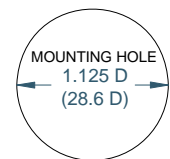
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

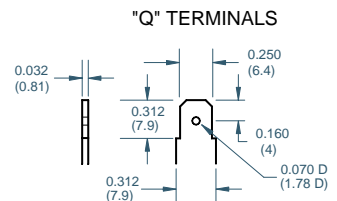
## DIMENSIONS



## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**



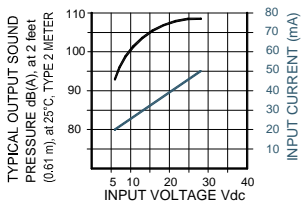
# UW-09-628-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UW-09-628-S(F) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

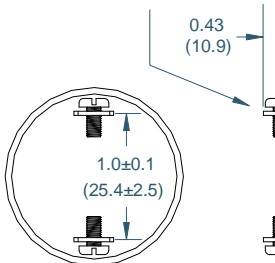
## SPECIFICATIONS

**Operating Mode:** Ultra Loud Warble Tone  
**Operating Voltage:** 6-28 Vdc  
**Nominal Operating Voltage:** 28 Vdc  
**Operating Frequency:** Low Frequency— 2000±250 Hz  
 High Frequency— 2100±250 Hz  
 3±25% Cycles per second  
**Typical Operating Current:** 20 mA at 6 Vdc  
 50 mA at 28 Vdc  
**Typical Sound Pressure:** 93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load  
**Termination Strength:**  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

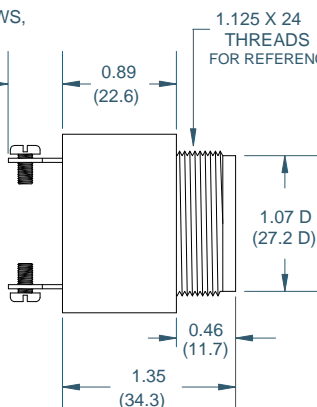
## DIMENSIONS

### REAR VIEW

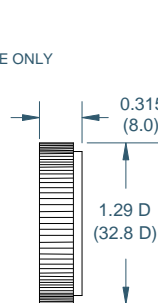
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



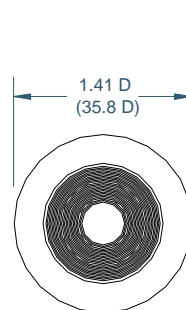
### SIDE VIEW



### RING

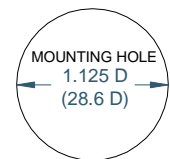


### FRONT VIEW



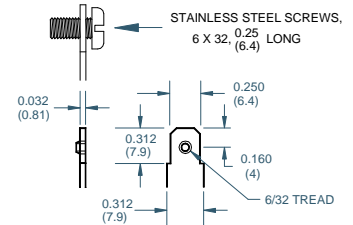
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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Revision: 2.07

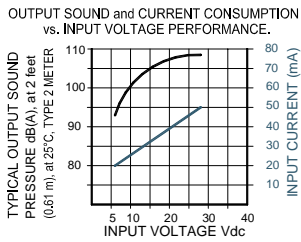


# UW-09-628-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

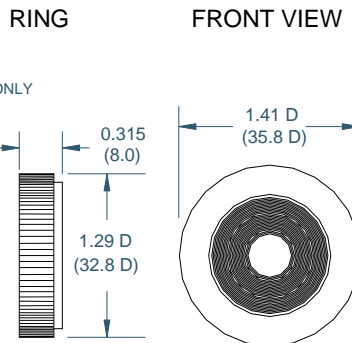
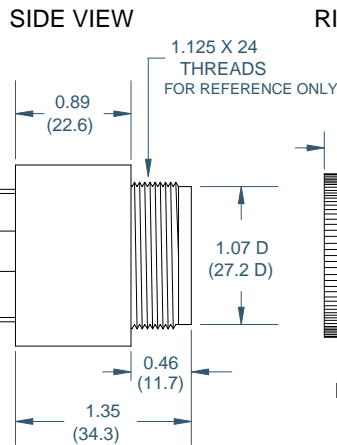
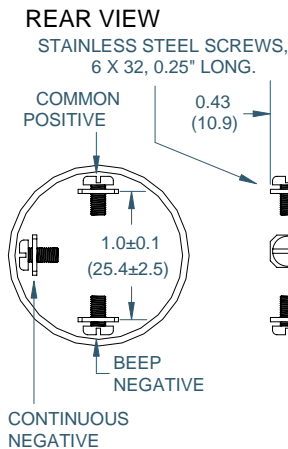


The UW-09-628-S(F)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a fast warble tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

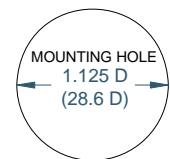
<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



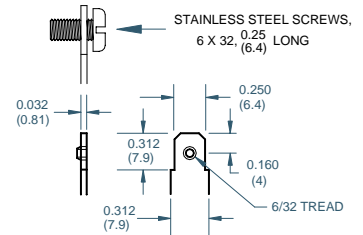
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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www.floydbell.com

**Revision: 2.07**

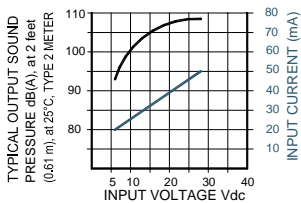
# UW-09-628-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UW-09-628-S(S) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

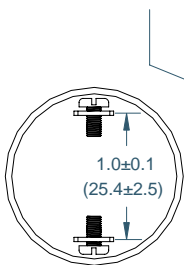
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

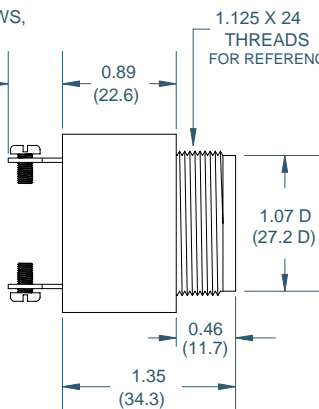
## DIMENSIONS

### REAR VIEW

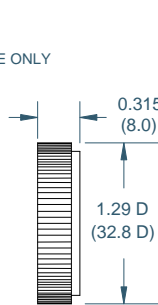
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



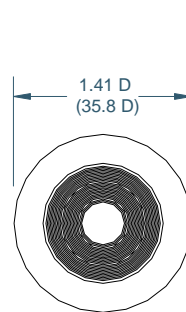
### SIDE VIEW



### RING

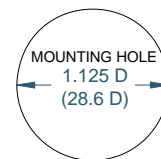


### FRONT VIEW



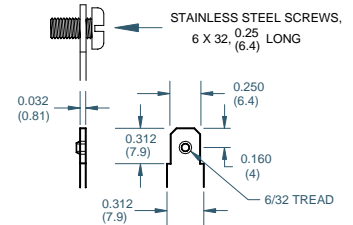
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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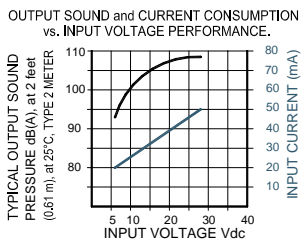
**Revision: 2.07**

# UW-09-628-S(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

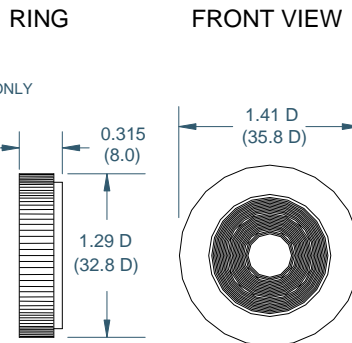
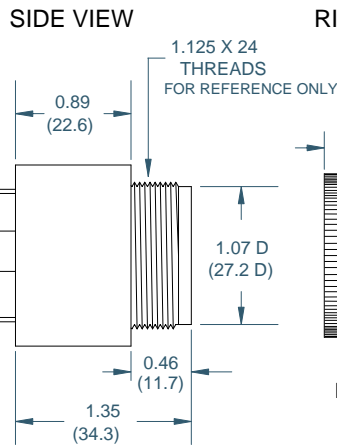
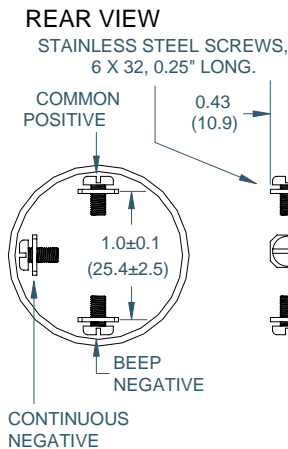


The UW-09-628-S(S)D is an ultra loud output, dual function, panel mounted alarm for operating voltages of 6-28VDC. The alarm functions as a slow warble tone and as a continuous tone. Both tone modes have a typical sound pressure level of 109 dB(A) at maximum voltage.

## SPECIFICATIONS

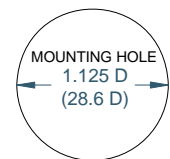
<b>Operating Mode:</b>	Ultra Loud Dual Function Warble/Continuous Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



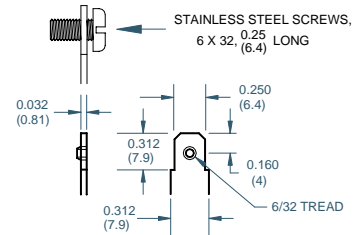
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS



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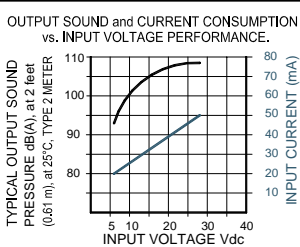
**Revision: 2.07**

# UW-09-628-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



The UW-09-628-W(F) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

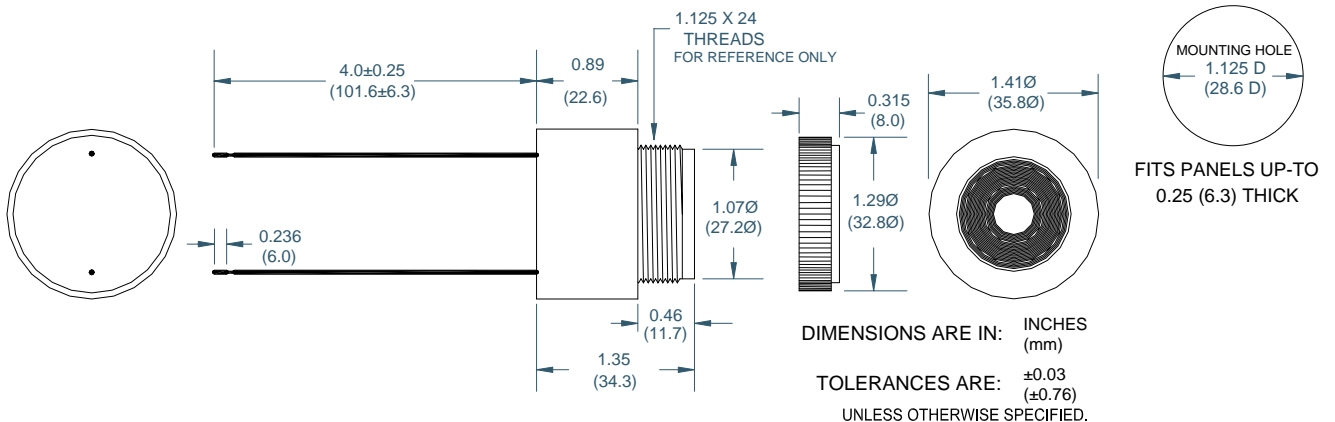
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07



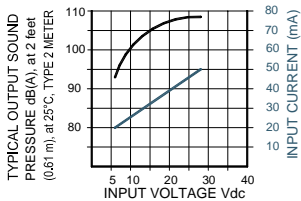
# UW-09-628-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UW-09-628-W(S) is an ultra loud output, panel mounted alarm for operating voltages of 6-28VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	6-28 Vdc
<b>Nominal Operating Voltage:</b>	28 Vdc
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	20 mA at 6 Vdc 50 mA at 28 Vdc
<b>Typical Sound Pressure:</b>	93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

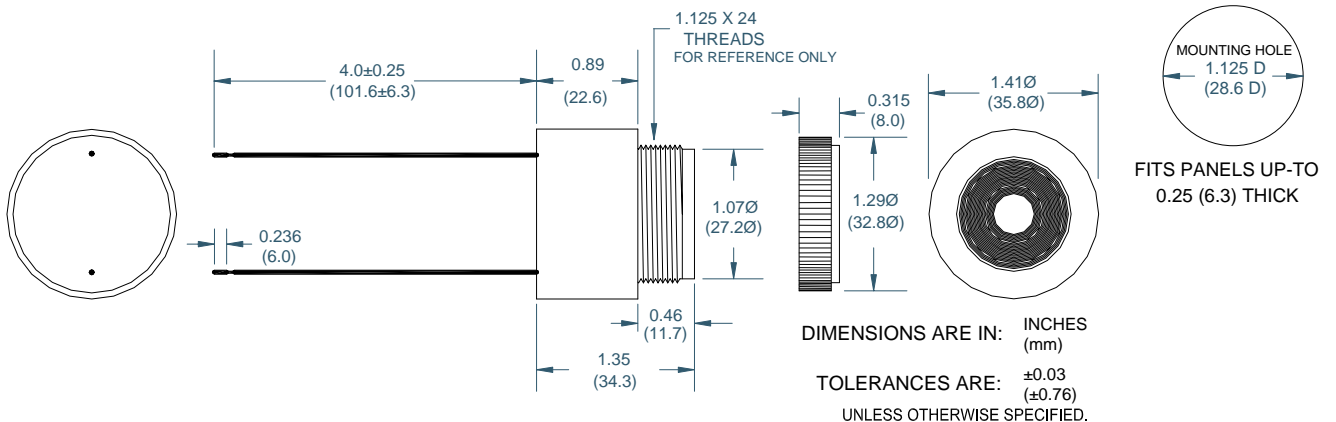
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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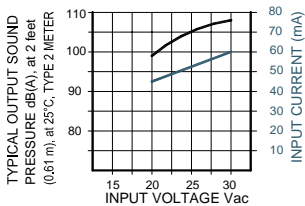
# UW-19-230-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

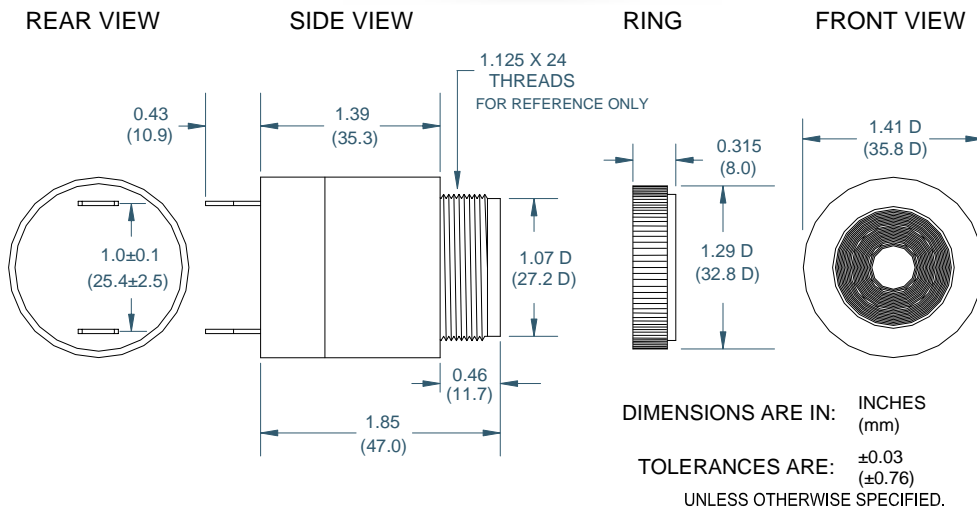


The UW-19-230-Q(F) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

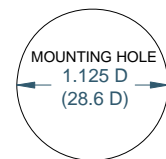
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

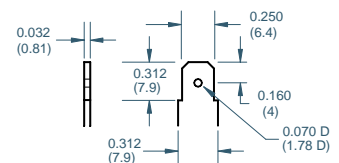


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



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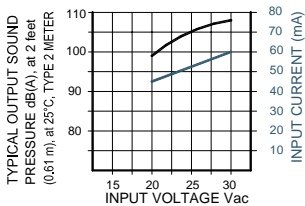
# UW-19-230-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

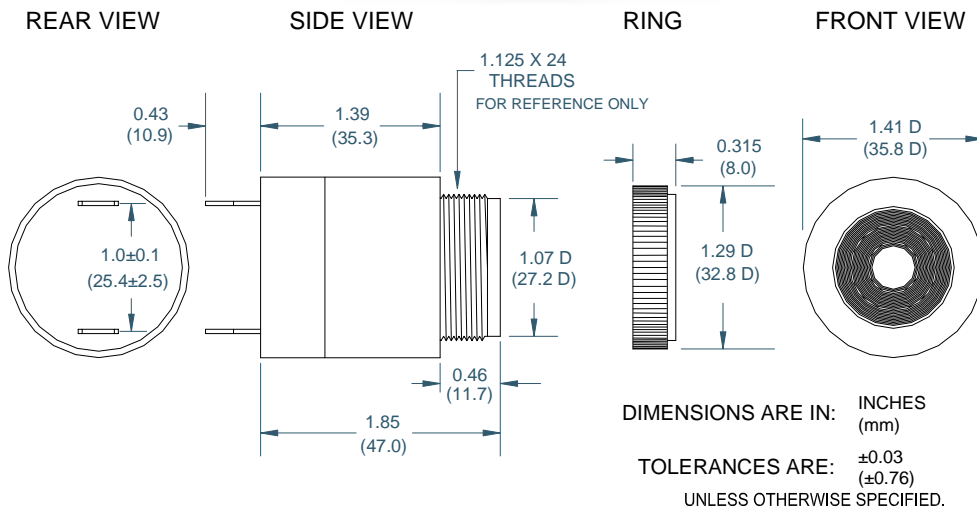


The UW-19-230-Q(S) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

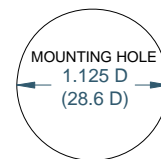
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

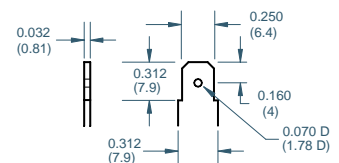


## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS



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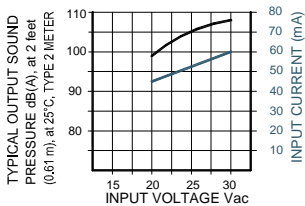
# UW-19-230-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The UW-19-230-S(F) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

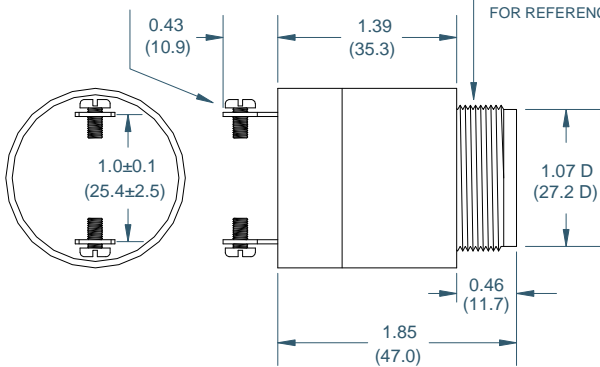
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2000±250 Hz. 2100±250 Hz. 3±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

### REAR VIEW

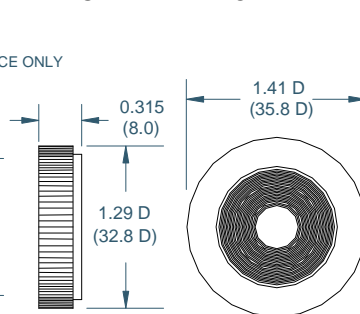
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



### SIDE VIEW

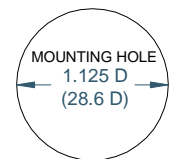
### RING

### FRONT VIEW



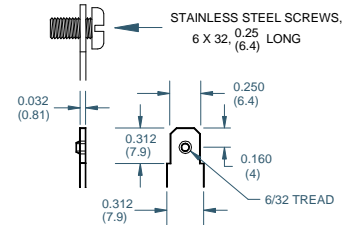
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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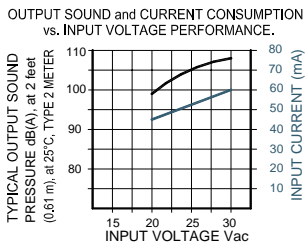
**Revision: 2.07**

# UW-19-230-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

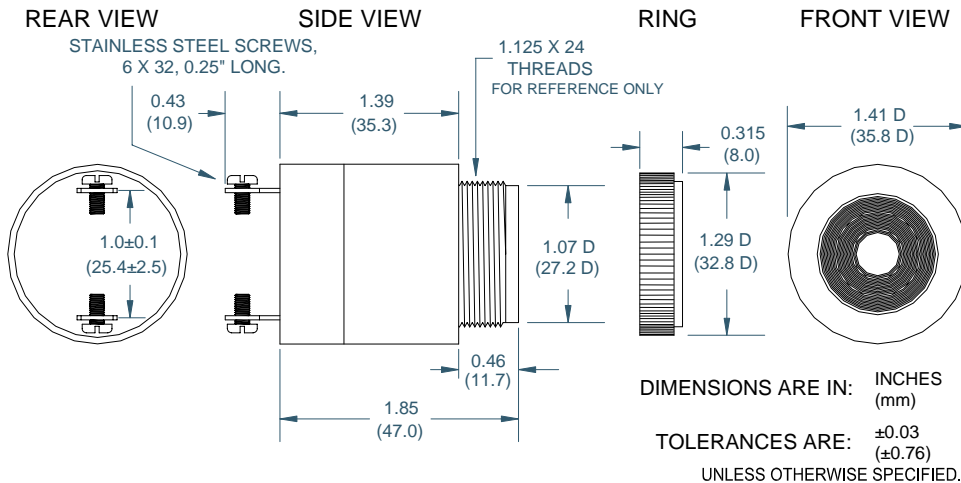


The UW-19-230-S(S) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

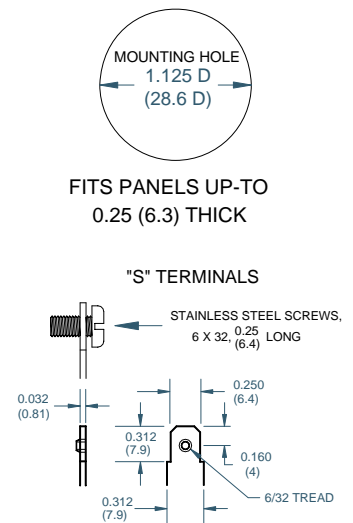
## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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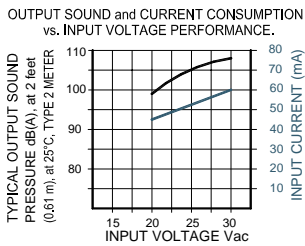
**Revision: 2.07**

# UW-19-230-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

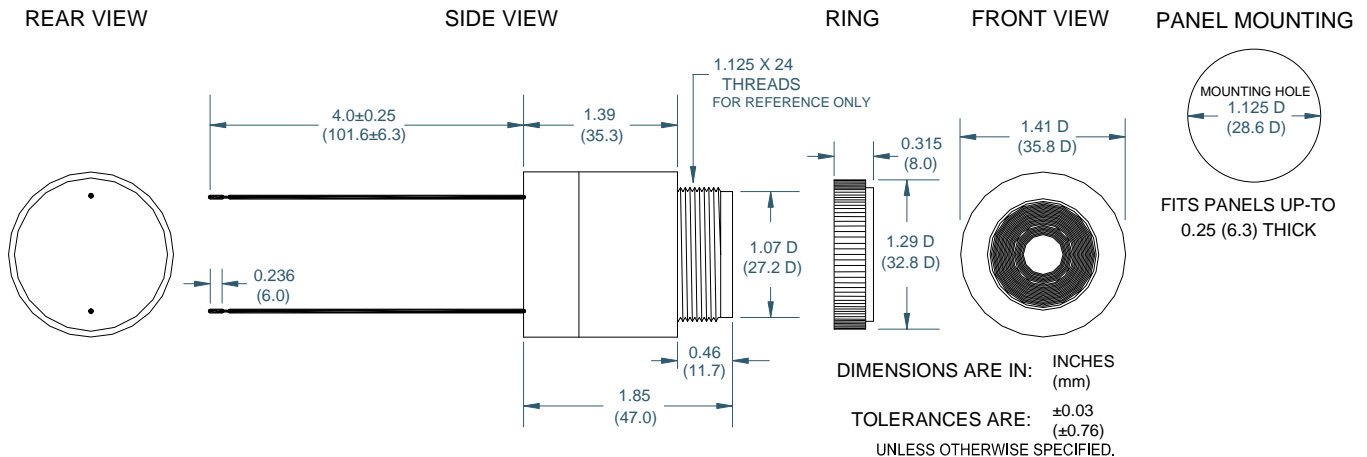


The UW-19-230-W(F) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The fast warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 3±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
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<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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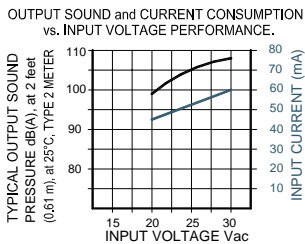


# UW-19-230-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

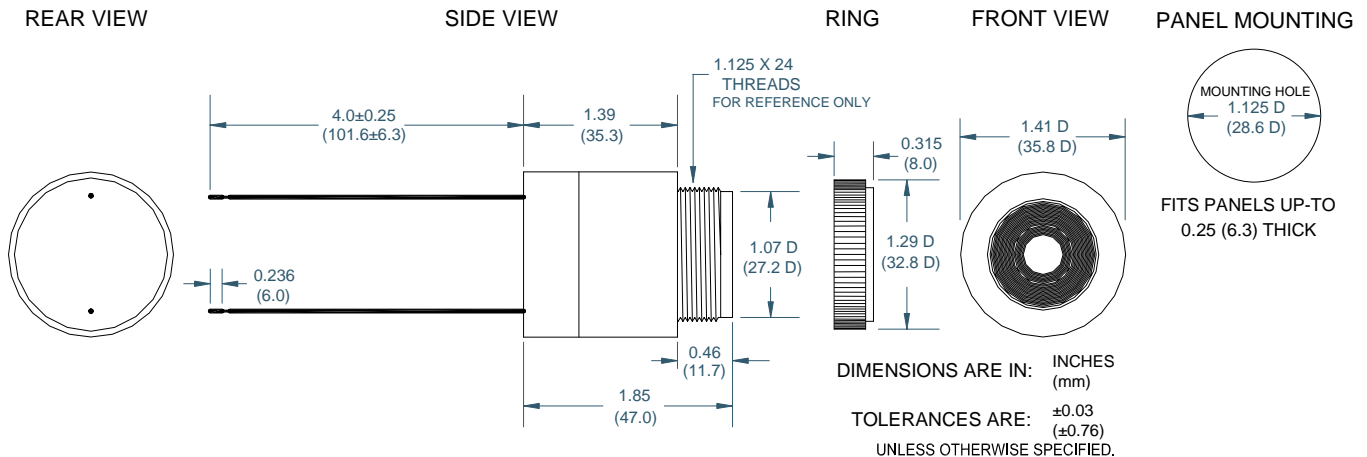


The UW-19-230-W(S) is an ultra loud output, panel mounted alarm for operating voltages of 20-30VAC/VDC. The slow warble tone has a typical sound pressure level of 109 dB(A) at maximum voltage. It is terminated with two 18AWG wires, 4" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Ultra Loud Warble Tone
<b>Operating Voltage:</b>	20-30 Vac/Vdc
<b>Nominal Operating Voltage:</b>	30 Vac
<b>Operating Frequency:</b>	2100±250 Hz. Center 1±25% Cycles per second
<b>Typical Operating Current:</b>	40 mA at 20 Vac 60 mA at 30 Vac
<b>Typical Sound Pressure:</b>	100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C 109±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
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## DIMENSIONS



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720 Dearborn Park Lane • Columbus, OH 43085  
Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
www.floydbell.com

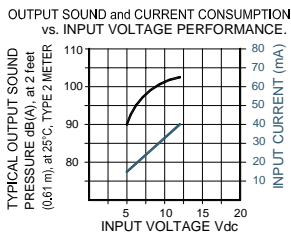
**Revision: 2.07**

# XB-05-312-P(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- PCB Mountable
- Two Tones, One Package
- Polarity Protected Circuitry
- Reliable Piezoelectric Technology

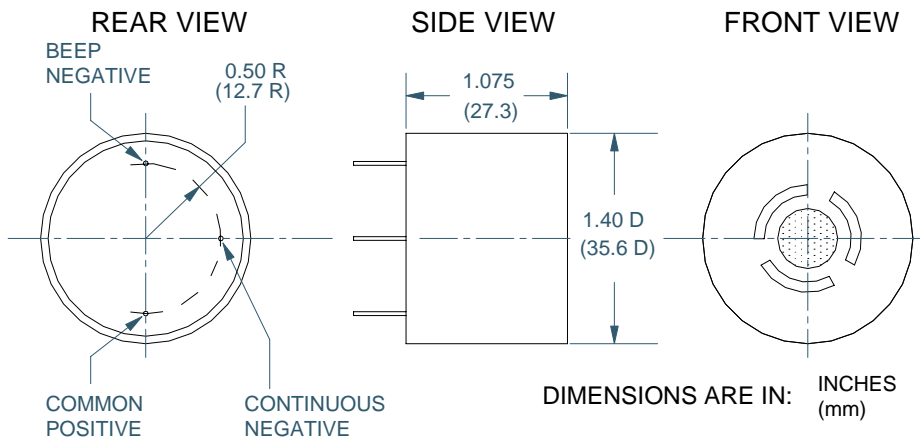


The XB-05-312-P(U)D is an extra loud output alarm for operating voltages of 5-12VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

# XB-09-201-Q(F)

**Made in  
USA**

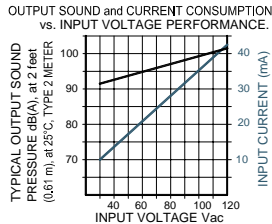


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-201-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

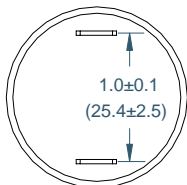
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

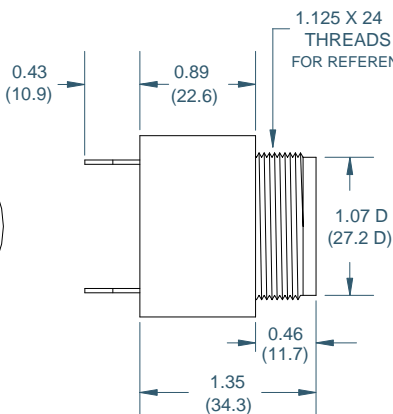


## DIMENSIONS

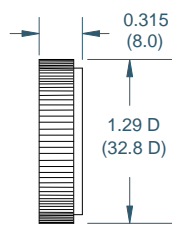
REAR VIEW



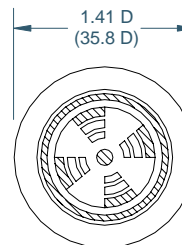
SIDE VIEW



RING

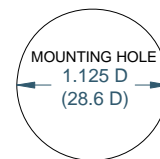


FRONT VIEW



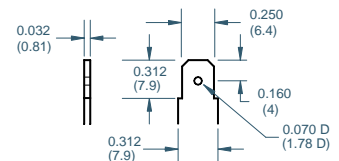
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

# XB-09-201-Q(M)

**Made in  
USA**

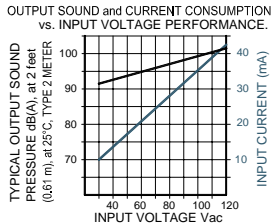


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-201-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

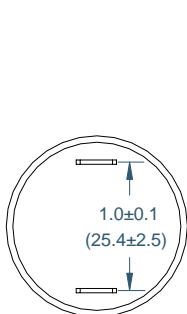
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

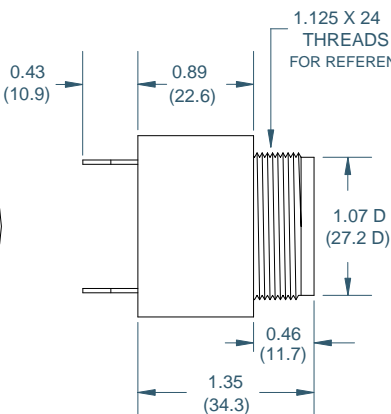


## DIMENSIONS

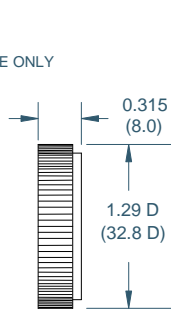
REAR VIEW



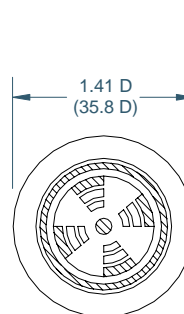
SIDE VIEW



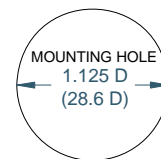
RING



FRONT VIEW

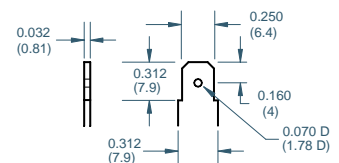


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
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**Revision: 2.07**

# XB-09-201-Q(S)

**Made in  
USA**



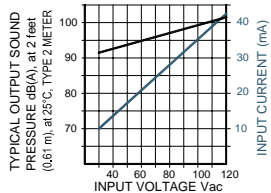
- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-201-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

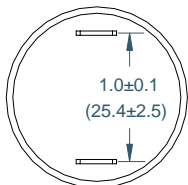
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

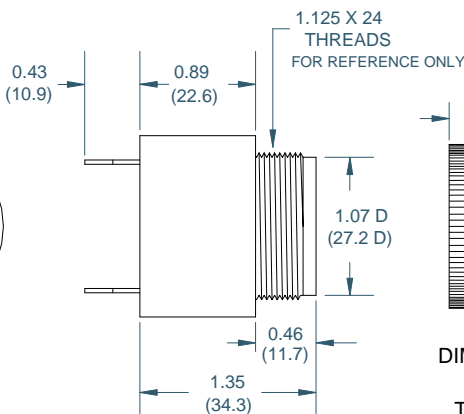


## DIMENSIONS

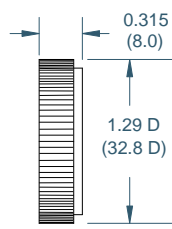
REAR VIEW



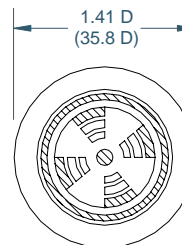
SIDE VIEW



RING

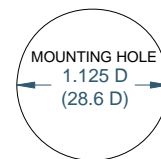


FRONT VIEW



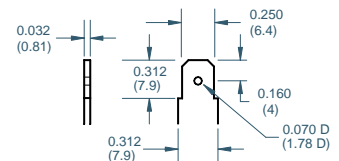
DIMENSIONS ARE IN: INCHES (mm)  
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## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**



# XB-09-201-S(F)

**Made in  
USA**

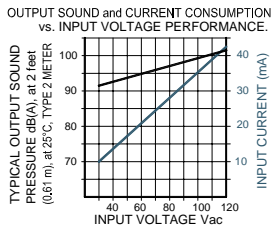


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

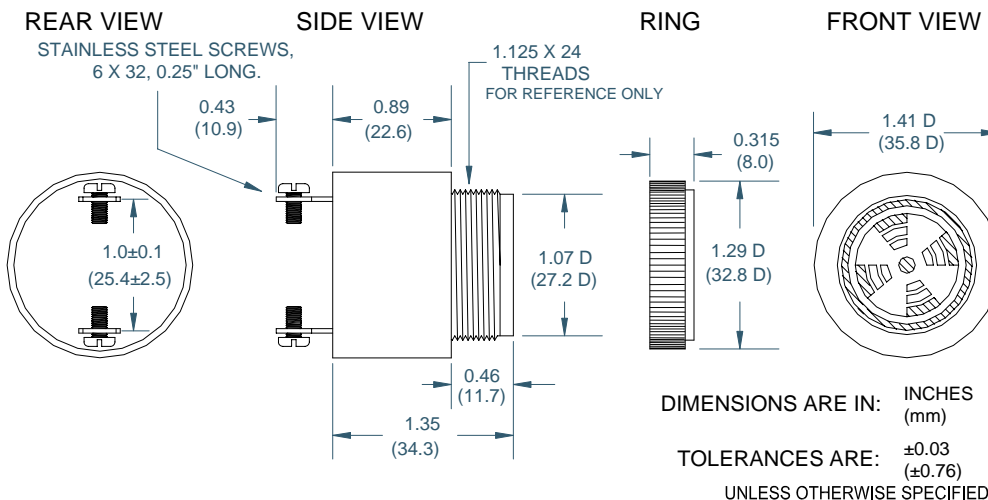
The XB-09-201-S(F) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

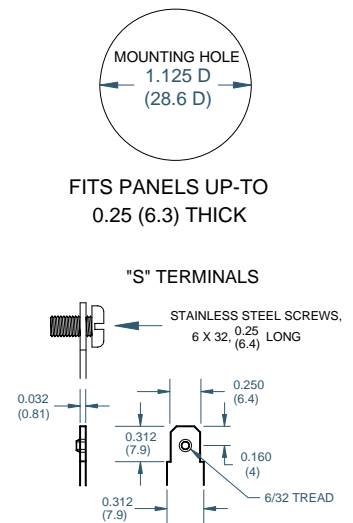
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-09-201-S(M)

**Made in  
USA**

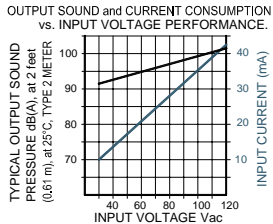


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

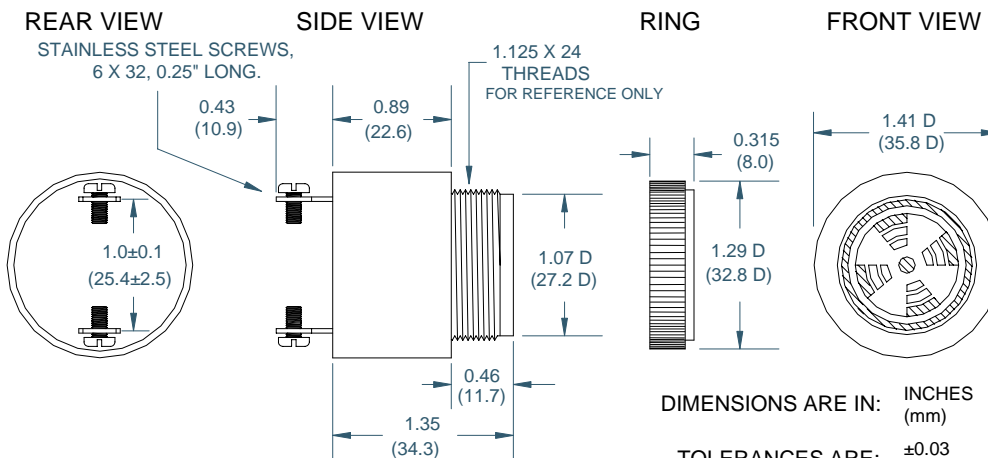
The XB-09-201-S(M) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
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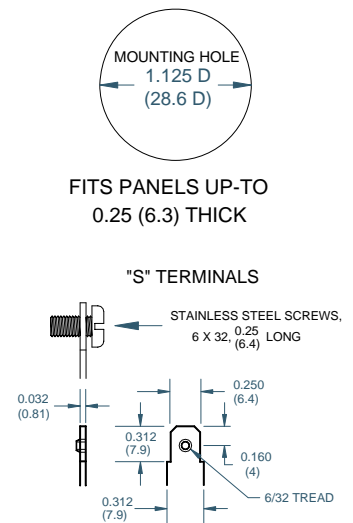


## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



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**Revision: 2.07**

# XB-09-201-S(S)

**Made in  
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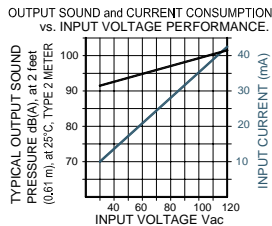


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

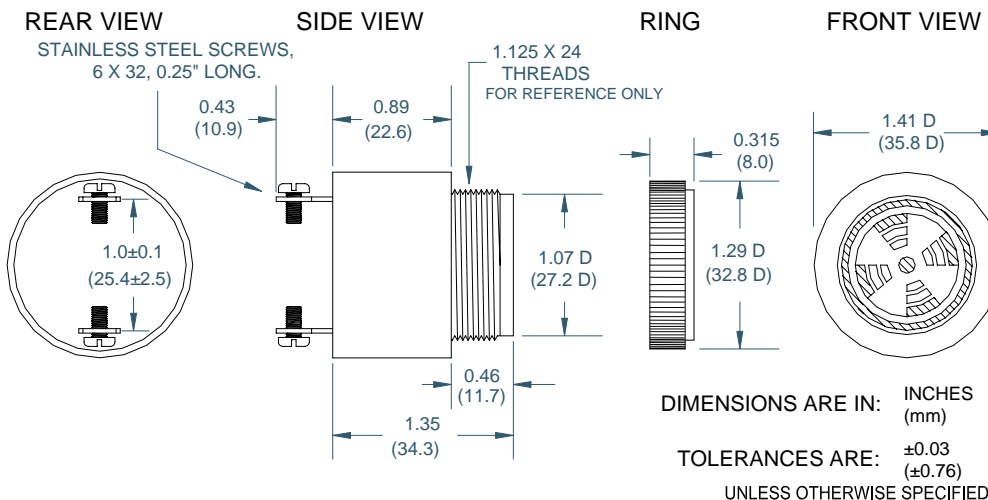
The XB-09-201-S(S) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

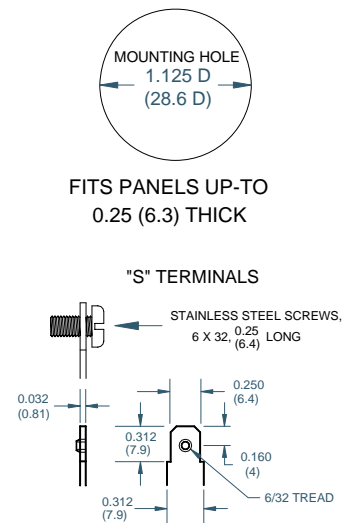
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



**Floyd Bell Inc**  
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**Revision: 2.07**

# XB-09-201-W(F)

**Made in  
USA**

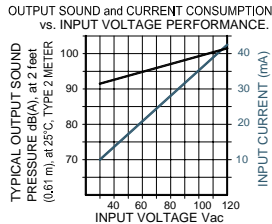


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-201-W(F) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

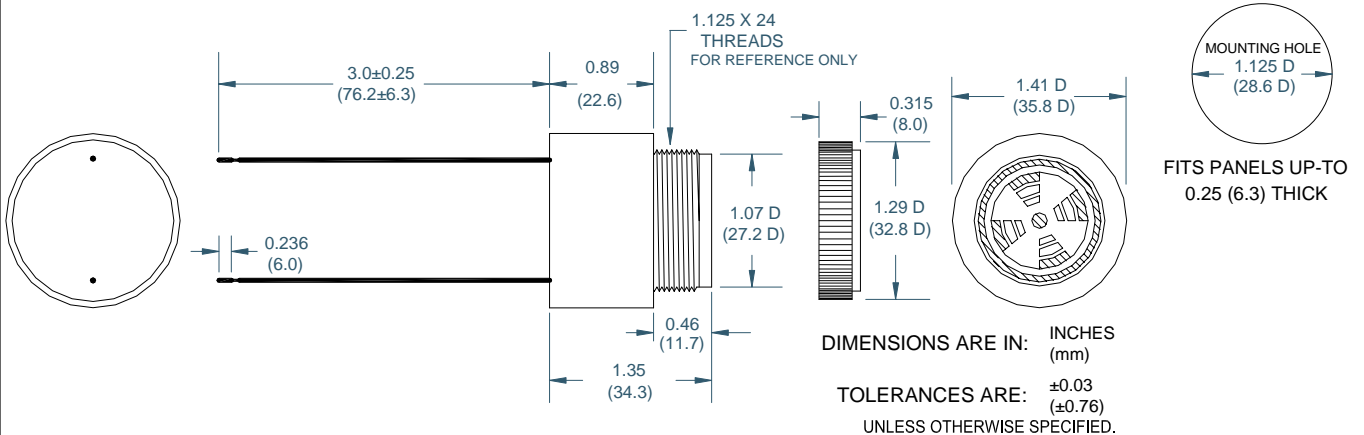
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**

# XB-09-201-W(M)

**Made in  
USA**

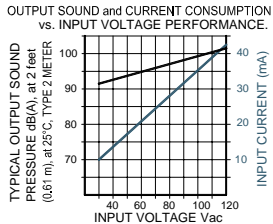


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-201-W(M) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

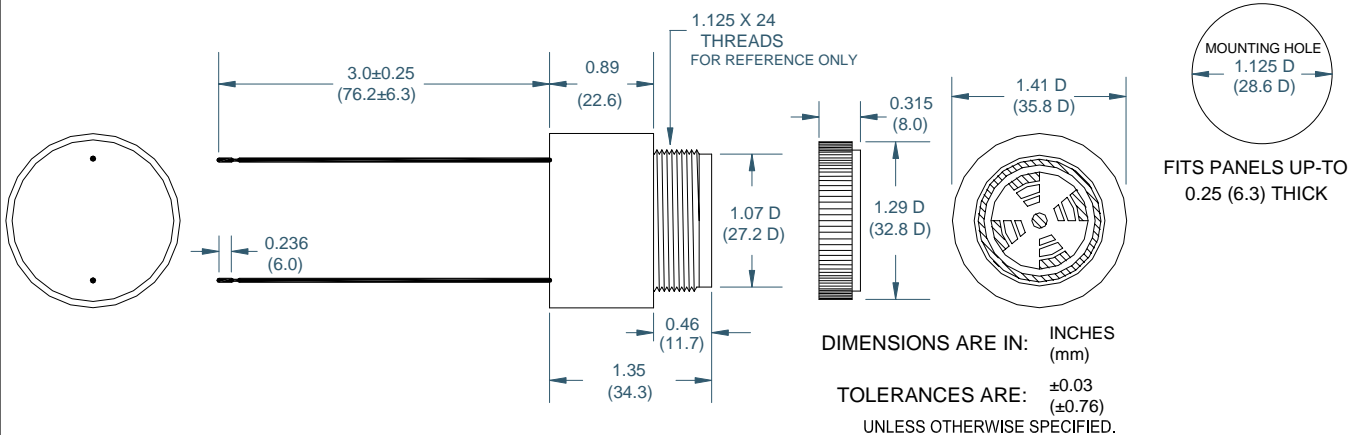
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**



# XB-09-201-W(S)

**Made in  
USA**

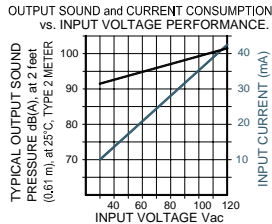


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-201-W(S) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

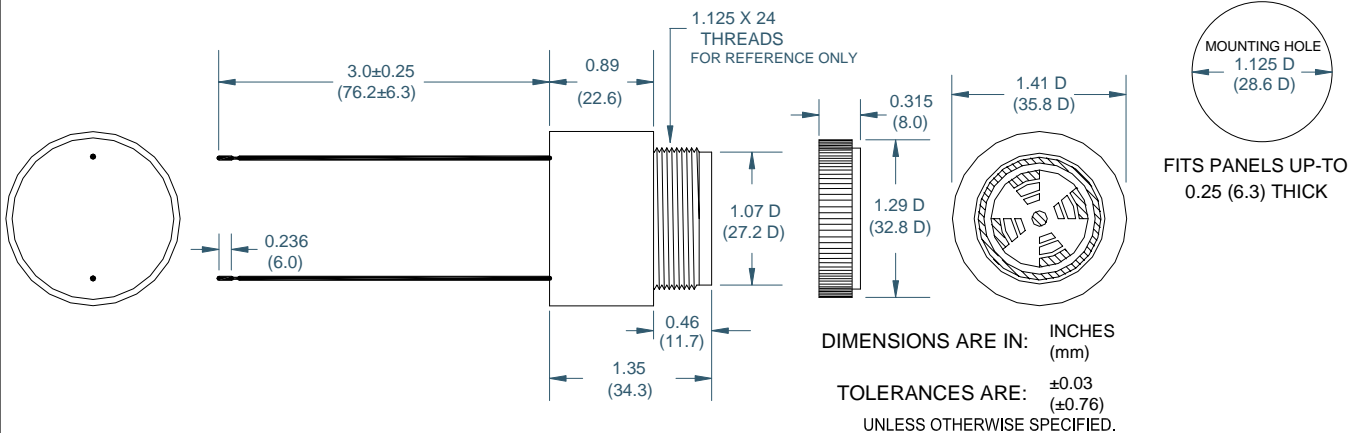
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**

# XB-09-301-Q(F)

**Made in  
USA**

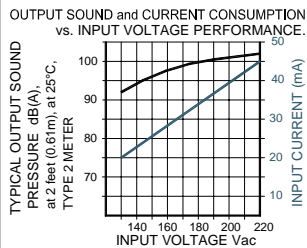


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-301-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

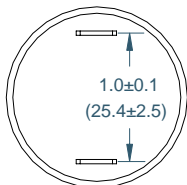
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

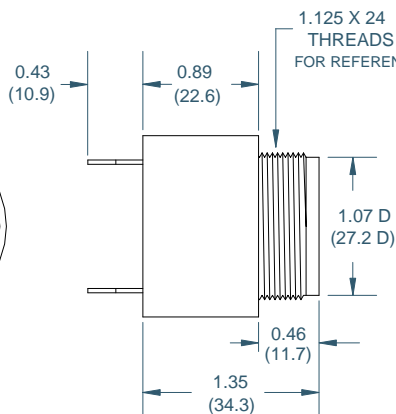


## DIMENSIONS

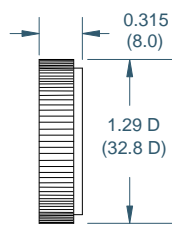
REAR VIEW



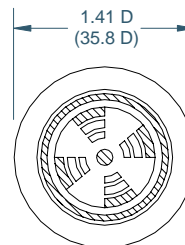
SIDE VIEW



RING

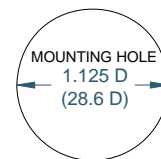


FRONT VIEW



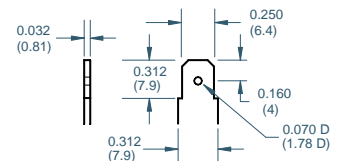
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

# XB-09-301-Q(M)

**Made in  
USA**

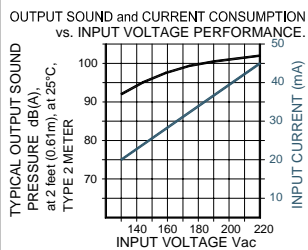


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-301-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

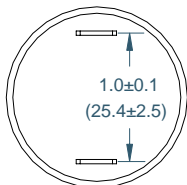
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

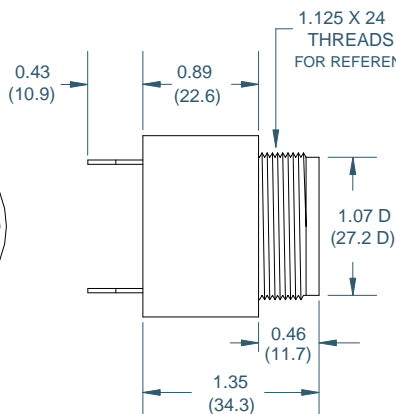


## DIMENSIONS

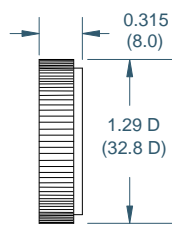
REAR VIEW



SIDE VIEW



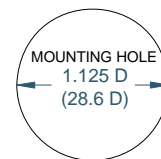
RING



FRONT VIEW

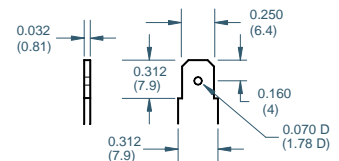


PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

# XB-09-301-Q(S)

**Made in  
USA**

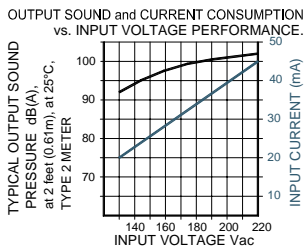


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-301-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

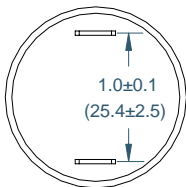
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

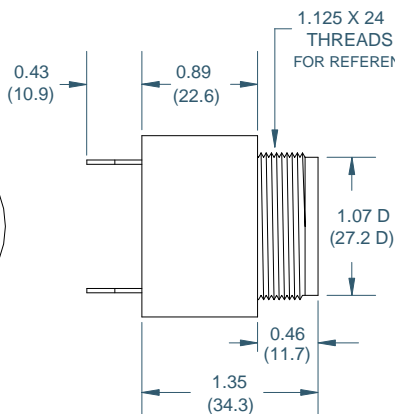


## DIMENSIONS

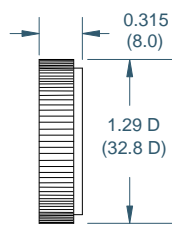
REAR VIEW



SIDE VIEW



RING

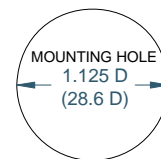


FRONT VIEW



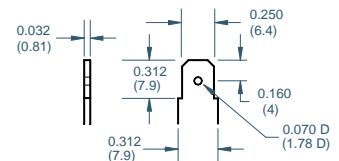
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

# XB-09-301-S(F)

**Made in  
USA**

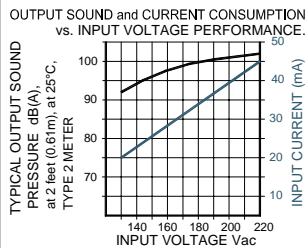


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

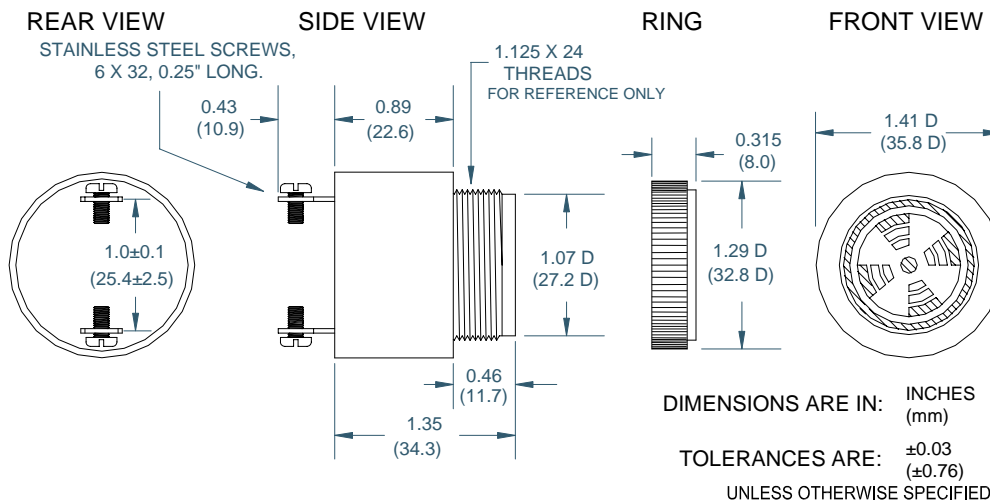
The XB-09-301-S(F) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

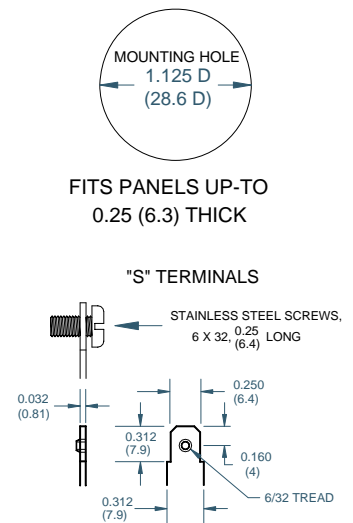
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



# XB-09-301-S(M)

**Made in  
USA**

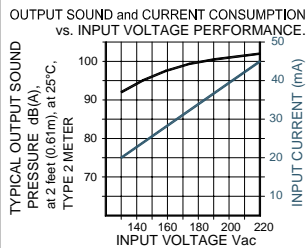


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

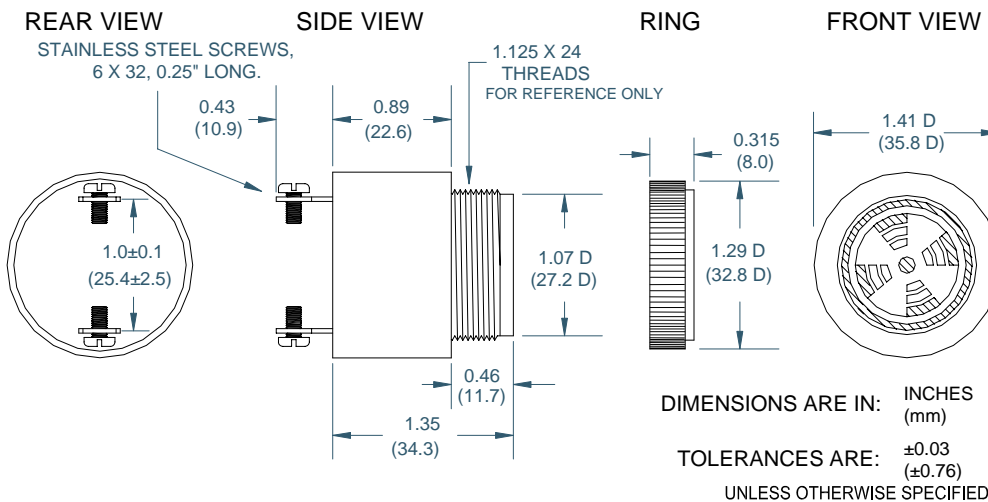
The XB-09-301-S(M) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

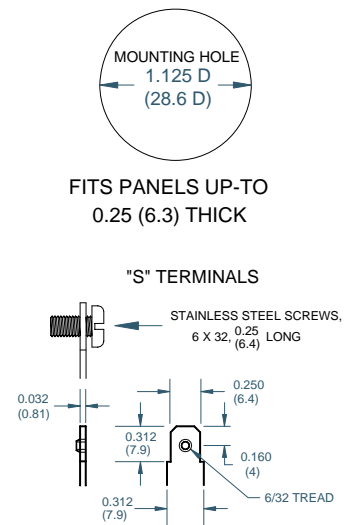
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-09-301-S(S)

**Made in  
USA**

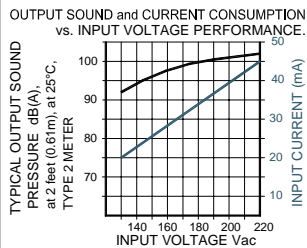


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

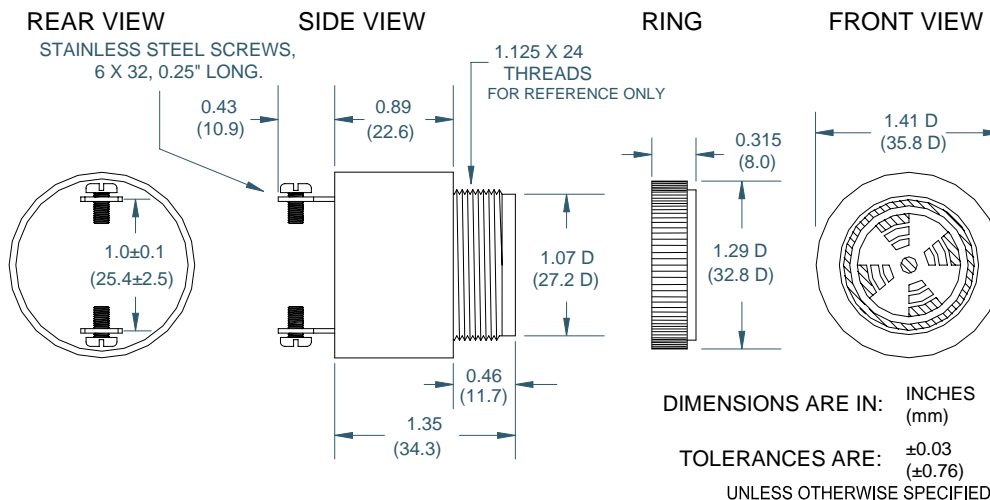
The XB-09-301-S(S) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

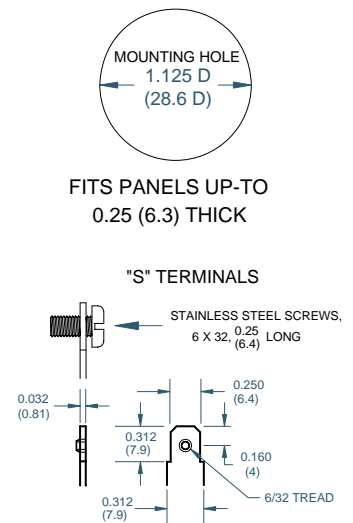
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-09-301-W(F)

**Made in  
USA**

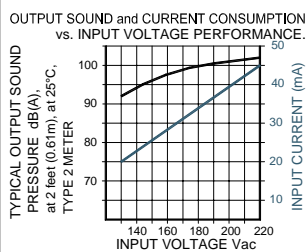


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-301-W(F) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

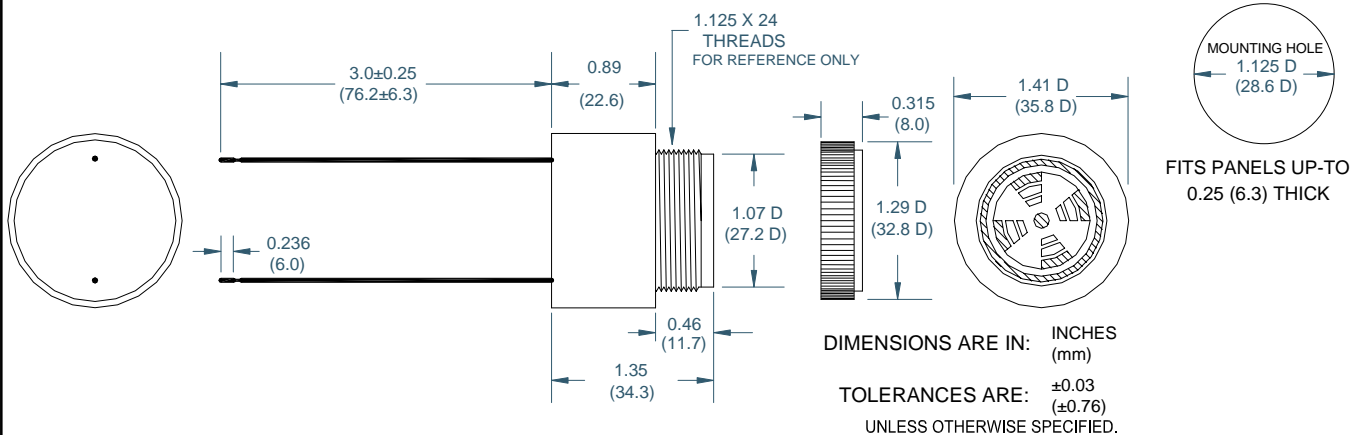
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**

# XB-09-301-W(M)

**Made in  
USA**

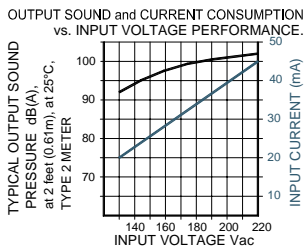


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-301-W(M) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

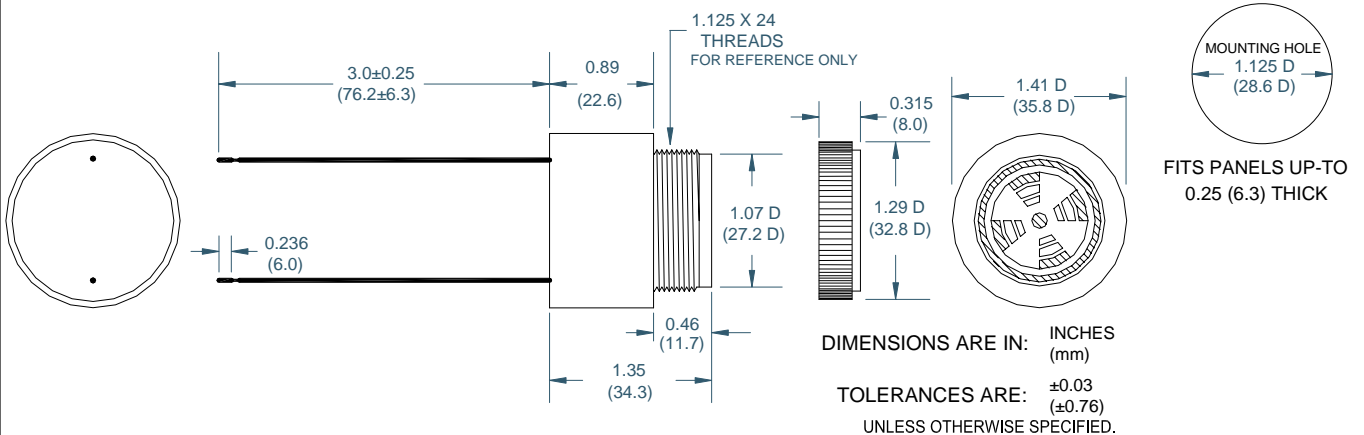
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**

# XB-09-301-W(S)

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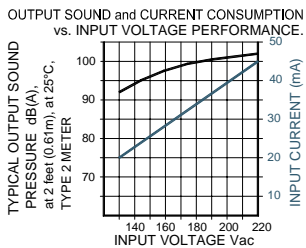


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-301-W(S) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS

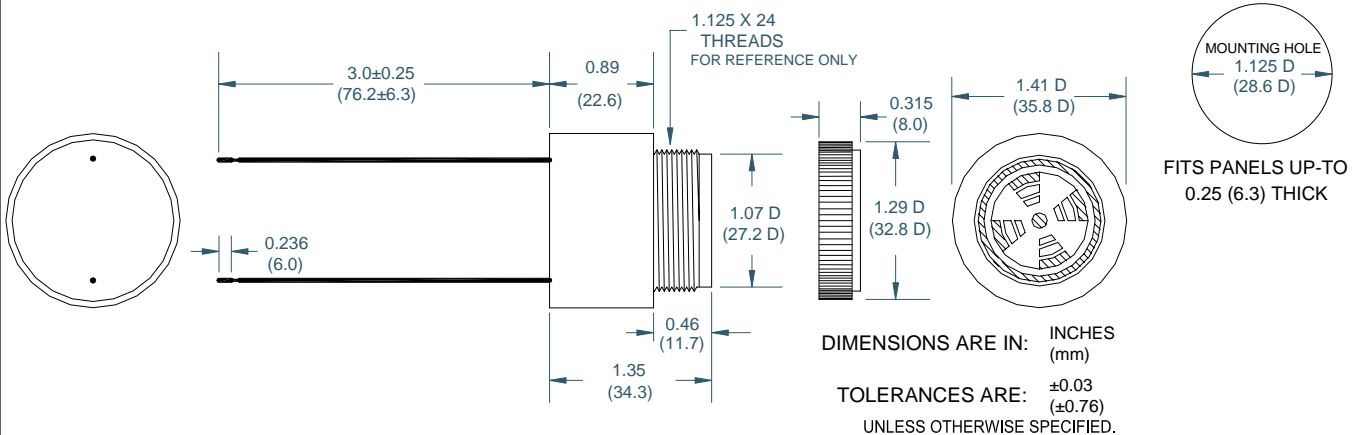
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**



# XB-09-312-Q(F)

**Made in  
USA**

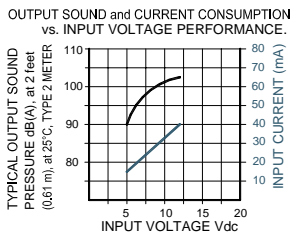


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-312-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

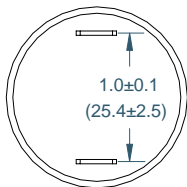
## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

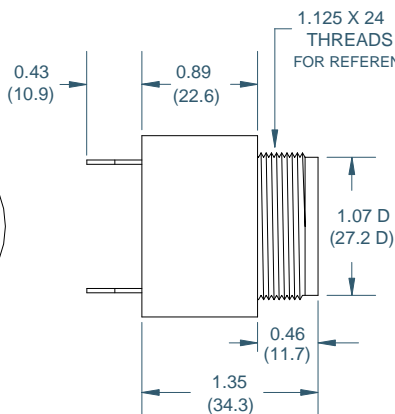


## DIMENSIONS

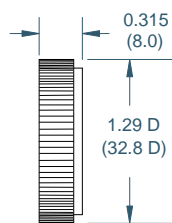
REAR VIEW



SIDE VIEW



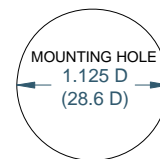
RING



FRONT VIEW

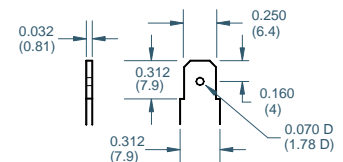


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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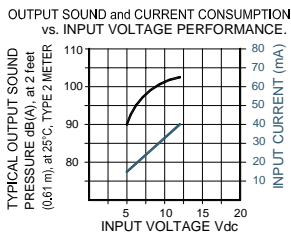
**Revision: 2.07**

# XB-09-312-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

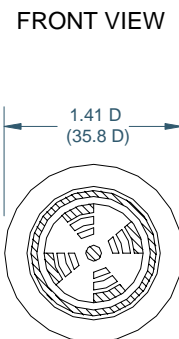
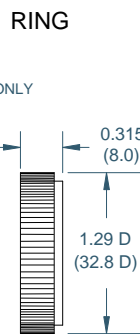
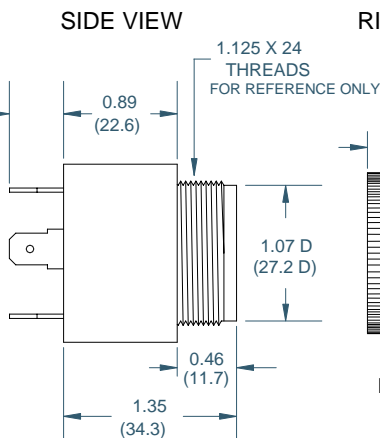
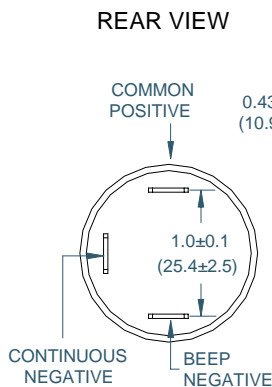


The XB-09-312-Q(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a fast beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

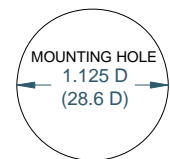
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

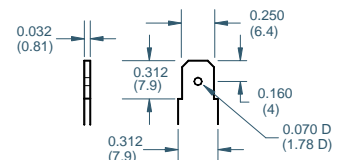


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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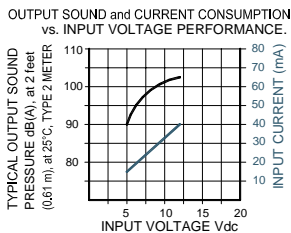
**Revision: 2.07**

# XB-09-312-Q(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



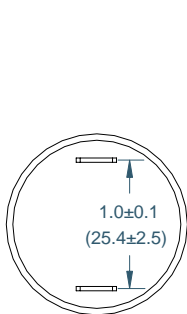
The XB-09-312-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

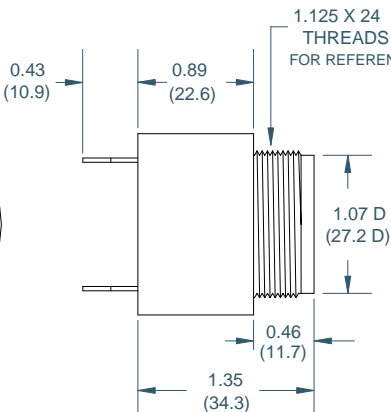
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

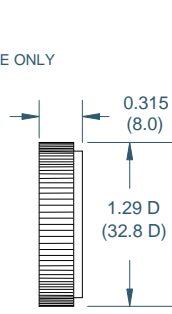
REAR VIEW



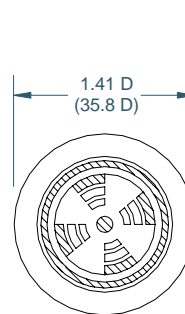
SIDE VIEW



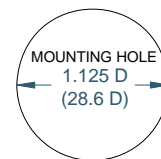
RING



FRONT VIEW

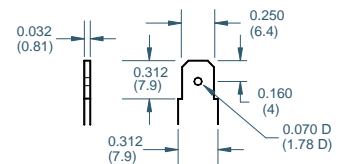


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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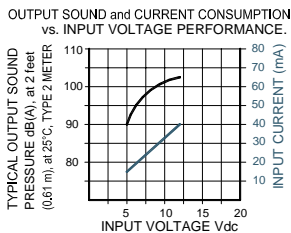
**Revision: 2.07**

# XB-09-312-Q(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

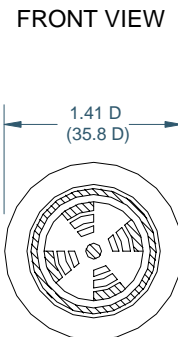
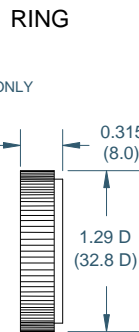
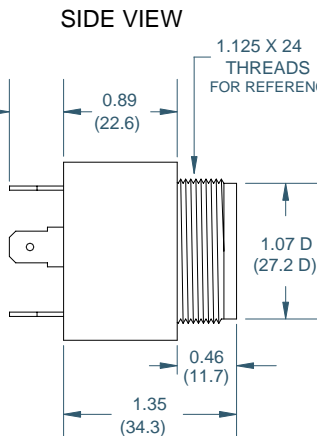
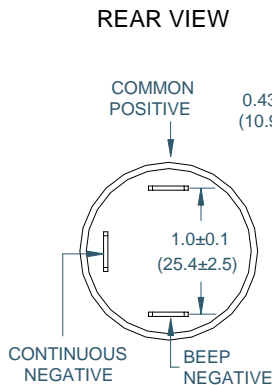


The XB-09-312-Q(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a medium beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

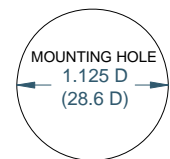
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

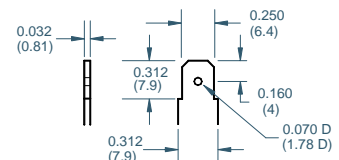


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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www.floydbell.com

**Revision: 2.07**

# XB-09-312-Q(S)

**Made in  
USA**

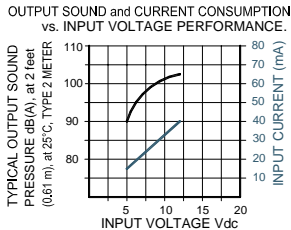


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-312-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

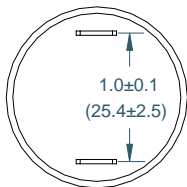
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

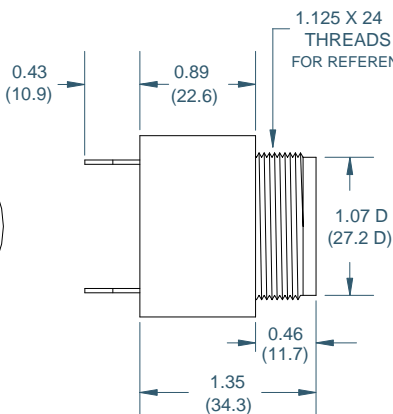


## DIMENSIONS

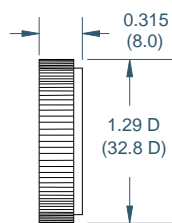
REAR VIEW



SIDE VIEW



RING

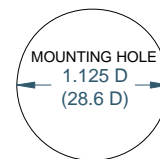


FRONT VIEW



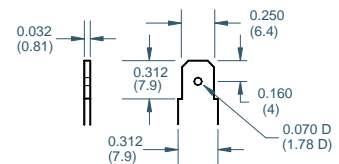
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

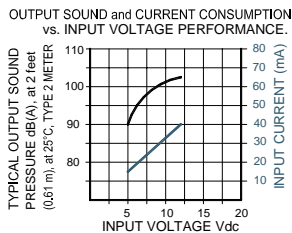


# XB-09-312-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

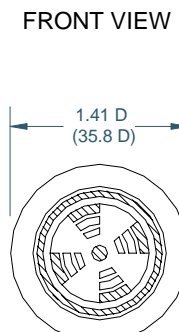
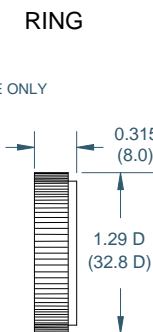
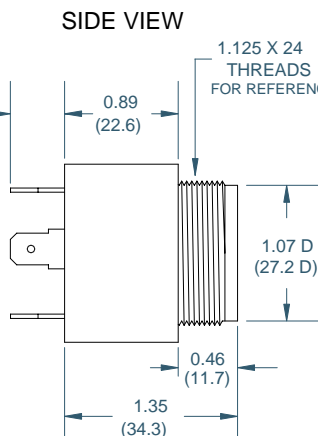
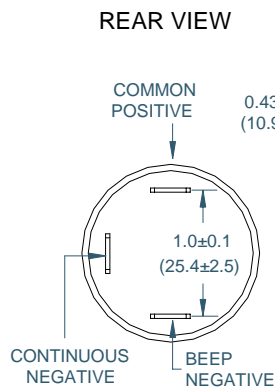


The XB-09-312-Q(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a slow beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

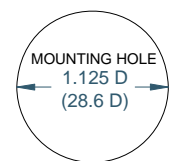
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

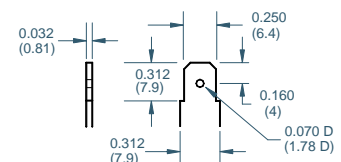


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

# XB-09-312-Q(U)

**Made in  
USA**

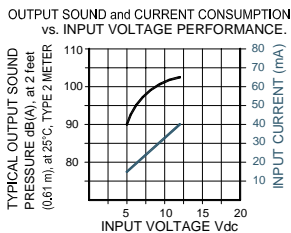


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-312-Q(U) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The six pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

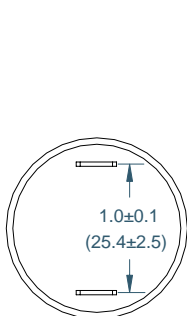
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

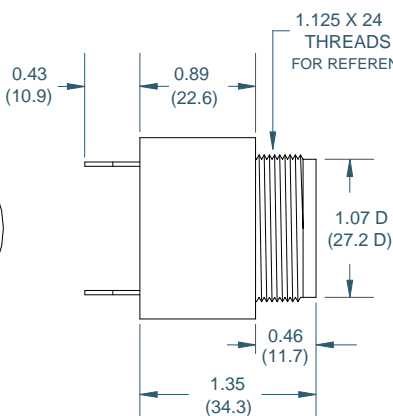


## DIMENSIONS

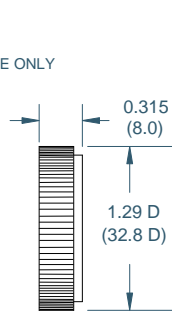
REAR VIEW



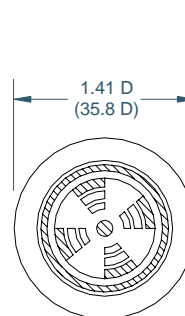
SIDE VIEW



RING

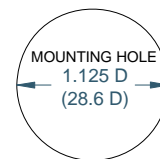


FRONT VIEW



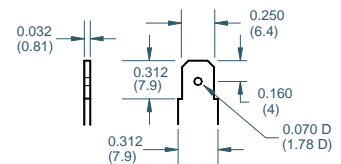
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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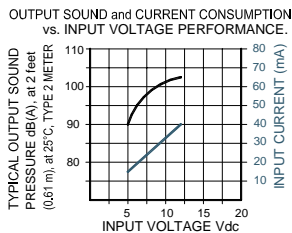
Revision: 2.07

# XB-09-312-Q(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

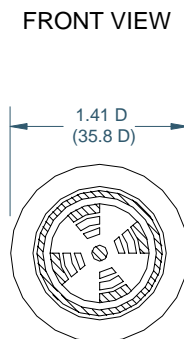
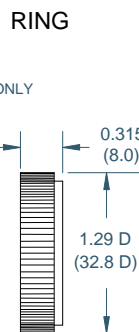
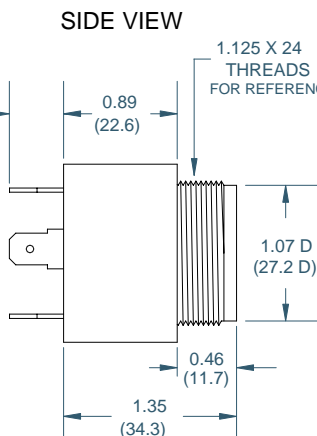
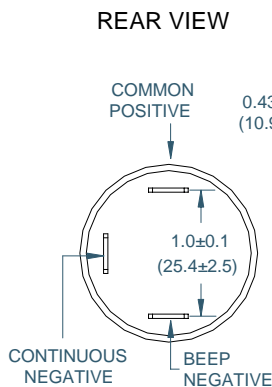


The XB-09-312-Q(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

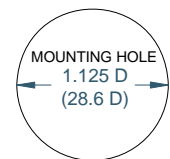
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

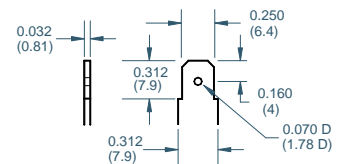


## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

UNLESS OTHERWISE SPECIFIED.

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Revision: 2.07

# XB-09-312-S(F)

**Made in  
USA**

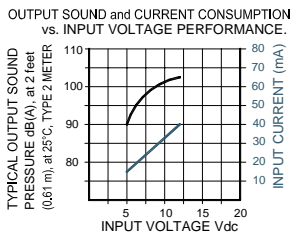


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

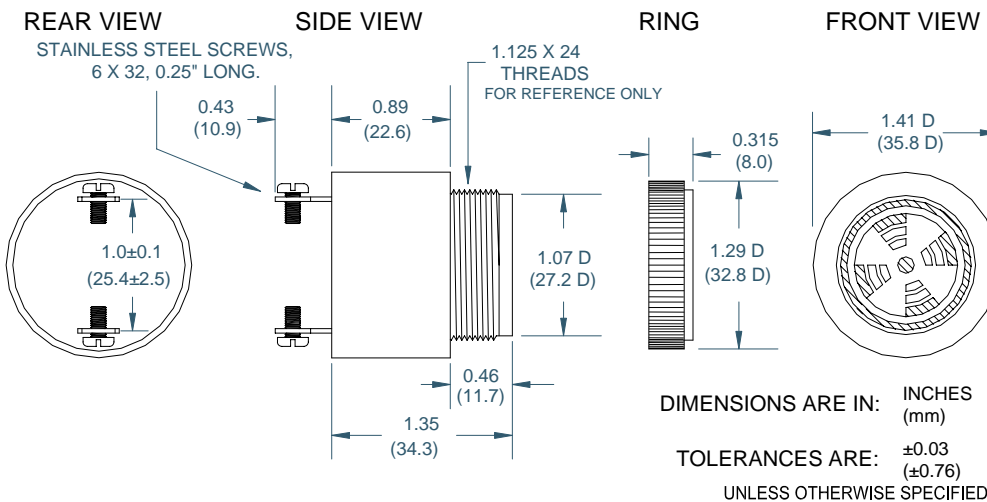
The XB-09-312-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

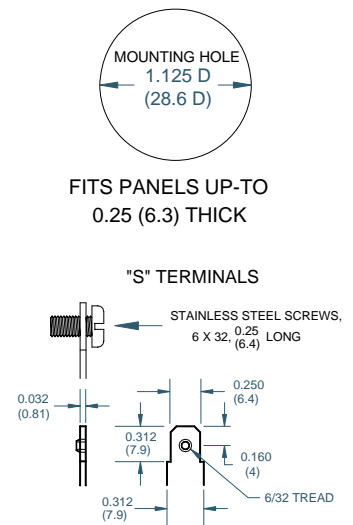
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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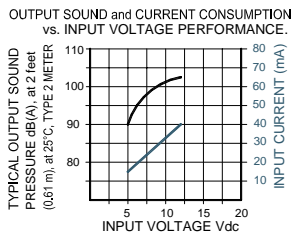


# XB-09-312-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

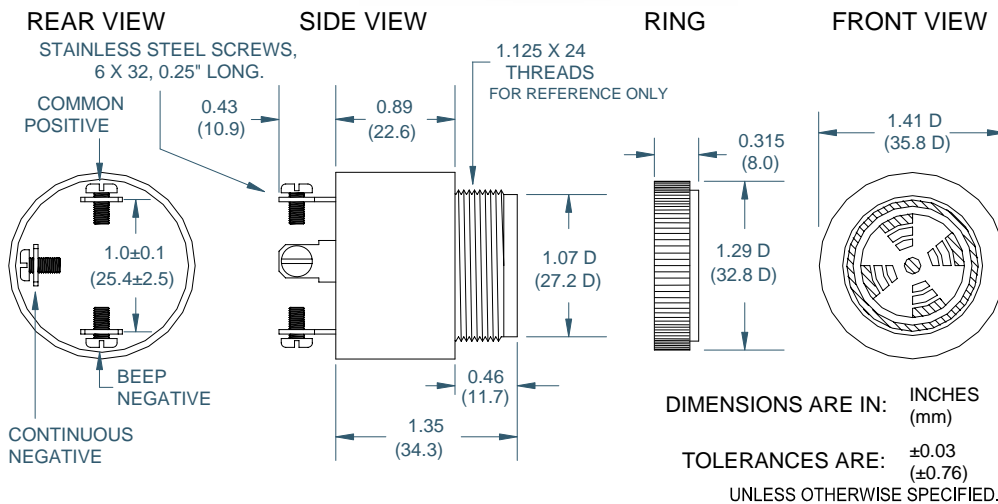


The XB-09-312-S(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a fast beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

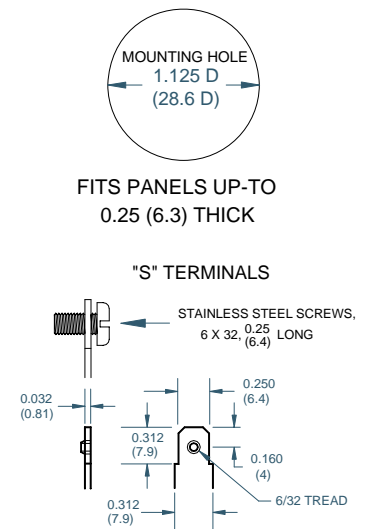
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



# XB-09-312-S(M)

**Made in  
USA**

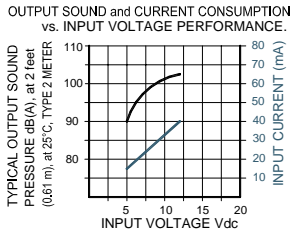


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

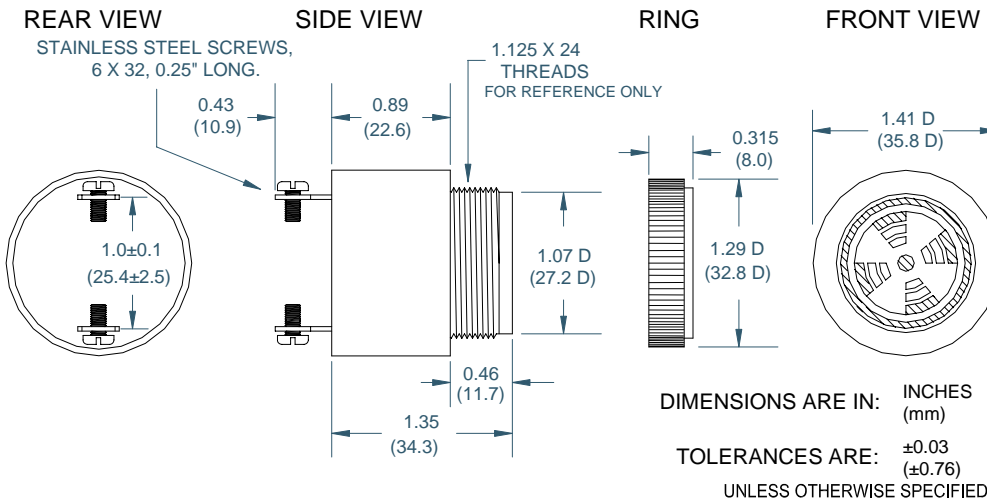
The XB-09-312-S(M) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

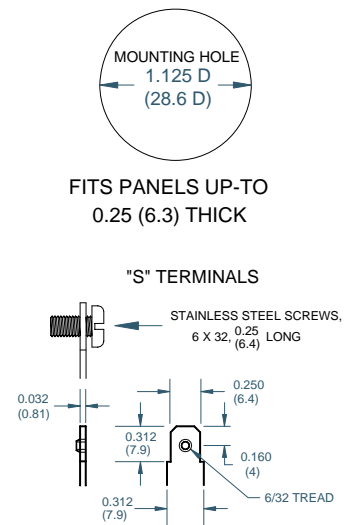
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS



## PANEL MOUNTING



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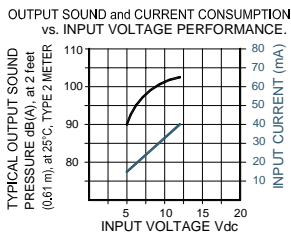
**Revision: 2.07**

# XB-09-312-S(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

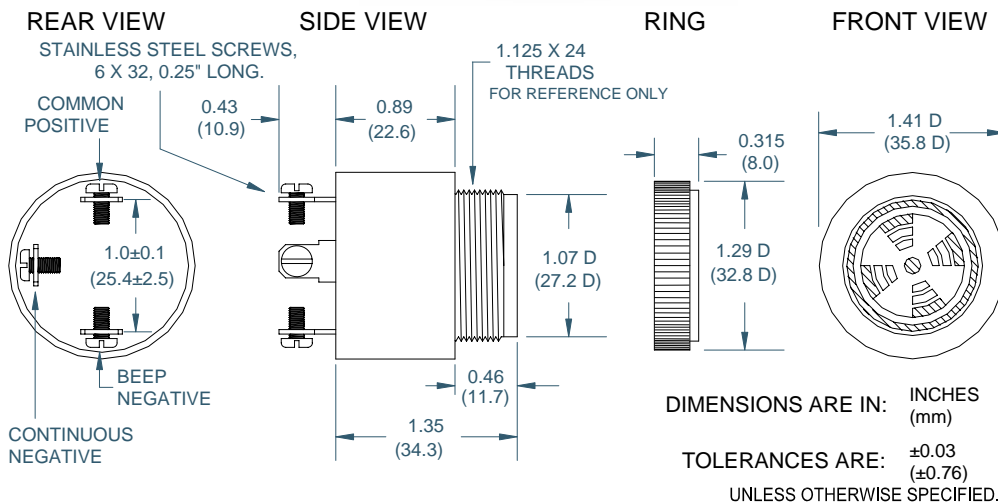


The XB-09-312-S(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a medium beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

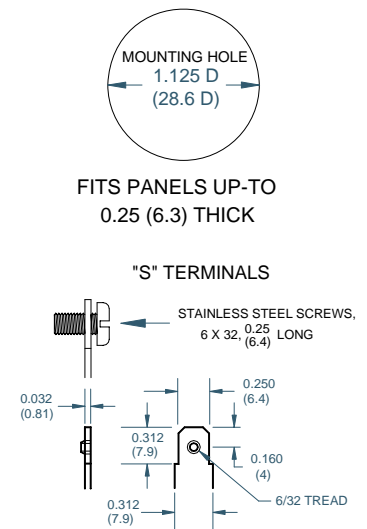
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-09-312-S(S)

**Made in  
USA**

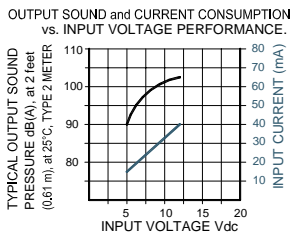


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

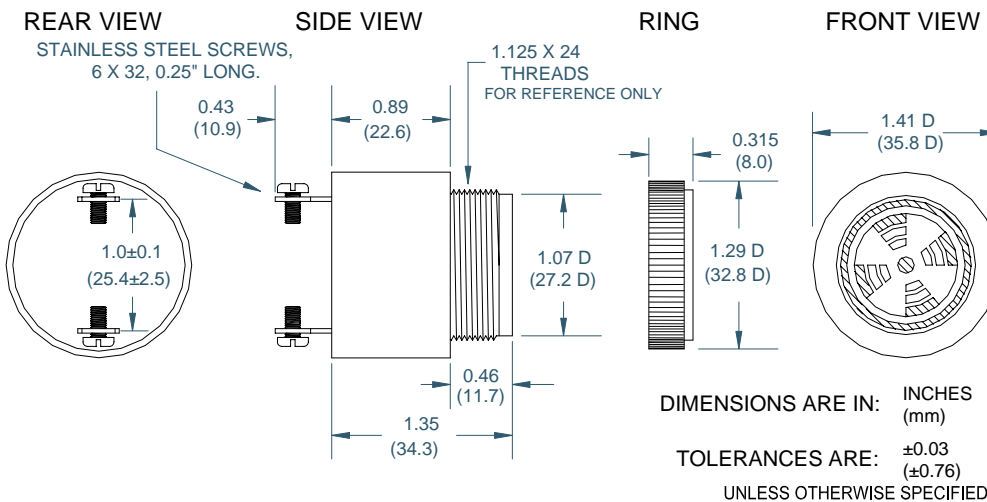
The XB-09-312-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

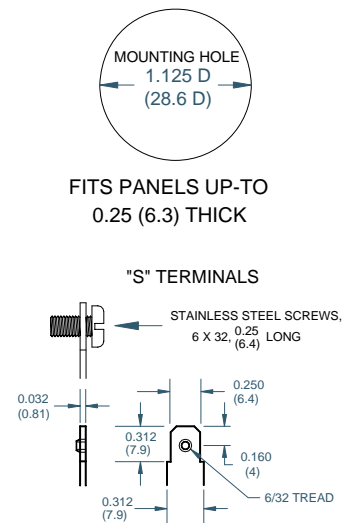
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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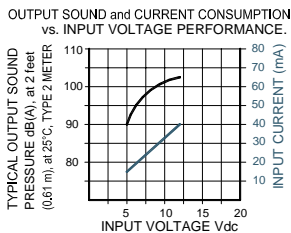
**Revision: 2.07**

# XB-09-312-S(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

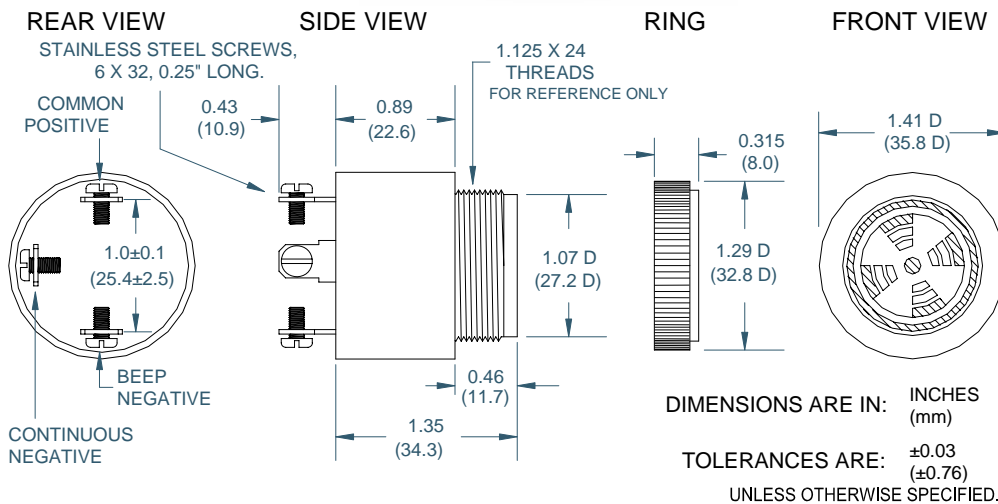


The XB-09-312-S(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a slow beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

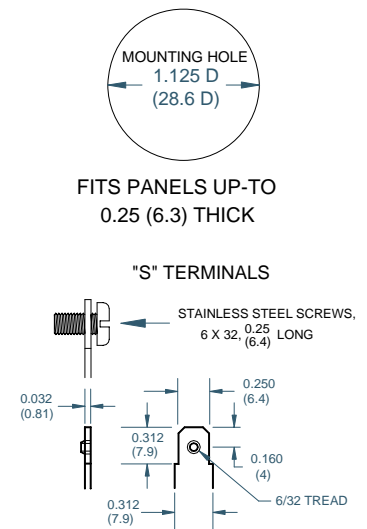
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



# XB-09-312-S(U)

**Made in  
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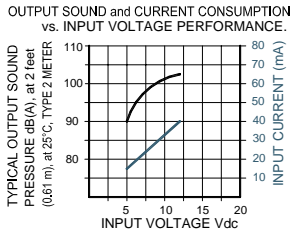


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

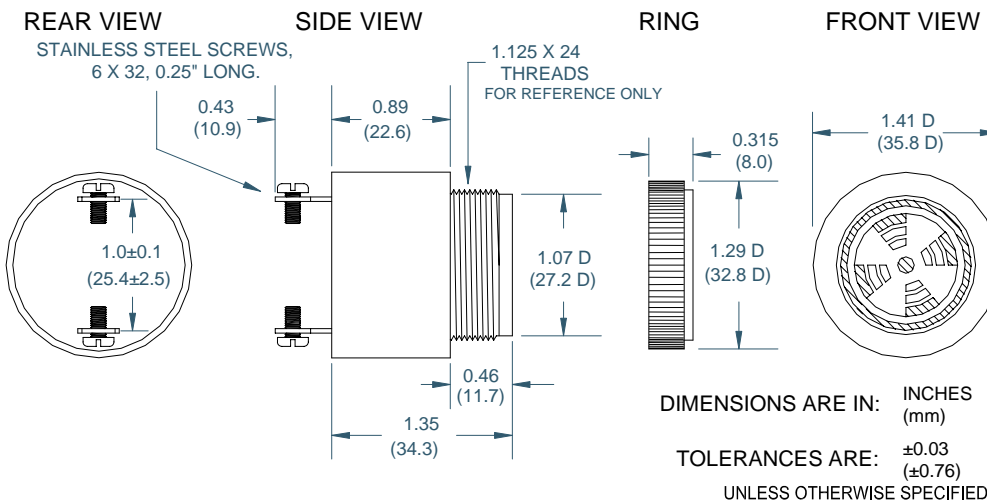
The XB-09-312-S(U) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The six pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

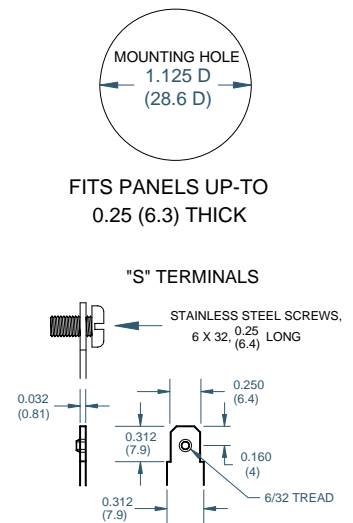
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS



## PANEL MOUNTING



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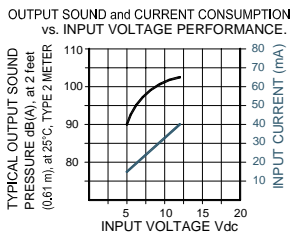


# XB-09-312-S(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

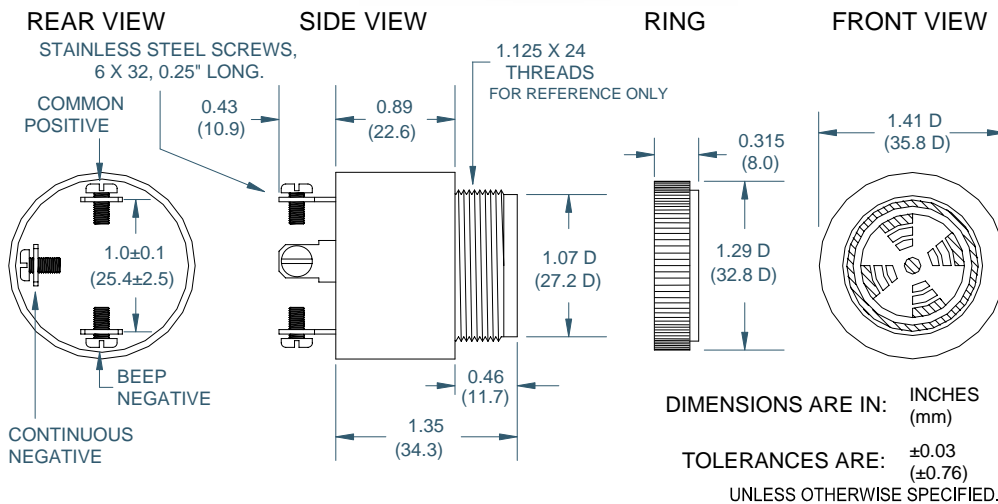


The XB-09-312-S(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

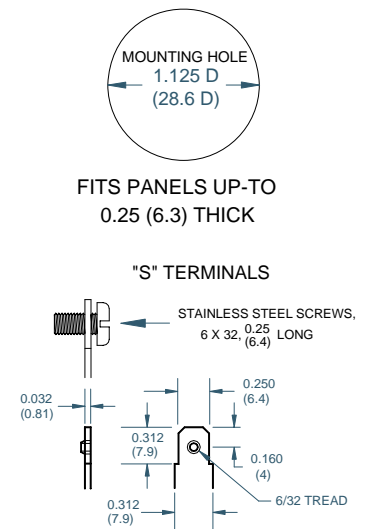
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-09-312-W(F)

**Made in  
USA**

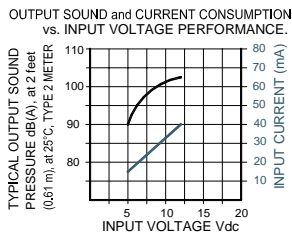


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-312-W(F) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS

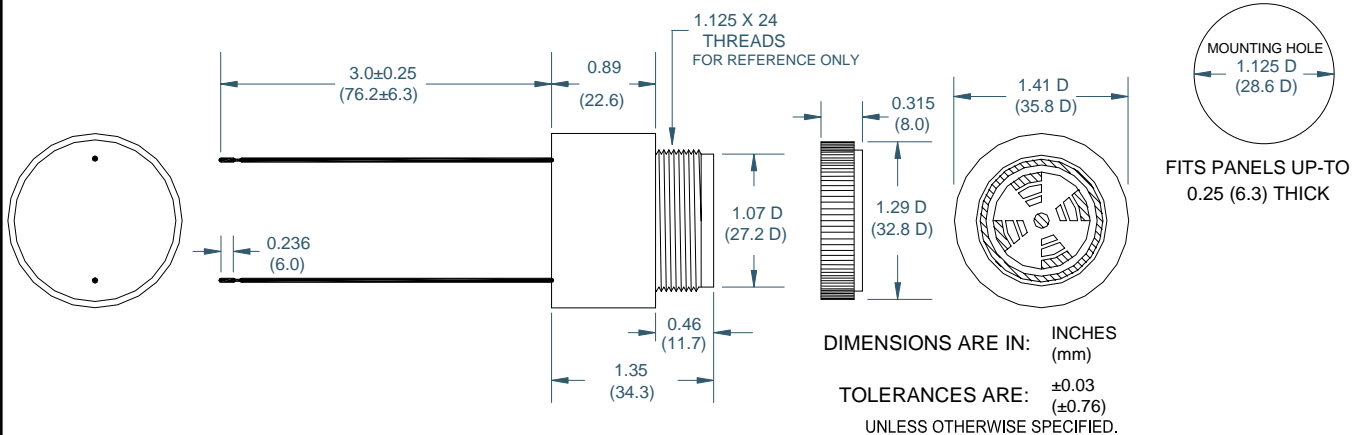
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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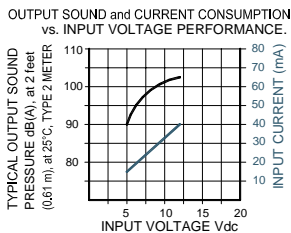
Revision: 2.07

# XB-09-312-W(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XB-09-312-W(M) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

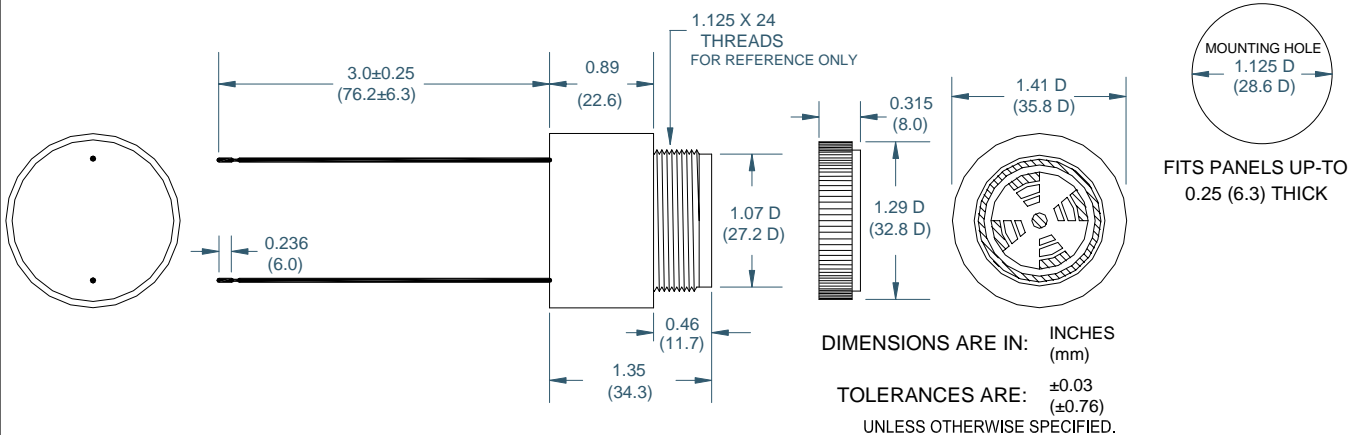
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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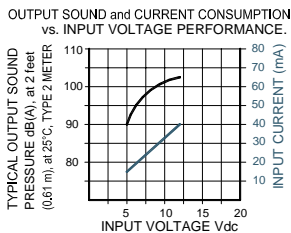
**Revision: 2.07**

# XB-09-312-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XB-09-312-W(S) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

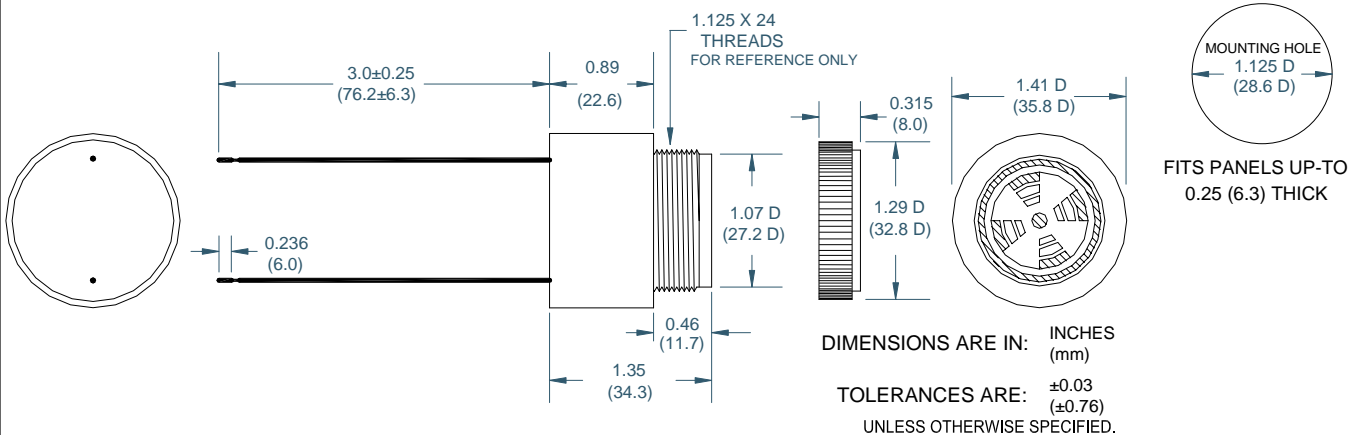
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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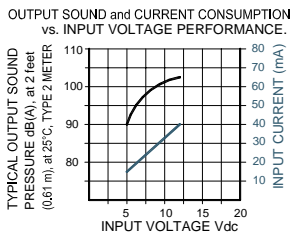
**Revision: 2.07**

# XB-09-312-W(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XB-09-312-W(U) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The six pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc, 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

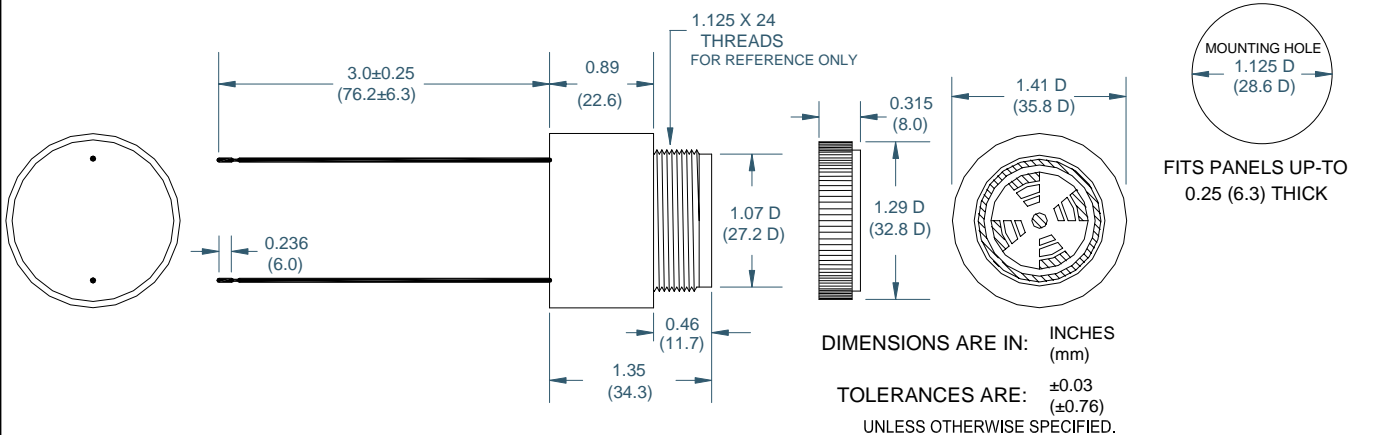
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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Revision: 2.07

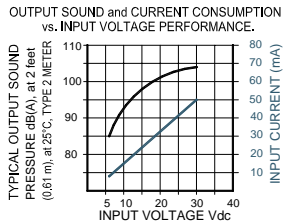


# XB-09-630-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



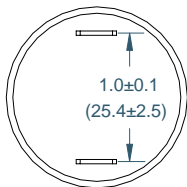
The XB-09-630-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

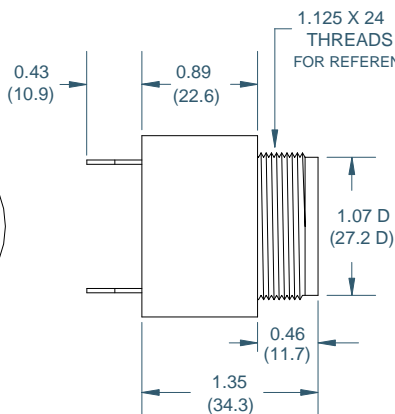
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

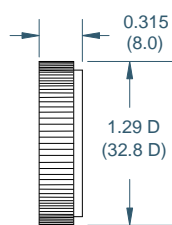
REAR VIEW



SIDE VIEW



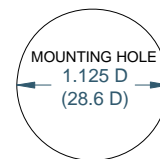
RING



FRONT VIEW

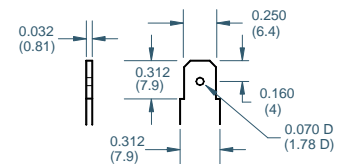


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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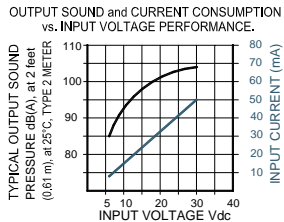
Revision: 2.07

# XB-09-630-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

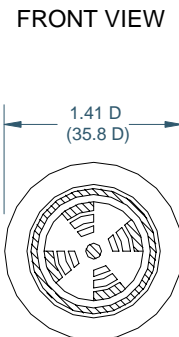
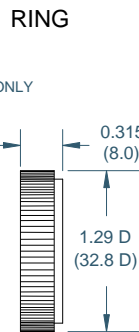
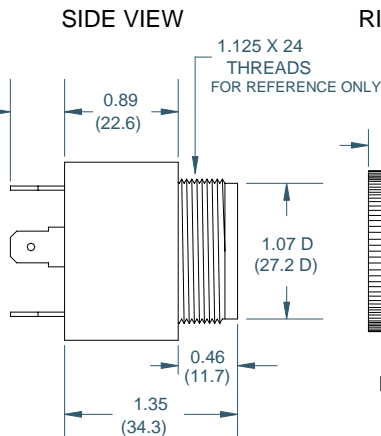
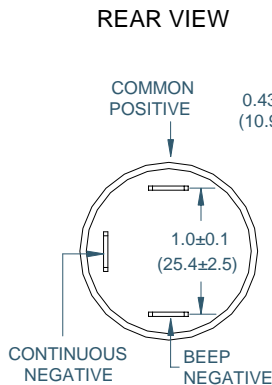


The XB-09-630-Q(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a fast beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

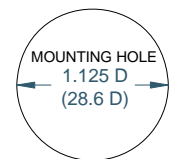
**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

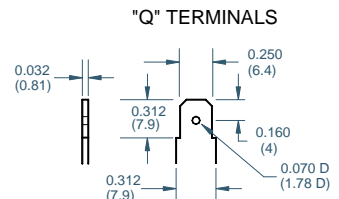


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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**Revision: 2.07**

# XB-09-630-Q(M)

**Made in  
USA**

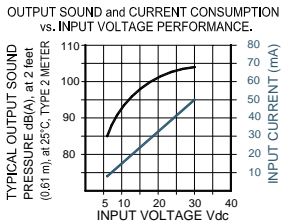


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-630-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

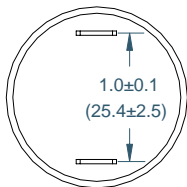
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

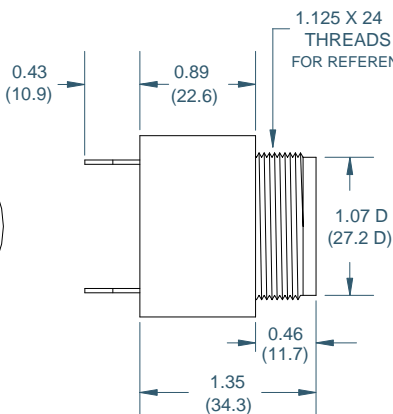


## DIMENSIONS

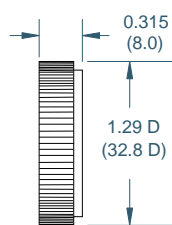
REAR VIEW



SIDE VIEW



RING

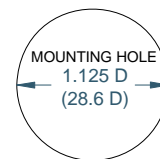


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

FRONT VIEW

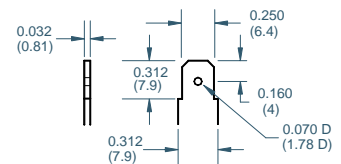


## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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www.floydbell.com

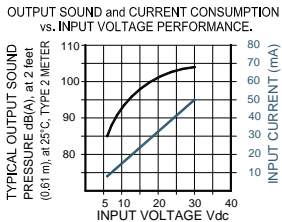
Revision: 2.07

# XB-09-630-Q(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

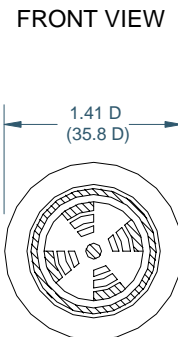
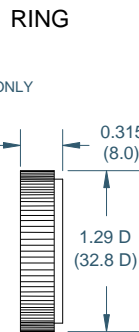
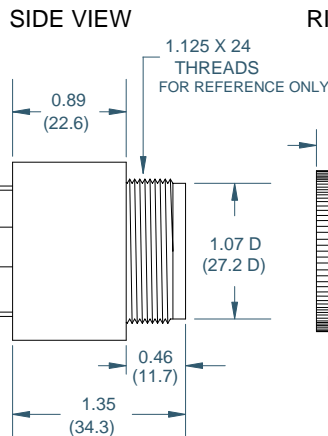
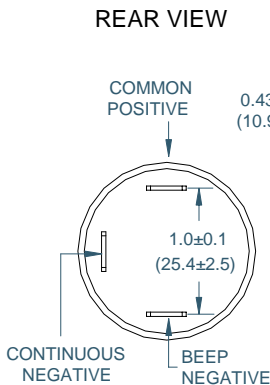


The XB-09-630-Q(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a medium beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

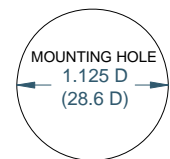
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

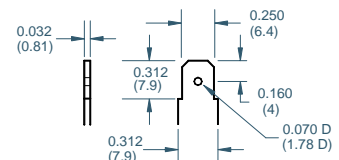


## PANEL MOUNTING



FITS PANELS UP-TO  
 0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**



# XB-09-630-Q(S)

**Made in  
USA**

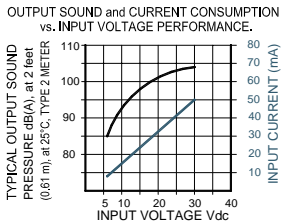


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-630-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

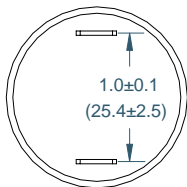
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

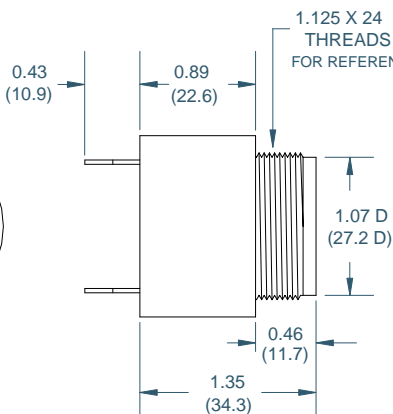


## DIMENSIONS

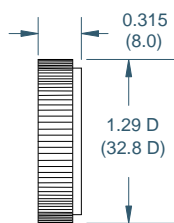
REAR VIEW



SIDE VIEW



RING

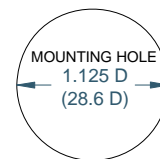


FRONT VIEW



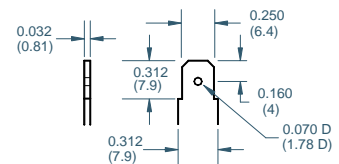
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

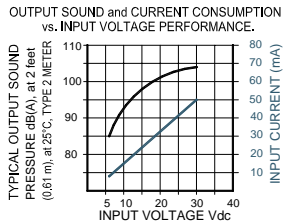


# XB-09-630-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

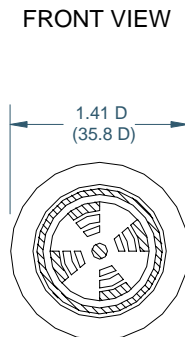
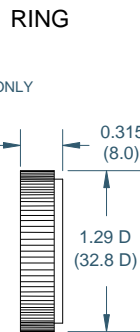
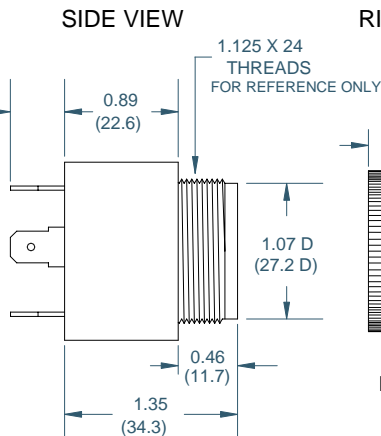
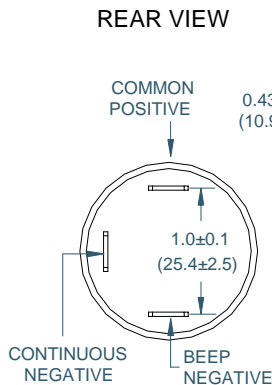


The XB-09-630-Q(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a slow beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

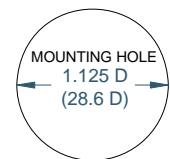
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

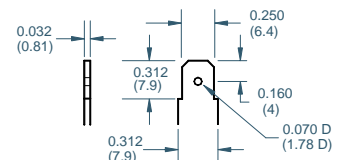


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.07**

# XB-09-630-Q(U)

**Made in  
USA**

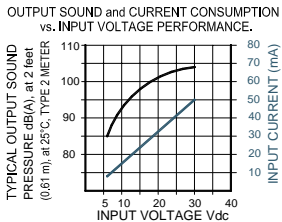


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-630-Q(U) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The six pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

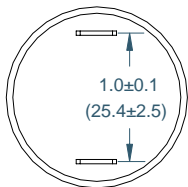
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-V0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

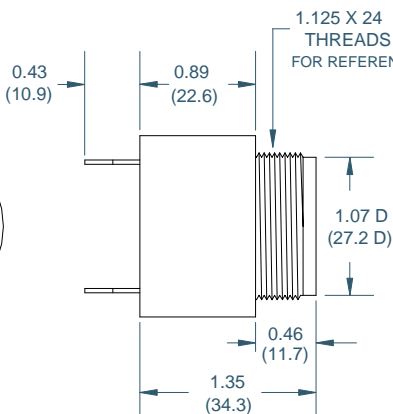


## DIMENSIONS

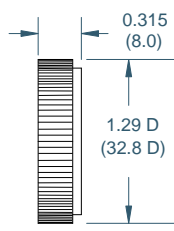
REAR VIEW



SIDE VIEW



RING

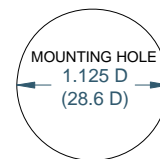


FRONT VIEW



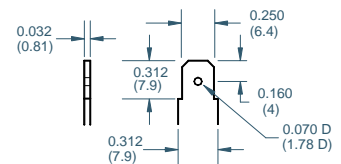
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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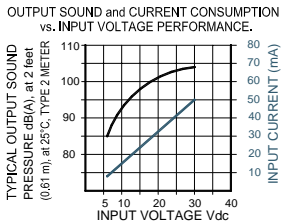
Revision: 2.07

# XB-09-630-Q(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

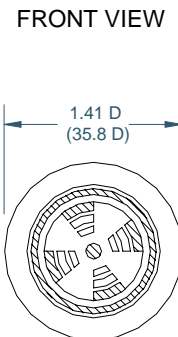
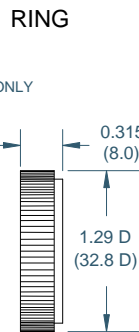
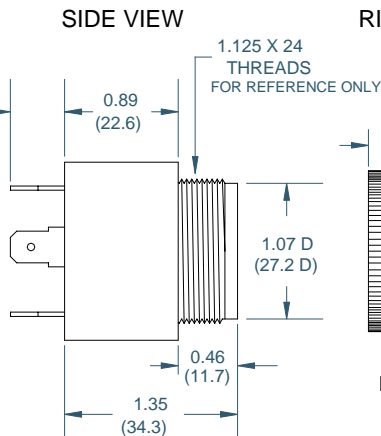
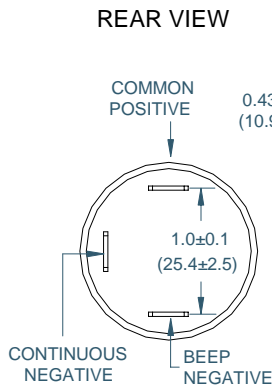


The XB-09-630-Q(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

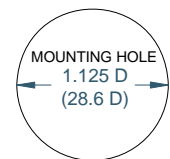
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

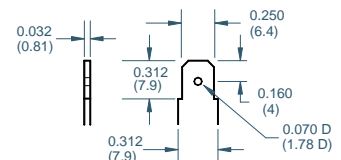


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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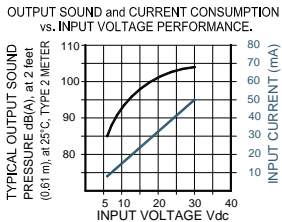
**Revision: 2.07**

# XB-09-630-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

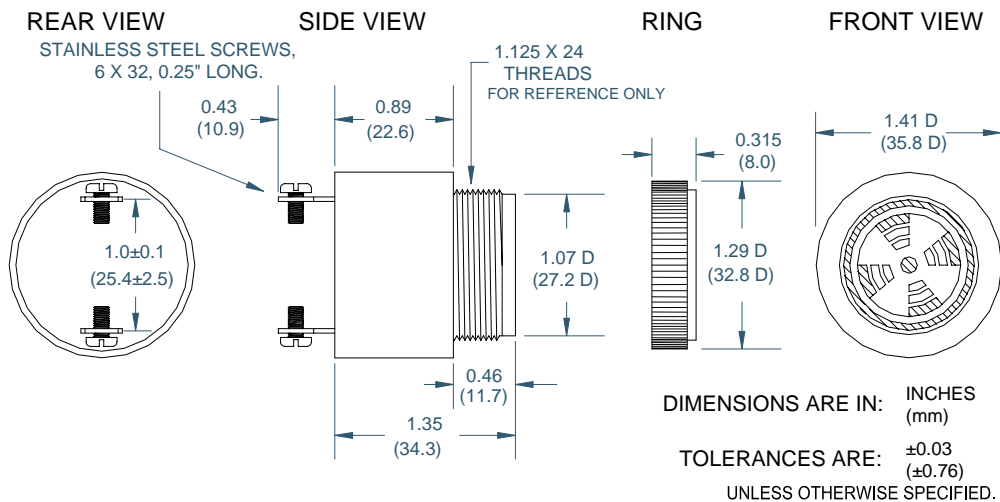


The XB-09-630-S(F) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

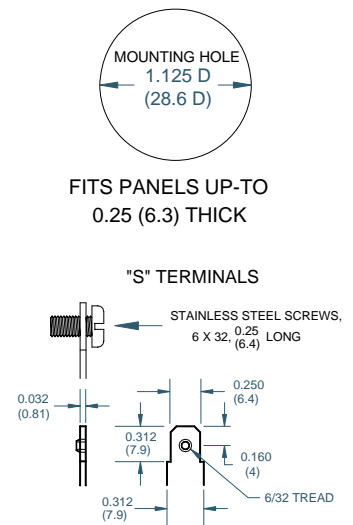
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



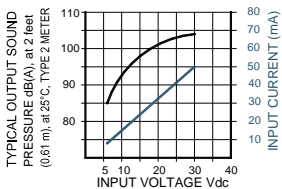
# XB-09-630-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

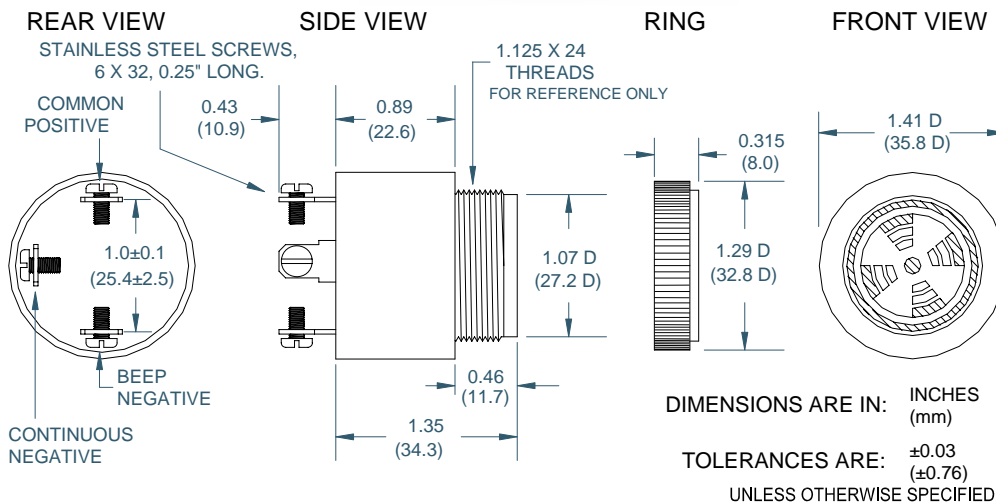


The XB-09-630-S(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a fast beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

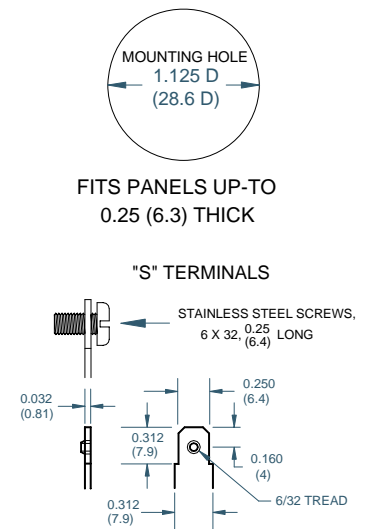
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

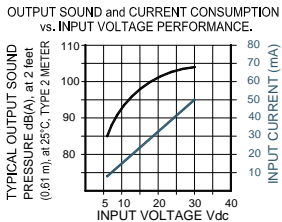


# XB-09-630-S(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

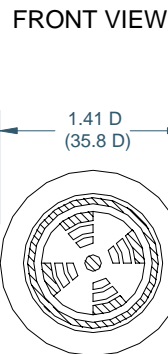
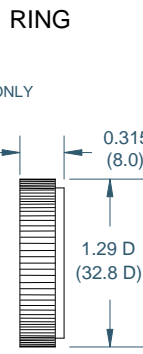
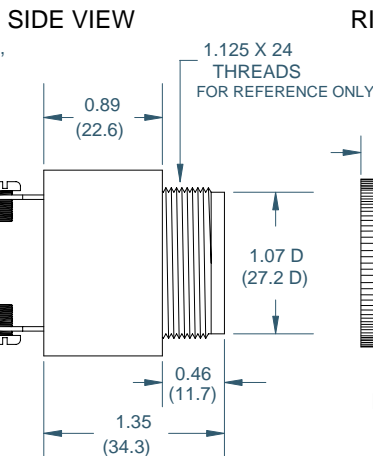
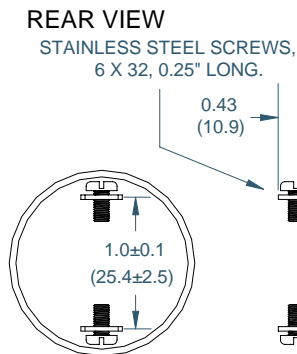


The XB-09-630-S(M) is an extra loud output, panel mounted alarm for operating voltages of 6-30Vdc. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

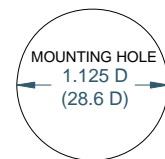
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.  
**Environmental Durability:** For a period of two years from the date of manufacture under normal operating conditions.  
**Life Expectancy:**  
**Warranty:**

## DIMENSIONS

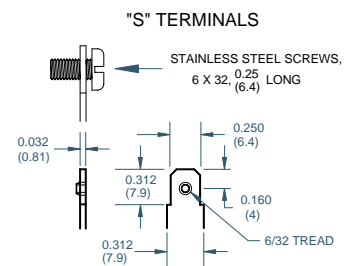


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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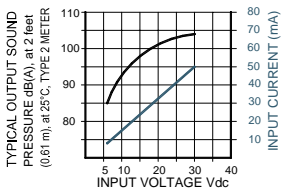
# XB-09-630-S(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

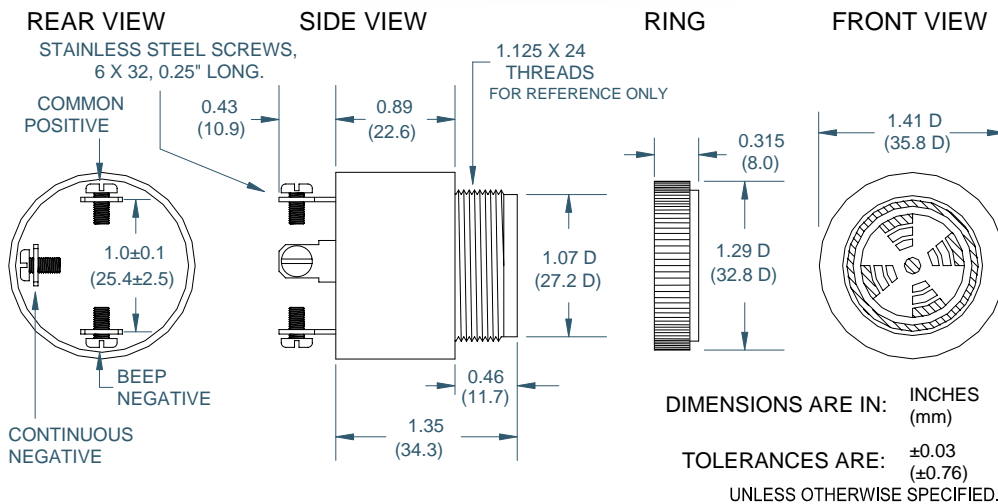


The XB-09-630-S(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30Vdc. The alarm functions as a medium beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

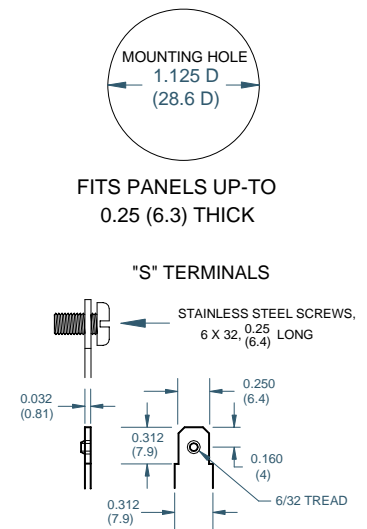
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



## PANEL MOUNTING



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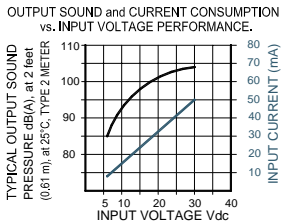
**Revision: 2.07**

# XB-09-630-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

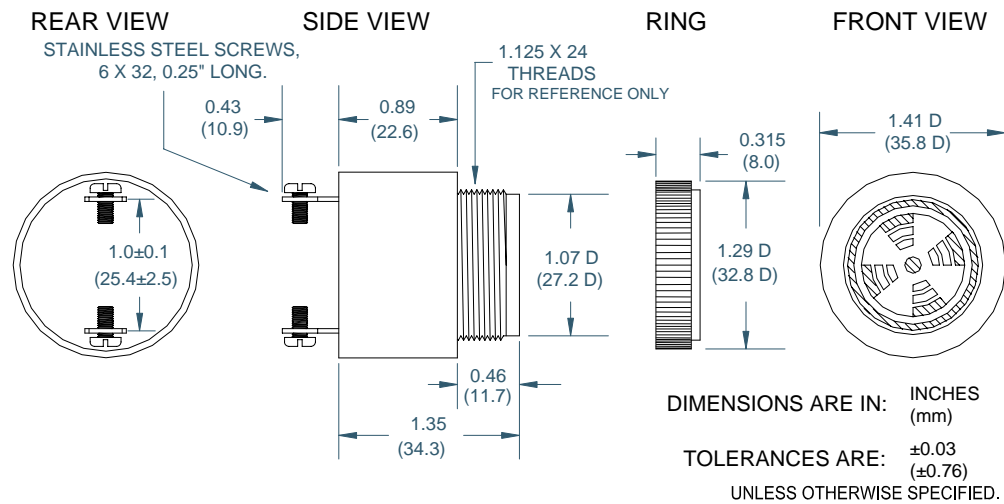


The XB-09-630-S(S) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

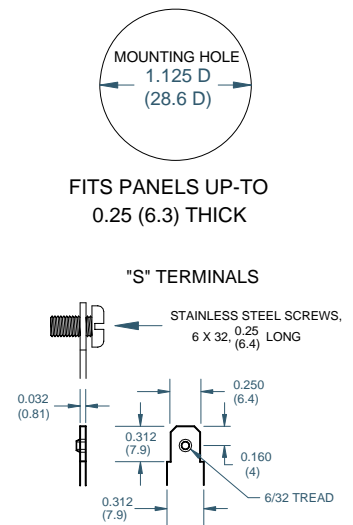
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

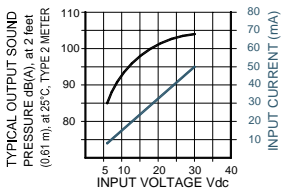
# XB-09-630-S(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

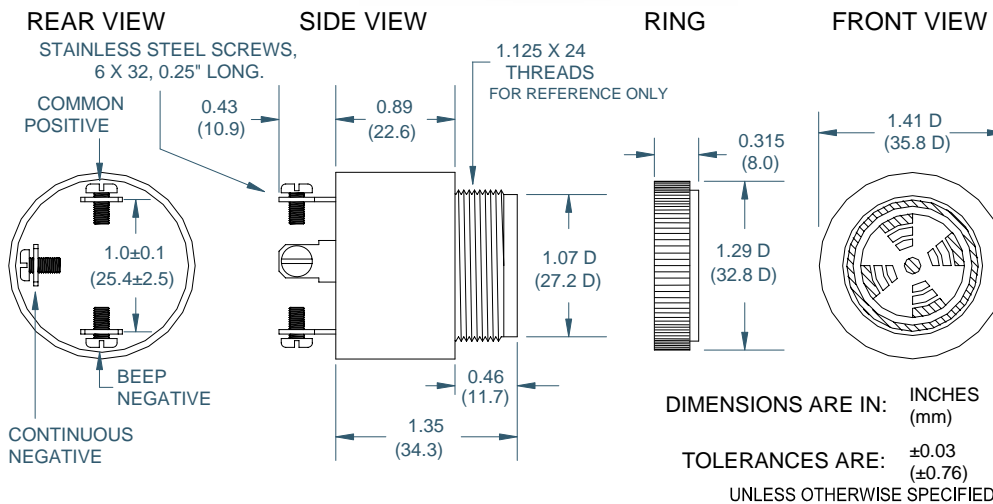


The XB-09-630-S(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30Vdc. The alarm functions as a slow beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

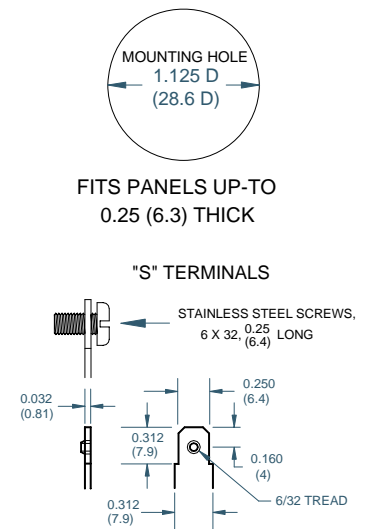


DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



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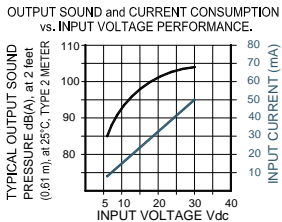


# XB-09-630-S(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

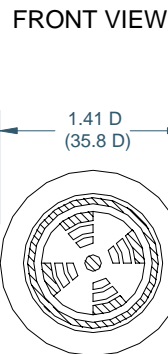
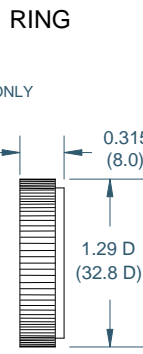
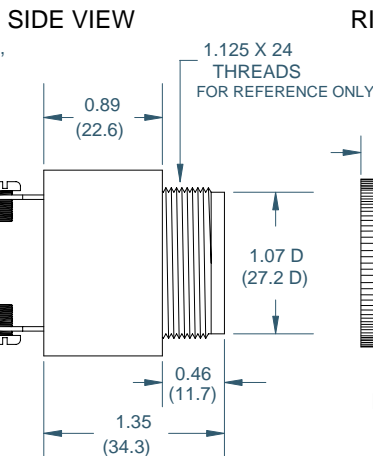
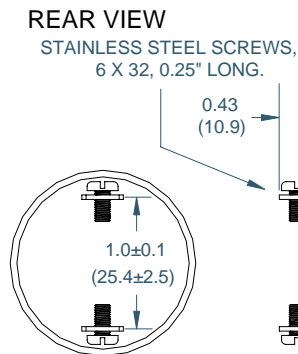


The XB-09-630-S(U) is an extra loud output, panel mounted alarm for operating voltages of 6-30Vdc. The six pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

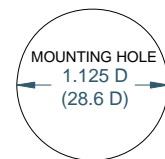
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

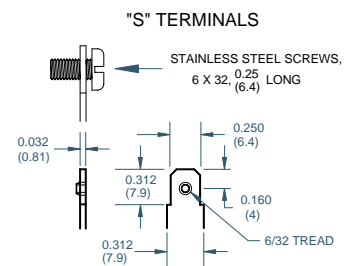


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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**Revision: 2.07**



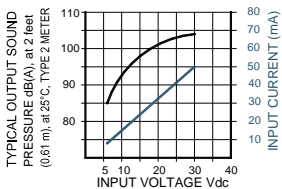
# XB-09-630-S(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

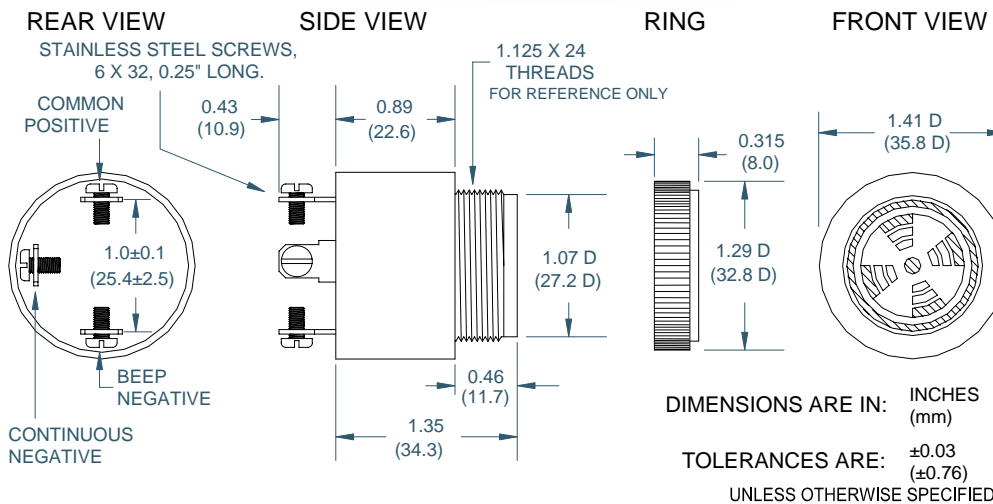


The XB-09-630-S(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30Vdc. The alarm functions as an ultra fast beep tone and as a continuous tone. Both tone modes have a typical sound pressure level of 103 dB(A) at maximum voltage.

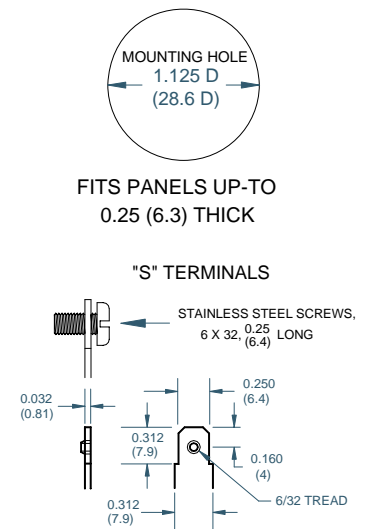
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



## PANEL MOUNTING



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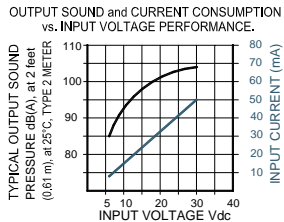
Revision: 2.07

# XB-09-630-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XB-09-630-W(F) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The three pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

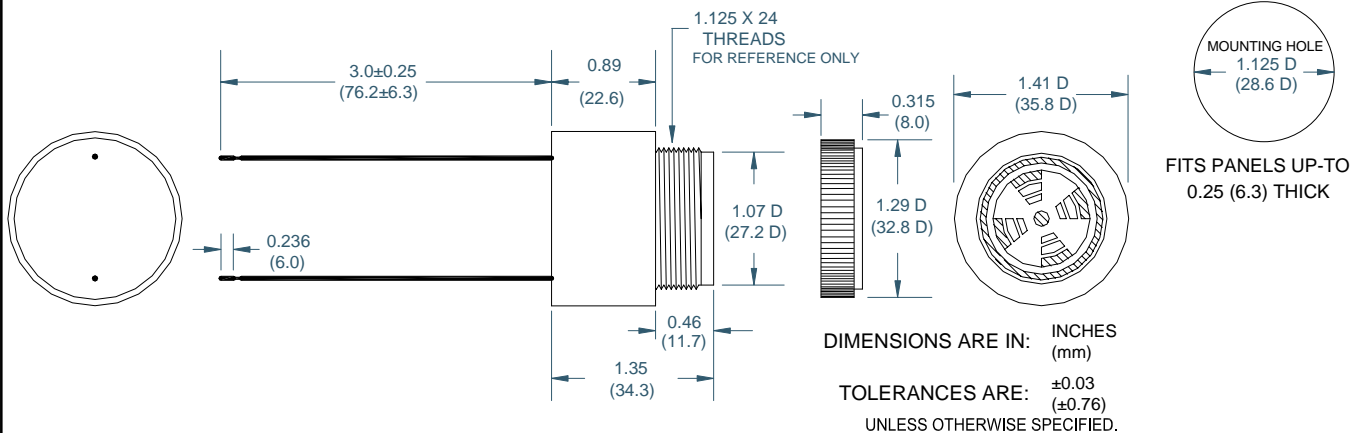
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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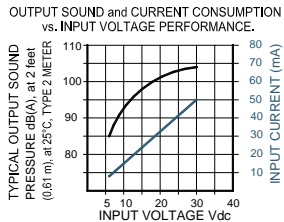
**Revision: 2.07**

# XB-09-630-W(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XB-09-630-W(M) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The two pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

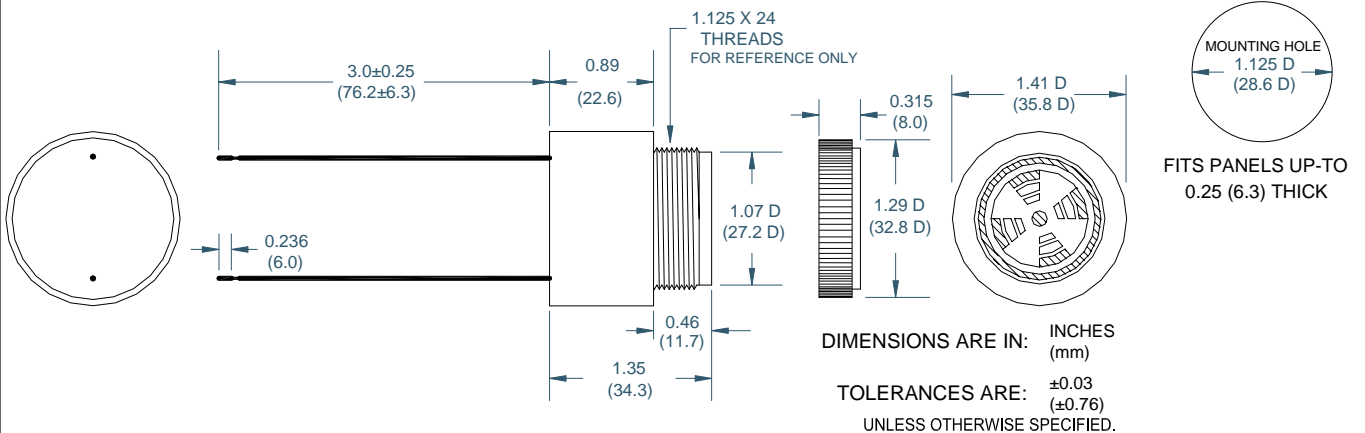
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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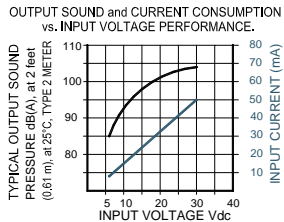
**Revision: 2.07**

# XB-09-630-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XB-09-630-W(S) is an extra loud output, panel mounted alarm for operating voltages of 6-30Vdc. The one pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

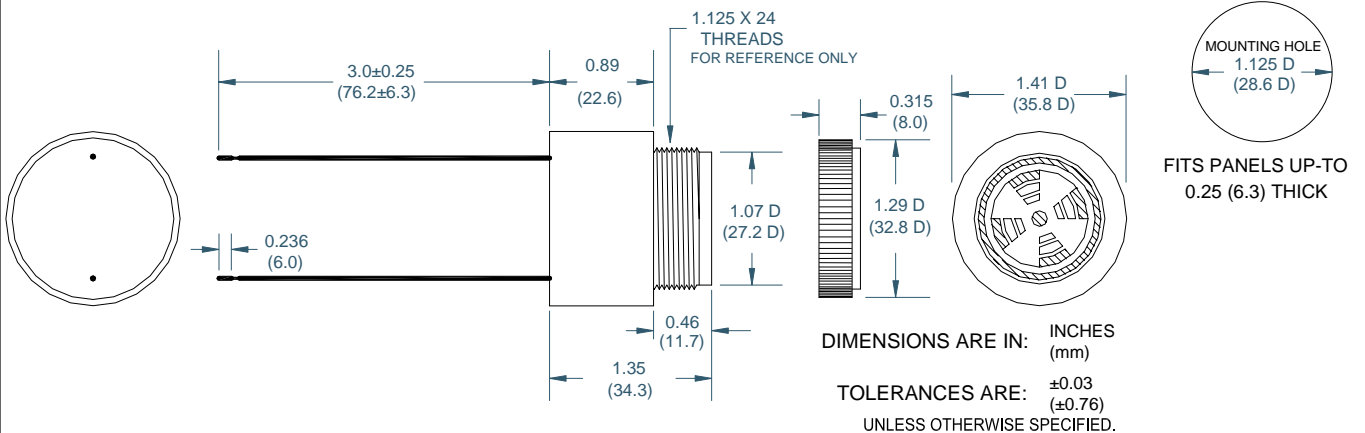
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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# XB-09-630-W(U)

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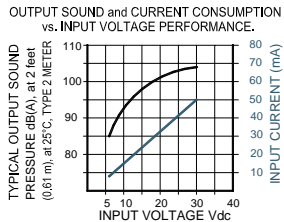


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-09-630-W(U) is an extra loud output, panel mounted alarm for operating voltages of 6-30VDC. The six pulse per second beep tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-V0, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	



## DIMENSIONS

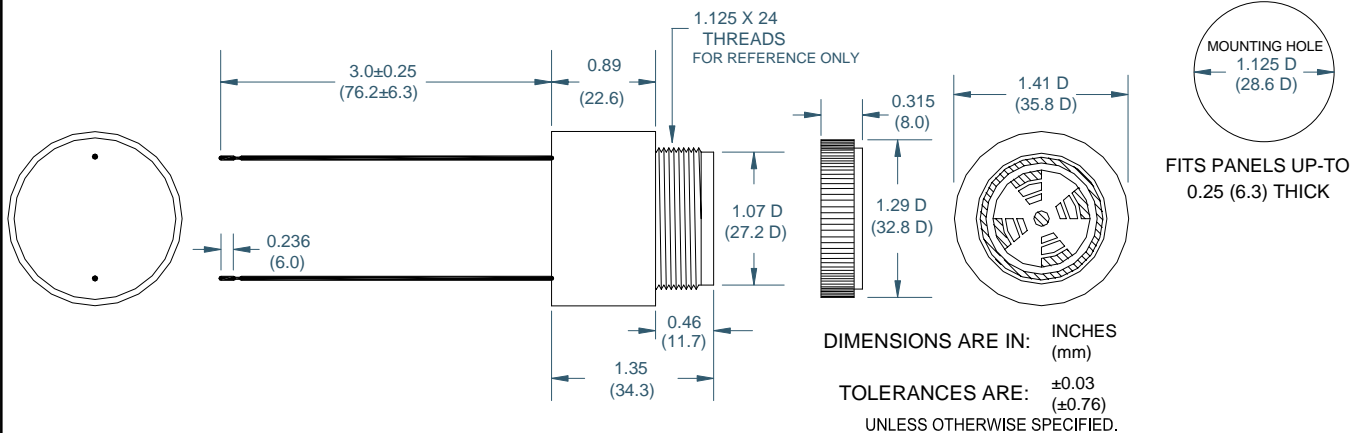
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**



# XB-V09-201-Q(F)

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USA**

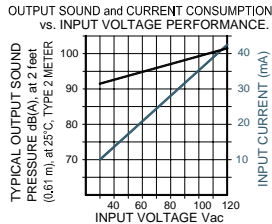


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-201-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

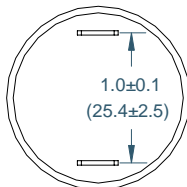
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

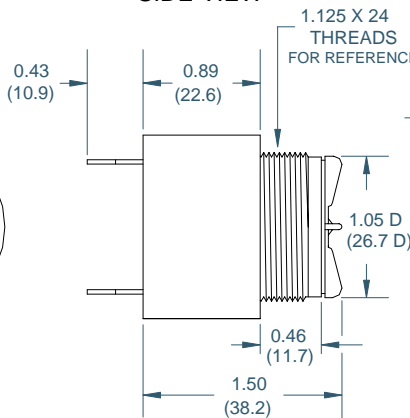


## DIMENSIONS

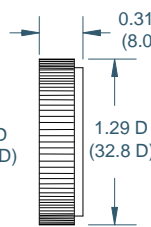
REAR VIEW



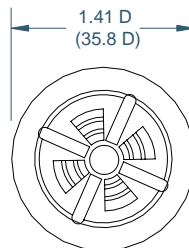
SIDE VIEW



RING

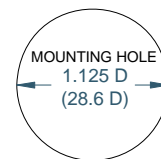


FRONT VIEW



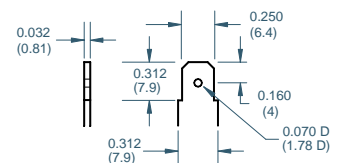
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

# XB-V09-201-Q(M)

**Made in  
USA**

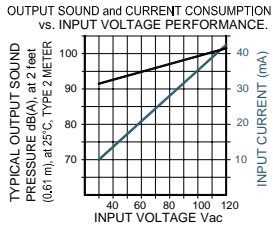


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-201-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

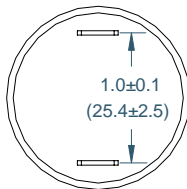
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

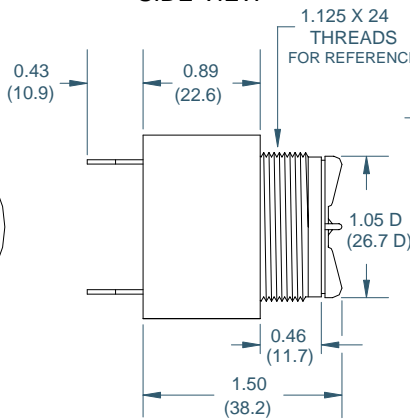


## DIMENSIONS

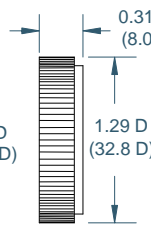
REAR VIEW



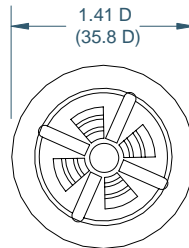
SIDE VIEW



RING

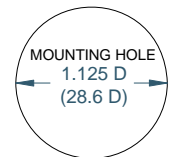


FRONT VIEW



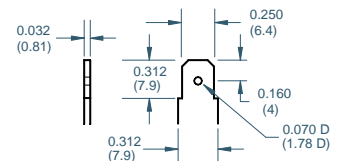
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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# XB-V09-201-Q(S)

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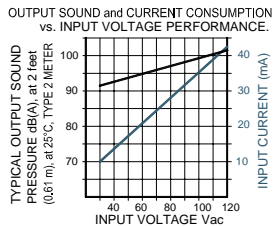


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-201-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

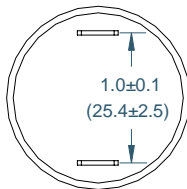
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

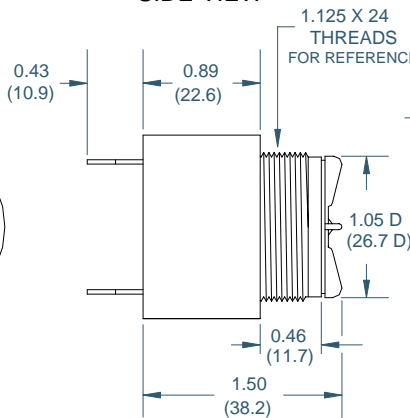


## DIMENSIONS

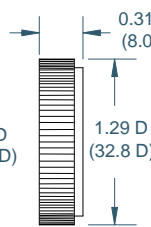
REAR VIEW



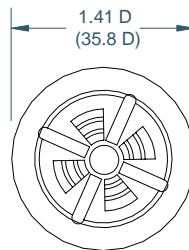
SIDE VIEW



RING

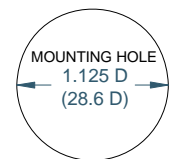


FRONT VIEW



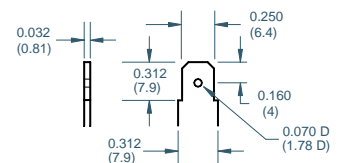
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

# XB-V09-201-S(F)

**Made in  
USA**

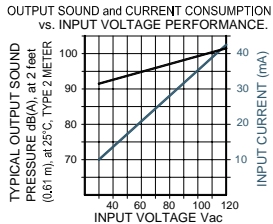


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

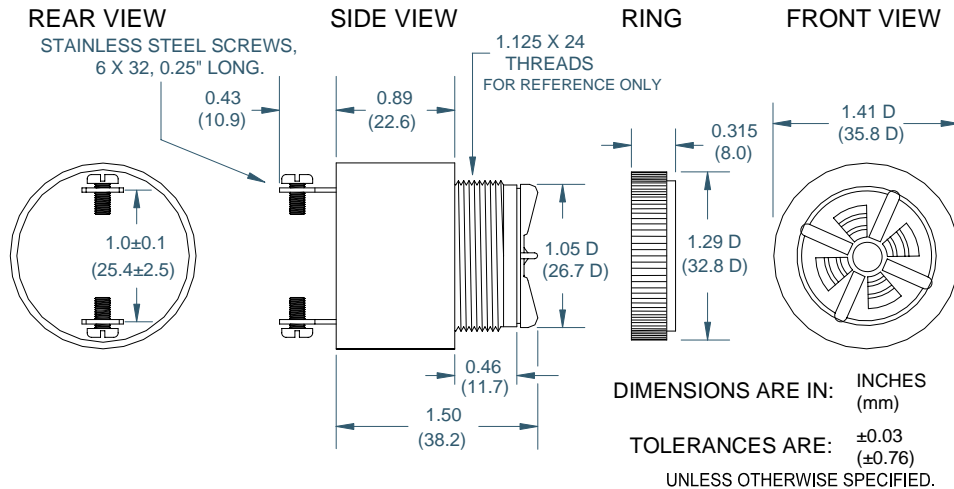
The XB-V09-201-S(F) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

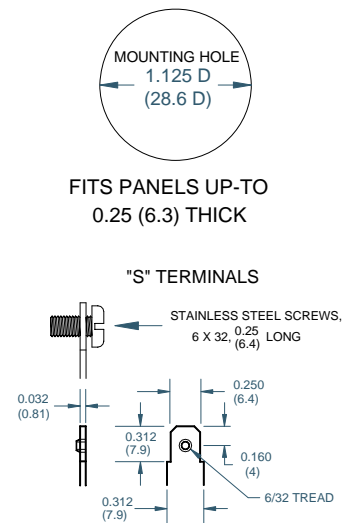
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)—0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-V09-201-S(M)

**Made in  
USA**

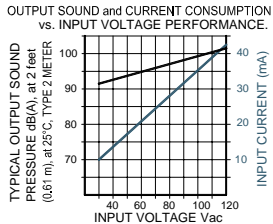


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

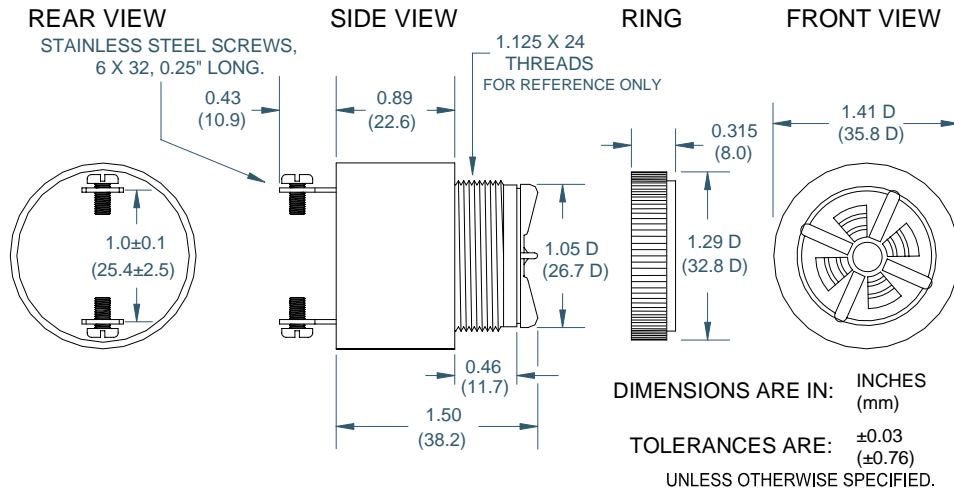
The XB-V09-201-S(M) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

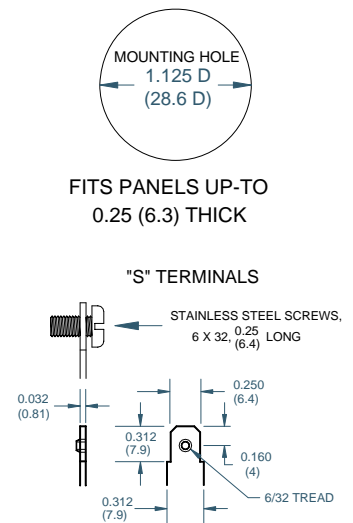
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)—0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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Revision: 2.07

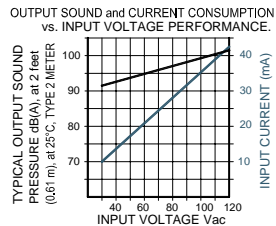


# XB-V09-201-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

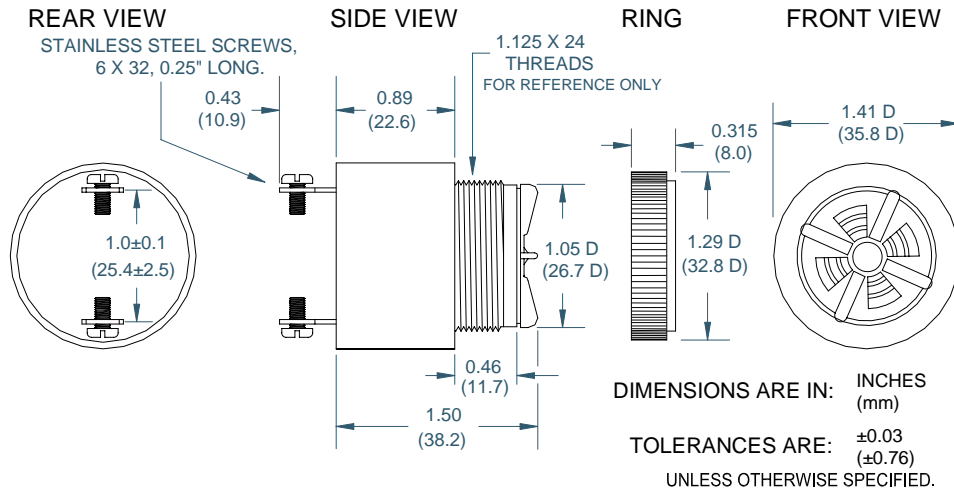


The XB-V09-201-S(S) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

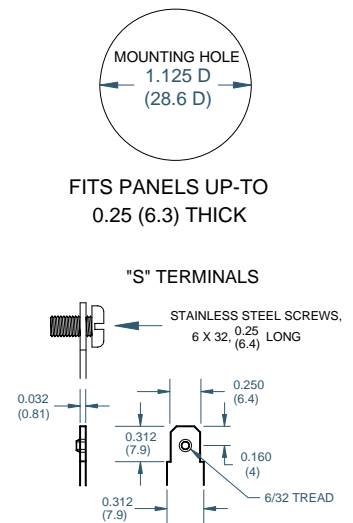
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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Revision: 2.07

# XB-V09-201-W(F)

**Made in  
USA**

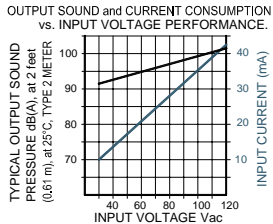


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

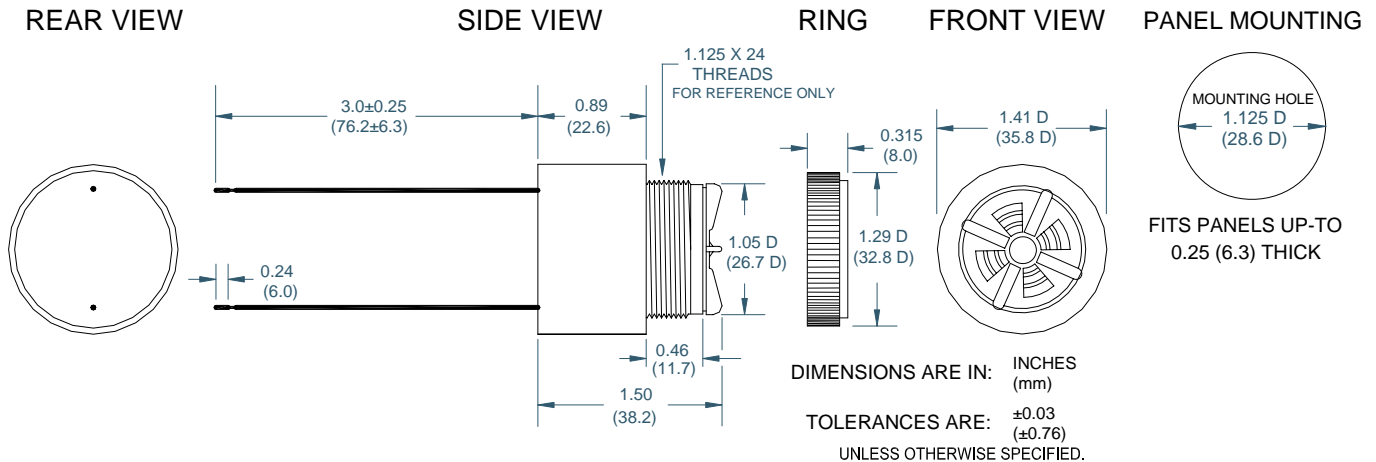
The XB-V09-201-W(F) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 2.07

# XB-V09-201-W(M)

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USA**

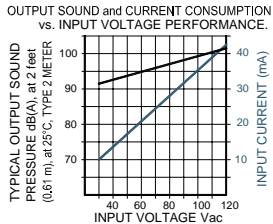


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

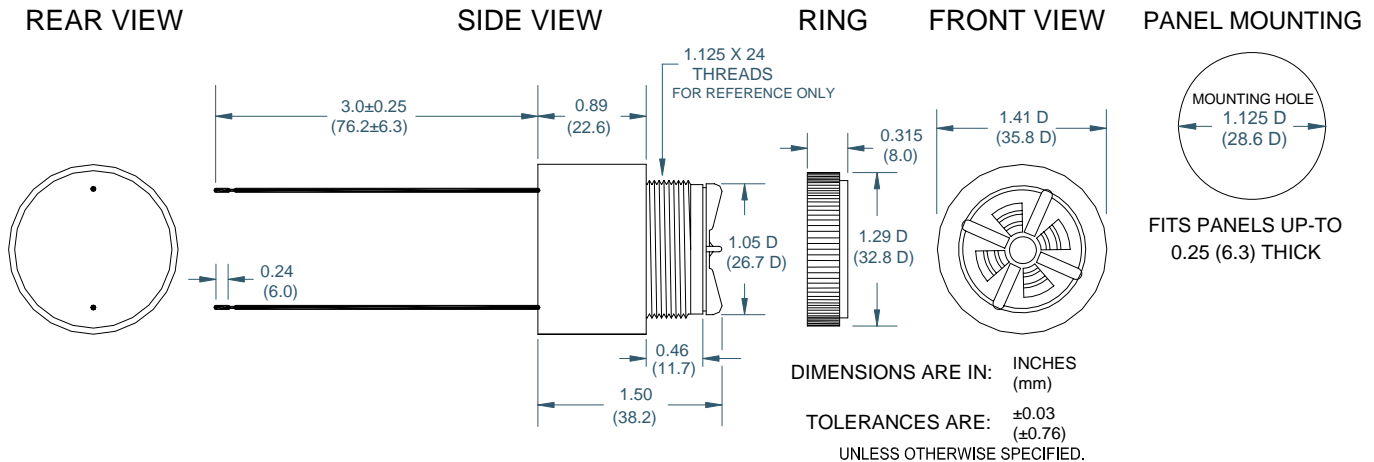
The XB-V09-201-W(M) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



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# XB-V09-201-W(S)

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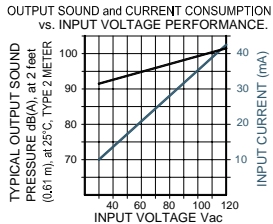


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

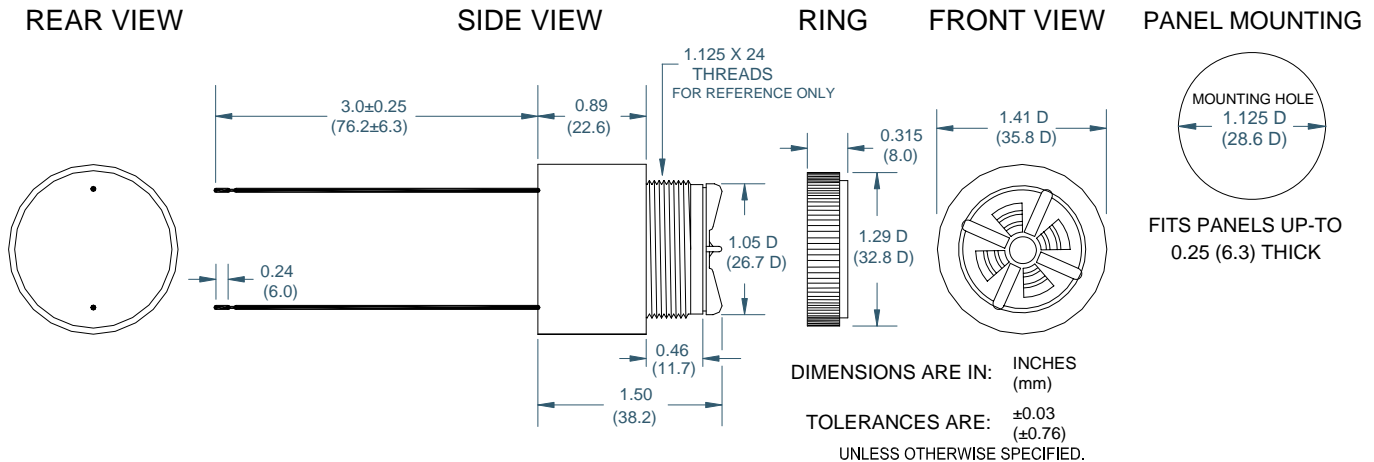
The XB-V09-201-W(S) is an extra loud output, panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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Revision: 2.07

# XB-V09-301-Q(F)

**Made in  
USA**

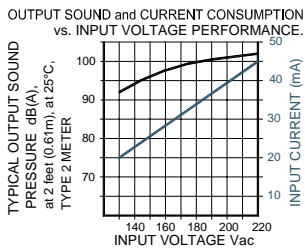


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-301-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

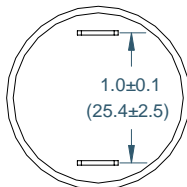
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

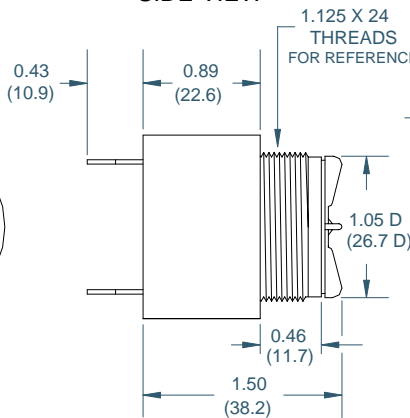


## DIMENSIONS

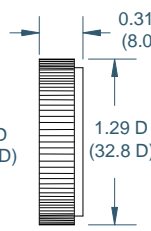
REAR VIEW



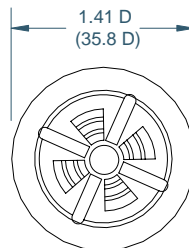
SIDE VIEW



RING

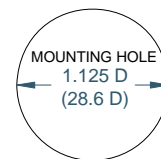


FRONT VIEW



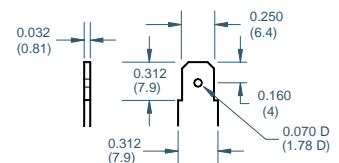
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



**Floyd Bell Inc**  
An ISO 9001:2000 Registered Company

720 Dearborn Park Lane • Columbus, OH 43085  
Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
www.floydbell.com

Revision: 2.07



# XB-V09-301-Q(M)

**Made in  
USA**

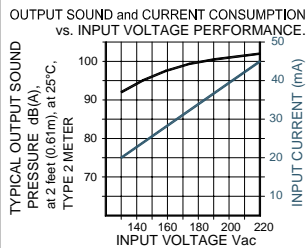


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-301-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

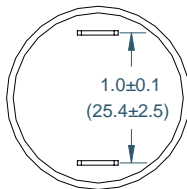
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

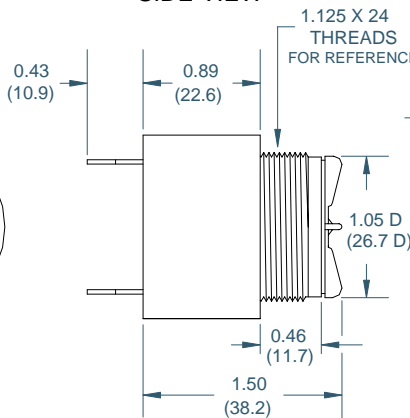


## DIMENSIONS

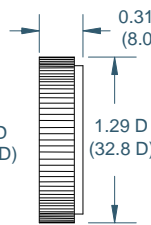
REAR VIEW



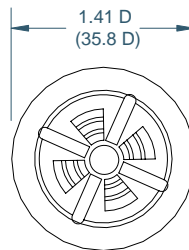
SIDE VIEW



RING

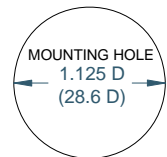


FRONT VIEW



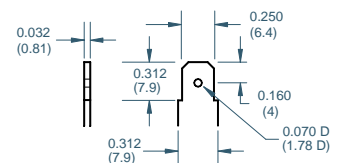
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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www.floydbell.com

Revision: 2.07

# XB-V09-301-Q(S)

**Made in  
USA**

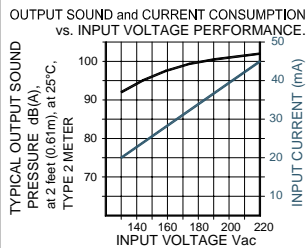


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-301-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

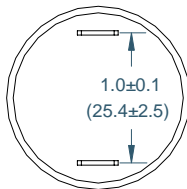
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

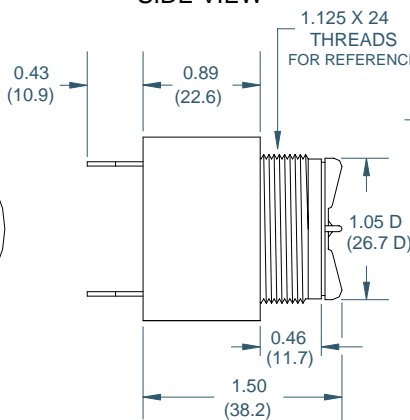


## DIMENSIONS

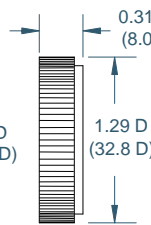
REAR VIEW



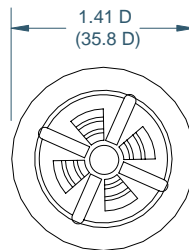
SIDE VIEW



RING

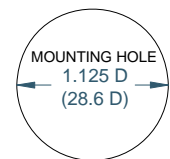


FRONT VIEW



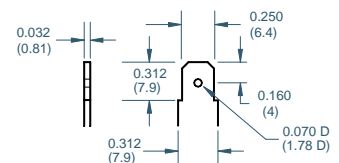
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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www.floydbell.com

Revision: 2.07

# XB-V09-301-Q(U)

**Made in  
USA**

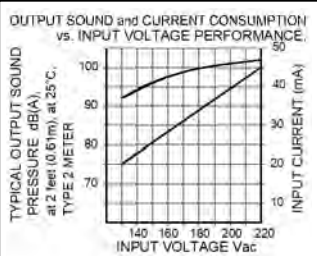


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XB-V09-301-Q(U) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades. The case is designed for panel mounting in a 1.125" hole.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination:</b>	-20°C to +65°C.
<b>Termination Strength:</b>	-40°C to +85°C.
<b>Operating Temperature:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Storage Temperature:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Construction Materials:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Environmental Durability:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

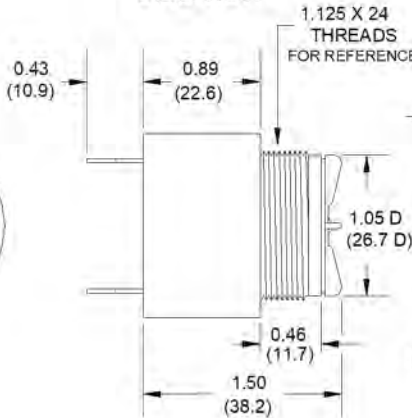


## DIMENSIONS

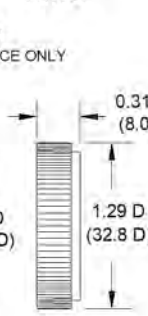
REAR VIEW



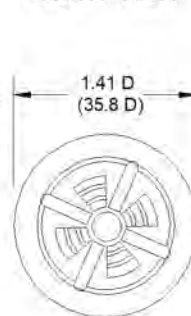
SIDE VIEW



RING



FRONT VIEW



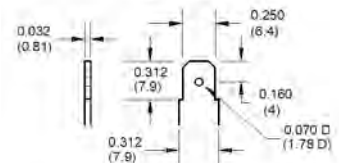
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

# XB-V09-301-S(F)

**Made in  
USA**

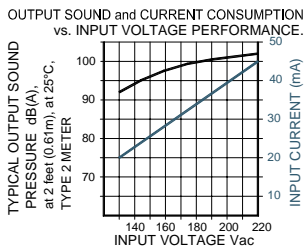


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

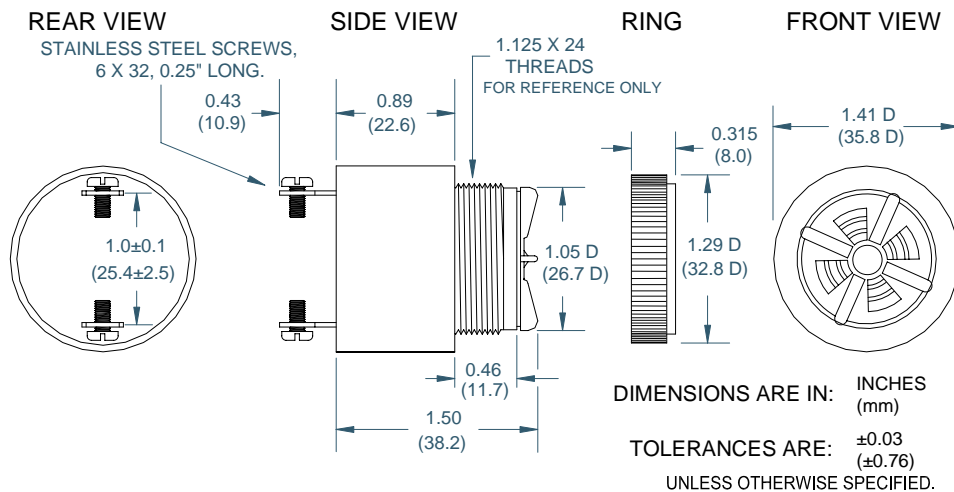
The XB-V09-301-S(F) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

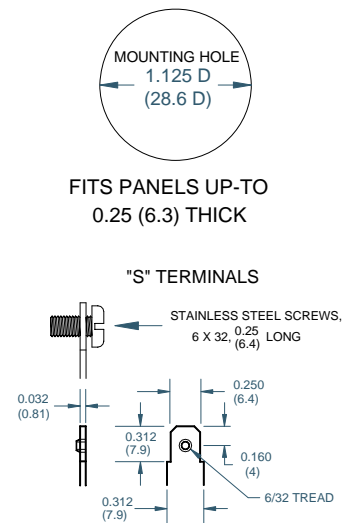
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



# XB-V09-301-S(M)

**Made in  
USA**

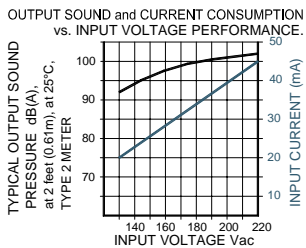


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

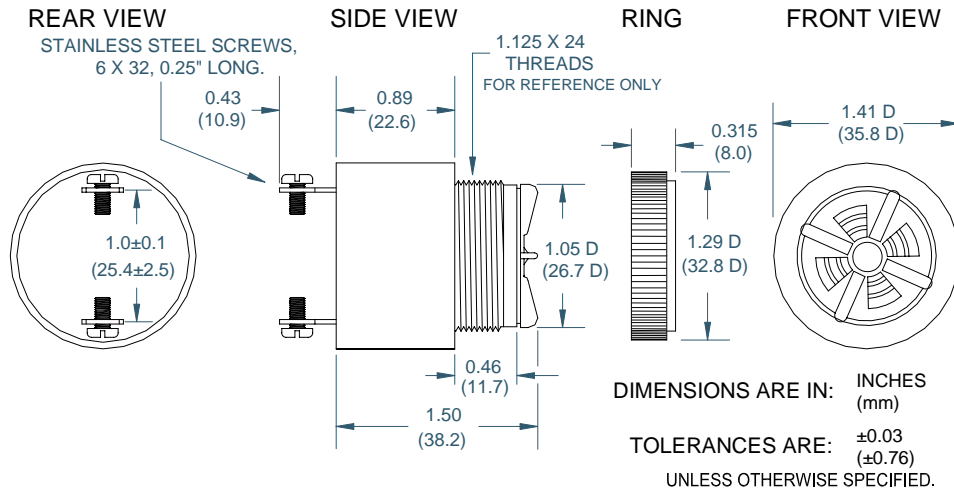
The XB-V09-301-S(M) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

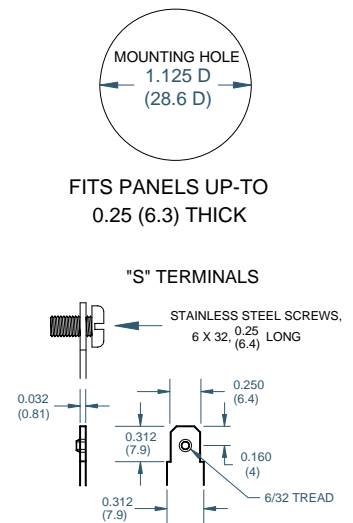
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**



# XB-V09-301-S(S)

**Made in  
USA**

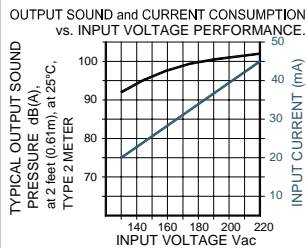


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

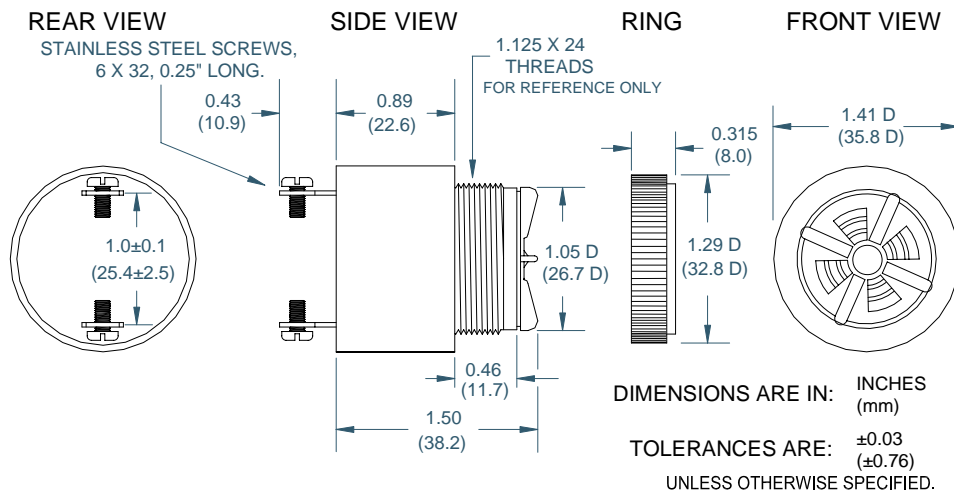
The XB-V09-301-S(S) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

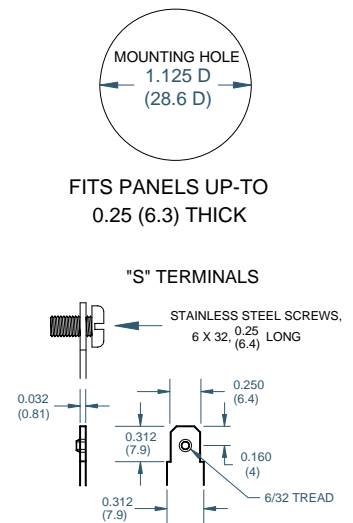
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

# XB-V09-301-W(F)

**Made in  
USA**

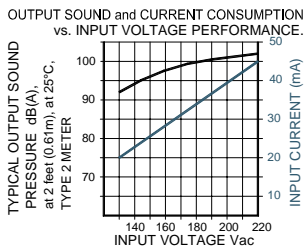


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

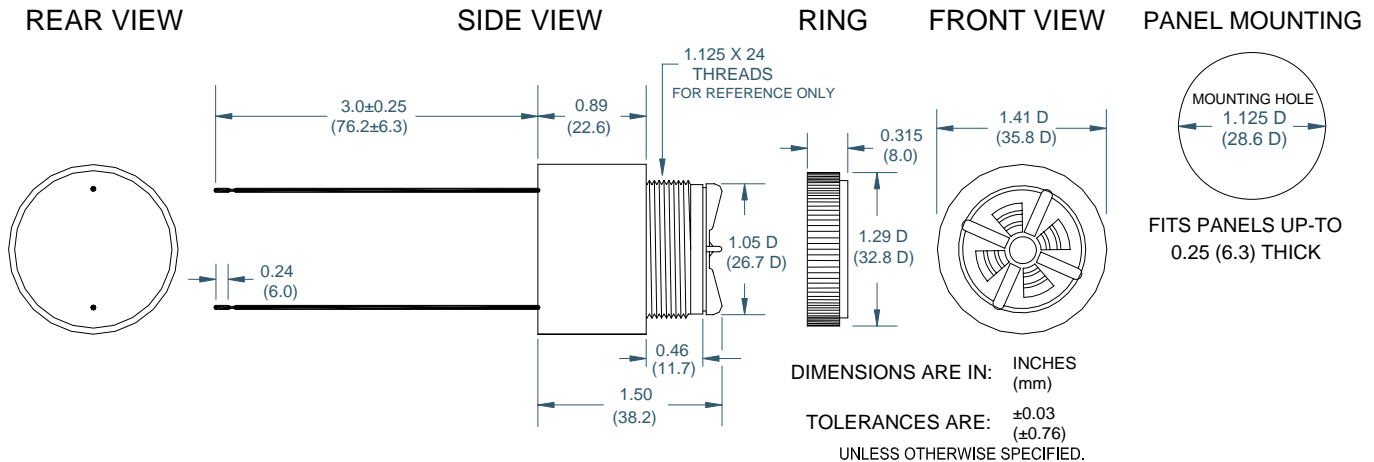
The XB-V09-301-W(F) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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**Revision: 2.07**

# XB-V09-301-W(M)

**Made in  
USA**

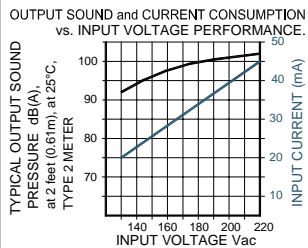


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

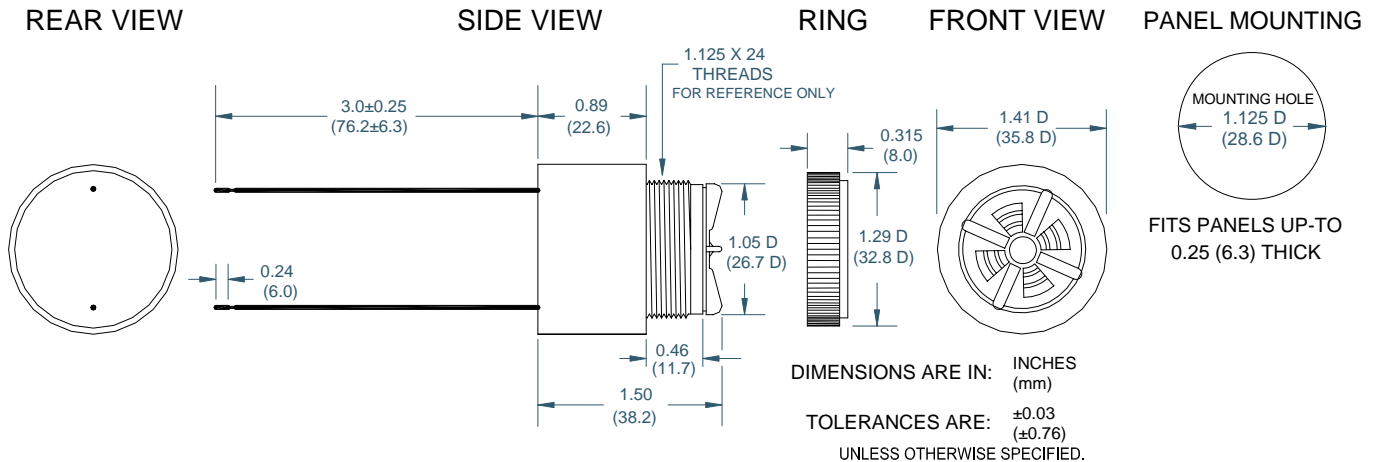
The XB-V09-301-W(M) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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**Revision: 2.07**

# XB-V09-301-W(S)

**Made in  
USA**

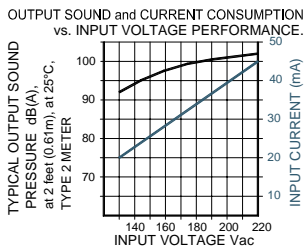


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

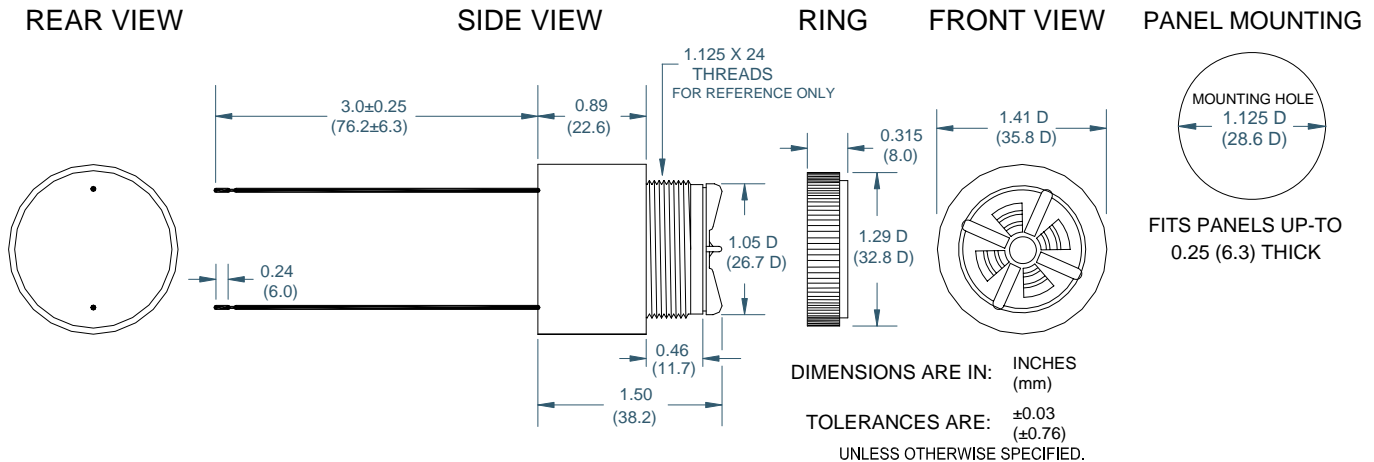
The XB-V09-301-W(S) is an extra loud output, panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	20 mA at 130 Vac 45 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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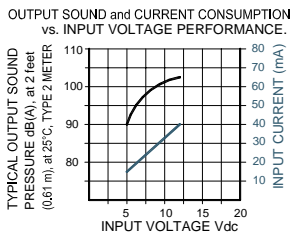
**Revision: 2.07**

# XB-V09-312-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



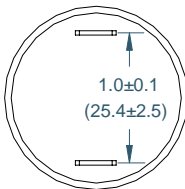
The XB-V09-312-Q(F) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

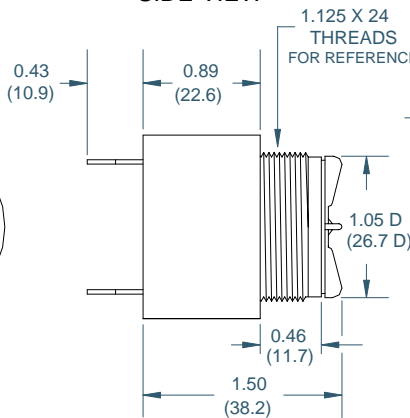
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

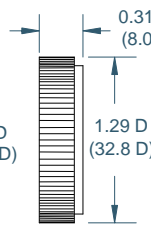
REAR VIEW



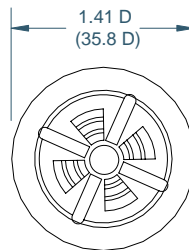
SIDE VIEW



RING

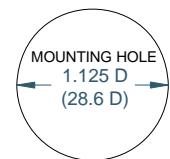


FRONT VIEW



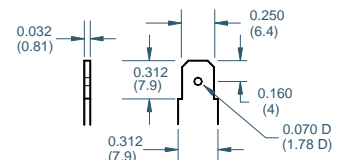
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

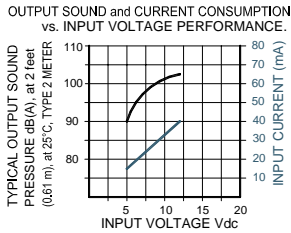


# XB-V09-312-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

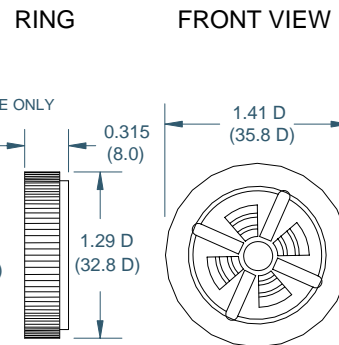
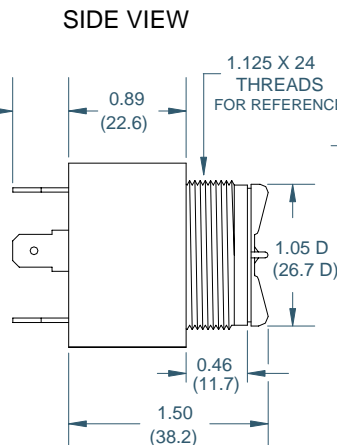
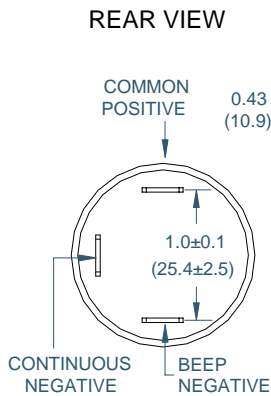


The XB-V09-312-Q(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

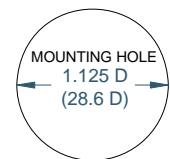
**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

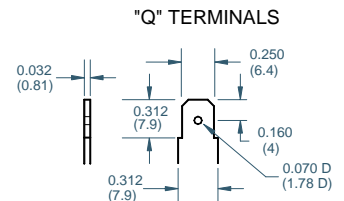


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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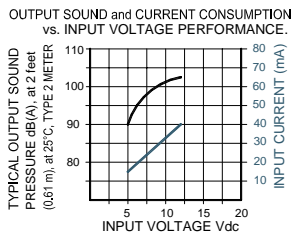
**Revision: 2.07**

# XB-V09-312-Q(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



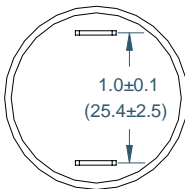
The XB-V09-312-Q(M) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

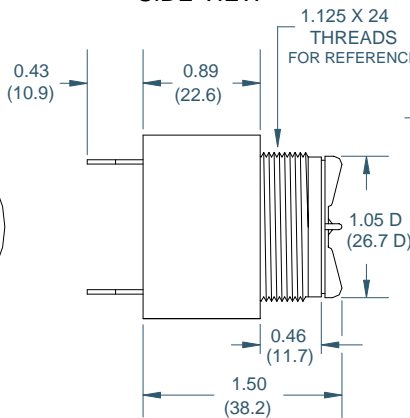
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

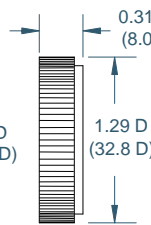
REAR VIEW



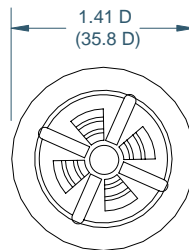
SIDE VIEW



RING

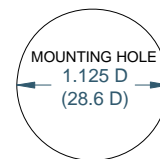


FRONT VIEW



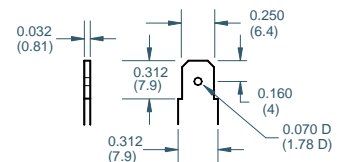
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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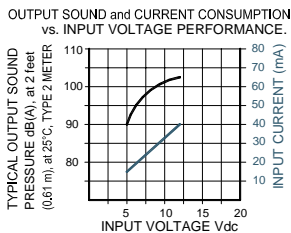
Revision: 2.07

# XB-V09-312-Q(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

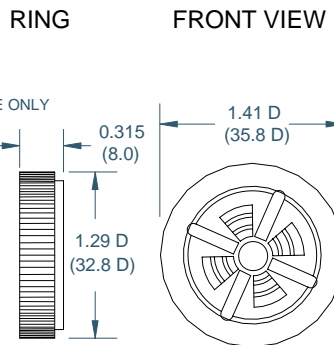
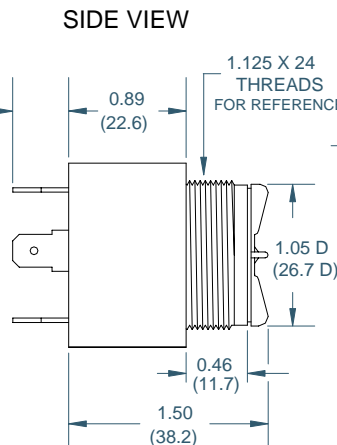
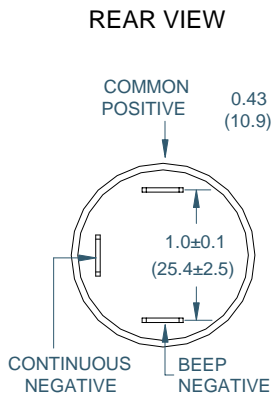


The XB-V09-312-Q(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a medium beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

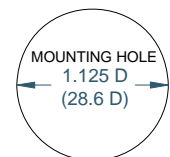
**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

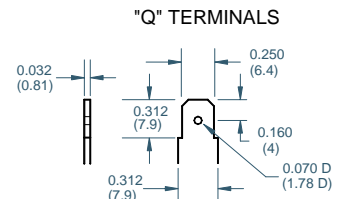


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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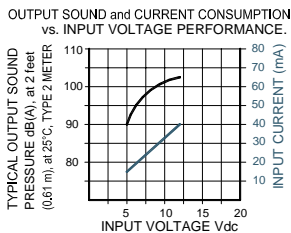
**Revision: 2.07**

# XB-V09-312-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



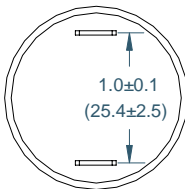
The XB-V09-312-Q(S) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

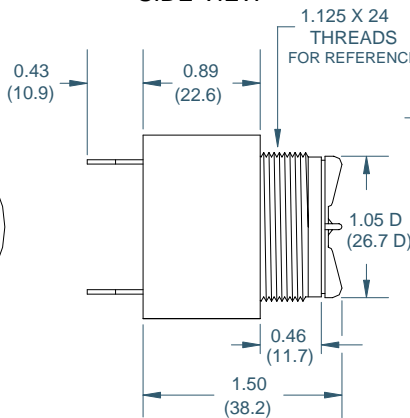
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

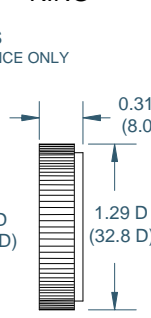
REAR VIEW



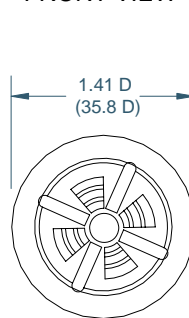
SIDE VIEW



RING



FRONT VIEW

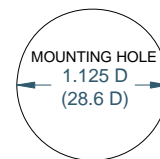


DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)

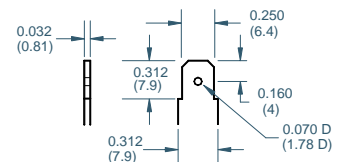
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

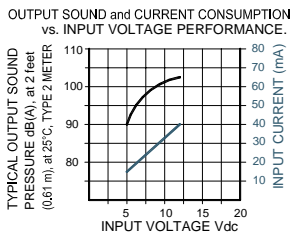


# XB-V09-312-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

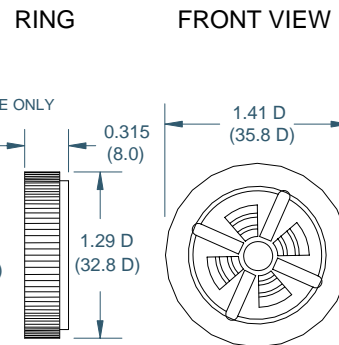
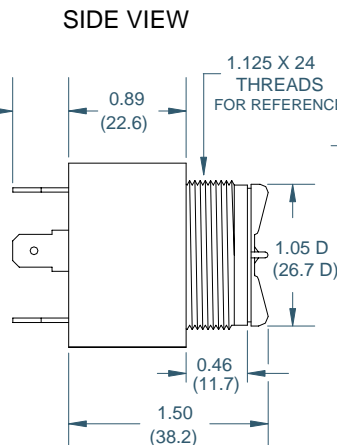
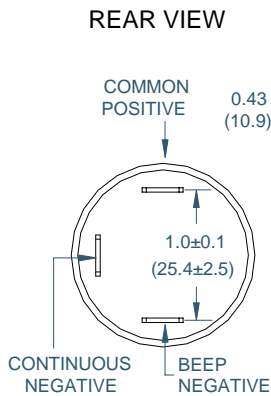


The XB-V09-312-Q(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a slow beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

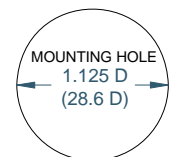
**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

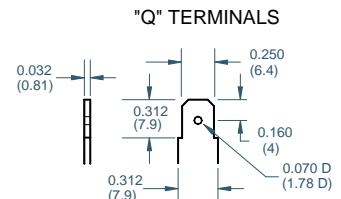


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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**Revision: 2.07**

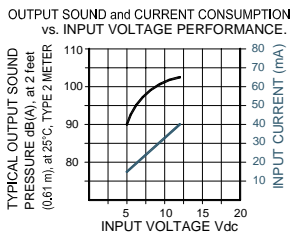


# XB-V09-312-Q(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



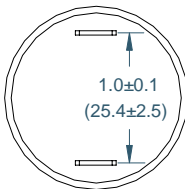
The XB-V09-312-Q(U) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

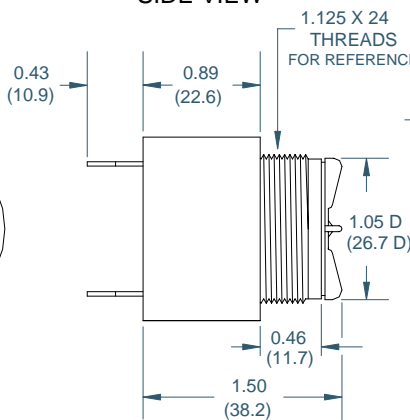
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

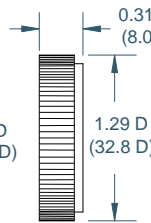
REAR VIEW



SIDE VIEW

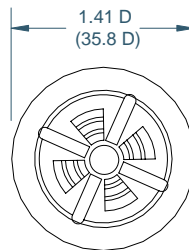


RING

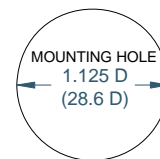


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

FRONT VIEW

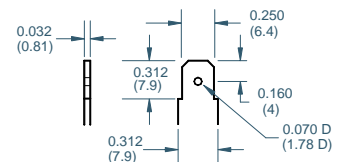


## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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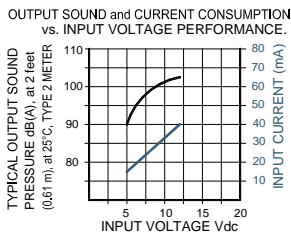
**Revision: 2.07**

# XB-V09-312-Q(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

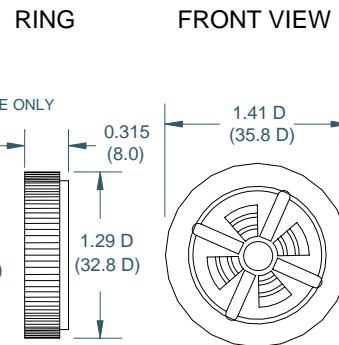
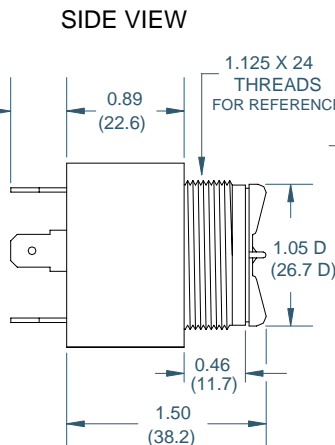
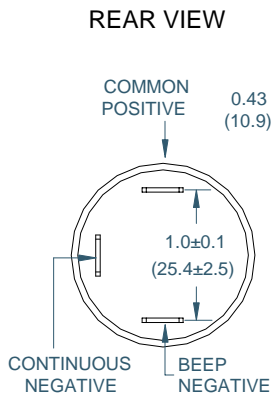


The XB-V09-312-Q(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

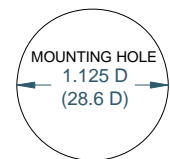
**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
 10 years under normal operating conditions.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

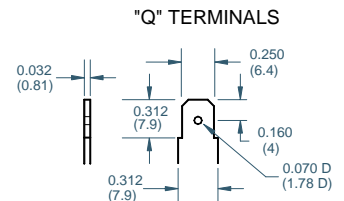


DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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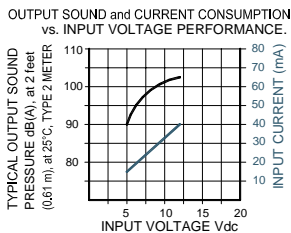
**Revision: 2.07**

# XB-V09-312-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

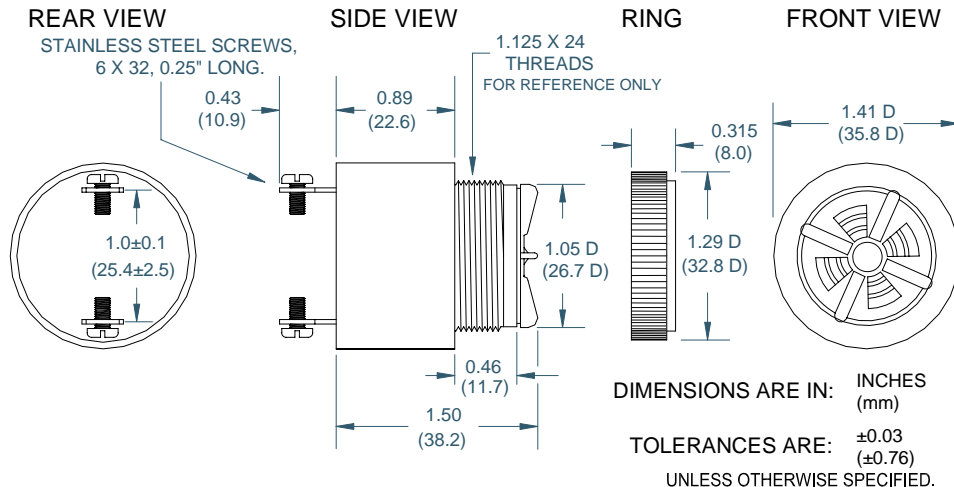


The XB-V09-312-S(F) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

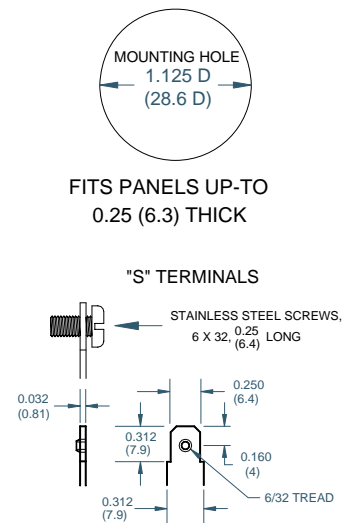
## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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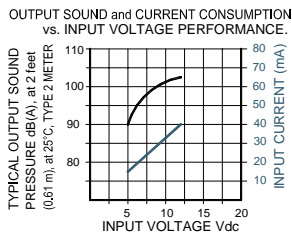
**Revision: 2.07**

# XB-V09-312-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

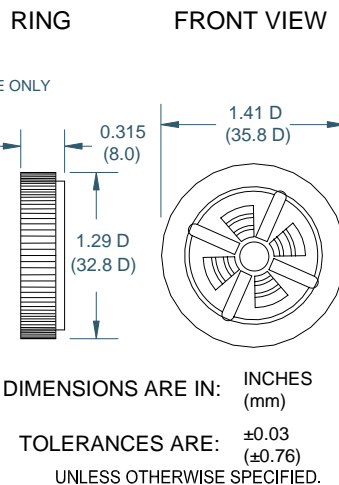
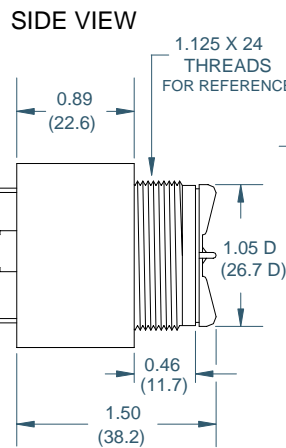
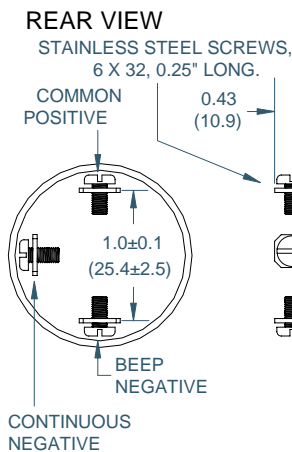


The XB-V09-312-S(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

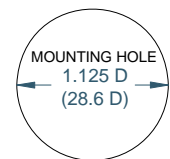
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

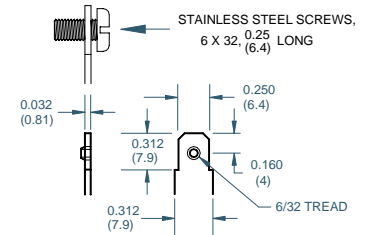


## PANEL MOUNTING



FITS PANELS UP-TO  
 0.25 (6.3) THICK

### "S" TERMINALS



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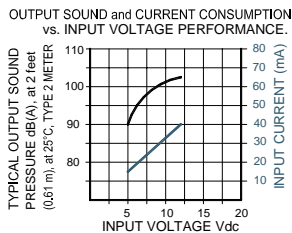


# XB-V09-312-S(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



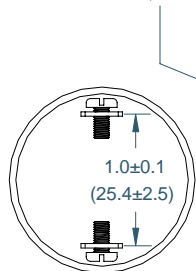
The XB-V09-312-S(M) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

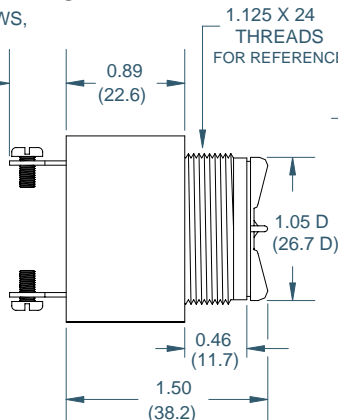
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

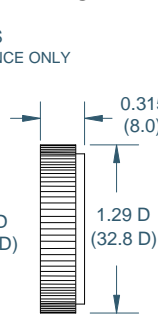
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



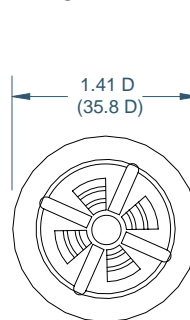
**SIDE VIEW**



**RING**

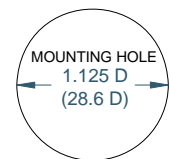


**FRONT VIEW**



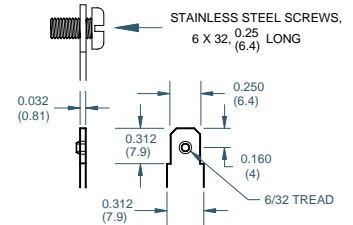
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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 www.floydbell.com

**Revision: 2.07**

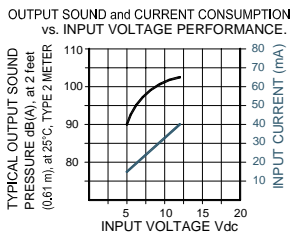


# XB-V09-312-S(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package



The XB-V09-312-S(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a medium beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second in Beep Mode

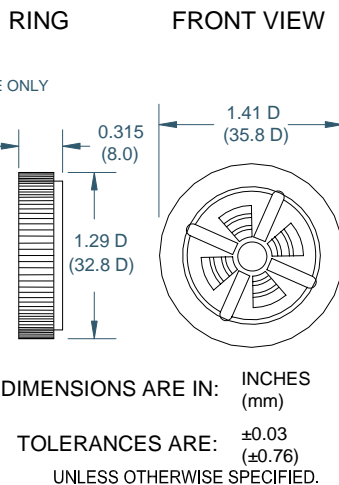
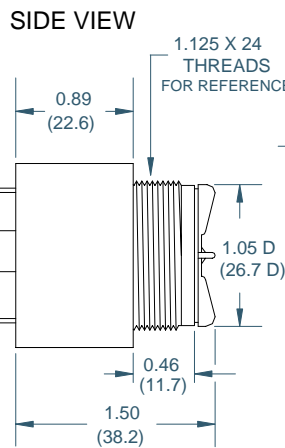
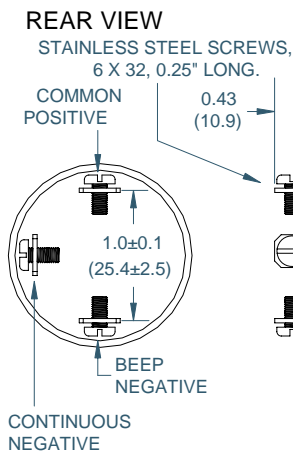
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc

**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.

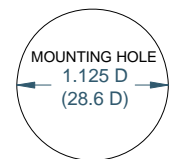
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

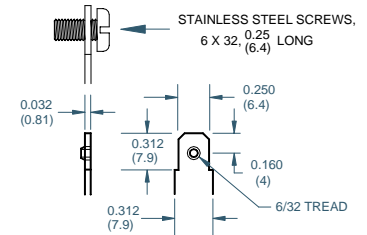


## PANEL MOUNTING



FITS PANELS UP-TO  
 0.25 (6.3) THICK

### "S" TERMINALS



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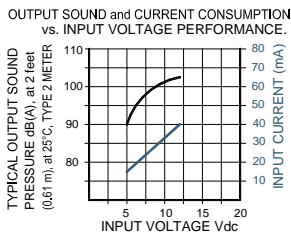
Revision: 2.07

# XB-V09-312-S(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

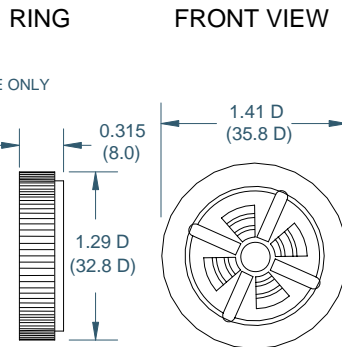
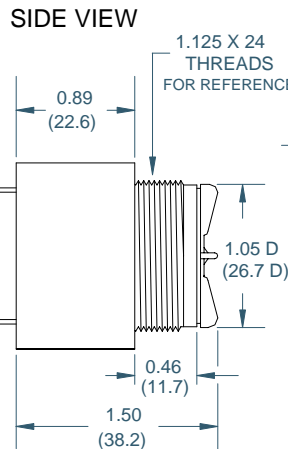
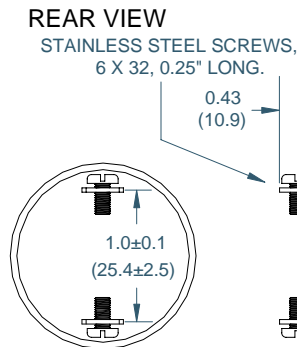


The XB-V09-312-S(S) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

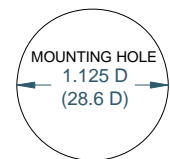
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

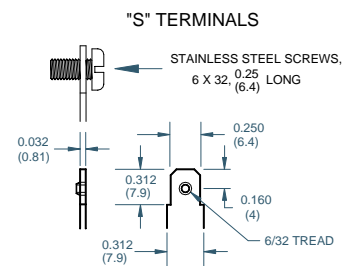


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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www.floydbell.com

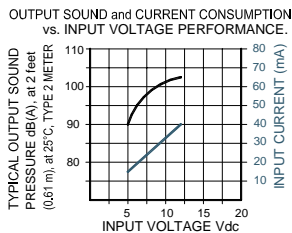
**Revision: 2.07**

# XB-V09-312-S(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

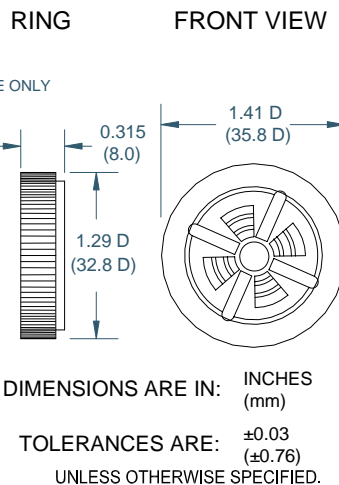
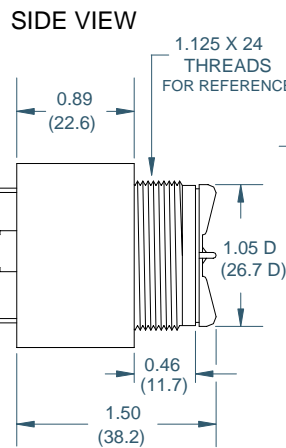
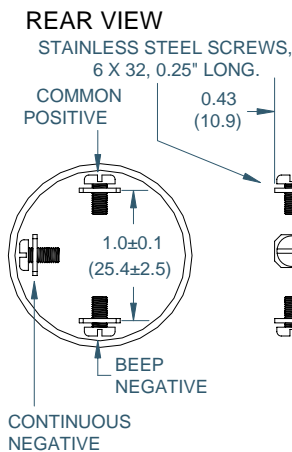


The XB-V09-312-S(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as a slow beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

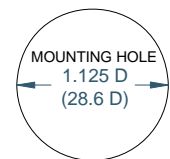
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

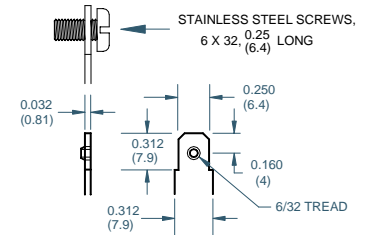


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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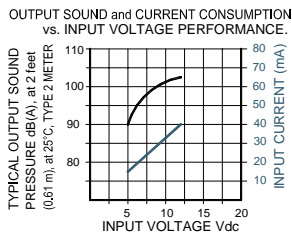
Revision: 2.07

# XB-V09-312-S(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



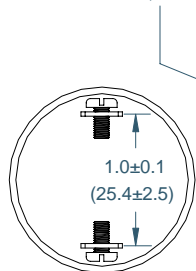
The XB-V09-312-S(U) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

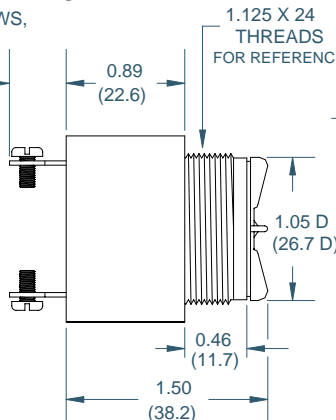
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

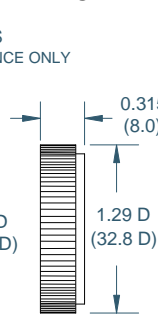
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



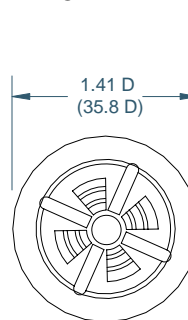
**SIDE VIEW**



**RING**

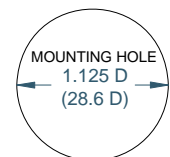


**FRONT VIEW**



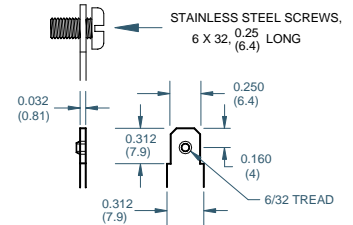
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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Revision: 2.07

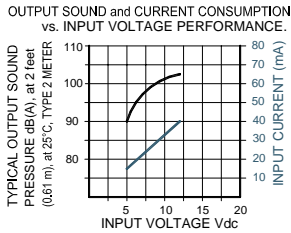


# XB-V09-312-S(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

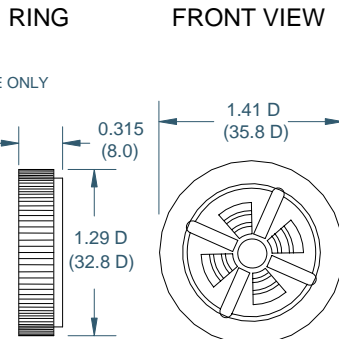
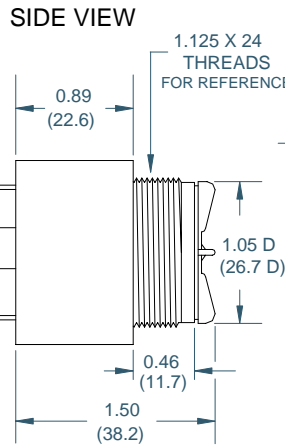
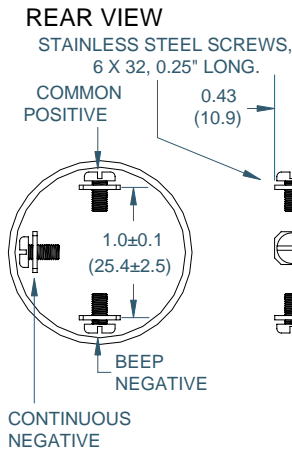


The XB-V09-312-S(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 5-12VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 5-12 Vdc  
**Nominal Operating Voltage:** 12 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 15 mA at 5 Vdc  
 40 mA at 12 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

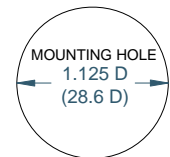


**FRONT VIEW**

1.41 D (35.8 D)

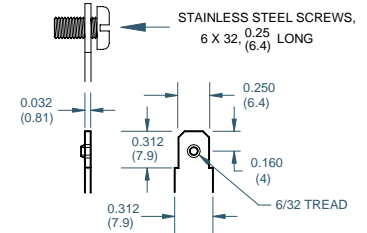
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
 0.25 (6.3) THICK

"S" TERMINALS



 **Floyd Bell Inc**  
 An ISO 9001:2000 Registered Company

720 Dearborn Park Lane • Columbus, OH 43085  
 Tel: 888-FLOYD-BELL • Fax: 614/291-0823  
 www.floydbell.com

**Revision: 2.07**

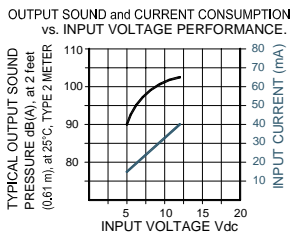


# XB-V09-312-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

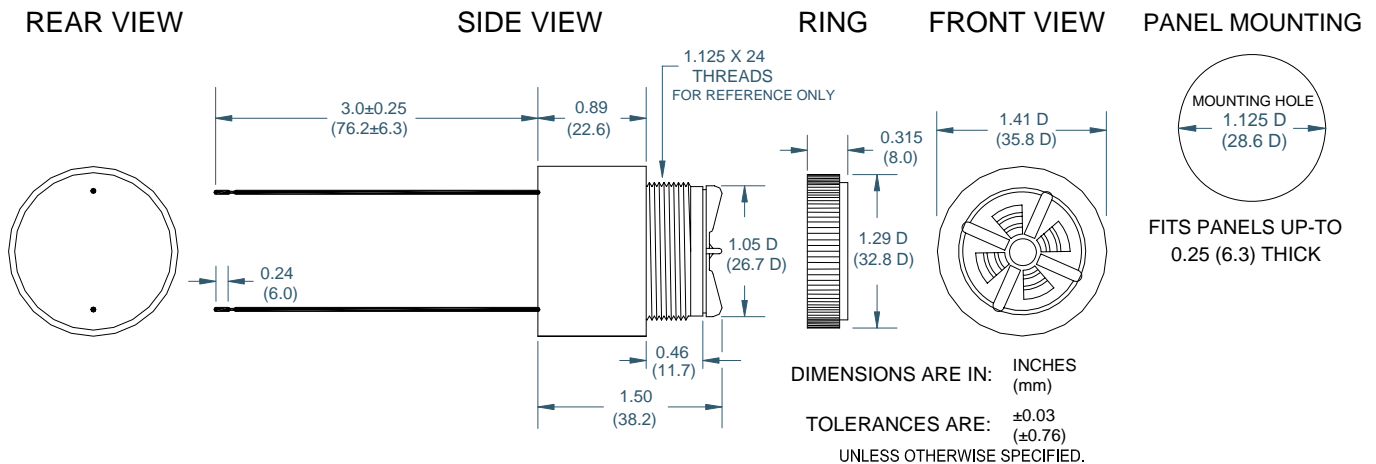


The XB-V09-312-W(F) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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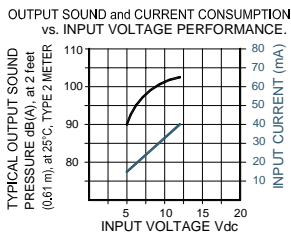
**Revision: 2.07**

# XB-V09-312-W(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

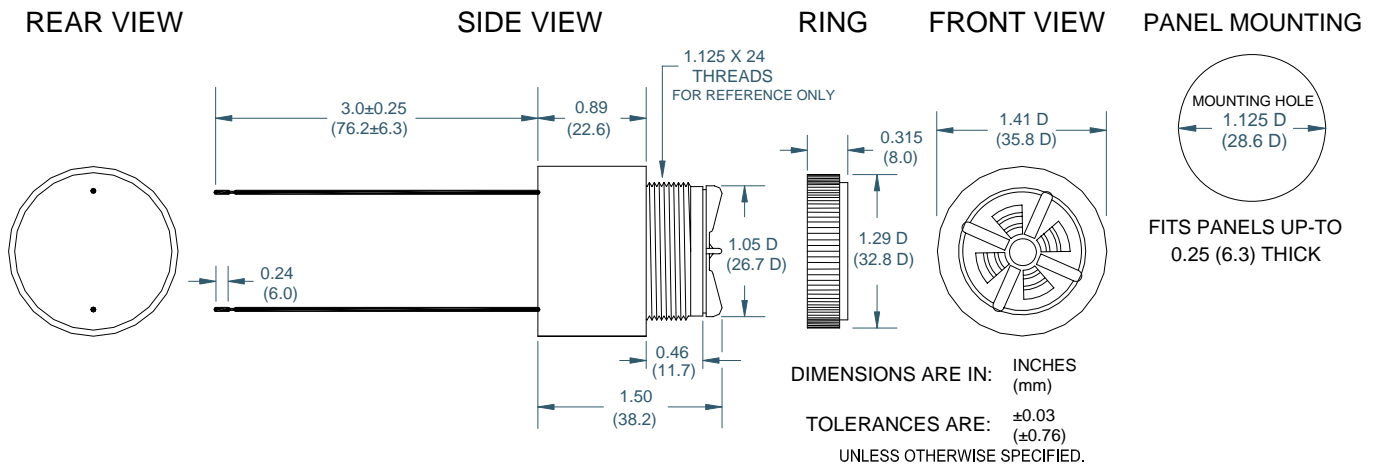


The XB-V09-312-W(M) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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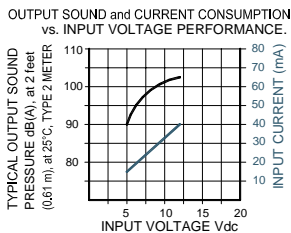
**Revision: 2.07**

# XB-V09-312-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

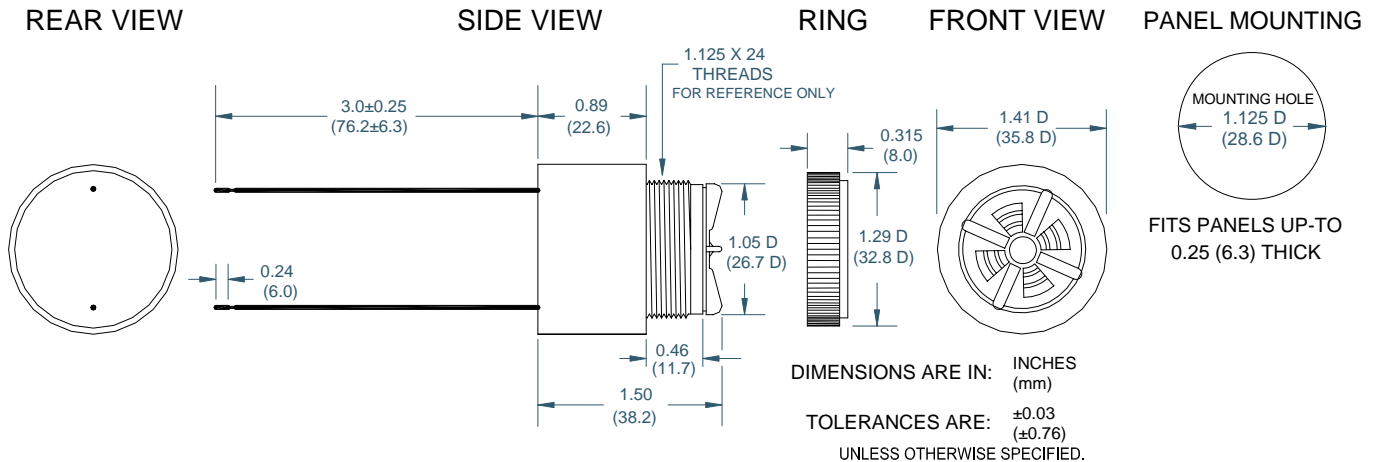


The XB-V09-312-W(S) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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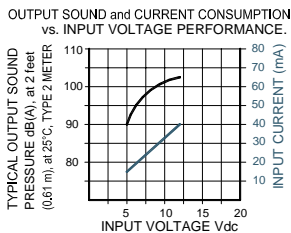
**Revision: 2.07**

# XB-V09-312-W(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

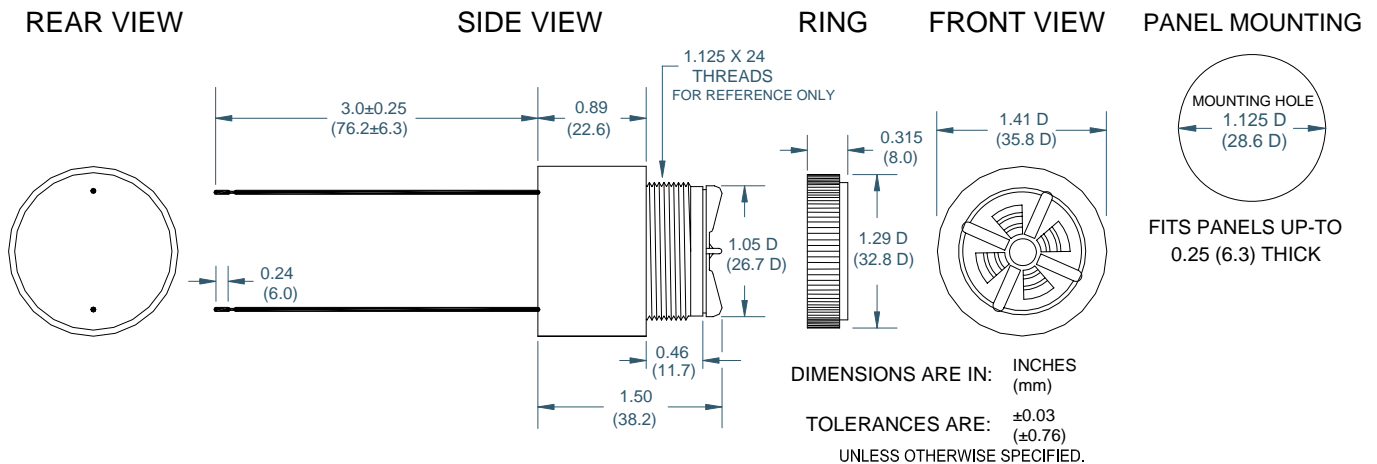


The XB-V09-312-W(U) is an extra loud output, panel mounted alarm for operating voltages of 5-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	5-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	15 mA at 5 Vdc 40 mA at 12 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

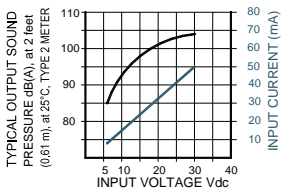
# XB-V09-630-Q(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



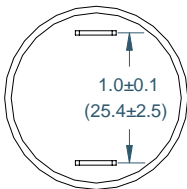
The XB-V09-630-Q(F) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

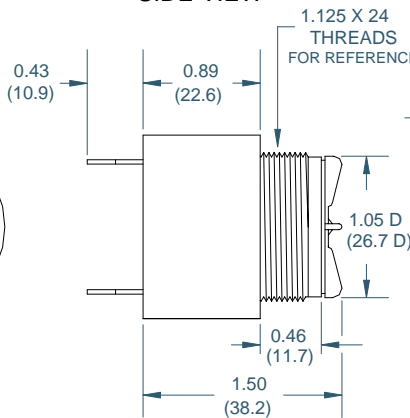
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

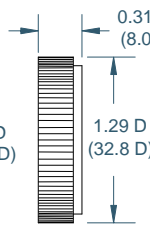
REAR VIEW



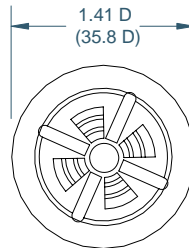
SIDE VIEW



RING

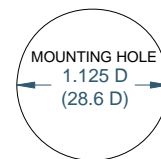


FRONT VIEW



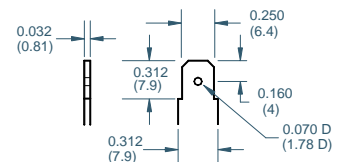
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**



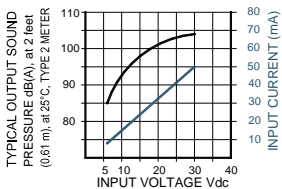
# XB-V09-630-Q(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

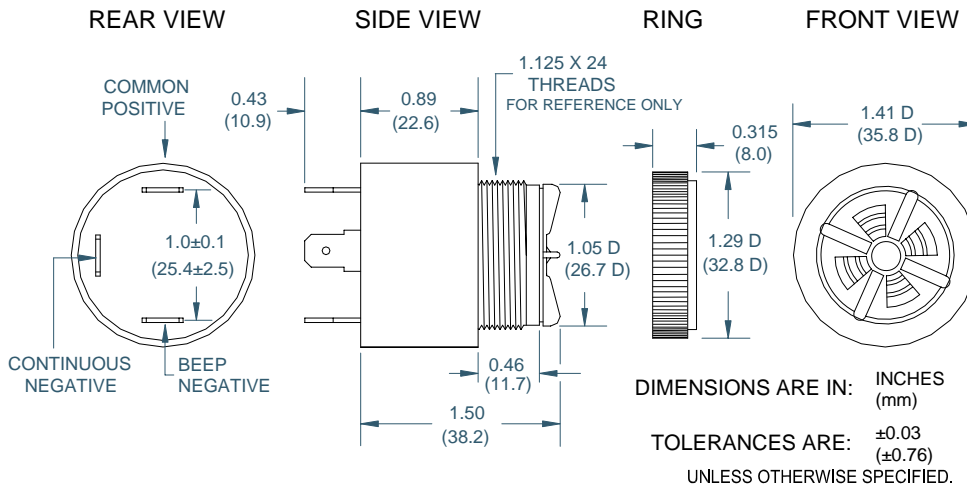


The XB-V09-630-Q(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

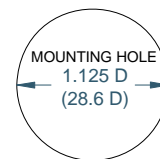
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

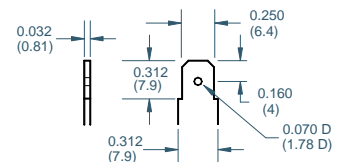


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



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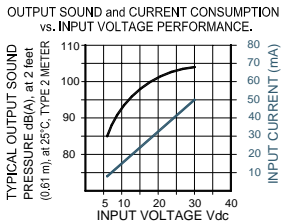
**Revision: 2.07**

# XB-V09-630-Q(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



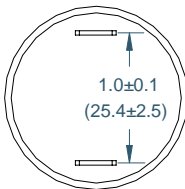
The XB-V09-630-Q(M) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

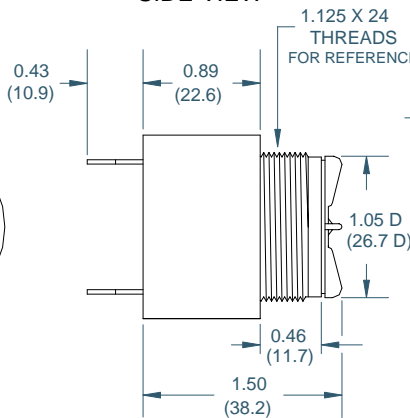
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

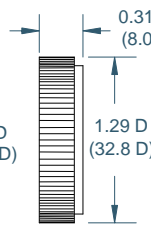
REAR VIEW



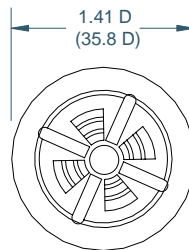
SIDE VIEW



RING

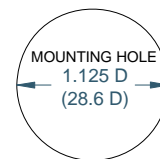


FRONT VIEW



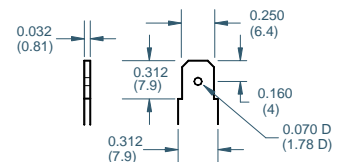
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.07

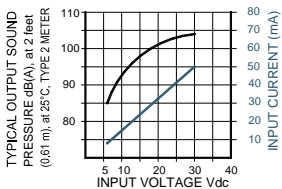
# XB-V09-630-Q(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

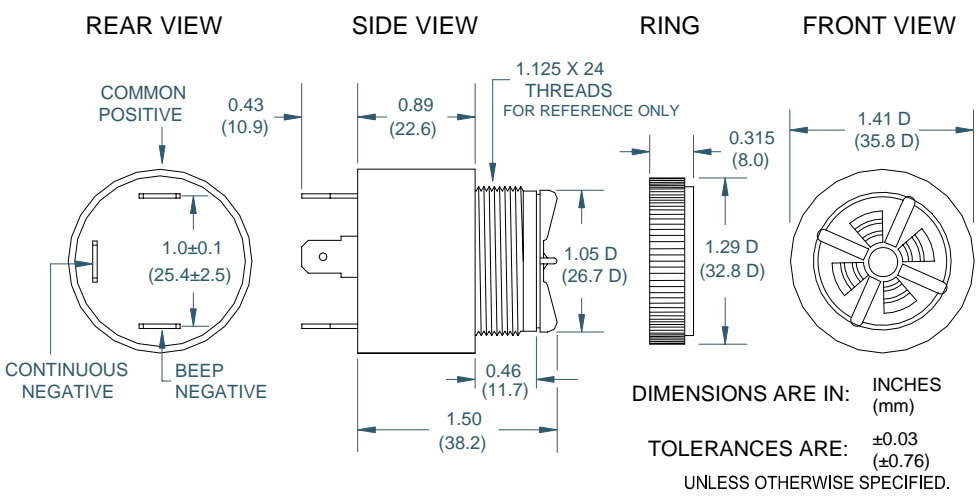


The XB-V09-630-Q(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a medium beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

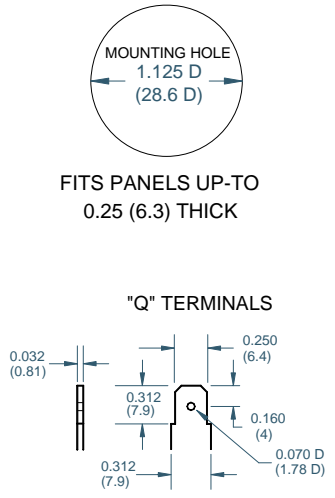
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

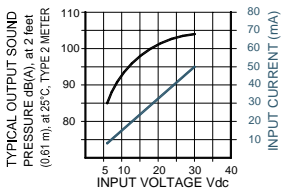
# XB-V09-630-Q(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



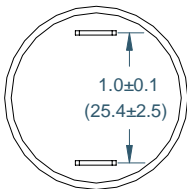
The XB-V09-630-Q(S) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

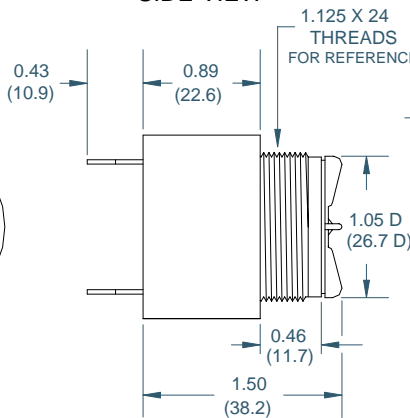
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

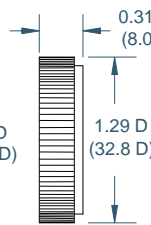
REAR VIEW



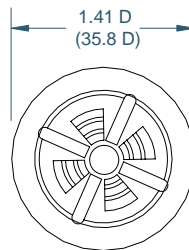
SIDE VIEW



RING

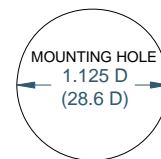


FRONT VIEW



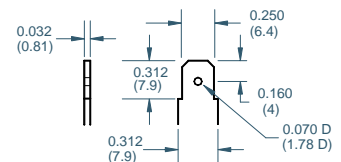
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**



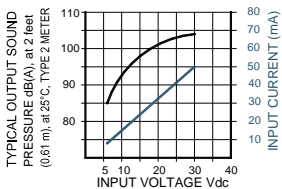
# XB-V09-630-Q(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

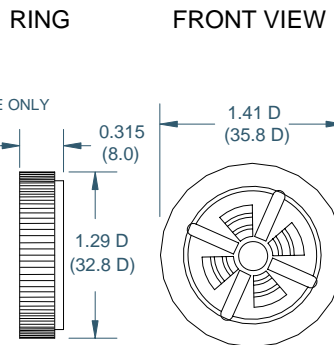
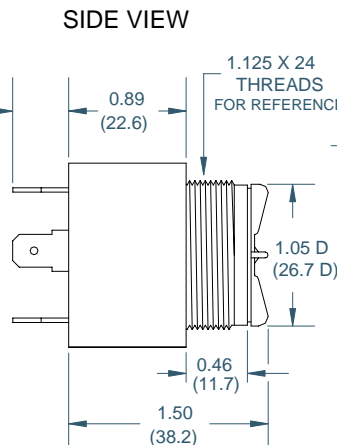
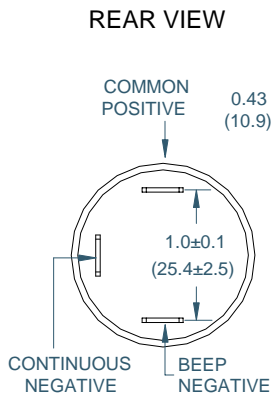


The XB-V09-630-Q(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a slow beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

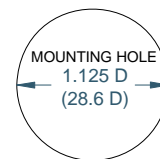
<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

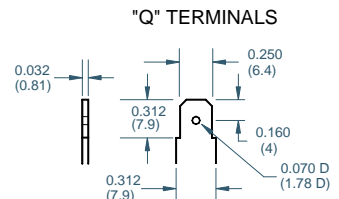


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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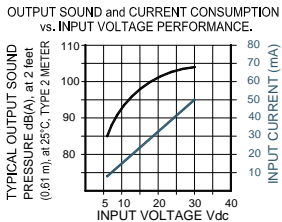


# XB-V09-630-Q(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



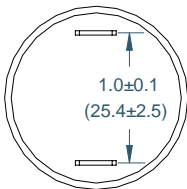
The XB-V09-630-Q(U) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades.

## SPECIFICATIONS

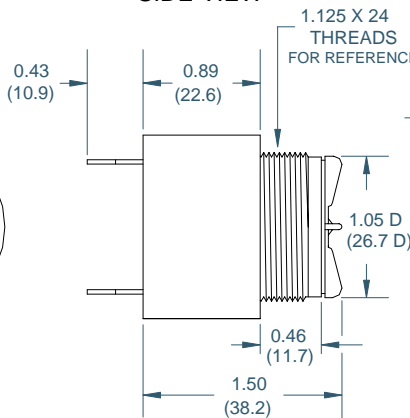
<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

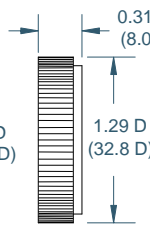
REAR VIEW



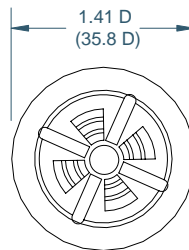
SIDE VIEW



RING

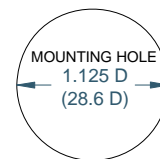


FRONT VIEW



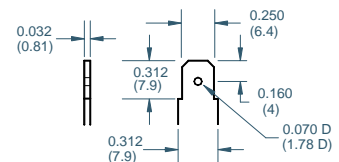
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**Revision: 2.07**

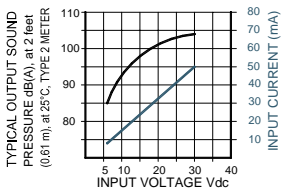
# XB-V09-630-Q(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

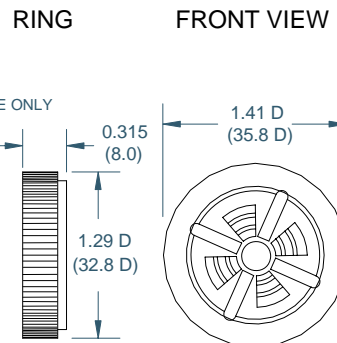
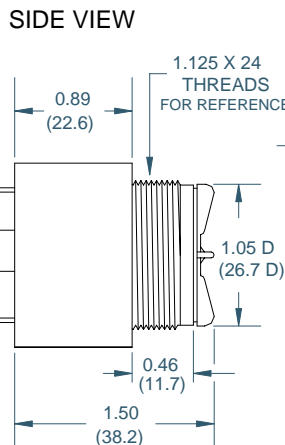
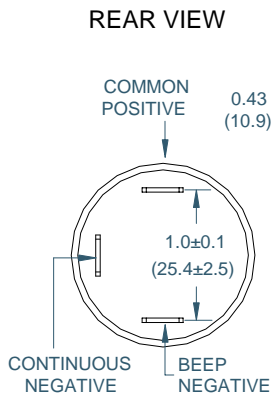


The XB-V09-630-Q(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

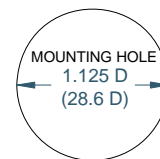
<b>Operating Mode:</b>	Extra Loud Dual Function Beep/Continuous Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second in Beep Mode
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

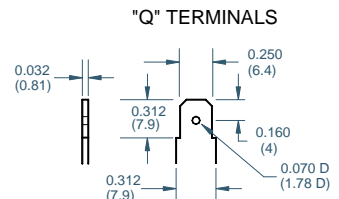


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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**Revision: 2.07**

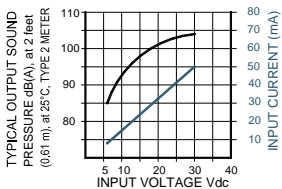
# XB-V09-630-S(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



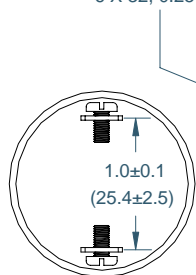
The XB-V09-630-S(F) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

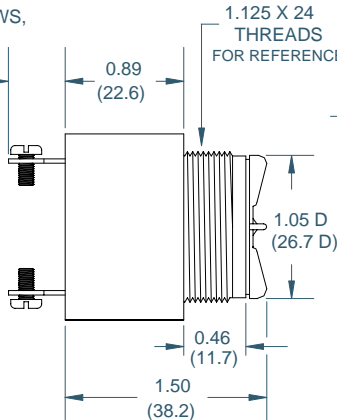
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

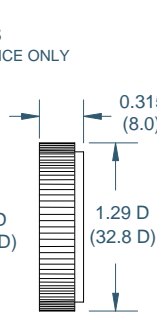
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



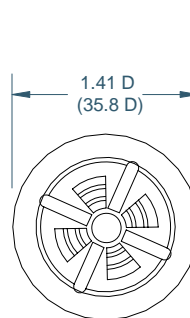
**SIDE VIEW**



**RING**

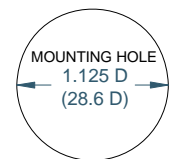


**FRONT VIEW**



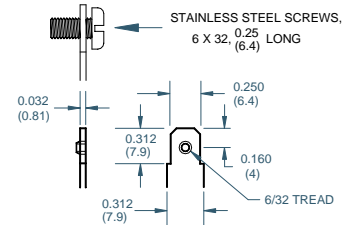
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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 www.floydbell.com

Revision: 2.07

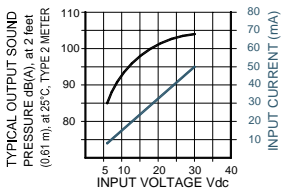
# XB-V09-630-S(F)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

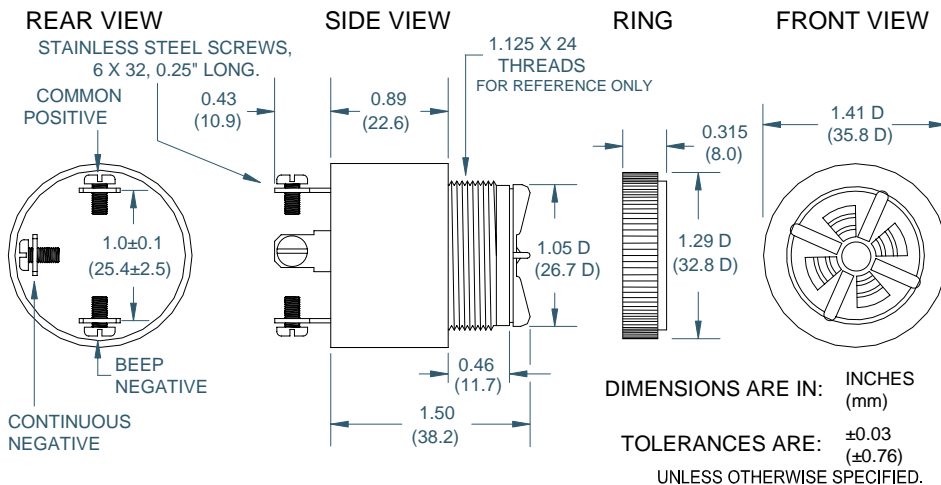


The XB-V09-630-S(F)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

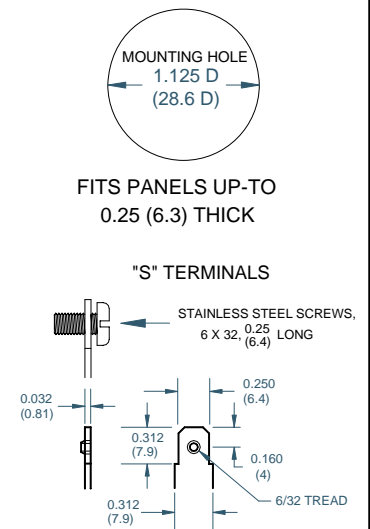
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 3±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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Revision: 2.07



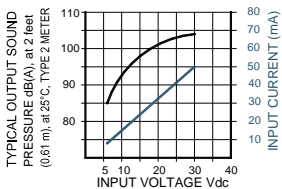
# XB-V09-630-S(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

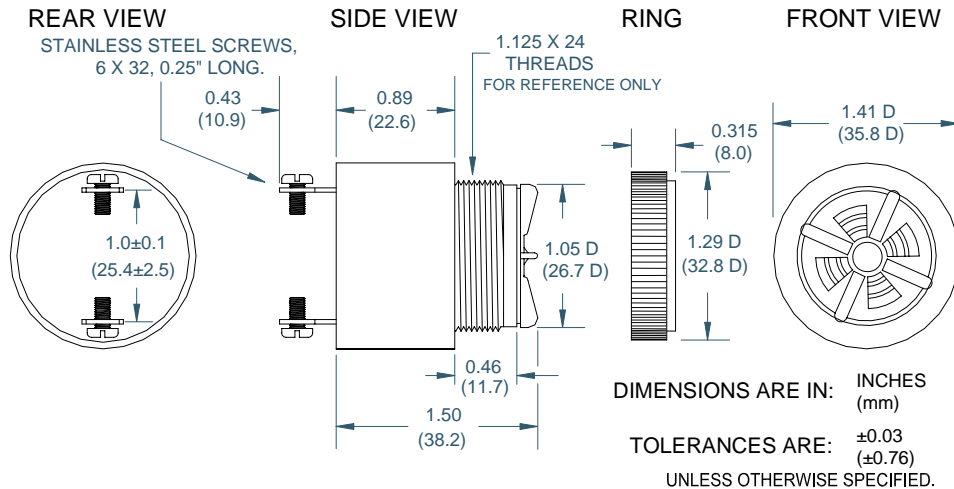


The XB-V09-630-S(M) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

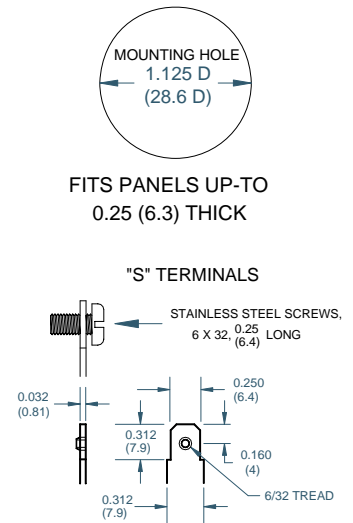
## SPECIFICATIONS

**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.  
**Environmental Durability:** For a period of two years from the date of manufacture under normal operating conditions.  
**Life Expectancy:**  
**Warranty:**

## DIMENSIONS



## PANEL MOUNTING



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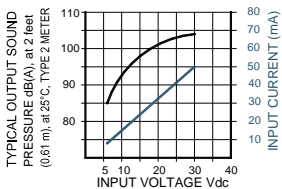
# XB-V09-630-S(M)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The XB-V09-630-S(M)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a medium beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

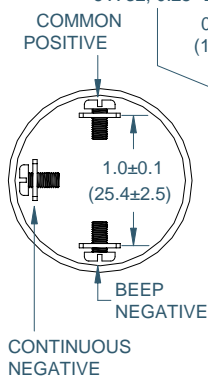
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 2±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

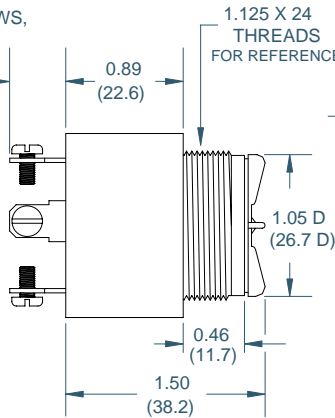
## DIMENSIONS

### REAR VIEW

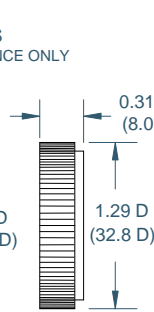
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



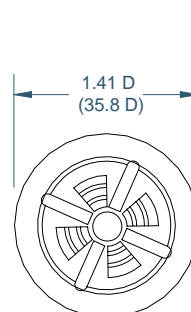
### SIDE VIEW



### RING

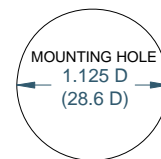


### FRONT VIEW



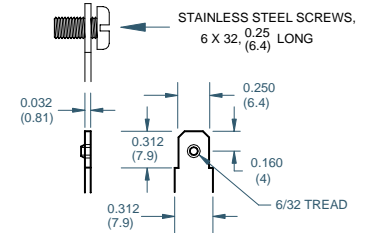
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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**Revision: 2.07**

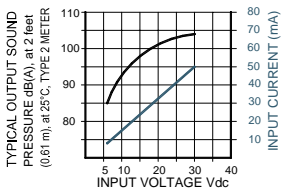
# XB-V09-630-S(S)

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USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



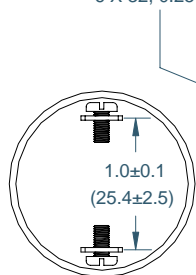
The XB-V09-630-S(S) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

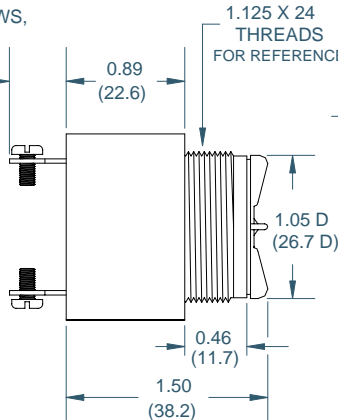
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

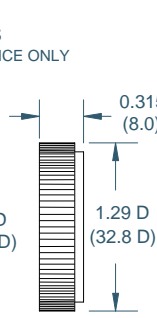
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



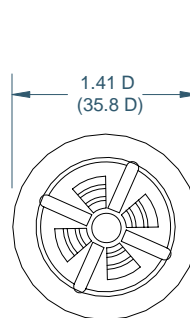
**SIDE VIEW**



**RING**

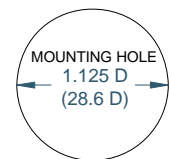


**FRONT VIEW**



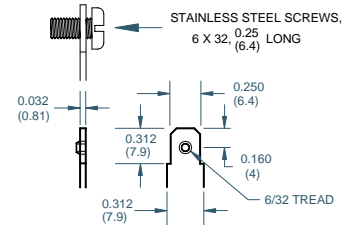
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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**Revision: 2.07**

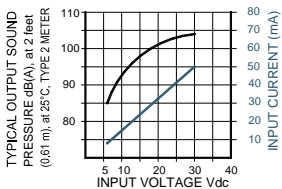
# XB-V09-630-S(S)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



The XB-V09-630-S(S)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as a slow beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

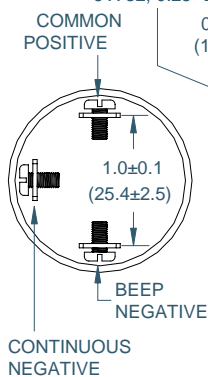
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 1±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.  
**Environmental Durability:** For a period of two years from the date of manufacture under normal operating conditions.  
**Life Expectancy:**  
**Warranty:**

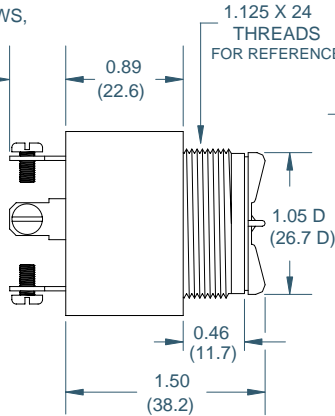
## DIMENSIONS

### REAR VIEW

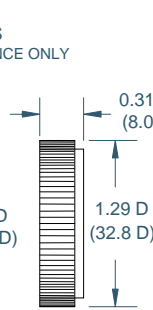
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



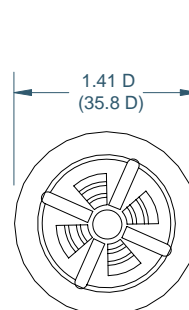
### SIDE VIEW



### RING

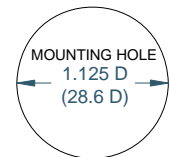


### FRONT VIEW



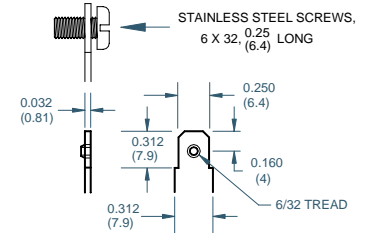
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



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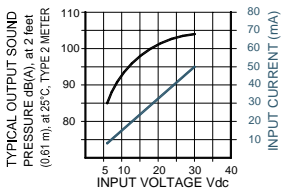
# XB-V09-630-S(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.



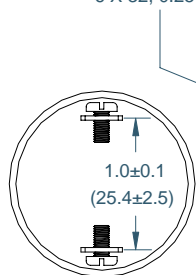
The XB-V09-630-S(U) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

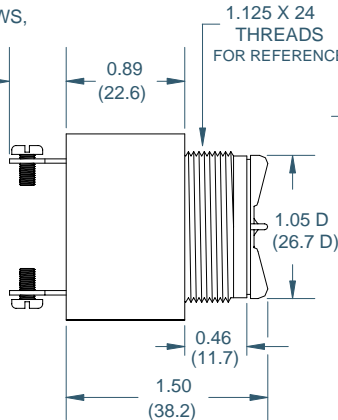
**Operating Mode:** Extra Loud Beep Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Environmental Durability:** 10 years under normal operating conditions.  
**Life Expectancy:** For a period of two years from the date of manufacture under normal operating conditions.  
**Warranty:**

## DIMENSIONS

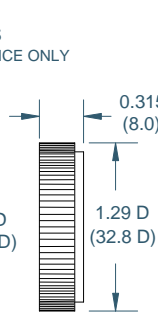
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



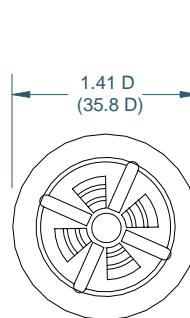
**SIDE VIEW**



**RING**

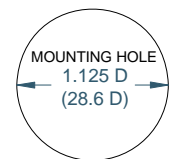


**FRONT VIEW**



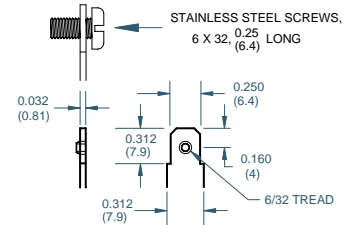
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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**Revision: 2.07**



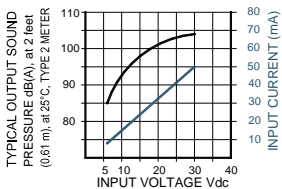
# XB-V09-630-S(U)D

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Polarity Protected Circuitry
- Two Tones, One Package

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

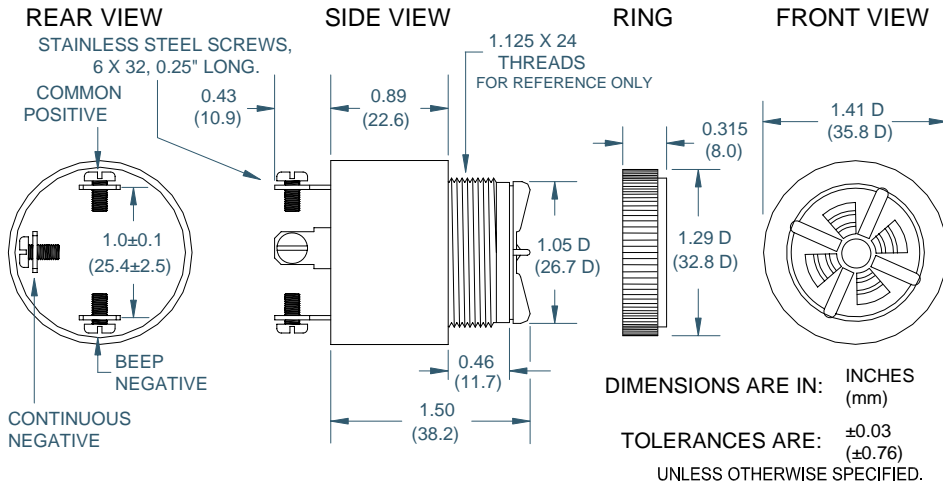


The XB-V09-630-S(U)D is an extra loud output, dual function, panel mounted alarm for operating voltages of 6-30VDC. The alarm functions as an ultra fast beep tone and as a continuous tone. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

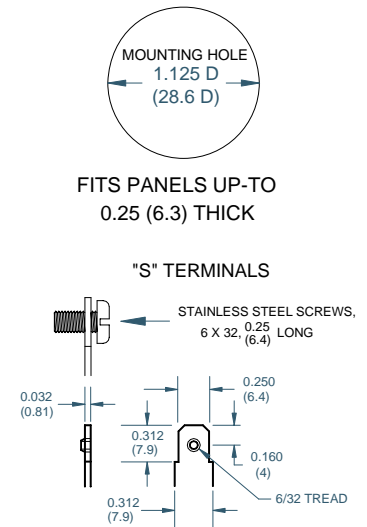
## SPECIFICATIONS

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone  
**Operating Voltage:** 6-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±250 Hz.  
 6±25% Pulses per second in Beep Mode  
**Typical Operating Current:** 10 mA at 6 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** With volume control fully open:  
 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
 Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

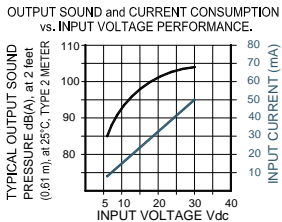


# XB-V09-630-W(F)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

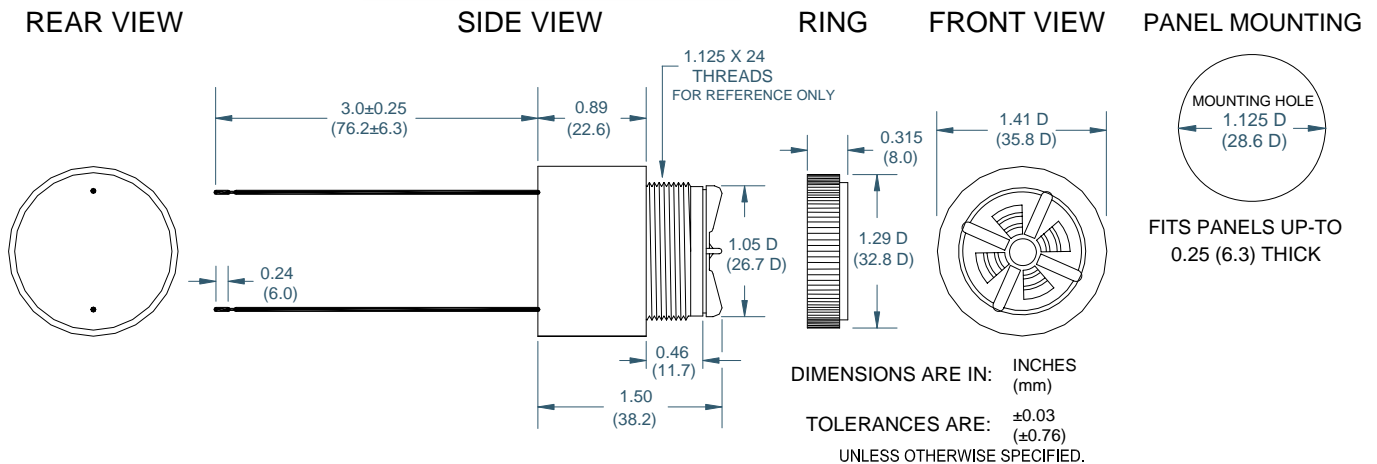


The XB-V09-630-W(F) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 3±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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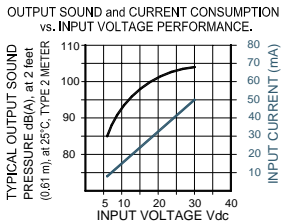
**Revision: 2.07**

# XB-V09-630-W(M)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

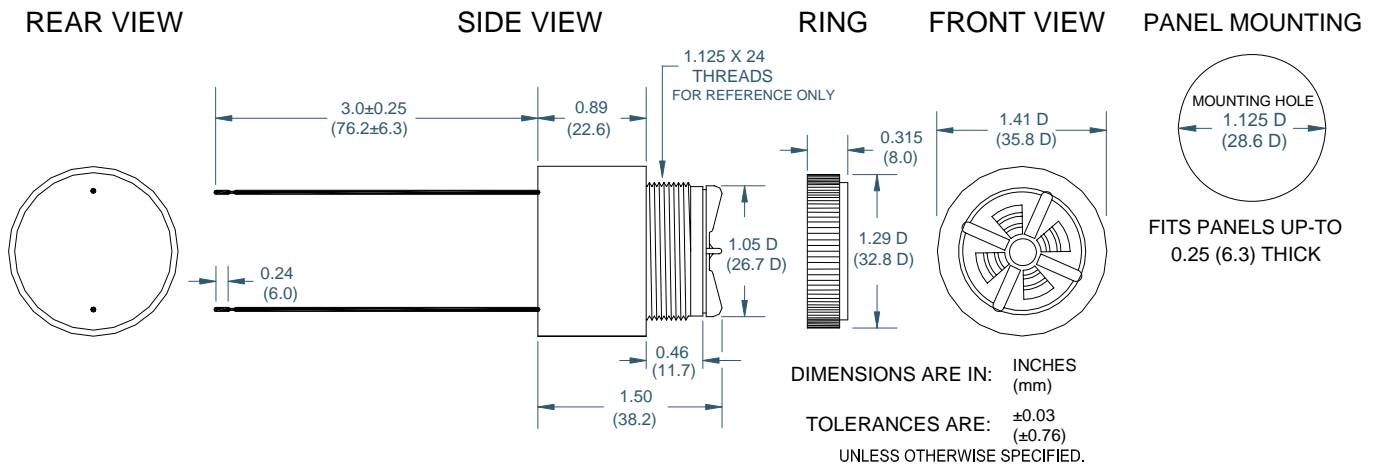


The XB-V09-630-W(M) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 2±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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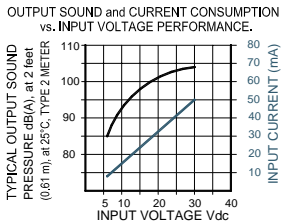
**Revision: 2.07**

# XB-V09-630-W(S)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

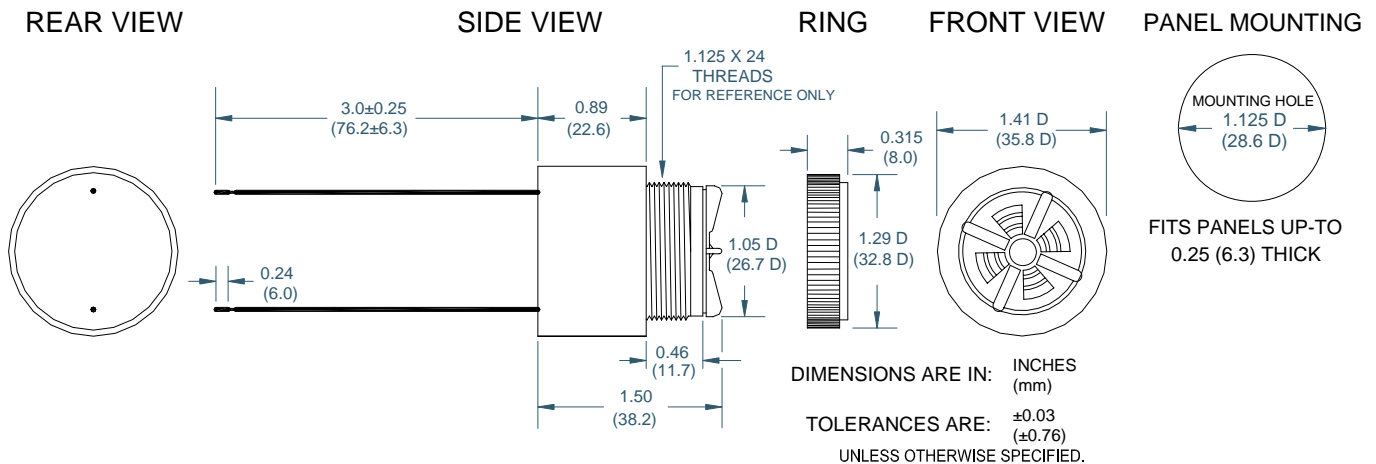


The XB-V09-630-W(S) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 1±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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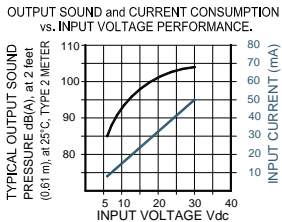
**Revision: 2.07**

# XB-V09-630-W(U)

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

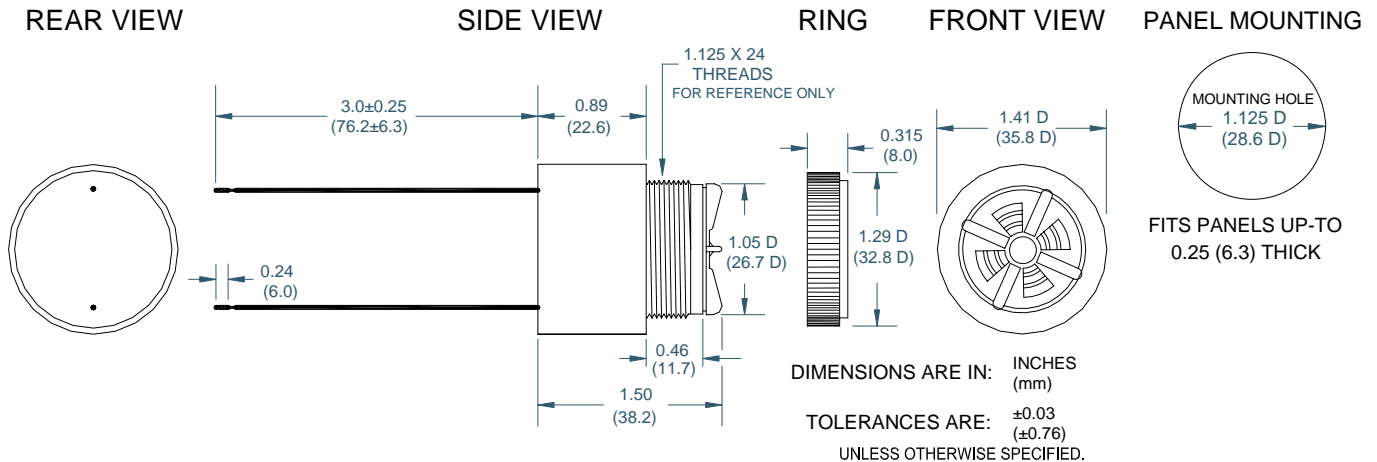


The XB-V09-630-W(U) is an extra loud output, beep tone, panel mounted alarm for operating voltages of 6-30VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Beep Tone
<b>Operating Voltage:</b>	6-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±250 Hz. 6±25% Pulses per second
<b>Typical Operating Current:</b>	10 mA at 6 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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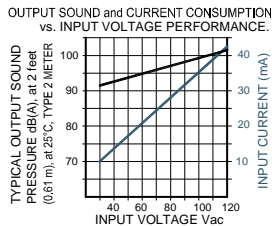
**Revision: 2.07**

# XC-05-201-P

Made in  
USA

Image Not  
Available

- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- PCB Mountable
- Installs Easily
- Reliable Piezoelectric Technology

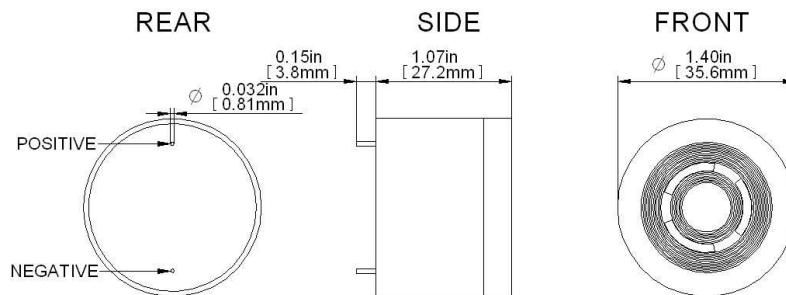


The XC-05-201-P is an extra loud continuous tone alarm for operating voltages of 30-120VAC. It has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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Revision: 2.14

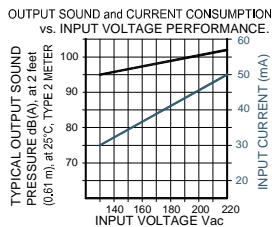


# XC-05-301-P

Made in  
USA

Image Not  
Available

- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- PCB Mountable
- Installs Easily
- Reliable Piezoelectric Technology

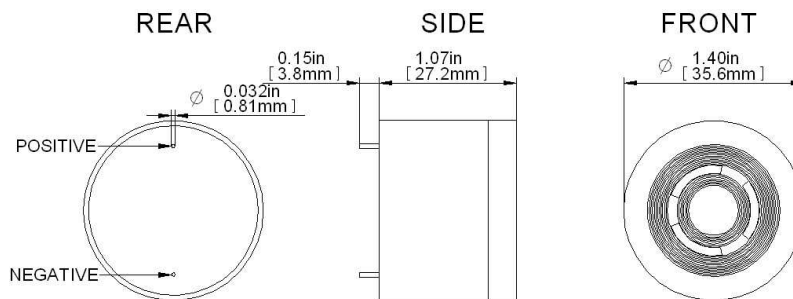


The XC-05-301-P is an extra loud continuous tone alarm for operating voltages of 130-220VAC. It has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 130 Vac 50 mA at 220 Vac
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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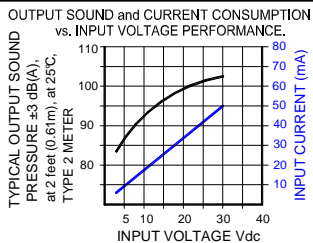
Revision: 2.14

# XC-05-330-P

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- PCB Mountable
- Reliable Piezoelectric Technology
- Installs Easily

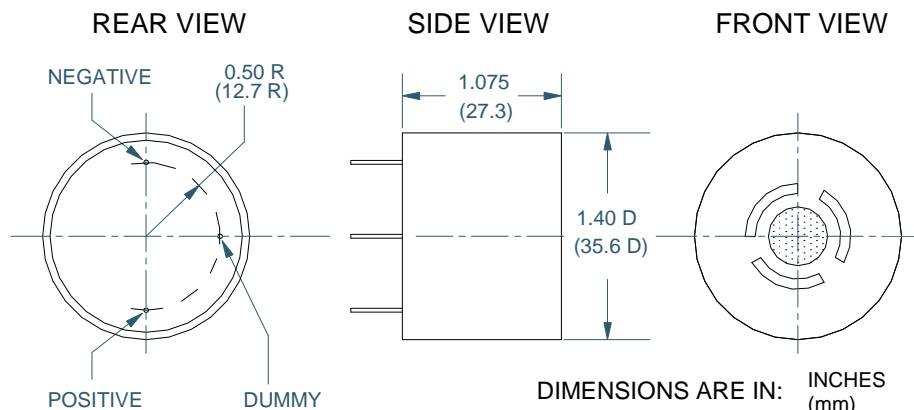


The XC-05-330-P is an extra loud continuous tone alarm for operating voltages of 3-30VDC. It has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with three 0.032" diameter pins for mounting to a printed circuit board.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



DIMENSIONS ARE IN: INCHES (mm)

TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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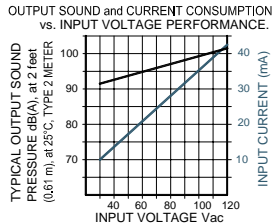
Revision: 3.12

# XC-09-201-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



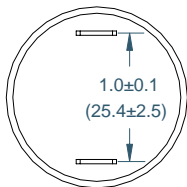
The XC-09-201-Q is a panel mounted alarm for operating voltages of 30-120VAC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

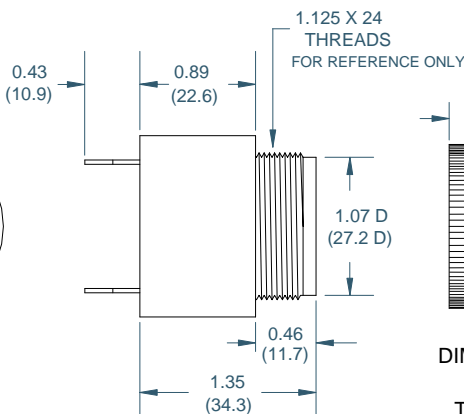
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

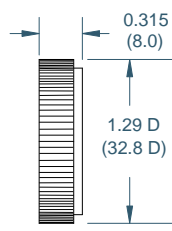
REAR VIEW



SIDE VIEW



RING

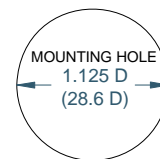


FRONT VIEW



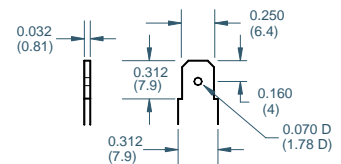
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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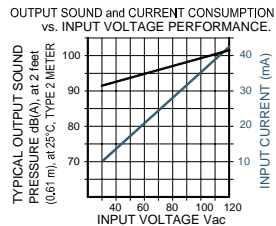
Revision: 2.07

# XC-09-201-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

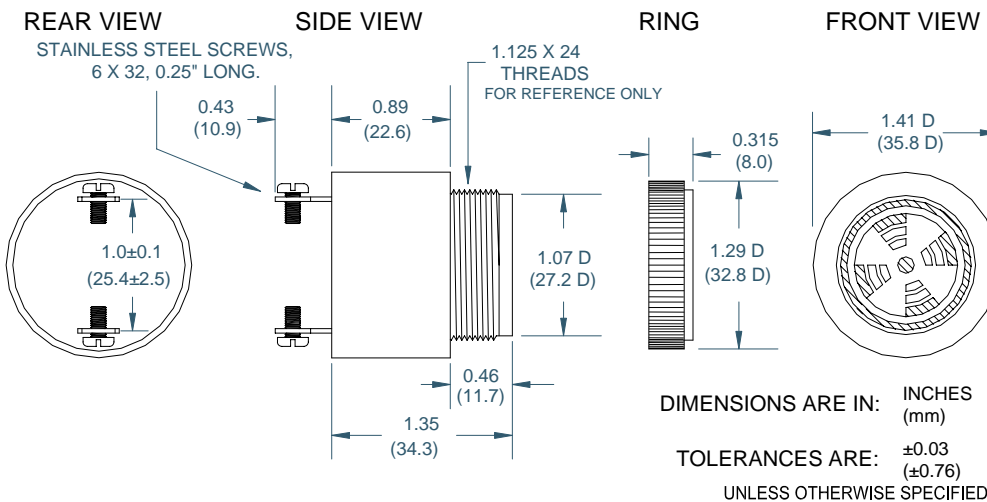


The XC-09-201-S is a panel mounted alarm for operating voltages of 30-120VAC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

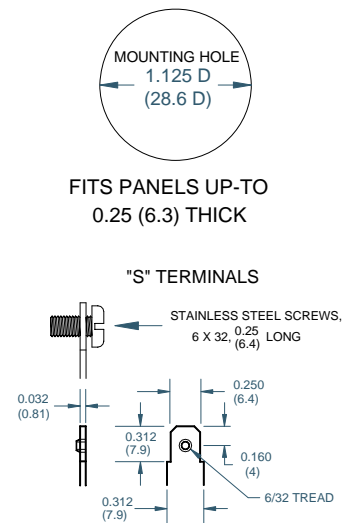
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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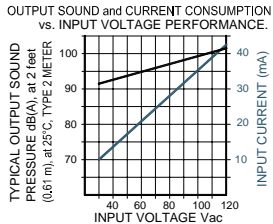
**Revision: 2.07**

# XC-09-201-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-09-201-W is a panel mounted alarm for operating voltages of 30-120VAC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304
<b>Environmental Durability:</b>	Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

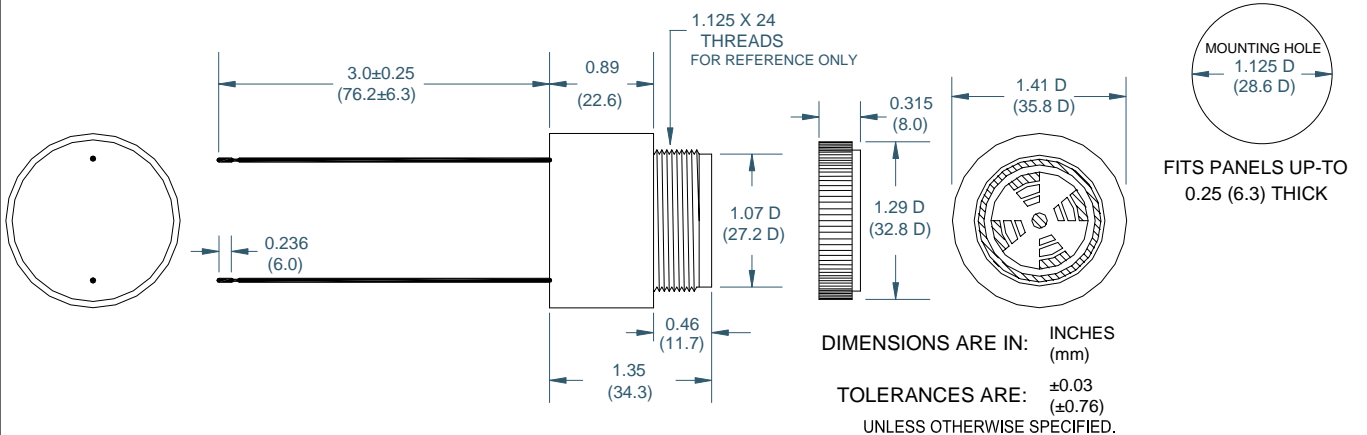
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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**Revision: 2.07**



# XC-09-212-Q

**Made in  
USA**

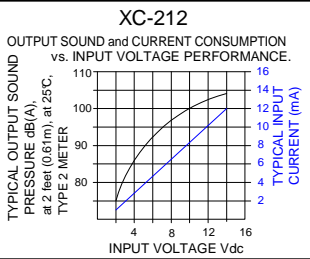


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XC-09-212-Q is an extra loud output, panel mounted alarm for operating voltages of 2-12VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	2-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

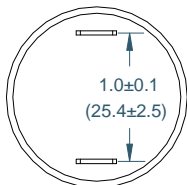


**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

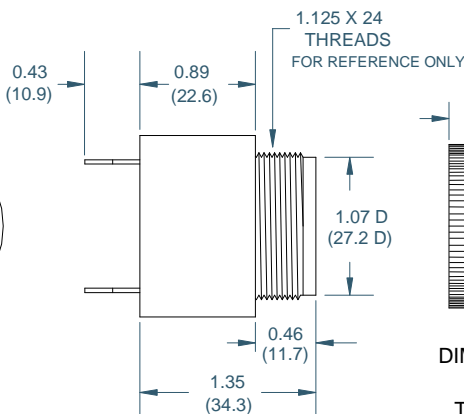
## DIMENSIONS

## PANEL MOUNTING

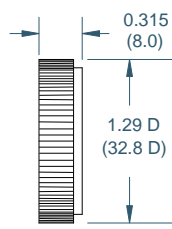
### REAR VIEW



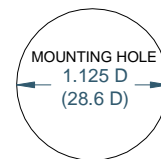
### SIDE VIEW



### RING

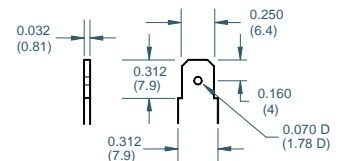


### FRONT VIEW



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "Q" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 2.12**

# XC-09-212-S

**Made in  
USA**

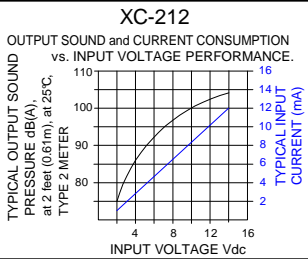


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XC-09-212-S is an extra loud output, panel mounted alarm for operating voltages of 2-12VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

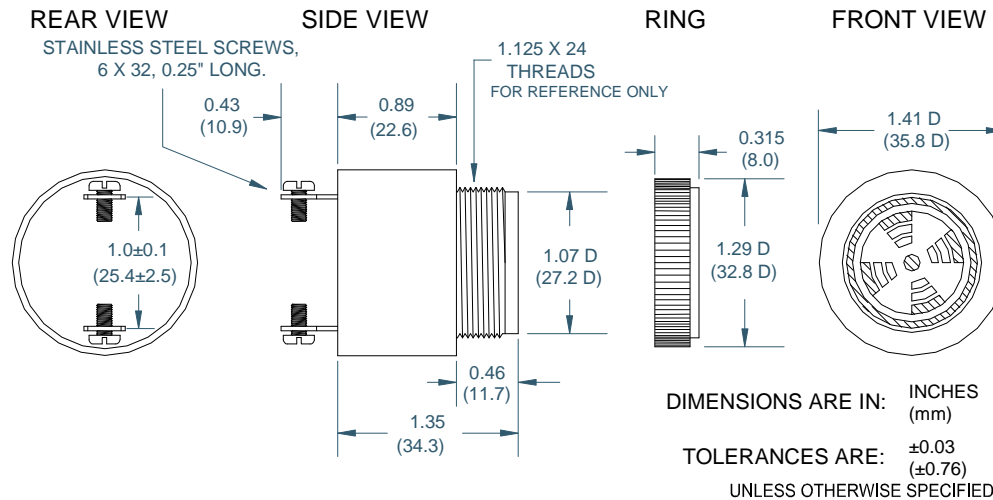
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	2-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal operating conditions.
<b>Environmental Durability:</b>	
<b>Life Expectancy:</b>	
<b>Warranty:</b>	

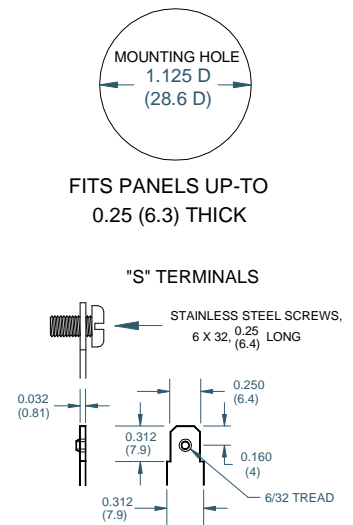


**RoHS** RoHS Compliant

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.12**

# XC-09-212-W

**Made in  
USA**

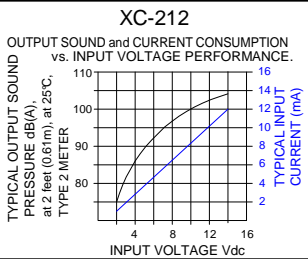


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XC-09-212-W is an extra loud output, panel mounted alarm for operating voltages of 2-12VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	2-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max
<b>Typical Sound Pressure:</b>	75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

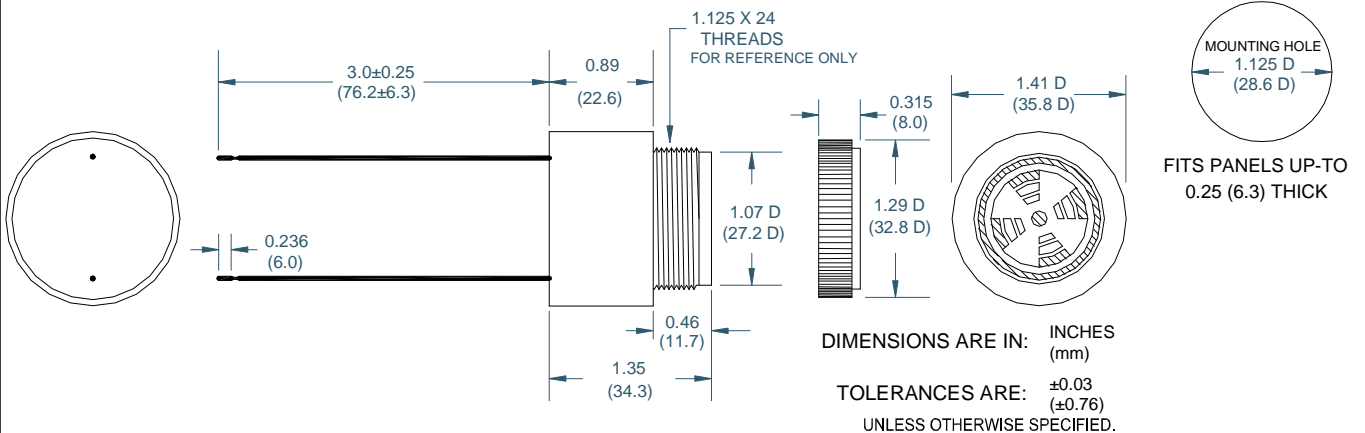
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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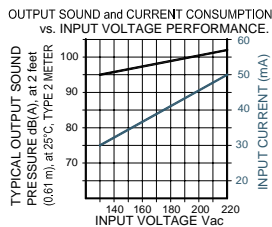
Revision: 2.12

# XC-09-301-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-09-301-Q is a panel mounted alarm for operating voltages of 130-220VAC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

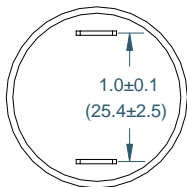
**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 130-220 Vac  
**Nominal Operating Voltage:** 220 Vac  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 30 mA at 130 Vac  
 50 mA at 220 Vac

**Typical Sound Pressure:** 95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.  
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

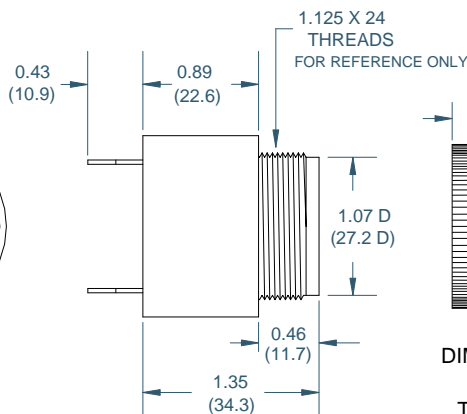
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

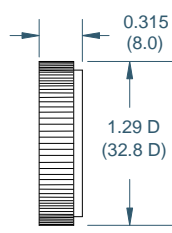
REAR VIEW



SIDE VIEW



RING

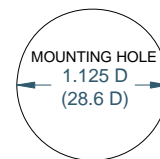


FRONT VIEW



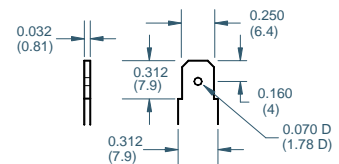
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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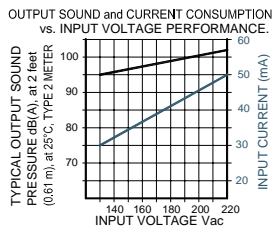
Revision: 2.07

# XC-09-301-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

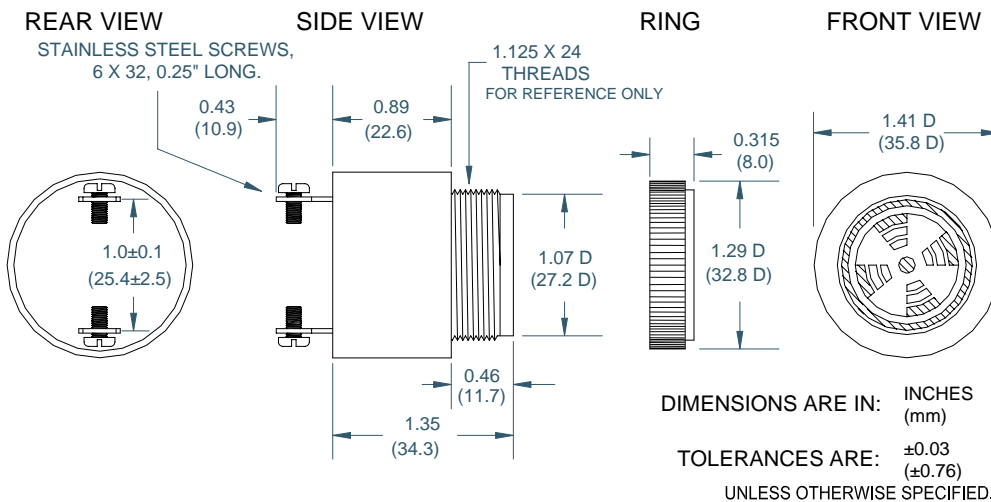


The XC-09-301-S is a panel mounted alarm for operating voltages of 130-220VAC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

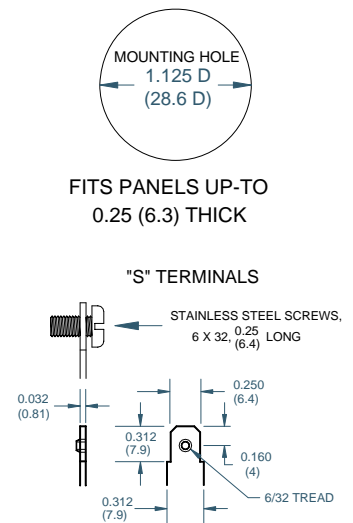
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 130 Vac 50 mA at 220 Vac
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.07**

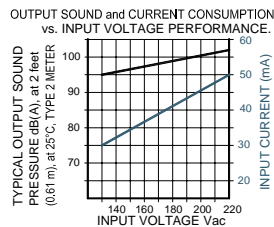


# XC-09-301-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-09-301-W is a panel mounted alarm for operating voltages of 130-220VAC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 130 Vac 50 mA at 220 Vac
<b>Typical Sound Pressure:</b>	95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

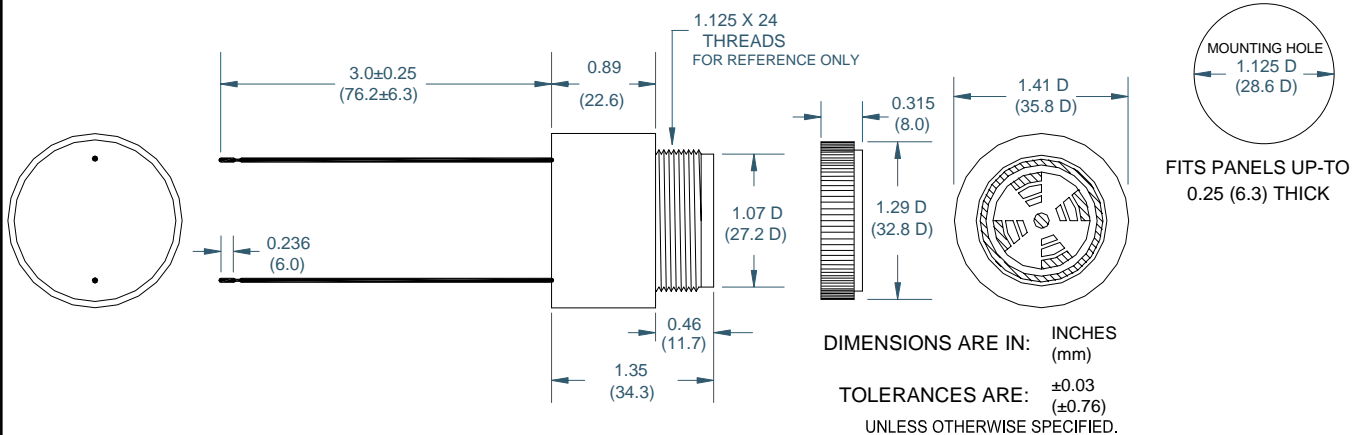
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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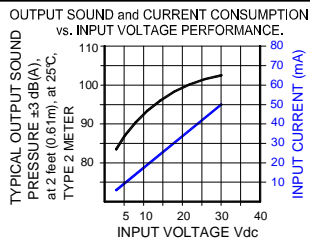
**Revision: 2.07**

# XC-09-330-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-09-330-Q is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

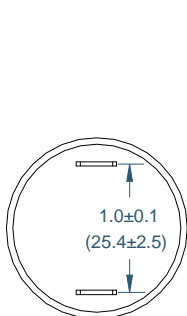
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

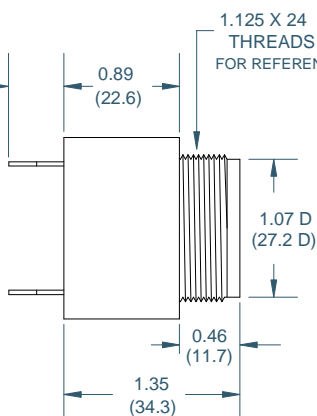
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

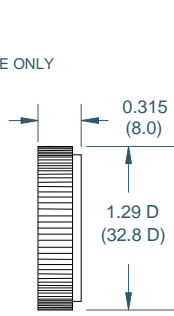
REAR VIEW



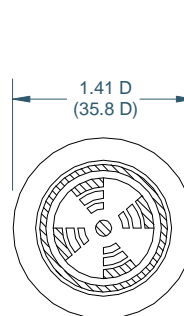
SIDE VIEW



RING

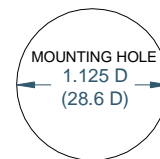


FRONT VIEW



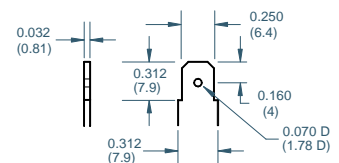
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"Q" TERMINALS



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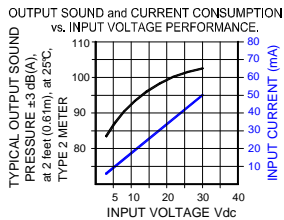
Revision: 03.12

# XC-09-330-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



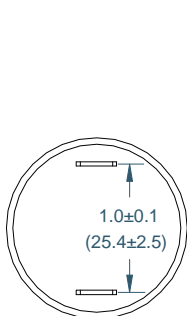
The XC-09-330-Q is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

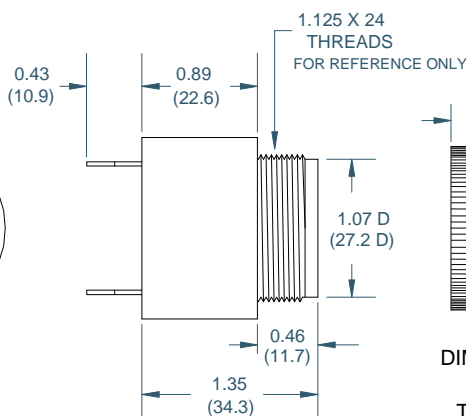
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

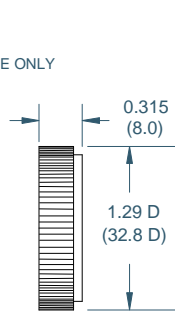
REAR VIEW



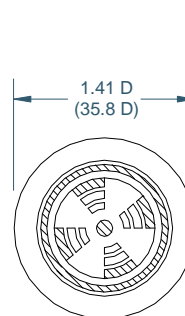
SIDE VIEW



RING

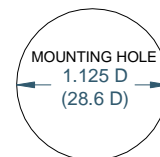


FRONT VIEW



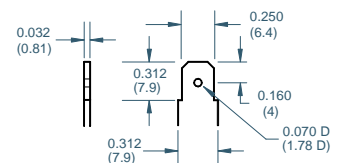
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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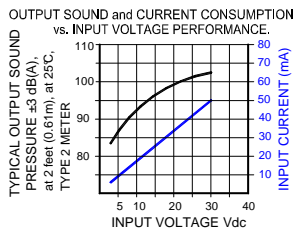
Revision: 03.12

# XC-09-330-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



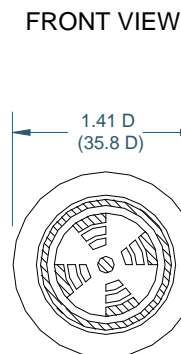
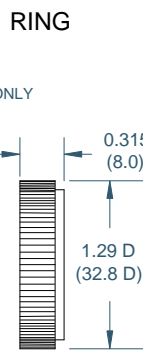
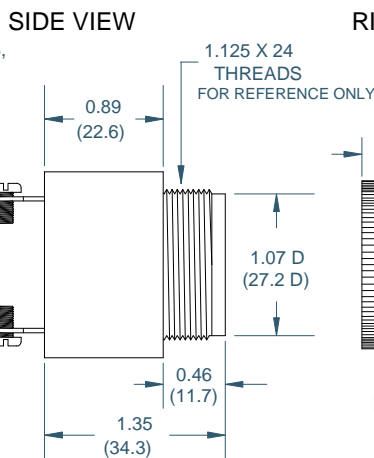
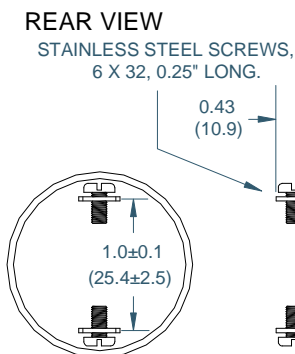
The XC-09-330-S is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

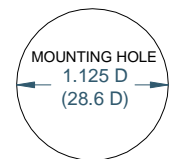
**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 3-30 Vdc  
**Nominal Operating Voltage:** 30 Vdc  
**Operating Frequency:** 2900±500 Hz.  
**Typical Operating Current:** 6 mA at 3 Vdc  
 50 mA at 30 Vdc  
**Typical Sound Pressure:** 82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.  
**Termination:** 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws  
 Pull test with a maximum of 22 pounds (10 kg) load  
**Termination Strength:**  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Reverse Voltage Protection:** To the maximum operating voltage.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene  
**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

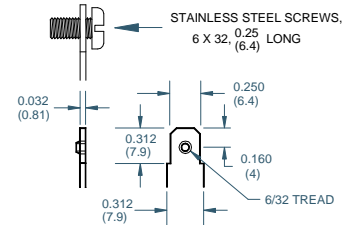


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

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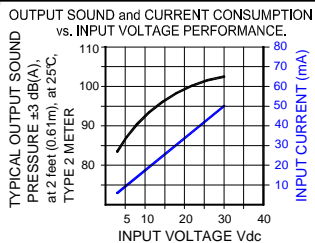
**Revision: 03.12**

# XC-09-330-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

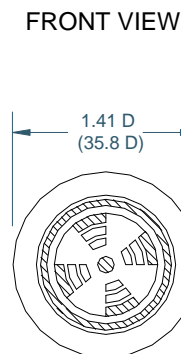
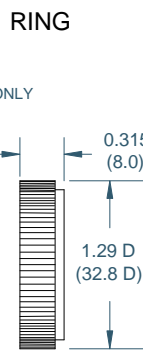
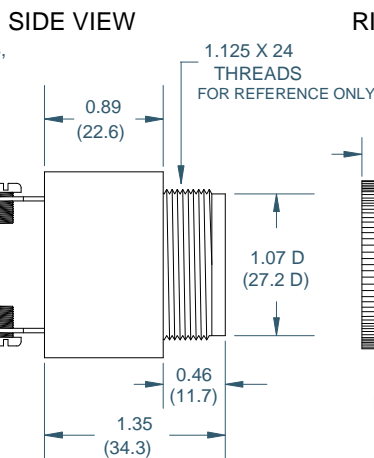
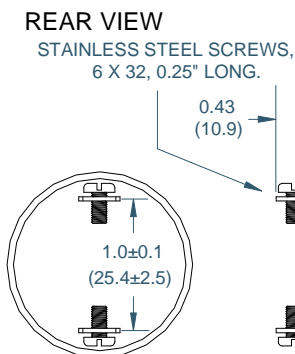


The XC-09-330-S is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

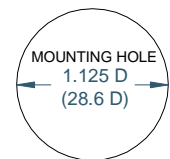
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

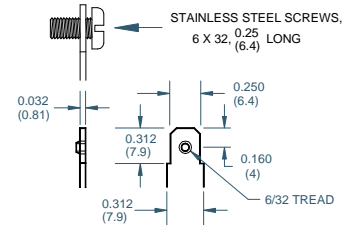


## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

### "S" TERMINALS



DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

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**Revision: 03.12**

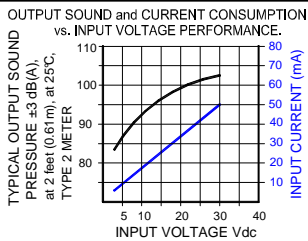


# XC-09-330-W

Made in  
USA



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-09-330-W is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

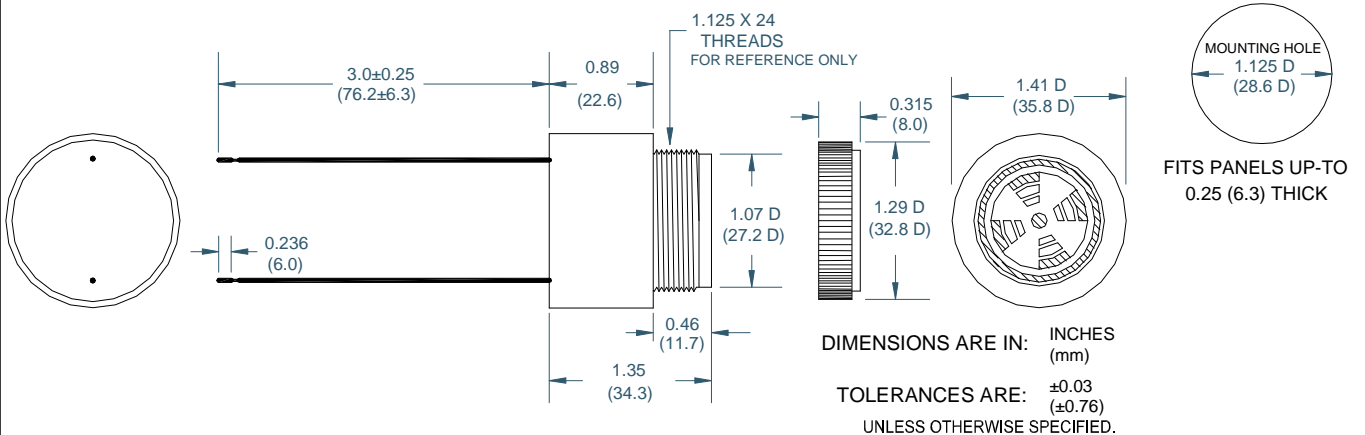
REAR VIEW

SIDE VIEW

RING

FRONT VIEW

PANEL MOUNTING



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www.floydbell.com

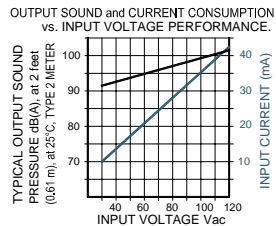
Revision: 03.12

# XC-V09-201-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-V09-201-Q is a panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 30-120 Vac  
**Nominal Operating Voltage:** 110 Vac  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 10 mA at 30 Vac  
 45 mA at 120 Vac

**Typical Sound Pressure:** With volume control fully open:  
 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.

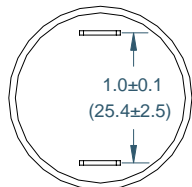
**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene

**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

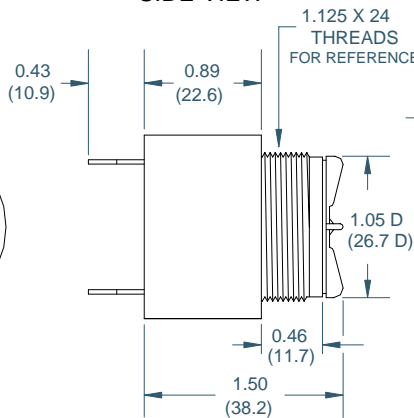
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

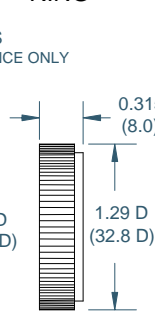
REAR VIEW



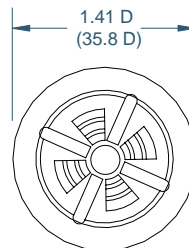
SIDE VIEW



RING

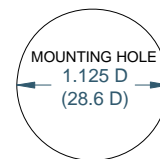


FRONT VIEW



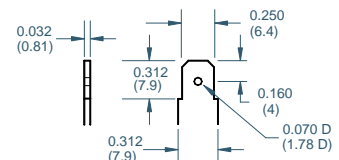
DIMENSIONS ARE IN: INCHES (mm)  
 TOLERANCES ARE: ±0.03 (±0.76)  
 UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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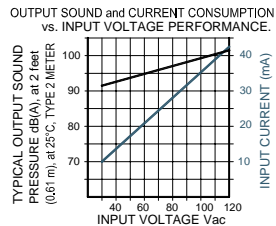
Revision: 2.07

# XC-V09-201-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



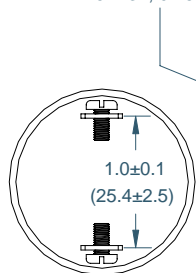
The XC-V09-201-S is a panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

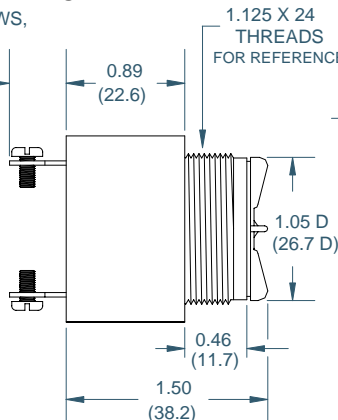
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

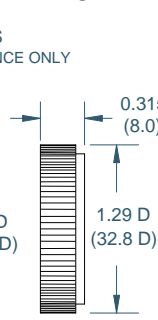
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



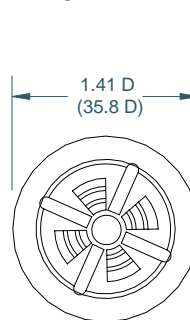
**SIDE VIEW**



**RING**

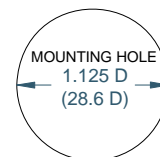


**FRONT VIEW**



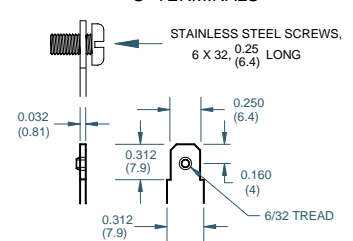
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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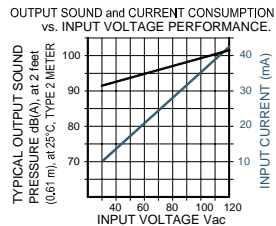
Revision: 2.07

# XC-V09-201-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

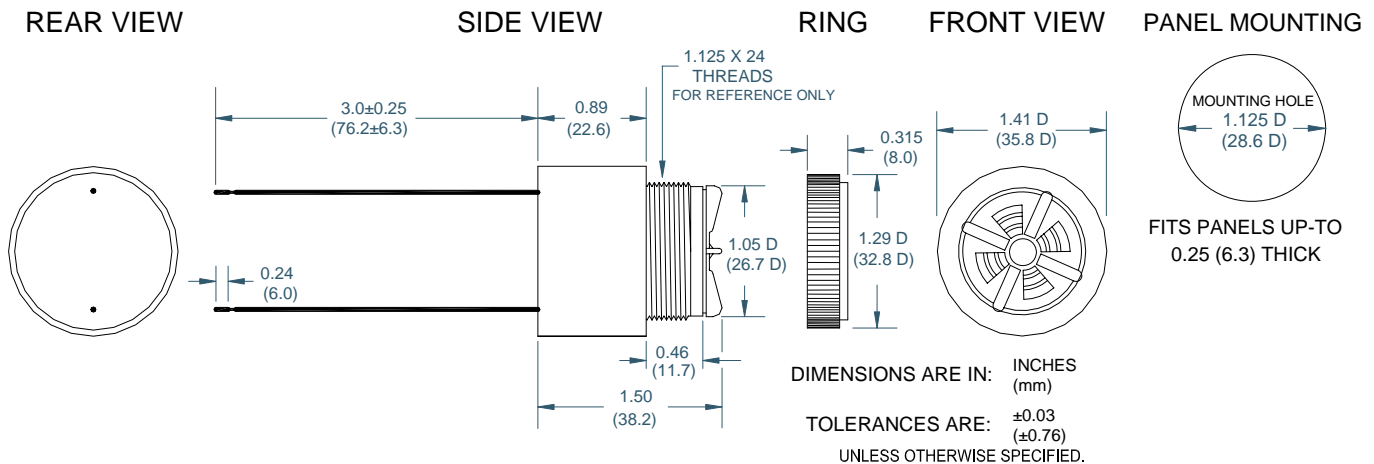


The XC-V09-201-W is a panel mounted alarm for operating voltages of 30-120VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	30-120 Vac
<b>Nominal Operating Voltage:</b>	110 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	10 mA at 30 Vac 45 mA at 120 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 92±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 2.07

# XC-V09-212-Q

**Made in  
USA**

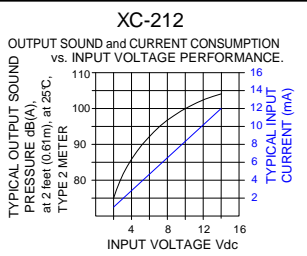


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XC-V09-212-Q is an extra loud output, panel mounted alarm for operating voltages of 2-12VDC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

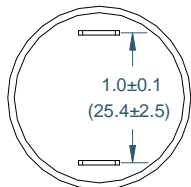
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	2-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



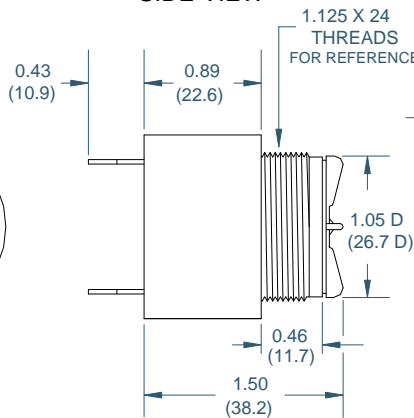
**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS

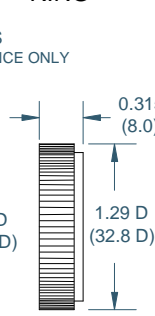
REAR VIEW



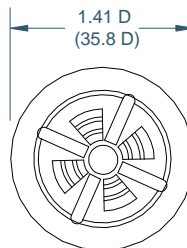
SIDE VIEW



RING

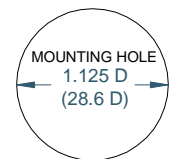


FRONT VIEW



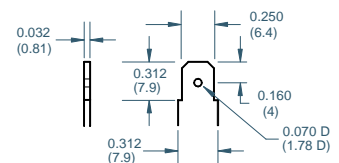
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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Revision: 2.12



# XC-V09-212-S

**Made in  
USA**

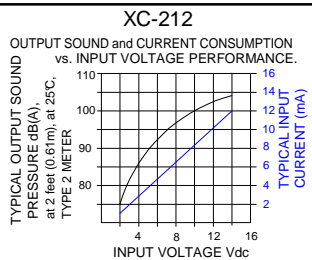


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

The XC-V09-212-S is an extra loud output, panel mounted alarm for operating voltages of 2-12VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

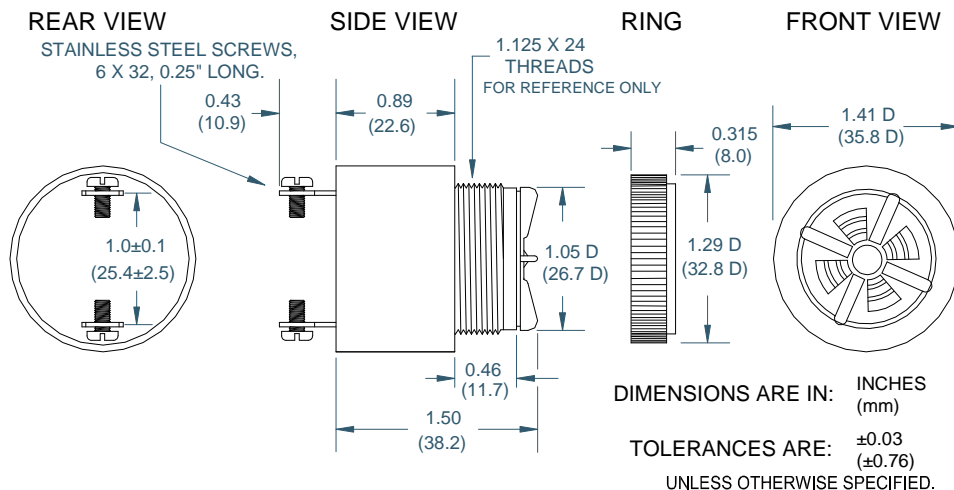
## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	2-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

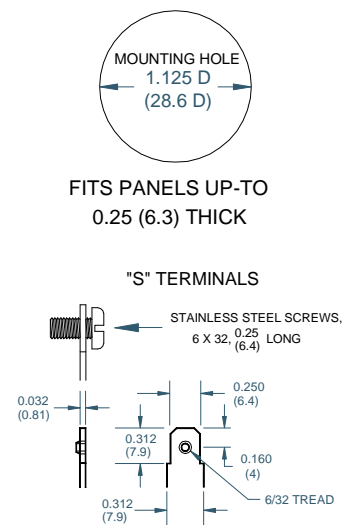


**RoHS** Also available RoHS Compliant — Add "R" to end of part number.

## DIMENSIONS



## PANEL MOUNTING



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**Revision: 2.12**

# XC-V09-212-W

**Made in  
USA**

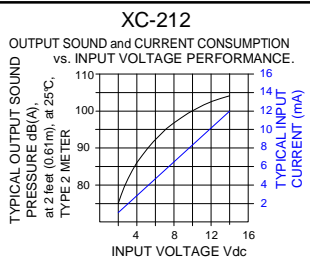


- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

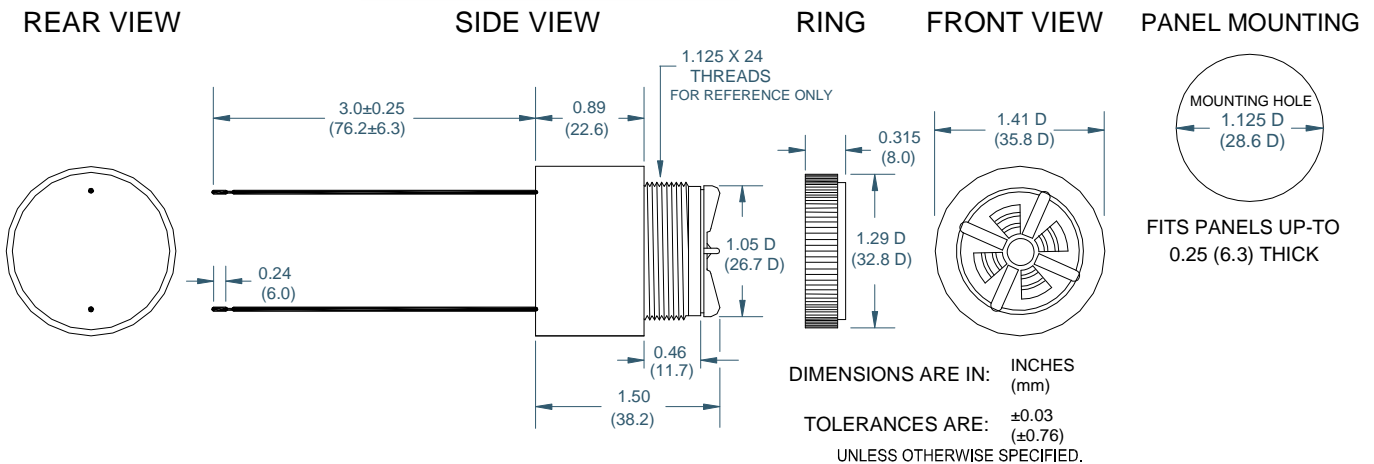
The XC-V09-212-W is an extra loud output, continuous tone, panel mounted alarm for operating voltages of 2-12Vdc. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting in a 1.125" hole.

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	2-12 Vdc
<b>Nominal Operating Voltage:</b>	12 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max
<b>Typical Sound Pressure:</b>	With volume control fully open: 75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.



## DIMENSIONS



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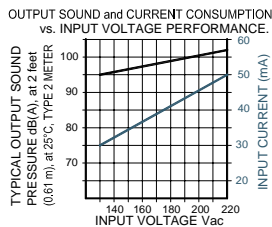
**Revision: 2.12**

# XC-V09-301-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



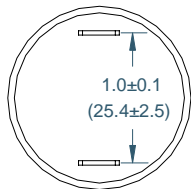
The XC-V09-301-Q is a panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades for push-on or direct solder attachment.

## SPECIFICATIONS

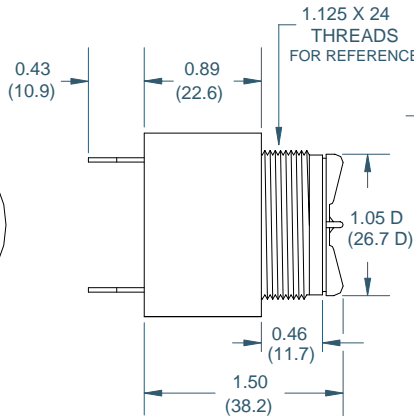
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 130 Vac 50 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

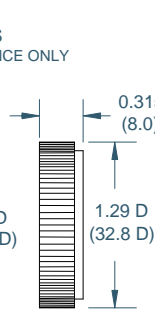
REAR VIEW



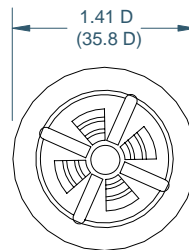
SIDE VIEW



RING

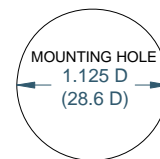


FRONT VIEW



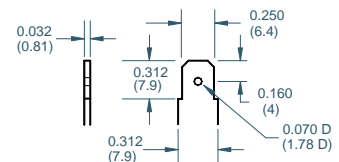
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



**Floyd Bell Inc**  
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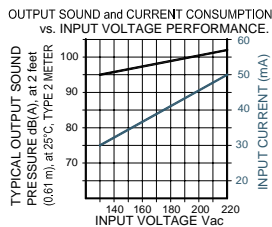
Revision: 2.07

# XC-V09-301-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



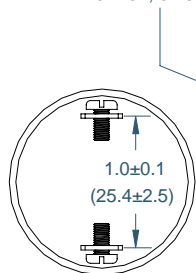
The XC-V09-301-S is a panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. The terminals are standard 0.25" quick-connect blades with screws added for connection to wires with lugs.

## SPECIFICATIONS

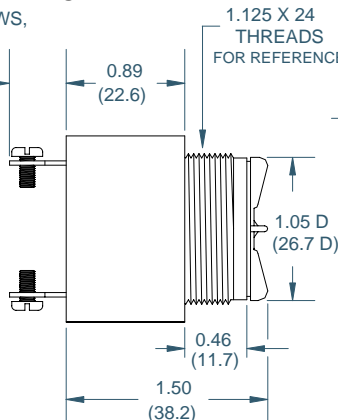
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	130-220 Vac
<b>Nominal Operating Voltage:</b>	220 Vac
<b>Operating Frequency:</b>	2900±250 Hz.
<b>Typical Operating Current:</b>	30 mA at 130 Vac 50 mA at 220 Vac
<b>Typical Sound Pressure:</b>	With volume control fully open: 95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.
<b>Life Expectancy:</b>	For a period of two years from the date of manufacture under normal operating conditions.
<b>Warranty:</b>	

## DIMENSIONS

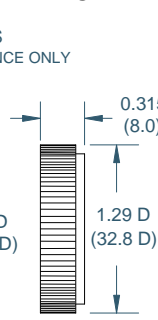
**REAR VIEW**  
STAINLESS STEEL SCREWS,  
6 X 32, 0.25" LONG.



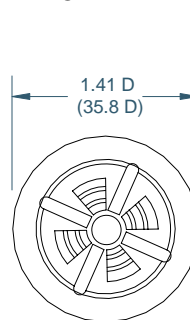
**SIDE VIEW**



**RING**

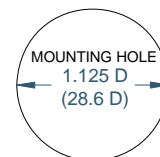


**FRONT VIEW**



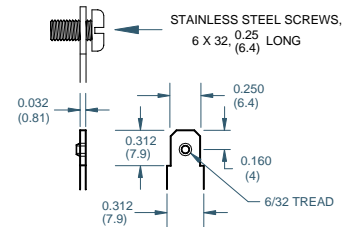
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK

"S" TERMINALS



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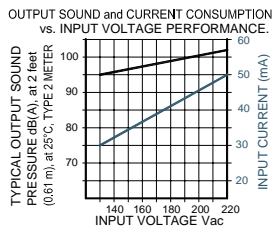
**Revision: 2.07**

# XC-V09-301-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



The XC-V09-301-W is a panel mounted alarm for operating voltages of 130-220VAC. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25". The case is designed for panel mounting in a 1.125" hole with a knurled ring nut.

## SPECIFICATIONS

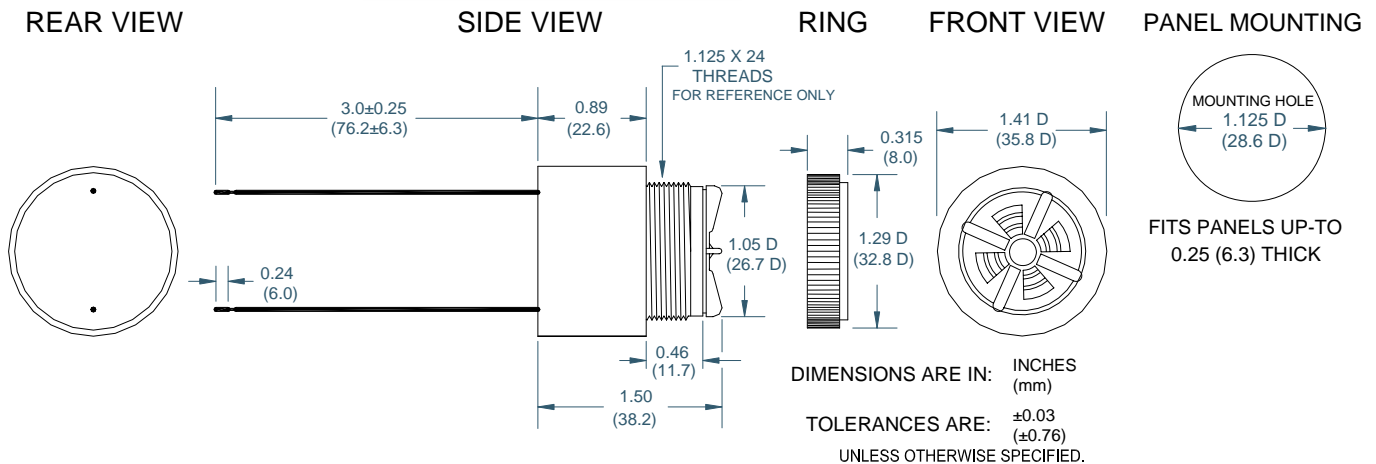
**Operating Mode:** Extra Loud Continuous Tone  
**Operating Voltage:** 130-220 Vac  
**Nominal Operating Voltage:** 220 Vac  
**Operating Frequency:** 2900±250 Hz.  
**Typical Operating Current:** 30 mA at 130 Vac  
 50 mA at 220 Vac

**Typical Sound Pressure:** With volume control fully open:  
 95±5 dB(A), at 130 Vac, at 24 inches (61 cm), at 25°C  
 103±5 dB(A), at 220 Vac, at 24 inches (61 cm), at 25°C.

**Termination:** 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black  
**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load  
**Operating Temperature:** -20°C to +65°C.  
**Storage Temperature:** -40°C to +85°C.  
**Surge Voltage:** 20% over maximum rated voltage for less than 5 minutes.  
**Part Recognized By:** Underwriters Laboratory  
**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black  
 Internal Circuit- Audio-oscillator and piezoelectric driver  
 Potting- 2 parts epoxy resin or silicone, black  
 Diaphragm- Stainless Steel 304  
 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene

**Environmental Durability:** Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output  
 Humidity- 95% relative humidity at +40°C continuously for 100 hours.  
 Vibration- Withstands vibration between 0 and 55 Hz. on all axes.  
**Life Expectancy:** 10 years under normal operating conditions.  
**Warranty:** For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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**Revision: 2.07**

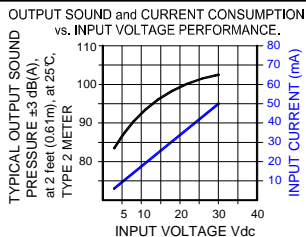


# XC-V09-330-Q

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology



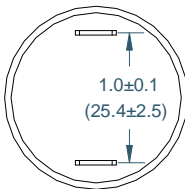
The XC-V09-330-Q is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

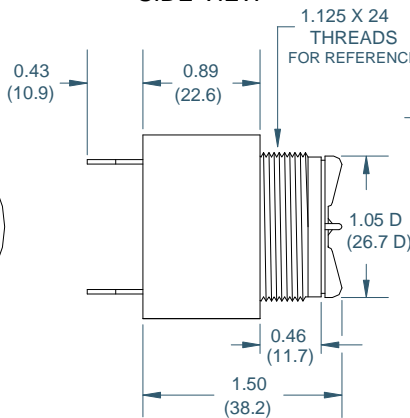
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

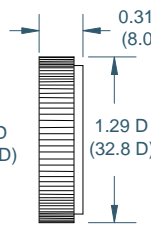
REAR VIEW



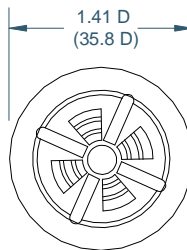
SIDE VIEW



RING

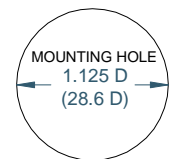


FRONT VIEW



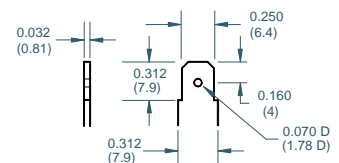
DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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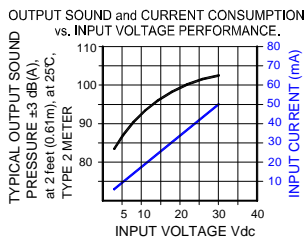
Revision: 03.12

# XC-V09-330-S

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

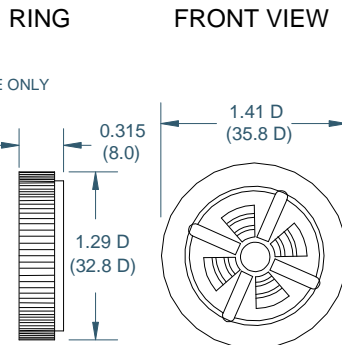
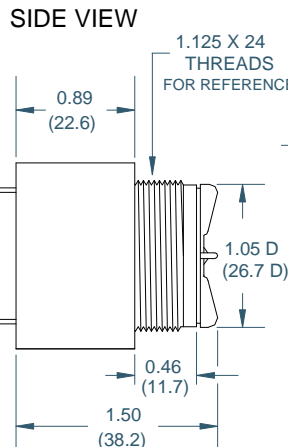
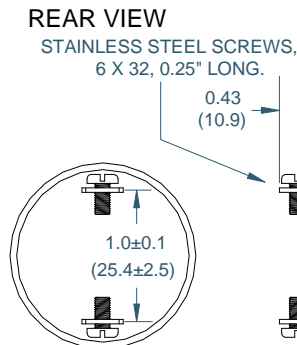


The XC-V09-330-S is an extra loud output, panel mounted alarm for operating voltages of 3-30VDC. The continuous tone has a typical sound pressure level of 103 dB(A) at maximum voltage. The built-in volume control provides variable attenuation up to 20 dB(A) typically.

## SPECIFICATIONS

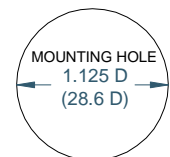
<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Stainless Steel Screws Pull test with a maximum of 22 pounds (10 kg) load
<b>Termination Strength:</b>	-20°C to +65°C.
<b>Operating Temperature:</b>	-40°C to +85°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)- 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS

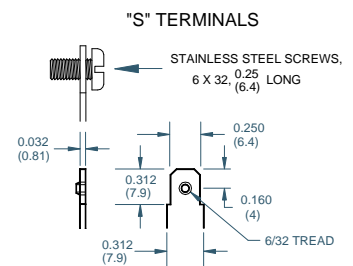


DIMENSIONS ARE IN: INCHES (mm)  
TOLERANCES ARE: ±0.03 (±0.76)  
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO  
0.25 (6.3) THICK



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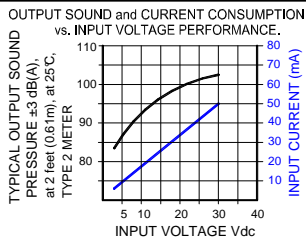
**Revision: 03.12**

# XC-V09-330-W

**Made in  
USA**



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- UL Approved
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology

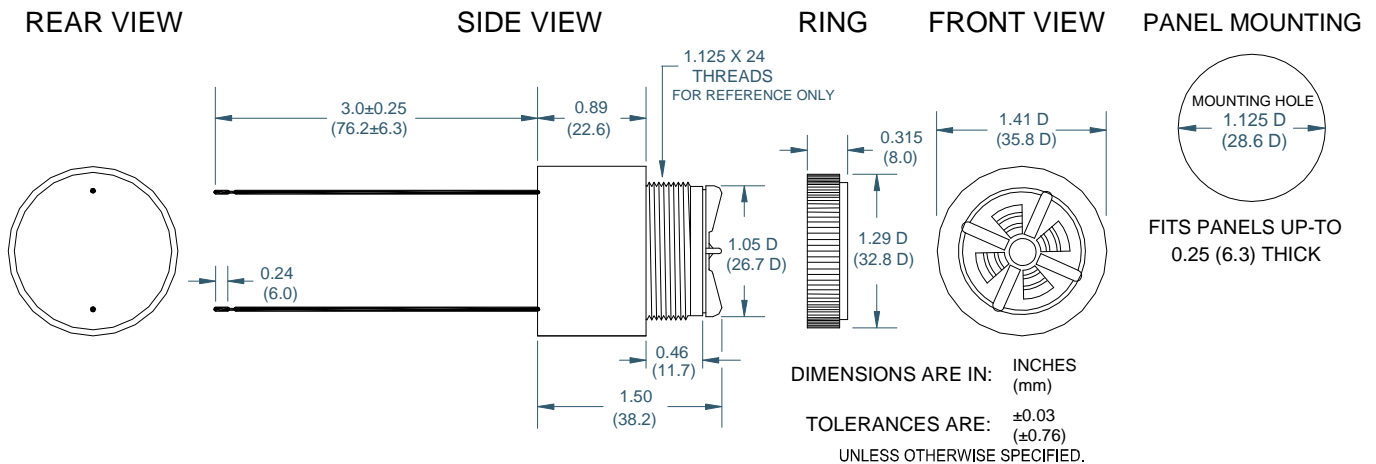


The XC-V09-330-W is an extra loud output, continuous tone, panel mounted alarm for operating voltages of 3-30Vdc. The built-in volume control provides variable attenuation up to 20 dB(A) typically. It is terminated with two 24AWG wires, 3" long, stripped 0.25".

## SPECIFICATIONS

<b>Operating Mode:</b>	Extra Loud Continuous Tone
<b>Operating Voltage:</b>	3-30 Vdc
<b>Nominal Operating Voltage:</b>	30 Vdc
<b>Operating Frequency:</b>	2900±500 Hz.
<b>Typical Operating Current:</b>	6 mA at 3 Vdc 50 mA at 30 Vdc
<b>Typical Sound Pressure:</b>	With volume control fully open: 82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25°C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
<b>Termination:</b>	24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black
<b>Termination Strength:</b>	Pull test with a maximum of 22 pounds (10 kg) load
<b>Operating Temperature:</b>	-20°C to +65°C.
<b>Storage Temperature:</b>	-40°C to +85°C.
<b>Surge Voltage:</b>	20% over maximum rated voltage for less than 5 minutes.
<b>Reverse Voltage Protection:</b>	To the maximum operating voltage.
<b>Part Recognized By:</b>	Underwriters Laboratory
<b>Construction Materials:</b>	Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Internal Circuit- Audio-oscillator and piezoelectric driver Potting- 2 parts epoxy resin or silicone, black Diaphragm- Stainless Steel 304 Gasket (Sold Separately)— 0.062" Thick, 60 Durometer Neoprene
<b>Environmental Durability:</b>	Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in sound output Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.
<b>Life Expectancy:</b>	10 years under normal operating conditions.
<b>Warranty:</b>	For a period of two years from the date of manufacture under normal operating conditions.

## DIMENSIONS



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Revision: 03.12

