## 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. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 80 5 10 20 30 40 INPUT VOLTAGE Vdc

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**

**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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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.

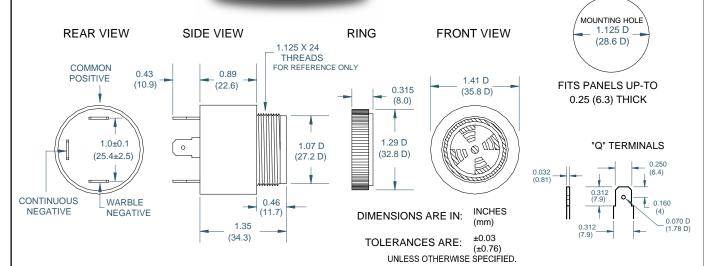
For a period of two years from the date of manufacture under normal

operating conditions

#### **DIMENSIONS**

Warranty:

#### PANEL MOUNTING





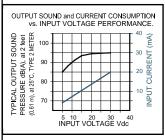
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### MW-09-530-S

#### 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**

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:** 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. -40°C to +85°C. **Storage Temperature:** 

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 **Environmental Durability:** 

300 hours with no decrease in 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: 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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **RING REAR VIEW** SIDE VIEW FRONT VIEW 1.125 D STAINLESS STEEL SCREWS (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS (32.8 D) $(25.4\pm2.5)$ (27.2 D)6 X 32, 0.25 LONG 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: 0.160 1.35 6/32 TREAD (34.3)±0.03 **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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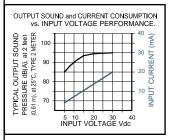
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## MW-09-530-S(F)

# 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**

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.

10±25% Cycles per second

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:** 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.

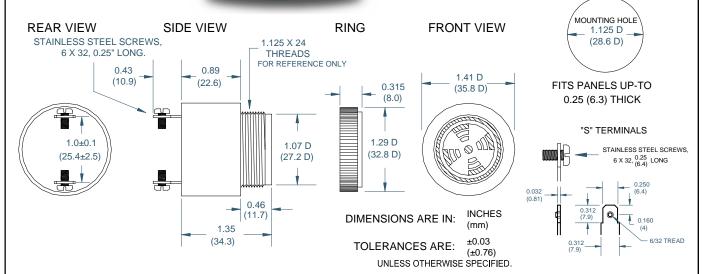
**Life Expectancy:** 10 years under normal operating conditions.

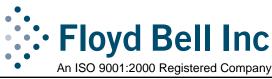
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

#### PANEL MOUNTING





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

# Made in USA



Durable Stainless Steel
 304 Diaphragm

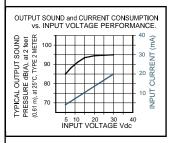
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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**

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. 10±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:** 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.

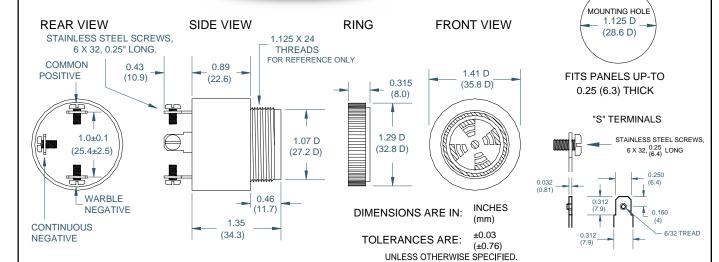
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

#### PANEL MOUNTING





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

# Made in USA



 Durable Stainless Steel 304 Diaphragm

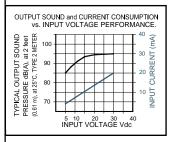
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



**REAR VIEW** 

STAINLESS STEEL SCREWS.

**NEGATIVE** 

CONTINUOUS

**NEGATIVE** 

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**

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:** 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.

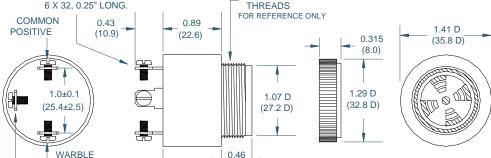
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

# RING FRONT VIEW 1.125 X 24 THREADS FOR REFERENCE ONLY



(11.7)

1.35

(34.3)

SIDE VIEW

DIMENSIONS ARE IN:

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

"S" TERMINALS

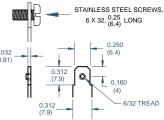
PANEL MOUNTING

MOUNTING HOLE

(28.6 D)

FITS PANELS UP-TO

0.25 (6.3) THICK



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**INCHES** 

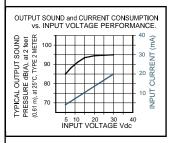
(mm)

## 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**

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: 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

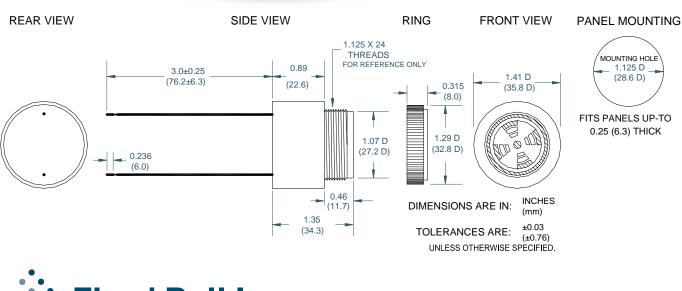
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





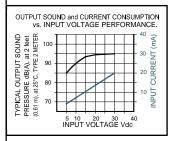
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## MW-09-530-W(F)

# 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**

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.

10±25% Cycles per second

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

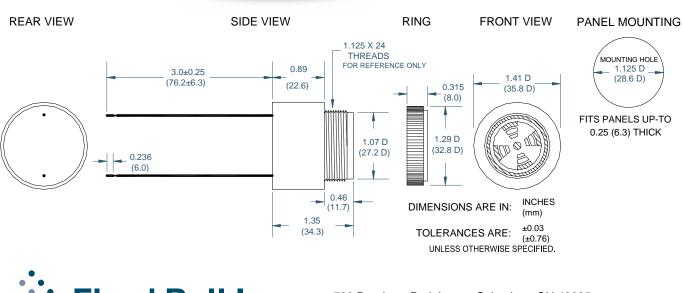
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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## MW-09-531-Q(F)

#### Made in USA



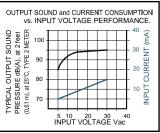
**Durable Stainless Steel** 304 Diaphragm

**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**

Life Expectancy:

**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:** 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: 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.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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## MW-09-531-Q(M)

#### Made in USA



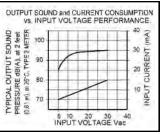
**Durable Stainless Steel** 304 Diaphragm

**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

Life Expectancy:

Warranty:

**Operating Mode:** Medium Loud Warble Tone

5-24 Vac/Vdc Operating Voltage: Nominal Operating Voltage: 24 Vac/Vdc

High Frequency Peak: 3000±250 Hz. **Operating Frequency:** Low Frequency Peak: 2600±250 Hz.

2±25% Cycles per second

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

85±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** 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. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Part Recognized By: **Underwriters Laboratory** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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.

For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE REAR VIEW SIDE VIEW RING FRONT VIEW 1.125 D (28.6 D) 1.125 X 24 THREADS FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)FITS PANELS UP-TO (22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.160 0.46 INCHES DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. 720 Dearborn Park Lane • Columbus, OH 43085 Floyd Bell Inc Tel: 888-FLOYD-BELL • Fax: 614/291-0823

www.floydbell.com

An ISO 9001:2000 Registered Company

## MW-09-531-S

# Made in USA



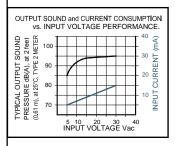
 Durable Stainless Steel 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric
 Technology



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

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.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal

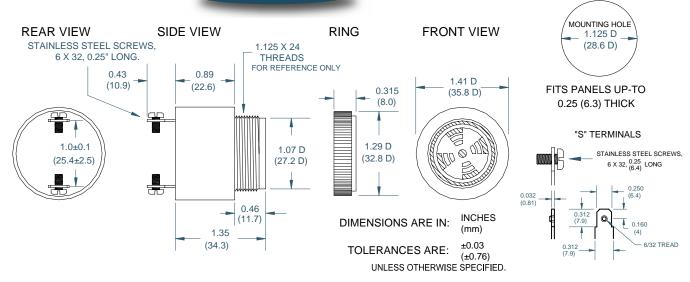
operating conditions.

#### DIMENSIONS

Life Expectancy:

Warranty:

#### PANEL MOUNTING





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## MW-09-531-S(F)

#### Made in USA



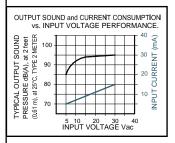
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Medium Loud Warble Tone

5-24 Vac/Vdc **Operating Voltage:** 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:** 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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

-20°C to +65°C. **Operating Temperature: 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.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal

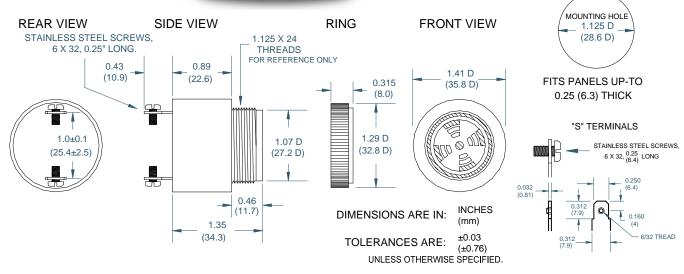
operating conditions.

#### **DIMENSIONS**

Life Expectancy:

Warranty:

#### PANEL MOUNTING





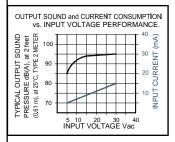
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## MW-09-531-W

# Made in USA



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



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**

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: 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

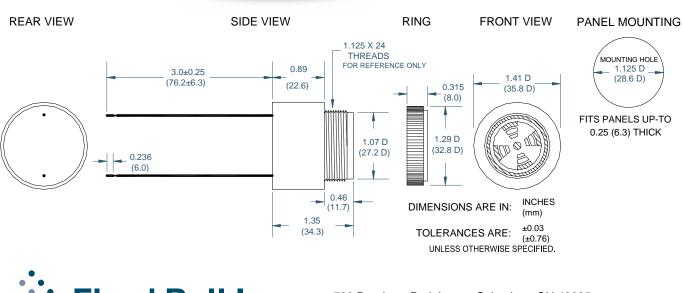
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**



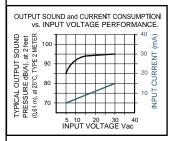
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## MW-09-531-W(F)

# Made in USA



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



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**

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: 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: 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

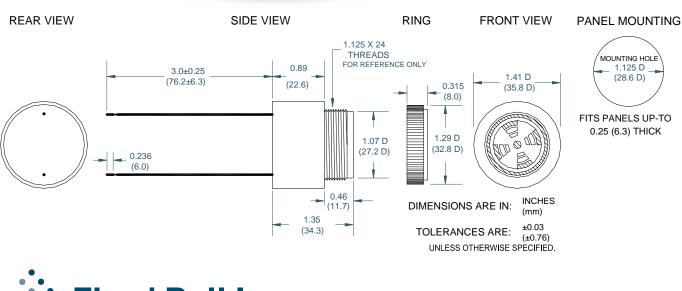
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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## MW-09-550-Q

# Made in USA



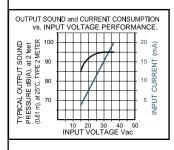
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology



**REAR VIEW** 

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

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.

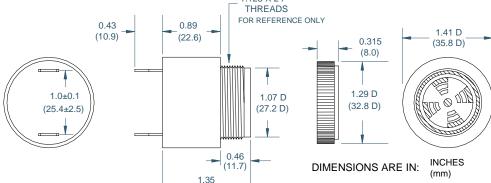
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

# SIDE VIEW RING FRONT VIEW



(34.3)

UNLESS OTHERWISE SPECIFIED.

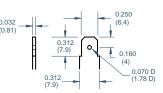
**TOLERANCES ARE:** 

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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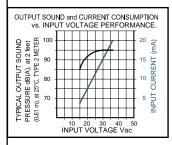
 $(\pm 0.76)$ 

## 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



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" quickconnect 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:** 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:** 

**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.

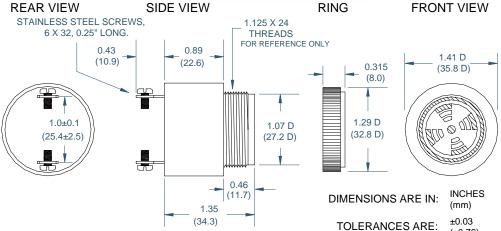
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

## PANEL MOUNTING



"S" TERMINALS

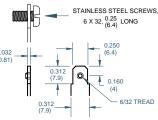
MOUNTING HOLE

1.125 D

(28.6 D)

FITS PANELS UP-TO

0.25 (6.3) THICK





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UNLESS OTHERWISE SPECIFIED.

## MW-09-550-W

# Made in USA



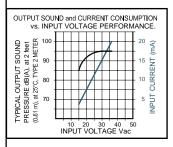
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric
 Technology



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

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.

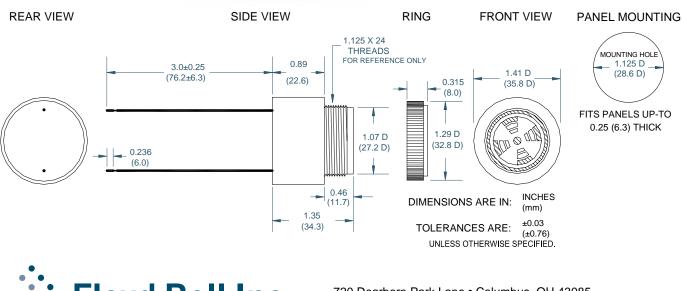
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





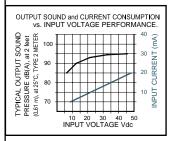
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## MW-09-948-Q(F)

#### 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**

**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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

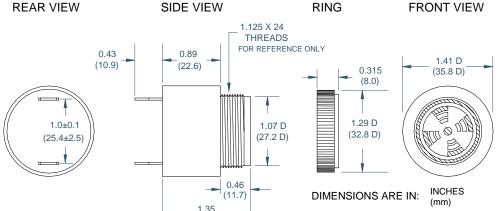
operating conditions.

## **DIMENSIONS**

Life Expectancy:

Warranty:

#### **RING** FRONT VIEW



(34.3)

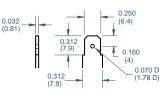
**TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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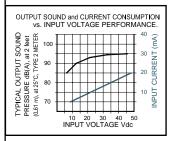
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## MW-09-948-Q(M)

#### 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**

**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.

2±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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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

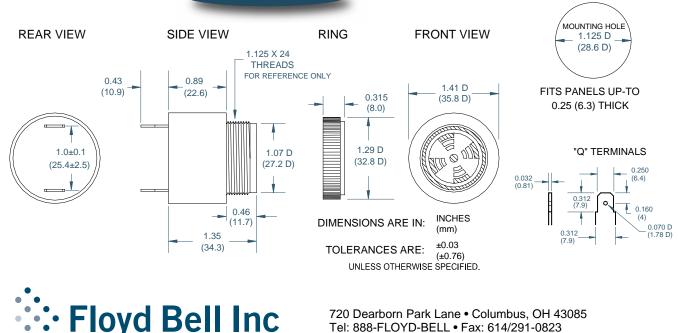
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operating conditions.

#### **DIMENSIONS**

#### PANEL MOUNTING



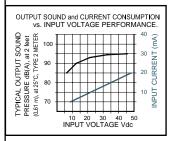
An ISO 9001:2000 Registered Company

## 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

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:** 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.

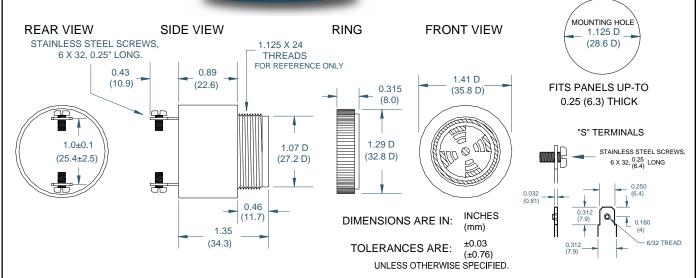
For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Warranty:

## IONS PANEL MOUNTING





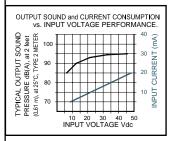
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## MW-09-948-S(M)

# 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**

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.

2±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:** 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.

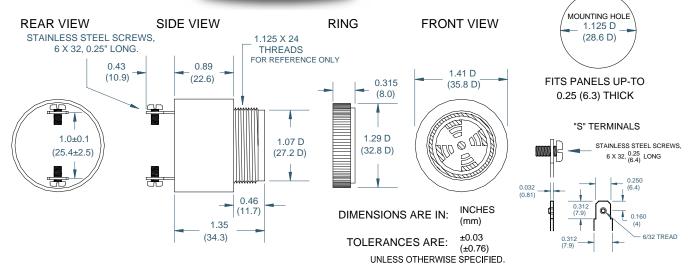
For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Warranty:

#### PANEL MOUNTING





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## MW-09-948-W(F)

# Made in USA



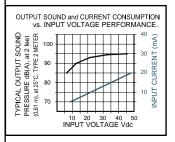
Durable Stainless Steel
 304 Diaphragm

 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

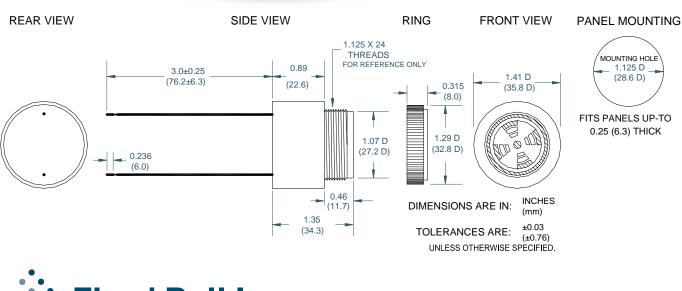
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





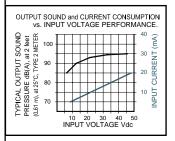
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## MW-09-948-W(M)

#### Made in USA



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



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**

**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.

2±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.

24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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

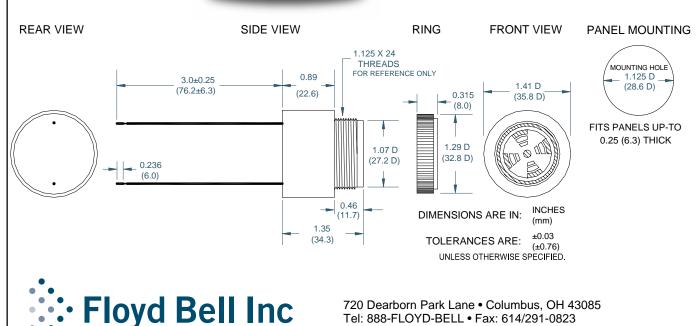
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**



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## MW-V07-530-S

# Made in USA



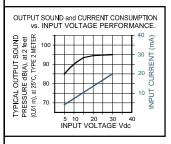
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric
 Technology



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**

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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: ASTM B117 Certified- 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.

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

**RING** 

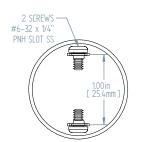
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

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

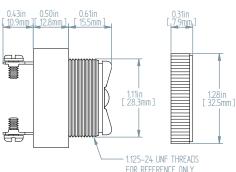
#### DIMENSIONS

SIDE



**REAR** 

TOLERANCES ARE: ±0.03in. [±0.76mm]



# φ [141in [35.8mm]]

FRONT

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK



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Revision: 10.09

## MW-V09-201-O

# Made in USA



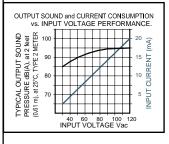
Durable Stainless Steel
 304 Diaphragm

 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

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 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 30 Vac 20 mA at 120 Vac

Typical Sound Pressure: 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.

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

Termination Strength: Pull test with a m
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

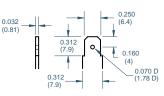
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.0±0.1 1.29 D 1.05 D (32.8 D) (25.4+2.5)(26.7 D) 0.46 (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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### MW-V09-201-S

#### Made in USA



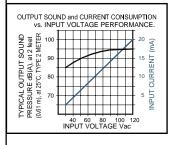
**Durable Stainless Steel** 304 Diaphragm

**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

Termination:

**Operating Mode:** Medium Loud Warble Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 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 30 Vac

20 mA at 120 Vac

**Typical Sound Pressure:** 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.

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 **Environmental Durability:** 

300 hours with no decrease in 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: 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**

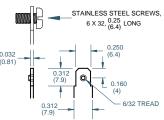
#### FRONT VIEW **REAR VIEW** SIDE VIEW **RING** 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:**

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





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UNLESS OTHERWISE SPECIFIÉD.

## MW-V09-201-W

#### Made in USA



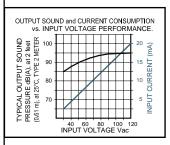
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Medium Loud Warble Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 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 30 Vac

20 mA at 120 Vac

**Typical Sound Pressure:** 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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

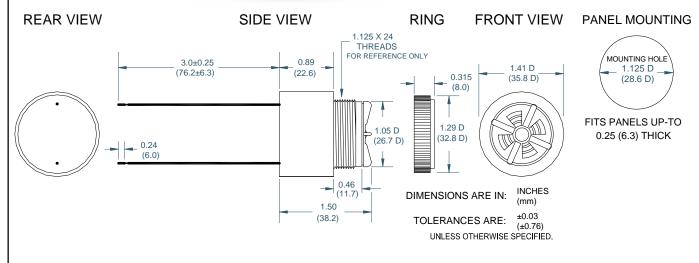
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**





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## MW-V09-301-O

#### Made in USA



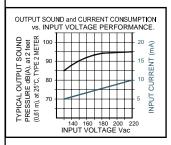
**Durable Stainless Steel** 304 Diaphragm

**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

**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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **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.

**Underwriters Laboratory** Part Recognized By:

**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.

TOLERANCES ARE:

UNLESS OTHERWISE SPECIFIED.

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

#### **DIMENSIONS**

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50

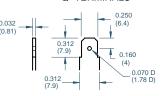
(38.2)

PANEL MOUNTING

MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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 $\pm 0.03$ 

 $(\pm 0.76)$ 

### MW-V09-301-S

#### Made in USA



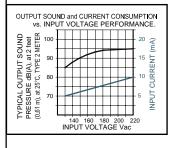
**Durable Stainless Steel** 304 Diaphragm

**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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **Underwriters Laboratory** Part Recognized By:

**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.

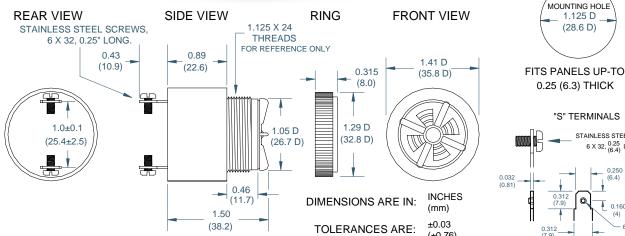
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

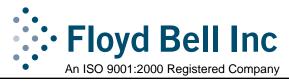
RoHS Also available RoHS Compliant — Add "R" to end of part number.

#### **DIMENSIONS**

## PANEL MOUNTING



"S" TERMINALS STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG 0.160 6/32 TREAD



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UNLESS OTHERWISE SPECIFIÉD.

## MW-V09-301-W

# Made in USA



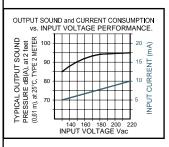
Durable Stainless Steel
 304 Diaphragm

 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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.

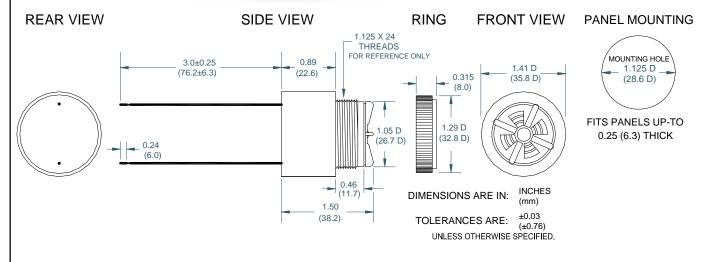
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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**





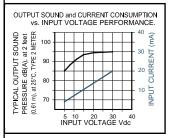
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## MW-V09-530-O

#### 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 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

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**

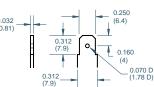
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





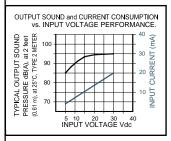
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## MW-V09-530-Q(F)

#### 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**

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.

10±25% Cycles per second

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

20 mA at 30 Vdc

With volume control fully open: **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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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**

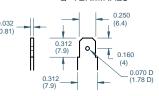
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 $\pm 0.03$ (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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## 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

TAPICAL OUTPUT SOUND
PRESSURE 48(A), at 2 feet
(1051 m), at 25 feet
(105

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**

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. 10±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: 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

Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in 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.

**TOLERANCES ARE:** 

UNLESS OTHERWISE SPECIFIED.

#### DIMENSIONS

#### **REAR VIEW** FRONT VIEW SIDE VIEW RING 1.125 X 24 **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 **POSITIVE** 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D $1.0 \pm 0.1$ 1.05 D 0 (32.8 D) (25.4±2.5) (26.7 D) CONTINUOUS WARBLE 0.46 **INCHES** (11.7)**NEGATIVE NEGATIVE DIMENSIONS ARE IN:** (mm) 1.50

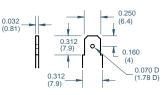
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PANEL MOUNTING

MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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

# Made in USA



 Durable Stainless Steel 304 Diaphragm

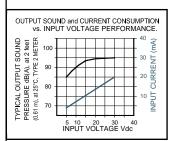
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

• Two Tones, One Package



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**

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: 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

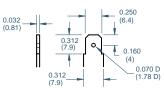
#### **REAR VIEW** FRONT VIEW SIDE VIEW RING 1.125 X 24 **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 **POSITIVE** 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D $1.0 \pm 0.1$ 1.05 D 0 (32.8 D) (25.4±2.5) (26.7 D) CONTINUOUS WARBLE 0.46 **INCHES** (11.7)**NEGATIVE NEGATIVE DIMENSIONS ARE IN:** (mm) 1.50 (38.2)**TOLERANCES ARE:**

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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 $(\pm 0.76)$ 

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### MW-V09-530-S

#### Made in USA



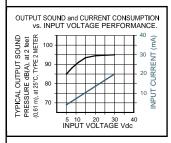
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



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

**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.

**TOLERANCES ARE:** 

UNLESS OTHERWISE SPECIFIÉD.

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

#### **DIMENSIONS**

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50

(38.2)

FITS PANELS UP-TO

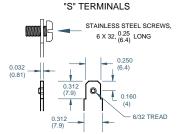
PANEL MOUNTING

MOUNTING HOLE

1.125 D

(28.6 D)

0.25 (6.3) THICK



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

#### Made in USA



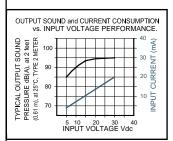
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



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**

**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.

10±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

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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**

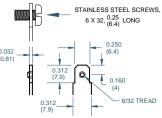
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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

#### Made in USA



**Durable Stainless Steel** 304 Diaphragm

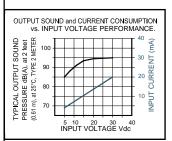
**Epoxy Encapsulated** Electronics

**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**

**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. 10±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: 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. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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

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300 hours with no decrease in 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

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 D 1.125 X 24 STAINLESS STEEL SCREWS, (28.6 D) **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY COMMON 0.89 0.43 1.41 D **POSITIVE** (10.9)(22.6) 0.315 FITS PANELS UP-TO (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1.0±0.1 1.29 D 1.05 D STAINLESS STEEL SCREWS, (26.7 D) (32.8 D) (25.4±2.5) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)WARBLE 0.46 **INCHES NEGATIVE** (11.7)**DIMENSIONS ARE IN:** (mm) 1.50 CONTINUOUS (38.2)**NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085

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

# Made in USA



Durable Stainless Steel
 304 Diaphragm

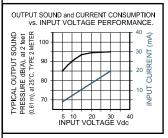
 Epoxy Encapsulated Electronics

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**

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:** 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

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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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 D 1.125 X 24 STAINLESS STEEL SCREWS, (28.6 D) **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY COMMON 0.89 0.43 1.41 D **POSITIVE** (10.9)(22.6) 0.315 FITS PANELS UP-TO (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1.0±0.1 1.29 D 1.05 D STAINLESS STEEL SCREWS, (26.7 D) (32.8 D) (25.4±2.5) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)WARBLE 0.46 **INCHES NEGATIVE** (11.7)**DIMENSIONS ARE IN:** (mm) 1.50 CONTINUOUS (38.2)**NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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Floyd Bell Inc

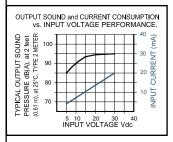
An ISO 9001:2000 Registered Company

## 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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

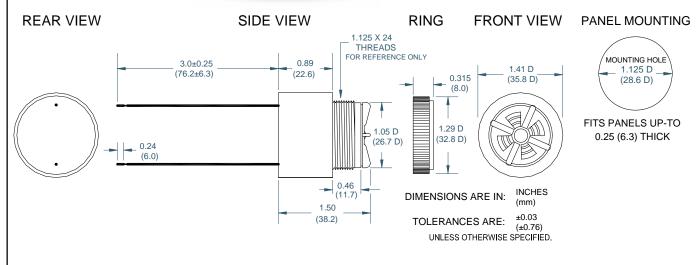
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





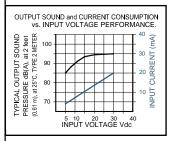
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# MW-V09-530-W(F)

# 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

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.

10±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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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

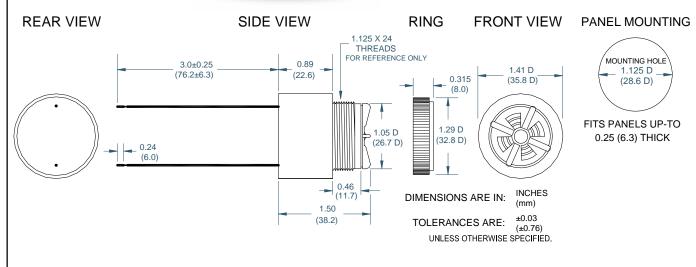
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





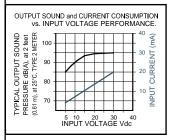
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# MW-V09-530-W(M)D

# 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



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

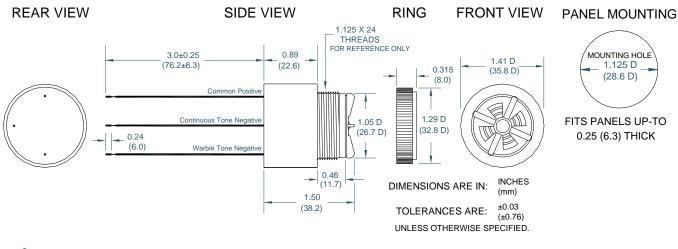
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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# MW-V09-531-Q

## Made in USA



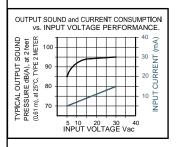
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



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

**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:** 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: 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. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**

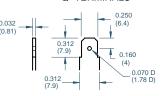
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: (±0.76) UNLESS OTHERWISE SPECIFIED.

### 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



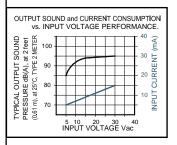
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology



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

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:** 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.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Life Expectancy:

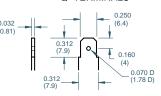
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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# MW-V09-531-S

## Made in USA



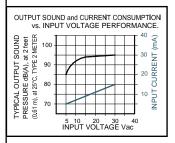
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



The MW-V09-531-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

Operating Mode: Medium Loud Warble Tone

5-24 Vac/Vdc **Operating Voltage:** 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:** 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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

-20°C to +65°C. **Operating Temperature: Storage Temperature:** -40°C to +85°C.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Part Recognized By: **Underwriters Laboratory** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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.

For a period of two years from the date of manufacture under normal

operating conditions

**TOLERANCES ARE:** 

UNLESS OTHERWISE SPECIFIÉD.

### **DIMENSIONS**

Life Expectancy:

Warranty:

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50

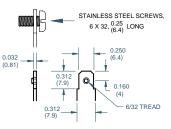
(38.2)

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





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# MW-V09-531-S(F)

# Made in USA



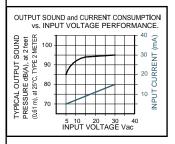
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology



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

**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.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal

operating conditions.

**TOLERANCES ARE:** 

UNLESS OTHERWISE SPECIFIÉD.

### **DIMENSIONS**

Life Expectancy:

Warranty:

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50

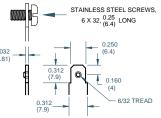
(38.2)

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS STAINLESS STE





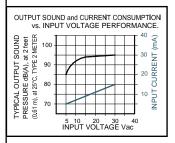
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## MW-V09-531-W

## Made in USA



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



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

**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:** 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.

24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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

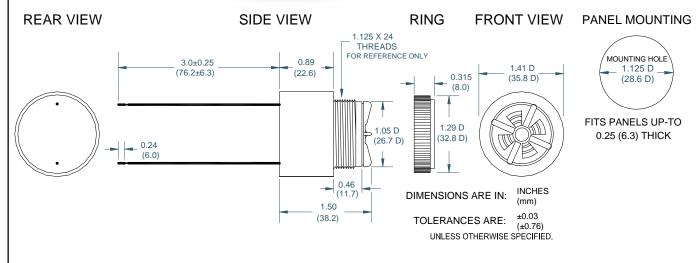
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**





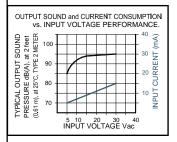
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# MW-V09-531-W(F)

## Made in USA



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



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

**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

5 mA at 5 Vac **Typical Operating Current:** 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.

24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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

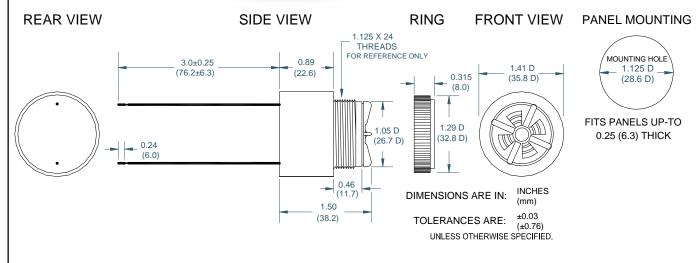
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**





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# MW-V09-550-Q

## Made in USA



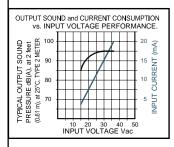
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



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**

**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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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**

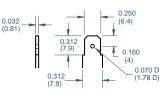
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: (±0.76) UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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# MW-V09-550-S

## Made in USA



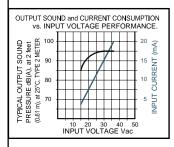
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



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" guick-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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

-20°C to +65°C. **Operating Temperature: Storage Temperature:** -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge Voltage:

Part Recognized By: **Underwriters Laboratory** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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.

For a period of two years from the date of manufacture under normal

operating conditions

### **DIMENSIONS**

Life Expectancy:

Warranty:

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 (11.7)

1.50 (38.2) DIMENSIONS ARE IN: (mm) TOLERANCES ARE:

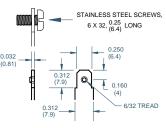
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### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





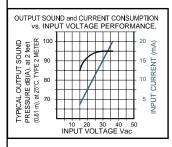
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# MW-V09-550-W

# Made in USA



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



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**

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: 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

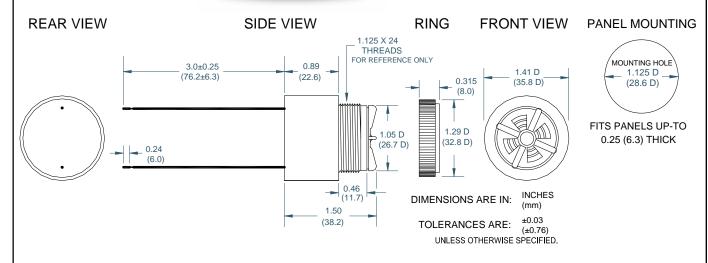
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

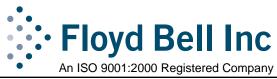
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**





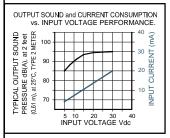
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# MW-V09-616-Q

## Made in USA



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



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

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

With volume control fully open: **Typical Sound Pressure:** 

85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black Construction Materials:

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions. Life Expectancy:

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.

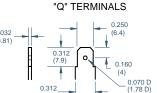
### **DIMENSIONS**

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK





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# MW-V09-948-Q(F)

# Made in USA



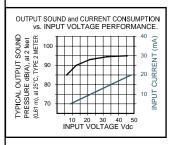
Durable Stainless Steel
 304 Diaphragm

 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**

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:

 $85\pm 5$  dB(A), at 9 Vdc, at 24 inches (61 cm), at  $25^{\circ}\text{C}$  95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at  $25^{\circ}\text{C}$ 

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

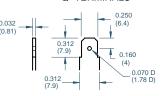
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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# MW-V09-948-Q(M)

# Made in USA



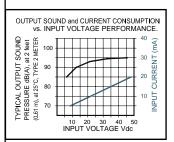
Durable Stainless Steel
 304 Diaphragm

 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**

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.

2±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.

**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

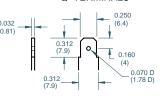
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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# MW-V09-948-S(F)

## Made in USA



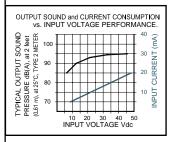
**Durable Stainless Steel** 304 Diaphragm

**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.

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. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50

(38.2)

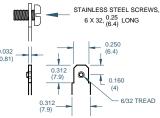
**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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# MW-V09-948-S(M)

# Made in USA



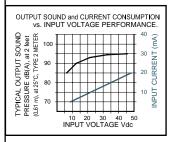
Durable Stainless Steel
 304 Diaphragm

 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**

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.

2±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.

**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

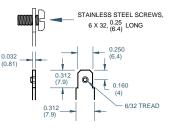
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





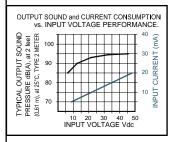
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# MW-V09-948-W(F)

# Made in USA



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



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

Termination:

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. 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

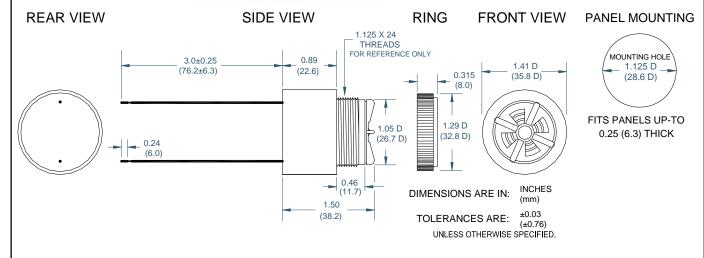
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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





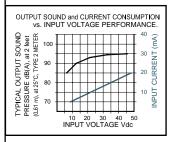
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# MW-V09-948-W(M)

# Made in USA



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



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

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.

2±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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red a 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

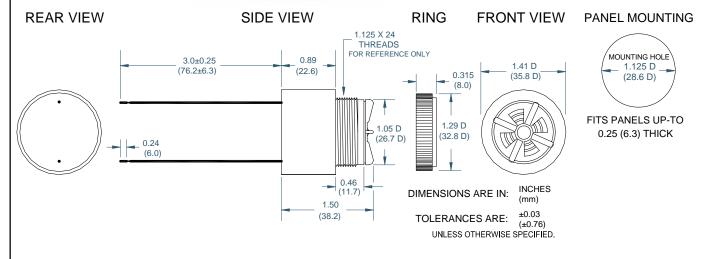
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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





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## 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

**REAR** 

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

Operating Mode: Medium Loud Warble Tone
Operating Voltage: 5-20 Vrms, 50-60 Hz or 7-20 Vdc

Nominal Operating Voltage: 20 Vrms

Operating Frequency: High Frequency Peak: 3500±250 Hz.

Low Frequency Peak: 2900±250 Hz.

15±25% Cycles per second

Typical Operating Current: 15 mA at 20 Vdc

Typical Sound Pressure: 95±5 dB(A), at 20 Vdc, at 24 inches (61 cm), at 25°C.

Termination: 2 wire leads with telephone-standard spade lug terminals

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- ABS Thermoplastic, Black

Internal Circuit- Audio-oscillator and piezoelectric driver

Potting- 2 parts epoxy resin or silicone, black

Diaphragm-Stainless Steel 304

Environmental Durability: Humidity-95% relative humidity at +40°C continuously for 100 hours.

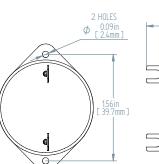
Vibrations- Withstand vibrations between 0 and 55 Hz. on all axis.

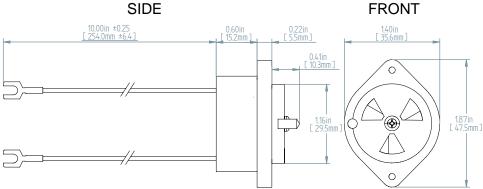
**Life Expectancy:** 10 years under normal operating conditions.

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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## 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 telephonestandard spade lug terminals.

### SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone Operating Voltage: 5-20 Vrms, 50-60 Hz or 7-20 Vdc

Nominal Operating Voltage: 20 Vrms, 50 to 60 Hz

High Frequency Peak: 2900±250 Hz. Operating Frequency:

Low Frequency Peak: 2200±250 Hz. (Dominant)

15±25% Cycles per second

Typical Operating Current: 15 mA at 20 Vdc

Typical Sound Pressure: 95±5 dB(A), at 20 Vdc, at 24 inches (61 cm), at 25°C. Termination: 2 wire leads with telephone-standard spade lug terminals

**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- ABS Thermoplastic, Beige

Internal Circuit- Audio-oscillator and piezoelectric driver

Potting- 2 parts epoxy resin or silicone, black

Diaphragm-Stainless Steel 304

**Environmental Durability:** Humidity- 95% relative humidity at +40°C continuously for 100 hours.

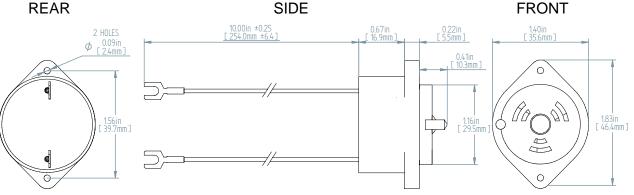
Vibrations-Withstand vibrations between 0 and 55 Hz. on all axis.

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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## 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 telephonestandard spade lug terminals.

### SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone

Operating Voltage: 15-50 Vdc or 15-36 Vrms, 50-60 Hz

Nominal Operating Voltage: 36 Vrms, 50 to 60 Hz

High Frequency Peak: 3500±250 Hz. Operating Frequency: Low Frequency Peak: 2900±250 Hz.

15±25% Cycles per second

**Typical Operating Current:** 20 mA at 36 Vdc

Typical Sound Pressure: 95±5 dB(A), at 36 Vdc, at 24 inches (61 cm), at 25°C. Termination: 2 wire leads with telephone-standard spade lug terminals

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -30℃ to +65℃. Storage Temperature: -40℃ to +85℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

**Construction Materials:** Case- ABS Thermoplastic, Black

Internal Circuit- Audio-oscillator and piezoelectric driver

Potting- 2 parts epoxy resin or silicone, black

Diaphragm-Stainless Steel 304

**Environmental Durability:** Humidity- 95% relative humidity at +40℃ continuou sly for 100 hours.

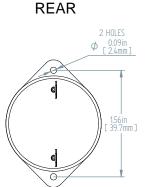
Vibrations-Withstand vibrations between 0 and 55 Hz. on all axis.

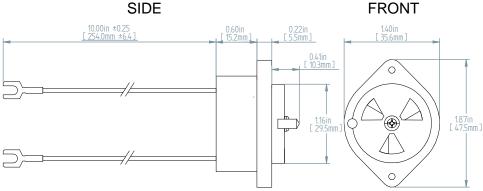
Life Expectancy: 10 years under normal operating conditions.

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

conditions.

### **DIMENSIONS**





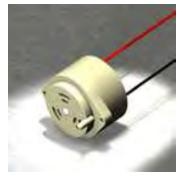
TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## 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 telephonestandard spade lug terminals.

### SPECIFICATIONS

**Operating Mode:** Medium Loud Warble Tone

Operating Voltage: 15-50 Vdc or 15-36 Vrms, 50-60 Hz Nominal Operating Voltage: 36 Vrms, 50 to 60 Hz

High Frequency Peak: 2900±250 Hz. Operating Frequency:

Low Frequency Peak: 2200±250 Hz. (Dominant)

15±25% Cycles per second Typical Operating Current: 20 mA at 36 Vdc

Typical Sound Pressure: 95±5 dB(A), at 36 Vdc, at 24 inches (61 cm), at 25°C.

Termination: 2 wire leads with telephone-standard spade lug terminals **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -30℃ to +65℃. Storage Temperature: -40℃ to +85℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

**Construction Materials:** Case- ABS Thermoplastic, Beige

Internal Circuit- Audio-oscillator and piezoelectric driver

Potting- 2 parts epoxy resin or silicone, black

Diaphragm-Stainless Steel 304

**Environmental Durability:** Humidity- 95% relative humidity at +40℃ continuou sly for 100 hours.

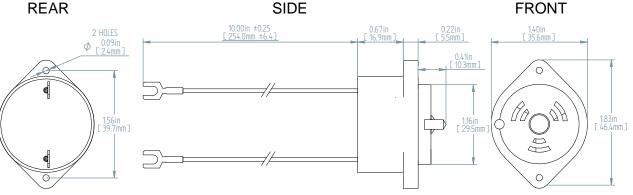
Vibrations-Withstand vibrations between 0 and 55 Hz. on all axis.

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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## **PM-80**

# Made in USA





UL Certified

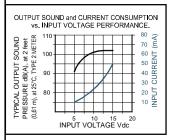
Meets SAE J1171

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**

Operating Mode: Continuous Tone
Operating Voltage: 5-15 VDC
Nominal Operating Voltage: 12 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℃.

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

Environmental Durability: 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

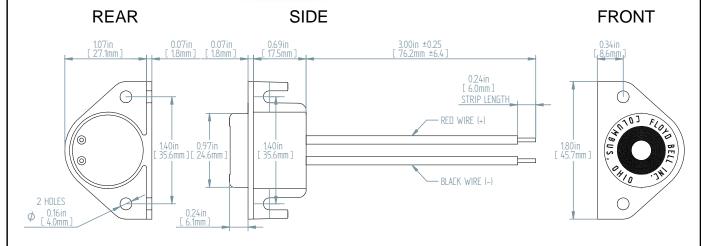
Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration— Tested to 20gs @ 25Hz to 100Hz, 10gs @ 100Hz to 500Hz.

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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## **PM-81**

## Made in USA



**Expanded Voltage Range** 

Small Footprint

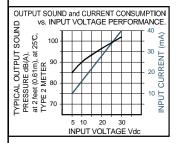
**Epoxy Encapsulated** 

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**

**Operating Mode:** Continuous Tone Operating Voltage: 5-30 VDC Nominal Operating Voltage: 24 VDC **Operating Frequency:** 2900 ± 250 Hz. **Typical Operating Current:** 10 mA at 5 VDC 40 mA at 30 VDC

Typical Sound Pressure: 85±5 dB(A), at 5 VDC, at 24 inches (61 cm), at 25℃.

103±5 dB(A), at 30 VDC, at 24 inches (61 cm), at 25°C. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃.

Storage Temperature: -40℃ to +85℃.

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

ASTM B117 Certified-Withstands exposure to salt spray for 300 hours **Environmental Durability:** 

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 continu ously for 100 hours. Vibration-Tested to 20gs @ 25Hz to 100Hz, 10gs @ 100Hz to 500Hz.

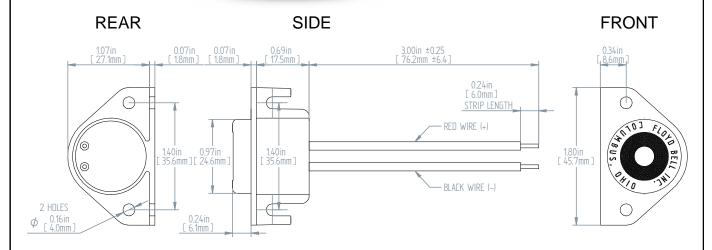
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

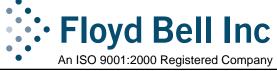
operating conditions.

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

### **DIMENSIONS**



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



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## **PM-100**

## Made in USA



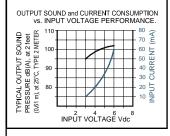
Polarity Protected

**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

Fits Compact Spaces

Reliable Piezoelectric Technology



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**

**Operating Mode:** Continuous Tone **Operating Voltage:** 3-6 VDC Nominal Operating Voltage: 6 VDC 2900 ± 250 Hz. **Operating Frequency: Typical Operating Current:** 10 mA at 3 VDC

60 mA at 6 VDC

**Typical Sound Pressure:** 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. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Termination:

**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

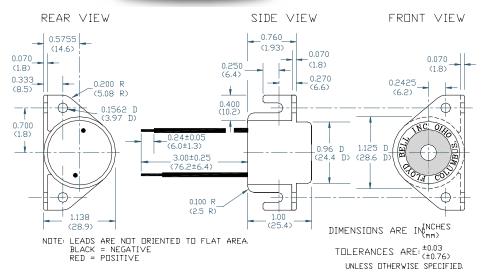
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**





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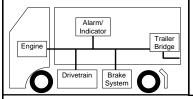
# TCAN-98R-930-H

# 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

### **Application**



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 multitone 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**

Operating Mode:
Baud Rate:
Operating Voltage Range::
Nominal Operating Voltage:
CAN-H and CAN-L Voltage:
Frequency Range:
Resonant Frequency:
Typical Operating Current Alarm:
Typical Operating Current Light:
Typical Idle Current:
Sound Pressure Range:
Termination:

Termination Strength:
Operating Temperature:
Storage Temperature:
Surge Voltage:
Reverse Voltage Protection:
CE Certified:
Construction Materials:

**Environmental Durability** 

Life Expectancy: Warranty:

J1939-15 CAN Device 250Kb/s 9-30Vdc (+Red, -Black)

24Vdc (+Red, -Black)

5Vdc Nominal (CH&CL tolerate –3Vdc to +24Vdc with respect to ground) 1.6Khz to 2Khz

1800 Hz. (Max output can be achieved at this frequency) 30 mA at 12 Vdc, 35 mA at 24 Vdc, 40 mA at 30 Vdc 50 mA at 12 Vdc. 35 mA at 24 Vdc. 30 mA at 30 Vdc

<20 mA from 12Vdc or 24 Vdc

Network adjustable from 60 dB(A)±5,-to-108dBA  $\pm$  5, 10 steps. 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 -20°C to +65°C.

-40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes.

Polarity Protected - Red and Black only.

Laboratory tested and certified per declarations doc. Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Potting- 2 parts epoxy resin or silicone, black

Diaphragm- Stainless Steel 304

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

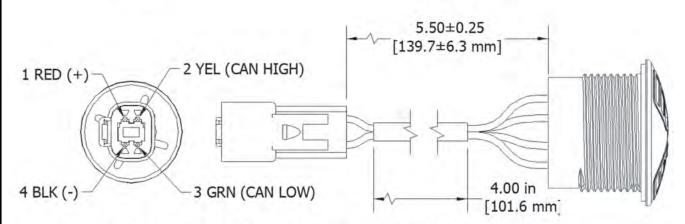
Vibration- Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.

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

**BACK** 

SIDE





TOLERANCES ARE ± 0.03 ± 0.76mm 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

DATES SURE TO SOUND THE SOUND TO SOUND

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

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 12 / 24 Vdc
Operating Frequency: 2900±250 Hz.
3 chimes 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

**Environmental Durability: ASTM** 

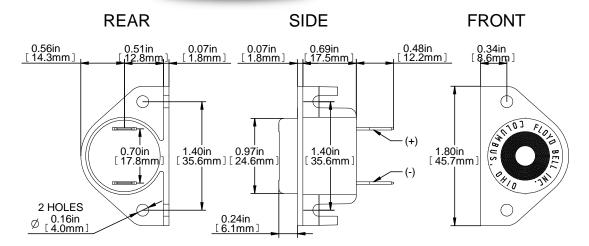
ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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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# 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

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 12 / 24 Vdc
Operating Frequency: 2900±250 Hz.
1 chime 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

Environmental Durability: ASTM B117 Certified-Withstands exposure to salt spray for 300 hours

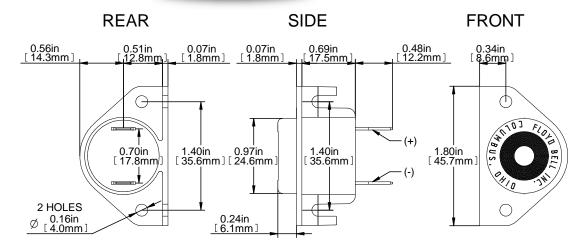
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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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# TCH-86-530-P(F)

# Made in USA



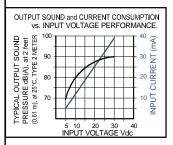


Patented Revolutionary
 Turbo Design

 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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 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: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±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: 2 FC pins, 0.032 (0.6 min) diameter, electro-tin plat

Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

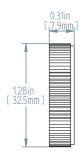
Warranty: For a period of two years from the date of manufacture under normal operating

conditions.

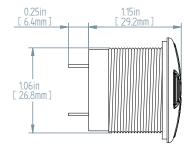
### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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# TCH-86-530-P(M)

# Made in USA



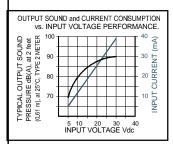


 Patented Revolutionary Turbo Design

 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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc

Operating Frequency: 2900±250 Hz.

1±25% Chimes per second

Typical Operating Current: 4 mA at 5 Vdc 40 mA at 30 Vdc

Typical Sound Pressure: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated b Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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.

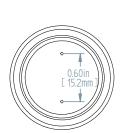
### DIMENSIONS

REAR RING

**GASKET** 

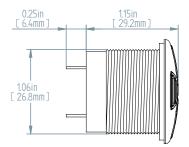
SIDE

**FRONT** 











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# TCH-86-530-Q(F)

# Made in USA



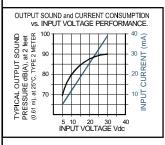


Patented Revolutionary
 Turbo Design

 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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 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: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±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: Pull test with a maximum of 22 pounds (10

Operating Temperature:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously 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

**Environmental Durability:** 

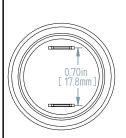
REAR

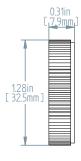
**RING** 

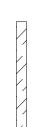
**GASKET** 

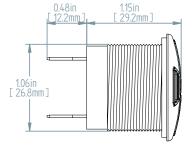
SIDE

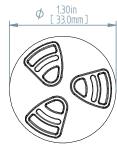
**FRONT** 



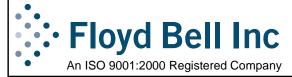








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# TCH-86-530-Q(M)

## Made in USA



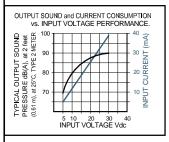


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TCH-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

**Operating Mode:** Medium Loud Chime Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

1±25% Chimes per second

**Typical Operating Current:** 4 mA at 5 Vdc 40 mA at 30 Vdc

70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

Typical Sound Pressure: 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

20% over maximum rated voltage for less than 5 minutes. Surge Voltage:

Reverse Voltage Protection: To the maximum operating voltage.

Part Recognized By: Underwriters Laboratory

Case- Plastic "NORYL® N-190". Flame Retardant UL 94V-0. Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

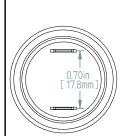
Life Expectancy: 10 years under normal operating conditions.

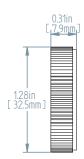
Warranty: For a period of two years from the date of manufacture under normal operating

conditions.

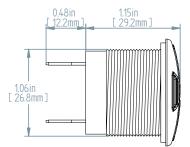
### **DIMENSIONS**

**REAR** RING **GASKET** SIDE **FRONT** 











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



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# TCH-86-530-S(F)

# Made in USA



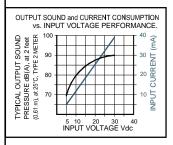


Patented Revolutionary
 Turbo Design

 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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 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: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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**

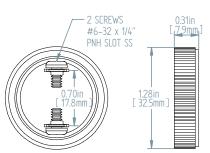
REAR

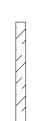
**RING** 

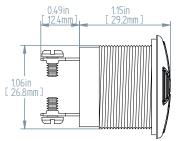
**GASKET** 

SIDE

**FRONT** 









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



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# TCH-86-530-S(M)

## Made in USA



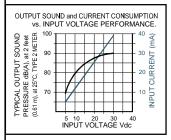


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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**

Operating Mode: Medium Loud Chime Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

1±25% Chimes per second

Typical Operating Current: 4 mA at 5 Vdc

40 mA at 30 Vdc

**Typical Sound Pressure:** 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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

-20℃ to +65℃. **Operating Temperature:** Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions. Life Expectancy:

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

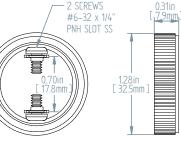
SIDE

conditions.

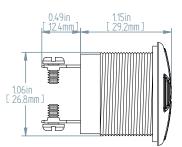
### **DIMENSIONS**



RING



**GASKET** 



1.30in 33.0mm

**FRONT** 

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



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## TCH-86-530-W(F)

## Made in USA



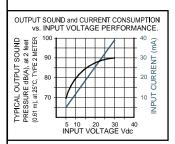


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TCH-86-530-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

Operating Mode: Medium Loud Chime Tone

**Operating Voltage:** 5-30 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:** 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: Termination Strength:

Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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 continu ously 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**

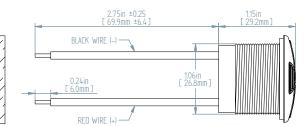
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

SIDE



**FRONT** 



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



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## TCH-86-530-W(M)

# Made in USA



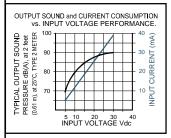


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TCH-86-530-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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

Termination:

1±25% Chimes per second

Typical Operating Current: 4 mA at 5 Vdc 40 mA at 30 Vdc

Typical Sound Pressure: 70±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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

ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified– Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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.

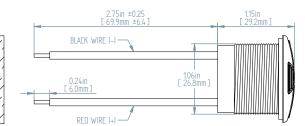
## DIMENSIONS

**REAR** 

**RING** 

**GASKET** 

SIDE



FRONT



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



1.28in [ 32.5mm]

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## TCH-V86-530-P(F)

## Made in USA



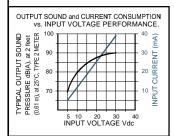


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



**REAR** 

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

Operating Mode: Medium Loud Chime Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±250 Hz. **Operating Frequency:** 

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 5 Vdc, at 24 inches (61 cm), at 25℃

90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: Pull test with a maximum of 22 pounds (10 kg) load Termination Strength:

**Operating Temperature:** -20℃ to +65℃.

Storage Temperature: -40℃ to +85℃. 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

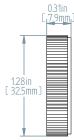
Life Expectancy: 10 years under normal operating conditions.

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

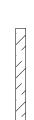
SIDE

conditions.

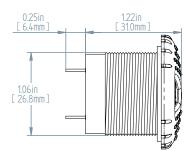
## **DIMENSIONS**



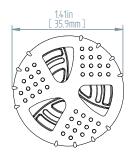
**RING** 



**GASKET** 



## **FRONT**



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



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## TCH-V86-530-P(M)

# Made in USA



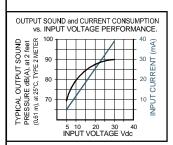


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±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 5 Vdc, at 24 inches (61 cm), at 25℃ 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -20°C to +65°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 continu ously for 100 hours.

Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

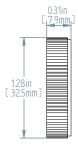
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

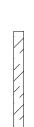
#### **DIMENSIONS**

0.60in [ 15.2mm ]

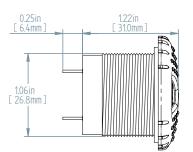
**REAR** 



**RING** 

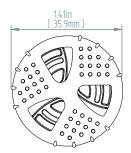


**GASKET** 



SIDE

FRONT



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



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## TCH-V86-530-Q(F)

## Made in USA



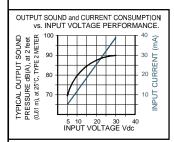


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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 frontmounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

#### SPECIFICATIONS

Medium Loud Chime Tone Operating Mode:

**Operating Voltage:** 5-30 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 5 Vdc, at 24 inches (61 cm), at 25℃ 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

**Underwriters Laboratory** Part Recognized By:

**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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

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

conditions.

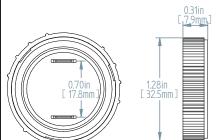
## **DIMENSIONS**

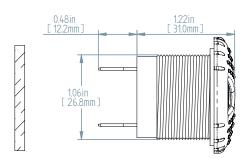
RFAR RING

**GASKET** SIDE



**FRONT** 





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



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## TCH-V86-530-Q(M)

# Made in USA



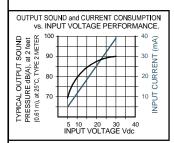


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



**REAR** 

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

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±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 5 Vdc, at 24 inches (61 cm), at 25℃ 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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 continu ously 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

SIDE

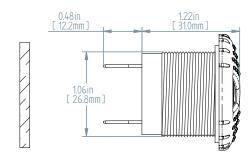
conditions.

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

## **DIMENSIONS**

RING

# 0.70in [ 128in [ 32.5mm]



[ 35.9mm ]

**FRONT** 

TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

**GASKET** 



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## TCH-V86-530-S(F)

# Made in USA



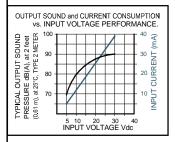


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TCH-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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 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:

 $70\pm5$  dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 90 $\pm5$  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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

Life Expectancy:

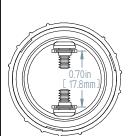
**REAR** 

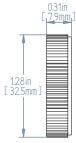
**RING** 

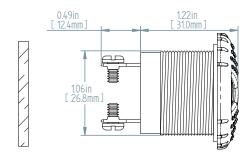
**GASKET** 

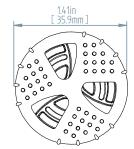
SIDE

**FRONT** 









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



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## TCH-V86-530-S(M)

# Made in USA



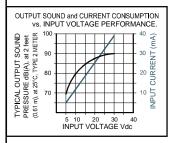


Patented Revolutionary
 Turbo Design

 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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±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 5 Vdc, at 24 inches (61 cm), at 25℃ 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously 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

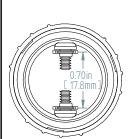
REAR

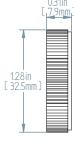
**RING** 

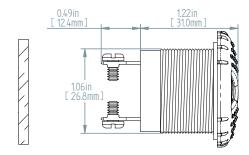
**GASKET** 

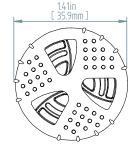
SIDE

**FRONT** 









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## TCH-V86-530-W(F)

# Made in USA



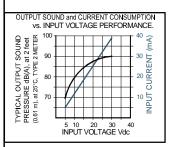


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TCH-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**

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 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 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.

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black 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 continu ously 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** 

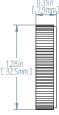
**RING** 

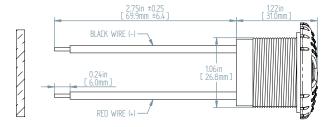
**GASKET** 

SIDE

FRONT









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## TCH-V86-530-W(M)

## Made in USA



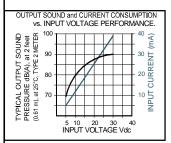


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TCH-V86-530-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

Operating Mode: Medium Loud Chime Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±250 Hz. **Operating Frequency:** 

1±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 5 Vdc, at 24 inches (61 cm), at 25℃ 90±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously 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 Warranty:

operating conditions.

#### **DIMENSIONS**

**REAR** 

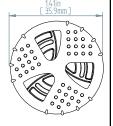
RING

**GASKET** 

SIDE

BLACK WIRE (-)

**FRONT** 



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

RED WIRE (+)



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## TCH-V86-530-Q(F)

## Made in USA



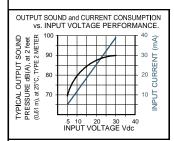


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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 frontmounting 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 2900±250 Hz. **Operating Frequency:** 

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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. Storage Temperature:

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Underwriters Laboratory Part Recognized By:

**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.

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

conditions.

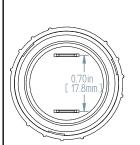
## **DIMENSIONS**

**GASKET** 

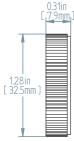
RING

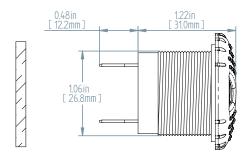
SIDE

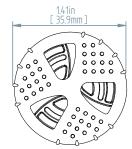
**FRONT** 



RFAR







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## TCH-V86-948-Q(M)

## Made in USA



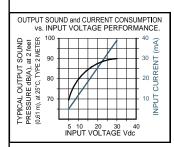


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



**REAR** 

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 frontmounting 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

9-48 Vdc **Operating Voltage:** Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

1±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

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination: **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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and 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.

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

SIDE

conditions.

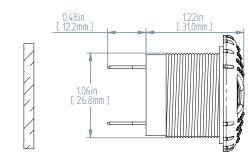
**RoHS** 

**GASKET** 

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

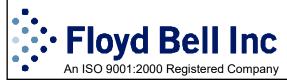
#### **DIMENSIONS**

RING



**FRONT** 

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



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## **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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Emits Red or Green Light (Individually)

Operating Voltage: 9-30 Vdc

Nominal Operating Voltage: 24 Vdc

Typical Brightness: (8000 cd/m<sup>2</sup> Red) or (9000 cd/m<sup>2</sup> Green)

± 20% at 30 Vdc Max. Operating Current: ± 20% at 30 Vdc 145 mA at 9 Vdc 50 mA at 30 Vdc

Termination: 3 Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness, One

positive Blade and three negative Blades for color select.

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃. Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case- Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene

Environmental Durability: AS

Life Expectancy:

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

Warranty:

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℃ continuously for 100 hours.

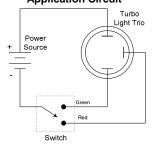
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal

operating conditions.

#### **Application Circuit**



## DIMENSIONS

**BACK RING GASKET** SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] 0.48 in [7.9 mm] 0.91 in [17.8 mm] [12.2 mm] [23.1 mm] n I mm 1.06 [26.9 m 0 [32.5] 1.28 0.24 in [6.2 mm]



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## 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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Blue
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 1700 cd/m<sup>2</sup> ± 20% at 9 Vdc 1850 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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— Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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.

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## **DIMENSIONS**

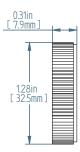
REAR

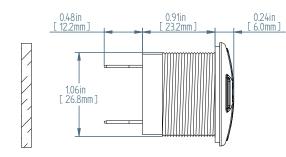
**RING** 

**GASKET** 

SIDE

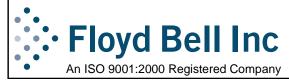








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## TLH-87B-930-S

# 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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Blue
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 1700 cd/m<sup>2</sup> ± 20% at 9 Vdc 1850 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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.

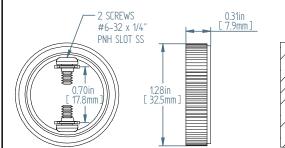
## PANEL MOUNTING

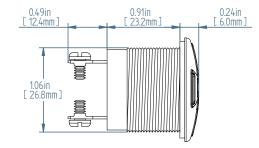


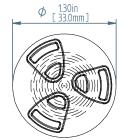
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

## REAR RING GASKET SIDE FRONT







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



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## TLH-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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Green
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 4500 cd/m<sup>2</sup> ± 20% at 9 Vdc 4700 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## **DIMENSIONS**

REAR RING

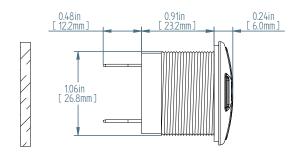
GASKET

SIDE

## FRONT









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



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## TLH-87G-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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Green **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc

 $4500 \text{ cd/m}^2 \pm 20\% \text{ at } 9 \text{ Vdc}$ **Typical Brightness:** 4700 cd/m<sup>2</sup> ± 20% at 30 Vdc

**Max. Operating Current:** 110 mA at 9 Vdc 50 mA at 30 Vdc

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:** -40°C to +85°C. -40°C to +100°C. Storage Temperature:

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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

## PANEL MOUNTING



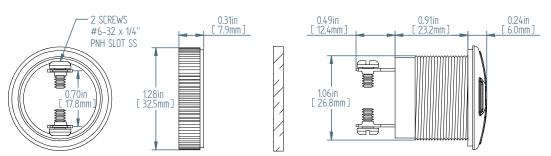
FITS PANELS UP TO 0.60in [15.2mm] THICK

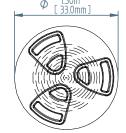
#### **DIMENSIONS**

#### **REAR RING GASKET**

SIDE

## **FRONT**





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



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## TLH-87R-930-P

## 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

**Operating Mode:** Extra-Bright Continuous Output LED Panel Indicator

Color: Red **Operating Voltage:** 

9-30 Vdc Nominal Operating Voltage: 24 Vdc

 $5300 \text{ cd/m}^2 \pm 20\% \text{ at } 9 \text{ Vdc}$ **Typical Brightness:**  $5700 \text{ cd/m}^2 \pm 20\% \text{ at } 30 \text{ Vdc}$ 

110 mA at 9 Vdc Max. Operating Current:

50 mA at 30 Vdc

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:** -40℃ to +85℃. **Storage Temperature:** -40℃ to +100℃.

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 Gasket - 0.125" Thick, 60 Durometer Neoprene

ASTM B117 Certified-Withstands exposure to salt spray for 300 hours **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity–Withstands 95% relative humidity at +40℃ continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

SIDE

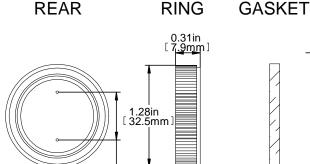
operating conditions.

#### PANEL MOUNTING



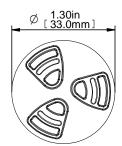
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

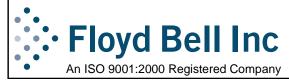


0.25in [ 6.4mm 1.15in 29.2mm 1.06in [ 26.8mm]

**FRONT** 



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



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Revision: 11.13

0.60in ±0.05 [ 15.24mm ±1.27]

## 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

**Operating Mode:** Extra-Bright Continuous Output LED Panel Indicator

Color: Red 9-30 Vdc **Operating Voltage:** Nominal Operating Voltage: 24 Vdc

 $5300 \text{ cd/m}^2 \pm 20\% \text{ at } 9 \text{ Vdc}$ **Typical Brightness:**  $5700 \text{ cd/m}^2 \pm 20\% \text{ at } 30 \text{ Vdc}$ 

110 mA at 9 Vdc Max. Operating Current: 50 mA at 30 Vdc

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -40°C to +85°C. Storage Temperature: -40°C to +100°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

Gasket - 0.125" Thick, 60 Durometer Neoprene

ASTM B117 Certified-Withstands exposure to salt spray for 300 hours **Environmental Durability:** 

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

## PANEL MOUNTING



0.60in [15.2mm] THICK

## **DIMENSIONS**

REAR

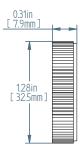
**RING** 

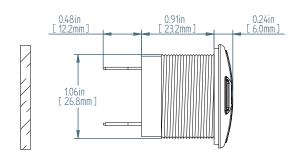
**GASKET** 

SIDE

## **FRONT**









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



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## TLH-87R-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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 5300 cd/m<sup>2</sup> ± 20% at 9 Vdc 5700 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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 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.

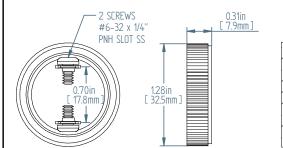
#### PANEL MOUNTING

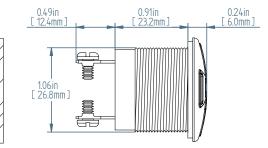


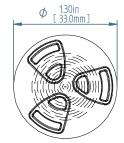
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

## REAR RING GASKET SIDE FRONT







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



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## TLH-87W-930-Q

# 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

PANEL MOUNTING



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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: White

Operating Voltage: 9-30 Vdc Nominal Operating Voltage: 24 Vdc

Typical Brightness: 13500 cd/m<sup>2</sup> ± 20% at 9 Vdc 14500 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

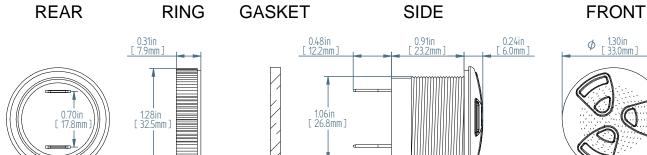
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**



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



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## TLH-87W-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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: White
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 13500 cd/m<sup>2</sup> ± 20% at 9 Vdc 14500 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

## PANEL MOUNTING

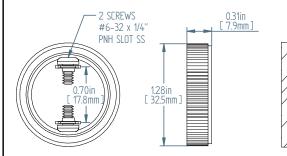


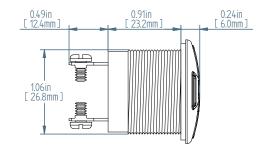
FITS PANELS UP TO 0.60in [15.2mm] THICK

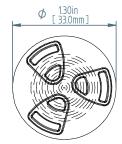
#### **DIMENSIONS**

## REAR RING GASKET SIDE

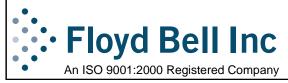
## E FRONT







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



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## TLH-87Y-930-P

# 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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Yellow
Operating Voltage: 9-30 Vdc

Operating Voltage: 9-30 Vdc Nominal Operating Voltage: 24 Vdc

Typical Brightness: 12100 cd/m<sup>2</sup> ± 20% at 9 Vdc 13000 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

**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:  $-40^{\circ}$ C to  $+85^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+100^{\circ}$ 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—Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ 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

SIDE

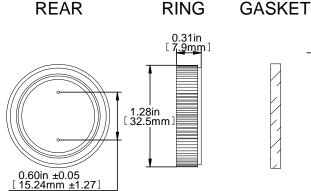
operating conditions.

## PANEL MOUNTING

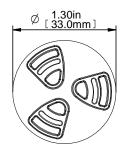


FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**



FRONT



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



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## 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

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

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Yellow Operating Voltage: 9-30 Vdc

Nominal Operating Voltage: 9-30 Vdc

Typical Brightness: 12100 cd/m² ± 20% at 9 Vdc 13000 cd/m² ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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

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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.

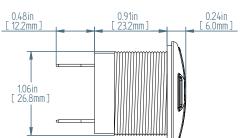
#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## **DIMENSIONS**

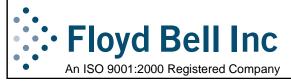




**FRONT** 



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



1.28in [ 32.5mm]

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## TLH-87Y-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**

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Yellow Operating Voltage: 9-30 Vdc Nominal Operating Voltage: 24 Vdc

Typical Brightness: 12100 cd/m<sup>2</sup> ± 20% at 9 Vdc 13000 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

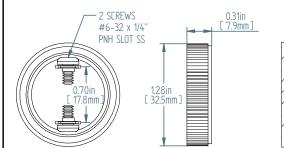
## PANEL MOUNTING

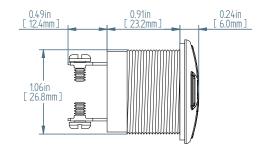


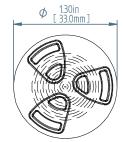
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **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 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 Beep Tone

Color: Blue
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: 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: Lens/Case—Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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

SIDE

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.

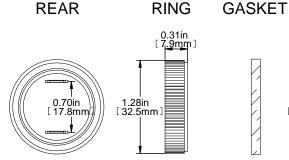
PANEL MOUNTING

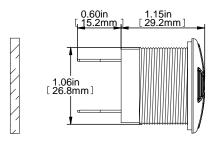


FITS PANELS UP TO 0.60in [15.2mm] THICK

## DIMENSIONS

\*Not Evaluated by UL





Ø 1.30in [33.0mm]

**FRONT** 

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



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## **TLHB-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

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 Beep Tone

Color: Blue
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc
Operating Frequency: 2900±250 H

equency: 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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

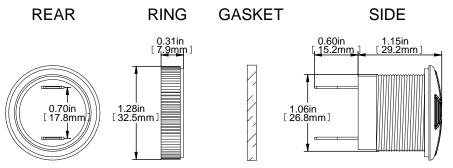
FITS PANELS UP TO

0.60in [15.2mm] THICK

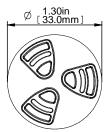
PANEL MOUNTING

## DIMENSIONS

\*Not Evaluated by UL



**FRONT** 



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## TLHB-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**

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: Blue
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:** 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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in SS PNHD SLOT/PHIL

**REAR** 

0.70in

17.8mm

## DIMENSIONS

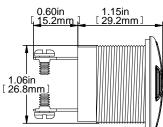
.28in

[ 32.5mm]

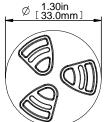
RING

0.31in

GASKET SIDE



3.2mm



**FRONT** 

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



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## TLHB-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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone

Color: Blue **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** \*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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

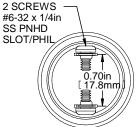
PANEL MOUNTING

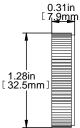


FITS PANELS UP TO 0.60in [15.2mm] THICK

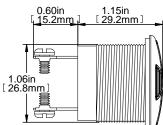
## **DIMENSIONS**



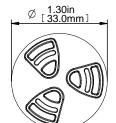








SIDE



**FRONT** 

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

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.

Floyd Bell's ground-breaking new Twin Turbo™ Lighted Alarm is a panel-mount

#### **SPECIFICATIONS**

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: Blue
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

NEMĂ 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.

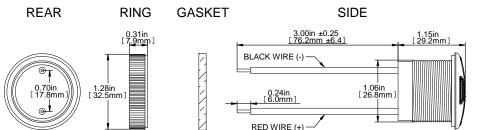
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## DIMENSIONS

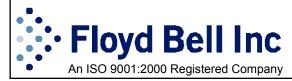
\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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

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 Beep Tone

Color: Blue
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

NEMĀ 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 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.

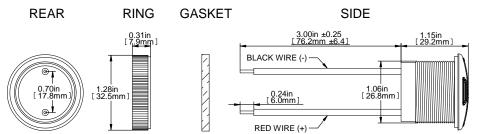
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## **DIMENSIONS**

\*Not Evaluated by UL



Ø [130im]

**FRONT** 

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

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 Beep Tone

Color: Green
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

1\*03±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

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

NEMĀ 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

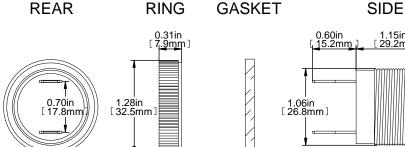
operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## DIMENSIONS



\*Not Evaluated by UL

Termination:

Ø [33.0mm]

**FRONT** 

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



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## 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

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 Beep Tone

Color: Green **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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

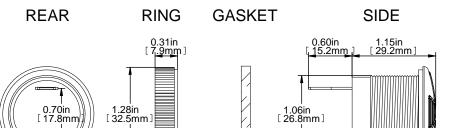
operating conditions.

PANEL MOUNTING

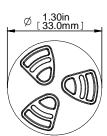
FITS PANELS UP TO 0.60in [15.2mm] THICK

## **DIMENSIONS**

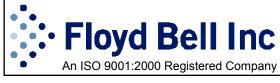
\*Not Evaluated by UL



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



**FRONT** 



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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 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 Beep Tone

Color: Green
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: 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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

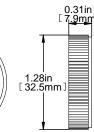
#6-32 x 1/4in SS PNHD SLOT/PHIL

## DIMENSIONS

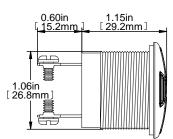


0.70in

17.8mm

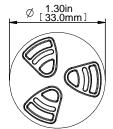


**GASKET** 

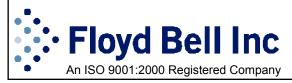


SIDE

FRONT



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



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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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone

Color: Green **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: 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

SIDE

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in

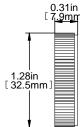
SS PNHD SLOT/PHIL

## **DIMENSIONS**

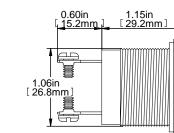


0.70in

17.8mm



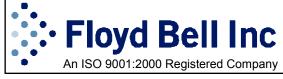
#### RING **GASKET**



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

# 1.30in [ 33.0mm]

**FRONT** 



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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

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 Beep Tone

Color: Green **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

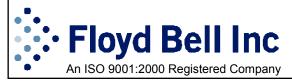
## **DIMENSIONS**

\*Not Evaluated by UL

**REAR RING GASKET** SIDE BLACK WIRE (-) 1.28in [ 32.5mm] 1.06in [ 26.8mm ] RED WIRE (+) -

**FRONT** 

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



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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

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 Beep Tone

Color: Green
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 h

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.

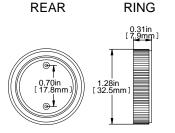
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

FITS PANELS UP TO \*Not Evaluated by UL

### **DIMENSIONS**



GASKET SIDE

3.00in ±0.25
[76.2mm ±6.4]

BLACK WIRE (+)

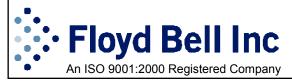
0.24in
[6.0mm]

RED WIRE (+)

Ø [33.0mm]

**FRONT** 

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



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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

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**

**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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

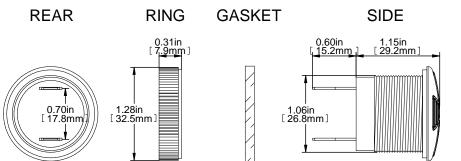
PANEL MOUNTING



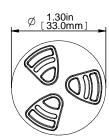
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

\*Not Evaluated by UL



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



**FRONT** 



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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

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**

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

requency: 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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

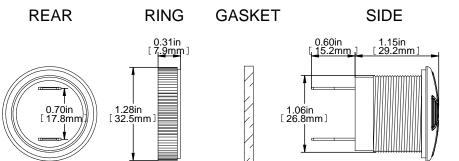
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

# DIMENSIONS

\*Not Evaluated by UL



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



**FRONT** 



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# TLHB-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 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**

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:** 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.

PANEL MOUNTING

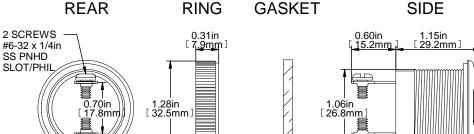


FITS PANELS UP TO 0.60in [15.2mm] THICK

# DIMENSIONS

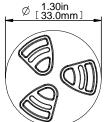
#### Billiertelett

Not Evaluated by UL



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

# FRONT





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# 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**

**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.

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: 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.

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in

SS PNHD SLOT/PHIL **REAR** 

# **DIMENSIONS**

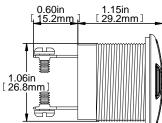
RING

Not Evaluated by UL

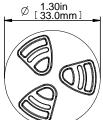
0.70in .28in 17.8mm

0.31in [ 32.5mm]

**GASKET** 



SIDE



**FRONT** 

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



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# **TLHB-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

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**

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

NEMĂ 4X Gasket – 0.125" Thick, 60 Durometer Neoprene
Environmental Durability: ASTM B117 Certified- Withstands exposure to salt spray for 300 h

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.

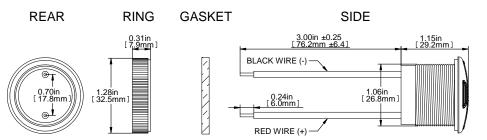
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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



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# **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

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**

**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.

1±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

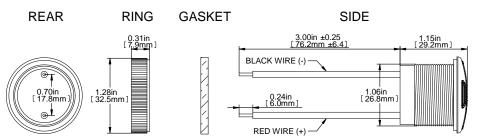
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

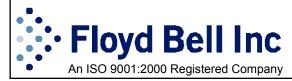
### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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

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.

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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

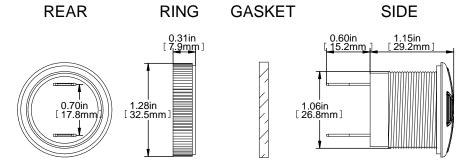
Warranty: For a period of two years from the date of manufacture under normal

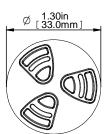
operating conditions.

FITS PANELS UP TO \*Not Evaluated by UL

0.60in [15.2mm] THICK

### **DIMENSIONS**





**FRONT** 

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



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# **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

PANEL MOUNTING

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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

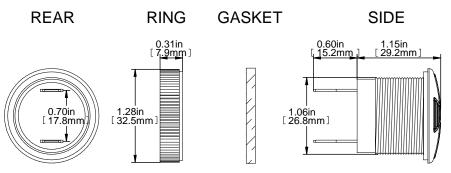
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

\*Not Evaluated by UL

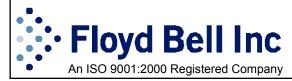
### **DIMENSIONS**







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



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# 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

**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: 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

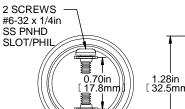
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

# **DIMENSIONS**

RING

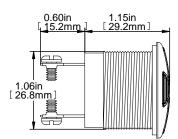


**REAR** 

0.31in [ 32.5mm]

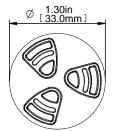


**GASKET** 



SIDE

**FRONT** 



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 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:** 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

SIDE

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in SS PNHD SLOT/PHIL

**REAR** 

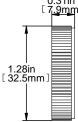
0.70in

17.8mm

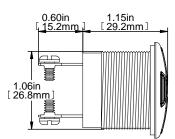
# DIMENSIONS

RING

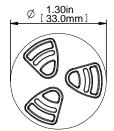
0.31in [7.9mm



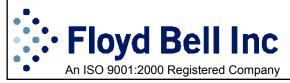
**GASKET** 



FRONT



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



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# TLHB-88W-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

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.

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 30

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

\*Not Evaluated by UL

Ø [33.0mm]

**FRONT** 

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



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# **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

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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

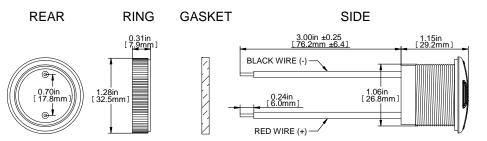
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

FITS PANELS UP TO

\*Not Evaluated by UL 0.60in [15.2mm] THICK

### **DIMENSIONS**



**FRONT** 

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



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# **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**

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: Yellow
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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

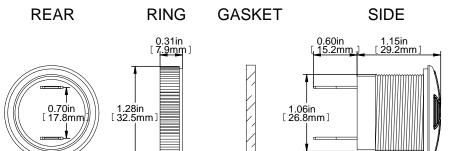
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

\*Not Evaluated by UL



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



**FRONT** 



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All specifications subject to change without notice.

# **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**

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: Yellow
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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

# DIMENSIONS

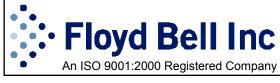
\*Not Evaluated by UL

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

# Ø 1.30in Ø [33.0mm]

**FRONT** 





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# **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**

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: Yellow
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: 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

SIDE

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in SS PNHD SLOT/PHIL

# DIMENSIONS

RING

**REAR** 

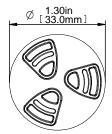
0.70in

17.8mm

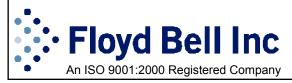
0.31in [7.9mm] **GASKET** 

0.60in 1.15in [29.2mm]

**FRONT** 



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



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# 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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone

Color: Yellow **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz.

**Typical Sound Pressure:** 

1±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

\*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

SIDE

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



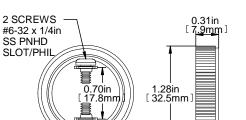
FITS PANELS UP TO 0.60in [15.2mm] THICK

**REAR** 

# **DIMENSIONS**

**GASKET** 

RING



0.60in 1.15in .2mm 1.06in [ 26.8mm]

1.30in [ 33.0mm]

**FRONT** 

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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: Yellow
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 30

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.

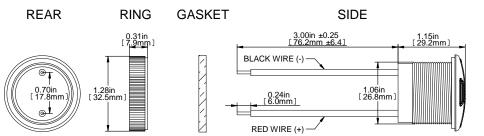
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

\*Not Evaluated by UL



Ø [33,0mm]

**FRONT** 

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



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# **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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Beep Tone

Color: Yellow **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

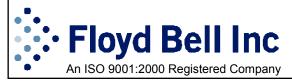
\*Not Evaluated by UL

# **DIMENSIONS**

**REAR RING GASKET** SIDE BLACK WIRE (-) 1.28in [ 32.5mm] 1.06in [ 26.8mm ] RED WIRE (+) -

**FRONT** 

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



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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

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

**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.

1±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc

50 mA 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: 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: 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.

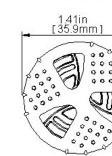
PANEL MOUNTING



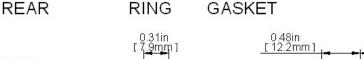
FITS PANELS UP TO 0.60in [15.2mm] THICK

# **DIMENSIONS**

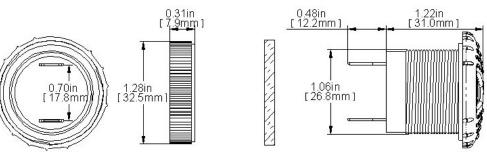
SIDE



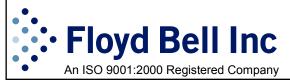
FRONT



\*Not Evaluated by UL



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



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# 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**

**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.

110 mA at 9 Vdc Typical Operating Current: 50 mA at 30 Vdc

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

\*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 Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. Storage Temperature:

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.

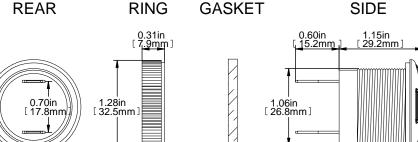
Not Evaluated by UL

### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**



**FRONT** 



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



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# 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**

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:** 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

SIDE

NEMĀ 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.

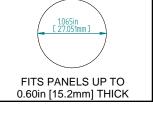
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

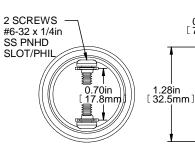
TO \*Not Evaluated by UL

### **DIMENSIONS**

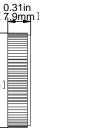
**GASKET** 



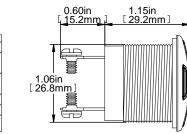
PANEL MOUNTING



**REAR** 

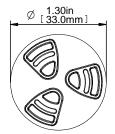


RING





**FRONT** 



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



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# TLHC-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

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. 110 mA at 9 Vdc Typical Operating Current:

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

3", 18AWG, GXL, Red and Black Wires Termination:

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

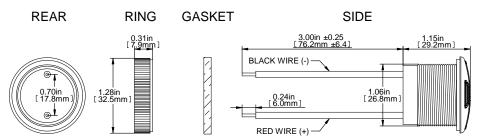
operating conditions.

Not Evaluated by UL

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**



**FRONT** 

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



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# 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**

**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. 110 mA at 9 Vdc Typical Operating Current:

50 mA at 30 Vdc

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

\*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

Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. Storage Temperature:

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

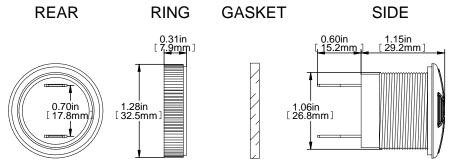
operating conditions.

Not Evaluated by UL

FITS PANELS UP TO 0.60in [15.2mm] THICK

PANEL MOUNTING

### **DIMENSIONS**



**FRONT** 

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



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# 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

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. 110 mA at 9 Vdc Typical Operating Current:

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.

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 -40°C to +85°C. Storage Temperature:

Termination:

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.

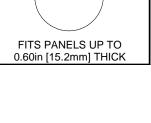
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

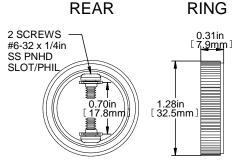
\*Not Evaluated by UL

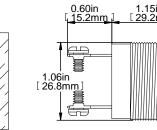
### **DIMENSIONS**

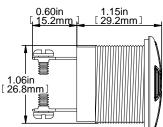
**GASKET** 



PANEL MOUNTING

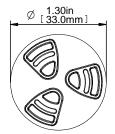






SIDE

**FRONT** 



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



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# 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

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. 110 mA at 9 Vdc Typical Operating Current:

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C Typical Sound Pressure: \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

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

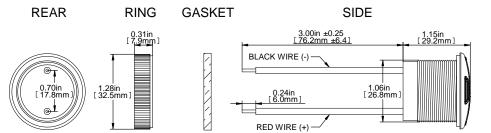
Termination:

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**



**FRONT** 

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



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# 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone

Color: Red **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz. 110 mA at 9 Vdc Typical Operating Current:

50 mA at 30 Vdc

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

\*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

Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. Storage Temperature:

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.

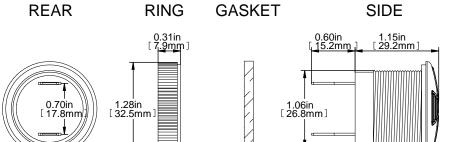
Not Evaluated by UL

### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**



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



**FRONT** 



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# 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 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**

Operating Mode: Extra Bright LED Plus Extra Loud Continuous Tone

Color: Red
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:** 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

NEMĀ 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.

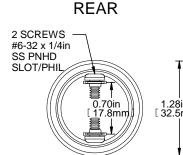
PANEL MOUNTING

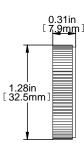
FITS PANELS UP TO 0.60in [15.2mm] THICK

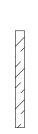
# DIMENSIONS

\*Not Evaluated by UL

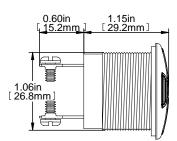
RING





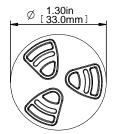


**GASKET** 



SIDE

FRONT



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



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# 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**

Operating Mode: Extra Bright LED Plus Extra Loud Continuous Tone

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc
Operating Engagement 2000+250 Hz

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

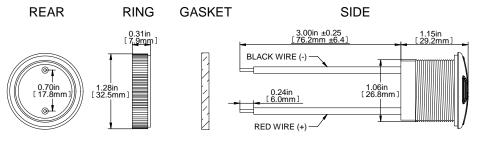
operating conditions.

\*Not Evaluated by UL

#### FITS PANELS UP TO 0.60in [15.2mm] THICK

PANEL MOUNTING

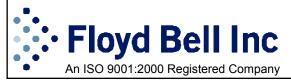
### **DIMENSIONS**



Ø 1.30in [33.0mm]

**FRONT** 

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



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# 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

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.

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

\*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.

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.

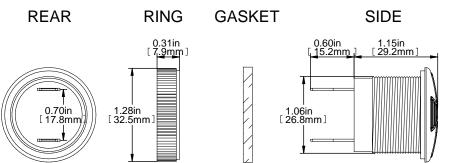
\*Not Evaluated by UL

# 1.065in

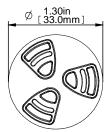
PANEL MOUNTING



### **DIMENSIONS**



FRONT



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



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# TLHC-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

PANEL MOUNTING

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:** 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

NEMĀ 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

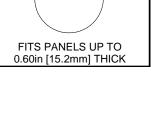
operating conditions.

\*Not Evaluated by UL

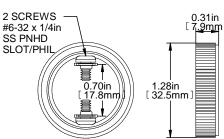
RING

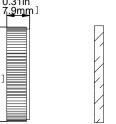
# DIMENSIONS

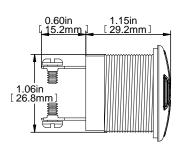
**GASKET** 



**REAR** 







SIDE

Ø [33.0mm]

**FRONT** 

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



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# 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

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.

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

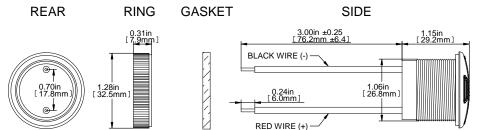
Termination:

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**



Ø [33.0mm]

**FRONT** 

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



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# 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**

Operating Mode: Extra Bright LED Plus Extra Loud Continuous Tone

Color: Yellow
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

\*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.

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.

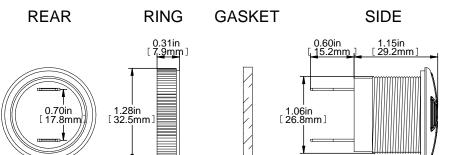
\*Not Evaluated by UL

### PANEL MOUNTING

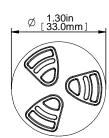


FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**



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



**FRONT** 



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All specifications subject to change without notice.

# 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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Continuous Tone

Color: Yellow
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:** 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

NEMĀ 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.

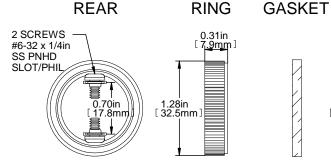
Warranty: For a period of two years from the date of manufacture under normal

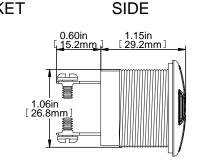
operating conditions.

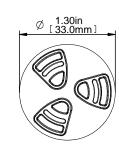
UP TO \*Not Evaluated by UL

### **DIMENSIONS**



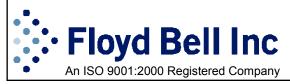






**FRONT** 

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



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# 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Continuous Tone

Color: Yellow **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz. 110 mA at 9 Vdc **Typical Operating Current:** 

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C Typical Sound Pressure: \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

3", 18AWG, GXL, Red and Black Wires

Termination: 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

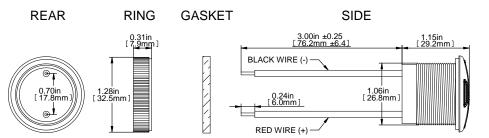
operating conditions.

FITS PANELS UP TO 0.60in [15.2mm] THICK

PANEL MOUNTING

Not Evaluated by UL

### **DIMENSIONS**



**FRONT** 

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



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# TLHC-V88G-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

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**

**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. 110 mA at 9 Vdc Typical Operating Current:

50 mA 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **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:** Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

SIDE

NEMA 4X Gasket - 0.125" Thick, 60 Durometer Neoprene ASTM B117 Certified- Withstands exposure to salt spray for 300 hours **Environmental Durability:** 

\*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.

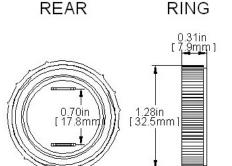
Warranty: For a period of two years from the date of manufacture under normal

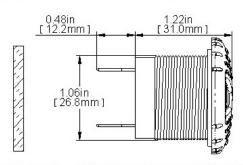
operating conditions.

\*Not Evaluated by UL FITS PANELS UP TO 0.60in [15.2mm] THICK

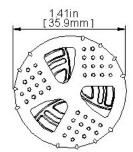
### **DIMENSIONS**

GASKET

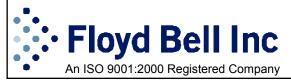




FRONT



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



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## **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

Operating Mode: Extra Bright LED Plus Extra Loud Continuous Tone

Color: Red
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: 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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: Lens/Case— Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

SIDE

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

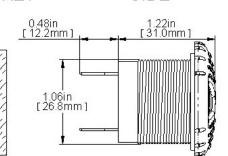


FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**



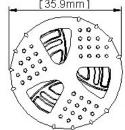
1.28in [32.5mm]

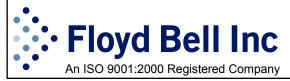


TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED Dimensions shown with volume control installed on unit.

## 1.41in [35.9mm]

FRONT



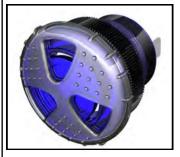


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## TLHO-V88B-930-Q

#### Made in USA





High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

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. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

#### **SPECIFICATIONS**

Extra Bright LED Plus Extra Loud Whoop Tone **Operating Mode:** 

Color: Blue 9-30 Vdc **Operating Voltage:** 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 With the volume control fully open. **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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

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.

10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

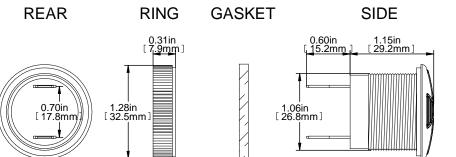
PANEL MOUNTING



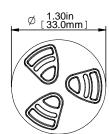
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

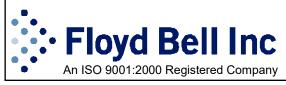
Not Evaluated by UL



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



**FRONT** 



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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 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 Whoop Tone

Color: Blue
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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

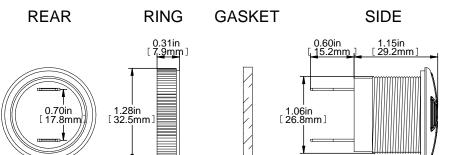
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

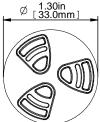
## DIMENSIONS

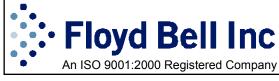
\*Not Evaluated by UL



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

# FRONT





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## 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**

Operating Mode: Extra Bright LED Plus Extra Loud Whoop Tone

Color: Blue
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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in SS PNHD SLOT/PHIL

### DIMENSIONS

.28in

[ 32.5mm]

REAR RING GASKET

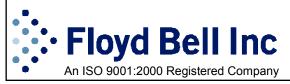
0.60in 1.15in [29.2mm]

SIDE

Ø [33.0mm]

**FRONT** 

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



0.70in

17.8mm

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## 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

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 Whoop Tone

Color: Blue
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc
Operating Frequency: 2900±250 H

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:** 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

NEMĀ 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.

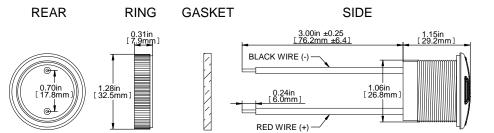
/ 1.065in \ [ 27.051mm ]

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

\*Not Evaluated by UL

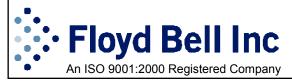
#### **DIMENSIONS**



Ø [33.0mm]

**FRONT** 

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

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 Whoop Tone

Color: Green
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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

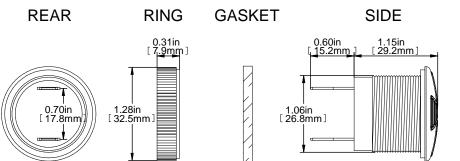
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### DIMENSIONS

\*Not Evaluated by UL



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



**FRONT** 



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All specifications subject to change without notice.

## 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

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 Whoop Tone

Color: Green **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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

\*Not Evaluated by UL



PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

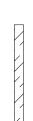
#6-32 x 1/4in SS PNHD SLOT/PHIL

#### **DIMENSIONS**



# 0.70in 17.8mm

0.31in .28in [ 32.5mm]

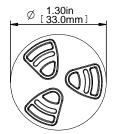


**GASKET** 

## 0.60in 1.15in 1.06in [ 26.8mm]

SIDE

**FRONT** 



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

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 Whoop Tone

Color: Green
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: 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

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.

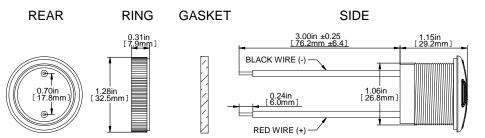
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone

Color: Red **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

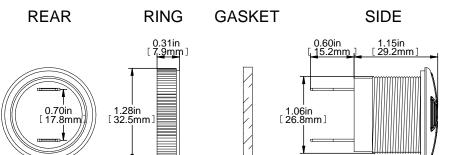
PANEL MOUNTING



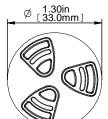
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

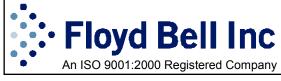
\*Not Evaluated by UL



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



**FRONT** 



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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 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**

Operating Mode: Extra Bright LED Plus Extra Loud Whoop Tone

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

**Typical Sound Pressure:** 

Operating Frequency: 2900±250 Hz.

2±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

\*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.

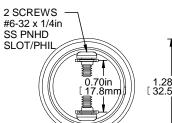
PANEL MOUNTING



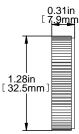
FITS PANELS UP TO 0.60in [15.2mm] THICK

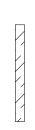
### DIMENSIONS

RING

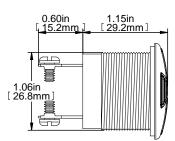


**REAR** 



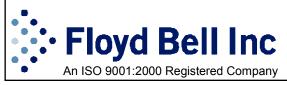


**GASKET** 



SIDE

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



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Revision: 4.11

**FRONT** 

1.30in [ 33.0mm]

## 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone

Color: Red **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

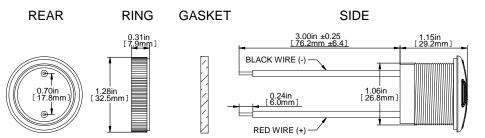
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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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

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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

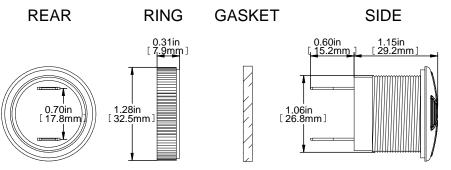
FITS PANELS UP TO

0.60in [15.2mm] THICK

PANEL MOUNTING

### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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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

PANEL MOUNTING

FITS PANELS UP TO

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 9-30 Vdc **Operating Voltage:** 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.

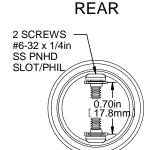
Life Expectancy: 10 years under normal operating conditions.

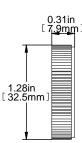
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

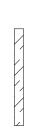
0.60in [15.2mm] THICK

#### **DIMENSIONS**

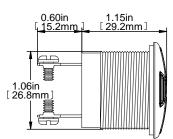




RING

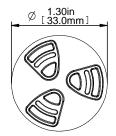


**GASKET** 



SIDE

#### **FRONT**



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

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:** 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

NEMĀ 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.

PANEL MOUNTING

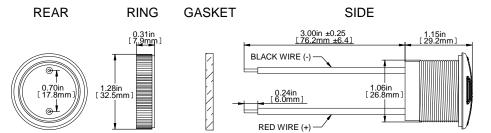


FITS PANELS UP TO 0.60in [15.2mm] THICK

### DIMENSIONS

\*Not Evaluated by UL

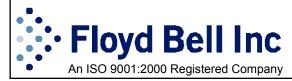
#### BIMENTOTOTIC



Ø [33,0mm]

**FRONT** 

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 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**

Operating Mode: Extra Bright LED Plus Extra Loud Whoop Tone

Color: Yellow
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: 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

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

NEMĂ 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

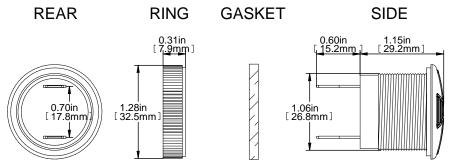
operating conditions.

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



Ø 1.30in [33.0mm]

**FRONT** 

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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Whoop Tone

Color: Yellow
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.

PANEL MOUNTING



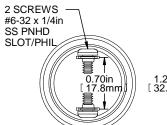
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

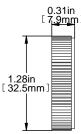


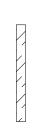
RING

Not Evaluated by UL

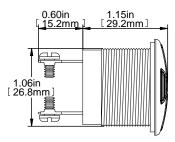


**REAR** 





**GASKET** 



SIDE

Ø 1.30in [33.0mm]

**FRONT** 

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



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## 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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Whoop Tone

Color: Yellow
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: 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

NEMĀ 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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

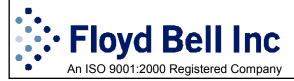
#### **DIMENSIONS**

\*Not Evaluated by UL

Ø [33.0mm]

**FRONT** 

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

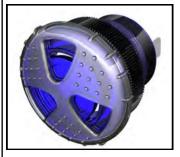


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## TLHO-V88B-930-Q

#### Made in USA





High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

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. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

#### **SPECIFICATIONS**

Extra Bright LED Plus Extra Loud Whoop Tone **Operating Mode:** 

Color: Blue 9-30 Vdc **Operating Voltage:** 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 With the volume control fully open. **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.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

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.

10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

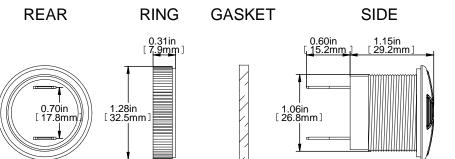
PANEL MOUNTING



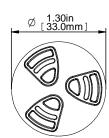
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

Not Evaluated by UL



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



**FRONT** 



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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

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 Siren Tone

Color: Blue
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:
 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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

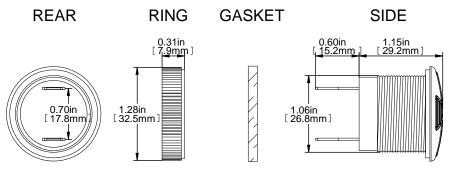
operating conditions.

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



Ø 1.30in [33.0mm]

**FRONT** 

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



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## 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

2 SCREWS

#6-32 x 1/4in SS PNHD SLOT/PHIL

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

PANEL MOUNTING

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 Siren Tone

Color: Blue **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: 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

FITS PANELS UP TO 0.60in [15.2mm] THICK

0.70in

17.8mm

Not Evaluated by UL

.28in

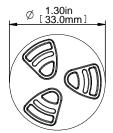
[ 32.5mm]

#### **DIMENSIONS**



# 1.15in 1.06in [ 26.8mm]

**FRONT** 



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



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## TLHS-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

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 Siren Tone

Color: Blue **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

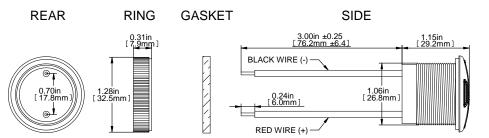
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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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

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 Siren Tone

Color: Green **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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

SIDE

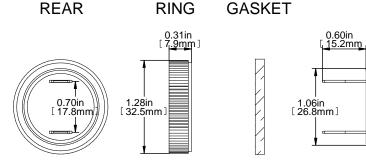
operating conditions.

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

## **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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## TLHS-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

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 Siren Tone

Color: Green
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: 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.

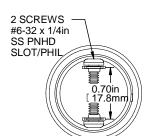
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

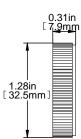
operating conditions.

0.60in [15.2mm] THICK \*Not Evaluated by UL

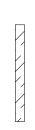
#### **DIMENSIONS**



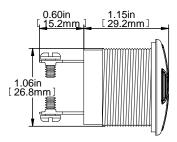
**REAR** 



RING

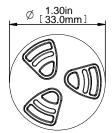


**GASKET** 

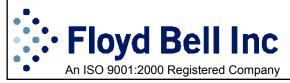


SIDE

**FRONT** 



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



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## TLHS-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

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 Siren Tone

Color: Green **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

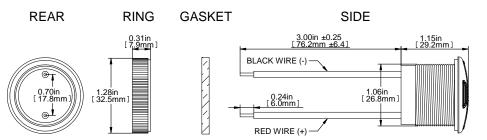
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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## 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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone

Color: Red **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

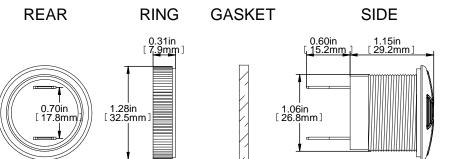
PANEL MOUNTING



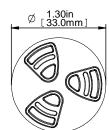
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

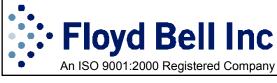
\*Not Evaluated by UL



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



**FRONT** 



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## 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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone

Color: Red **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: 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.

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

SIDE

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in

SS PNHD SLOT/PHIL

### **DIMENSIONS**

RING

**REAR** 

0.70in

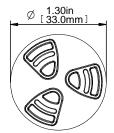
17.8mm

0.31in .28in [ 32.5mm]

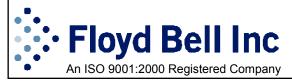
**GASKET** 

0.60in 1.15in .2mm 1.06in [ 26.8mm]

**FRONT** 



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



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## 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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Siren Tone

Color: Red
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

NEMĂ 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.

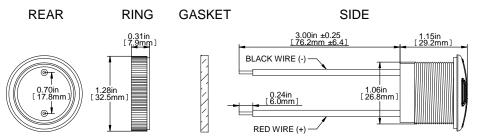
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

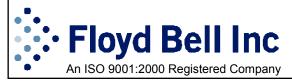
\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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



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## 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
- 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 Siren 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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

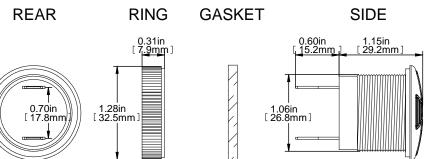
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### DIMENSIONS

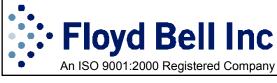
\*Not Evaluated by UL



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



**FRONT** 



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## 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**

Operating Mode: Extra Bright LED Plus Extra Loud Siren 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: 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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in SS PNHD SLOT/PHIL

### DIMENSIONS

REAR RING GASKET

.28in

[ 32.5mm]

0.31in

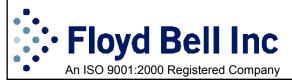
0.60in 1.15in [29.2mm]
1.06in [26.8mm]

SIDE

Ø [33.0mm]

**FRONT** 

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



0.70in

17.8mm

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### 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

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 Siren 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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

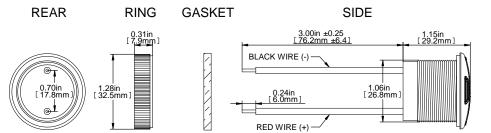
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

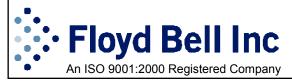
\*Not Evaluated by UL

### **DIMENSIONS**



**FRONT** 

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



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## 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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone

Color: Yellow **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

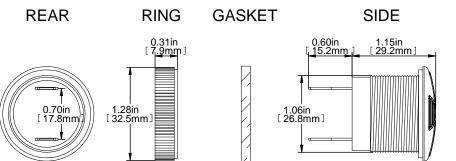
\*Not Evaluated by UL

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**



**FRONT** 

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



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## TLHS-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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone

Color: Yellow **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: 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.

For a period of two years from the date of manufacture under normal Warranty:

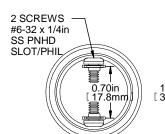
operating conditions.

FITS PANELS UP TO 0.60in [15.2mm] THICK

\*Not Evaluated by UL

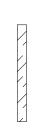
RING

#### **DIMENSIONS**

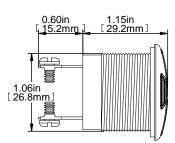


**REAR** 

# 0.31in .28in [ 32.5mm]

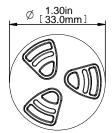


**GASKET** 



SIDE

**FRONT** 



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



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## 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Siren Tone

Color: Yellow **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

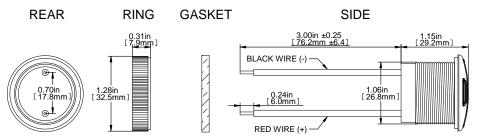
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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## 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
 Hale

 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

Operating Mode: Extra Bright LED Plus Extra Loud Siren Tone

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Cycles per second 110 mA at 9 Vdc

Typical Operating Current: 110 mA at 9 Vdc 50 mA 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.
Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Termination Strength: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20°C to +65°C.

Storage Temperature: -20 C to +65 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.

PANEL MOUNTING



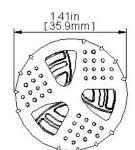
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

REAR RING GASKET

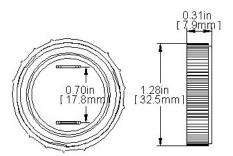
Not Evaluated by UL

SIDE

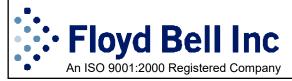


FRONT

NO CASKET SI



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



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## 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

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 Staccato Tone

Color: Blue **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc

**Operating Frequency:** 2900±250 Hz. 8±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

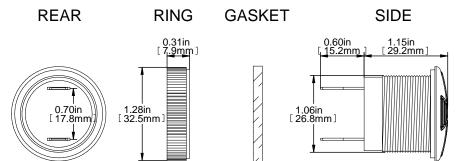
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

FITS PANELS UP TO

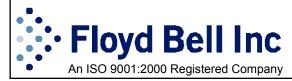
\*Not Evaluated by UL 0.60in [15.2mm] THICK

#### **DIMENSIONS**



**FRONT** 

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



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### 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

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 Staccato Tone

Color: Blue **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 

**Typical Sound Pressure:** 

2900±250 Hz.

8±25% Cycles per second Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*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 -40°C to +85°C. Storage Temperature:

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.

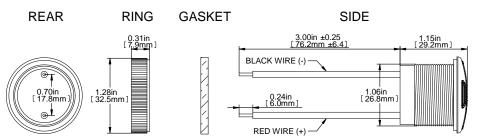
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# 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

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 Staccato Tone

Color: Green **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 

2900±250 Hz.

8±25% Cycles per second Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

PANEL MOUNTING

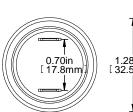


FITS PANELS UP TO 0.60in [15.2mm] THICK

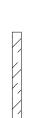
# **DIMENSIONS**

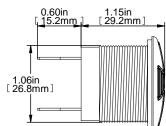
\*Not Evaluated by UL

**REAR** RING **GASKET** SIDE 0.60in 15.2mi



1.28in [ 32.5mm]





**FRONT** 



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



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# 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

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 Staccato Tone

Color: Green **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 

2900±250 Hz.

8±25% Cycles per second 110 mA at 9 Vdc

Typical Operating Current: 50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

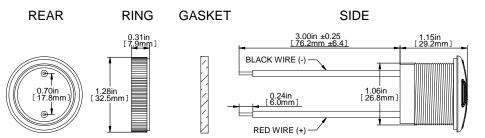
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

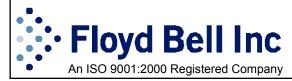
#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# 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

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

Operating Mode: Extra Bright LED Plus Extra Loud Staccato Tone

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Operating Frequency: 2900±250 Hz.

8±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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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.

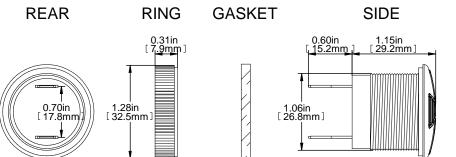
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

# DIMENSIONS

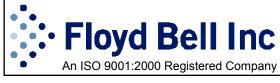
\*Not Evaluated by UL



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

# Ø [33.0mm]

**FRONT** 



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# 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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone

Color: Red **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 

2900±250 Hz.

8±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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

SS PNHD SLOT/PHIL

## **DIMENSIONS**

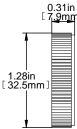
RING



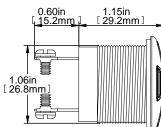
0.70in

17.8mm

**REAR** 

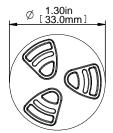


**GASKET** 

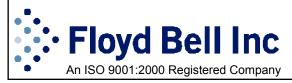


SIDE

**FRONT** 



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



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# 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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Staccato Tone

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc
Operating Frequency: 2900±250 Hz

2900±250 Hz.

8±25% Cycles per second
Typical Operating Current: 110 mA at 9 Vdc

ical 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

NEMĂ 4X Gasket – 0.125" Thick, 60 Durometer Neoprene
Environmental Durability: ASTM B117 Certified- Withstands exposure to salt spray for 300 h

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

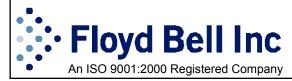
## DIMENSIONS

\*Not Evaluated by UL

Ø [33.0mm]

**FRONT** 

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



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# 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

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 Staccato Tone

Color: White **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 

2900±250 Hz.

8±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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

SIDE

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

**REAR** 

\*Not Evaluated by UL

#### **DIMENSIONS**

**GASKET** 

0.70in 17.8mm

1.28in [ 32.5mm]

RING

0.60in 15.2mi 1.06in [ 26.8mm]

**FRONT** 

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



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# 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

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 Staccato Tone

Color: White **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz.

8±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

3", 18AWG, GXL, Red and Black Wires

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20°C to +65°C -40°C to +85°C. Storage Temperature:

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.

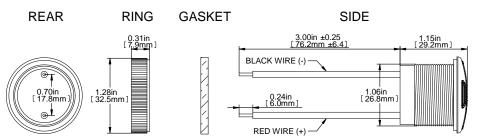
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone

Color: Yellow **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz.

8±25% Cycles per second Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

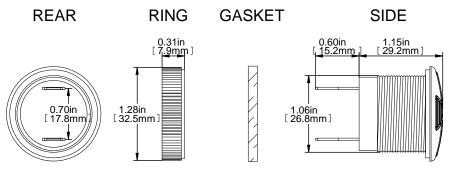
FITS PANELS UP TO

0.60in [15.2mm] THICK

PANEL MOUNTING

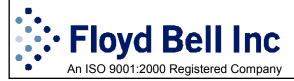
#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Staccato Tone

Color: Yellow **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz.

8±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc

50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

3", 18AWG, GXL, Red and Black Wires

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20°C to +65°C -40°C to +85°C. Storage Temperature:

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.

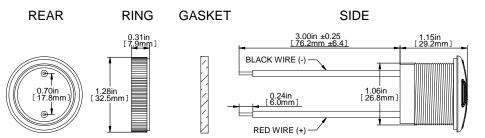
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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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

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 Warble Tone

Color: Blue **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

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

\*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 -40°C to +85°C. Storage Temperature:

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

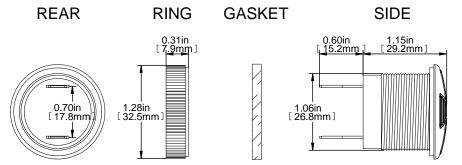
operating conditions.

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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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

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 Warble Tone

Color: Blue
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: 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: -20°C to +65°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

NEMĂ 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.

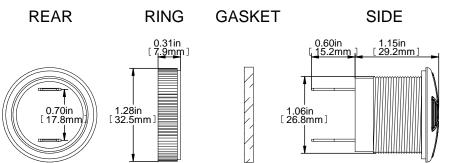
PANEL MOUNTING



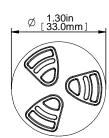
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

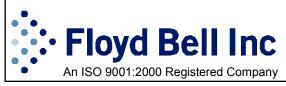
\*Not Evaluated by UL



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



**FRONT** 



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# 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

PANEL MOUNTING

FITS PANELS UP TO

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 Warble Tone

Color: Blue
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: 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 3

ity: 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.

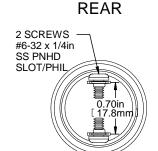
**Life Expectancy:** 10 years under normal operating conditions.

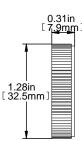
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

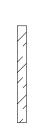
0.60in [15.2mm] THICK \*Not Evaluated by UL

#### **DIMENSIONS**

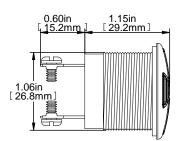




RING

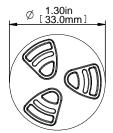


**GASKET** 



SIDE

FRONT



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



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# 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**

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: Blue
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:** 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.

PANEL MOUNTING



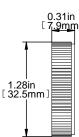
FITS PANELS UP TO 0.60in [15.2mm] THICK

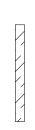
## DIMENSIONS

RING

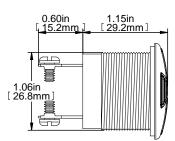


**REAR** 



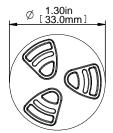


**GASKET** 



SIDE

**FRONT** 



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



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# 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

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 Warble Tone

Color: Blue **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

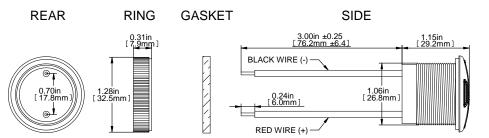
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

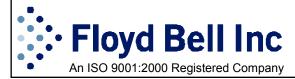
#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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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

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 Warble Tone

Color: Blue **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

3", 18AWG, GXL, Red and Black Wires

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20°C to +65°C -40°C to +85°C. Storage Temperature:

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.

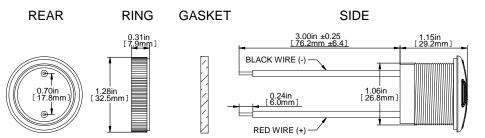
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# **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

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 Warble Tone

Color: Green **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

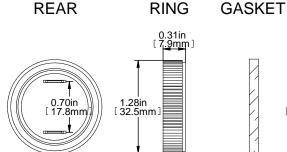
0.60in [15.2mm] THICK

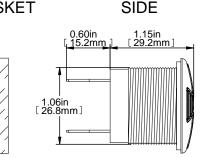
PANEL MOUNTING

FITS PANELS UP TO

\*Not Evaluated by UL

#### **DIMENSIONS**







**FRONT** 

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



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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

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 Warble Tone

Color: Green
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:** 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

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

NEMĂ 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.

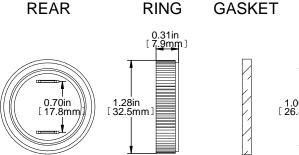
FITS PANELS UP TO

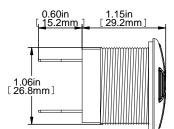
0.60in [15.2mm] THICK

PANEL MOUNTING

#### **DIMENSIONS**

\*Not Evaluated by UL





SIDE

Ø [33.0mm]

**FRONT** 

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



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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

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 Warble Tone

Color: Green **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: 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

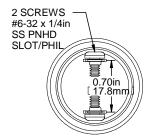
#### **DIMENSIONS**

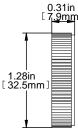
**REAR** 

**GASKET** 

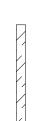
SIDE

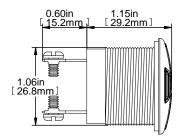
**FRONT** 





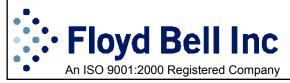
RING







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



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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

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 Warble Tone

Color: Green
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: 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.

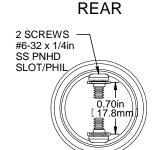
**Life Expectancy:** 10 years under normal operating conditions.

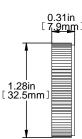
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

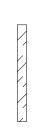
0.60in [15.2mm] THICK \*Not Evaluated by UL

#### **DIMENSIONS**

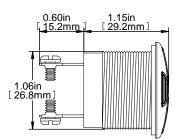




RING

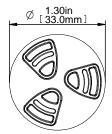


**GASKET** 



SIDE

FRONT



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



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# 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

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 Warble Tone

Color: Green
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

NEMĀ 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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

## DIMENSIONS

\_

\*Not Evaluated by UL

Ø [33.0mm]

**FRONT** 

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



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# **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

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 Warble Tone

Color: Green
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

NEMĀ 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.

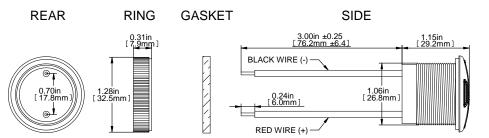
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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



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# **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

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**

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: Red
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: 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: 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.

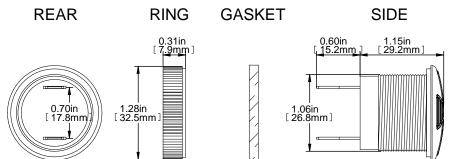
\*Not Evaluated by UL

#### PANEL MOUNTING

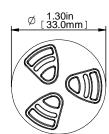


FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**



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



**FRONT** 



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# **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

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

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: Red
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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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

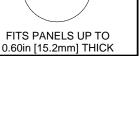
SIDE

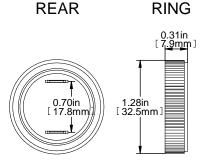
operating conditions.

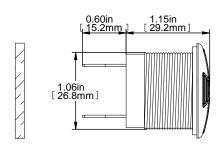
ELS UP TO \*Not Evaluated by UL

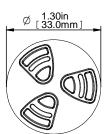
#### **DIMENSIONS**

**GASKET** 









**FRONT** 

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



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# 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 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**

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: Red
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: 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.

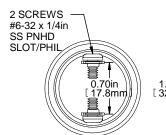
FITS PANELS UP TO 0.60in [15.2mm] THICK

PANEL MOUNTING

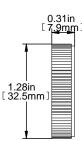
\*Not Evaluated by UL

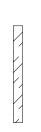
RING

#### **DIMENSIONS**

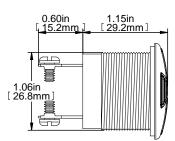


**REAR** 



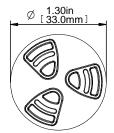


**GASKET** 



SIDE

FRONT



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



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# 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Red **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 

2900±250 Hz.

1±25% Cycles per second 110 mA at 9 Vdc

Typical Operating Current: 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

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.

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

2 SCREWS

#6-32 x 1/4in

SS PNHD SLOT/PHIL

## **DIMENSIONS**

RING

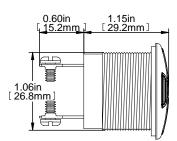


0.70in

17.8mm

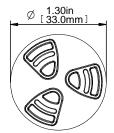
# 0.31in .28in [ 32.5mm]

#### **GASKET**

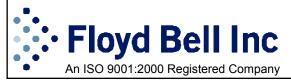


SIDE

#### **FRONT**



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



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# 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**

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Red **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

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.

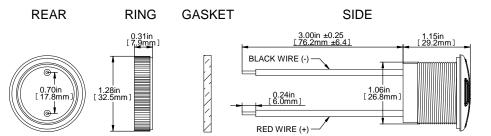
\*Not Evaluated by UL

#### PANEL MOUNTING



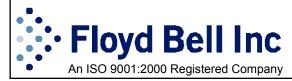
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**



**FRONT** 

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



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# **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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Red **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

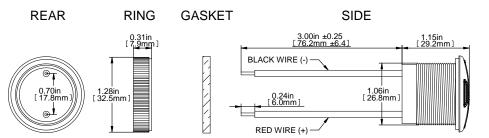
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

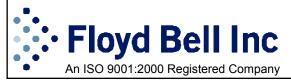
#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# **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

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 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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

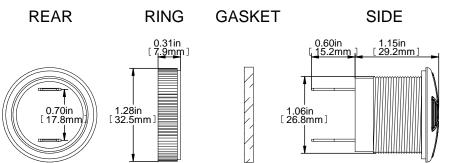
PANEL MOUNTING



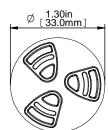
FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



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



**FRONT** 



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# **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

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

\*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.

\*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.

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

NEMĂ 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.

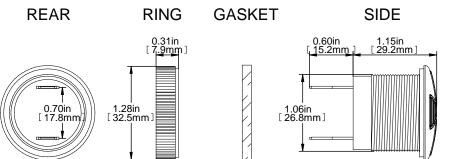
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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



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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

PANEL MOUNTING

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.

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: 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

SIDE

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.

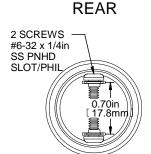
Warranty: For a period of two years from the date of manufacture under normal

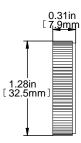
operating conditions.

FITS PANELS UP TO
0.60in [15.2mm] THICK

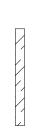
\*Not Evaluated by UL

#### **DIMENSIONS**

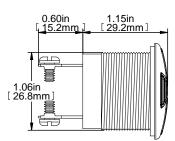




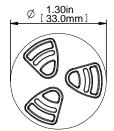
RING



**GASKET** 



FRONT



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



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# TLHW-88W-93<u>0-SS</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

PANEL MOUNTING

FITS PANELS UP TO

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 \*85±5 dB(A), at 9 Vdc, at 24 inches (61 cn

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.

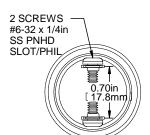
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

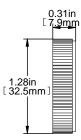
operating conditions.

0.60in [15.2mm] THICK \*Not Evaluated by UL

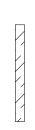
#### DIMENSIONS



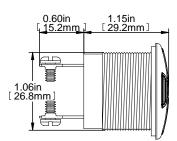
**REAR** 



RING



**GASKET** 

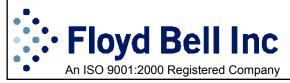


SIDE

Ø [33.0mm]

**FRONT** 

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



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# TLHW-88W-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

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.

3±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

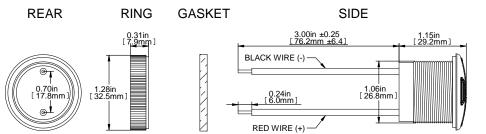
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

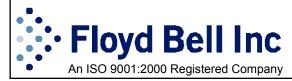
#### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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

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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*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 -40°C to +85°C. Storage Temperature:

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.

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

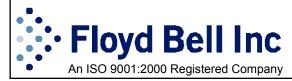
## **DIMENSIONS**

\*Not Evaluated by UL

#### **REAR RING GASKET** SIDE BLACK WIRE (-) 1.28in [ 32.5mm] 1.06in [ 26.8mm ] RED WIRE (+) -

**FRONT** 

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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Yellow **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

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

-20°C to +65°C

Operating Temperature: -40°C to +85°C. Storage Temperature:

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.

PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

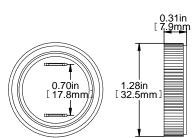
**REAR** 

# **DIMENSIONS**

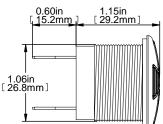
**GASKET** 

RING

\*Not Evaluated by UL

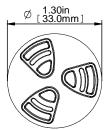


0.60in 15.2mi 1.06in [ 26.8mm]



SIDE

**FRONT** 



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



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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 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

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: Yellow
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: 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: Lens/Case- Red Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black

NEMĂ 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

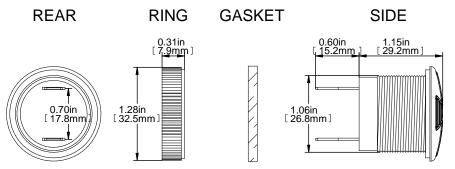
operating conditions.

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

\*Not Evaluated by UL



Ø [33.0mm]

**FRONT** 

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



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# TLHW-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**

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: Yellow
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:** 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.

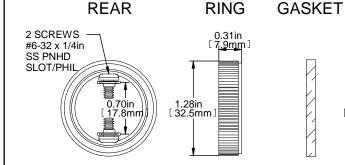
L 27.051mm J

PANEL MOUNTING

FITS PANELS UP TO 0.60in [15.2mm] THICK

#### **DIMENSIONS**

Not Evaluated by UL



0.60in 1.15in [29.2mm]

SIDE

Ø [33.0mm]

**FRONT** 

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



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# 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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Yellow **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: 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

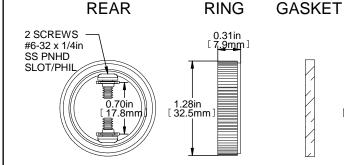
FITS PANELS UP TO

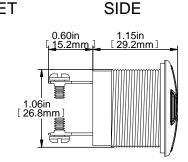
0.60in [15.2mm] THICK

PANEL MOUNTING

### **DIMENSIONS**

\*Not Evaluated by UL

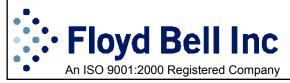




1.30in [ 33.0mm]

**FRONT** 

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



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# **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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Yellow **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc **Operating Frequency:** 2900±250 Hz.

**Typical Sound Pressure:** 

3±25% Cycles per second

Typical Operating Current: 110 mA at 9 Vdc 50 mA at 30 Vdc

\*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 -40°C to +85°C. Storage Temperature:

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

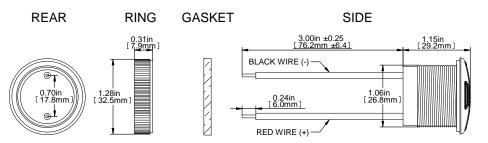
operating conditions.

FITS PANELS UP TO 0.60in [15.2mm] THICK

PANEL MOUNTING

### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# 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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Yellow **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

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** \*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.

3", 18AWG, GXL, Red and Black Wires

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20°C to +65°C -40°C to +85°C. Storage Temperature:

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.

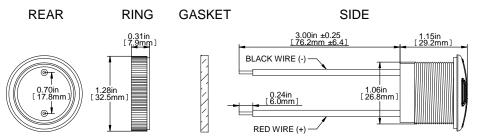
PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

\*Not Evaluated by UL



**FRONT** 

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



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# **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

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**

**Operating Mode:** Extra Bright LED Plus Extra Loud Warble Tone

Color: Red **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc

**Operating Frequency:** 2900±250 Hz.

1±25% Cycles per second 110 mA at 9 Vdc

Typical Operating Current: 50 mA at 30 Vdc

\*85±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C (with volume control open) **Typical Sound Pressure:** 

\*103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. (with volume control open) Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

-20°C to +65°C

Operating Temperature: -40°C to +85°C. **Storage Temperature:** 

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.

PANEL MOUNTING



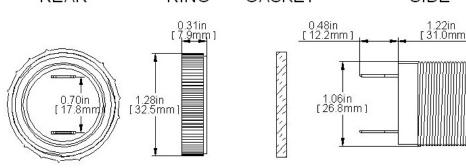
FITS PANELS UP TO 0.60in [15.2mm] THICK

REAR RING GASKET

SIDE

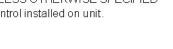


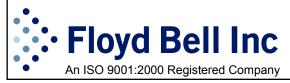
# **DIMENSIONS**



\*Not Evaluated by UL

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





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Revision: 4.11

FRONT

# **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**

Operating Mode: LED Panel Indicator

Color: Blue

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 250 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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. 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

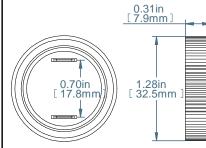
RFAR

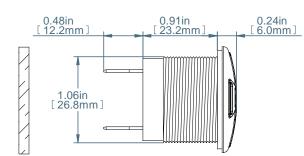
### **DIMENSIONS**

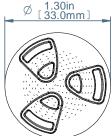
RING

GASKET SIDE

FRONT







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



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# **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**

Operating Mode: LED Panel Indicator

Color: Blue

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 250 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30°C to +80°C. Storage Temperature: -40°C to +100°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— Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black 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.

# PANEL MOUNTING



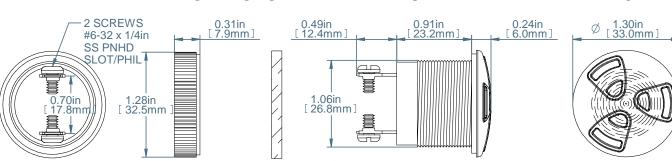
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

REAR RING GASKET

SIDE

**FRONT** 



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



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# **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**

Operating Mode: LED Panel Indicator

Color: Blue

Operating Voltage: 24 Vdc ± 20% Nominal Operating Voltage: 24 Vdc

Typical Brightness: 250 cd/m<sup>2</sup> ± 20% at 24 Vdc

Max. Operating Current: 80 mA at 24 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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℃ 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.

# PANEL MOUNTING



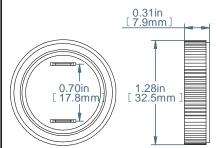
FITS PANELS UP TO 0.60in [15.2mm] THICK

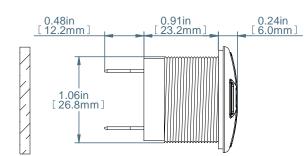
### **DIMENSIONS**

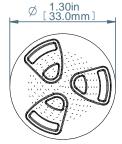
REAR RING G

GASKET SIDE

FRONT







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



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# **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**

Operating Mode: LED Panel Indicator

Color: Blue

Operating Voltage: 24 Vdc ± 20% Nominal Operating Voltage: 24 Vdc

Typical Brightness: 250 cd/m<sup>2</sup> ± 20% at 24 Vdc

Max. Operating Current: 80 mA at 24 Vdc

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: -30°C to +80°C. Storage Temperature: -40°C to +100°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— Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black 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℃ 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.

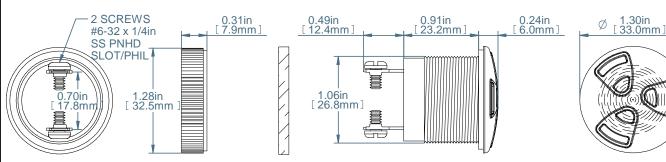
### PANEL MOUNTING



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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# 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**

Operating Mode: LED Panel Indicator

Color: Green

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 350 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

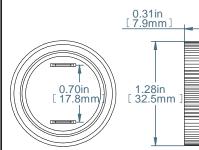
### **DIMENSIONS**

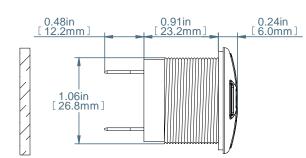
RFAR RING

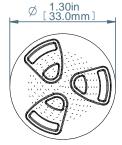
GASKET

SIDE

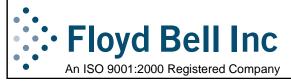
**FRONT** 







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



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# **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**

Operating Mode: LED Panel Indicator

Color: Green

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 350 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

**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: -30°C to +80°C. Storage Temperature: -40°C to +100°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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

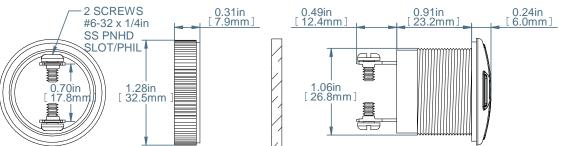
### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

# REAR RING GASKET SIDE FRONT



Ø [1.30in | 33.0mm]

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



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# **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**

Operating Mode: LED Panel Indicator

Color: Green

Operating Voltage: 24 Vdc ± 20% Nominal Operating Voltage: 24 Vdc

Typical Brightness: 350 cd/m<sup>2</sup> ± 20% at 24 Vdc

Max. Operating Current: 80 mA at 24 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

REAR RING GASKET

SIDE

**FRONT** 



0.48in [0.91in [23.2mm]] [0.24in [6.0mm]]



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



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# **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 resistant case. This rugged panel light is ideal for indoor and outdoor industrial applications.

### **SPECIFICATIONS**

Operating Mode: LED Panel Indicator

Color: Green

Operating Voltage: 24 Vdc ± 20%

Nominal Operating Voltage: 24 Vdc

Typical Brightness: 350 cd/m<sup>2</sup> ± 20% at 24 Vdc
Max. Operating Current: 80 mA at 24 Vdc

**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: -30°C to +80°C. Storage Temperature: -40°C to +100°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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene

Environmental Durability: ASTM B117 Certified-Withstands exposure to salt spray for 300 hours

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

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.

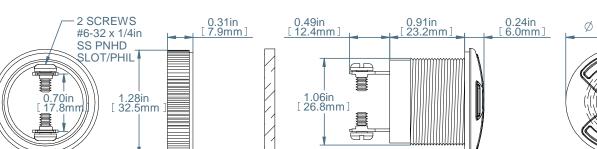
### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

# REAR RING GASKET SIDE FRONT



Ø [1.30in | 33.0mm]

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



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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 Pin

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

Operating Mode: LED Panel Indicator

Color: Red

Operating Voltage: 12 Vdc ± 20%

Nominal Operating Voltage: 12 Vdc

Typical Brightness:  $1000 \text{ cd/m}^2 \pm 20\% \text{ at } 12 \text{ Vdc}$ 

Max. Operating Current: 80 mA at 12 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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

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℃ 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

RFAR

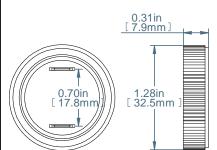
### **DIMENSIONS**

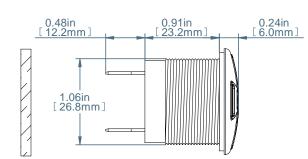
**GASKET** 

RING

SIDE

**FRONT** 







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



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# **TLL-87R-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**

Operating Mode: LED Panel Indicator

Color: Red

Operating Voltage: 12 Vdc ± 20%

Nominal Operating Voltage: 12 Vdc

Typical Brightness: 1000 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30°C to +80°C. Storage Temperature: -40°C to +100°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

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.

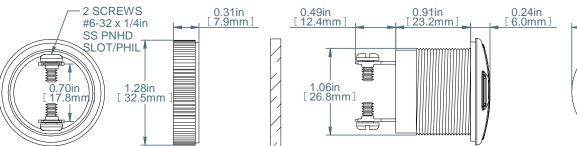
PANEL MOUNTING



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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# **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 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

Operating Mode: LED Panel Indicator

Color: Red

Operating Voltage: 24 Vdc ± 20%

Nominal Operating Voltage: 24 Vdc

Typical Brightness:  $1000 \text{ cd/m}^2 \pm 20\% \text{ at } 24 \text{ Vdc}$ 

Max. Operating Current: 80 mA at 24 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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

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℃ 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

RFAR

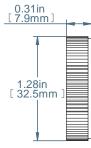
**RING** 

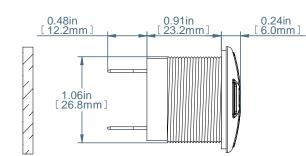
**GASKET** 

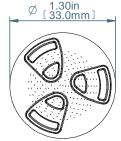
SIDE

**FRONT** 

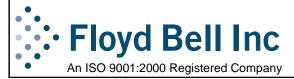








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# **TLL-87R-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

**Operating Mode:** LED Panel Indicator

Color: Red

**Operating Voltage:** 24 Vdc ± 20%

Nominal Operating Voltage: 24 Vdc

 $1000 \text{ cd/m}^2 \pm 20\% \text{ at } 24 \text{ Vdc}$ **Typical Brightness:** 

Max. Operating Current: 80 mA at 24 Vdc

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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

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℃ 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.

# PANEL MOUNTING



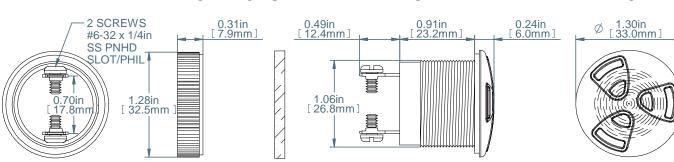
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

#### **RING GASKET** REAR

SIDE

**FRONT** 



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



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# 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

Operating Mode: LED Panel Indicator

Color: White

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 900 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

RFAR

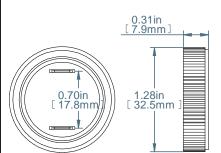
### **DIMENSIONS**

RING

GASKET SIDE

Ø [33.0mm]

**FRONT** 



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



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# **TLL-87W-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

**LED Panel Indicator Operating Mode:** 

Color: White

12 Vdc ± 20% **Operating Voltage:** Nominal Operating Voltage: 12 Vdc

 $900 \text{ cd/m}^2 \pm 20\% \text{ at } 12 \text{ Vdc}$ Typical Brightness:

Max. Operating Current: 80 mA at 12 Vdc

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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-Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

0.24in 6.0mm

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.

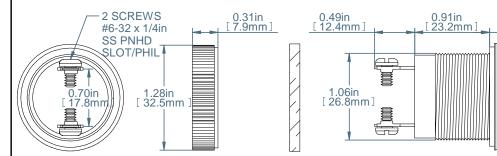
#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

#### **RING GASKET** SIDE **FRONT** REAR





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



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# **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

Operating Mode: LED Panel Indicator

Color: White

Operating Voltage: 24 Vdc ± 20% Nominal Operating Voltage: 24 Vdc

Typical Brightness: 900 cd/m<sup>2</sup> ± 20% at 24 Vdc

Max. Operating Current: 80 mA at 24 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

RFAR

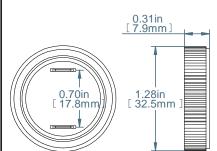
### **DIMENSIONS**

**GASKET** 

RING

SIDE

**FRONT** 





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



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# **TLL-87W-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**

Operating Mode: LED Panel Indicator

Color: White

Operating Voltage: 24 Vdc ± 20% Nominal Operating Voltage: 24 Vdc

Typical Brightness: 900 cd/m<sup>2</sup> ± 20% at 24 Vdc

Max. Operating Current: 80 mA at 24 Vdc

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: -30°C to +80°C. Storage Temperature: -40°C to +100°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— Clear Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

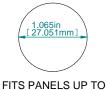
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

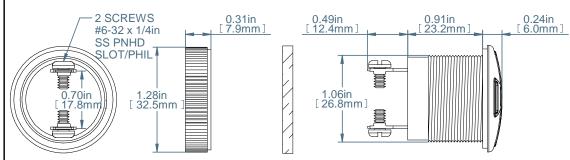
# PANEL MOUNTING



0.60in [15.2mm] THICK

### **DIMENSIONS**

# REAR RING GASKET SIDE FRONT



Ø [1.30in | 33.0mm]

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



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# **TLL-87Y-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

Operating Mode: LED Panel Indicator

Color: Yellow

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 750 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

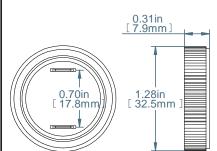
RFAR

### **DIMENSIONS**

RING

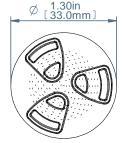
GASKET

FRONT

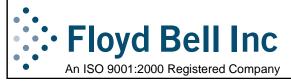


0.48in [ 0.91in [ 0.24in [ 6.0mm]]

SIDE



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



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# **TLL-87Y-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

Operating Mode: LED Panel Indicator

Color: Yellow

Operating Voltage: 12 Vdc ± 20% Nominal Operating Voltage: 12 Vdc

Typical Brightness: 750 cd/m<sup>2</sup> ± 20% at 12 Vdc

Max. Operating Current: 80 mA at 12 Vdc

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: -30°C to +80°C. Storage Temperature: -40°C to +100°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— Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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℃ 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.

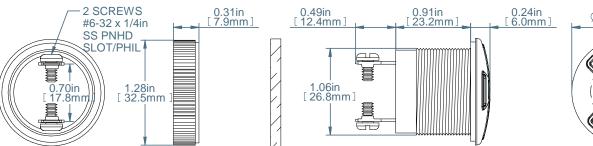
#### PANEL MOUNTING

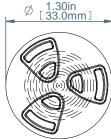


FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

# REAR RING GASKET SIDE FRONT





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



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# **TLL-87Y-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

Operating Mode: LED Panel Indicator

Color: Yellow

Operating Voltage: 24 Vdc ± 20% Nominal Operating Voltage: 24 Vdc

Typical Brightness: 750 cd/m<sup>2</sup> ± 20% at 24 Vdc

Max. Operating Current: 80 mA at 24 Vdc

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: -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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— Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ 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.

#### PANEL MOUNTING



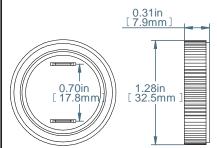
FITS PANELS UP TO 0.60in [15.2mm] THICK

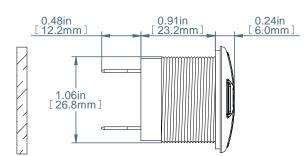
### **DIMENSIONS**

REAR RING G

GASKET SIDE

FRONT







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



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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

**Operating Mode:** LED Panel Indicator

Yellow

Color: 24 Vdc ± 20% **Operating Voltage:** 

Nominal Operating Voltage: 24 Vdc

SPECIFICATIONS

applications.

 $750 \text{ cd/m}^2 \pm 20\% \text{ at } 24 \text{ Vdc}$ **Typical Brightness:** 

**Max. Operating Current:** 80 mA at 24 Vdc

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

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

Stainless Steel Screws

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -30℃ to +80℃. Storage Temperature: -40℃ to +100℃.

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- Yellow Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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℃ 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.

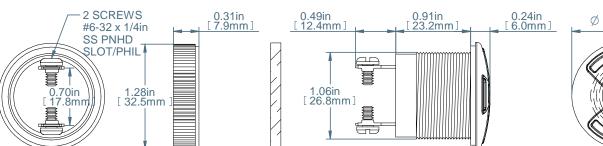
#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

#### **RING GASKET** SIDE REAR



1.30in [ 33.0mm ]

**FRONT** 

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



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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**

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Blue
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 900 cd/m² ± 20% at 9 Vdc 1000 cd/m² ± 20% at 30 Vdc

Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Blue Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

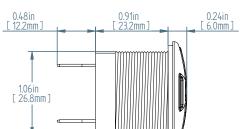
# PANEL MOUNTING



0.60in [15.2mm] THICK

### **DIMENSIONS**



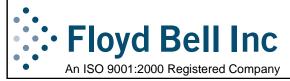


SIDE

# **FRONT**



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



1.28in [ 32.5mm]

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# TLM-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Blue
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 900 cd/m² ± 20% at 9 Vdc 1000 cd/m² ± 20% at 30 Vdc

Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Blue Translucent Polycarbonate UL94V-0 Potting- 2 parts epoxy resin or silicone, black

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.

#### PANEL MOUNTING



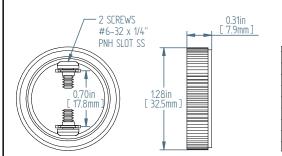
FITS PANELS UP TO 0.60in [15.2mm] THICK

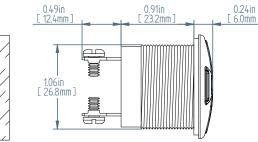
# DIMENSIONS

# REAR RING GASKET

SIDE

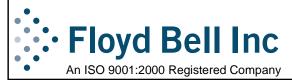
# **FRONT**







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



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# TLM-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Green
Operating Voltage: 9-30 Vdc

Nominal Operating Voltage: 24 Vdc
Typical Brightness: 900 cd/m<sup>2</sup> ± 20% at 9 Vdc

1000 cd/m² ± 20% at 30 Vdc

Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

REAR

### **DIMENSIONS**

**GASKET** 

0.31in \_\_\_\_\_\_



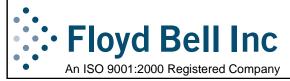
**RING** 

SIDE



**FRONT** 

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



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# TLM-87G-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Green
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

**Typical Brightness:** 900 cd/m<sup>2</sup> ± 20% at 9 Vdc

 $1000 \text{ cd/m}^2 \pm 20\% \text{ at } 30 \text{ Vdc}$ 

Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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— Green Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

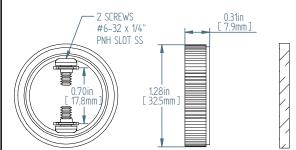
# PANEL MOUNTING

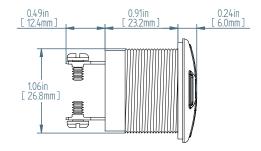


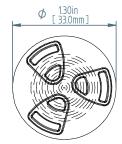
FITS PANELS UP TO 0.60in [15.2mm] THICK

# DIMENSIONS

REAR RING GASKET SIDE FRONT







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



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# TLM-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Red Operating Voltage: 9-30 Vdc

Nominal Operating Voltage: 24 Vdc

Typical Brightness:  $2000 \text{ cd/m}^2 \pm 20\% \text{ at 9 Vdc}$   $2200 \text{ cd/m}^2 \pm 20\% \text{ at 30 Vdc}$ Max. Operating Current: 80 mA at 9 Vdc

Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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 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.

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

REAR

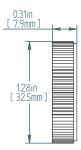
**RING** 

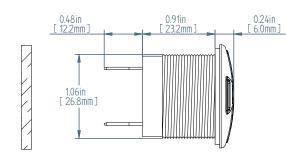
**GASKET** 

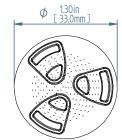
SIDE

**FRONT** 









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



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# TLM-87R-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Red
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 2000 cd/m<sup>2</sup> ± 20% at 9 Vdc 2200 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 80 mA at 9 Vdc

40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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 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.

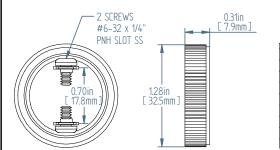
# PANEL MOUNTING

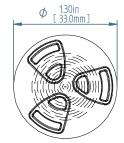


FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

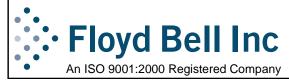
# REAR RING GASKET SIDE





**FRONT** 

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



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# TLM-87W-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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: White
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 2500 cd/m<sup>2</sup> ± 20% at 9 Vdc

 $3000 \text{ cd/m}^2 \pm 20\% \text{ at } 30 \text{ Vdc}$ Max. Operating Current: 80 mA at 9 Vdc

40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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- Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

#### PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

REAR F

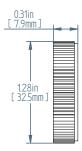
**RING** 

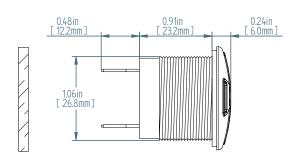
**GASKET** 

SIDE

**FRONT** 









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



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# TLM-87W-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: White
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 2500 cd/m<sup>2</sup> ± 20% at 9 Vdc 3000 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 80 mA at 9 Vdc

40 mA at 30 Vdc

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: -40°C to +85°C.
Storage Temperature: -40°C to +100°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— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

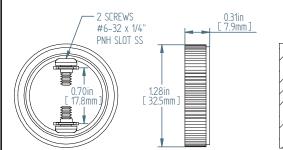
#### PANEL MOUNTING

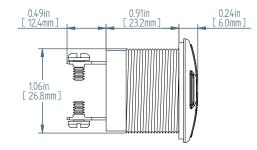


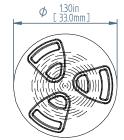
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

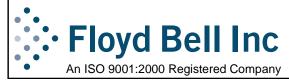
# REAR RING GASKET SIDE FRONT







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



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# TLM-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Yellow Operating Voltage: 9-30 Vdc

Nominal Operating Voltage: 24 Vdc
Typical Brightness: 1800 cd/m² ± 20% at 9 Vdc

2000 cd/m $^2$  ± 20% at 30 Vdc Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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—Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

# PANEL MOUNTING



FITS PANELS UP TO 0.60in [15.2mm] THICK

REAR

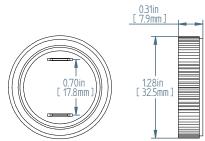
### **DIMENSIONS**

RING GASKET

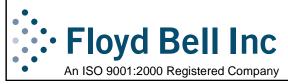
SIDE

# φ [330mm]

**FRONT** 



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



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# TLM-87Y-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 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

Operating Mode: Bright Continuous Output LED Panel Indicator

Color: Yellow
Operating Voltage: 9-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 1800 cd/m<sup>2</sup> ± 20% at 9 Vdc 2000 cd/m<sup>2</sup> ± 20% at 30 Vdc

Max. Operating Current: 80 mA at 9 Vdc 40 mA at 30 Vdc

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: -40°C to +85°C. Storage Temperature: -40°C to +100°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— Yellow Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

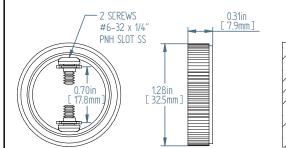
# PANEL MOUNTING

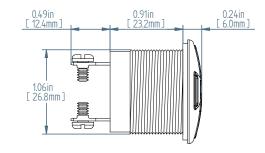


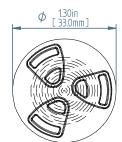
FITS PANELS UP TO 0.60in [15.2mm] THICK

### **DIMENSIONS**

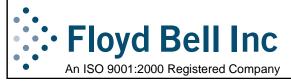
REAR RING GASKET SIDE FRONT







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



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# **TLSH-87B-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**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Blue Light

Operating Voltage: 5-12Vdc
Nominal Operating Voltage: 12Vdc

**Typical Brightness:** 4000 cd/m<sup>2</sup> Red ± 20% at 12Vdc

Typical Flash Rate:

1 pulse per second ± 20%

Typical Operating Current:

1 pulse per second ± 20%

Note: These are typical of measurements taken with a

standard DMM. Peak current at 12Vdc can be near 700mA. **Termination:**2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃. Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

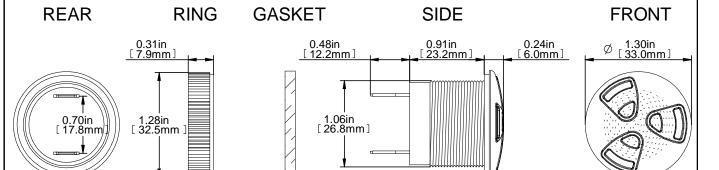
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**



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



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# **TLSH-87B-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**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Blue Light
Operating Voltage: 5-30 Vdc

Nominal Operating Voltage: 24 Vdc

Typical Brightness: 4000 cd/m<sup>2</sup> Red ± 20% at 24 Vdc

Typical Flash Rate: 1 pulse per second ± 20%

Typical Operating Current: 170mA at 24 Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.

**Termination:** 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness. **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃. Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

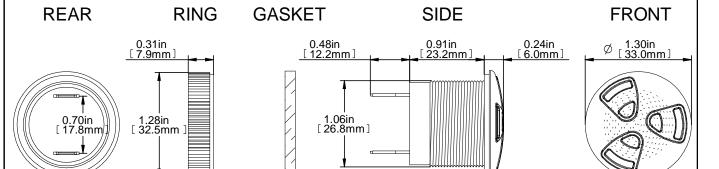
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

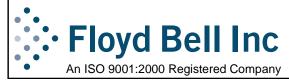
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

# DIMENSIONS



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



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### **TLSH-87G-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**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Green Light

Operating Voltage: 5-12Vdc

Nominal Operating Voltage: 12Vdc

Typical Brightness: 12000 cd/m² Red ± 20% at 12Vdc

Typical Flash Rate: 1 pulse per second ± 20%
Typical Operating Current: 110mA at 12Vdc Note: These are typical of measurements taken with a

standard DMM. Peak current at 12Vdc can be near 700mA.

Yermination: 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.

**Termination:** 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.03 **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃. Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

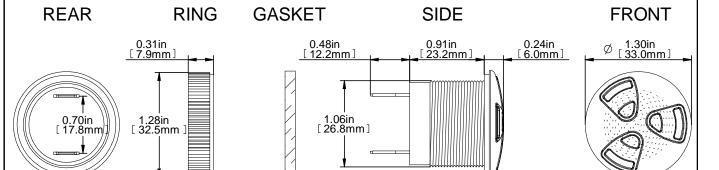
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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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### **TLSH-87G-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**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Green Light

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Typical Brightness: 12000 cd/m<sup>2</sup> Red ± 20% at 24 Vdc

Typical Flash Rate: 1 pulse per second ± 20%

Typical Operating Current: 170mA at 24 Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.

Termination: 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40°C to +85°C. Storage Temperature: -40°C to +100°C.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case—Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

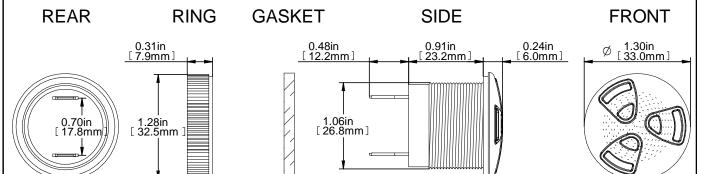
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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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### **TLSH-87R-12V-Q**

## Made in USA





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.

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

#### **SPECIFICATIONS**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Red Light
Operating Voltage: 5-12Vdc

Nominal Operating Voltage: 24 Vdc
Typical Brightness: 15000 cd/m<sup>2</sup> Red ± 20% at 12Vdc

Typical Flash Rate: 1 pulse per second ± 20%

Typical Operating Current: 110mA at 12Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.

**Termination:** 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness. **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃.
Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case—Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

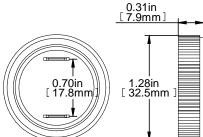
**Life Expectancy:** 10 years under normal operating conditions.

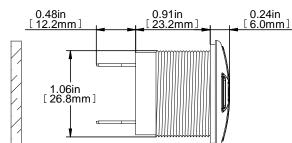
Warranty: For a period of two years from the date of manufacture under normal

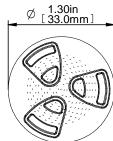
operating conditions.

#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT







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### **TLSH-87R-24V-Q**

## Made in USA





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.

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

#### **SPECIFICATIONS**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Red Light
Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 24 Vdc

Typical Brightness: 15000 cd/m<sup>2</sup> Red ± 20% at 24 Vdc

Typical Flash Rate: 1 pulse per second ± 20%

Typical Operating Current: 170mA at 24 Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.

Termination: 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40°C to +85°C. Storage Temperature: -40°C to +100°C.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case—Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

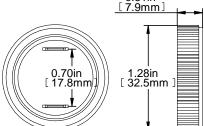
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

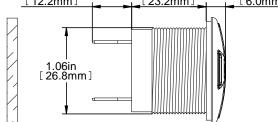
**Life Expectancy:** 10 years under normal operating conditions.

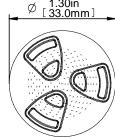
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**







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



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### **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**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits White Light

Operating Voltage: 5-12 Vdc Nominal Operating Voltage: 12 Vdc

Typical Brightness: 25000 cd/m<sup>2</sup> Red ± 20% at 12 Vdc

Typical Flash Rate: 1 pulse per second ± 20%

Typical Operating Current: 110mA at 12 Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.

**Termination:** 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness.

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃. Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ 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 0.31in 0.48in 0.91in 0.24in 1.30in [6.0mm] 7.9mm] 33.0mm] [ 12.2mm] 1.06in 1.28in [ 32.5mm ] 0.70in [26.8mm] [ 17.8mm

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### **TLSH-87W-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**

Extra-Bright Strobe LED Panel Indicator **Operating Mode:** 

Emits White Light Color:

5-30 Vdc **Operating Voltage:** Nominal Operating Voltage: 24 Vdc

25000 cd/m<sup>2</sup> Red ± 20% at 24 Vdc **Typical Brightness:** 

Typical Flash Rate: 1 pulse per second + 20%

Typical Operating Current: 170mA at 24 Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A

Termination: 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: -40℃ to +85℃. **Operating Temperature:** 

Storage Temperature: -40℃ to +100℃

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case—Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

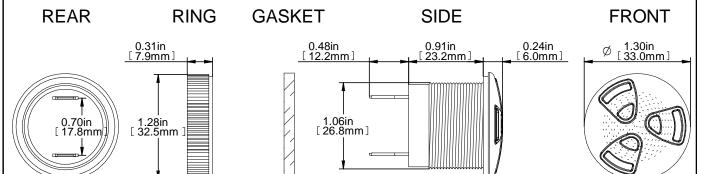
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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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### **TLSH-87Y-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

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Yellow Light

Operating Voltage: 5-12Vdc

Nominal Operating Voltage: 12Vdc
Typical Brightness: 25000 cd/m<sup>2</sup> Red ± 20% at 12Vdc

Typical Flash Rate: 1 pulse per second <u>+</u> 20%

Typical Operating Current: 110mA at 12Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 12Vdc can be near 700mA.

**Termination:** 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness. **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40℃ to +85℃.
Storage Temperature: -40℃ to +100℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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.

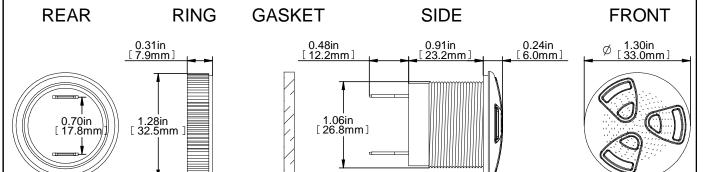
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**



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



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### **TLSH-87Y-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**

Operating Mode: Extra-Bright Strobe LED Panel Indicator

Color: Emits Yellow Light

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Typical Brightness: 25000 cd/m<sup>2</sup> Red ± 20% at 24 Vdc

Typical Flash Rate: 1 pulse per second <u>+</u> 20%

Typical Operating Current: 170mA at 24 Vdc Note: These are typical of measurements taken with a standard DMM. Peak current at 24Vdc can be near 1A.

**Termination:** 2 Quick Connect Blades, 0.25" (6.3mm) Width, 0.032" (0.8mm) Thickness. **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40°C to +85°C. Storage Temperature: -40°C to +100°C.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case— Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black 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℃ continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

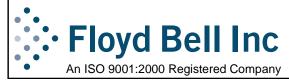
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

**REAR** RING **GASKET** SIDE FRONT 0.31in 0.48in 0.91in 0.24in 1.30in 7.9mm] [6.0mm] 33.0mm] [ 12.2mm] 1.06in 1.28in [ 32.5mm ] 0.70in [26.8mm] [ 17.8mm/

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



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### TLTH-87RYG-930-Q

## Made in USA





 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
 Hale

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**

Operating Mode: Extra-Bright Continuous Output LED Panel Indicator

Color: Emits Red, Yellow or Green Light (Individually)
Operating Voltage: 9-30 Vdc

Nominal Operating Voltage: 24 Vdc

Typical Brightness: (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 Max. Operating Current: ± 20% at 30 Vdc 145 mA at 9 Vdc 50 mA at 30 Vdc

Termination: 4 Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness, One

positive Blade and three negative Blades for color select.

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -40°C to +85°C. Storage Temperature: -40°C to +100°C.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Construction Materials: Lens/Case—Clear Translucent Polycarbonate UL94V-0

Potting- 2 parts epoxy resin or silicone, black Gasket – 0.125" Thick, 60 Durometer Neoprene

Environmental Durability: AS

Life Expectancy:

Warranty:

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.

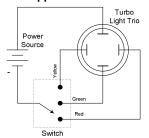
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal

operating conditions.

#### **Application Circuit**



#### DIMENSIONS

BACK **RING GASKET** SIDE FRONT 0.70 in [17.8 mm] 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [12.2 mm] [23.1 mm] - Yellow .⊑ H H 26.9 mm 1.28 32.5 I 0.24 in [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TMB-82-948-Q(F)

## Made in USA





 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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 B1

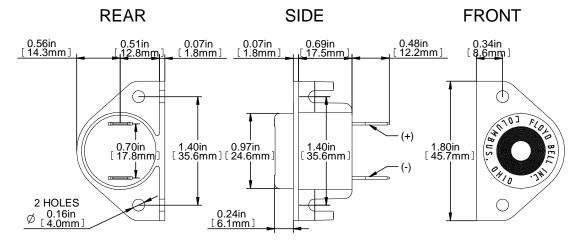
ASTM B117 Certified-Withstands exposure to salt spray for 300 hours Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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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### TMB-86-201-Q(F)

### Made in USA



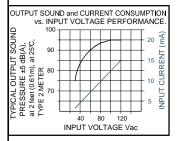


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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

30-120 Vac Operating Voltage: 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℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination: Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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.

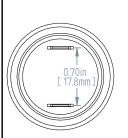
#### **DIMENSIONS**

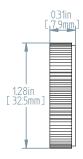
**REAR RING** 

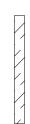
**GASKET** SIDE

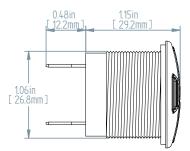


**FRONT** 

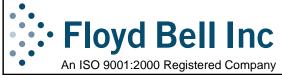








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TMB-86-201-Q(M)

## Made in USA



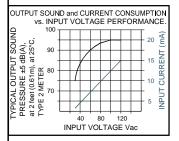


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±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 Temporature: Pull lest with a maximum of 22 pounds (10 kg

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.

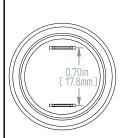
#### **DIMENSIONS**

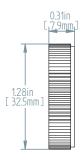
REAR RING

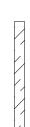
GASKET

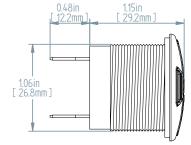
SIDE

**FRONT** 











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



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### TMB-86-201-Q(S)

### Made in USA



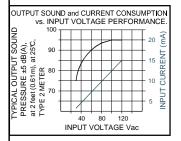


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Medium Loud Beep Tone

30-120 Vac Operating Voltage: Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

1±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℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination: Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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**

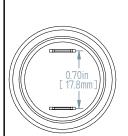
**REAR** 

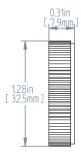
**RING** 

**GASKET** 

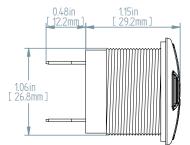
SIDE

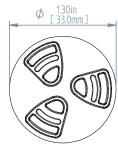
**FRONT** 











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



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### TMB-86-201-S(F)

## Made in USA



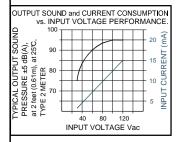


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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**

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℃.

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

ty: ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified– Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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

SIDE

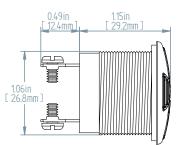
conditions.

#### **DIMENSIONS**



RING

**GASKET** 



(33,0mm)

**FRONT** 

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



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### TMB-86-201-S(S)

## Made in USA



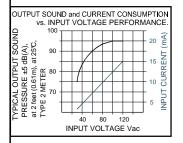


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

The Turbo TMB-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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

1±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℃.

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 fo

ASTM B117 Certified- 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.

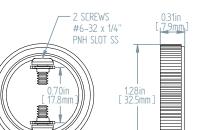
Life Expectancy: 10 years under normal operating conditions.

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

SIDE

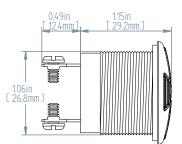
conditions.

#### **DIMENSIONS**



RING

**GASKET** 



φ [330mm]

**FRONT** 

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



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### TMB-86-530-P(F)

## Made in USA



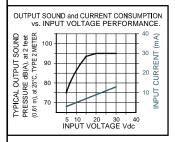


Patent-Pending
 Revolutionary Turbo Design

 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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Beeps 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℃

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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

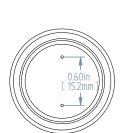
Life Expectancy: 10 years under normal operating conditions.

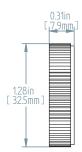
Warranty: For a period of two years from the date of manufacture under normal

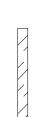
operating conditions.

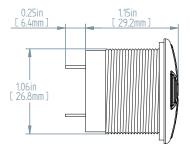
#### DIMENSIONS

REAR RING GASKET SIDE









FRONT



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



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### TMB-86-530-P(S)

## Made in USA



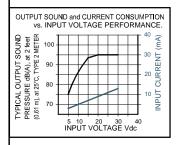


Patented Revolutionary
 Turbo Design

 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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

2900±250 Hz.

1±25% Beeps 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℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

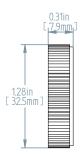
Warranty: For a period of two years from the date of manufacture under normal operating

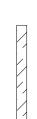
conditions.

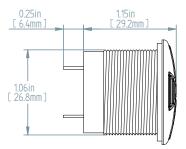
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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### TMB-86-530-Q(F)

## Made in USA



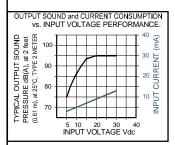


 Patented Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Beeps 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℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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% to +65%. Storage Temperature: -40% to +85%.

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 continu ously 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

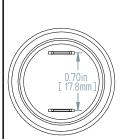
conditions.

#### **DIMENSIONS**

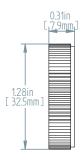
**GASKET** 

SIDE

**FRONT** 

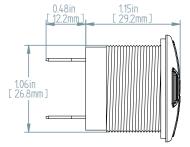


**REAR** 



**RING** 







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



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## TMB-86-530-Q(S)

### Made in USA



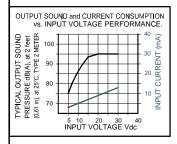


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMB-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 Beep Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

1±25% Beeps 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℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

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

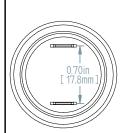
conditions.

#### **DIMENSIONS**

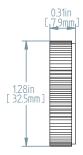
**GASKET** 

SIDE

**FRONT** 

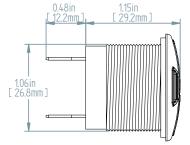


**REAR** 



**RING** 







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



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### TMB-86-530-S(F)

### Made in USA



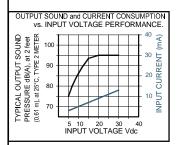


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMB-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

Medium Loud Beep Tone Operating Mode:

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

3±25% Beeps 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℃ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

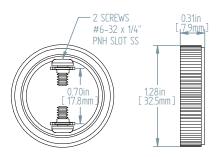
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

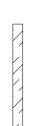
Life Expectancy: 10 years under normal operating conditions. Warranty: For a period of two years from the date of manufacture under normal operating

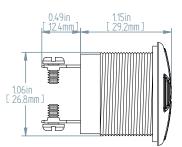
conditions.

#### **DIMENSIONS**

RING **GASKET** SIDE REAR









**FRONT** 

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



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### TMB-86-530-S(S)

## Made in USA



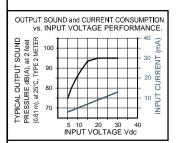


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc

Operating Frequency: 2900±250 Hz. 1±25% Beeps 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℃

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

SIDE

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

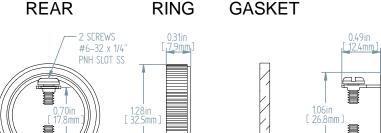
IP 68 Certified—Withstands water submergence and dust exposure Humidity-95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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

**FRONT** 

### TMB-86-530-W(F)

# Made in USA



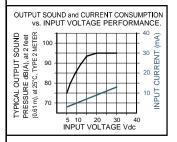


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Beeps 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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black 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 continu ously 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.

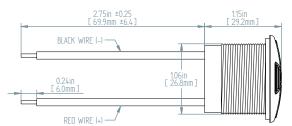
#### **DIMENSIONS**

REAR

**RING** 

1.28in [ 32.5mm] **GASKET** 

SIDE



FRONT



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



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### TMB-86-530-W(S)

### Made in USA



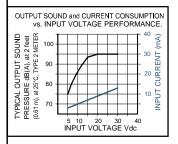


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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

Operating Mode: Medium Loud Beep Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±250 Hz. **Operating Frequency:** 

1±25% Beeps 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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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

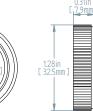
SIDE

operating conditions.

#### **DIMENSIONS**



**REAR** 



**RING** 

**GASKET** 

BLACK WIRE (-) 1.06in [ 26.8mm] RED WIRE (+)

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



**FRONT** 



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### TMB-86-531-P(F)

### Made in USA



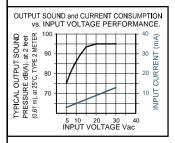


Patent-Pending

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

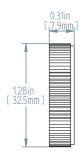
Warranty: For a period of two years from the date of manufacture under normal

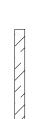
operating conditions.

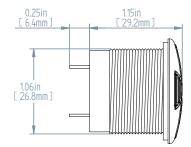
#### **DIMENSIONS**

**RING** SIDE RFAR **GASKET** 











FRONT

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



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### TMB-86-531-P(S)

### Made in USA





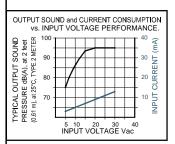
Patent-Pending

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃.

-40℃ to +85℃. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

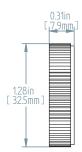
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

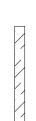
operating conditions.

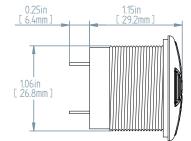
#### **DIMENSIONS**

**RING** SIDE RFAR **GASKET** FRONT











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



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### TMB-86-531-Q(F)

# Made in USA

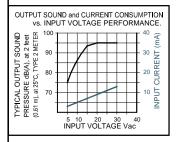




Patent-Pending
 Revolutionary Turbo Design

 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

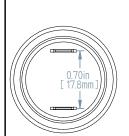
**Life Expectancy:** 10 years under normal operating conditions.

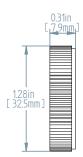
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

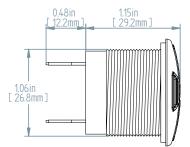
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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### TMB-86-531-Q(S)

## Made in USA



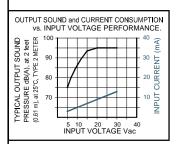


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

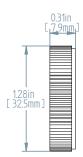
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

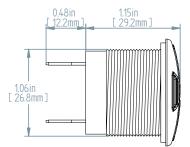
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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### TMB-86-531-S(F)

## Made in USA



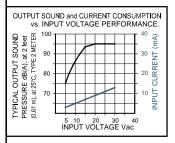


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



REAR

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**

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

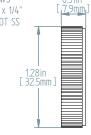
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

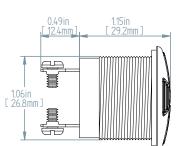
#### **DIMENSIONS**

2 SCREWS #6-32 x 1/4" [7,9 PNH SLOT SS



RING

**GASKET** 



SIDE

FRONT



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



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### TMB-86-531-S(S)

# Made in USA



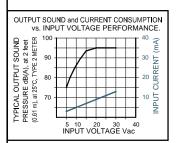


Patent-Pending
 Revolutionary Turbo Design

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Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMB-86-531-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**

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: 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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**

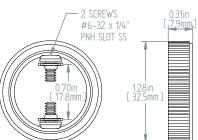
REAR

RING

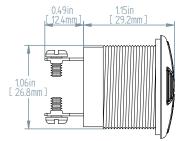
**GASKET** 

SIDE

**FRONT** 









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



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### TMB-86-531-W(F)

### Made in USA



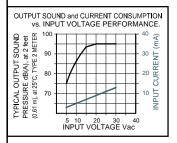


Patent-Pending Revolutionary Turbo Design

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃.

Storage Temperature: 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

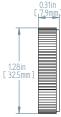
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

**REAR** 



**RING** 

**GASKET** 

Life Expectancy:

2.75in ±0.21 BLACK WIRE (-) 1.06in [ 26.8mm] RED WIRE (+)

SIDE

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



**FRONT** 





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### TMB-86-531-W(S)

## Made in USA



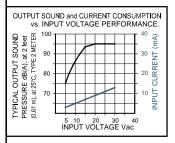


Patent-Pending
 Revolutionary Turbo Design

 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 $\pm$ 5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25 $^{\circ}$ C 95 $\pm$ 5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25 $^{\circ}$ 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

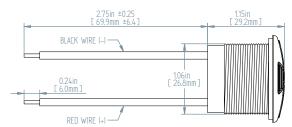
REAR

**RING** 

1.28in [ 32.5mm] **GASKET** 

Life Expectancy:

SIDE



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

FRONT





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### TMB-86-948-P(F)

# Made in USA



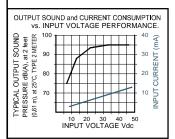


Patent-Pending
 Revolutionary Turbo Design

 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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

**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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

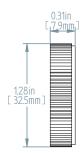
Warranty: For a period of two years from the date of manufacture under normal

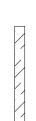
operating conditions.

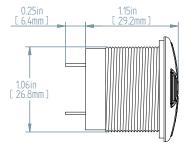
#### DIMENSIONS

REAR RING GASKET SIDE FRONT











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



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### TMB-86-948-P(S)

### Made in USA



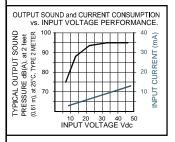


Patent-Pending Revolutionary Turbo Design

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 2900±250 Hz. **Operating Frequency:** 

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℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination: Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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 Warranty:

operating conditions.

#### **DIMENSIONS**

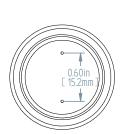
RFAR

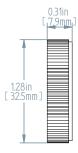
**RING** 

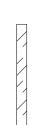
**GASKET** 

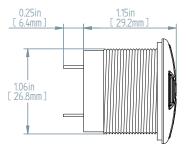
SIDE

FRONT











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



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### TMB-86-948-Q(F)

## Made in USA



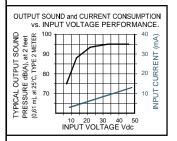


Patent-Pending
 Revolutionary Turbo Design

 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**

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Life Expectancy:

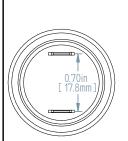
REAR

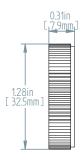
RING

**GASKET** 

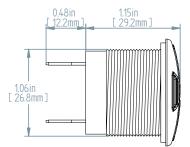
SIDE

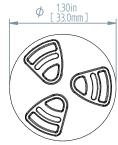
**FRONT** 











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



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### TMB-86-948-Q(S)

## Made in USA





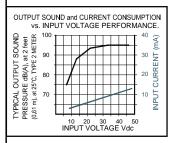
Patent-Pending

Revolutionary Turbo Design

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 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**

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: 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℃ to +65℃.

Storage Temperature: -20°C to +65°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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

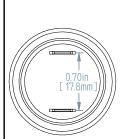
REAR

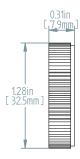
RING

**GASKET** 

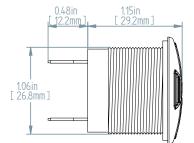
SIDE

**FRONT** 











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



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### TMB-86-948-S(F)

## Made in USA



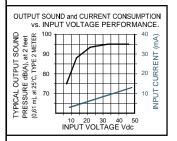


Patent-Pending
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REAR

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**

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℃. **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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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

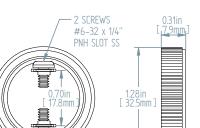
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

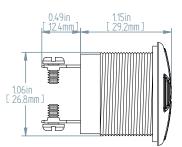
operating conditions.

#### **DIMENSIONS**



RING

**GASKET** 



SIDE

**FRONT** 

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



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# TMB-86-948-S(S)

# Made in USA



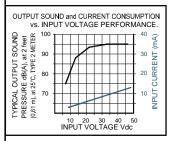


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMB-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**

Termination:

**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℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃

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℃ to +85℃.

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

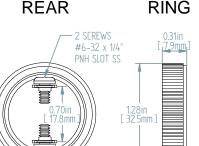
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

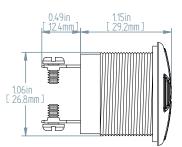
operating conditions.

## **DIMENSIONS**



RING

**GASKET** 



SIDE

**FRONT** 

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



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# TMB-86-948-W(F)

# Made in USA



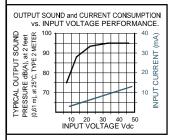


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMB-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**

**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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃.

-40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

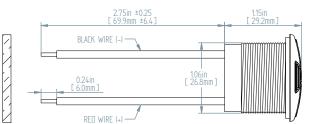
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

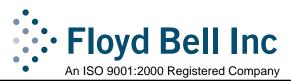
SIDE



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

**FRONT** 





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# TMB-86-948-W(S)

# Made in USA



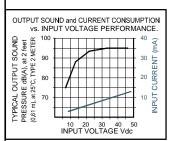


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMB-86-948-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.

### **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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -20℃ to +65℃.

-40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

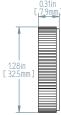
SIDE

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

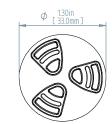
**RING REAR** 



**GASKET** 

BLACK WIRE (-) 1.06in [ 26.8mm] RED WIRE (+)

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



**FRONT** 



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# TMB-V86-201-Q(F)

# Made in USA



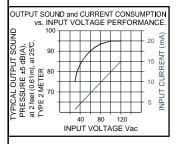


Patented Revolutionary
 Turbo Design

 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±250 Hz.

3±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±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃.

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 continu ously 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**

RFAR

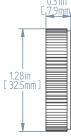
RING

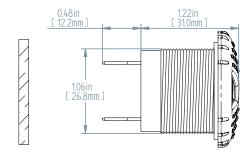
**GASKET** 

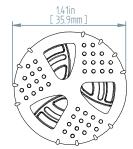
SIDE

**FRONT** 









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



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# TMB-V86-201-Q(S)

# Made in USA



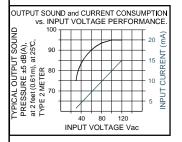


 Patented Revolutionary Turbo Design

 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±250 Hz.

1±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±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

RFAR

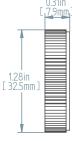
**RING** 

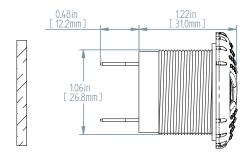
**GASKET** 

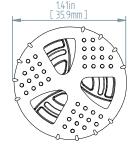
SIDE

**FRONT** 









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



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# TMB-V86-201-S(F)

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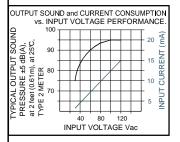


 Patented Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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±250 Hz.

3±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±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

**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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously 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**

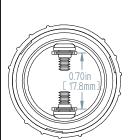
RFAR

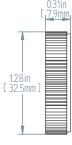
## **RING**

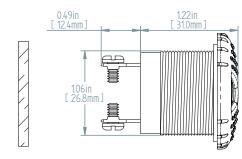
## **GASKET**

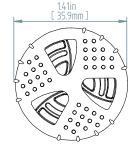
## SIDE

## **FRONT**









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



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# TMB-V86-201-S(S)

# Made in USA



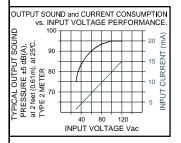


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TMB-V86-201-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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

1±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±5 dB(A), at 30 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

**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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously 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**

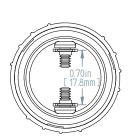


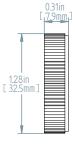
# **RING**

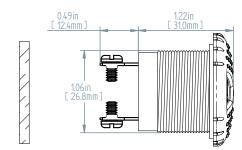
# **GASKET**

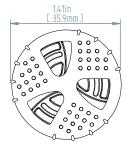
# SIDE

# FRONT









TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMB-V86-530-P(F)

# Made in USA



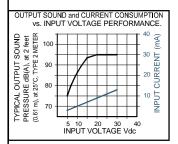


Patent-Pending
 Revolutionary Turbo Design

 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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Beeps per second

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℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

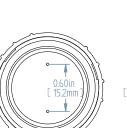
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

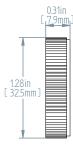
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

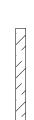
#### **DIMENSIONS**



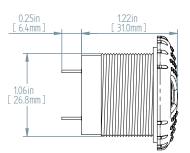
**REAR** 



**RING** 

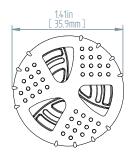


**GASKET** 



SIDE

## **FRONT**



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



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# TMB-V86-530-P(S)

# Made in USA



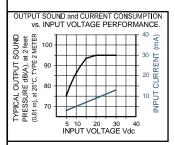


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±25% Beeps per second

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

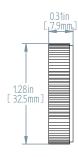
operating conditions.

## DIMENSIONS

Life Expectancy:

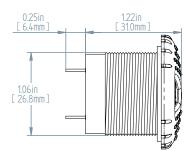
0.60in [ 15.2mm ]

**REAR** 



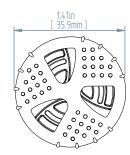
**RING** 

**GASKET** 



SIDE

**FRONT** 



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



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# TMB-V86-530-Q(F)

# Made in USA



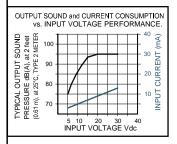


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Beeps per second

Typical Operating Current: 2 mA at 5 Vdc

10 mA at 30 Vdc

Typical Sound Pressure: With volume control fully open:

75 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95 $\pm$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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** 

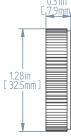
RING

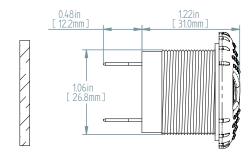
**GASKET** 

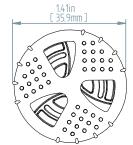
SIDE

**FRONT** 









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



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# TMB-V86-530-Q(S)

# Made in USA



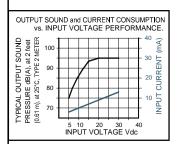


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±25% Beeps per second

Typical Operating Current: 2 mA at 5 Vdc

10 mA at 30 Vdc

Typical Sound Pressure: With volume control fully open:

75 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95 $\pm$ 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:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously 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**

RFAR

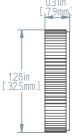
RING

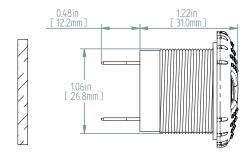
**GASKET** 

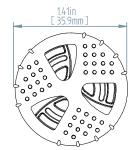
SIDE

FRONT

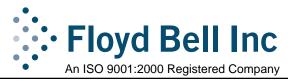








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# TMB-V86-530-S(F)

# Made in USA



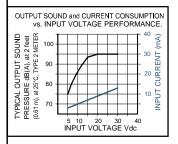


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

**Operating Mode:** Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

3±25% Beeps per second

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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**

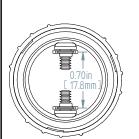
REAR

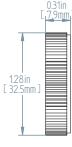
## **RING**

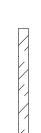
## **GASKET**

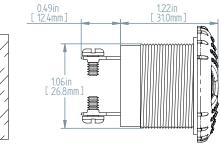
## SIDE

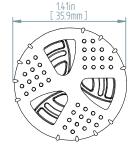
## **FRONT**











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# TMB-V86-530-S(S)

# Made in USA





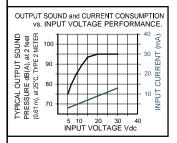
Patent-Pending

Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±25% Beeps per second

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously 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

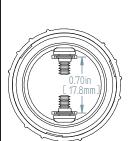
REAR

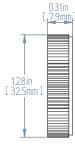
**RING** 

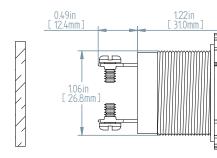
**GASKET** 

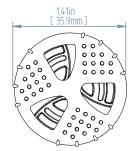
SIDE

**FRONT** 

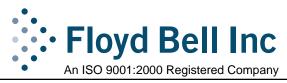








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# TMB-V86-530-W(F)

# Made in USA



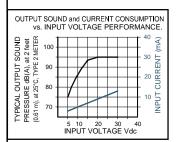


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

3±25% Beeps per second

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously 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**

0.311

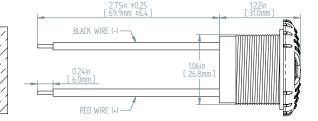
**REAR** 



RING

GASKET

SIDE



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

141n [35,9mm]

**FRONT** 



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# TMB-V86-530-W(S)

# Made in USA



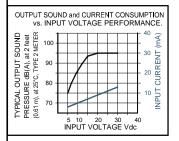


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

 Corrosion Resistant Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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**

Operating Mode: Medium Loud Beep Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±25% Beeps per second

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a 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 continu ously 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**

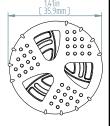
REAR

RING

**GASKET** 

SIDE

**FRONT** 



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



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# TMB-V86-531-P(F)

# Made in USA



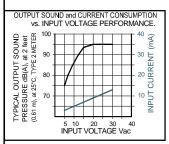


Patent-Pending Revolutionary Turbo Design

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 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 -20℃ to +65℃. **Operating Temperature:** 

**Storage Temperature:** -40℃ to +85℃.

Termination:

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

SIDE

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

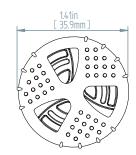
Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

## **DIMENSIONS**

**REAR RING GASKET** 106in 1.28in [ 32.5mm] [ 26.8mm ]



**FRONT** 

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



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# TMB-V86-531-P(S)

# Made in USA



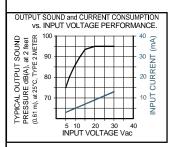


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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 snapfit 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

With volume control fully open:

**Typical Sound Pressure:** 

75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. -40℃ to +85℃.

Termination:

**Storage Temperature:** 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 **Environmental Durability:** 

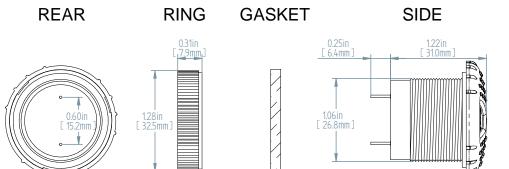
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

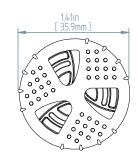
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**



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



**FRONT** 



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# TMB-V86-531-Q(F)

# Made in USA



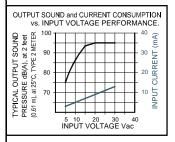


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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**

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 $\pm$ 5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95 $\pm$ 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: Pull test with a maximum of 23 pounds (10 kg) lead

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

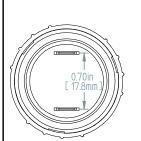
## DIMENSIONS

Life Expectancy:

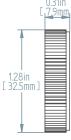
GASKET

SIDE

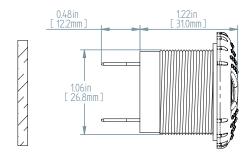
**FRONT** 

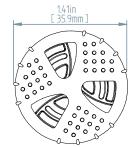


RFAR



RING





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



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# TMB-V86-531-Q(S)

# Made in USA



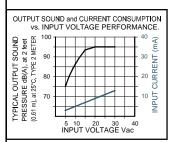


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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 $^{\circ}$ C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25 $^{\circ}$ 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℃ to +65℃.

Storage Temperature: -20℃ to +65℃. -40℃ to +85℃.

**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 continu ously 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**

RFAR

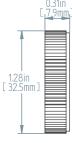
RING

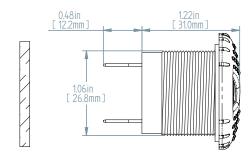
**GASKET** 

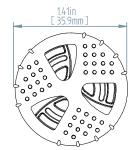
SIDE

**FRONT** 









TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMB-V86-531-S(F)

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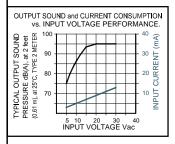


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 3

ASTM B117 Certified- 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.

**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**

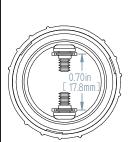
REAR

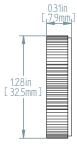
## **RING**

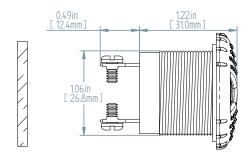
## **GASKET**

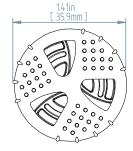
## SIDE

## **FRONT**









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



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# TMB-V86-531-S(S)

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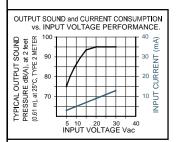


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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**

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 $\pm$ 5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25°C 95 $\pm$ 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

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 continu ously 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

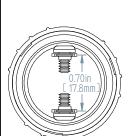
REAR

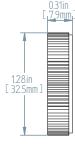
**RING** 

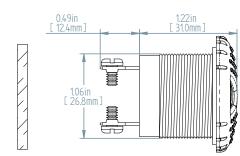
**GASKET** 

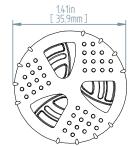
SIDE

**FRONT** 









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



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# TMB-V86-531-W(F)

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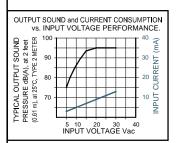


Patent-Pending Revolutionary Turbo Design

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**

Termination:

**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

With volume control fully open:

**Typical Sound Pressure:** 75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25℃

95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Underwriters Laboratory Part Recognized By:

**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 **Environmental Durability:** 

IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

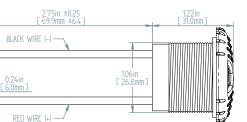
## **DIMENSIONS**



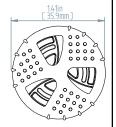
RING

**GASKET** 

SIDE



**FRONT** 



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



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# TMB-V86-531-W(S)

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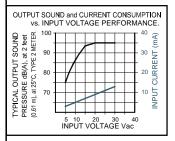


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TMB-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 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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red a **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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

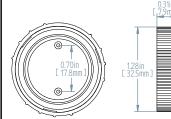
Life Expectancy: 10 years under normal operating conditions.

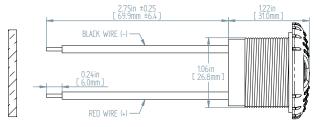
Warranty: For a period of two years from the date of manufacture under normal

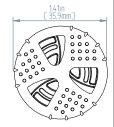
operating conditions.

#### **DIMENSIONS**

REAR RING GASKET SIDE







**FRONT** 

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



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# TMB-V86-948-P(F)

# Made in USA



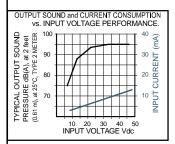


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



**REAR** 

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 snapfit 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

With volume control fully open:

Typical Sound Pressure:

75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 **Environmental Durability:** 

> IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

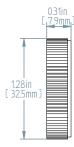
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

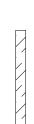
operating conditions.

## **DIMENSIONS**

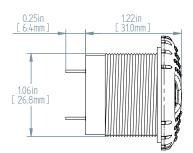
Life Expectancy:



**RING** 

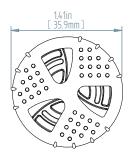


**GASKET** 



SIDE

**FRONT** 



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



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# TMB-V86-948-P(S)

# Made in USA



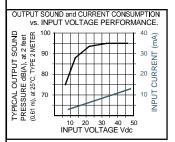


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

 Corrosion Resistant Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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 continu ously 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.

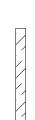
## **DIMENSIONS**

0.60in [ 15.2mm ]

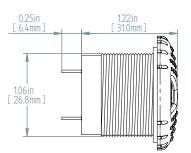
**REAR** 



**RING** 

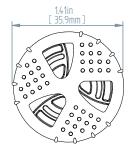


**GASKET** 



SIDE

## **FRONT**



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



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# TMB-V86-948-Q(F)

# Made in USA



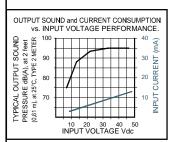


Patent-Pending
 Revolutionary Turbo Design

 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

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 $^{\circ}$ C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25 $^{\circ}$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

Life Expectancy:

RFAR

RING

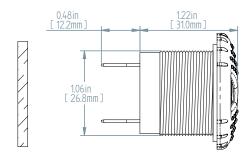
**GASKET** 

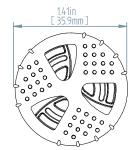
SIDE

**FRONT** 









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



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# TMB-V86-948-Q(S)

# Made in USA



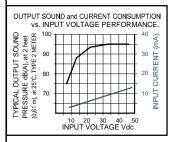


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

 Corrosion Resistant Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMB-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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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** 

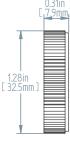
## RING

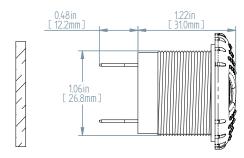
## **GASKET**

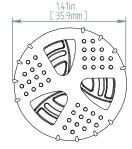
## SIDE

# **FRONT**









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



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# TMB-V86-948-S(F)

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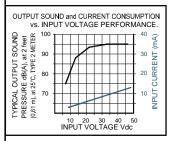


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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 $^{\circ}$ C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25 $^{\circ}$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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

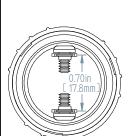
REAR

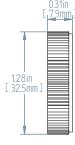
**RING** 

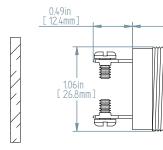
**GASKET** 

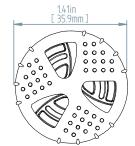
SIDE

**FRONT** 

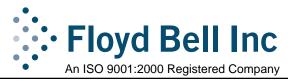








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# TMB-V86-948-S(S)

# Made in USA



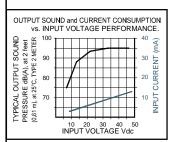


Patent-Pending
 Revolutionary Turbo Design

 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**

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 $^{\circ}$ C 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25 $^{\circ}$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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.

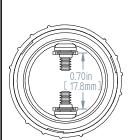
## DIMENSIONS

**GASKET** 

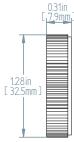
**RING** 

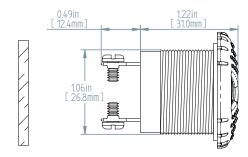
SIDE

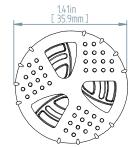
**FRONT** 



REAR







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



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# TMB-V86-948-W(F)

# Made in USA



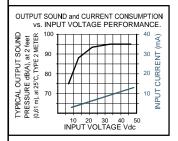


Patent-Pending
 Revolutionary Turbo Design

 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

Typical Sound Pressure: With volume control fully open:

10 mA at 48 Vdc

75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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**

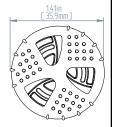
REAR

**RING** 

**GASKET** 

SIDE

FRONT



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



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# TMB-V86-948-W(S)

# Made in USA



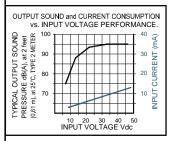


Patent-Pending
 Revolutionary Turbo Design

 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 Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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
bility: ASTM B117 Certified- Withstands exposure to salt spray for 300 hours

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 continu ously for 100 hours.

Humidity- 95% relative humidity at +40°C continu ously 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**

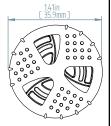
**REAR** 

RING

**GASKET** 

SIDE

FRONT



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

RED WIRE (+)



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# TMC-80-530-W

# Made in USA

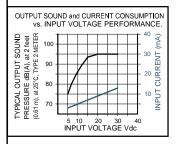


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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

ASTM B117 Certified-Withstands exposure to salt spray for 300 hours **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and 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.

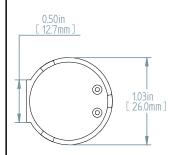
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

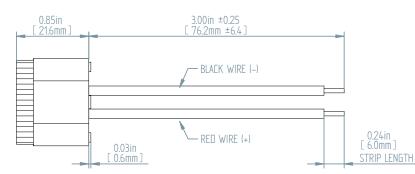
RoHS Also available RoHS Compliant — Add "R" to end of part number.

SIDE

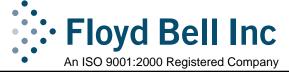
## **DIMENSIONS**



REAR



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



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Revision: 8.12

**FRONT** 

# TMC-86-201-Q

# Made in USA



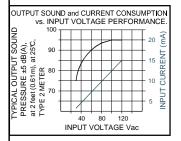


 Patented Revolutionary Turbo Design

 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**

Operating Mode: Medium Loud Continuous Tone

Operating Voltage: 30-120 Vac
Nominal Operating Voltage: 110 Vac
Operating Frequency: 2900±250 Hz.
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

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

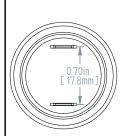
**Life Expectancy:** 10 years under normal operating conditions.

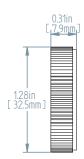
Warranty: For a period of two years from the date of manufacture under normal operating

conditions.

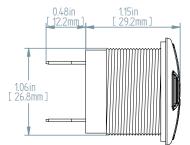
## **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TMC-86-201-S

# Made in USA





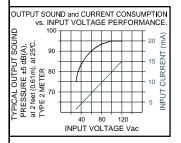
Patented Revolutionary

Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

Operating Mode: Medium Loud Continuous Tone

30-120 Vac Operating Voltage: Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 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℃.

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

-20℃ to +65℃. **Operating Temperature: Storage Temperature:** -40℃ to +85℃.

Termination:

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℃ continu ously 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

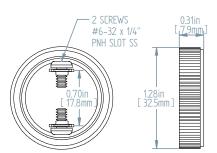
conditions.

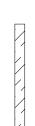
## **DIMENSIONS**

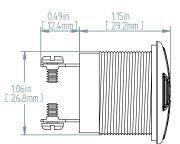
RING **GASKET** REAR

SIDE

**FRONT** 









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



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# TMC-86-530-P

# Made in USA



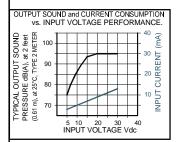


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Termination: 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C.
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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

ASTM B117 Certified-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.

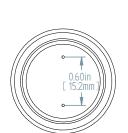
**Life Expectancy:** 10 years under normal operating conditions.

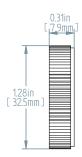
Warranty: For a period of two years from the date of manufacture under normal

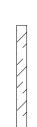
operating conditions.

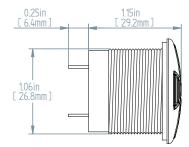
## DIMENSIONS

REAR RING GASKET SIDE FRONT











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



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# TMC-86-530-Q

# Made in USA

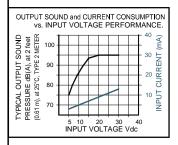




Patent-Pending
 Revolutionary Turbo Design

 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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

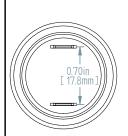
Warranty: For a period of two years from the date of manufacture under normal

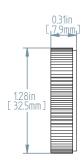
operating conditions.

#### **DIMENSIONS**

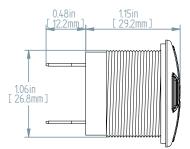
Life Expectancy:

REAR RING GASKET SIDE FRONT











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



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# TMC-86-530-S

## Made in USA



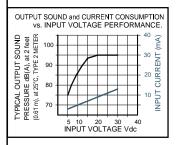


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



**REAR** 

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**

**Operating Mode:** Medium Loud Continuous Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±250 Hz. Operating Frequency: 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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

2 SEREWS #6-32 x 1/4' PNH SLOT SS 1.28in [ 32.5mm]

RING

**GASKET** 

0.49in 1.06in

SIDE

**FRONT** 



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



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# TMC-86-530-W

## Made in USA



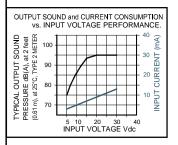


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMC-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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously 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**

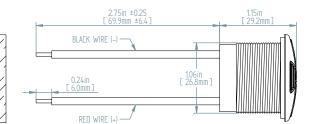
**REAR** 

**RING** 

1.28in [ 32.5mm]

## **GASKET**

SIDE



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

**FRONT** 



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# TMC-86-531-P

# Made in USA



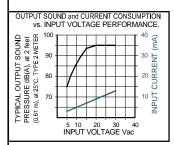


Patent-Pending
 Revolutionary Turbo Design

 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

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

**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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

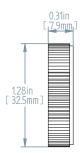
Warranty: For a period of two years from the date of manufacture under normal

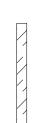
operating conditions.

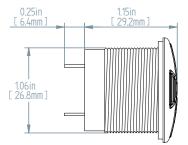
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TMC-86-531-Q

# Made in USA



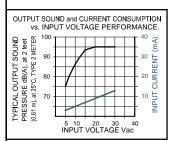


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMC-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℃

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

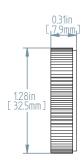
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

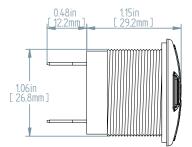
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TMC-86-531-S

## Made in USA



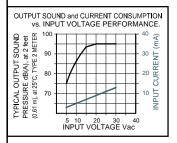


Patent-Pending Revolutionary Turbo Design

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**

**Operating Mode:** Medium Loud Continuous Tone

**Operating Voltage:** 5-24 Vac/dc Nominal Operating Voltage: 24 Vac 2900±250 Hz. Operating Frequency: 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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃

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℃ to +65℃. -40℃ to +85℃. **Storage Temperature:** 

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

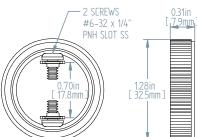
10 years under normal operating conditions.

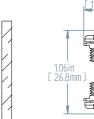
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

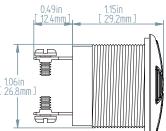
operating conditions.

#### **DIMENSIONS**



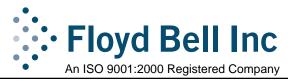








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMC-86-531-W

# Made in USA



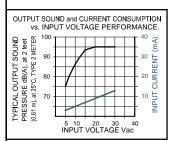


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion ResistantStainless Steel Diaphragm

 Reliable Piezoelectric Technology



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℃

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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.

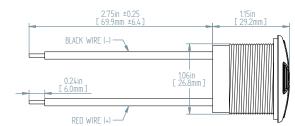
#### **DIMENSIONS**

REAR

**RING** 

1.28in [ 32.5mm GASKET

SIDE



FRONT



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



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# TMC-86-948-P

# Made in USA



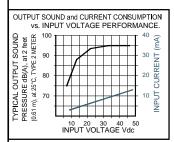


Patent-Pending
 Revolutionary Turbo Design

 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

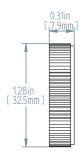
Warranty: For a period of two years from the date of manufacture under normal

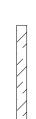
operating conditions.

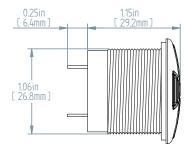
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TMC-86-948-Q

## Made in USA



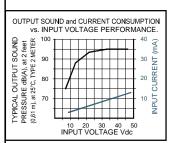


Patent-Pending Revolutionary Turbo Design

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**

**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℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

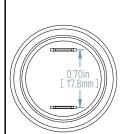
10 years under normal operating conditions.

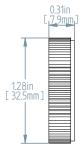
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

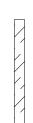
operating conditions.

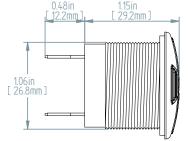
## **DIMENSIONS**

**REAR** RING **GASKET** SIDE **FRONT** 











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



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# TMC-86-948-S

## Made in USA



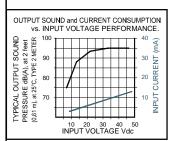


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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**

Termination:

**Operating Mode:** Medium Loud Continuous Tone

**Operating Voltage:** 9-48 Vdc Nominal Operating Voltage: 48 Vdc 2900±250 Hz. Operating Frequency: **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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃

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℃ to +65℃. -40℃ to +85℃. **Storage Temperature:** 

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

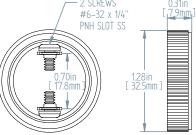
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

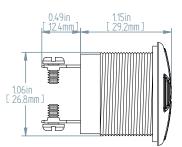
## **DIMENSIONS**

## 2 SEREWS #6-32 x 1/4' PNH SLOT SS

RING



**GASKET** 



SIDE

**FRONT** 



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



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# TMC-86-948-W

## Made in USA



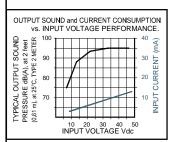


Patent-Pending Revolutionary Turbo Design

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 2900±250 Hz. Operating Frequency: **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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously 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**

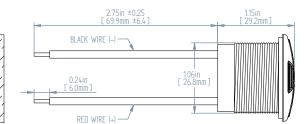
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

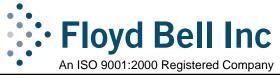
SIDE



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



**FRONT** 



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# TMC-V86-201-Q

# Made in USA



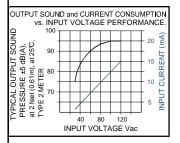


Patented Revolutionary
 Turbo Design

 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

Operating Mode: Medium Loud Continuous Tone

Operating Voltage: 30-120 Vac
Nominal Operating Voltage: 110 Vac
Operating Frequency: 2900±250 Hz.
Typical Operating Current: 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℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thicknet 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

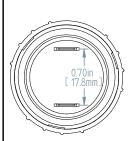
**Life Expectancy:** 10 years under normal operating conditions.

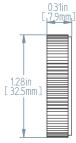
Warranty: For a period of two years from the date of manufacture under normal operating

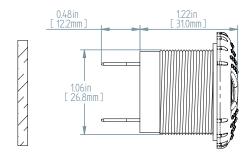
conditions.

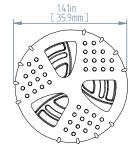
### **DIMENSIONS**

REAR RING GASKET SIDE FRONT

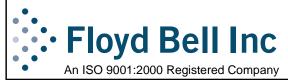








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMC-V86-201-S

# Made in USA



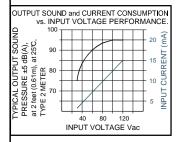


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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

Operating Mode: Medium Loud Continuous Tone

Operating Voltage: 30-120 Vac
Nominal Operating Voltage: 110 Vac
Operating Frequency: 2900±250 Hz.
Typical Operating Current: 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℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

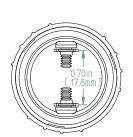


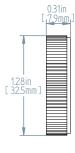
RING

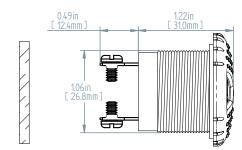
**GASKET** 

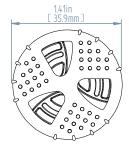
SIDE

## **FRONT**









TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMC-V86-530-P

# Made in USA



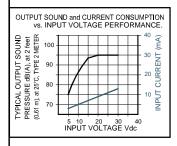


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



**REAR** 

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**

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. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **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 fo

ASTM B117 Certified- 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.

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**

**GASKET** 

# 0.31in [7,9mm] 0.60in [15,2mm]

**RING** 

0.25in 122in [31.0mm]

SIDE

14fin [35,9mm]

**FRONT** 

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



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# TMC-V86-530-Q

# Made in USA



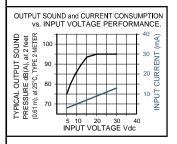


Patent-Pending
 Revolutionary Turbo Design

 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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

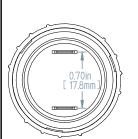
RFAR

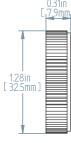
RING

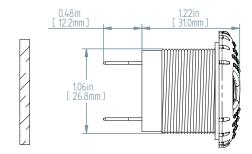
**GASKET** 

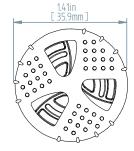
SIDE

**FRONT** 

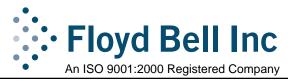








TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMC-V86-530-S

# Made in USA



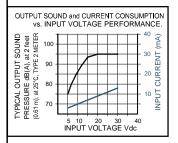


Patent-Pending
 Revolutionary Turbo Design

 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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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.

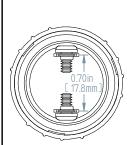
#### **DIMENSIONS**

**GASKET** 

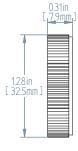
**RING** 

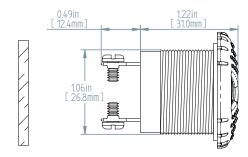
SIDE

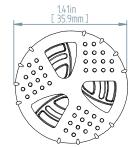
**FRONT** 



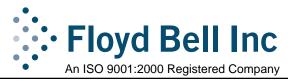
REAR







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



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# TMC-V86-530-W

# Made in USA



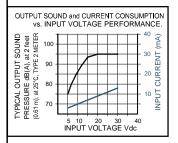


Patent-Pending
 Revolutionary Turbo Design

 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 Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -20°C to +03°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

IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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**

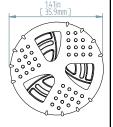
REAR

RING

**GASKET** 

SIDE

FRONT



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

RED WIRE (+)



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# TMC-V86-531-P

# Made in USA



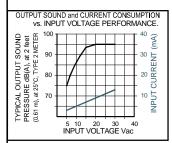


 Patent-Pending Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

 Corrosion Resistant Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

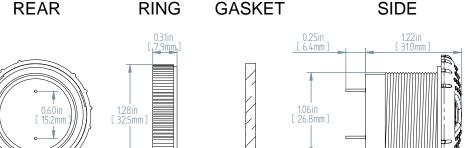
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

**Environmental Durability:** 







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Revision: 9.09

**FRONT** 

# TMC-V86-531-Q

# Made in USA



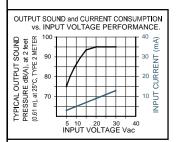


Patent-Pending
 Revolutionary Turbo Design

 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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

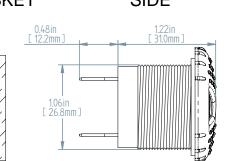
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

REAR RING GASKET SIDE

Life Expectancy:



**FRONT** 





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# TMC-V86-531-S

## Made in USA



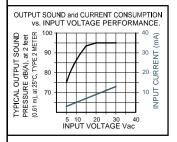


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMC-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

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Part Recognized By: Underwriters Laboratory

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

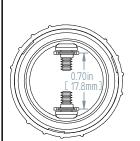
Life Expectancy: Warranty:

For a period of two years from the date of manufacture under normal

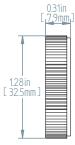
operating conditions.

## **DIMENSIONS**

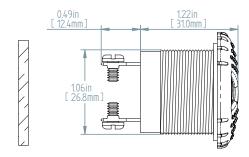
**GASKET** SIDE **FRONT** 

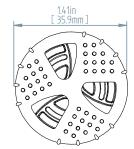


REAR



**RING** 





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



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# TMC-V86-531-W

# Made in USA



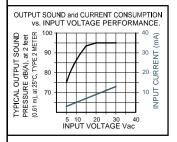


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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**

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red and **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

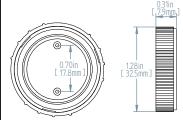
**Life Expectancy:** 10 years under normal operating conditions.

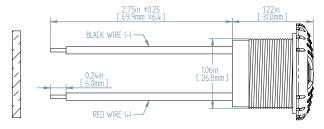
Warranty: For a period of two years from the date of manufacture under normal

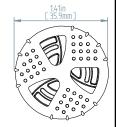
operating conditions.

### **DIMENSIONS**

REAR RING GASKET SIDE FRONT







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



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## TMC-V86-948-P

# Made in USA



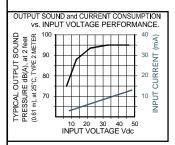


Patent-Pending
 Revolutionary Turbo Design

 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**

Operating Mode: Medium Loud Continuous Tone
Operating Voltage: 9-48 Vdc

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: With volume control fully open:

75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated b
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

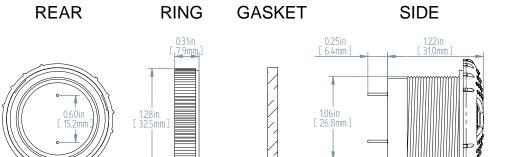
IP 68 Certified—Withstands water submergence and dust exposure Humidity-95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

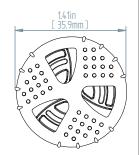
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**



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



**FRONT** 



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# TMC-V86-948-Q

# Made in USA



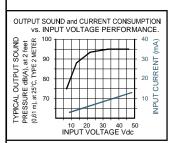


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMC-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**

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

10 IIIA at 46 vuc

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

RFAR

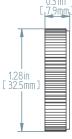
RING

**GASKET** 

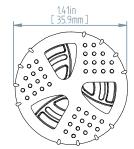
SIDE

**FRONT** 









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# TMC-V86-948-S

# Made in USA



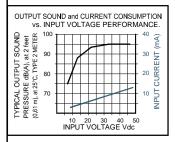


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMC-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

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: With volume control fully open:

75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

**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 continu ously 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

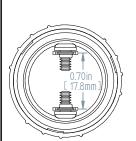
RFAR

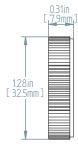
**RING** 

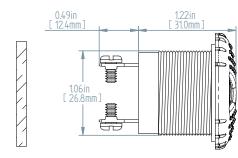
**GASKET** 

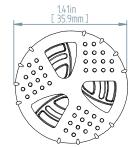
SIDE

**FRONT** 









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



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# TMC-V86-948-W

## Made in USA



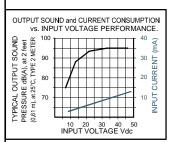


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMC-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**

**Operating Mode:** Medium Loud Continuous Tone 9-48 Vdc

Operating Voltage: Nominal Operating Voltage: 48 Vdc 2900±250 Hz. Operating Frequency: **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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

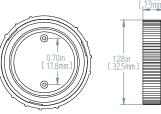
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

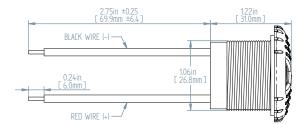
### **DIMENSIONS**

**REAR** 

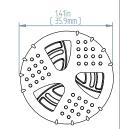


**GASKET** 

SIDE



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



**FRONT** 



RING

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# TMS-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

REAR

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

Operating Mode: Medium Loud Siren Tone

Operating Voltage: 9-50 Vdc Nominal Operating Voltage: 48 Vdc

Operating Frequency: Sweep 2.7Khz ± 250Hz -to- 3.5Khz ± 250Hz (3.1Khz Center)

Typical Sweep Rate: 5±25% Cycles per second (Fast Rate)

Typical Operating Current: 30 mA at 48 Vdc

Typical Sound Pressure: 80 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃

95 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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

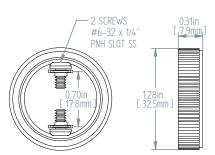
operating conditions.

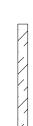
## DIMENSIONS

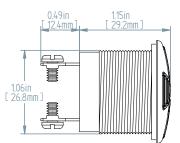
RING

GASKET SIDE

**FRONT** 









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



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# TMW-86-201-Q(F)

# Made in USA



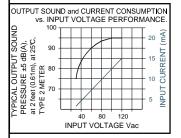


Patented Revolutionary
 Turbo Design

 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**

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

10±25% Cycles 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% to +65%. Storage Temperature: -40% to +85%.

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 continu ously 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

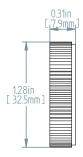
conditions.

### **DIMENSIONS**

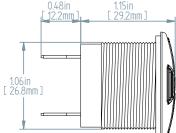
REAR RING GASKET SIDE

E FRONT











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



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# TMW-86-201-Q(S)

# Made in USA



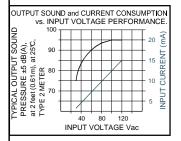


 Patented Revolutionary Turbo Design

 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**

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±25% Cycles 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% to +65%. Storage Temperature: -40% to +85%.

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 continu ously 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.

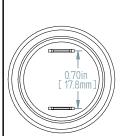
### **DIMENSIONS**

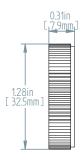
REAR RIN

RING GASKET

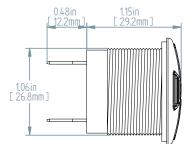
SIDE

**FRONT** 











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



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# TMW-86-201-S(F)

# Made in USA





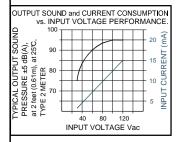
Patented Revolutionary

Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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**

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

10±25% Cycles 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℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

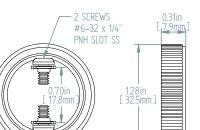
Warranty: For a period of two years from the date of manufacture under normal operating

SIDE

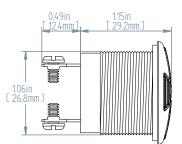
conditions.

### **DIMENSIONS**

**GASKET** 



RING



φ [330nm]

**FRONT** 

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



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# TMW-86-201-S(S)

# Made in USA





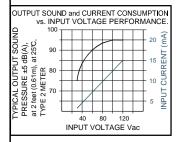
Patented Revolutionary

Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±25% Cycles 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℃.

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 3

ASTM B117 Certified- 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.

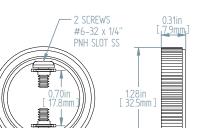
Life Expectancy: 10 years under normal operating conditions.

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

SIDE

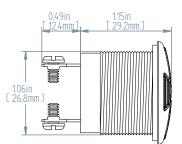
conditions.

### **DIMENSIONS**



RING

**GASKET** 



φ [330m]

**FRONT** 

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



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# TMW-86-530-P(F)

# Made in USA



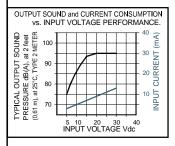


Patent-Pending
 Revolutionary Turbo Design

 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**

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. 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.

Termination:

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 continu ously 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

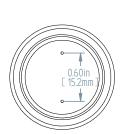
RFAR

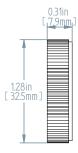
**RING** 

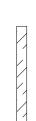
**GASKET** 

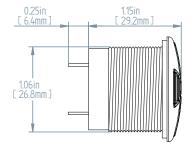
SIDE

**FRONT** 











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



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# TMW-86-530-P(S)

# Made in USA



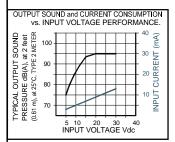


Patent-Pending
 Revolutionary Turbo Design

 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:  $75\pm5$  dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  $95\pm5$  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 Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

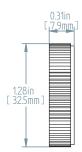
Warranty: For a period of two years from the date of manufacture under normal

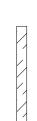
operating conditions.

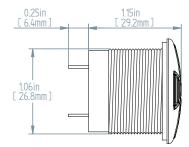
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT



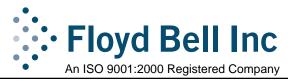








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# TMW-86-530-Q(F)

## Made in USA



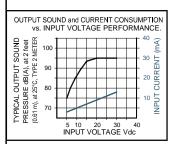


Patent-Pending Revolutionary Turbo Design

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**

**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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

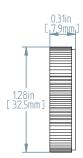
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

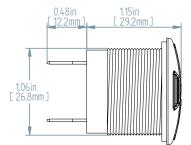
## **DIMENSIONS**

**REAR** RING **GASKET** SIDE **FRONT** 











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



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# TMW-86-530-Q(S)

# Made in USA



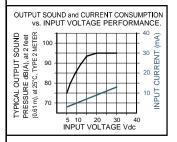


Patent-Pending
 Revolutionary Turbo Design

 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

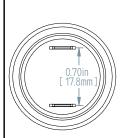
REAR

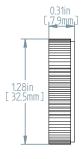
RING

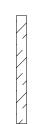
**GASKET** 

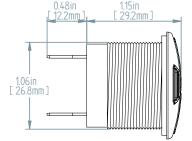
SIDE

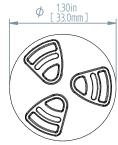
**FRONT** 











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# TMW-86-530-S(F)

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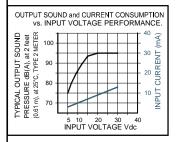


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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.

#### **SPECIFICATIONS**

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℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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

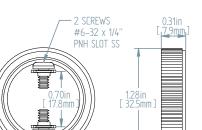
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

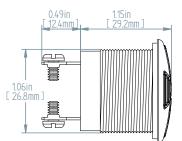
operating conditions.

## DIMENSIONS



RING

**GASKET** 



SIDE

FRONT



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



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# TMW-86-530-S(S)

## Made in USA



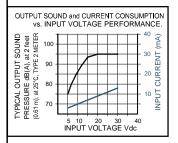


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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

**Operating Mode:** Medium Loud Warble Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±250 Hz. **Operating Frequency:** 

2±25% Cycles per second

2 mA at 5 Vdc **Typical Operating Current:** 10 mA at 30 Vdc

**Typical Sound Pressure:** 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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

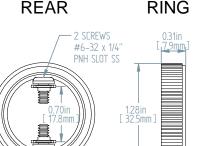
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

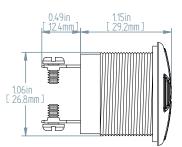
operating conditions.

#### **DIMENSIONS**



RING

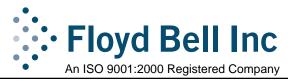
**GASKET** 



SIDE

**FRONT** 

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



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# TMW-86-530-W(F)

## Made in USA



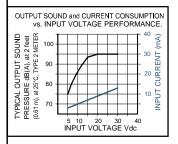


Patent-Pending Revolutionary Turbo Design

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**

**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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously 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**

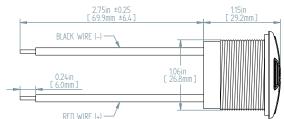
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

SIDE



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

### **FRONT**





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# TMW-86-530-W(S)

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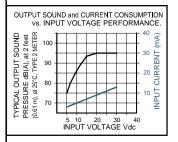


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

 Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TMW-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 continu ously 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.

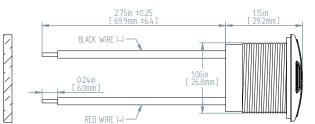
## DIMENSIONS

REAR

**RING** 

1.28in [ 32.5mm] **GASKET** 

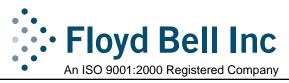
SIDE



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

FRONT





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# TMW-86-531-P(F)

# Made in USA



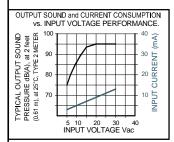


Patent-Pending Revolutionary Turbo Design

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

**Operating Mode:** Medium Loud Warble Tone

Operating Voltage: 5-24 Vac/dc Nominal Operating Voltage: 24 Vac

2900±250 Hz. **Operating Frequency:** 

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℃

95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 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

-20℃ to +65℃. Operating Temperature:

Termination:

Storage Temperature: -40℃ to +85℃. 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

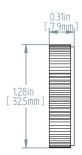
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

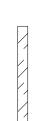
operating conditions.

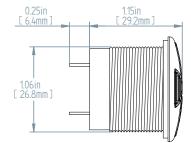
#### **DIMENSIONS**

**RING GASKET** SIDE RFAR **FRONT** 











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



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# TMW-86-531-P(S)

# Made in USA



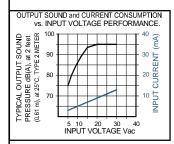


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

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. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -40℃ to +85℃.

**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 3

ASTM B117 Certified- 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.

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

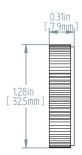
Warranty: For a period of two years from the date of manufacture under normal

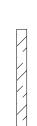
operating conditions.

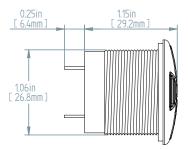
## DIMENSIONS

REAR RING GASKET SIDE FRONT











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



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# TMW-86-531-Q(F)

# Made in USA



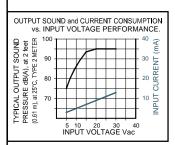


Patent-Pending
 Revolutionary Turbo Design

 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

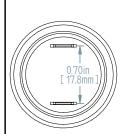
**Life Expectancy:** 10 years under normal operating conditions.

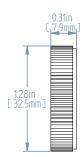
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

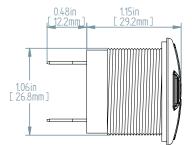
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TMW-86-531-Q(S)

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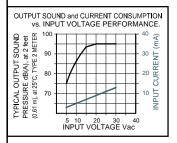


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

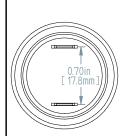
**Life Expectancy:** 10 years under normal operating conditions.

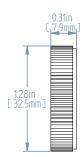
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

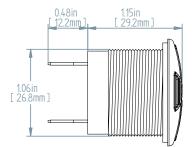
#### **DIMENSIONS**

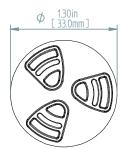
REAR RING GASKET SIDE FRONT











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



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# TMW-86-531-S(F)

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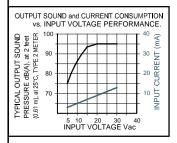


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMW-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**

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: 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

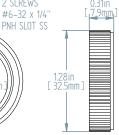
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

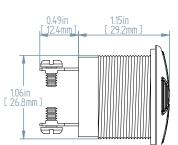
REAR

— 2 SEREWS



RING

**GASKET** 



SIDE

**FRONT** 



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# TMW-86-531-S(S)

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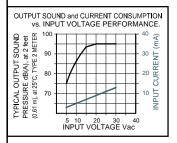


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

The Turbo TMW-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**

**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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

-20℃ to +65℃. Operating Temperature: Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

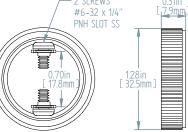
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

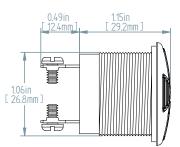
## **DIMENSIONS**

2 SEREWS #6-32 x 1/4' PNH SLOT SS

RING



**GASKET** 



SIDE

**FRONT** 



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



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# TMW-86-531-W(F)

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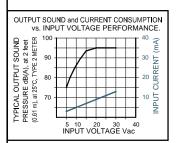


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMW-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 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℃

95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

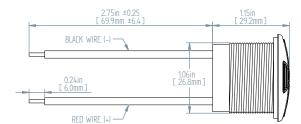
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

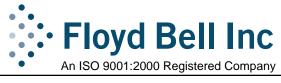
SIDE



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



**FRONT** 



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# TMW-86-531-W(S)

# Made in USA



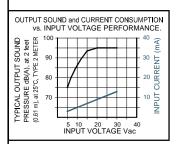


Patent-Pending Revolutionary Turbo Design

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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

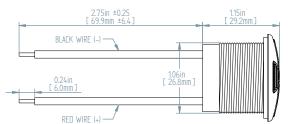
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

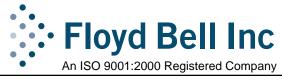
SIDE



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



**FRONT** 



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# TMW-86-948-P(F)

# Made in USA



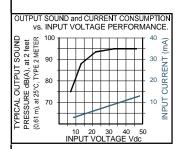


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion ResistantStainless 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

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: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz, on all axes.

Life Expectancy: 10 years under normal operating conditions.

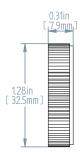
Warranty: For a period of two years from the date of manufacture under normal

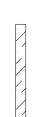
operating conditions.

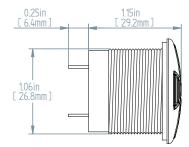
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TMW-86-948-P(S)

# Made in USA



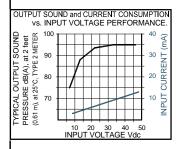


Patent-Pending Revolutionary Turbo Design

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

Operating Mode: Medium Loud Warble Tone

**Operating Voltage:** 9-48 V/dc Nominal Operating Voltage: 48 Vdc

Termination:

2900±250 Hz. **Operating Frequency:** 

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℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

## **DIMENSIONS**

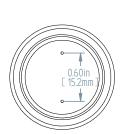
RFAR

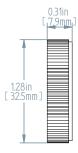
**RING** 

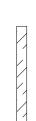
**GASKET** 

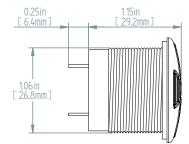
SIDE

**FRONT** 











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



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# TMW-86-948-Q(F)

# Made in USA



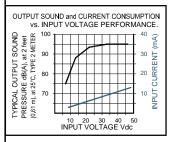


Patent-Pending
 Revolutionary Turbo Design

 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**

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:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

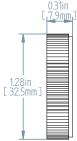
operating conditions.

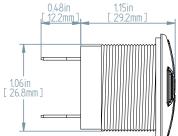
### **DIMENSIONS**

Life Expectancy:

REAR RING GASKET SIDE







**FRONT** 

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



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# TMW-86-948-Q(S)

# Made in USA



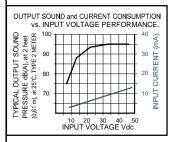


Patent-Pending
 Revolutionary Turbo Design

 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**

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: 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 continu ously 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

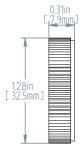
**RING** 

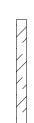
**GASKET** 

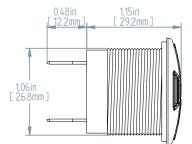
SIDE

**FRONT** 











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



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# TMW-86-948-S(F)

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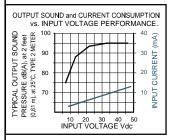


Patent-Pending Revolutionary Turbo Design

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**

Termination:

**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:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃ 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℃ to +85℃.

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

SIDE

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

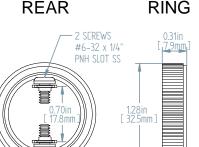
10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

**GASKET** 



RING

0.49in 1.06in

**FRONT** 

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# TMW-86-948-S(S)

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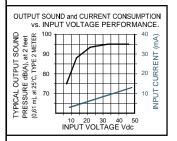


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

**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℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

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℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

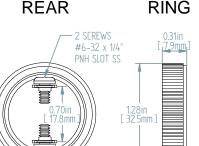
10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

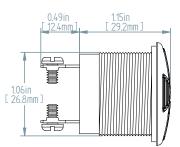
operating conditions.

### **DIMENSIONS**

**GASKET** 



RING



SIDE

**FRONT** 

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



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# TMW-86-948-W(F)

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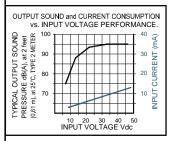


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMW-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**

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:** 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

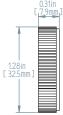
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

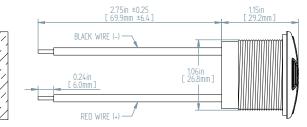
#### **DIMENSIONS**

**REAR** 



**RING** 

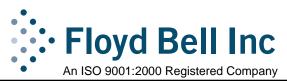
GASKET SIDE



FRONT



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



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# TMW-86-948-W(S)

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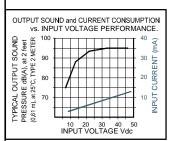


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMW-86-948-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.

### **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 $\pm$ 5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95 $\pm$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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.

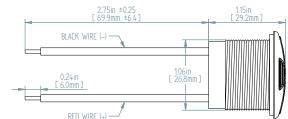
## DIMENSIONS

**REAR** 

**RING** 

1.28in [ 32.5mm] GASKET

SIDE



FRONT



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



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# TMW-V86-201-Q(F)

# Made in USA



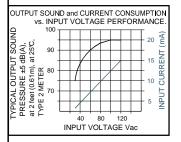


 Patented Revolutionary Turbo Design

 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

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

10±25% Cycles per second

Typical Operating Current: 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

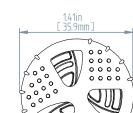
Warranty: For a period of two years from the date of manufacture under normal operating

conditions.

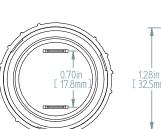
### **DIMENSIONS**

RING

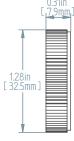
GASKET SIDE

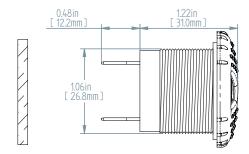


**FRONT** 

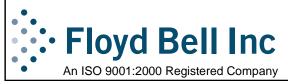


RFAR









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# TMW-V86-201-Q(S)

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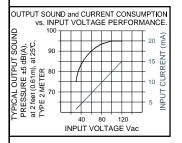


Patented Revolutionary
 Turbo Design

 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.

2±25% Cycles per second

Typical Operating Current: 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 continu ously 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**

RFAR

## RING

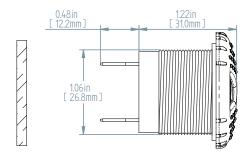
## **GASKET**

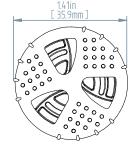
## SIDE

# FRONT









TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMW-V86-201-S(F)

# Made in USA



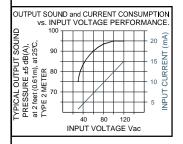


 Patented Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

10±25% Cycles per second

Typical Operating Current: 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℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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**

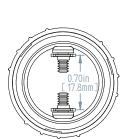
REAR

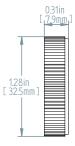
**RING** 

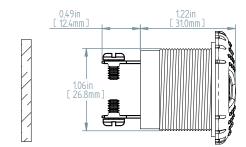
**GASKET** 

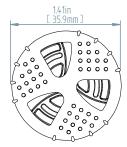
SIDE

**FRONT** 

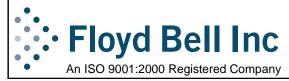








TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMW-V86-201-S(S)

# Made in USA



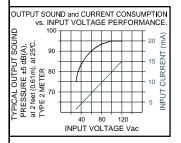


 Patented Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMW-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

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 30-120 Vac
Nominal Operating Voltage: 110 Vac
Operating Frequency: 2900±250 Hz.
2±25% Cycles per second

Typical Operating Current: 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℃ 95±5 dB(A), at 120 Vac, at 24 inches (61 cm), at 25℃.

**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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

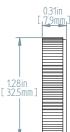
Warranty: For a period of two years from the date of manufacture under normal operating

SIDE

conditions.

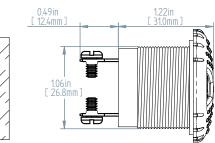
### **DIMENSIONS**



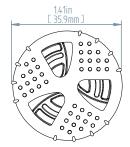


**RING** 

GASKET



**FRONT** 



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



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# TMW-V86-530-P(F)

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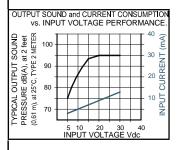


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMW-V86-530-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**

**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:** With volume control fully open:

75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

Termination:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 **Environmental Durability:** 

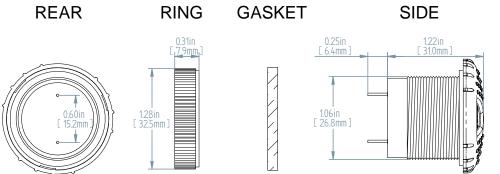
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

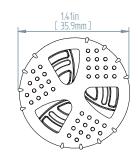
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

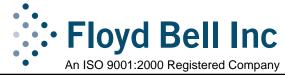
## **DIMENSIONS**



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



**FRONT** 



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# TMW-V86-530-P(S)

# Made in USA



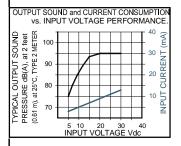


Patent-Pending
 Revolutionary Turbo Design

 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

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: With volume control fully open: 75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

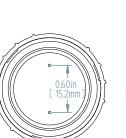
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

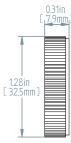
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

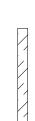
### **DIMENSIONS**



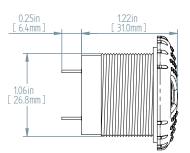
**REAR** 



**RING** 

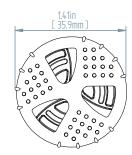


**GASKET** 



SIDE

## **FRONT**



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



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# TMW-V86-530-Q(F)

# Made in USA



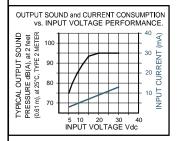


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

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: With volume control fully open:

75 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95 $\pm$ 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:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

**RFAR** 

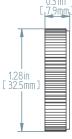
RING

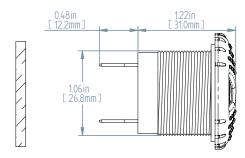
**GASKET** 

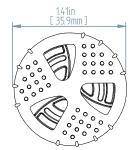
SIDE

**FRONT** 

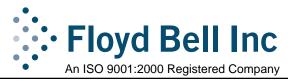








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TMW-V86-530-Q(S)

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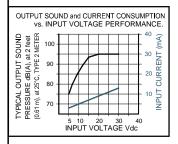


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

Operating Mode: Medium Loud Warble Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

2900±250 Hz. 2±25% Cycles per second

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℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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

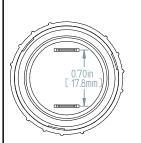
operating conditions.

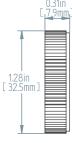
## DIMENSIONS

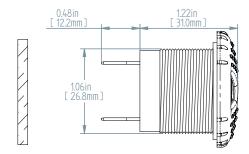
REAR RING GASKET

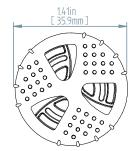
SIDE

## FRONT

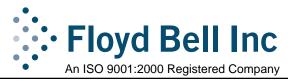








TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TMW-V86-530-S(F)

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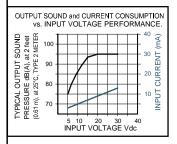


Patent-Pending
 Revolutionary Turbo Design

 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**

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: With volume control fully open:

75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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

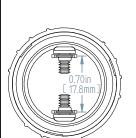
**REAR** 

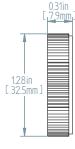
**RING** 

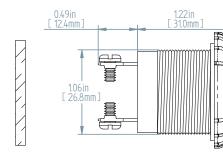
**GASKET** 

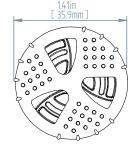
SIDE

**FRONT** 









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



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# TMW-V86-530-S(S)

# Made in USA



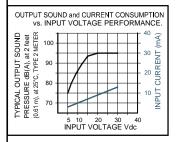


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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: With volume control fully open:

75 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 95 $\pm$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

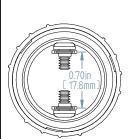
REAR

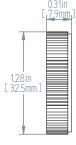
**RING** 

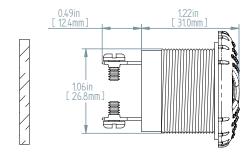
**GASKET** 

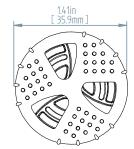
SIDE

**FRONT** 









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



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# TMW-V86-530-W(F)

# Made in USA



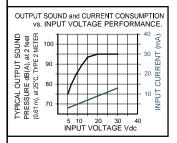


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

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: With volume control fully open:

75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red ar 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 continu ously 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**

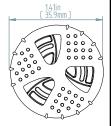
REAR

**RING** 

**GASKET** 

SIDE

FRONT



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

RED WIRE (+)



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# TMW-V86-530-W(S)

# Made in USA



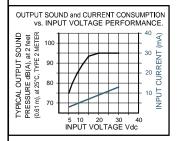


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

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: With volume control fully open:

75±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

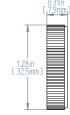
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

\_\_\_\_

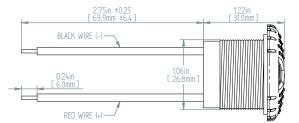
**REAR** 



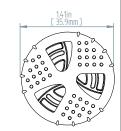
RING

GASKET

SIDE



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



**FRONT** 



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# TMW-V86-531-P(F)

# Made in USA



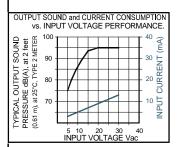


Patent-Pending
 Revolutionary Turbo Design

 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**

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: With volume control fully open:

75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

SIDE

Warranty: For a period of two years from the date of manufacture under normal

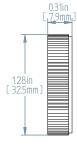
operating conditions.

### **DIMENSIONS**

Life Expectancy:

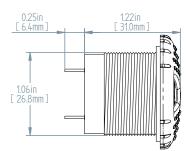
0.60in [ 152mm]

**REAR** 

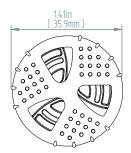


**RING** 

**GASKET** 



FRONT



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



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# TMW-V86-531-P(S)

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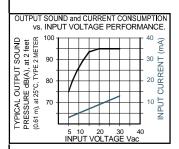


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMW-V86-531-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 2900±250 Hz. Operating Frequency:

2±25% Cycles per second

**Typical Operating Current:** 2 mA at 5 Vac 15 mA at 24 Vac

Termination:

Life Expectancy:

Typical Sound Pressure: With volume control fully open:

75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 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℃ to +65℃.

-40℃ to +85℃. **Storage Temperature:** Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

**Underwriters Laboratory** Part Recognized By:

**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

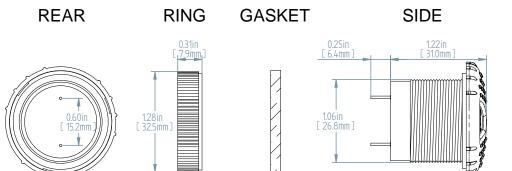
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

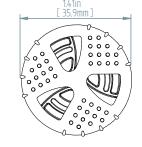
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**



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



**FRONT** 



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# TMW-V86-531-Q(F)

# Made in USA



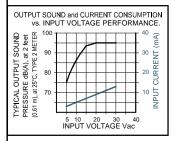


Patent-Pending
 Revolutionary Turbo Design

 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**

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: 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: -40°C to +85°C.
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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

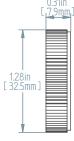
Warranty: For a period of two years from the date of manufacture under normal

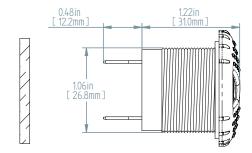
operating conditions.

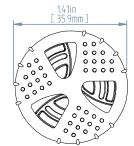
## DIMENSIONS

REAR RING GASKET SIDE FRONT









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



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# TMW-V86-531-Q(S)

# Made in USA



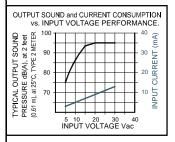


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TMW-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 $^{\circ}$  95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25 $^{\circ}$ .

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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

RFAR R

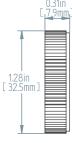
RING GASKET

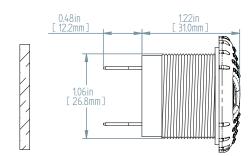
Life Expectancy:

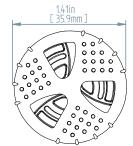
SIDE

**FRONT** 









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



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# TMW-V86-531-S(F)

# Made in USA



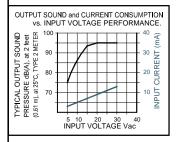


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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: With volume control fully open:

75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃.

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

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 continu ously 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**

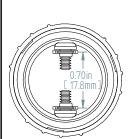
RFAR

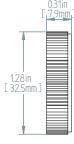
**RING** 

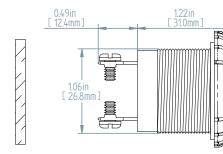
**GASKET** 

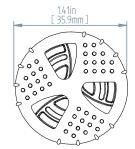
SIDE

**FRONT** 

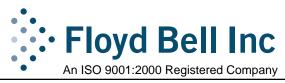








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# TMW-V86-531-S(S)

# Made in USA



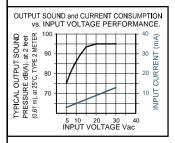


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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.

### 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 $^{\circ}$ C 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25 $^{\circ}$ 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

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 continu ously 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**

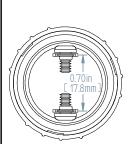
RFAR

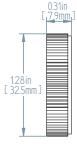
## **RING**

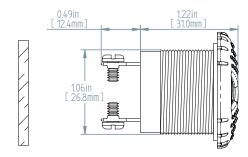
## **GASKET**

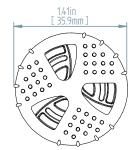
## SIDE

## **FRONT**









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# TMW-V86-531-W(F)

# Made in USA



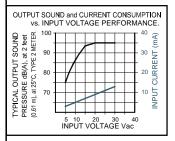


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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**

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: With volume control fully open:

75±5 dB(A), at 5 Vac, at 24 inches (61 cm), at 25℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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**

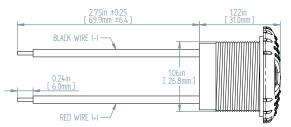
**REAR** 



RING

GASKET

SIDE



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



**FRONT** 



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## TMW-V86-531-W(S)

### Made in USA



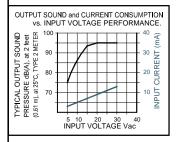


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TMW-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**

Termination:

**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℃ 95±5 dB(A), at 24 Vac, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load -20℃ to +65℃. Operating Temperature:

Storage Temperature: -40℃ to +85℃. 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

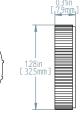
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

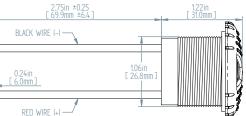
**REAR** 



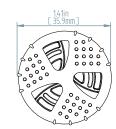
RING

**GASKET** 

SIDE



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



**FRONT** 



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## TMW-V86-948-P(F)

#### Made in USA



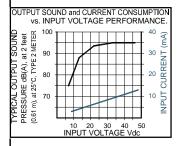


Patent-Pending Revolutionary Turbo Design

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

Operating Mode: Medium Loud Warble Tone

**Operating Voltage:** 9-48 Vdc Nominal Operating Voltage: 48 Vdc 2900±250 Hz. **Operating Frequency:** 

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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

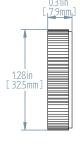
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

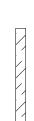
operating conditions.

#### **DIMENSIONS**

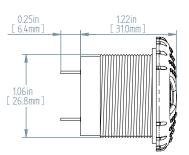
**REAR** 



**RING** 

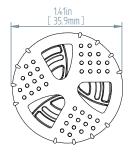


**GASKET** 

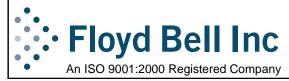


SIDE

**FRONT** 



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## TMW-V86-948-P(S)

## Made in USA



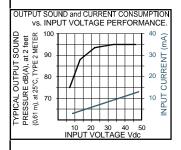


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion ResistantStainless 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

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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -20°C to +65°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

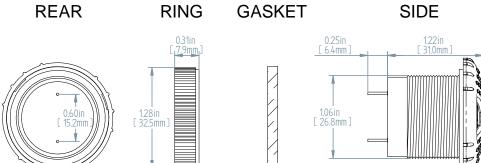
IP 68 Certified—Withstands water submergence and dust exposure Humidity-95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

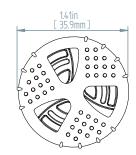
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS



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



**FRONT** 



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## TMW-V86-948-Q(F)

### Made in USA



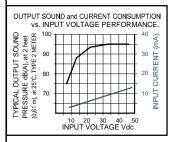


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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

**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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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**

RFAR

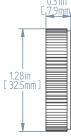
RING

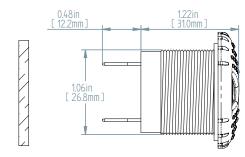
**GASKET** 

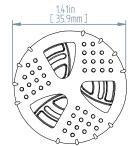
SIDE

**FRONT** 

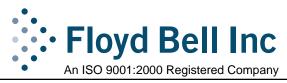








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## TMW-V86-948-Q(S)

# Made in USA



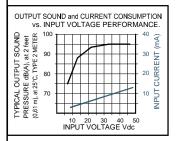


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TMW-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

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 $\pm$ 5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25°C 95 $\pm$ 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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

RFAR

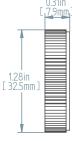
RING

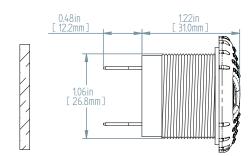
**GASKET** 

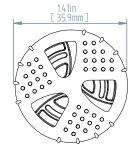
SIDE

**FRONT** 









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## TMW-V86-948-S(F)

### Made in USA



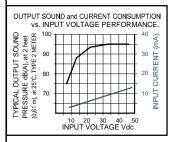


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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

**Operating Mode:** Medium Loud Warble Tone

**Operating Voltage:** 9-48 V/dc Nominal Operating Voltage: 48 Vdc

2900±250 Hz. Operating Frequency:

10±25% Cycles per second Typical Operating Current: 2 mA at 9 Vdc

10 mA at 48 Vdc

With volume control fully open:

Typical Sound Pressure: 75±5 dB(A), at 9 Vdc, at 24 inches (61 cm), at 25℃

95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

20% over maximum rated voltage for less than 5 minutes. Surge Voltage:

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 **Environmental Durability:** 

> IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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**

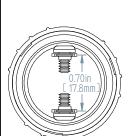
RFAR

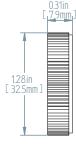
**RING** 

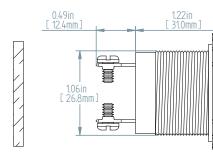
**GASKET** 

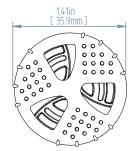
SIDE

**FRONT** 

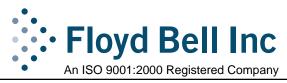








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TMW-V86-948-S(S)

# Made in USA



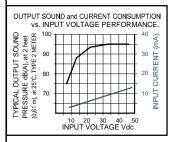


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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

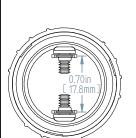
REAR

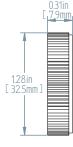
**RING** 

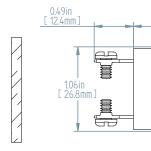
**GASKET** 

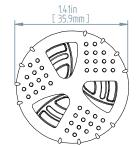
SIDE

**FRONT** 

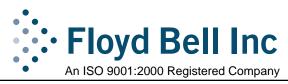








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## TMW-V86-948-W(F)

#### Made in USA



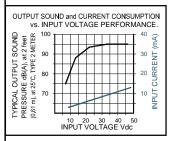


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

Termination:

**Operating Mode:** Medium Loud Warble Tone

**Operating Voltage:** 9-48 Vdc Nominal Operating Voltage: 48 Vdc 2900±250 Hz. Operating Frequency:

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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

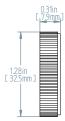
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

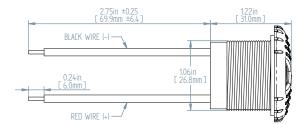
**REAR** 



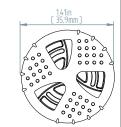
RING

**GASKET** 

SIDE



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



**FRONT** 



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## TMW-V86-948-W(S)

# Made in USA



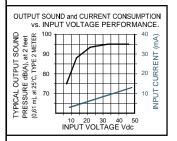


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

 Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo 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℃ 95±5 dB(A), at 48 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

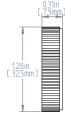
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

[

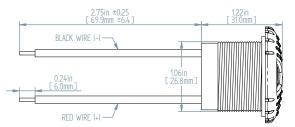
**REAR** 



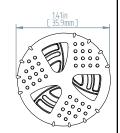
RING

GASKET

SIDE



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



**FRONT** 



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### **TT-I-39**

# Made in USA

The TT-I-39 is a Tel-A-Tone<sup>™</sup> remote extension ringer. Plug into any telephone extension outlet for a pleasant, distinctive ring.

- 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

#### SPECIFICATIONS

Life Expectancy:

Operating Mode: Medium Loud Warble Tone
Operating Voltage: 40-120 Vrms, 16-67 Hz
Nominal Operating Voltage: 90 Vrms, 20 to 30 Hz

Operating Frequency: High Frequency Peak: 2900±250 Hz.

Low Frequency Peak: 2200±250 Hz. (Dominant)

15±25% Cycles per second

Typical Operating Current: 5 mA at 90 Vrms at 20 Hz
Typical Sound Pressure: 85±5 dB(A), at 90 Vrms at 20 Hz, at 24 inches (61 cm), at 25°C.

Termination: Telephone-standard Modular Jack and Plug, RJ-11
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.

Bell Tapping Suppression: Dialing, hook switch, and random line impulses up to 800 V, 2 mS

Construction Materials: Case- ABS or Norpex Plastic, Beige

Internal Circuit- Audio-oscillator and piezoelectric driver

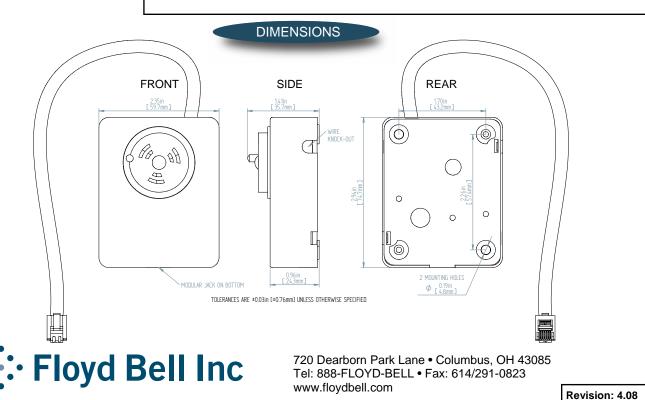
Diaphragm- Stainless Steel 304

Environmental Durability: 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.

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

conditions.



## **TUHB-88B-930-Q(F)**

#### Made in USA





Indoor or Outdoor Use

NEMA 4X and IP68 Rated

High Intensity LED Light

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

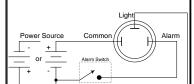
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

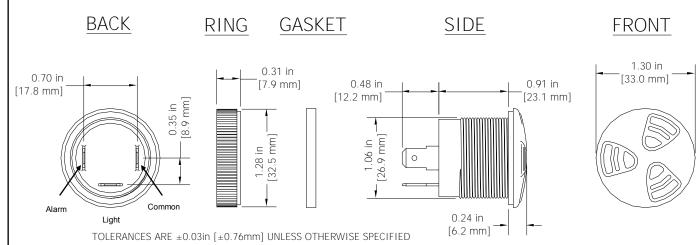
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

Application Circuits



#### **DIMENSIONS**





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## 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

Tamper Resistant Front-Mounting Case with Thread-

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

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.

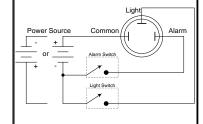
Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

ed Attachment Ring

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] .35 in .9 mm] u u u 90 [26.9] 28

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

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[6.2 mm]

Revision: 4.14



Alarm

## TUHB-88B-930-Q(S)

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

0.91 in

[23.1 mm]

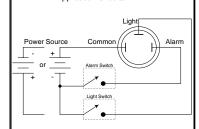
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

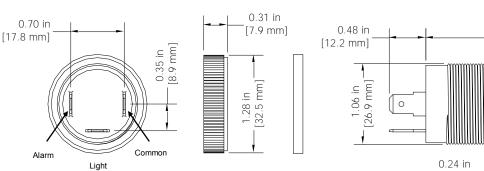
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE



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

1.30 in [33.0 mm]

FRONT

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## TUHB-88B-930-Q(U)

#### Made in USA





Turbo™ Universal are non polarized making the device a perfect fit for positive or negative switch applications. (see application circuit) **SPECIFICATIONS** 

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: **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

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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

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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

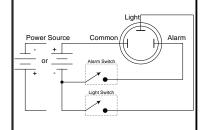
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

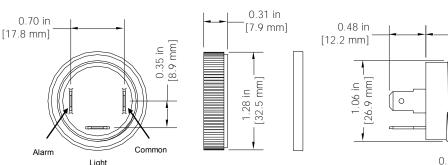
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE



0.91 in [23.1 mm] [6.2 mm]



FRONT

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

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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

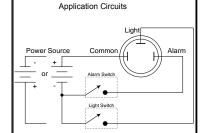
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] .35 in .9 mm] u u u 90 [26.9] 28 Alarm [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

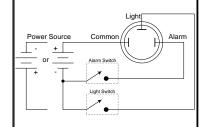
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

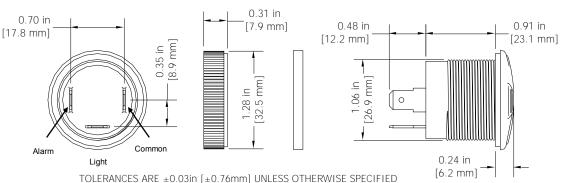
operating conditions.

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT





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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

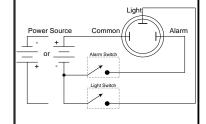
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

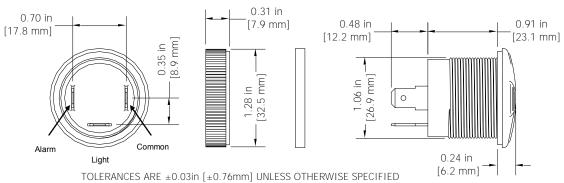
operating conditions.

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT





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## 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

Tamper Resistant Front-Mounting Case with Thread-

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

0.91 in

[23.1 mm]

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

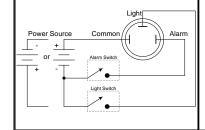
10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

ed Attachment Ring

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE

> 0.31 in [7.9 mm] 0.48 in [12.2 mm] u u u 90

[26.9] 28 [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED

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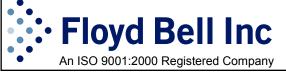
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Revision: 4.14

FRONT

1.30 in

[33.0 mm]



.35 in .9 mm]

0.70 in

Alarm

[17.8 mm]

## **TUHB-88R-930-Q(F)**

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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

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.

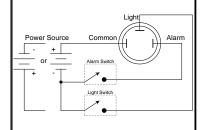
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

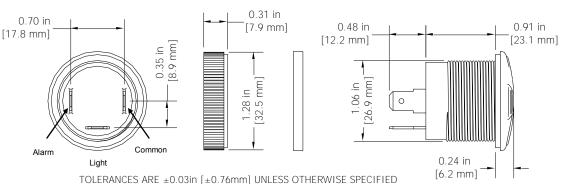
operating conditions.

#### Application Circuits



#### DIMENSIONS

BACK RING GASKET SIDE FRONT





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## **TUHB-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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

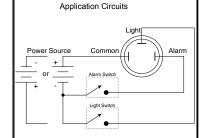
IP 68 Certified-Withstands water submergence and dust exposure

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.

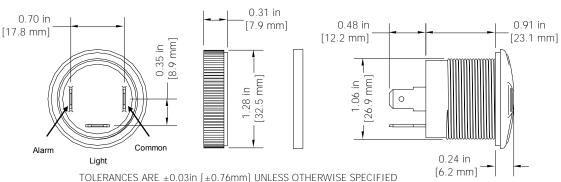
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in



[33.0 mm]

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## **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
 Halo

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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

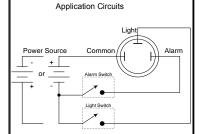
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

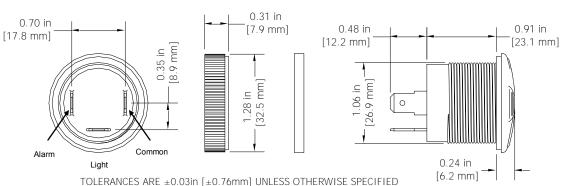
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.



#### DIMENSIONS

BACK RING GASKET SIDE FRONT





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## **TUHB-88R-930-Q(F)**

#### Made in USA





Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Thread-

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

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.

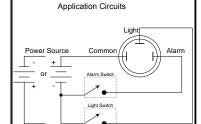
10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

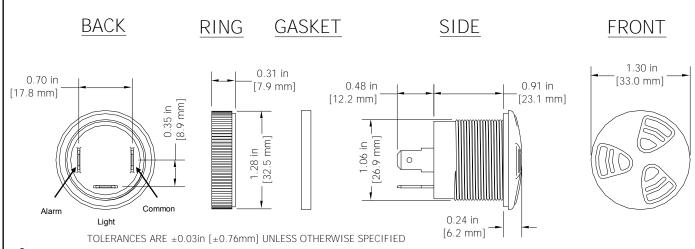
operating conditions.

High Intensity LED Light

ed Attachment Ring



#### **DIMENSIONS**





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## **TUHB-88W-930-Q(F)**

#### Made in USA





pendent 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)

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric alert that can also emit a bright red light when activated, effectively combining inde-

**SPECIFICATIONS** 

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

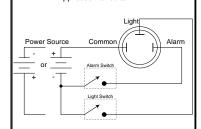
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

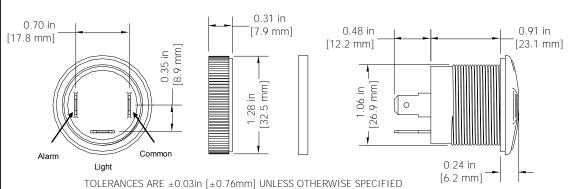
operating conditions.

### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE





FRONT

Floyd Bell Inc

An ISO 9001:2000 Registered Company

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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

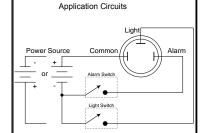
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] .35 in .9 mm] u u u 90 [26.9] 28 Alarm [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

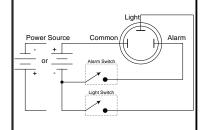
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

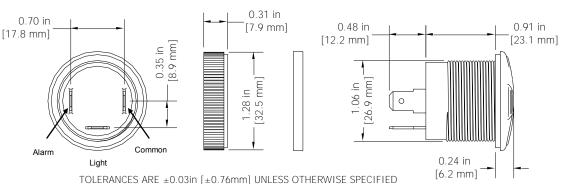
operating conditions.

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in





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## TUHB-88W-930-Q(U)

#### Made in USA





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)

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-

**SPECIFICATIONS** 

Operating Mode: Extra Bright LED Plus Extra Loud Beep Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

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 Warranty:

operating conditions.

High Intensity LED Light

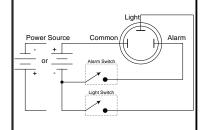
Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] .35 in .9 mm]

u u u 90 [26.9] 28 Alarm

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

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[6.2 mm]



## 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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

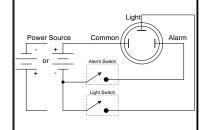
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

Application Circuits

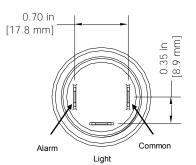


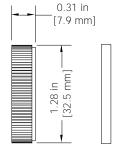
#### **DIMENSIONS**

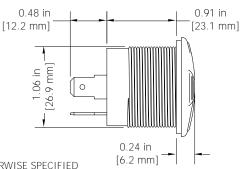
BACK **GASKET** RING

SIDE

FRONT









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



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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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

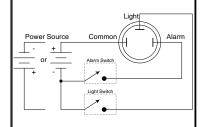
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### Application Circuits

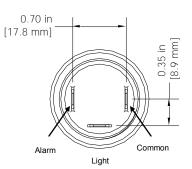


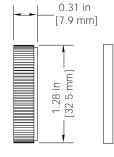
#### **DIMENSIONS**

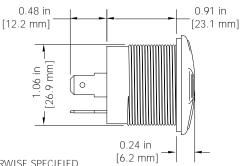
BACK **GASKET** RING

SIDE

FRONT









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



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## 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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

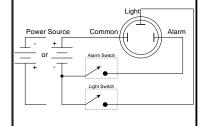
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

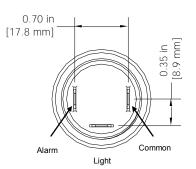


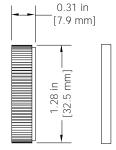
#### **DIMENSIONS**

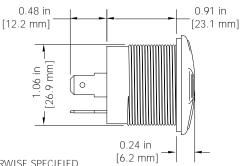
BACK **GASKET** RING

SIDE

FRONT









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



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## TUHB-88Y-930-Q(U)

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

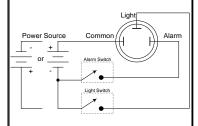
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.

#### Application Circuits

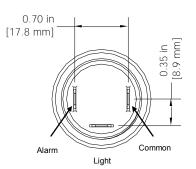


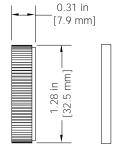
#### **DIMENSIONS**

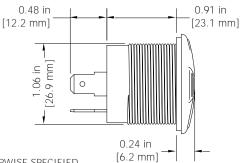
BACK **GASKET** RING

SIDE

FRONT









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



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## 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 piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

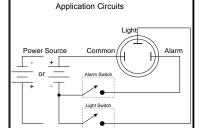
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

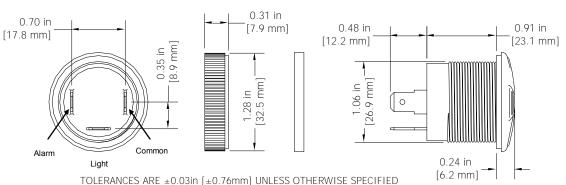
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** SIDE RING FRONT





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## TUHC-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 Thread-

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

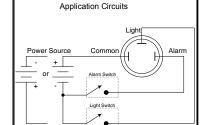
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

ed Attachment Ring



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [7.9 mm] 0.48 in 0.91 in

[17.8 mm] [23.1 mm] [12.2 mm] u u u 90 [26.9] 28 Alarm [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TUHC-88R-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 Continuous Tone

Color: **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc 3000±500 Hz. **Tone Frequency:** 

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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

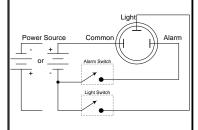
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

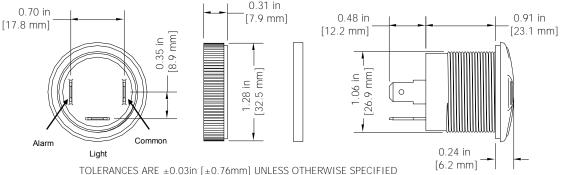
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** SIDE RING FRONT 1.30 in 0.31 in





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### **TUHC-88W-930-Q**

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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** 

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 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

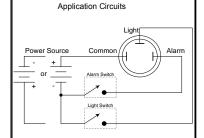
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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.



#### DIMENSIONS

u u u

28

> 1.06 [26.9 m

Common
Light

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

0.24 in
[6.2 mm]



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Revision: 4.14

Alarm

## TUHC-88Y-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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** 

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 Continuous Tone

Color: Yellow **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc 3000±500 Hz. **Tone Frequency:** 

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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

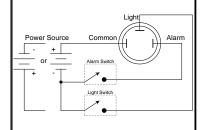
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

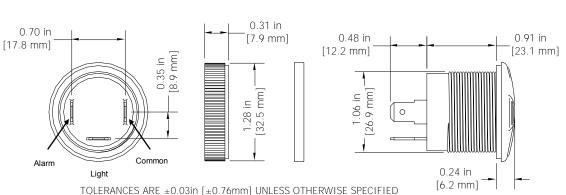
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** SIDE RING



1.30 in [33.0 mm]

FRONT

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## **TUHCH-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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

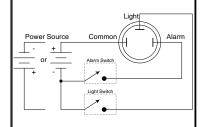
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

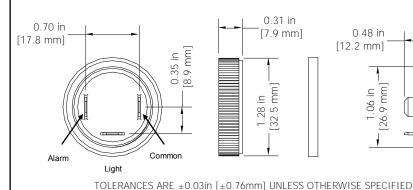
#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE

FRONT



0.48 in 0.91 in [23.1 mm] [12.2 mm] 90 [26.9] [6.2 mm]



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## 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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

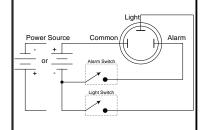
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

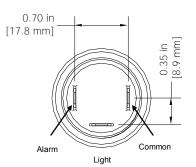


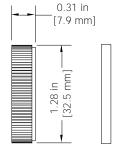
#### **DIMENSIONS**

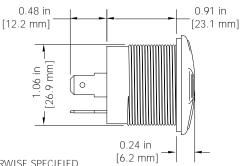
BACK **GASKET** RING

SIDE

FRONT









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

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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

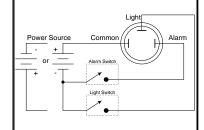
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

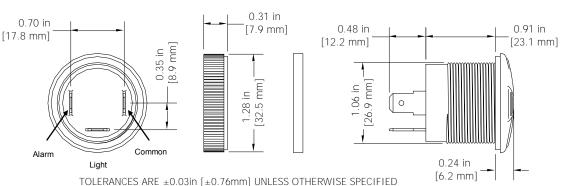
operating conditions.

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT







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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

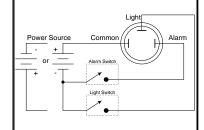
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

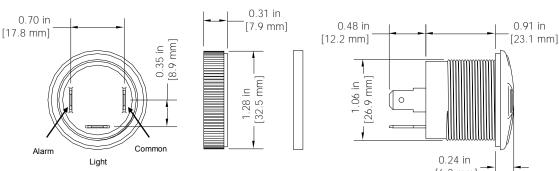
operating conditions.

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE



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



FRONT



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## 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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

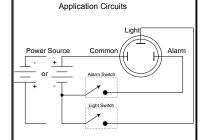
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

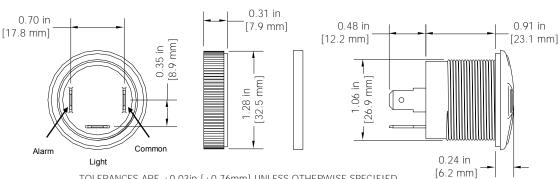
For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE



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



FRONT

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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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.

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -30°C to +65°C. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

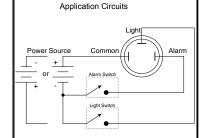
IP 68 Certified-Withstands water submergence and dust exposure Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

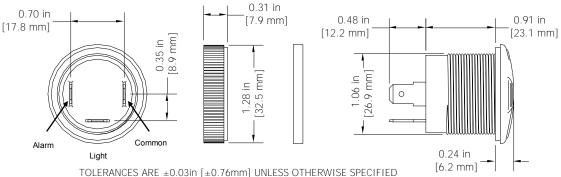
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in





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## **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
 Holo

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: 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

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.

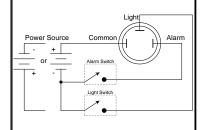
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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

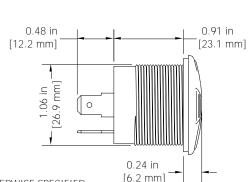
BACK RING GASKET SIDE

0.31 in

[7.9 mm]

u u u

28



TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED

1.30 in [33.0 mm]

FRONT

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.35 in .9 mm]

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Revision: 4.14

0.70 in

Alarm

[17.8 mm]

## 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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

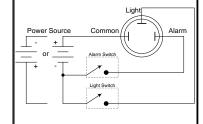
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

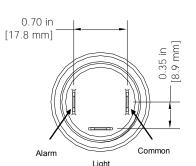


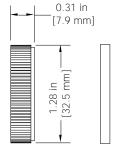
#### **DIMENSIONS**

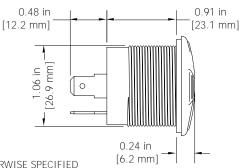
BACK **GASKET** RING

SIDE

FRONT









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



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## **TUHCH-88R-930-Q(S)**

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Single Shot Chime Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

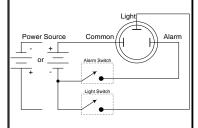
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

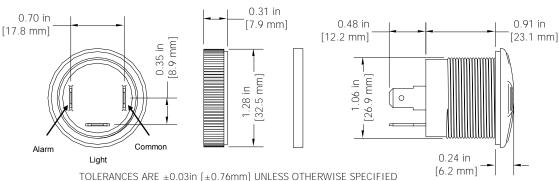
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in





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## 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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

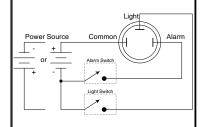
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

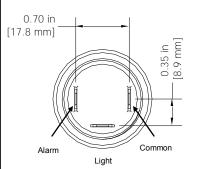


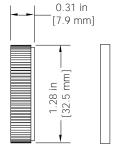
#### **DIMENSIONS**

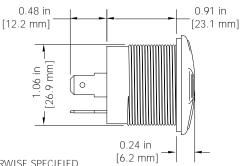
BACK **GASKET** RING

SIDE

FRONT









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

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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

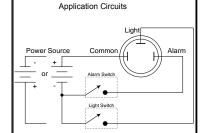
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.

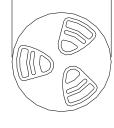


#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm]

u u u 90 [26.9] 28 Alarm

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



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[6.2 mm]

## TUHCH-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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

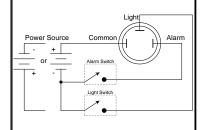
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

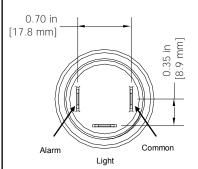


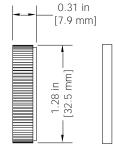
#### **DIMENSIONS**

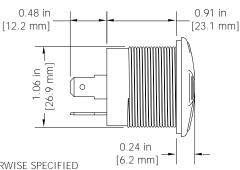
BACK **GASKET** RING

SIDE

FRONT









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



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## **TUHCH-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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

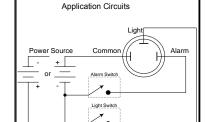
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

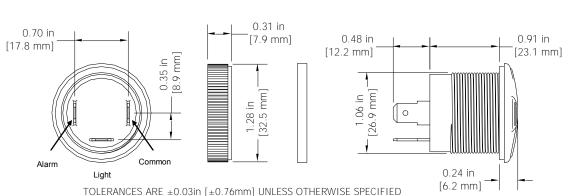
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



### **DIMENSIONS**

BACK **GASKET** RING SIDE



1.30 in [33.0 mm]

FRONT

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## **TUHCH-88Y-930-Q(M)**

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

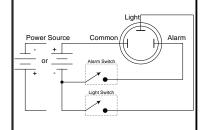
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.

#### Application Circuits



#### **DIMENSIONS**

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

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] .35 in .9 mm] u u u 90 [26.9] 28 Alarm

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[6.2 mm]

## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

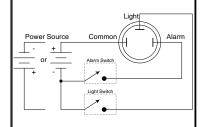
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

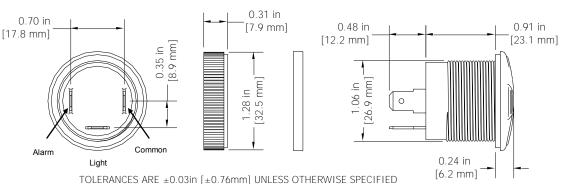
operating conditions.

Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT





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## TUHO-88B-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 Whoop Tone

Color: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

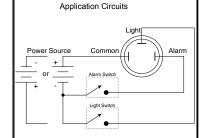
IP 68 Certified-Withstands water submergence and dust exposure

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.

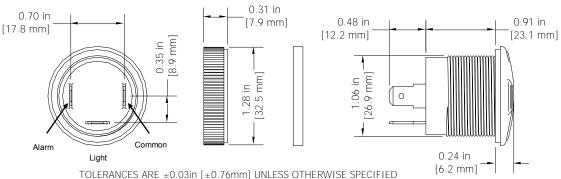
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING 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 piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

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.

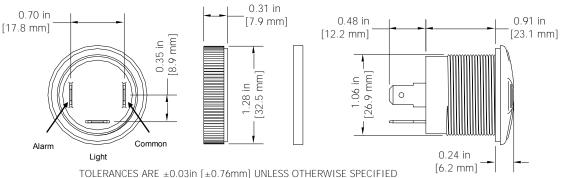
For a period of two years from the date of manufacture under normal Warranty:

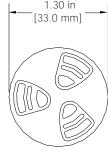
operating conditions.

Application Circuits Common

#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in





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## TUHO-88R-930-Q

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 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:** 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.

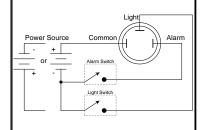
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

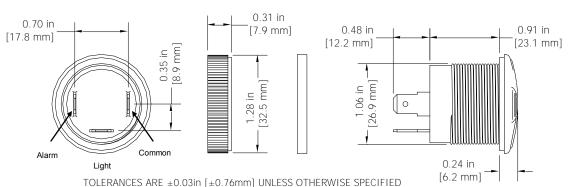
operating conditions.

#### Application Circuits



#### DIMENSIONS

BACK RING GASKET SIDE





FRONT

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## TUHS-88W-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

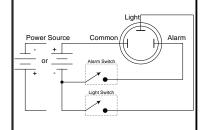
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

## Application Circuits

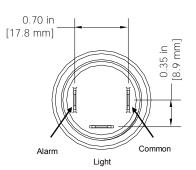


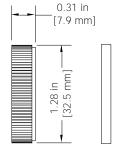
#### **DIMENSIONS**

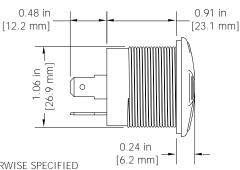
BACK **GASKET** RING

SIDE

FRONT









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



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## TUHO-88Y-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

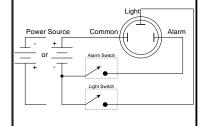
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

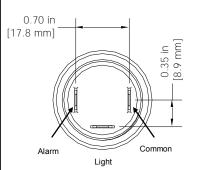


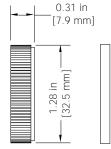
#### **DIMENSIONS**

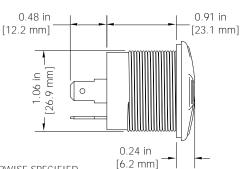
BACK **GASKET** RING

SIDE

FRONT









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

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## TUHO-V88R-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

**Operating Mode:** Extra Bright LED Plus Extra Loud Whoop Tone

Color: Red **Operating Voltage:** 9-30 Vdc Nominal Operating Voltage: 24 Vdc

3000±250 Hz. Whoop Tone. **Tone Frequency:** 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.

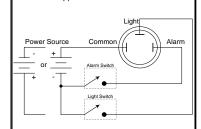
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

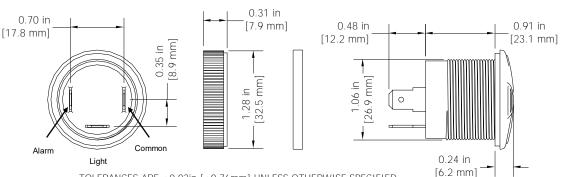
operating conditions.

## Application Circuits



#### DIMENSIONS

BACK **GASKET** SIDE RING



1.30 in [33.0 mm]

FRONT

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



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## 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 piezoelectric 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: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

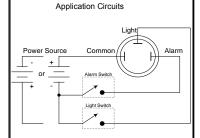
IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

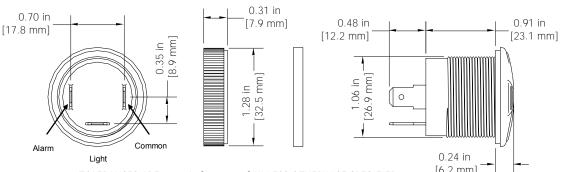
Life Expectancy: 10 years under normal operating conditions. For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT



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

1.30 in

[33.0 mm]

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## 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 piezoelectric 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: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

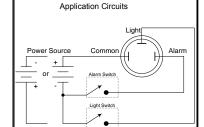
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.



#### **DIMENSIONS**

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

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] u u u 90 [26.9] 28 Alarm 0.24 in Light



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[6.2 mm]

## TUHS-88R-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 Siren Tone

Color: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

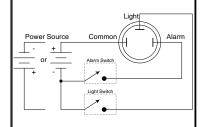
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

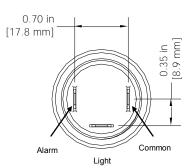
## Application Circuits

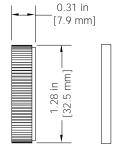


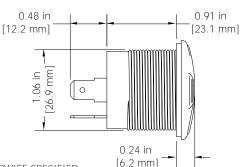
#### **DIMENSIONS**

BACK **GASKET** RING SIDE

FRONT









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



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## TUHS-88W-930-Q

#### Made in USA





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)

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezo-

**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 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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

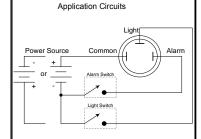
IP 68 Certified-Withstands water submergence and dust exposure

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 Warranty:

operating conditions.

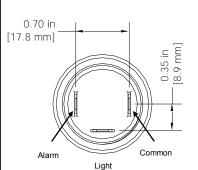


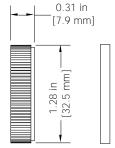
#### **DIMENSIONS**

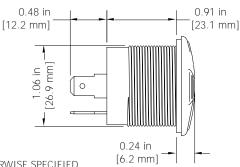
BACK **GASKET** RING

SIDE

FRONT









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



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## TUHS-88Y-930-Q

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 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

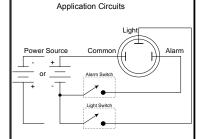
Humidity— Withstands 95% relative humidity at +40°C continuously for 100 hours.

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

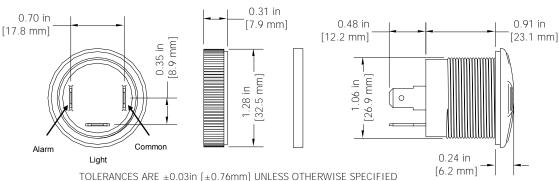
operating conditions.



#### DIMENSIONS

BACK RING GASKET SIDE FRONT

1.30 in





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## 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 piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

# Power Source Common

Application Circuits

#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] u u u 90 [26.9] 28 Alarm 0.24 in Light [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TUHT-88G-930-Q

#### Made in USA





Indoor or Outdoor Use

NEMA 4X and IP68 Rated

High Intensity LED Light

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 piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

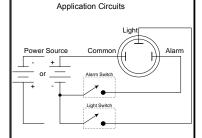
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



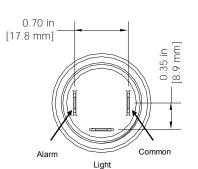
#### **DIMENSIONS**

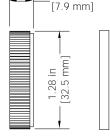
BACK **GASKET** RING

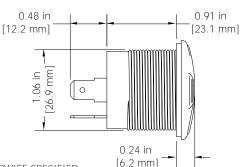
0.31 in

SIDE

FRONT









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

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## TUHT-88R-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 Staccato Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

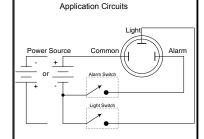
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes. 10 years under normal operating conditions.

Life Expectancy: Warranty:

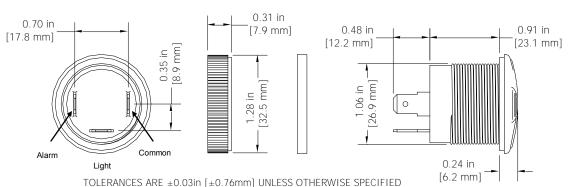
For a period of two years from the date of manufacture under normal

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE





FRONT

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## TUHT-88W-930-Q

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

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 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

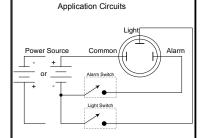
IP 68 Certified-Withstands water submergence and dust exposure

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.

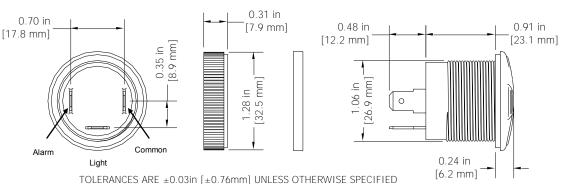
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT





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## **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 piezoelectric 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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

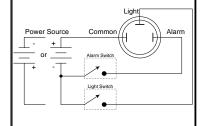
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

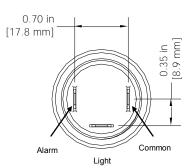


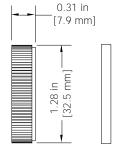
#### **DIMENSIONS**

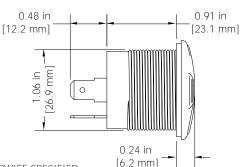
BACK **GASKET** RING

SIDE

FRONT









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



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## **TUHW-88B-930-Q(F)**

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

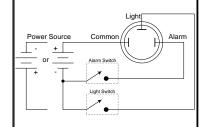
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

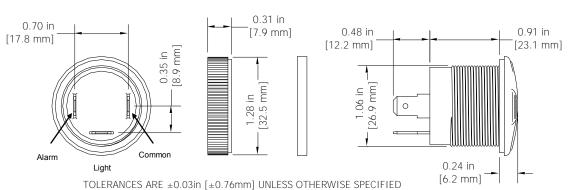
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT





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## TUHW-88B-930-Q(M)

# Made in USA





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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring 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.

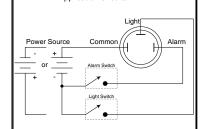
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

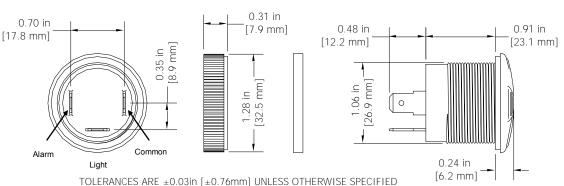
operating conditions.

## Application Circuits



#### DIMENSIONS

BACK RING GASKET SIDE FRONT





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## TUHW-88B-930-Q(S)

#### Made in USA





tors 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)

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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 Indica-

**SPECIFICATIONS** 

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

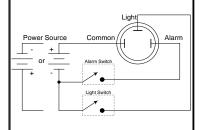
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

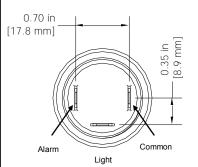
#### Application Circuits

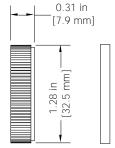


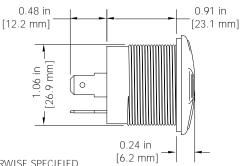
#### **DIMENSIONS**

BACK **GASKET** RING SIDE

FRONT









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

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## **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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

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 Warranty:

operating conditions.

# Common

Application Circuits

#### **DIMENSIONS**

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

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [12.2 mm] [23.1 mm] u u u 90 [26.9] 28

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[6.2 mm]

Revision: 4.14

Alarm

## TUHW-88G-930-Q(M)

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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** 

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

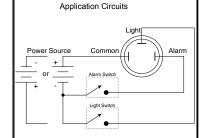
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.

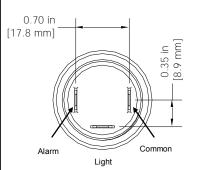


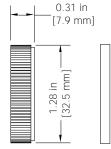
#### **DIMENSIONS**

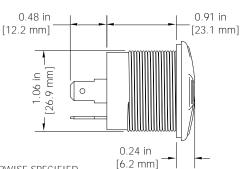
BACK **GASKET** RING

SIDE

FRONT









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



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## **TUHW-88G-930-Q(S)**

#### Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

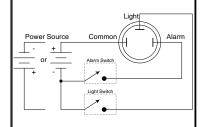
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

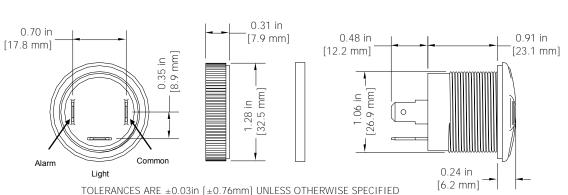
operating conditions.

#### Application Circuits



#### **DIMENSIONS**

BACK **GASKET** RING SIDE



1.30 in [33.0 mm]

FRONT

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# **TUHW-88R-930-Q(F)**

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

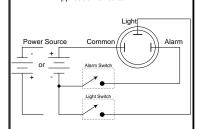
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

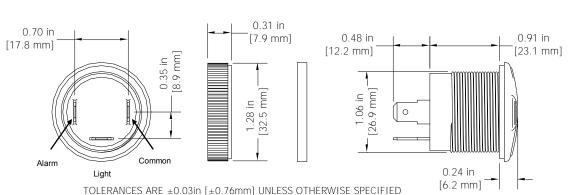
operating conditions.

# Application Circuits



## **DIMENSIONS**

BACK **GASKET** RING SIDE



1.30 in [33.0 mm]

FRONT

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# TUHW-88R-930-Q(M)

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

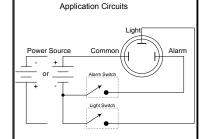
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.

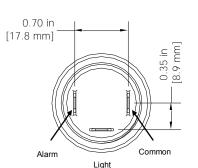


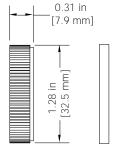
## **DIMENSIONS**

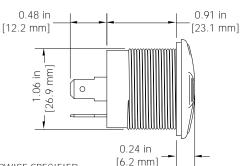
BACK **GASKET** RING

SIDE

FRONT









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



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# TUHW-88R-930-Q(S)

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with ThreadOperating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

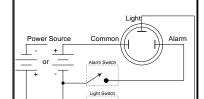
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

ed Attachment Ring



Application Circuits

## **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm] [23.1 mm] [12.2 mm] u u u 90 [26.9] 28 Alarm [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

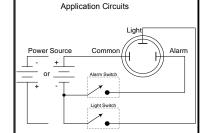
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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 Warranty:

operating conditions.



## **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in 0.31 in 0.70 in [33.0 mm] [7.9 mm] 0.48 in 0.91 in [17.8 mm]

[12.2 mm] [23.1 mm] u u u 90 [26.9] 28 Alarm [6.2 mm] TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TUHW-88W-930-Q(M)

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

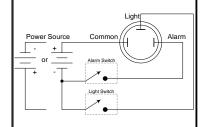
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

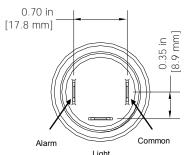
#### Application Circuits

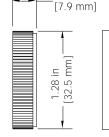


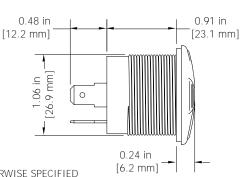
## **DIMENSIONS**

0.31 in

BACK **GASKET** RING SIDE







1.30 in [33.0 mm]

FRONT

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

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# TUHW-88W-930-Q(S)

# Made in USA





**SPECIFICATIONS** 

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Operating Mode: Extra Bright LED Plus Extra Loud Warble Tone

Color: **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

switch applications. (see application circuit)

**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

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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

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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

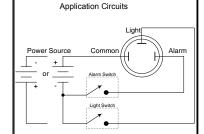
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

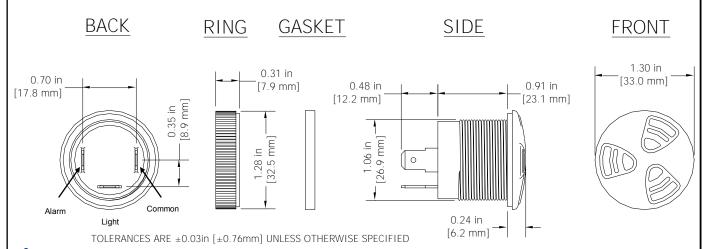
10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



## **DIMENSIONS**





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# TUHW-88Y-930-Q(F)

# Made in USA





Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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**

High Intensity LED Light

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.065 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

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. -40°C to +85°C. **Storage Temperature:** 

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

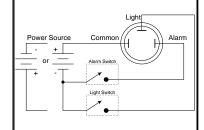
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### Application Circuits

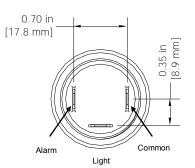


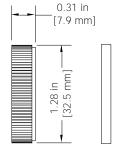
## **DIMENSIONS**

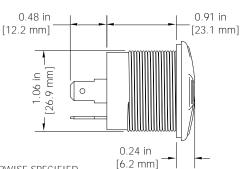
BACK **GASKET** RING

SIDE

FRONT









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



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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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

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.

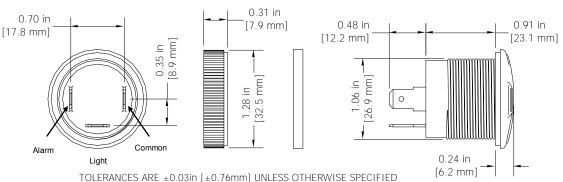
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

Application Circuits Common

## **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in





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# **TUHW-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

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Floyd Bell's ground-breaking new Twin Turbo™ Universal Lighted Alarm is a panel-mount piezoelectric 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. -40°C to +85°C. Storage Temperature:

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

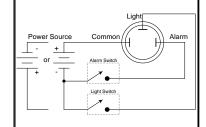
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

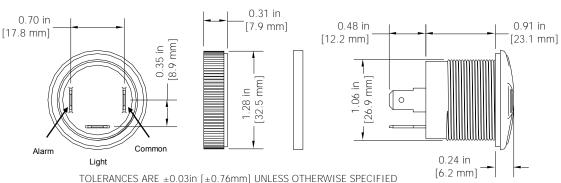
operating conditions.

Application Circuits



## **DIMENSIONS**

BACK **GASKET** RING SIDE FRONT 1.30 in





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# TXB-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

DUTPUT SOUND and CURRENT CONSUMPTION

BESSOURE (8th), at 2 feet

(

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**

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

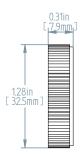
Warranty: For a period of two years from the date of manufacture under normal

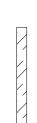
operating conditions.

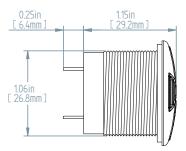
### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TXB-86-515-P(S)

# Made in USA



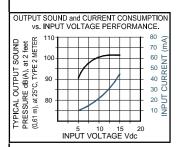


Patent-Pending Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

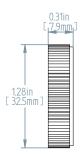
Warranty: For a period of two years from the date of manufacture under normal

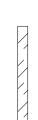
operating conditions.

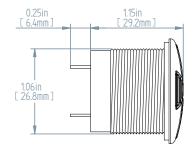
## DIMENSIONS

REAR RING GASKET SIDE FRONT



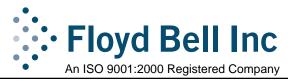








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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# TXB-86-515-Q(F)

# Made in USA



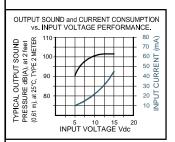


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXB-86-515-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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

**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 continu ously 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**

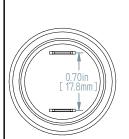
REAR

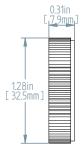
RING

**GASKET** 

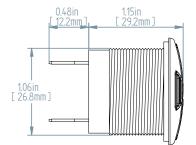
SIDE

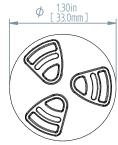
**FRONT** 











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



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# TXB-86-515-Q(S)

# Made in USA



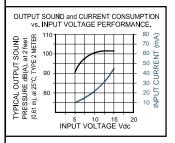


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXB-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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

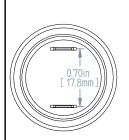
REAR

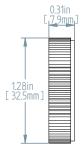
RING

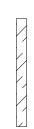
**GASKET** 

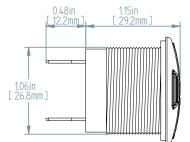
SIDE

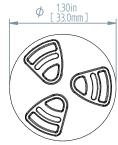
**FRONT** 











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



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# TXB-86-515-S(F)

# Made in USA



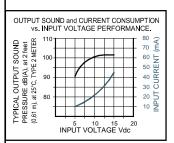


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

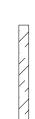
operating conditions.

### **DIMENSIONS**

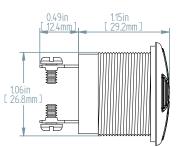
Life Expectancy:

RING

2 SEREWS #6-32 x 1/4" [7,9mm] PNH SLOT SS [7,9mm]



**GASKET** 



SIDE



**FRONT** 

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



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# TXB-86-515-S(S)

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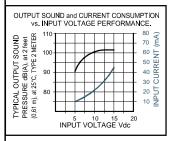


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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

**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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

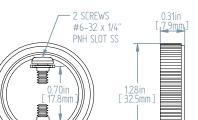
10 years under normal operating conditions.

SIDE

Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

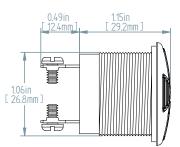
operating conditions.

## **DIMENSIONS**



RING

**GASKET** 



**FRONT** 



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



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# TXB-86-515-W(F)

# Made in USA



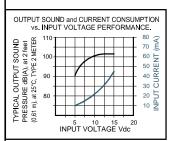


Patent-Pending
 Revolutionary Turbo Design

 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

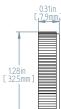
Warranty: For a period of two years from the date of manufacture under normal

SIDE

operating conditions.

## DIMENSIONS

REAR



**RING** 

**GASKET** 

2.75in ±0.25 [69.9mm ±6.4]

BLAEK WIRE (-)

0.24in
[6.0mm]

0.24in
[26.8mm]

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

FRONT





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# TXB-86-515-W(S)

# Made in USA



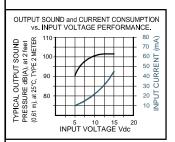


Patent-Pending Revolutionary Turbo Design

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. **Storage Temperature:** 

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

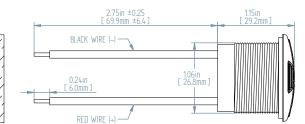
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

SIDE



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

**FRONT** 





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# TXB-86-530-Q(F)

# Made in USA



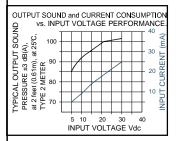


Patent-Pending
 Revolutionary Turbo Design

 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**

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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:

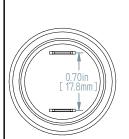
**REAR** 

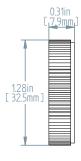
**RING** 

**GASKET** 

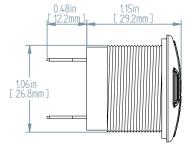
SIDE

**FRONT** 











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



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# TXB-86-530-Q(S)

# Made in USA

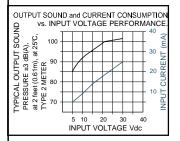




Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



The Turbo 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

**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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black Construction Materials:

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

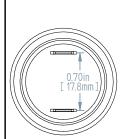
10 years under normal operating conditions.

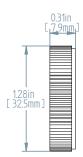
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

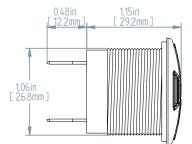
### **DIMENSIONS**

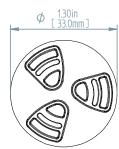
**REAR** RING **GASKET** SIDE **FRONT** 











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



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# TXB-86-530-S(F)

# Made in USA



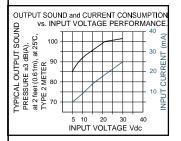


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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.

## SPECIFICATIONS

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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

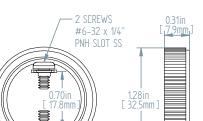
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

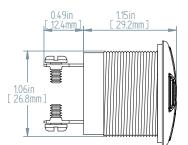
## DIMENSIONS

Life Expectancy:

**RING** 



**GASKET** 



SIDE

FRONT



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



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# TXB-86-530-S(S)

# Made in USA



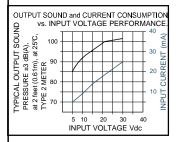


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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

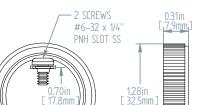
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

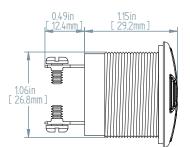
operating conditions.

### **DIMENSIONS**



**RING** 

**GASKET** 

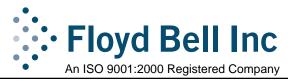


SIDE

**FRONT** 



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



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# TXB-V86-515-P(F)

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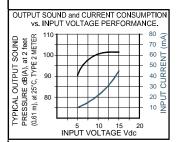


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TXB-V86-515-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

**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

With volume control fully open:

**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

Termination:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

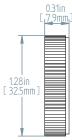
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

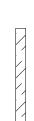
operating conditions.

### **DIMENSIONS**

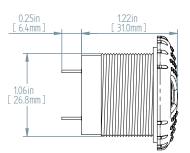
**REAR** 



**RING** 

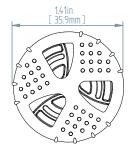


**GASKET** 



SIDE

## **FRONT**



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



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# TXB-V86-515-P(S)

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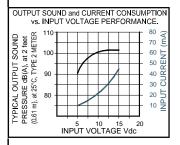


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TXB-V86-515-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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **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

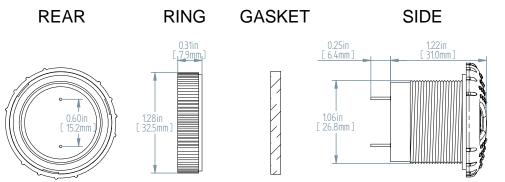
IP 68 Certified—Withstands water submergence and dust exposure Humidity-95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

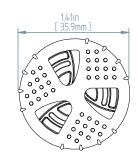
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**



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



**FRONT** 



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# TXB-V86-515-Q(F)

# Made in USA



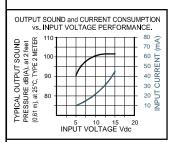


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXB-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

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 $\pm$ 5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C 103 $\pm$ 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 continu ously 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**

RFAR

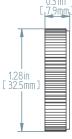
RING

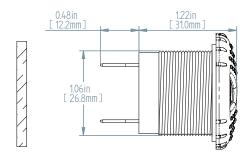
**GASKET** 

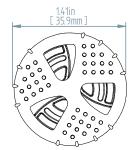
SIDE

**FRONT** 









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



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# TXB-V86-515-Q(S)

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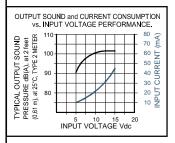


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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

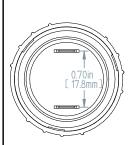
**GASKET** 



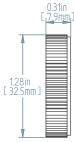
RING

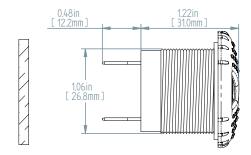
SIDE

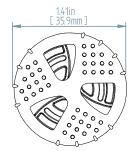
## **FRONT**



RFAR







TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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# TXB-V86-515-S(F)

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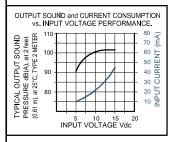


Patent-Pending
Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ continu ously 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**

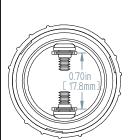
**REAR** 

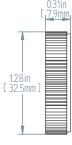
## **RING**

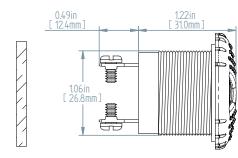
## **GASKET**

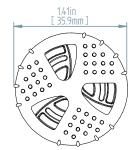
## SIDE

## **FRONT**









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



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# TXB-V86-515-S(S)

# Made in USA



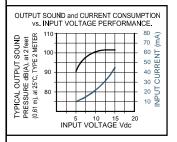


Patent-PendingRevolutionary Turbo Design

 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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

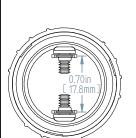
REAR

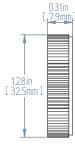
**RING** 

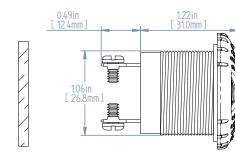
**GASKET** 

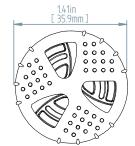
SIDE

**FRONT** 









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



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# TXB-V86-515-W(F)

# Made in USA



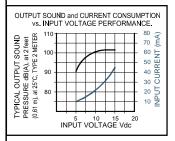


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TXB-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

With volume control fully open:

**Typical Sound Pressure:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously 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 Warranty:

operating conditions.

## **DIMENSIONS**

**REAR** 

RING

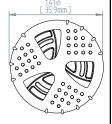
**GASKET** 

Life Expectancy:

SIDE

BLACK WIRE (-)

**FRONT** 



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

RED WIRE (+)



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# TXB-V86-515-W(S)

# Made in USA



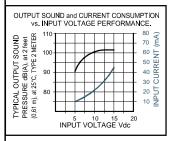


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a 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 continu ously 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

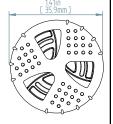
REAR

**RING** 

**GASKET** 

SIDE

**FRONT** 



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

RED WIRE (+)



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# TXB-V86-530-Q(F)

## Made in USA

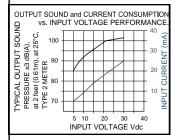




Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

- Corrosion Resistant Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



The Turbo 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

**Operating Mode:** Extra Loud Beep Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc 2900±250 Hz. Operating Frequency:

3±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 -40°C to +85°C Storage Temperature:

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

Part Recognized By: Construction Materials: Underwriters Laboratory

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black

Internal Circuit- Audio-oscillator 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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and 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:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

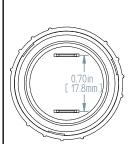
## **DIMENSIONS**

**GASKET** 

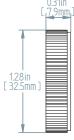
RING

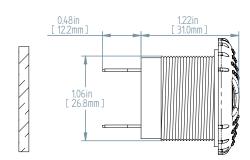
SIDE

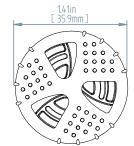
**FRONT** 



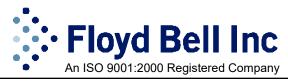
**REAR** 







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



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# TXB-V86-530-Q(S)

# Made in USA



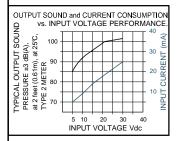


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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 2900±250 Hz. **Operating Frequency:** 

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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

Pull test with a maximum of 22 pounds (10 kg) load Termination Strength:

**Operating Temperature:** -20℃ to +65℃. -40℃ to +85℃. **Storage Temperature:** 

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

SIDE

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

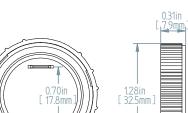
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

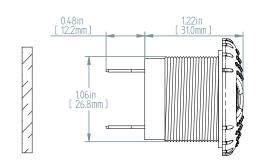
operating conditions.

### **DIMENSIONS**

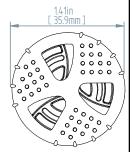
**GASKET** 



**RING** 



**FRONT** 



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



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# TXB-V86-530-S(F)

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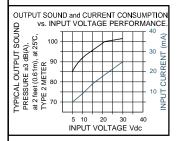


Patent-Pending
 Revolutionary Turbo Design

 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

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: With volume control fully open:

85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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 continu ously 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

SIDE

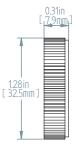
operating conditions.

### **DIMENSIONS**

**GASKET** 

0.70in 17.8mm l

**REAR** 



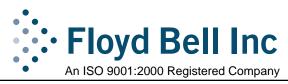
**RING** 

0.49in 122in [31.0mm]
106in [26.8mm]

[ 35.9mm]

**FRONT** 

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



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# TXB-V86-530-S(S)

# Made in USA



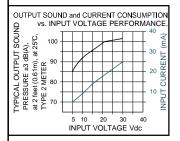


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

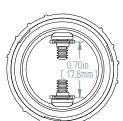
**Life Expectancy:** 10 years under normal operating conditions.

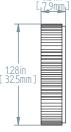
Warranty: For a period of two years from the date of manufacture under normal

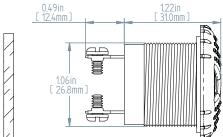
operating conditions.

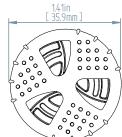
### **DIMENSIONS**











**FRONT** 

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



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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

OUTPUT SOUND and CURRENT CONSUMPTION VS. INPUT VOLTAGE PERFORMANCE.

OF THE SOUND AND THE SOUND VS. INPUT VOLTAGE PERFORMANCE.

OF THE SOUND VS. INPUT VOLTAGE VS. INPUT VS. I

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25°C. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

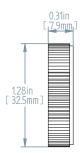
operating conditions.

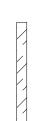
### **DIMENSIONS**

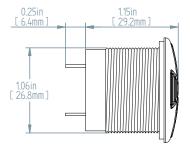
Life Expectancy:

REAR RING GASKET SIDE FRONT











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



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# TXC-86-515-Q

# Made in USA



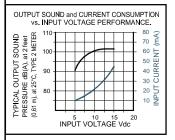


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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 2900±250 Hz. Operating Frequency: **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℃ 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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

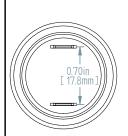
10 years under normal operating conditions.

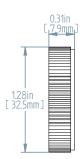
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

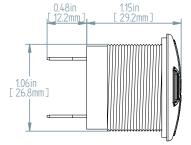
### **DIMENSIONS**

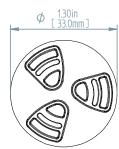
**REAR** RING **GASKET** SIDE **FRONT** 











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



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# TXC-86-515-S

# Made in USA



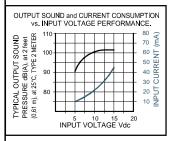


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



**REAR** 

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**

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℃

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 continu ously 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

SIDE

operating conditions.

## DIMENSIONS

**GASKET** 

# 2 SCREWS #6-32 x 1/4" [7.9mm] PNH SLOT SS [1.28in [32.5mm]]

RING

0.49in 1.15in [ 29.2mm ] 1.06in [ 26.8mm ]

© [330mm]

**FRONT** 

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



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## TXC-86-515-W

# Made in USA



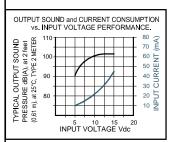


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

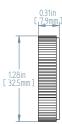
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

0.70%

**REAR** 



**RING** 

GASKET

SIDE



**FRONT** 

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



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## TXC-86-530-Q

# Made in USA



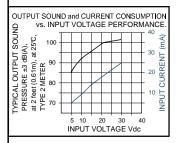


Patented Revolutionary
 Turbo Design

 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**

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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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

ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified– Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

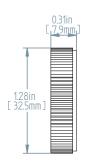
Warranty: For a period of two years from the date of manufacture under normal operating

conditions.

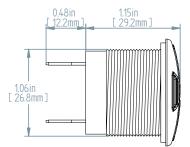
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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## TXC-86-530-S

#### Made in USA



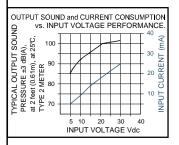


Patented Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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**

Operating Mode: Extra Loud Continuous Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc 2900±250 Hz. **Operating Frequency: 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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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

-20℃ to +65℃ **Operating Temperature: Storage Temperature:** -40℃ to +85℃.

Termination:

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℃ continu ously 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

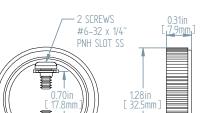
SIDE

conditions.

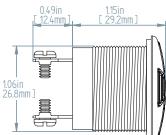
#### **DIMENSIONS**

**GASKET** 

**Environmental Durability:** 



**RING** 



**FRONT** 



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



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## TXC-86-530-W

#### Made in USA



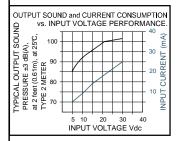


Patented Revolutionary

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant

Turbo Design



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

Operating Mode: Extra Loud Continuous Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 24 Vdc 2900±250 Hz. **Operating Frequency: 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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. **Storage Temperature:** 

20% over maximum rated voltage for less than 5 minutes. Surge Voltage:

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:** 

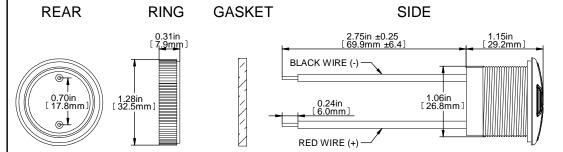
ASTM B117 Certified- Withstands exposure to salt spray for 300 hours IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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** 

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



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## TXC-V86-515-P

#### Made in USA



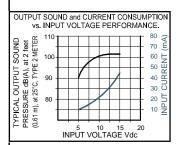


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo TXC-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

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:** With volume control fully open:

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20℃ to +65℃

Storage Temperature: -40℃ to +85℃

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

**Underwriters Laboratory** Part Recognized By:

**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

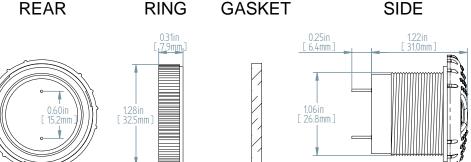
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

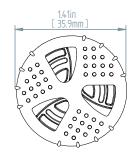
For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### **DIMENSIONS**



**FRONT** 



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



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## TXC-V86-515-Q

# Made in USA



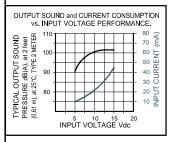


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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

Milh and harman and the Health

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℃ to +65℃ Storage Temperature: -40℃ to +85℃

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

RFAR

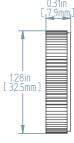
RING

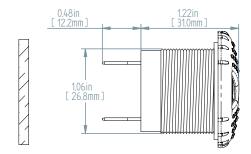
**GASKET** 

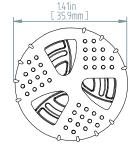
SIDE

**FRONT** 









TOLERANCES ARE  $\pm 0.03$ in [ $\pm 0.76$ mm] UNLESS OTHERWISE SPECIFIED



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## TXC-V86-515-S

# Made in USA



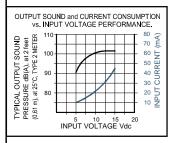


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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: With volume control fully open:

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

**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:  $-20^{\circ}$  to  $+65^{\circ}$  Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 

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 continu ously 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**

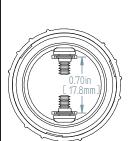
RFAR

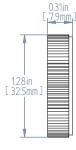
**RING** 

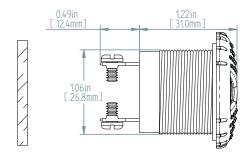
**GASKET** 

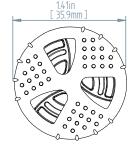
SIDE

**FRONT** 









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



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## TXC-V86-515-W

# Made in USA

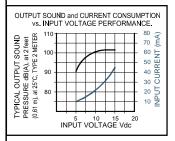




Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

- Corrosion Resistant
   Stainless Steel Diaphragm
- Reliable Piezoelectric Technology



The Turbo 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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃.
Storage Temperature: -40℃ to +85℃.

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

ASTM B117 Certified-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.

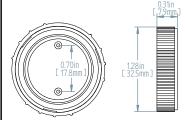
Life Expectancy: 10 years under normal operating conditions.

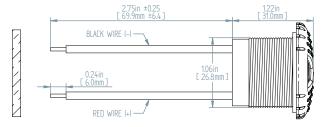
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

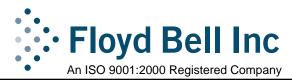
REAR RING GASKET SIDE FRONT







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



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## TXC-V86-530-Q

# Made in USA



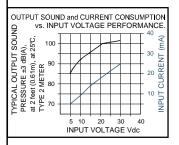


Patented Revolutionary
 Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

Reliable Piezoelectric
 Technology



The Turbo TXC-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**

Operating Mode: Extra Loud Continuous Tone
Operating Voltage: 5-30 Vdc

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: 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℃ to +65℃.

Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

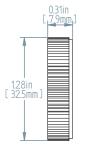
Warranty: For a period of two years from the date of manufacture under normal operating

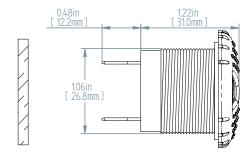
conditions.

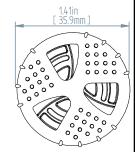
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT









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



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## TXC-V86-530-S

# Made in USA



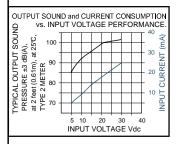


Patented Revolutionary
 Turbo Design

 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**

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: With volume control fully open:

85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25 $^{\circ}$ C 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25 $^{\circ}$ 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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

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

conditions.

#### **DIMENSIONS**

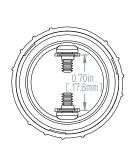
Life Expectancy:

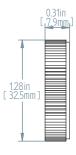
REAR RING

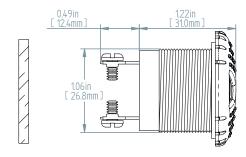
**GASKET** 

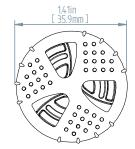
SIDE

**FRONT** 









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



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## TXC-V86-530-W

#### Made in USA

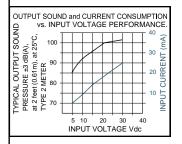




Patent-Pending Revolutionary Turbo Design

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 2900±250 Hz. **Operating Frequency: 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. -40°C to +85°C. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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.

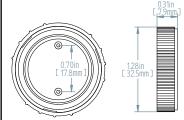
Life Expectancy: Warranty:

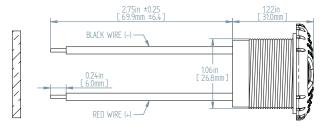
For a period of two years from the date of manufacture under normal

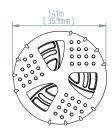
operating conditions.

#### **DIMENSIONS**

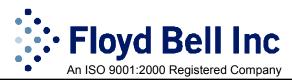
**REAR** RING **GASKET** SIDE **FRONT** 







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



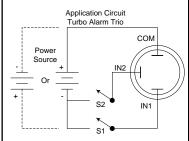
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## TXCBW-86-530-Q(F)

#### 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	Веер	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

Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone Operating Mode:

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Operating Frequency: 3Khz ±250 Hz. (Warble tone 2.9Khz to 3Khz)

3Hz Beep tone, 2Hz Warble tone 5 mA at 5 Vdc Typical Pulse Rate:

**Typical Operating Current:** 25 mA at 30 Vdc

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

-40°C to +85°C. Storage Temperature:

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.

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

conditions.

#### **DIMENSIONS**

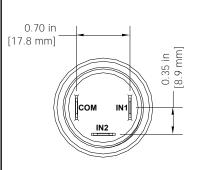
BACK

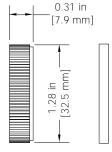
RING

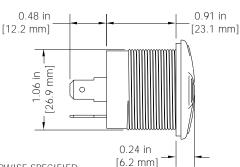
**GASKET** 

SIDE

FRONT









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



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## **TXCBW-86-530-Q(S)**

#### Made in USA

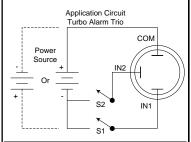


Patented Revolutionary Turbo Design

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	Веер	1 Hz	3000 Hz
On	On	Warble	2 Hz	2900 - 3000 Hz

BACK

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

Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone Operating Mode:

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Operating Frequency: 3Khz ±250 Hz. (Warble tone 2.9Khz to 3Khz)

1Hz Beep tone, 2Hz Warble tone 5 mA at 5 Vdc Typical Pulse Rate:

**Typical Operating Current:** 25 mA at 30 Vdc

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

-40°C to +85°C. Storage Temperature:

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.

10 years under normal operating conditions.

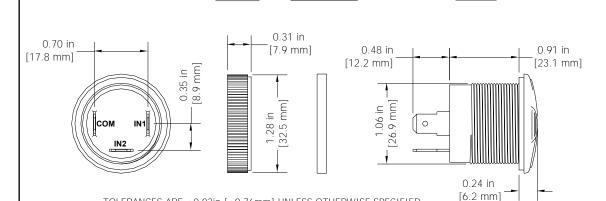
Life Expectancy: For a period of two years from the date of manufacture under normal operating Warranty:

SIDE

conditions.

#### **DIMENSIONS**

RING



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

**GASKET** 

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Revision: 5.20

FRONT

1.30 in

[33.0 mm]

## **TXCBW-V86-530-Q(F)**

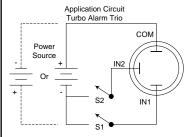
#### Made in USA



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	Веер	1 Hz	3000 Hz
On	On	Warble	2 Hz	2900 - 3000 Hz

BACK

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**

Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone Operating Mode:

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Operating Frequency: 3Khz ±250 Hz. (Warble tone 2.9Khz to 3Khz)

3Hz Beep tone, 2Hz Warble tone 5 mA at 5 Vdc Typical Pulse Rate:

**Typical Operating Current:** 25 mA at 30 Vdc

(With volume control fully open)  $85\pm5$  dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  $103\pm5$  dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. **Typical Sound Pressure:** 

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. -40°C to +85°C.

Storage Temperature: 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.

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

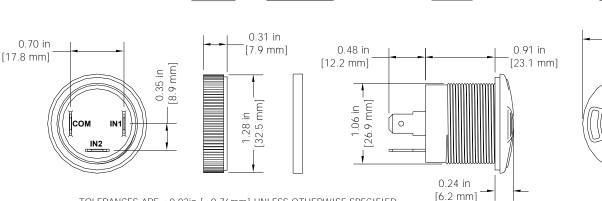
SIDE

conditions.

#### **DIMENSIONS**

RING

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



**GASKET** 

[33.0 mm]

FRONT

1.30 in

Floyd Bell Inc An ISO 9001:2000 Registered Company

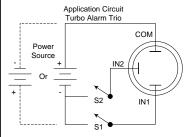
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## TXCBW-V86-530-Q(S)

#### 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	Веер	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**

Triple tone extra Loud Continuous tone or Beep tone, or a Warble tone Operating Mode:

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Operating Frequency: 3Khz ±250 Hz. (Warble tone 2.9Khz to 3Khz)

1Hz Beep tone, 2Hz Warble tone 5 mA at 5 Vdc Typical Pulse Rate:

**Typical Operating Current:** 25 mA at 30 Vdc

(With volume control fully open)  $85\pm5$  dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C  $103\pm5$  dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. **Typical Sound Pressure:** 

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.

10 years under normal operating conditions.

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

conditions.

#### **DIMENSIONS**

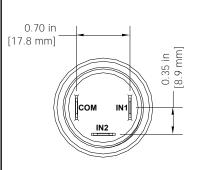
BACK

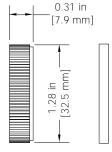
RING

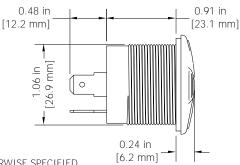
**GASKET** 

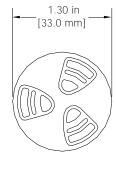
SIDE

FRONT









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

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## TXL7-96-930-Q

#### Made in USA





7 unique sounds one alarm

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.5 inch Panel

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 The Control inputs are universal polarity and are used to select which tone **Control Inputs:** 

the alarm plays. The Common connection can be positive with negative switch inputs or negative with positive switch inputs. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **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.

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black, UL94V-0 **Construction Materials:** 

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

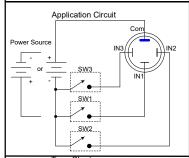
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

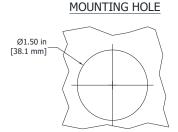
For a period of two years from the date of manufacture under normal

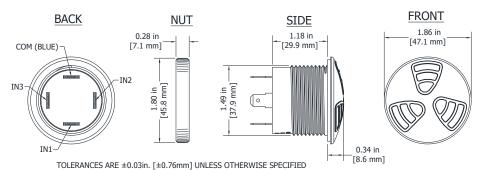
operating conditions.



	Tone Chart							
IN3	IN2	IN1	Sound	Rate	Frequency			
0	0	0	Off	X	X			
0	0	1	Constant	Х	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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## TXL7-V96-930-Q

#### Made in USA





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

7 unique sounds one alarm

Indoor or Outdoor Use

NEMA 4X and IP68 Rated

Mounts in 1.5 inch Panel

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

**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 -30°C to +65°C.

**Operating Temperature:** Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge Voltage:

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black, UL94V-0 **Construction Materials:** 

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

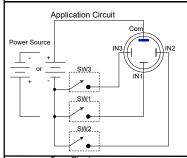
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

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.

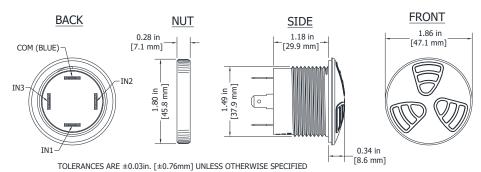


	Tone Chart							
IN3	IN2	IN1	Sound	Rate	Frequency			
0	0	0	Off	Χ	Х			
0	0	1	Constant	Χ	1800 Hz			
0	1	0	Beep	2 Hz	1800 Hz			
0	1	1	Siren	3 Hz	1600 - 2000 Hz			
1	0	0	Warble	2 Hz	1700 - 1800 Hz			
1	0	1	Chime	1 Hz	1800 Hz			
1	1	0	Whoop	3 Hz	1600 - 2000 Hz			
1	1	1	Ringer	10 Hz	1700 - 1800 Hz			

#### DIMENSIONS

# Ø1.50 in

MOUNTING HOLE





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All specifications subject to change without notice.

## TXLL7-98B-930-Q

#### Made in USA





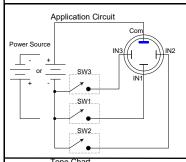
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	Х
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

**Termination Strength: Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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

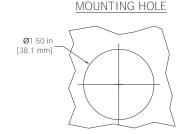
Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

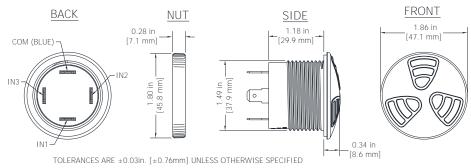
Life Expectancy: 10 years under normal operating conditions. Warranty:

For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS







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## TXLL7-98G-930-Q

#### Made in USA





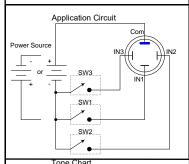
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	Х
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

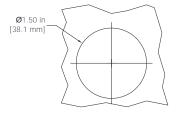
Life Expectancy: 10 years under normal operating conditions. Warranty:

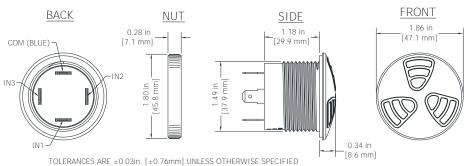
For a period of two years from the date of manufacture under normal

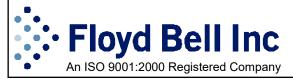
operating conditions.

#### MOUNTING HOLE

#### DIMENSIONS







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## TXLL7-98R-930-Q

#### Made in USA





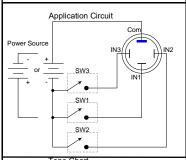
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	X	X
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

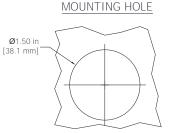
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

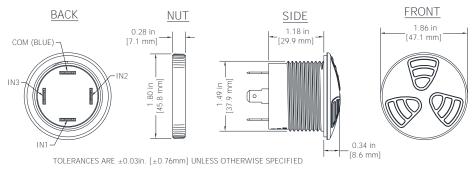
Life Expectancy: 10 years under normal operating conditions. Warranty:

For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS







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## TXLL7-98W-930-Q

#### Made in USA





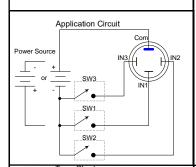
7 unique sounds and light in one alarm

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



	Tone Chart							
IN3	IN2	IN1	Sound	Rate	Frequency			
0	0	0	Off	Х	Х			
0	0	1	Constant	Х	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			

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

**Termination Strength: Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

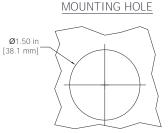
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

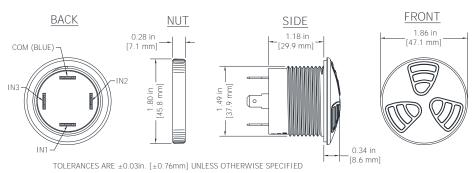
Life Expectancy: 10 years under normal operating conditions. Warranty:

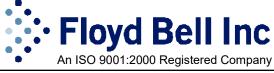
For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS







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## TXLL7-98Y-930-Q

#### Made in USA





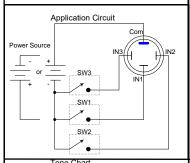
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	Х
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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 ASTM B117 Certified-Withstands exposure to salt spray for 300 hours **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure

Humidity-Withstands 95% relative humidity at +40°C continuously for 100 hours.

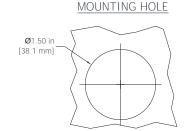
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

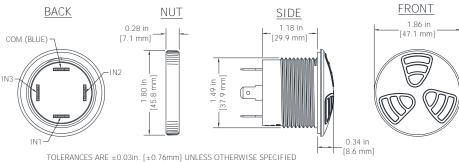
Life Expectancy: 10 years under normal operating conditions. Warranty:

For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS





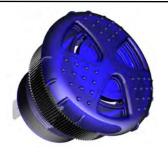


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## TXLL7-V98B-930-Q

#### Made in USA





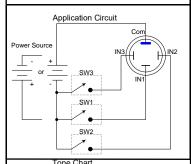
7 unique sounds and light in one alarm

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



	TOTIE CHAIL							
IN3	IN2	IN1	Sound	Rate	Frequency			
0	0	0	Off	Х	Х			
0	0	1	Constant	Х	1800 Hz			
0	1	0	Веер	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			

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

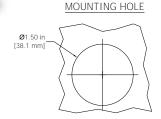
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

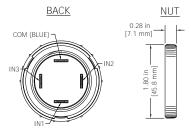
Life Expectancy: 10 years under normal operating conditions. Warranty:

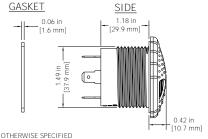
For a period of two years from the date of manufacture under normal

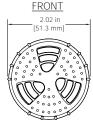
operating conditions.

#### DIMENSIONS

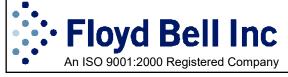








TOLERANCES ARE ±0.03in. [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TXLL7-V98G-930-Q

#### Made in USA





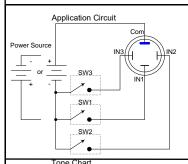
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	Х
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

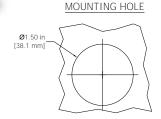
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

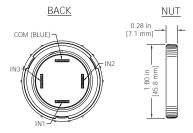
Life Expectancy: 10 years under normal operating conditions. Warranty:

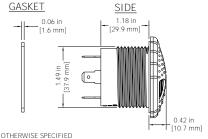
For a period of two years from the date of manufacture under normal

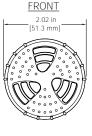
operating conditions.

#### DIMENSIONS

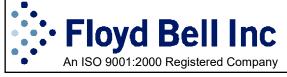








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## TXLL7-V98R-930-Q

#### Made in USA





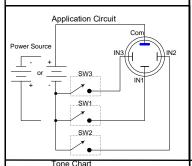
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	X
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

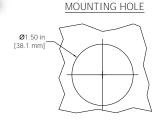
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

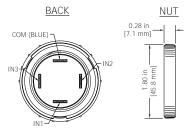
Life Expectancy: 10 years under normal operating conditions. Warranty:

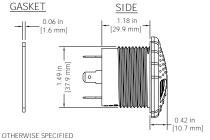
For a period of two years from the date of manufacture under normal

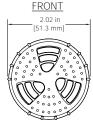
operating conditions.

#### DIMENSIONS

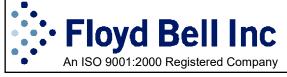








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### TXLL7-V98W-930-Q

#### Made in USA





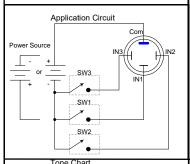
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	Х
0	0	1	Constant	Х	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

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 frequeny, 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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

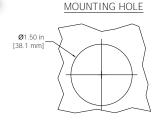
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

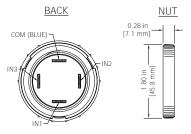
Life Expectancy: 10 years under normal operating conditions. Warranty:

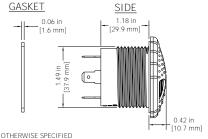
For a period of two years from the date of manufacture under normal

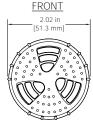
operating conditions.

#### DIMENSIONS

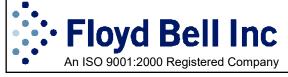








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## TXLL7-V98Y-930-Q

#### Made in USA





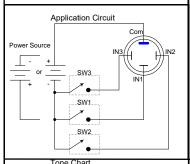
7 unique sounds and light in one alarm

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



IN3	IN2	IN1	Sound	Rate	Frequency
0	0	0	Off	Х	X
0	0	1	Constant	Х	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

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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. Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: **Operating Temperature:** -30°C to +65°C. Storage Temperature: -40°C to +85°C.

20% over maximum rated voltage for less than 5 minutes. Surge 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.

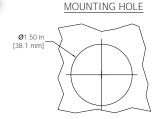
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

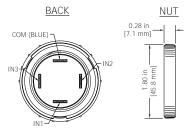
Life Expectancy: 10 years under normal operating conditions. Warranty:

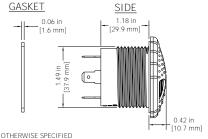
For a period of two years from the date of manufacture under normal

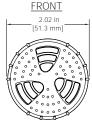
operating conditions.

#### DIMENSIONS

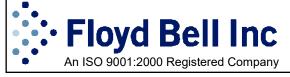








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## TXO-86-515-P

# 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

DUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE.

(1061 m), at 2 feet
(1061 m), at 2 fe

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

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: 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℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plater plates that a maximum of 22 pounds (10 kg) load

Operating Temperature:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

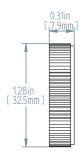
Warranty: For a period of two years from the date of manufacture under normal

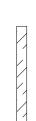
operating conditions.

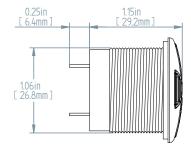
#### DIMENSIONS

REAR RING GASKET SIDE FRONT











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



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## TXO-86-515-Q

# Made in USA



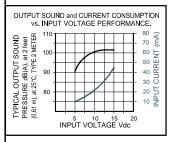


Patent-Pending
 Revolutionary Turbo Design

 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**

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:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

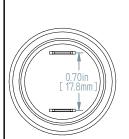
REAR

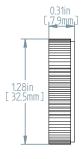
**RING** 

**GASKET** 

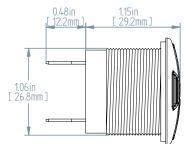
SIDE

**FRONT** 











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



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## TXO-86-515-S

# Made in USA



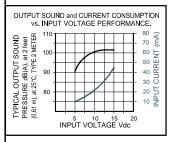


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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**

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: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

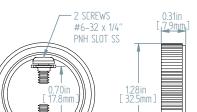
Warranty: For a period of two years from the date of manufacture under normal

SIDE

operating conditions.

#### DIMENSIONS

**GASKET** 



RING

0.49in 1.15in [ 29.2mm]

φ [330m]

**FRONT** 

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



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## TXO-86-515-W

#### Made in USA



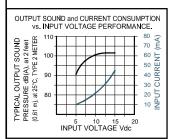


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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**

**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:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃.

-40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

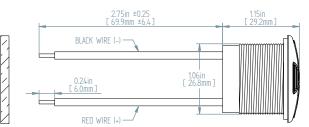
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

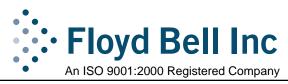
SIDE



**FRONT** 



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## TXO-86-530-Q

# Made in USA



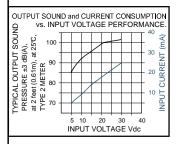


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

Operating Mode: Extra Loud Whoop Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 24 Vdc
Operating Frequency: 2900±250 Hz.

2±25% Cycles 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℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

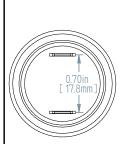
**Life Expectancy:** 10 years under normal operating conditions.

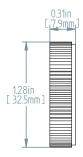
Warranty: For a period of two years from the date of manufacture under normal

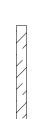
operating conditions.

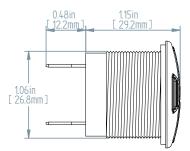
#### DIMENSIONS

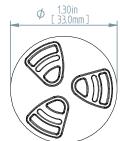
REAR RING GASKET SIDE





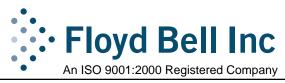






**FRONT** 

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



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## TXO-86-530-S

# Made in USA



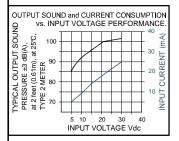


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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

Operating Mode: Extra Loud Whoop Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc Operating Frequency: 2900±250 Hz.

2±25% Cycles 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℃

103±5 dB(Å), at 30 Vdc, at 24 inches (61 cm), at 25 ℃. **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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

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.

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

Warranty: For a period of two years from the date of manufacture under normal

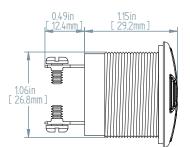
operating conditions.

#### DIMENSIONS

2 SEREWS #6-32 x 1/4" PNH SLOT SS 0.70in 17.8mm] 1.28in 1.32.5mm]

**RING** 

**GASKET** 

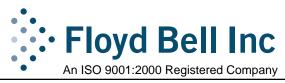


SIDE

FRONT



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



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## TXO-V86-515-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

OUTPUT SOUND and CURRENT CONSUMPTION

BESSAIRE GB(A), at 2 6et

(0.61 m) at 25°C; Type 2 Merson

100 more 2 more 2

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**

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. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin platermination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Life Expectancy:

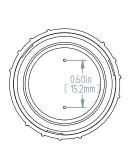
REAR

**RING** 

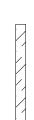
**GASKET** 

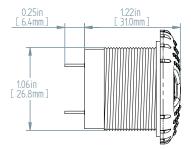
SIDE

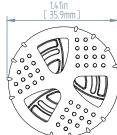
FRONT



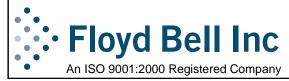








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## TXO-V86-515-Q

# Made in USA



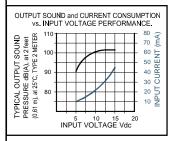


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

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: 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 continu ously 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

RFAR

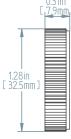
RING

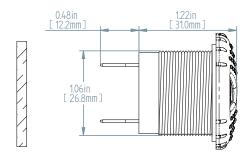
**GASKET** 

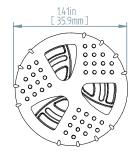
SIDE

**FRONT** 

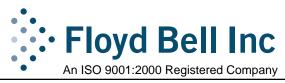








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TXO-V86-515-S

#### Made in USA



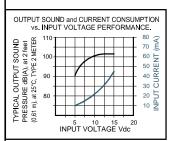


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

**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

With volume control fully open: **Typical Sound Pressure:** 

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 continu ously 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 Warranty:

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

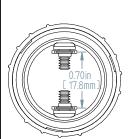
REAR

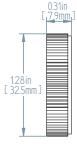
**RING** 

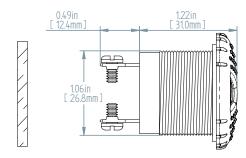
**GASKET** 

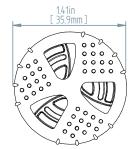
SIDE

**FRONT** 









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



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# TXO-V86-515-W

#### Made in USA



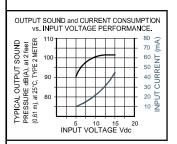


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

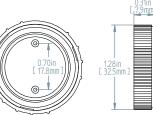
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

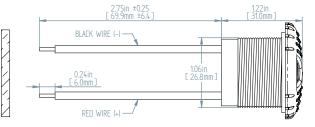
operating conditions.

#### **DIMENSIONS**

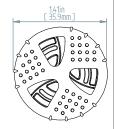
**REAR** 



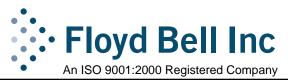
**GASKET** SIDE



**FRONT** 



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



RING

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### TXO-V86-530-Q

# Made in USA



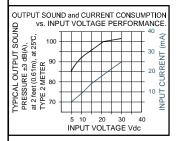


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



**REAR** 

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

Operating Mode: Extra Loud Whoop Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc Operating Frequency: 2900±250 Hz.

2±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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

**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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

SIDE

Warranty: For a period of two years from the date of manufacture under normal

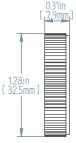
operating conditions.

#### **DIMENSIONS**

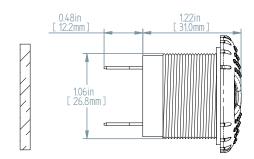
**GASKET** 

Life Expectancy:





**RING** 



1.41in [ 35.9mm ]

**FRONT** 

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



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### TXO-V86-530-S

#### Made in USA



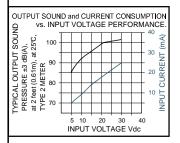


Patent-Pending Revolutionary Turbo Design

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 frontmounting 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:** 5-30 Vdc Nominal Operating Voltage: 24 Vdc

Operating Frequency: 2900±250 Hz.

2±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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

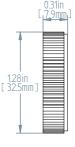
SIDE

operating conditions.

#### **DIMENSIONS**

**GASKET** 

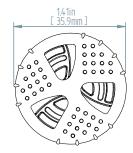
**REAR** 



**RING** 

[ 26.8mm]

**FRONT** 



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



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### TXS-86-515-P

# Made in USA





Patent-PendingRevolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion ResistantStainless Steel Diaphragm

Reliable Piezoelectric Technology

OUTPUT SOUND and CURRENT CONSUMPTION

BESSARE GB(A), at 2 feet

(10.61 m) at 25°C, Type 2 Merror

(10.61 m)

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 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.

Termination:

**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 continu ously 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

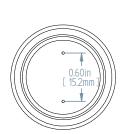
operating conditions.

#### DIMENSIONS

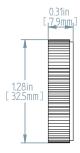
GASKET

SIDE

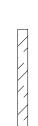
**FRONT** 

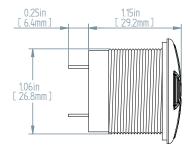


RFAR



**RING** 







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



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### TXS-86-515-Q

#### Made in USA



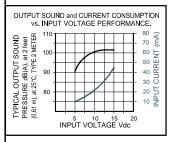


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

**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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

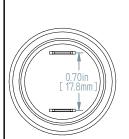
**REAR** 

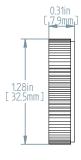
RING

**GASKET** 

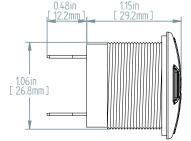
SIDE

**FRONT** 











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



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### TXS-86-515-S

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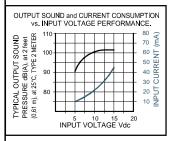


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

**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:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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

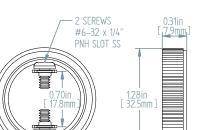
IP 68 Certified—Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

Warranty: For a period of two years from the date of manufacture under normal

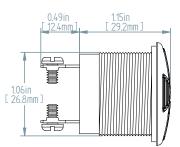
operating conditions.

#### **DIMENSIONS**



RING

**GASKET** 



SIDE

φ [330nm]

**FRONT** 

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



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### TXS-86-515-W

#### Made in USA



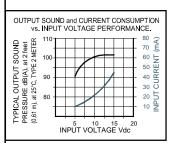


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃.

-40℃ to +85℃. Storage Temperature: 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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

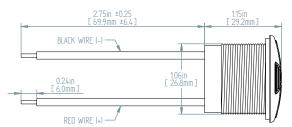
**REAR** 

**RING** 

1.28in [ 32.5mm]

**GASKET** 

SIDE



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

#### **FRONT**





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### TXS-86-530-Q

# Made in USA



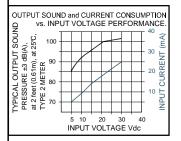


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Extra Loud Siren Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 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: 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℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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**

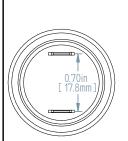
REAR

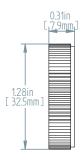
**RING** 

**GASKET** 

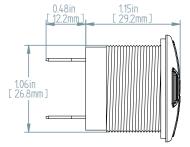
SIDE

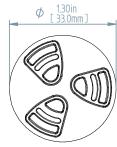
**FRONT** 











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



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# TXS-86-530-S

# Made in USA



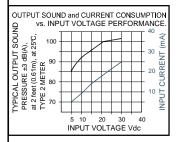


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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

Operating Mode: Extra Loud Siren Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 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:** 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 fo

ASTM B117 Certified- 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.

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

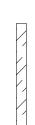
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

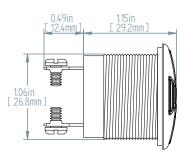
#### **DIMENSIONS**

2 SCREWS #6-32 x 1/4" [7.9mm] PNH SLOT SS 1.28in [32.5mm]

**RING** 



**GASKET** 

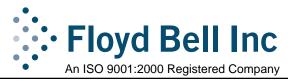


SIDE

FRONT



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



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### TXS-V86-515-P

# Made in USA





Patent-PendingRevolutionary 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.
(100 m) at 25 C. C. Type 2 Meeting 100 m) at 25 C. Type 2 Meeting 100 m) at 25

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**

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: 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. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

SIDE

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Life Expectancy:

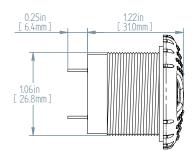
0.60in [ 15.2mm

**REAR** 

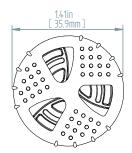
# 0.31in [.7.9mm]

**RING** 

**GASKET** 



**FRONT** 



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### TXS-V86-515-Q

#### Made in USA



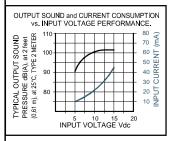


Patent-Pending Revolutionary Turbo Design

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

Operating Mode: Extra Loud Siren Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc 2900±250 Hz. **Operating Frequency:** 

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

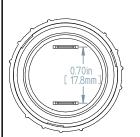
RFAR

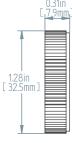
#### RING

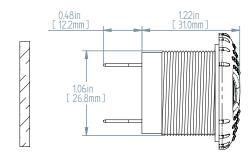
#### **GASKET**

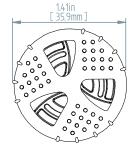
#### SIDE

#### **FRONT**

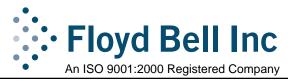








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# TXS-V86-515-S

#### Made in USA



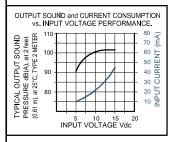


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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**

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

With volume control fully open:

**Typical Sound Pressure:** 

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 continu ously for 100 hours.

Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### **DIMENSIONS**

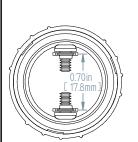
REAR

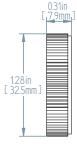
#### **RING**

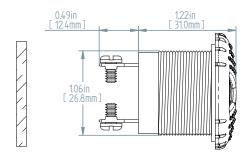
#### **GASKET**

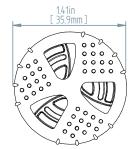
#### SIDE

#### **FRONT**

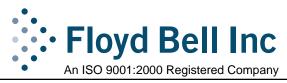








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### TXS-V86-515-W

# Made in USA



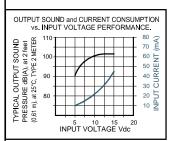


Patent-Pending
 Revolutionary Turbo Design

 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**

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

50 IIIA at 15 vuc

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. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

**Termination:** 18AWG Wire, GXL, Copper, XPLE Insulated, Red a **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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

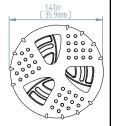
**REAR** 

**RING** 

**GASKET** 

SIDE

FRONT



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

RED WIRE (+)



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### TXS-V86-530-Q

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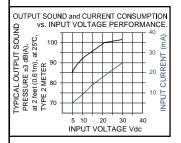


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXS-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**

Operating Mode: Extra Loud Siren Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

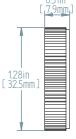
Warranty: For a period of two years from the date of manufacture under normal

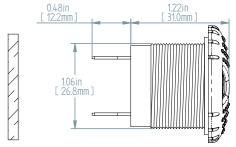
operating conditions.

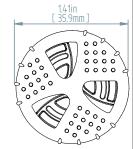
#### **DIMENSIONS**

REAR RING GASKET SIDE









**FRONT** 

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### TXS-V86-530-S

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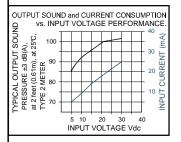


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXS-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

Operating Mode: Extra Loud Siren Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 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:**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 continu ously 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**

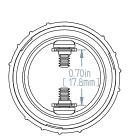
REAR

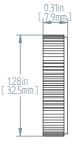
**RING** 

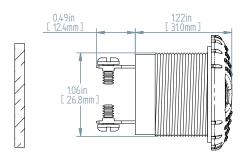
**GASKET** 

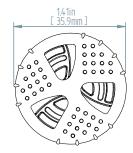
SIDE

**FRONT** 

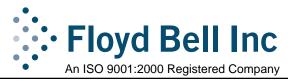








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### TXT-86-515-P

# 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**

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: 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat **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: -40 C to +65 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

ASTM B117 Certified-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.

Life Expectancy: 10 years under normal operating conditions.

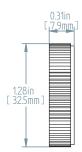
Warranty: For a period of two years from the date of manufacture under normal

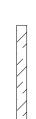
operating conditions.

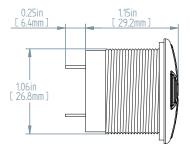
#### DIMENSIONS

REAR RING GASKET SIDE FRONT











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



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# TXT-86-515-Q

# Made in USA



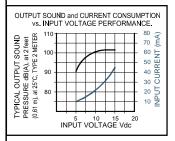


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

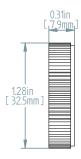
Life Expectancy:

REAR RING GASKET

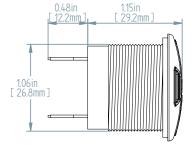
SIDE

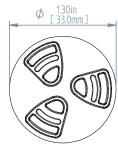
**FRONT** 











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



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### TXT-86-515-S

#### Made in USA



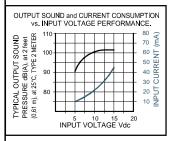


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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

Termination:

**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:** 92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

SIDE

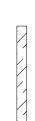
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

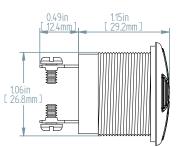
#### **DIMENSIONS**

2 SEREWS #6-32 x 1/4' PNH SLOT SS 1.28in [ 32.5mm]

RING



**GASKET** 



**FRONT** 



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



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# TXT-86-515-W

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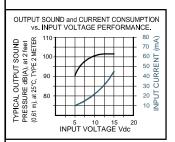


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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**

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: 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℃.

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Termination Strength: Pull test with a n
Operating Temperature: -20℃ to +65℃.
Storage Temperature: -40℃ to +85℃.

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 continu ously 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.

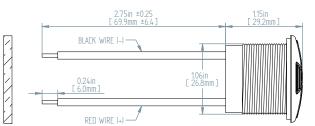
#### DIMENSIONS

REAR

**RING** 

1.28in [ 32.5mm] **GASKET** 

SIDE



FRONT



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



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### TXT-86-530-Q

# Made in USA



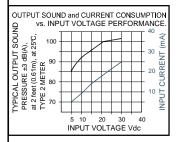


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

Operating Mode: Extra Loud Staccato Tone

Operating Voltage: 5-30 Vdc Nominal Operating Voltage: 24 Vdc Operating Frequency: 2900±250 Hz.

8±25% Cycles 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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

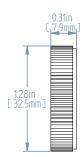
Warranty: For a period of two years from the date of manufacture under normal

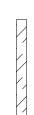
operating conditions.

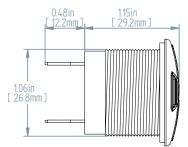
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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### TXT-86-530-S

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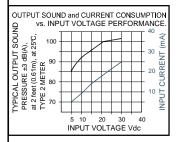


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



REAR

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 frontmounting case with threaded attachment ring.

#### SPECIFICATIONS

**Operating Mode:** Extra Loud Staccato Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 24 Vdc Operating Frequency: 2900±250 Hz.

8±25% Cycles per second

**Typical Operating Current:** 5 mA at 5 Vdc

25 mA at 30 Vdc

85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ **Typical Sound Pressure:** 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

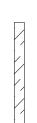
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

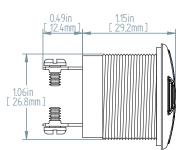
#### **DIMENSIONS**

2 SEREWS #6-32 x 1/4" PNH SLOT SS 1.28in [ 32.5mm]

**RING** 



**GASKET** 



SIDE

**FRONT** 



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



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### TXT-V86-515-P

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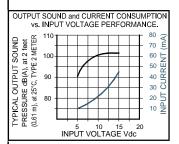


Patent-Pending Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



**REAR** 

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

**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 continu ously for 100 hours.

Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

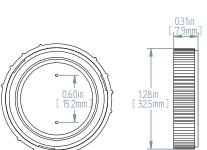
**Life Expectancy:** 10 years under normal operating conditions.

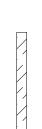
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

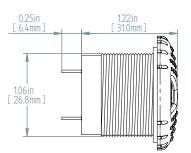
#### **DIMENSIONS**

**RING** 



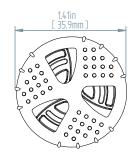


**GASKET** 



SIDE

#### **FRONT**



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



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### TXT-V86-515-Q

#### Made in USA



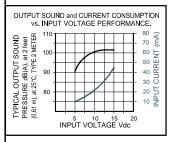


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** 

Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 **Environmental Durability:** IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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**

RFAR

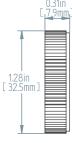
RING

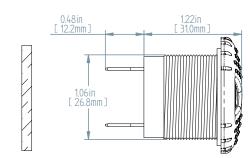
**GASKET** 

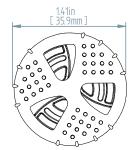
SIDE

**FRONT** 

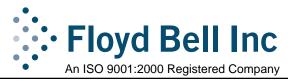








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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### TXT-V86-515-S

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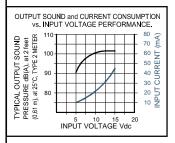
Patent-Pending

Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously 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.

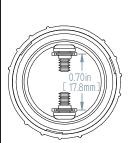
#### DIMENSIONS

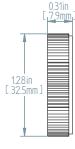
REAR RING

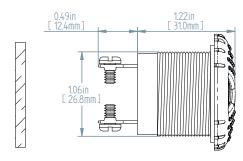
GASKET

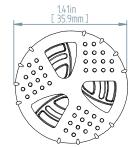
SIDE

**FRONT** 









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



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### TXT-V86-515-W

# Made in USA



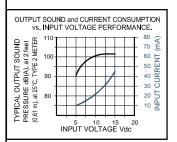


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20% to +65%. Storage Temperature: -40% to +85%.

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 continu ously 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

SIDE

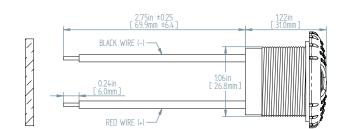
operating conditions.

#### **DIMENSIONS**

**GASKET** 



**REAR** 



[35.9mm]

**FRONT** 

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



RING

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### TXT-V86-530-Q

#### Made in USA



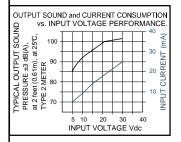


Patent-Pending Revolutionary Turbo Design

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 frontmounting 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

5-30 Vdc **Operating Voltage:** Nominal Operating Voltage: 24 Vdc

Operating Frequency: 2900±250 Hz.

8±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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

-20℃ to +65℃. **Operating Temperature: Storage Temperature:** -40℃ to +85℃.

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

#### **DIMENSIONS**

**REAR** 

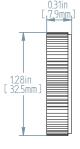
**RING** 

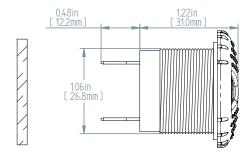
**GASKET** 

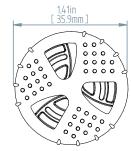
SIDE

**FRONT** 









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



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### TXT-V86-530-S

#### Made in USA



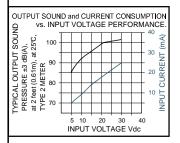


Patent-Pending Revolutionary Turbo Design

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 frontmounting case with threaded attachment ring. The snap-fit rotary volume control provides variable attenuation up to approximately 15dB.

#### SPECIFICATIONS

Termination:

**Operating Mode:** Extra Loud Staccato Tone

5-30 Vdc **Operating Voltage:** Nominal Operating Voltage: 24 Vdc

Operating Frequency: 2900±250 Hz.

8±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℃ 103±5 dB(A), at 30 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

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

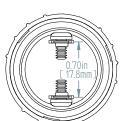
10 years under normal operating conditions. Life Expectancy:

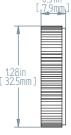
Warranty: For a period of two years from the date of manufacture under normal

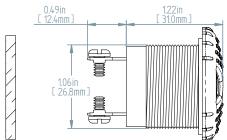
operating conditions.

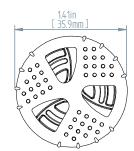
#### **DIMENSIONS**

**REAR RING** SIDE **GASKET** 



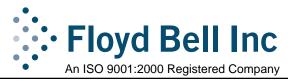






**FRONT** 

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



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### TXT-V86-530-W

#### Made in USA



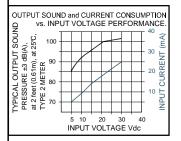


Patent-Pending Revolutionary Turbo Design

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 frontmounting 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

5-30 Vdc **Operating Voltage:** Nominal Operating Voltage: 24 Vdc Operating Frequency: 2900±250 Hz.

8±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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃ 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

-20℃ to +65℃. **Operating Temperature:** 

**Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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 Warranty:

operating conditions.

#### **DIMENSIONS**

**REAR** 

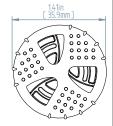
RING

**GASKET** 

SIDE

BLACK WIRE (-) RED WIRE (+)

**FRONT** 



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



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# TXW-86-515-P(F)

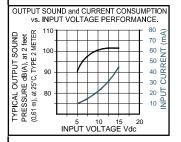
# Made in USA





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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -40℃ to +85℃.

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 30

ASTM B117 Certified-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.

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

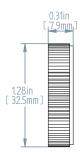
Warranty: For a period of two years from the date of manufacture under normal

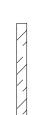
operating conditions.

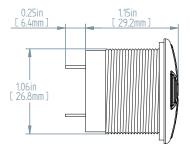
#### DIMENSIONS

REAR RING GASKET SIDE FRONT











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



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# TXW-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

OUTPUT SOUND and CURRENT CONSUMPTION

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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**

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plat

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 continu ously 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

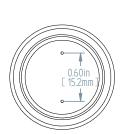
operating conditions.

#### DIMENSIONS

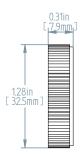
**RING** 

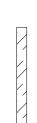
SIDE

**FRONT** 

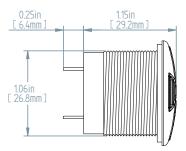


RFAR





**GASKET** 





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



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# TXW-86-515-Q(F)

# Made in USA



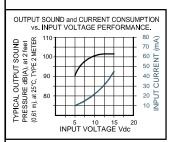


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXW-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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

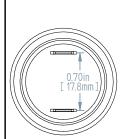
REAR

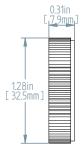
**RING** 

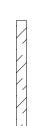
**GASKET** 

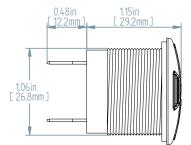
SIDE

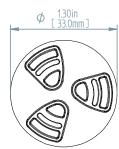
**FRONT** 











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



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# TXW-86-515-Q(S)

# Made in USA



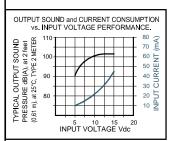


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXW-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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃.
Storage Temperature: -40℃ to +85℃.

**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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

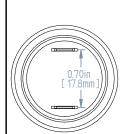
**Life Expectancy:** 10 years under normal operating conditions.

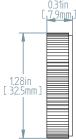
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

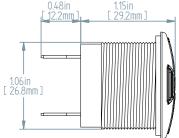
#### **DIMENSIONS**

REAR RING GASKET SIDE FRONT











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



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# TXW-86-515-S(F)

# Made in USA



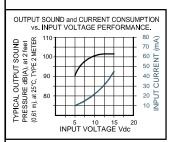


Patent-Pending
 Revolutionary Turbo Design

 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.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

#### DIMENSIONS

Life Expectancy:

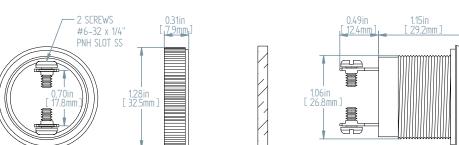
# REAR F

RING

**GASKET** 

SIDE

**FRONT** 



φ [330mm]

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



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# TXW-86-515-S(S)

# Made in USA



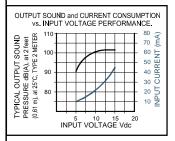


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



REAR

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**

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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

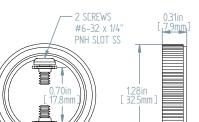
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

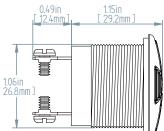
#### **DIMENSIONS**

**GASKET** 



RING

1.06in [ 26.8m



SIDE

(33.0mm)

**FRONT** 

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



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# TXW-86-515-W(F)

# Made in USA



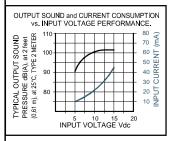


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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 -20℃ to +65℃.

Storage Temperature: -40℃ to +85℃.

**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 continu ously 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.

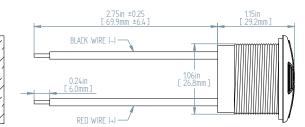
#### DIMENSIONS

REAR

**RING** 

1.28in [ 32.5mm] **GASKET** 

SIDE



FRONT



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



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# TXW-86-515-W(S)

#### Made in USA



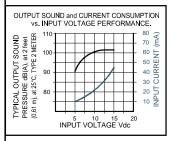


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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℃

103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. -40℃ to +85℃.

**Storage Temperature:** 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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94V-0, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

SIDE

operating conditions.

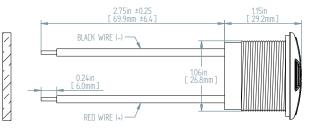
#### **DIMENSIONS**

**REAR** 

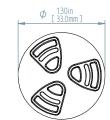
1.28in [ 32.5mm]

**RING** 

**GASKET** 



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



**FRONT** 



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## TXW-86-530-Q(F)

# Made in USA



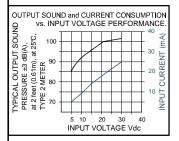


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

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:** 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

SIDE

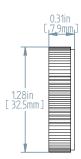
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

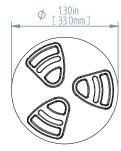
**REAR** 



RING

**GASKET** 

**FRONT** 



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



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## TXW-86-530-Q(S)

## Made in USA



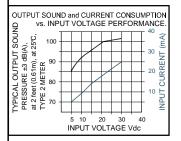


Patent-Pending Revolutionary Turbo Design

Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant Stainless Steel Diaphragm

Reliable Piezoelectric Technology



The Turbo 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

**Operating Mode:** Extra Loud Warble Tone

**Operating Voltage:** 5-30 Vdc Nominal Operating Voltage: 30 Vdc **Operating Frequency:** 2900±250 Hz.

1±25% Cycles per second

**Typical Operating Current:** 5 mA at 5 Vdc

25 mA at 30 Vdc

85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ **Typical Sound Pressure:** 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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** 

Case- Plastic "NORYL® N-190". Flame Retardant UL 94V-0. Black Construction Materials:

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

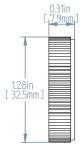
Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

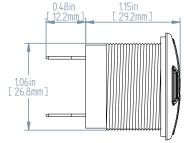
#### **DIMENSIONS**

**REAR** RING **GASKET** SIDE **FRONT** 











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



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## TXW-86-530-S(F)

# Made in USA



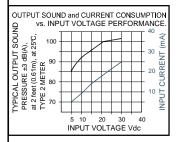


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXW-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.

## 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: 85±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(Å), at 30 Vdc, at 24 inches (61 cm), at 25 ℃. **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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

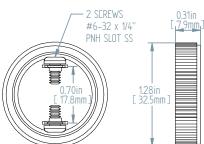
**Life Expectancy:** 10 years under normal operating conditions.

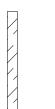
Warranty: For a period of two years from the date of manufacture under normal

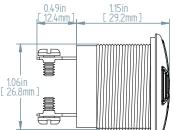
operating conditions.

## **DIMENSIONS**

REAR RING GASKET SIDE FRONT









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



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## TXW-86-530-S(S)

# Made in USA



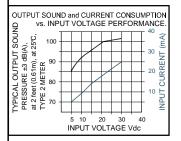


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo TXW-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 Warble Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±25% Cycles 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℃

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

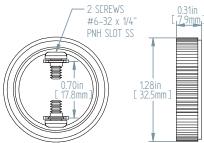
**Life Expectancy:** 10 years under normal operating conditions.

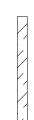
Warranty: For a period of two years from the date of manufacture under normal

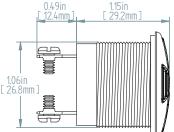
operating conditions.

## DIMENSIONS

REAR RING GASKET SIDE FRONT

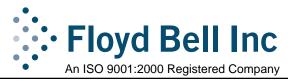








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TXW-V86-515-P(F)

## Made in USA



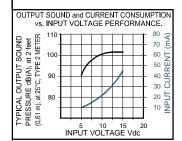


Patent-Pending Revolutionary Turbo Design

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. -40℃ to +85℃. Storage Temperature:

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

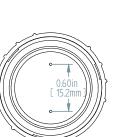
IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

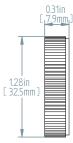
Life Expectancy: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

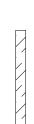
#### **DIMENSIONS**



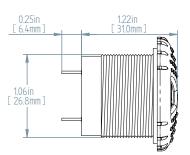
**REAR** 



**RING** 

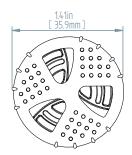


**GASKET** 



SIDE

## **FRONT**



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## TXW-V86-515-P(S)

# Made in USA



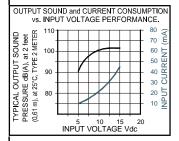


 Patented Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



**REAR** 

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

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: 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℃ to +65℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

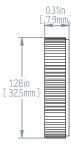
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

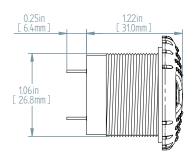
## DIMENSIONS

# 0.60in 1.28i [ 325



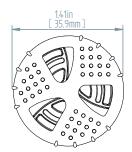
**RING** 

**GASKET** 



SIDE

## **FRONT**



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## TXW-V86-515-Q(F)

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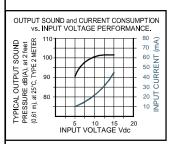


Patent-Pending
 Revolutionary Turbo Design

 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

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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

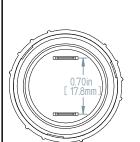
**REAR** 

RING

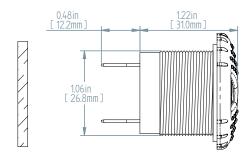
**GASKET** 

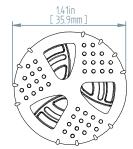
SIDE

**FRONT** 

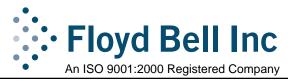








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## TXW-V86-515-Q(S)

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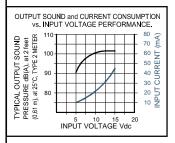


Patent-Pending
 Revolutionary Turbo Design

 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**

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: With volume control fully open:

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Life Expectancy:

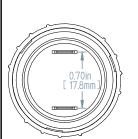
REAR

RING

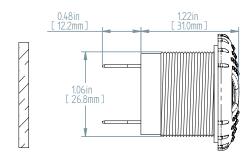
**GASKET** 

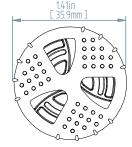
SIDE

**FRONT** 









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



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## TXW-V86-515-S(F)

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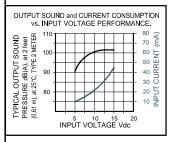


Patent-Pending
 Revolutionary Turbo Design

 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**

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:** 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 continu ously 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**

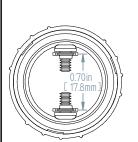
RFAR

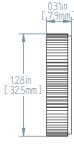
## **RING**

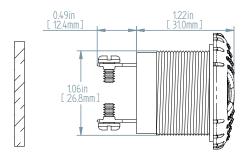
## **GASKET**

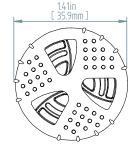
## SIDE

## **FRONT**

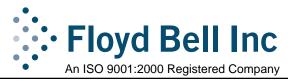








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## TXW-V86-515-S(S)

# Made in USA



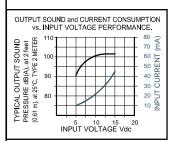


Patent-Pending
Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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

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: With volume control fully open:

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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

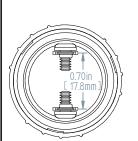
operating conditions.

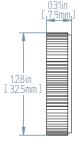
#### **DIMENSIONS**

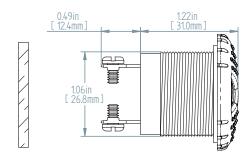
REAR RING (

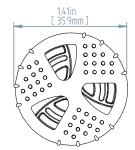
GASKET SIDE

**FRONT** 









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



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## TXW-V86-515-W(F)

# Made in USA



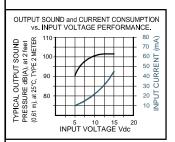


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



The Turbo 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**

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℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red a Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature:  $-20^{\circ}$ C to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$ C to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

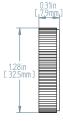
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

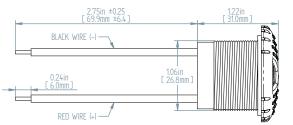
**REAR** 



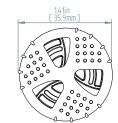
RING

**GASKET** 

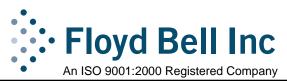
SIDE



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



**FRONT** 



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## TXW-V86-515-W(S)

# Made in USA



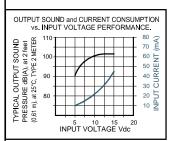


Patent-Pending
 Revolutionary Turbo Design

 Tamper Resistant Front-Mounting Case with Threaded Attachment Ring

Corrosion Resistant
 Stainless Steel Diaphragm

 Reliable Piezoelectric Technology



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

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: With volume control fully open:

92±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 15 Vdc, at 24 inches (61 cm), at 25℃. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃.

Storage Temperature: -20°C to +65°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 continu ously 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

SIDE

operating conditions.

#### **DIMENSIONS**

**GASKET** 

0.70in 128in [325mm]

**REAR** 

2.75in ±0.25 [69.9mm ±6.4]

BLAEK WIRE (-)

0.24in
[6.0mm]

RED WIRE (+)

14 lin [35.9mm]

**FRONT** 

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



RING

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## TXW-V86-530-Q(F)

# Made in USA



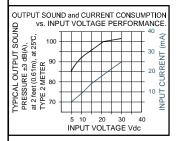


Patent-Pending
 Revolutionary Turbo Design

 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

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 continu ously 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**



0.48in 1.22in [31.0mm]
1.06in [26.8mm]

[35.9mm]

**FRONT** 

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



1.28in [ 32.5mm]

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## TXW-V86-530-Q(S)

## Made in USA



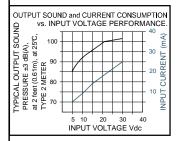


Patent-Pending Revolutionary Turbo Design

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

**Operating Mode:** Extra Loud Warble Tone

5-30 Vdc **Operating Voltage:** Nominal Operating Voltage: 30 Vdc Operating Frequency: 2900±250 Hz.

1±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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

-20℃ to +65℃. **Operating Temperature:** Storage Temperature: -40℃ to +85℃.

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 **Environmental Durability:** 

IP 68 Certified-Withstands water submergence and dust exposure Humidity- 95% relative humidity at +40℃ continu ously 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 Warranty:

operating conditions.

## **DIMENSIONS**

Life Expectancy:

**REAR** 

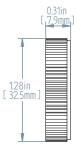
**RING** 

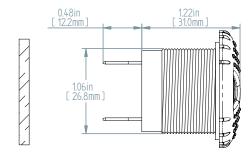
**GASKET** 

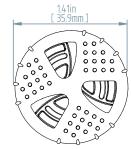
SIDE

**FRONT** 









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## TXW-V86-530-S(F)

# Made in USA



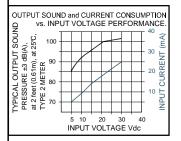


Patent-Pending
 Revolutionary Turbo Design

 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

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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously 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**

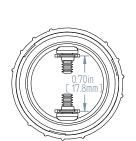
REAR

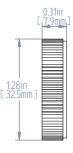
**RING** 

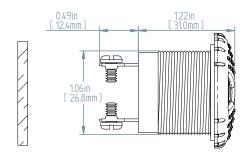
**GASKET** 

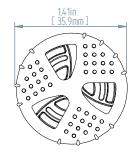
SIDE

**FRONT** 

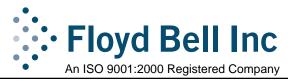








TOLERANCES ARE ±0.03in [±0.76mm] UNLESS OTHERWISE SPECIFIED



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## TXW-V86-530-S(S)

# Made in USA



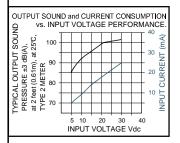


Patent-Pending
 Revolutionary Turbo Design

 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

Operating Mode: Extra Loud Warble Tone

Operating Voltage: 5-30 Vdc
Nominal Operating Voltage: 30 Vdc
Operating Frequency: 2900±250 Hz.

1±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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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

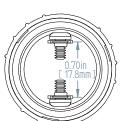
Warranty: For a period of two years from the date of manufacture under normal

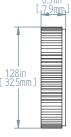
operating conditions.

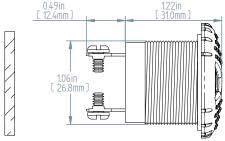
#### **DIMENSIONS**

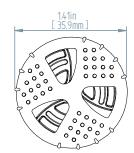
REAR RING GASKET SIDE

0.31in
[7.29mm,] 0.49in
[12.4mm] 1.22in
[31.0mm] ...
[31.0mm









**FRONT** 

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



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## UB-05-515-P(F)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

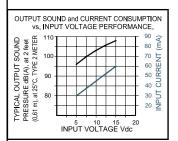
 Epoxy Encapsulated Electronics

Superior Audibility

PCB Mountable

 Reliable Piezoelectric Technology

Polarity Protected



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**

Operating Mode: Ultra Loud Dual Function Beep/Continuous Tone

Operating Voltage: 5-15 Vdc
Nominal Operating Voltage: 15 Vdc
Operating Frequency: 2100±250 Hz.

3±25% Pulses per second in Beep Mode

Typical Operating Current: 30 mA at 5 Vdc 60 mA at 15 Vdc

Typical Sound Pressure: 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.

**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.

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

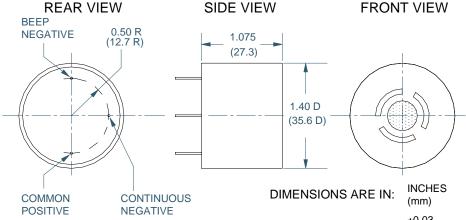
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**



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



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## 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 70 00 00 00 T CURRENT ( 5 10 15 20 INPUT VOLTAGE Vdc

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**

**Operating Mode:** Ultra Loud Beep Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

3±25% Beeps per second

30 mA at 5 Vdc **Typical Operating Current:** 60 mA at 15 Vdc

**Typical Sound Pressure:** 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 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.

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**

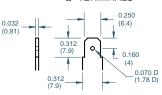
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)**INCHES** DIMENSIONS ARE IN: 1.35 (mm) (34.3)

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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±0.03

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

**TOLERANCES ARE:** 

## UB-09-515-Q(F)D

# Made in USA



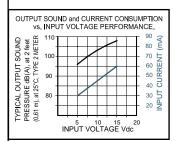
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

0.43

(10.9)

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**

Operating Mode: Ultra Loud Dual Function Beep/Continuous Tone

Operating Voltage: 5-15 Vdc
Nominal Operating Voltage: 15 Vdc
Operating Frequency: 2100±250 Hz.

3±25% Beeps per second

Typical Operating Current: 30 mA at 5 Vdc

60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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.

RING

Construction Materials: Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator and piezoelectric driver

FRONT VIEW

1.41 D

(35.8 D)

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.

0.315

(8.0)

## DIMENSIONS

1.125 X 24 THREADS

FOR REFERENCE ONLY

SIDE VIEW

0.89

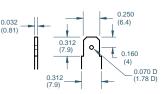
(22.6)

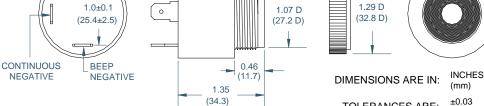
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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

Floyd Bell Inc
An ISO 9001:2000 Registered Company

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## UB-09-515-Q(S)

## Made in USA



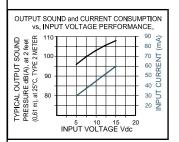
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Ultra Loud Beep Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

1±25% Beeps per second

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

60 mA at 15 Vdc

**Typical Sound Pressure:** 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

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

Life Expectancy:

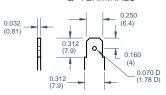
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)**INCHES** DIMENSIONS ARE IN: 1.35 (mm) (34.3)±0.03 **TOLERANCES ARE:**

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

## UB-09-515-Q(S)D

## Made in USA



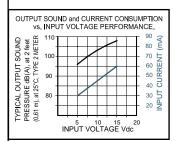
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

0.43

(10.9)

1.0±0.1

(25.4+2.5)

BEEP

**NEGATIVE** 

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**

Termination:

**Operating Mode:** Ultra Loud Dual Function Beep/Continuous Tone

5-15 Vdc **Operating Voltage:** Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

1±25% Beeps per second

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

60 mA at 15 Vdc

**Typical Sound Pressure:** 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

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.

RING

**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

FRONT VIEW

1.41 D

(35.8 D)

**INCHES** 

(mm)

**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.

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

**TOLERANCES ARE:** 

## **DIMENSIONS**

1.125 X 24 **THREADS** 

FOR REFERENCE ONLY

1.07 D

(27.2 D)

0.46

(11.7)

1.35 (34.3)

SIDE VIEW

0.89

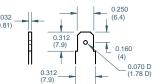
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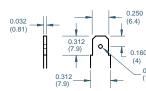
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS







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UNLESS OTHERWISE SPECIFIED.

Revision: 2.07

CONTINUOUS

**NEGATIVE** 

## **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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 1 CURRENT ( 5 10 15 20 INPUT VOLTAGE Vdc

REAR VIEW

STAINLESS STEEL SCREWS

1.0±0.1

(25.4+2.5)

6 X 32. 0.25" LONG.

0.43

(10.9)

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**

**Operating Mode:** Ultra Loud Beep Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

3±25% Beeps per second

30 mA at 5 Vdc Typical Operating Current: 60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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.

RING

**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.

FRONT VIEW

1.41 D

(35.8 D)

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

TOLERANCES ARE:

#### **DIMENSIONS**

1 125 X 24

THREADS FOR REFERENCE ONLY

1 07 D

(27.2 D)

0.46

(11.7)

1.35 (34.3)

Life Expectancy:

SIDE VIEW

0.89

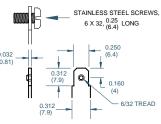
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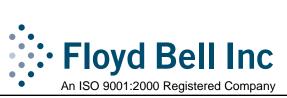
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS





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**INCHES** 

(mm)

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

## UB-09-515-S(F)D

## Made in USA



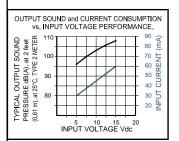
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



The 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**

**Operating Mode:** Ultra Loud Dual Function Beep/Continuous Tone

5-15 Vdc **Operating Voltage:** Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

3±25% Beeps per second

**Typical Operating Current:** 30 mA at 5 Vdc 60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

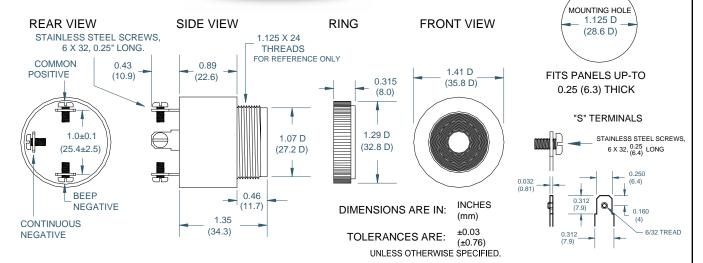
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

## PANEL MOUNTING





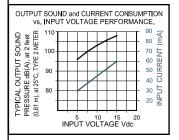
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## **UB-09-515-S(S)**

# 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-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**

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 5-15 Vdc
Nominal Operating Voltage: 15 Vdc
Operating Frequency: 2100±250 Hz.

1±25% Beeps per second

Typical Operating Current: 30 mA at 5 Vdc 60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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.

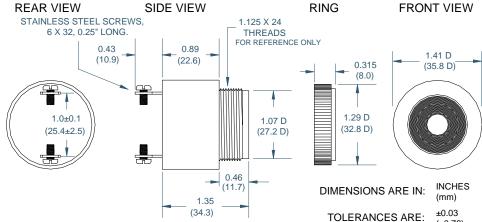
#### **DIMENSIONS**

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS STAINLESS STEEL SCREWS, 6 X 32, 0.25 LONG 0.032 (0.81) 0.312 (7.9) 0.312 (7.9) 0.312 (7.9) 0.312 (7.9)



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

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## UB-09-515-S(S)D

## Made in USA



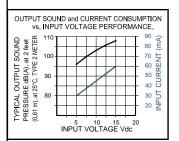
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

CONTINUOUS

NEGATIVE

STAINLESS STEEL SCREWS,

1.0+0.1

(25.4+2.5)

BFFP

**NEGATIVE** 

6 X 32. 0.25" LONG

0.43

(10.9)

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**

**Operating Mode:** Ultra Loud Dual Function Beep/Continuous Tone

5-15 Vdc **Operating Voltage:** Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

1±25% Beeps per second

**Typical Operating Current:** 30 mA at 5 Vdc 60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

RING

**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

**FRONT VIEW** 

1.41 D

(35.8 D)

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.

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

**TOLERANCES ARE:** 

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

# **DIMENSIONS**

1 125 X 24

**THREADS** FOR REFERENCE ONLY

1.07 D

(27.2 D)

0.46

(11.7)

1.35

(34.3)

SIDE VIEW

0.89

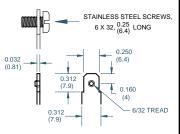
(22.6)

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"S" TERMINALS



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**INCHES** 

(mm)

±0.03

 $(\pm 0.76)$ 

## **UB-09-515-W(F)**

## Made in USA



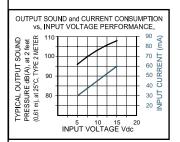
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Ultra Loud Beep Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz.

3±25% Beeps per second

**Typical Operating Current:** 30 mA at 5 Vdc 60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

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

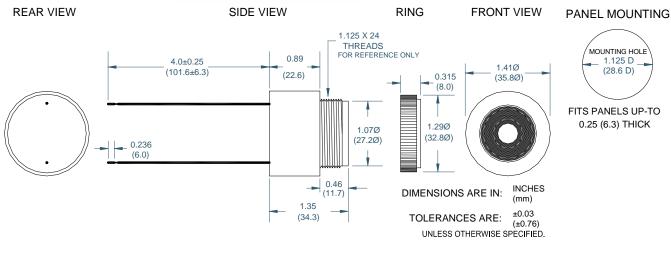
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





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## **UB-09-515-W(S)**

# Made in USA



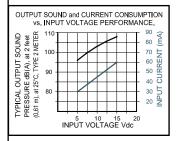
Durable Stainless Steel
 304 Diaphragm

 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**

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 5-15 Vdc
Nominal Operating Voltage: 15 Vdc
Operating Frequency: 2100±250 Hz.

1±25% Beeps per second

Typical Operating Current: 30 mA at 5 Vdc 60 mA at 15 Vdc

Typical Sound Pressure: 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.

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

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

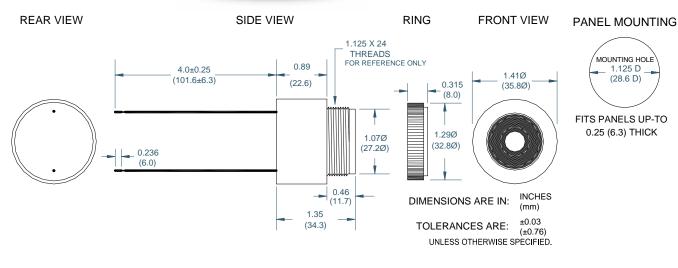
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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## **UB-09-628-Q(F)**

# Made in USA



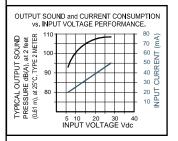
Durable Stainless Steel
 304 Diaphragm

 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**

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 6-28 Vdc
Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. 3±25% Beeps 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: 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.

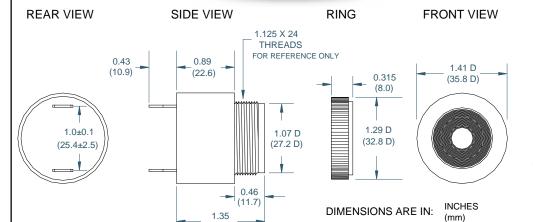
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

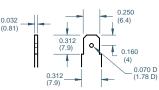
## PANEL MOUNTING



MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





(34.3)

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±0.03

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

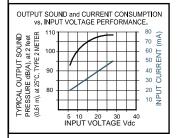
**TOLERANCES ARE:** 

## 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



**REAR VIEW** 

COMMON

**POSITIVE** 

0.43

(10.9)

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**

Operating Mode: Ultra Loud Dual Function Beep/Continuous Tone

Operating Voltage: 6-28 Vdc
Nominal Operating Voltage: 28 Vdc
Operating Frequency: 2100±250 Hz.

3±25% Beeps 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: 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.

RING

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.

FRONT VIEW

1.41 D

(35.8 D)

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

0.315

(8.0)

## DIMENSIONS

1.125 X 24 THREADS

FOR REFERENCE ONLY

Life Expectancy:

SIDE VIEW

0.89

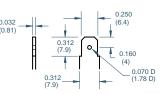
(22.6)

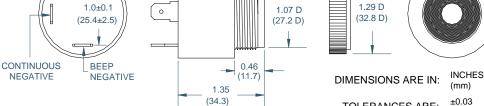
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





TOLERANCES ARE: (±0.76)
UNLESS OTHERWISE SPECIFIED.

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## **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

TAPICAL OUTPUT SOUND and CURRENT CONSUMPTION No. INPUT SOUND N

**REAR VIEW** 

1 0+0 1

(25.4±2.5)

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**

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc Operating Frequency: 2100±250 Hz.

1±25% Beeps 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

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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.

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

0.46

(11.7)

1.35

(34.3)

#### SIDE VIEW **RING** FRONT VIEW 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.07 D (32.8 D) (27.2 D)

DIMENSIONS ARE IN: INCHES (mm)

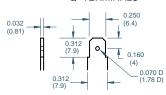
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "Q" TERMINALS





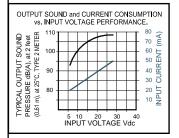
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## UB-09-628-Q(S)D

## Made in USA



- **Durable Stainless Steel** 304 Diaphragm
- **Epoxy Encapsulated** Electronics
- NEMA 4X Certified with Optional Gasket
- Reliable Piezoelectric Technology
- Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

0.43

(10.9)

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**

**Operating Mode:** Ultra Loud Dual Function Beep/Continuous Tone

**Operating Voltage:** 6-28 Vdc Nominal Operating Voltage: 28 Vdc **Operating Frequency:** 2100±250 Hz.

1±25% Beeps 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: 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. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

RING

**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.

FRONT VIEW

1.41 D

(35.8 D)

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

0.315

(8.0)

## **DIMENSIONS**

1.125 X 24 **THREADS** 

FOR REFERENCE ONLY

Life Expectancy:

SIDE VIEW

0.89

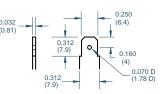
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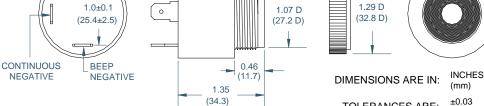
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "Q" TERMINALS





**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIED.

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## **UB-09-628-S(F)**

## Made in USA



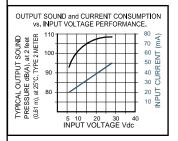
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



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**

**Operating Mode:** Ultra Loud Beep Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc **Operating Frequency:** 2100±250 Hz.

3±25% Beeps per second

**Typical Operating Current:** 20 mA at 6 Vdc 50 mA at 28 Vdc

93±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

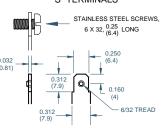
## **DIMENSIONS**

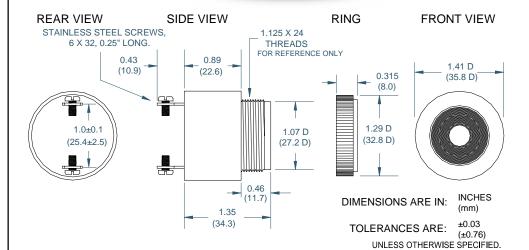
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "S" TERMINALS





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## 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 OUTPUT SOUND E dB(A), at 2 feet 5°C, TYPE 2 METER 110 TYPICAL OUTPUT S PRESSURE dB(A), a (0.61 m), at 25°C, TYPE. 90 20 L 10 N 5 10 20 30 4 INPUT VOLTAGE Vdc

**REAR VIEW** 

COMMON

**POSITIVE** 

CONTINUOUS

NEGATIVE

STAINLESS STEEL SCREWS,

1.0+0.1

(25.4+2.5)

BFFP

**NEGATIVE** 

6 X 32. 0.25" LONG

0.43

(10.9)

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**

**Operating Mode:** Ultra Loud Dual Function Beep/Continuous Tone

**Operating Voltage:** 6-28 Vdc Nominal Operating Voltage: 28 Vdc **Operating Frequency:** 2100±250 Hz.

3±25% Beeps 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

**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.

RING

**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

**Environmental Durability:** 300 hours with no decrease in 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.

**FRONT VIEW** 

1.41 D

(35.8 D)

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

**TOLERANCES ARE:** 

#### **DIMENSIONS**

1 125 X 24

**THREADS** FOR REFERENCE ONLY

1.07 D

(27.2 D)

0.46

(11.7)

1.35

(34.3)

Life Expectancy:

SIDE VIEW

0.89

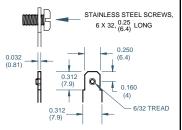
(22.6)

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "S" TERMINALS





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UNLESS OTHERWISE SPECIFIED.

**INCHES** 

(mm)

±0.03

 $(\pm 0.76)$ 

## **UB-09-628-S(S)**

# Made in USA



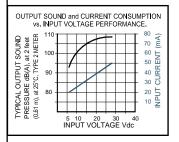
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



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**

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc Operating Frequency: 2100±250 Hz.

1±25% Beeps 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

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

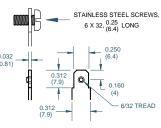
Life Expectancy:

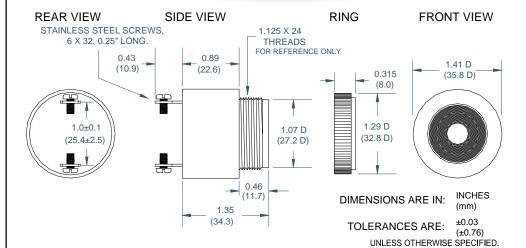
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "S" TERMINALS





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## 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

PRESSURE (BLA), at 2 feet (BLA), at 2 fe

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**

Operating Mode: Ultra Loud Dual Function Beep/Continuous Tone

Operating Voltage: 6-28 Vdc
Nominal Operating Voltage: 28 Vdc
Operating Frequency: 2100±250 Hz.

1±25% Beeps 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

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.

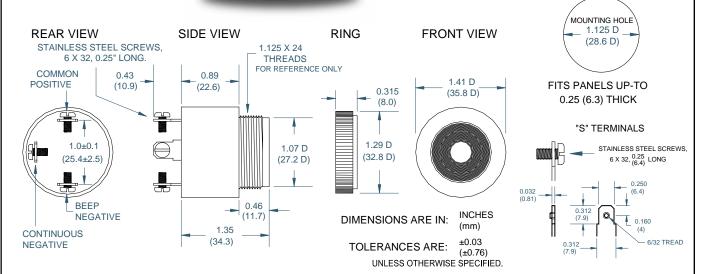
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

Life Expectancy:

## PANEL MOUNTING





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## **UB-09-628-W(F)**

# Made in USA



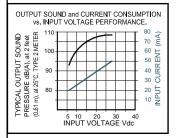
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 6-28 Vdc
Nominal Operating Voltage: 28 Vdc
Operating Frequency: 2100±250 Hz.

3±25% Beeps 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. 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

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.

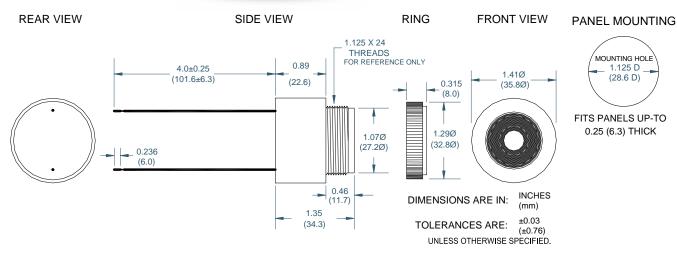
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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#### **UB-09-628-W(S)**

## Made in USA



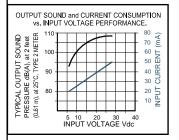
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

Operating Mode: Ultra Loud Beep Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc Operating Frequency: 2100±250 Hz.

1±25% Beeps 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. 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

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

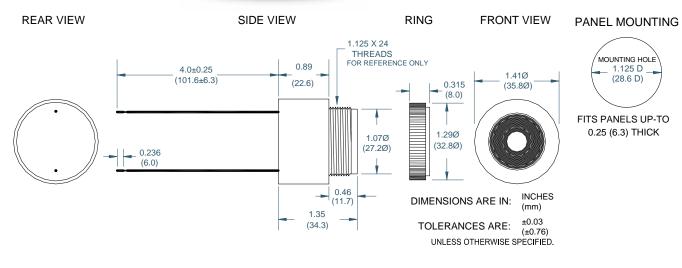
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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#### **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**

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:
 Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination:** Quick Conflict Blades, 0.23 (0.3) Width, 0.032 (0.9) Full 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

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.

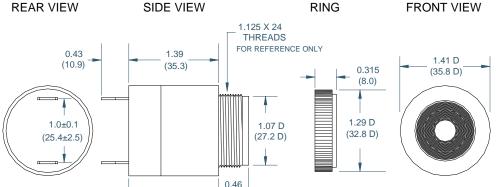
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

#### PANEL MOUNTING



(11.7)

1.85

(47.0)

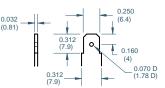
DIMENSIONS ARE IN: INCHES (mm)

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



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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#### **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

Operating Mode: Ultra Loud Beep Tone Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac Operating Frequency: 2100±250 Hz.

1±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: 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

Diaphragm-Stainless Steel 304

Internal Circuit- Audio-oscillator and piezoelectric driver

Potting- 2 parts epoxy resin or silicone, black

**Environmental Durability:** S

Salt Spray-Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in sound output

Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

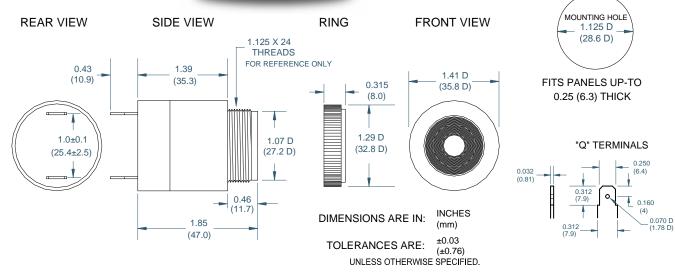
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

#### PANEL MOUNTING





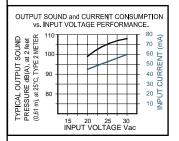
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#### **UB-19-230-S(F)**

## 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**

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: 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

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.

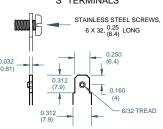
#### DIMENSIONS

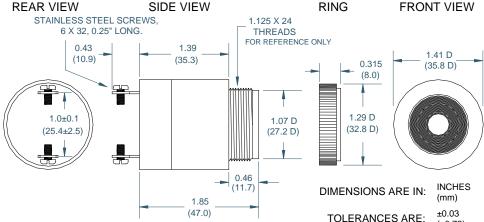
#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





LERANCES ARE: (±0.76)

UNLESS OTHERWISE SPECIFIED.

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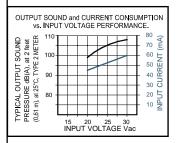
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#### **UB-19-230-S(S)**

## Made in USA



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



REAR VIEW

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**

Operating Mode: Ultra Loud Beep Tone
Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac Operating Frequency: 2100±250 Hz.

1±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: 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.

RING

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

FRONT VIEW

operating conditions.

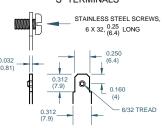
#### DIMENSIONS

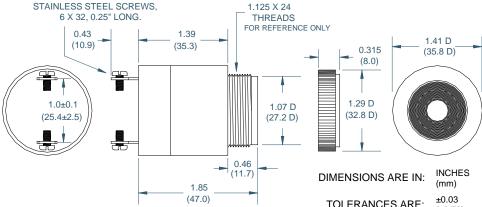
#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





SIDE VIEW

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

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#### **UB-19-230-W(F)**

## Made in USA



Durable Stainless Steel
 304 Diaphragm

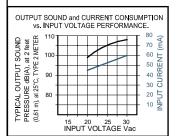
 Epoxy Encapsulated Electronics

Superior Audibility

NEMA 4X Certified

Reliable Piezoelectric
 Technology

Installs Easily



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.

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

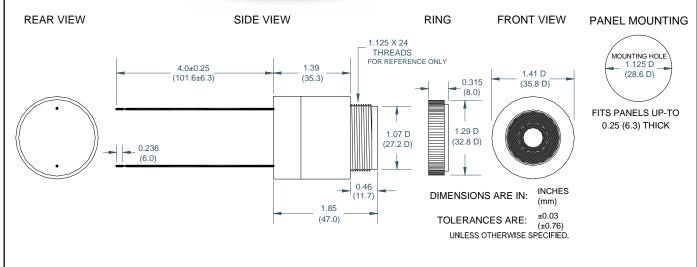
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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### **UB-19-230-W(S)**

#### Made in USA



**Durable Stainless Steel** 304 Diaphragm

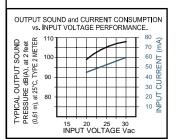
**Epoxy Encapsulated** Electronics

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**

**Operating Mode:** Ultra Loud Beep Tone 20-30 Vac/Vdc **Operating Voltage:** 

Nominal Operating Voltage: 30 Vac **Operating Frequency:** 2100±250 Hz.

1±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

-20°C to +65°C.

**Operating Temperature:** -40°C to +85°C. **Storage Temperature:** 

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

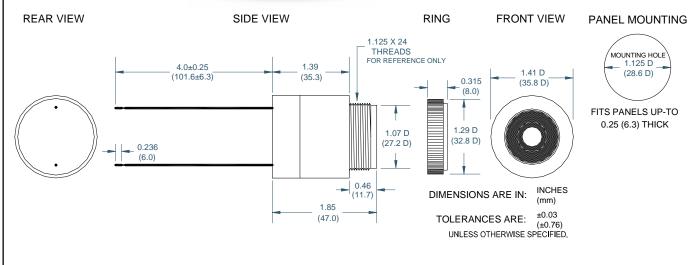
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





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#### 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. 40 N TYPICAL (PRESSUR (0.61 m), at; INPUT VOLTAGE Vdc

**REAR VIEW** 

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**

**Operating Mode:** Ultra Loud Continuous Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc 2100±250 Hz. **Operating Frequency:** 

**Typical Operating Current:** 30 mA at 5 Vdc 60 mA at 15 Vdc

**Typical Sound Pressure:** 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **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

FRONT VIEW

300 hours with no decrease in 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**

**RING** 

#### 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5)

0.46

(11.7)

1.35

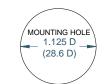
(34.3)

SIDE VIEW

**INCHES** DIMENSIONS ARE IN: (mm)

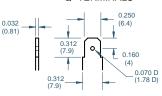
±0.03 **TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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#### UC-09-515-S

## Made in USA



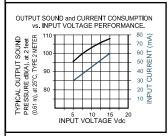
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric
 Technology

Polarity Protected



REAR VIEW

STAINLESS STEEL SCREWS

6 X 32. 0.25" LONG.

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**

Operating Mode: Ultra Loud Continuous Tone

Operating Voltage: 5-15 Vdc
Nominal Operating Voltage: 15 Vdc
Operating Frequency: 2100±250 Hz.
Typical Operating Current: 30 mA at 5 Vdc

60 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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.

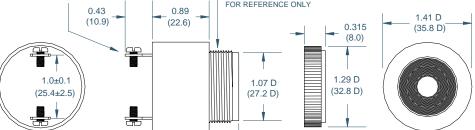
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

# RING FRONT VIEW 1.125 X 24 THREADS FOR REFERENCE ONLY



0.46

(11.7)

1.35 (34.3)

DIMENSIONS ARE IN: INCHES (mm)

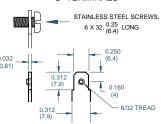
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





SIDE VIEW

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#### UC-09-515-T

#### Made in USA

## Image Not Available

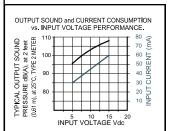
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



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**

**Operating Mode:** Ultra Loud Continuous Tone 5-15 Vdc

Operating Voltage: Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz. **Typical Operating Current:** 30 mA at 5 Vdc 60 mA at 15 Vdc

**Typical Sound Pressure:** 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

**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 Salt Spray-Withstand exposure to salt spray per ASTM B117 for a period of **Environmental Durability:** 

300 hours with no decrease in sound output

Humidity- 95% relative humidity at +40°C continuously for 100 hours.

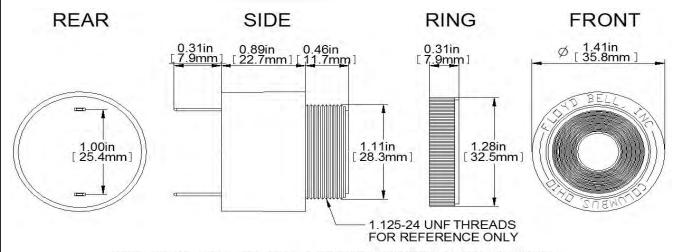
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: 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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#### UC-09-515-W

#### Made in USA



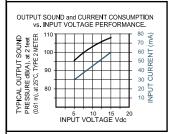
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Ultra Loud Continuous Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc **Operating Frequency:** 2100±250 Hz. **Typical Operating Current:** 30 mA at 5 Vdc

60 mA at 15 Vdc

**Typical Sound Pressure:** 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. 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

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

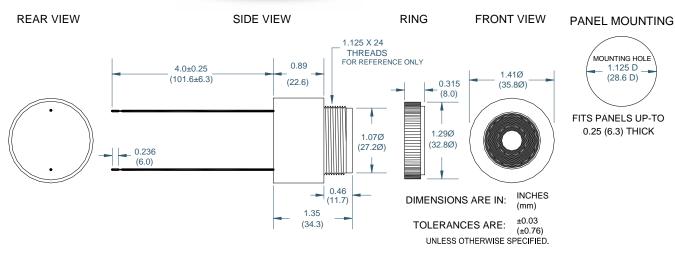
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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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#### 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

MESSING GOLD BOARD CONTROL SOUND TO SOU

**REAR VIEW** 

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**

Operating Mode: Ultra Loud Continuous Tone

Operating Voltage: 6-28 Vdc
Nominal Operating Voltage: 28 Vdc
Operating Frequency: 2100±250 Hz.
Typical Operating Current: 10 mA at 6 Vdc
50 mA at 28 Vdc

**Typical Sound Pressure:** 95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25℃ 108±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25℃.

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: -40°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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

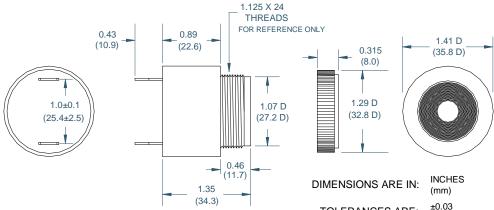
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

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

#### DIMENSIONS

## RING FRONT VIEW



SIDE VIEW

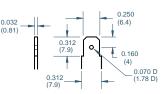
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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#### 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

PRESSURE 46/A) at 2 Cost and 250 C Type 2 C Type

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**

Operating Mode: Ultra Loud Continuous Tone

Operating Voltage: 6-28 Vdc
Nominal Operating Voltage: 28 Vdc
Operating Frequency: 2100±250 Hz.
Typical Operating Current: 10 mA at 6 Vdc
50 mA at 28 Vdc

**Typical Sound Pressure:** 95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25℃ 108±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25℃.

**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: -40℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously 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.

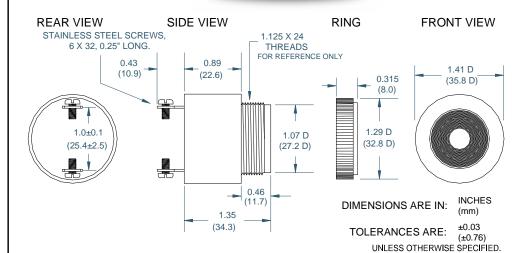
#### DIMENSIONS

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS STAINLESS STEEL SCREWS, 6 X 32, 0.25 LONG 0.032 (0.81) 0.312 (7.9) 0.312 (7.9) 0.160 (4) 0.312 6/32 TREAD



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#### UC-09-628-W

#### Made in USA



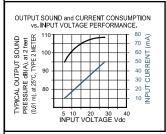
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Ultra Loud Continuous Tone

**Operating Voltage:** 6-28 Vdc Nominal Operating Voltage: 28 Vdc **Operating Frequency:** 2100±250 Hz. 10 mA at 6 Vdc **Typical Operating Current:** 

50 mA at 28 Vdc

**Typical Sound Pressure:** 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. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Termination:

**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

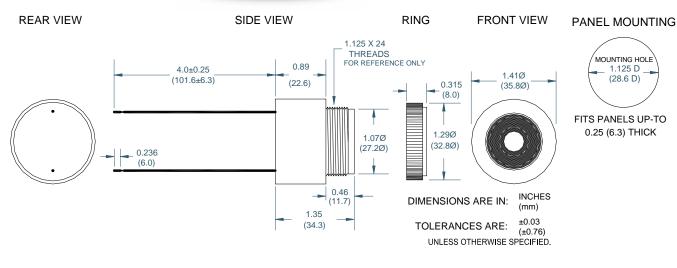
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





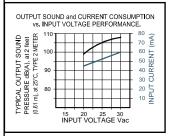
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#### UC-19-230-Q

## 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**

Operating Mode: Ultra Loud Continuous Tone

Operating Voltage: 20-30 Vac/Vdc
Nominal Operating Voltage: 30 Vac
Operating Frequency: 2100±250 Hz.

Typical Operating Current: 40 mA at 20 Vac 60 mA at 30 Vac

**Typical Sound Pressure:** 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.

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.

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

Salt Spray-Withstand exposure to salt spray per ASTM B117 for a period of 300 hours with no decrease in 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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1.125 X 24 **THREADS** FOR REFERENCE ONLY 1 39 0.43 1.41 D (10.9)(35.3)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK 1.29 D 1.0±0.1 1.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) (0.81) 0.312 (7.9) 0.46 0.160 (11.7)**INCHES** DIMENSIONS ARE IN: 0.070 D 1.85 (mm) (47.0)±0.03 TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. 720 Dearborn Park Lane • Columbus, OH 43085 Floyd Bell Inc Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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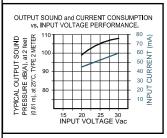
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#### UC-19-230-S

#### 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" guickconnect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

Termination:

**Operating Mode:** Ultra Loud Continuous Tone

**Operating Voltage:** 20-30 Vac/Vdc Nominal Operating Voltage: 30 Vac **Operating Frequency:** 2100±250 Hz. 40 mA at 20 Vac **Typical Operating Current:** 

60 mA at 30 Vac

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

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:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

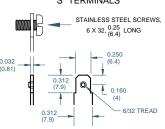
#### **DIMENSIONS**

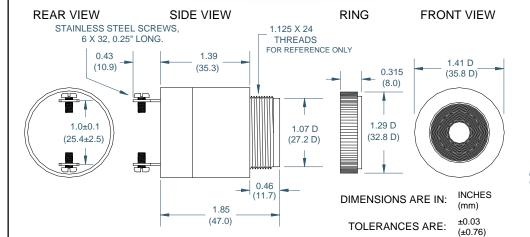
#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





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UNLESS OTHERWISE SPECIFIED.

#### UC-19-230-W

#### Made in USA



**Durable Stainless Steel** 304 Diaphragm

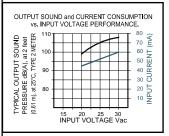
**Epoxy Encapsulated** Electronics

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**

**Operating Mode:** Ultra Loud Continuous Tone

**Operating Voltage:** 20-30 Vac/Vdc Nominal Operating Voltage: 30 Vac **Operating Frequency:** 2100±250 Hz. **Typical Operating Current:** 40 mA at 20 Vac 60 mA at 30 Vac

**Typical Sound Pressure:** 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 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

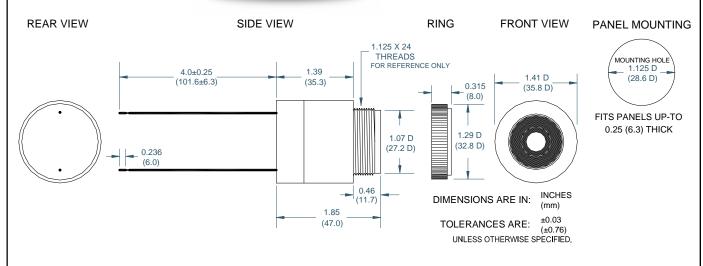
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

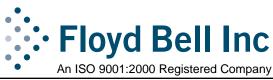
10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**





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#### UO-05-515-P

## Made in USA



 Durable Stainless Steel 304 Diaphragm

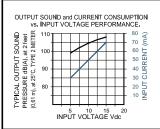
 Epoxy Encapsulated Electronics

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**

Operating Mode: Ultra Loud Whoop Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc 70 mA at 15 Vdc

Typical Sound Pressure: 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.

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.

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

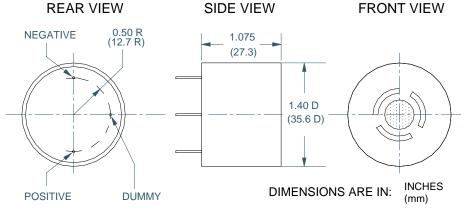
Humidity- 95% relative humidity at  $+40^{\circ}$ C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.



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#### UO-05-628-P

## Made in USA



Durable Stainless Steel
 304 Diaphragm

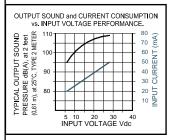
 Epoxy Encapsulated Electronics

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**

Termination:

Operating Mode: Ultra Loud Whoop Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 20 mA at 6 Vdc

50 mA at 28 Vdc

**Typical Sound Pressure:** 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. 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.

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.

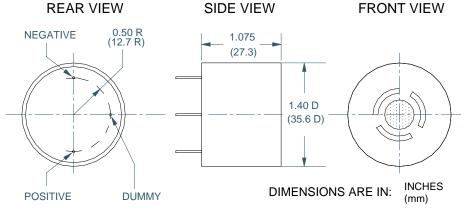
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:



TOLERANCES ARE:  $^{\pm 0.03}_{(\pm 0.76)}$ UNLESS OTHERWISE SPECIFIED.



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#### 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. 1107 5 10 15 20 INPUT VOLTAGE Vdc

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" guickconnect blades for push-on or direct solder attachment.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Whoop Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc 70 mA at 15 Vdc

**Typical Sound Pressure:** 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 Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.

-40°C to +85°C. **Storage Temperature:** 

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.

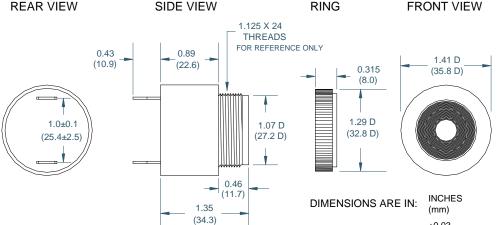
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

## PANEL MOUNTING



±0.03

UNLESS OTHERWISE SPECIFIED.

TOLERANCES ARE:

"Q" TERMINALS 0.032 0.312 (7.9) 0.160 0.070 D

MOUNTING HOLE

1.125 D (28.6 D)

FITS PANELS UP-TO

0.25 (6.3) THICK

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(±0.76)

#### 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**

Operating Mode: Ultra Loud Whoop Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc 70 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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.

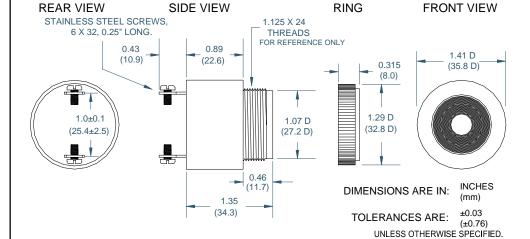
#### **DIMENSIONS**

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS STAINLESS STEEL SCREWS, 6 X 32, 0.25 LONG 0.032 (0.81) 0.312 0.160 (4) (4) 6/32 TREAD



Floyd Bell Inc
An ISO 9001:2000 Registered Company

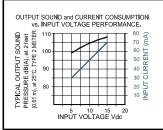
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#### UO-09-515-W

## 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**

Operating Mode: Ultra Loud Whoop Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc 70 mA at 15 Vdc

Typical Sound Pressure: 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.

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: -20°C to +65°C. -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

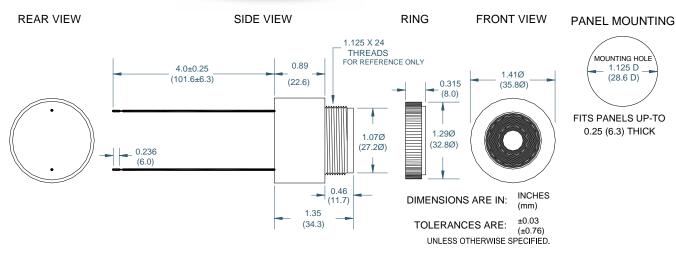
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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#### UO-09-628-Q

#### Made in USA



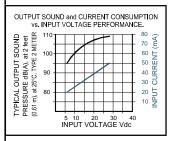
**Durable Stainless Steel** 304 Diaphragm

**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" guickconnect blades for push-on or direct solder attachment.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Whoop Tone

**Operating Voltage:** 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second 20 mA at 6 Vdc

Typical Operating Current: 50 mA at 28 Vdc

**Typical Sound Pressure:** 95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25℃ 109±5 dB(A), at 28 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

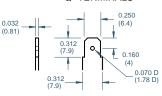
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46(11.7)**INCHES** DIMENSIONS ARE IN: 1.35 (mm) (34.3)±0.03 **TOLERANCES ARE:**

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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 $(\pm 0.76)$ 

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#### 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER \$ 110 90 20 L 10 N 5 10 20 30 40 INPUT VOLTAGE Vdc

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" guickconnect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Whoop Tone

**Operating Voltage:** 6-28 Vdc Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 2±25% Cycles per second

20 mA at 6 Vdc Typical Operating Current: 50 mA at 28 Vdc

**Typical Sound Pressure:** 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.

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: For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

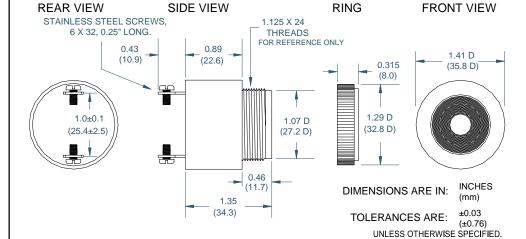
#### **DIMENSIONS**

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG 0.160 6/32 TREAD



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#### UO-09-628-W

#### Made in USA



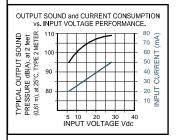
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Ultra Loud Whoop Tone

**Operating Voltage:** 6-28 Vdc Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 2±25% Cycles per second

20 mA at 6 Vdc **Typical Operating Current:** 50 mA at 28 Vdc

**Typical Sound Pressure:** 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. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

**REAR VIEW** SIDE VIEW RING FRONT VIEW PANEL MOUNTING 1.125 X 24 THREADS MOUNTING HOLE FOR REFERENCE ONLY 0.89 4.0±0.25 1.125 D 1 410 (28.6 D) (101.6±6.3) (22.6)0.315  $(35.8\emptyset)$ (8.0)FITS PANELS UP-TO 0.25 (6.3) THICK 1.29Ø 1 070 (32.80)(27.2Ø) 0.236 (6.0)0.46 DIMENSIONS ARE IN: (11.7)1.35 ±0.03 (34.3)TOLERANCES ARE: UNLESS OTHERWISE SPÈCIFIÉD.



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#### 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

**REAR VIEW** 

DUTPUT SOUND and CURRENT CONSUMPTION SOUND SOUND

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

Operating Mode: Ultra Loud Whoop Tone Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 40 mA at 20 Vac 60 mA at 30 Vac

**Typical Sound Pressure:** 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.

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

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.

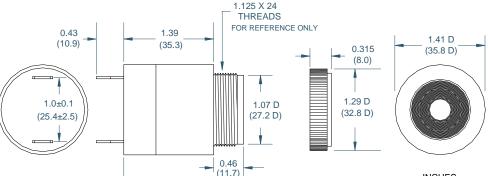
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

#### INIETTOTOTO

#### RING FRONT VIEW



DIMENSIONS ARE IN: INCHES (mm)

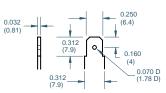
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





SIDE VIEW

1.85

(47.0)

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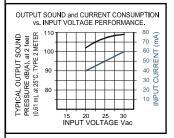
#### UO-19-230-S

## Made in USA



- Durable Stainless Steel 304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric Technology
- Installs Easily

REAR VIEW



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" guick-connect blades with screws added for connection to wires with lugs.

#### SPECIFICATIONS

Operating Mode: Ultra Loud Whoop Tone
Operating Voltage: 20-30 Vac/Vdc

Operating Voltage: 20-30 Vac/Vd Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 40 mA at 20 Vac 60 mA at 30 Vac

Typical Sound Pressure: 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.

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.

RING

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.

10 years under normal operating conditions.

FRONT VIEW

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

Life Expectancy:

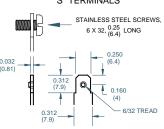
SIDE VIEW

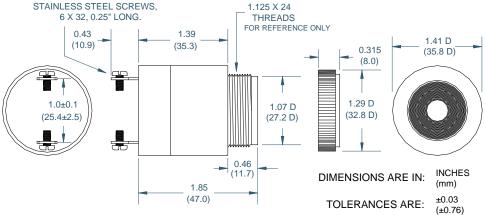
#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





UNLESS OTHERWISE SPECIFIED.

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#### UO-19-230-W

## Made in USA



Durable Stainless Steel
 304 Diaphragm

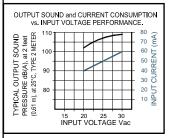
 Epoxy Encapsulated Electronics

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**

Operating Mode: Ultra Loud Whoop Tone Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 2±25% Cycles per second

Typical Operating Current: 40 mA at 20 Vac 60 mA at 30 Vac

Typical Sound Pressure: 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.

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

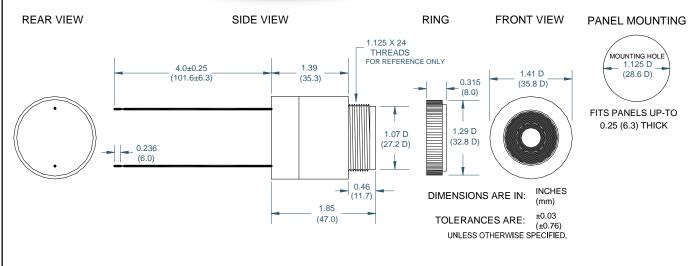
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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#### 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. 1107 5 10 15 20 INPUT VOLTAGE Vdc

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" guickconnect blades for push-on or direct solder attachment.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Siren Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

**Typical Operating Current:** 30 mA at 5 Vdc 70 mA at 15 Vdc

**Typical Sound Pressure:** 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 Termination: Pull test with a maximum of 22 pounds (10 kg) load

**Termination Strength:** 

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

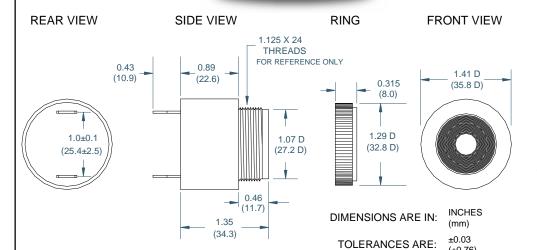
10 years under normal operating conditions. Life Expectancy:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

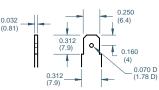
#### PANEL MOUNTING



MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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(±0.76)

UNLESS OTHERWISE SPECIFIED.

#### US-09-515-S

#### Made in USA



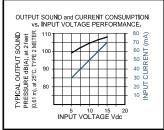
**Durable Stainless Steel** 304 Diaphragm

**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" guickconnect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Siren Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

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

70 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

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.

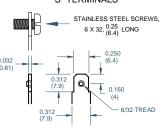
#### **DIMENSIONS**

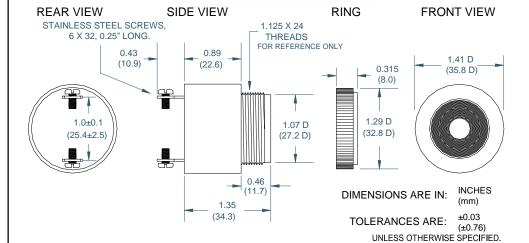
#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





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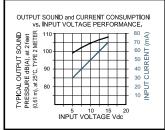
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#### US-09-515-W

## 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**

Operating Mode: Ultra Loud Siren Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc 70 mA at 15 Vdc

Typical Sound Pressure: 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.

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

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

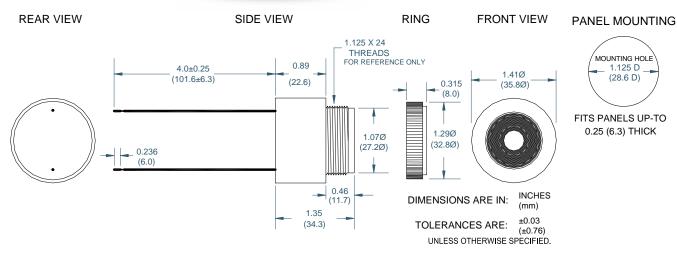
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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#### US-09-628-Q

## Made in USA



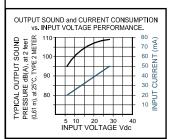
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

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**

Operating Mode: Ultra Loud Siren Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 20 mA at 6 Vdc

50 mA at 28 Vdc

Typical Sound Pressure: 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.

**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.

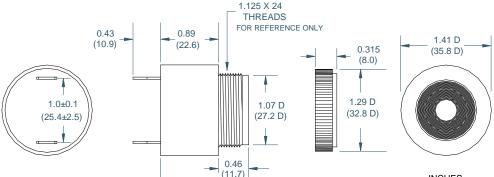
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### DIMENSIONS

## RING FRONT VIEW 1.125 X 24 THREADS FOR REFERENCE ONLY



SIDE VIEW

1.35

(34.3)

DIMENSIONS ARE IN: INCHES (mm)

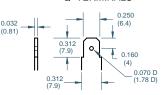
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





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#### US-09-628-S

#### Made in USA



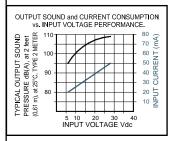
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

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" guickconnect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Siren Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

**Typical Operating Current:** 20 mA at 6 Vdc 50 mA at 28 Vdc

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

RING

**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

FRONT VIEW

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**

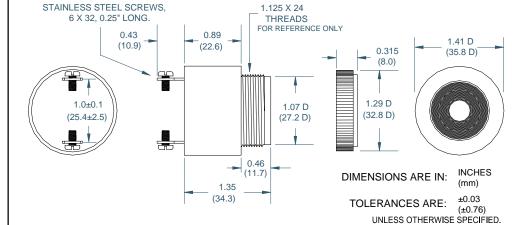
1 125 X 24

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG (6.4)0.160 6/32 TREAD



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SIDE VIEW

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#### US-09-628-W

## Made in USA



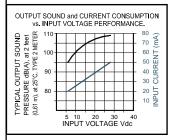
 Durable Stainless Steel 304 Diaphragm

 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**

Termination:

Operating Mode: Ultra Loud Siren Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 20 mA at 6 Vdc

50 mA at 28 Vdc

Typical Sound Pressure: 95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C

109±5 dB(Å), at 28 Vdc, at 24 inches (61 cm), at 25°C. 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

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

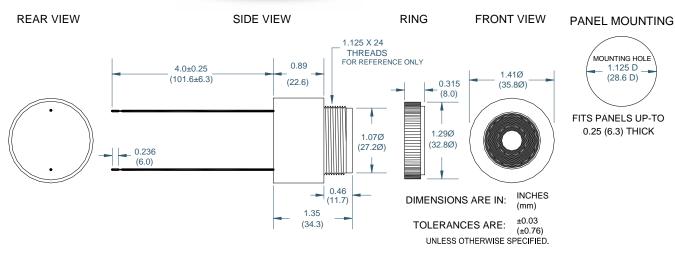
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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#### 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 90 15 20 25 30 INPUT VOLTAGE Vac

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**

**Operating Mode:** Ultra Loud Siren Tone **Operating Voltage:** 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second 40 mA at 20 Vac

**Typical Operating Current:** 60 mA at 30 Vac

**Typical Sound Pressure:** 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 Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.

-40°C to +85°C. **Storage Temperature:** 

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.

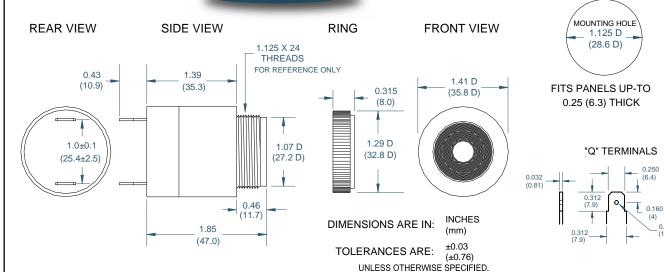
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

#### PANEL MOUNTING





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Revision: 2.07

0.070 D

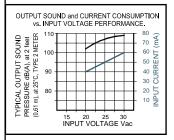
#### US-19-230-S

## Made in USA



- Durable Stainless Steel
   304 Diaphragm
- Epoxy Encapsulated Electronics
- Superior Audibility
- NEMA 4X Certified
- Reliable Piezoelectric
   Technology
- Installs Easily

REAR VIEW



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

Operating Mode: Ultra Loud Siren Tone Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 40 mA at 20 Vac 60 mA at 30 Vac

Typical Sound Pressure: 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.

**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

RING

Environmental Durability: Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of

FRONT VIEW

300 hours with no decrease in 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.

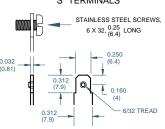
#### **DIMENSIONS**

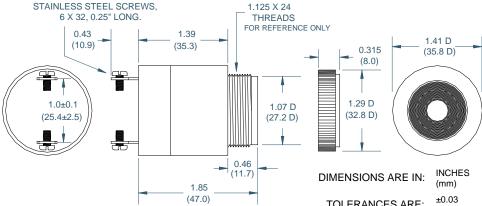
#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





SIDE VIEW

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

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# US-19-230-W

## Made in USA



**Durable Stainless Steel** 304 Diaphragm

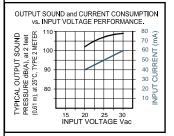
**Epoxy Encapsulated** Electronics

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**

**Operating Mode:** Ultra Loud Siren Tone **Operating Voltage:** 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

**Typical Operating Current:** 40 mA at 20 Vac 60 mA at 30 Vac

**Typical Sound Pressure:** 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. 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. -40°C to +85°C. **Storage Temperature:** 

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

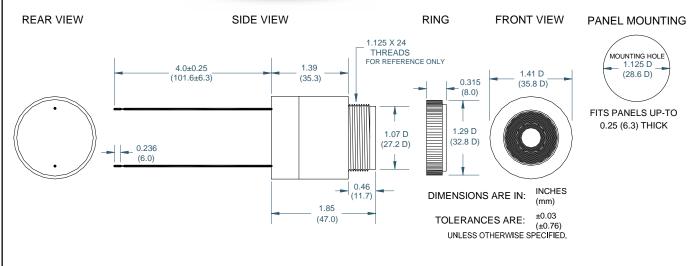
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





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# UT-05-515-P

# Made in USA



 Durable Stainless Steel 304 Diaphragm

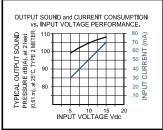
 Epoxy Encapsulated Electronics

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**

Operating Mode: Ultra Loud Staccato Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 8±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc

70 mA at 15 Vdc

Typical Sound Pressure: 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.

**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.

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

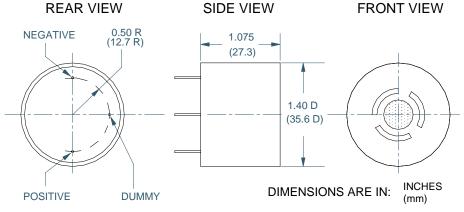
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**



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

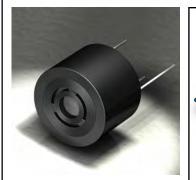


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# UT-05-628-P

# Made in USA



Durable Stainless Steel
 304 Diaphragm

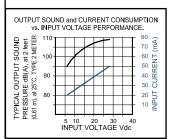
 Epoxy Encapsulated Electronics

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**

Termination:

Operating Mode: Ultra Loud Staccato Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 8±25% Cycles per second

Typical Operating Current: 20 mA at 6 Vdc

50 mA at 28 Vdc

**Typical Sound Pressure:** 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. 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.

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.

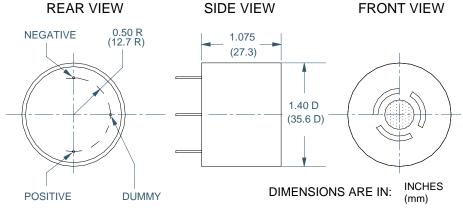
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

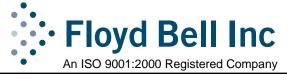
operating conditions.

#### **DIMENSIONS**

Life Expectancy:



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



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# 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. 1107 5 10 15 20 INPUT VOLTAGE Vdc

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" guickconnect blades for push-on or direct solder attachment.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Staccato Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 8±25% Cycles per second

**Typical Operating Current:** 30 mA at 5 Vdc 70 mA at 15 Vdc

100±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

109±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.

**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.

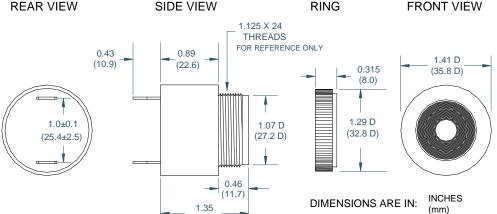
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

# PANEL MOUNTING



(34.3)

Floyd Bell Inc

An ISO 9001:2000 Registered Company

0.25 (6.3) THICK "Q" TERMINALS 0.032 0.312 (7.9) 0.160 0.070 D

MOUNTING HOLE

1.125 D (28.6 D)

FITS PANELS UP-TO

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

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# UT-09-515-S

## Made in USA



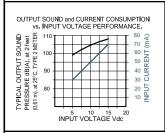
**Durable Stainless Steel** 304 Diaphragm

**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" quickconnect blades with screws added for connection to wires with lugs.

## **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Staccato Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 8±25% Cycles per second

**Typical Operating Current:** 30 mA at 5 Vdc 70 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

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.

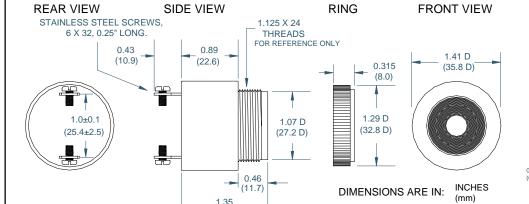
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

TOLERANCES ARE:

#### **DIMENSIONS**

# PANEL MOUNTING

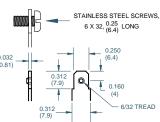


(34.3)

MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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±0.03

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

# 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

OUTPUT SOUND and CURRENT ON THE SOUND ON THE

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**

Operating Mode: Ultra Loud Staccato Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 8±25% Cycles per second

Typical Operating Current: 30 mA at 5 Vdc 70 mA at 15 Vdc

Typical Sound Pressure: 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.

Termination: 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black 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.

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

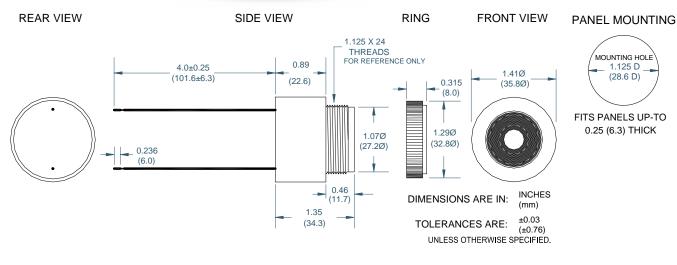
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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# 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**

Operating Mode: Ultra Loud Staccato Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 8±25% Cycles per second

Typical Operating Current: 20 mA at 6 Vdc 50 mA at 28 Vdc

**Typical Sound Pressure:** 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.

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

Life Expectancy:

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5)

0.46

(11.7)

1.35

(34.3)

DIMENSIONS ARE IN: INCHES (mm)

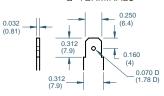
 $\begin{array}{ccc} \text{TOLERANCES ARE:} & \stackrel{\pm 0.03}{\text{($\pm 0.76$)}} \\ & \text{UNLESS OTHERWISE SPECIFIED.} \end{array}$ 

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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# UT-09-628-S

## Made in USA



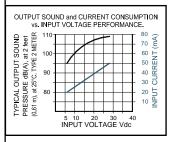
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



REAR VIEW

STAINLESS STEEL SCREWS

1.0±0.1

(25.4+2.5)

6 X 32. 0.25" LONG.

0.43

(10.9)

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" quickconnect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Staccato Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 8±25% Cycles per second

**Typical Operating Current:** 20 mA at 6 Vdc 50 mA at 28 Vdc

95±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

FRONT VIEW

1.41 D

(35.8 D)

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

TOLERANCES ARE:

RING

## **DIMENSIONS**

1 125 X 24

THREADS FOR REFERENCE ONLY

1 07 D

(27.2 D)

0.46

(11.7)

1.35 (34.3)

Life Expectancy:

SIDE VIEW

0.89

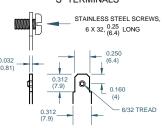
(22.6)

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS 6 X 32, 0.25 LONG





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**INCHES** 

(mm)

±0.03

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

# UT-09-628-W

# Made in USA



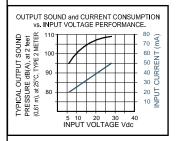
Durable Stainless Steel
 304 Diaphragm

 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**

Operating Mode: Ultra Loud Staccato Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 8±25% Cycles per second

Typical Operating Current: 20 mA at 6 Vdc 50 mA at 28 Vdc

Typical Sound Pressure: 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.

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

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.

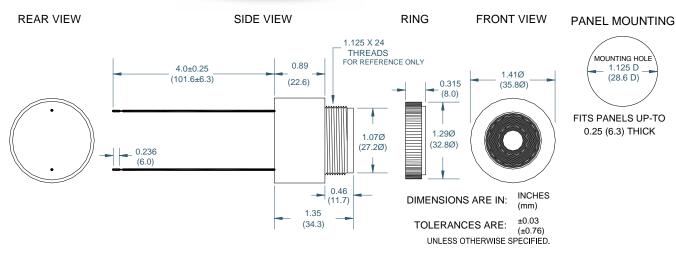
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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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# UT-19-230-Q

## Made in USA



**Durable Stainless Steel** 304 Diaphragm

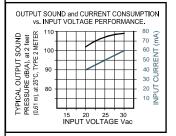
**Epoxy Encapsulated** Electronics

Superior Audibility

**NEMA 4X Certified** 

Reliable Piezoelectric Technology

Installs Easily



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**

**Operating Mode:** Ultra Loud Staccato Tone

20-30 Vac/Vdc **Operating Voltage:** 

Nominal Operating Voltage: 30 Vac

**Operating Frequency:** 2100±250 Hz. Center 8±25% Cycles per second

**Typical Operating Current:** 40 mA at 20 Vac

60 mA at 30 Vac

**Typical Sound Pressure:** 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 Termination: **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.

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 1 39 0.43 1.41 D (10.9)(35.3)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)**INCHES** DIMENSIONS ARE IN: 1.85 (mm)

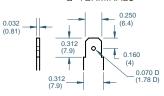
**DIMENSIONS** 

## PANEL MOUNTING

MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





(47.0)

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±0.03

UNLESS OTHERWISE SPECIFIED.

 $(\pm 0.76)$ 

TOLERANCES ARE:

# 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

REAR VIEW

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. r SOUND , at 2 feet TYPICAL OUTPUT SOUNE PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METE 90 15 20 25 30 INPUT VOLTAGE Vac

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**

**Operating Mode:** Ultra Loud Staccato Tone

20-30 Vac/Vdc **Operating Voltage:** 

Nominal Operating Voltage: 30 Vac

**Operating Frequency:** 2100±250 Hz. Center 8±25% Cycles per second

**Typical Operating Current:** 40 mA at 20 Vac 60 mA at 30 Vac

102±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C

**Typical Sound Pressure:** 109±5 dB(A), at 30 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. -40°C to +85°C. **Storage Temperature:** 

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

**RING** 

**Environmental Durability:** Salt Spray-Withstand exposure to salt spray per ASTM B117 for a period of

FRONT VIEW

300 hours with no decrease in 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.

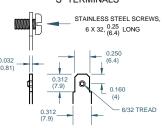
#### **DIMENSIONS**

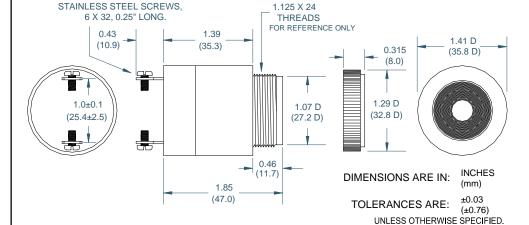
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "S" TERMINALS





SIDE VIEW

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# UT-19-230-W

# Made in USA



Durable Stainless Steel
 304 Diaphragm

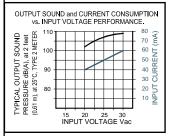
 Epoxy Encapsulated Electronics

Superior Audibility

NEMA 4X Certified

 Reliable Piezoelectric Technology

Installs Easily



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**

Termination:

Operating Mode: Ultra Loud Staccato Tone

Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 8±25% Cycles per second

Typical Operating Current: 40 mA at 20 Vac

60 mA at 30 Vac

Typical Sound Pressure: 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. 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

Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in sound output

Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

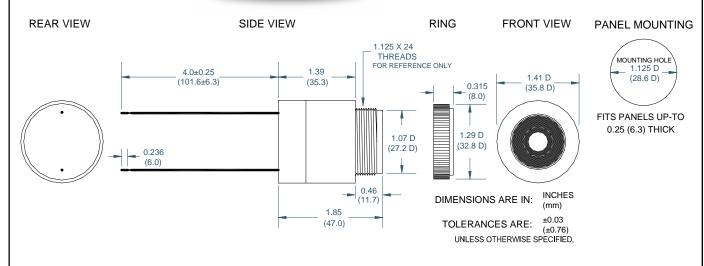
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

Life Expectancy:





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# **UW-09-515-Q(F)**

## Made in USA



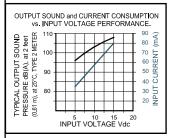
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Ultra Loud Warble Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

2100±250 Hz. Center **Operating Frequency:** 

3±25% Cycles per second

**Typical Operating Current:** 35 mA at 5 Vdc

80 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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.

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 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)**INCHES** 1.35

(34.3)

DIMENSIONS ARE IN: (mm)

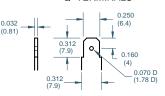
**TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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±0.03

# UW-09-515-Q(F)D

# Made in USA



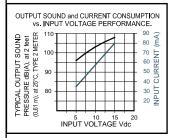
 Durable Stainless Steel 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

1.0±0.1

(25.4±2.5)

WARBLE

**NEGATIVE** 

0.43

(10.9)

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**

Termination:

Operating Mode: Ultra Loud Dual Function Warble/Continuous Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 35 mA at 5 Vdc

80 mA at 15 Vdc

Typical Sound Pressure: 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

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.

RING

Construction Materials: Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator and piezoelectric driver

FRONT VIEW

1.41 D

(35.8 D)

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.

0.315

(8.0)

1.29 D

(32.8 D)

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## DIMENSIONS

1.125 X 24 THREADS

FOR REFERENCE ONLY

1.07 D

(27.2 D)

(11.7)

1.35 (34.3)

SIDE VIEW

0.89

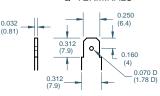
(22.6)

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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0

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Revision: 2.07

CONTINUOUS

**NEGATIVE** 

# UW-09-515-Q(S)

# Made in USA



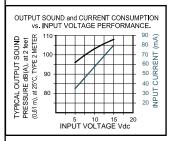
 Durable Stainless Steel 304 Diaphragm

 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**

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 1±25% Cycles per second

Typical Operating Current: 35 mA at 5 Vdc

80 mA at 15 Vdc

Typical Sound Pressure: 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.

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.

**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 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)

1.35

(34.3)

DIMENSIONS ARE IN: INCHES (mm)

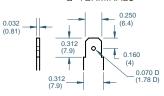
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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# UW-09-515-Q(S)D

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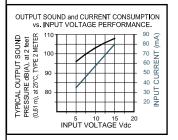
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

1.0±0.1

(25.4±2.5)

WARBLE

**NEGATIVE** 

0.43

(10.9)

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**

Operating Mode: Ultra Loud Dual Function Warble/Continuous Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 1±25% Cycles per second

Typical Operating Current: 35 mA at 5 Vdc

80 mA at 15 Vdc

Typical Sound Pressure: 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.

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

FRONT VIEW

1.41 D

(35.8 D)

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.

0.315

(8.0)

1.29 D

## DIMENSIONS

1.125 X 24 THREADS

FOR REFERENCE ONLY

1.07 D

SIDE VIEW

0.89

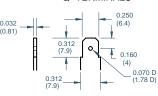
(22.6)

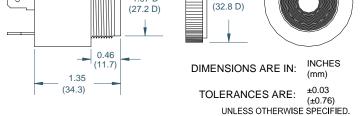
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





RING

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0

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Revision: 2.07

CONTINUOUS

**NEGATIVE** 

# 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 5 10 15 INPUT VOLTAGE Vdc

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**

**Operating Mode:** Ultra Loud Warble Tone

5-15 Vdc **Operating Voltage:** Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

**Typical Operating Current:** 35 mA at 5 Vdc 80 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

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.

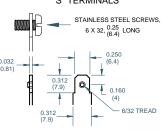
## **DIMENSIONS**

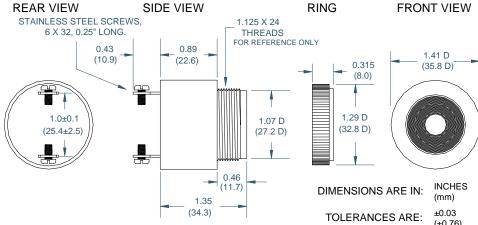
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS





 $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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# UW-09-515-S(F)D

# Made in USA



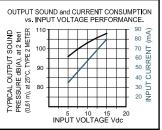
Durable Stainless Steel
 304 Diaphragm

 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**

Operating Mode: Ultra Loud Dual Function Warble/Continuous Tone

Operating Voltage: 5-15 Vdc Nominal Operating Voltage: 15 Vdc

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 35 mA at 5 Vdc 80 mA at 15 Vdc

**Typical Sound Pressure:** 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.

**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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1 125 X 24 6 X 32, 0.25" LONG. THREADS FOR REFERENCE ONLY COMMON 0.89 0.43 1 41 D **POSITIVE** (10.9)(22.6) FITS PANELS UP-TO 0.315 (35.8 D) 0.25 (6.3) THICK (8.0)"S" TERMINALS 1.29 D 1.0±0.1 1.07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)WARBLE 0.46 **INCHES NEGATIVE** (11.7)DIMENSIONS ARE IN: (mm) 1.35 CONTINUOUS 6/32 TREAD (34.3)±0.03 **NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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# UW-09-515-S(S)

## Made in USA



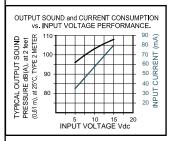
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

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**

**Operating Mode:** Ultra Loud Warble Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±25% Cycles per second

**Typical Operating Current:** 35 mA at 5 Vdc 80 mA at 15 Vdc

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

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.

FRONT VIEW

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

RING

## **DIMENSIONS**

Life Expectancy:

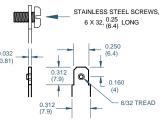
SIDE VIEW

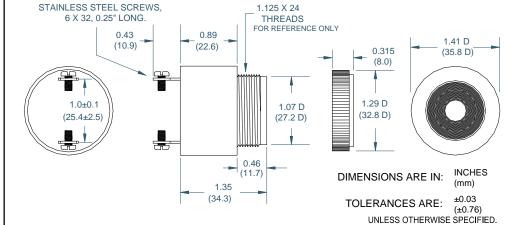
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK







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# UW-09-515-S(S)D

## Made in USA



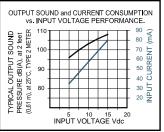
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with **Optional Gasket** 

Reliable Piezoelectric Technology

Polarity Protected



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**

Life Expectancy:

**Operating Mode:** Ultra Loud Dual Function Warble/Continuous Tone

**Operating Voltage:** 5-15 Vdc Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±25% Cycles per second

**Typical Operating Current:** 35 mA at 5 Vdc 80 mA at 15 Vdc

**Typical Sound Pressure:** 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.

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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 Salt Spray-Withstand exposure to salt spray per ASTM B117 for a period of **Environmental Durability:** 

300 hours with no decrease in 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.

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Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1 125 X 24 6 X 32, 0.25" LONG. THREADS FOR REFERENCE ONLY COMMON 0.43 0.89 1 41 D **POSITIVE** (10.9)(22.6) FITS PANELS UP-TO 0.315 (35.8 D) 0.25 (6.3) THICK (8.0)"S" TERMINALS 1.29 D 1.0±0.1 1.07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)WARBLE 0.46 **INCHES NEGATIVE** (11.7)DIMENSIONS ARE IN: (mm) 1.35 CONTINUOUS 6/32 TREAD (34.3)±0.03 **NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085

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# 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 5 10 15 INPUT VOLTAGE Vdc

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**

**Operating Mode:** Ultra Loud Warble Tone

5-15 Vdc **Operating Voltage:** Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

**Typical Operating Current:** 35 mA at 5 Vdc 80 mA at 15 Vdc

**Typical Sound Pressure:** 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.

18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** SIDE VIEW RING FRONT VIEW PANEL MOUNTING 1.125 X 24 THREADS MOUNTING HOLE FOR REFERENCE ONLY 0.89 4.0±0.25 1.125 D 1 410 (28.6 D) (101.6±6.3) (22.6)0.315  $(35.8\emptyset)$ (8.0)FITS PANELS UP-TO 0.25 (6.3) THICK 1.29Ø 1 070 (32.80)(27.2Ø) 0.236 (6.0)0.46 DIMENSIONS ARE IN: (11.7)1.35 ±0.03 (34.3)TOLERANCES ARE: UNLESS OTHERWISE SPÈCIFIED.



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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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE. TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 5 10 15 INPUT VOLTAGE Vdc

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**

**Operating Mode:** Ultra Loud Warble Tone

5-15 Vdc **Operating Voltage:** Nominal Operating Voltage: 15 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±25% Cycles per second

**Typical Operating Current:** 35 mA at 5 Vdc 80 mA at 15 Vdc

**Typical Sound Pressure:** 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. 18AWG Wire, GXL, Copper, XPLE Insulated, Red and Black Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C.

**Storage Temperature:** 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

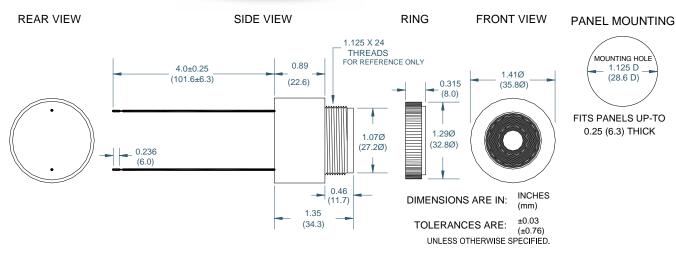
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





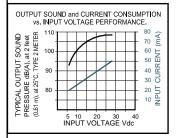
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# **UW-09-628-Q(F)**

# 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**

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 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: 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.

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** SIDE VIEW **RING** FRONT VIEW 1 125 X 24 THREADS FOR REFERENCE ONLY 0.89 0.43 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1 0+0 1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)

1.35

(34.3)

DIMENSIONS ARE IN: INCHES (mm)

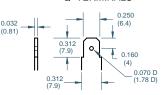
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "Q" TERMINALS





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# UW-09-628-Q(F)D

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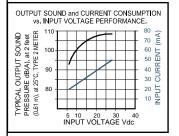
 Durable Stainless Steel 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

1.0±0.1

(25.4±2.5)

0.43

(10.9)

0

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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**

Operating Mode: Ultra Loud Dual Function Warble/Continuous Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) This **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

FRONT VIEW

1.41 D

(35.8 D)

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.

RING

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

0.315

(8.0)

1.29 D

(32.8 D)

## DIMENSIONS

1.125 X 24 THREADS

FOR REFERENCE ONLY

1.07 D

(27.2 D)

SIDE VIEW

0.89

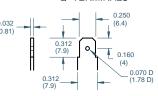
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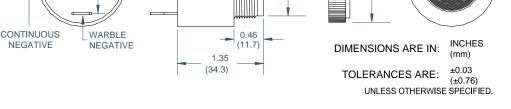
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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# **UW-09-628-Q(S)**

## Made in USA



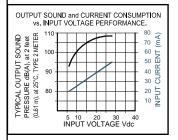
**Durable Stainless Steel** 304 Diaphragm

**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**

Termination:

**Operating Mode:** Ultra Loud Warble Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±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 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.

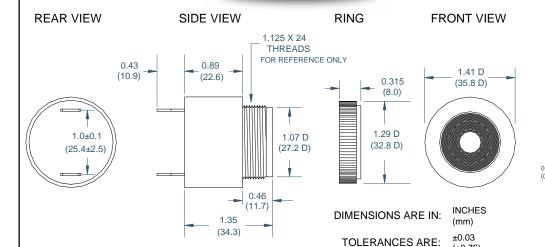
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

## **DIMENSIONS**

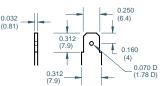
# PANEL MOUNTING



MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

# UW-09-628-Q(S)D

## Made in USA



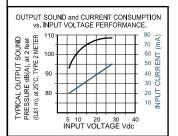
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

0.43

(10.9)

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**

**Operating Mode:** Ultra Loud Dual Function Warble/Continuous Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±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: 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.

RING

**Construction Materials:** Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator and piezoelectric driver

FRONT VIEW

1.41 D

(35.8 D)

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.

0.315

(8.0)

## **DIMENSIONS**

1.125 X 24 **THREADS** 

FOR REFERENCE ONLY

SIDE VIEW

0.89

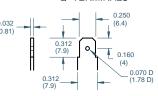
(22.6)

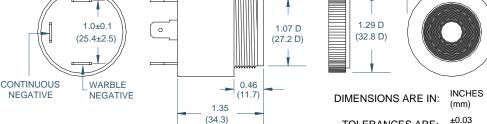
## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





TOLERANCES ARE:  $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

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# 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

DUTPUT SOUND and CURRENT CONSUMPTION VISION TO SOUND TO S

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

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  $+40^{\circ}$ 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.

#### **DIMENSIONS**

Life Expectancy:

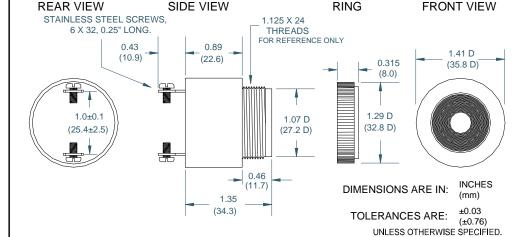
Warranty:

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS STAINLESS STEEL SCREWS, 6 X 32, 0.25 (6.4) LONG 0.032 (0.81) 0.160 (4) 6/32 TREAD



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# UW-09-628-S(F)D

# Made in USA



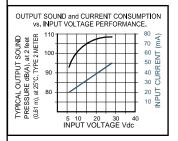
Durable Stainless Steel
 304 Diaphragm

 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**

Operating Mode: Ultra Loud Dual Function Warble/Continuous Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 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

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.

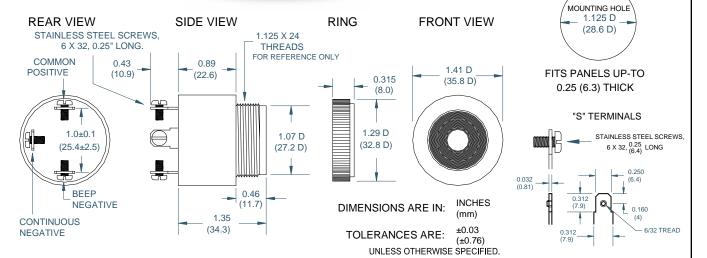
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

# DIMENSIONS

Life Expectancy:

## PANEL MOUNTING





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# UW-09-628-S(S)

## Made in USA



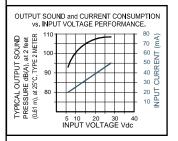
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



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**

**Operating Mode:** Ultra Loud Warble Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

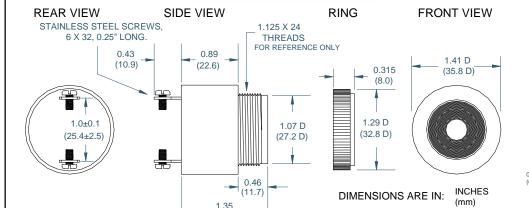
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

TOLERANCES ARE:

#### **DIMENSIONS**

# PANEL MOUNTING

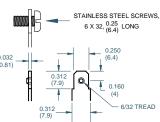


(34.3)

MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"S" TERMINALS





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±0.03

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

# UW-09-628-S(S)D

## Made in USA



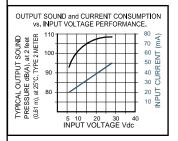
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology

Polarity Protected



**REAR VIEW** 

COMMON

**POSITIVE** 

CONTINUOUS

NEGATIVE

STAINLESS STEEL SCREWS,

1.0+0.1

(25.4+2.5)

BFFP

**NEGATIVE** 

6 X 32. 0.25" LONG

0.43

(10.9)

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**

**Operating Mode:** Ultra Loud Dual Function Warble/Continuous Tone

6-28 Vdc **Operating Voltage:** Nominal Operating Voltage: 28 Vdc

**Operating Frequency:** 2100±250 Hz. Center 1±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

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

**FRONT VIEW** 

1.41 D

(35.8 D)

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

**TOLERANCES ARE:** 

operating conditions.

RING

#### **DIMENSIONS**

1 125 X 24

**THREADS** FOR REFERENCE ONLY

1.07 D

(27.2 D)

0.46

(11.7)

1.35

(34.3)

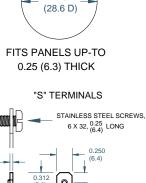
SIDE VIEW

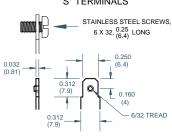
0.89

(22.6)

## PANEL MOUNTING

MOUNTING HOLE 1.125 D







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**INCHES** 

(mm)

±0.03

 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

# UW-09-628-W(F)

# Made in USA



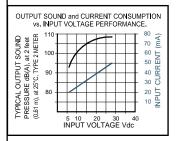
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 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(Å), at 28 Vdc, at 24 inches (61 cm), at 25°C. 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

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

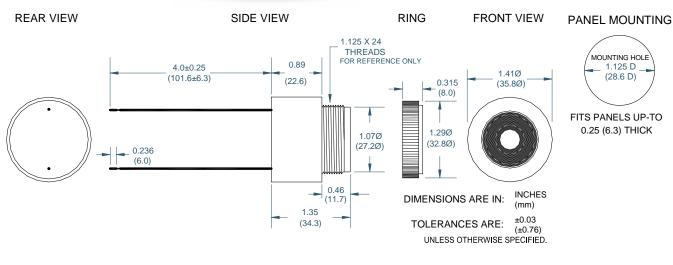
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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# UW-09-628-W(S)

# Made in USA



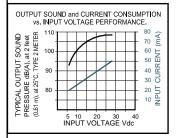
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology

Polarity Protected



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**

Termination:

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 6-28 Vdc Nominal Operating Voltage: 28 Vdc

Operating Frequency: 2100±250 Hz. Center 1±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. 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

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 1.125 X 24 THREADS MOUNTING HOLE FOR REFERENCE ONLY 0.89 4.0±0.25 1.125 D 1 410 (28.6 D) (101.6±6.3) (22.6)0.315  $(35.8\emptyset)$ (8.0)FITS PANELS UP-TO 0.25 (6.3) THICK 1.29Ø 1 070 (32.80)(27.2Ø) 0.236 (6.0)0.46 DIMENSIONS ARE IN: (11.7)1.35 ±0.03 (34.3)TOLERANCES ARE: UNLESS OTHERWISE SPÈCIFIED.



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# UW-19-230-Q(F)

## Made in USA



**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

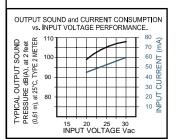
Superior Audibility

**NEMA 4X Certified** 

Reliable Piezoelectric Technology

Installs Easily

**REAR VIEW** 



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" quickconnect blades for push-on or direct solder attachment.

## **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Warble Tone

20-30 Vac/Vdc **Operating Voltage:** 

Nominal Operating Voltage: 30 Vac

**Operating Frequency:** 2100±250 Hz. Center 3±25% Cycles per second

**Typical Operating Current:** 40 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: 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

**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.

FRONT VIEW

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:

SIDE VIEW

(47.0)

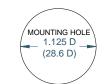
**RING** 

#### 1.125 X 24 **THREADS** FOR REFERENCE ONLY 1 39 0.43 1.41 D (10.9)(35.3)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.46 (11.7)**INCHES** DIMENSIONS ARE IN: 1.85

(mm)

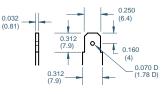
TOLERANCES ARE:  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "Q" TERMINALS





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±0.03

# 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 PERFORME (1971) at 2 feet with 100 to 100 to

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**

Termination:

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 1±25% Cycles per second

Typical Operating Current: 40 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.

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

Environmental Durability: Salt Spray- Withstand exposure

bility: Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in 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

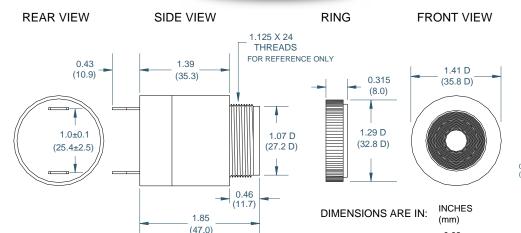
operating conditions.

#### **DIMENSIONS**

# PANEL MOUNTING

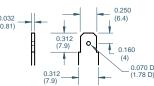
MOUNTING HOLE

1.125 D (28.6 D)



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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±0.03

UNLESS OTHERWISE SPECIFIED.

 $(\pm 0.76)$ 

**TOLERANCES ARE:** 

# 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

REAR VIEW

STAINLESS STEEL SCREWS,

0.43

(10.9)

1.0±0.1

 $(25.4\pm2.5)$ 

6 X 32, 0.25" LONG.

OUTPUT SOUND and CURRENT CONSUMPTION TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61 m), at 25°C, TYPE 2 METER 20 TO AN 80 15 20 25 30 INPUT VOLTAGE Vac

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" quickconnect blades with screws added for connection to wires with lugs.

## **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Warble Tone

**Operating Voltage:** 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

2000±250 Hz. **Operating Frequency:** 2100±250 Hz.

3±25% Cycles per second

**Typical Operating Current:** 40 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: 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.

20% over maximum rated voltage for less than 5 minutes. Surge Voltage:

**Reverse Voltage Protection:** To the maximum operating voltage.

RING

**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.

10 years under normal operating conditions.

FRONT VIEW

1.41 D

(35.8 D)

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

0.315

(8.0)

1 29 D

(32.8 D)

DIMENSIONS ARE IN:

TOLERANCES ARE:

## **DIMENSIONS**

1.125 X 24

**THREADS** FOR REFERENCE ONLY

1 07 D

(27.2 D)

0.46

(11.7)

Life Expectancy:

SIDE VIEW

1.39

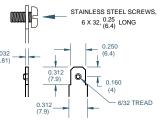
(35.3)

## PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS





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**INCHES** 

(mm)

±0.03

UNLESS OTHERWISE SPECIFIED.

 $(\pm 0.76)$ 

# 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

OUTPUT SOUND and CURRENT CONSUMPTION TYPICAL OUTP PRESSURE dB(/ (0.61 m), at 25°C, T 20 TO AN 80 15 20 25 30 INPUT VOLTAGE Vac

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" guickconnect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Ultra Loud Warble Tone

20-30 Vac/Vdc **Operating Voltage:** 

Nominal Operating Voltage: 30 Vac

**Operating Frequency:** 2100±250 Hz. Center 1±25% Cycles per second

**Typical Operating Current:** 40 mA at 20 Vac

60 mA at 30 Vac

100±5 dB(A), at 20 Vac, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

109±5 dB(A), at 30 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.

-40°C to +85°C. **Storage Temperature:** 

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.

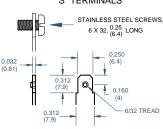
## **DIMENSIONS**

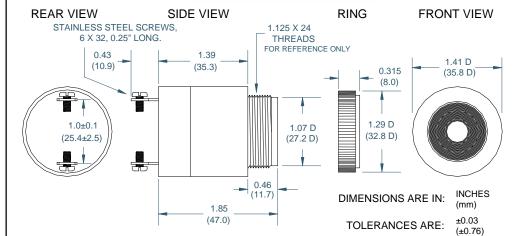
# PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "S" TERMINALS





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An ISO 9001:2000 Registered Company

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UNLESS OTHERWISE SPECIFIED.

### UW-19-230-W(F)

# Made in USA



Durable Stainless Steel
 304 Diaphragm

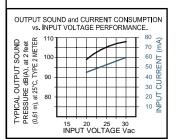
 Epoxy Encapsulated Electronics

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**

Termination:

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 3±25% Cycles per second

Typical Operating Current: 40 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. 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.

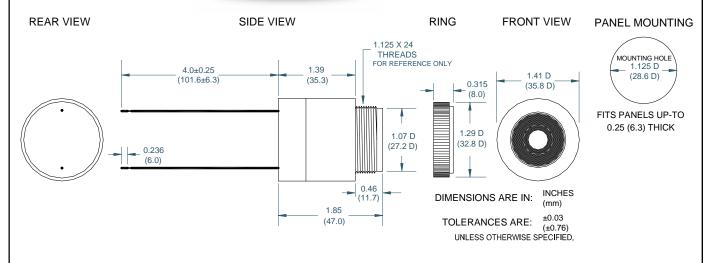
10 years under normal operating conditions.

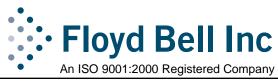
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:





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# **UW-19-230-W(S)**

# Made in USA



Durable Stainless Steel
 304 Diaphragm

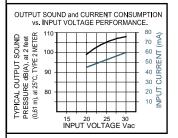
 Epoxy Encapsulated Electronics

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**

Termination:

Operating Mode: Ultra Loud Warble Tone

Operating Voltage: 20-30 Vac/Vdc

Nominal Operating Voltage: 30 Vac

Operating Frequency: 2100±250 Hz. Center 1±25% Cycles per second

Typical Operating Current: 40 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. 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.

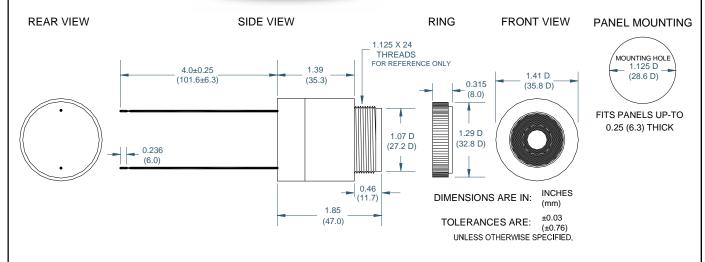
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:





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### XB-05-312-P(U)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

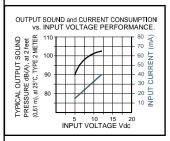
 Epoxy Encapsulated Electronics

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**

Termination:

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. 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.

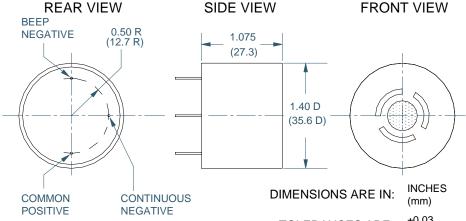
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

**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**



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



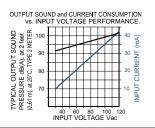
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# XB-09-201-Q(F)

# 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**

Termination:

Life Expectancy:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

Typical Operating Current: 10 mA at 30 Vac

45 mA at 120 Vac

Typical Sound Pressure: 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. 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.
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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D $1.0 \pm 0.1$ 1.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 0.070 D 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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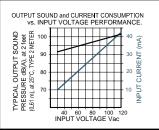
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### XB-09-201-Q(M)

# 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**

Termination:

Life Expectancy:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±25% Pulses per second

Typical Operating Current: 10 mA at 30 Vac

45 mA at 120 Vac

Typical Sound Pressure: 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. 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.

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

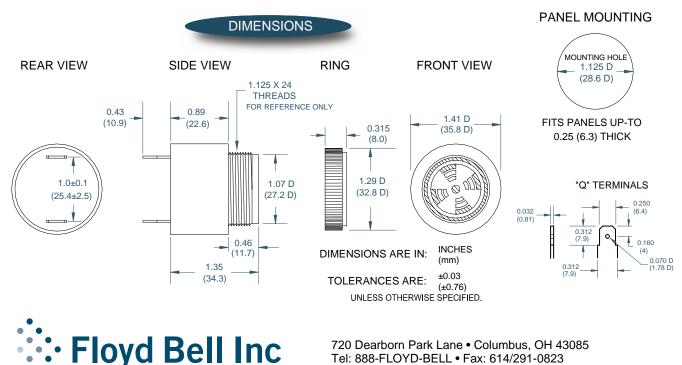
300 hours with no decrease in sound output

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.



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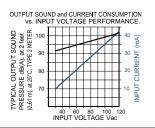
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# XB-09-201-Q(S)

# 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**

Termination:

Life Expectancy:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

1±25% Pulses per second

Typical Operating Current: 10 mA at 30 Vac

45 mA at 120 Vac

Typical Sound Pressure: 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. 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.

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D $1.0 \pm 0.1$ 1.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 0.070 D 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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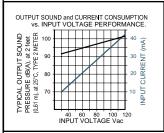
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### XB-09-201-S(F)

### Made in USA



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



STAINLESS STEEL SCREWS

1.0±0.1

 $(25.4\pm2.5)$ 

6 X 32, 0.25" LONG.

0.43

(10.9)

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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second

**Typical Operating Current:** 10 mA at 30 Vac

45 mA at 120 Vac **Typical Sound Pressure:** 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: 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.

-40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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

FRONT VIEW

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

0.46

(11.7)

1.35

(34.3)

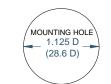
#### 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.89 1.41 D (22.6)0.315 (35.8 D) (8.0)1 29 D 1 07 D (32.8 D) (27.2 D)

RING

**INCHES** DIMENSIONS ARE IN: (mm) ±0.03 **TOLERANCES ARE:** 

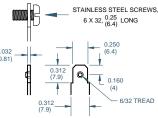
 $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





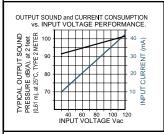
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# XB-09-201-S(M)

### 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second

**Typical Operating Current:** 10 mA at 30 Vac

45 mA at 120 Vac

**Typical Sound Pressure:** 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. 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32

Termination: Stainless Steel Screws

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C.

-40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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.

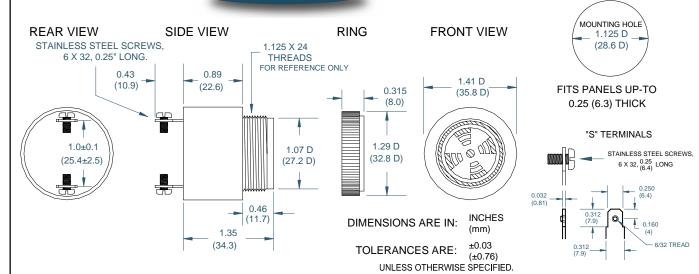
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





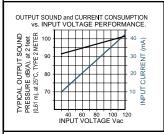
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# XB-09-201-S(S)

### Made in USA



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



The XB-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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second

**Typical Operating Current:** 10 mA at 30 Vac 45 mA at 120 Vac

**Typical Sound Pressure:** 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: 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. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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.

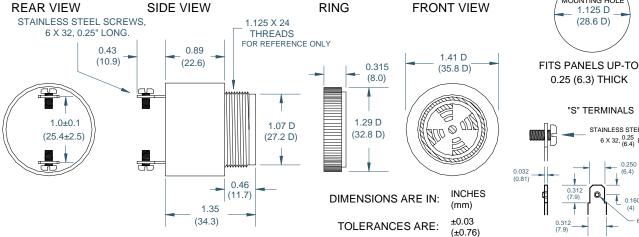
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

# **DIMENSIONS**

# PANEL MOUNTING



STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG 0.160

MOUNTING HOLE

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UNLESS OTHERWISE SPECIFIED.

Revision: 2.07

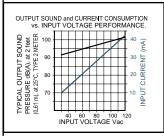
6/32 TREAD

# 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**

Termination:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

Typical Operating Current: 10 mA at 30 Vac

45 mA at 120 Vac

Typical Sound Pressure: 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. 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.

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.

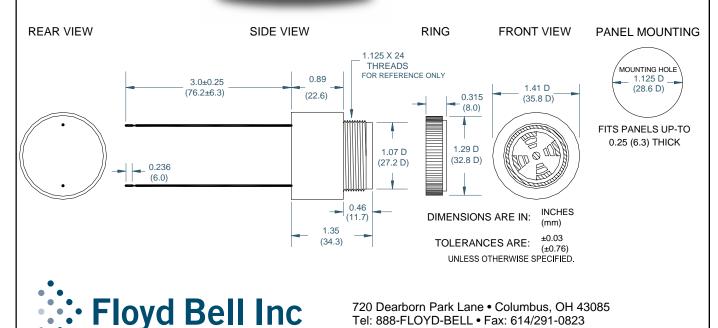
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:



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An ISO 9001:2000 Registered Company

# XB-09-201-W(M)

# Made in USA

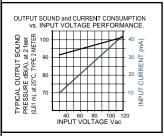


 Durable Stainless Steel 304 Diaphragm

 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**

Termination:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±25% Pulses per second

Typical Operating Current: 10 mA at 30 Vac

45 mA at 120 Vac

Typical Sound Pressure: 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. 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.

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.

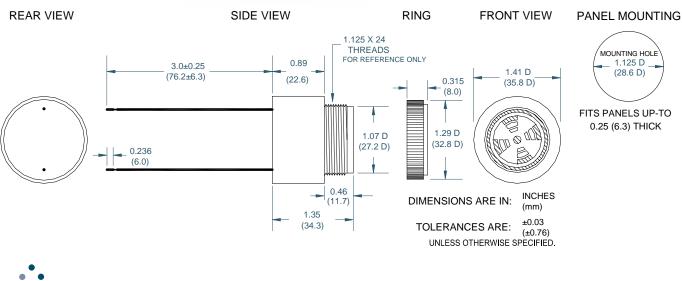
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**



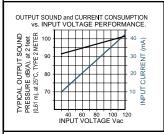
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# XB-09-201-W(S)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

1±25% Pulses per second

Typical Operating Current: 10 mA at 30 Vac

45 mA at 120 Vac Typical Sound Pressure: 92±5 dB(A), at 30 V

**Typical Sound Pressure:** 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:** 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.

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.

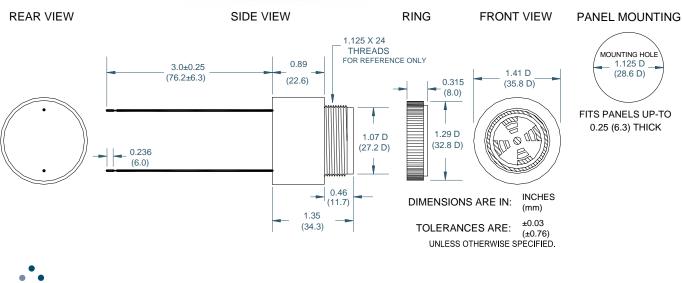
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:





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# 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

OUTPUT SOUND and CURRENT CONSUMPTION vs. INPUT VOLTAGE PERFORMANCE TYPICAL OUTPUT SOUND PRESSURE dB(A), at 2 feet (0.61m), at 25°C, 7 TYPE 2 METER 140 160 180 200 1 INPUT VOLTAGE Vac

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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second

**Typical Operating Current:** 20 mA at 130 Vac

45 mA at 220 Vac

**Typical Sound Pressure:** 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

Termination:

**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.

**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

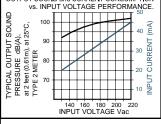
300 hours with no decrease in sound output

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

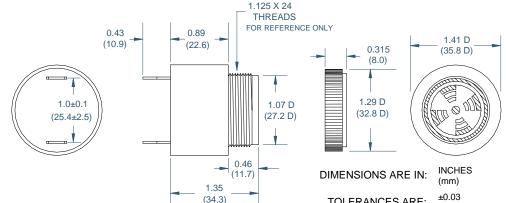
operating conditions.



**REAR VIEW** 

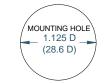
#### **DIMENSIONS**

#### SIDE VIEW **RING** FRONT VIEW



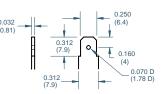
**TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





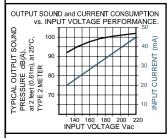
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### XB-09-301-Q(M)

### 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**

Termination:

Life Expectancy:

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second

**Typical Operating Current:** 20 mA at 130 Vac

45 mA at 220 Vac

**Typical Sound Pressure:** 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

**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. **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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D $1.0 \pm 0.1$ 1.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 0.070 D 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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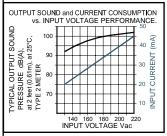
An ISO 9001:2000 Registered Company

# 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**

Life Expectancy:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

1±25% Pulses per second

Typical Operating Current: 20 mA at 130 Vac 45 mA at 220 Vac

Typical Sound Pressure: 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

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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.
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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D $1.0 \pm 0.1$ 1.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 0.070 D 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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### XB-09-301-S(F)

### Made in USA

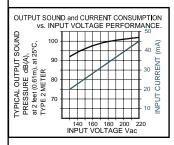


**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second **Typical Operating Current:** 20 mA at 130 Vac

45 mA at 220 Vac

**Typical Sound Pressure:** 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.

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.

-40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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.

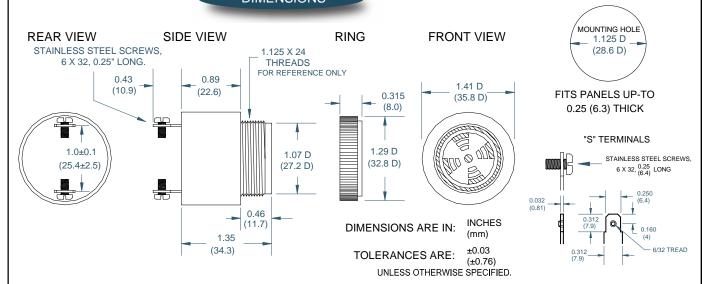
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





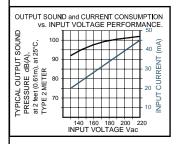
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# XB-09-301-S(M)

# 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**

Termination:

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

2±25% Pulses per second

Typical Operating Current: 20 mA at 130 Vac 45 mA at 220 Vac

Typical Sound Pressure: 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.

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.

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.

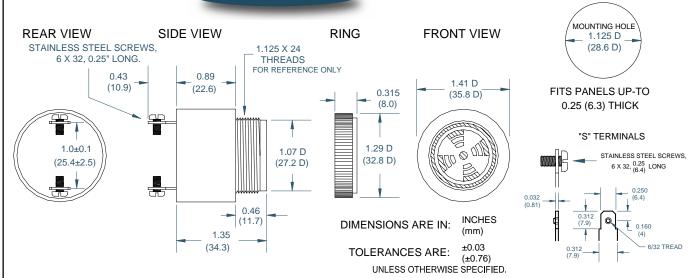
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





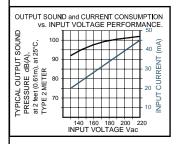
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# XB-09-301-S(S)

### 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second

**Typical Operating Current:** 20 mA at 130 Vac 45 mA at 220 Vac

**Typical Sound Pressure:** 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.

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. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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.

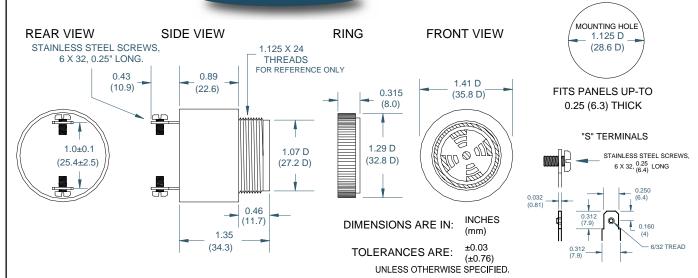
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





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# XB-09-301-W(F)

### Made in USA

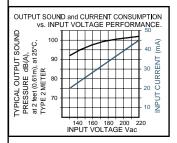


**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second

**Typical Operating Current:** 20 mA at 130 Vac 45 mA at 220 Vac

**Typical Sound Pressure:** 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 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: **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. **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.

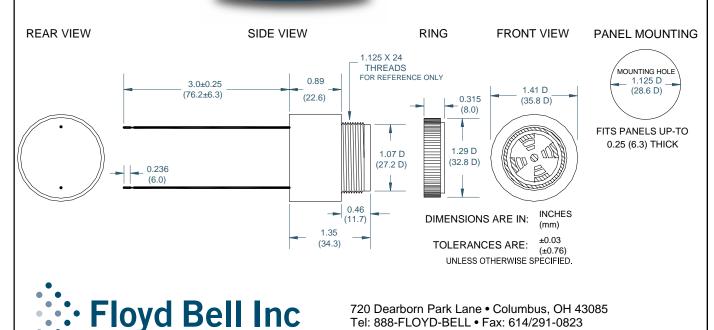
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:



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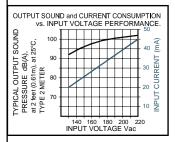
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# XB-09-301-W(M)

### 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second

**Typical Operating Current:** 20 mA at 130 Vac 45 mA at 220 Vac

**Typical Sound Pressure:** 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 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination:

**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. **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.

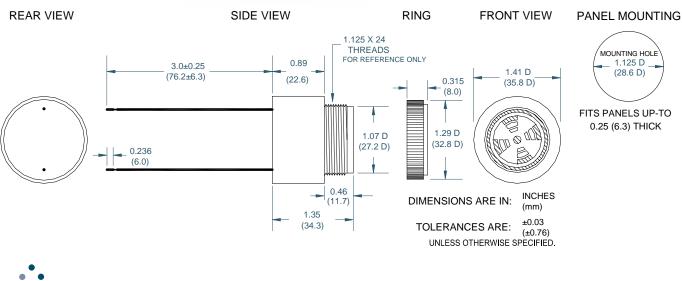
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:



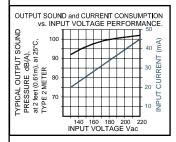
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# XB-09-301-W(S)

### Made in USA



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



The XB-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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second **Typical Operating Current:** 20 mA at 130 Vac

45 mA at 220 Vac

**Typical Sound Pressure:** 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 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. **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.

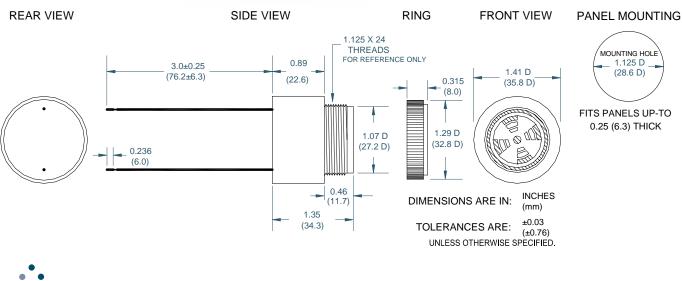
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:



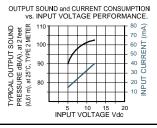
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# XB-09-312-Q(F)

# 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**

Termination:

Life Expectancy:

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. 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.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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# XB-09-312-Q(F)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

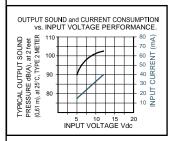
**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



REAR VIEW

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**

Termination:

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

**Operating Voltage:** 5-12 Vdc Nominal Operating Voltage: 12 Vdc 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second in Beep Mode

**Typical Operating Current:** 15 mA at 5 Vdc 40 mA at 12 Vdc

90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C. 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.

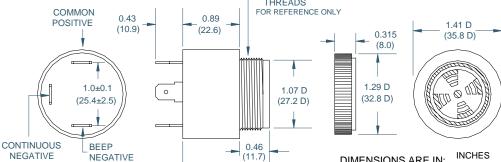
Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.



#### SIDE VIEW RING FRONT VIEW 1.125 X 24 **THREADS**



1.35

(34.3)

**INCHES** DIMENSIONS ARE IN: (mm)

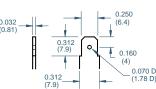
**TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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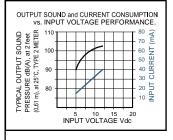
±0.03

# 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**

Termination:

Life Expectancy:

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. 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.

10 years under normal operating conditions.

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Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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Floyd Bell Inc

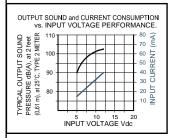
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# XB-09-312-Q(M)D

### 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**

Termination:

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

**Operating Voltage:** 5-12 Vdc Nominal Operating Voltage: 12 Vdc 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second in Beep Mode

**Typical Operating Current:** 15 mA at 5 Vdc 40 mA at 12 Vdc

90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C. 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

**TOLERANCES ARE:** 

### **DIMENSIONS**

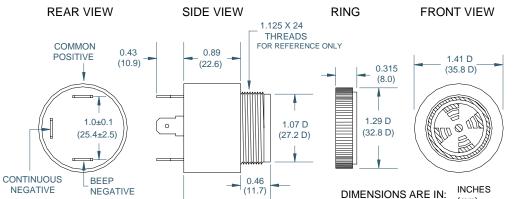
Life Expectancy:

### PANEL MOUNTING

MOUNTING HOLE

1.125 D (28.6 D)

FITS PANELS UP-TO



1.35 (34.3)

(mm)

±0.03

 $(\pm 0.76)$ 

0.25 (6.3) THICK "Q" TERMINALS

0.312 (7.9) 0.160

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# XB-09-312-Q(S)

# Made in USA



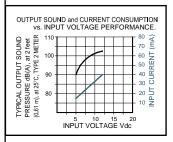
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

Life Expectancy:

**DIMENSIONS** 

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. 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.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$



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Revision: 2.07

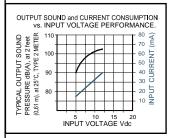
PANEL MOUNTING

# 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**

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: 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.

Warranty: For a period of two years from the date of manufacture under normal

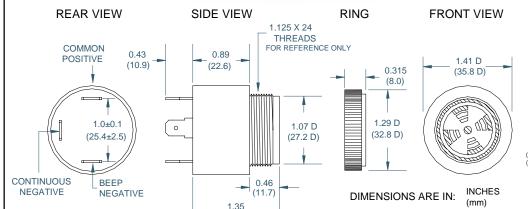
operating conditions.

**TOLERANCES ARE:** 

### DIMENSIONS

Life Expectancy:

# PANEL MOUNTING

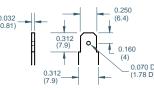


(34.3)

MOUNTING HOLE
1.125 D
(28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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UNLESS OTHERWISE SPECIFIED.

±0.03

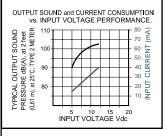
 $(\pm 0.76)$ 

# 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" guick-connect blades for push-on or direct solder attachment.

### **SPECIFICATIONS**

Termination:

Life Expectancy:

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 5-12 Vdc Nominal Operating Voltage: 12 Vdc 2900±250 Hz. **Operating Frequency:** 

6±25% Pulses per second **Typical Operating Current:** 15 mA at 5 Vdc

40 mA at 12 Vdc

90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C. 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.

10 years under normal operating conditions.

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Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085

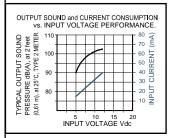
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# XB-09-312-Q(U)D

### 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**

Termination:

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

**Operating Voltage:** 5-12 Vdc Nominal Operating Voltage: 12 Vdc 2900±250 Hz. **Operating Frequency:** 

6±25% Pulses per second in Beep Mode

**Typical Operating Current:** 15 mA at 5 Vdc 40 mA at 12 Vdc

90±5 dB(A), at 5 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25°C. 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.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**

Life Expectancy:

#### REAR VIEW RING FRONT VIEW SIDE VIEW 1.125 X 24 **THREADS** COMMON FOR REFERENCE ONLY 0.89 0.43 **POSITIVE** 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.07 D 0 (32.8 D) $(25.4 \pm 2.5)$ (27.2 D) CONTINUOUS BEEP 0.46 NEGATIVE **INCHES NEGATIVE** (11.7)DIMENSIONS ARE IN: 1.35

(34.3)

(mm)

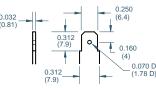
±0.03 **TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





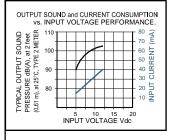
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### XB-09-312-S(F)

### 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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** 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.

0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32 Termination:

Stainless Steel Screws

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

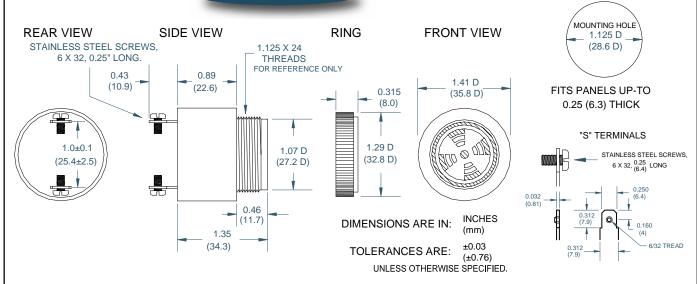
For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

### PANEL MOUNTING





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# XB-09-312-S(F)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

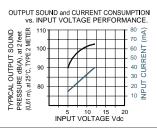
 Epoxy Encapsulated Electronics

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

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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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE SIDE VIEW **REAR VIEW** RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D POSITIVE (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)BEEP 0.46 **INCHES** NEGATIVE (11.7)DIMENSIONS ARE IN: (mm) 1.35 CONTINUOUS (34.3)6/32 TREAD **NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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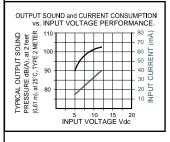
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# XB-09-312-S(M)

# 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**

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: 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.

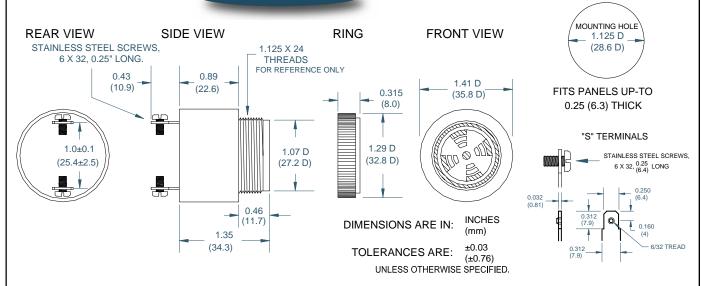
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

### PANEL MOUNTING





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# XB-09-312-S(M)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

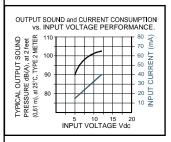
**Epoxy Encapsulated** Electronics

**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 2900±250 Hz. **Operating Frequency:** 

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:

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS** MOUNTING HOLE SIDE VIEW **REAR VIEW** RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D POSITIVE (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)BEEP 0.46 **INCHES** NEGATIVE (11.7)DIMENSIONS ARE IN: (mm) 1.35 CONTINUOUS (34.3)6/32 TREAD **NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.



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Revision: 2.07

PANEL MOUNTING

# XB-09-312-S(S)

### Made in USA



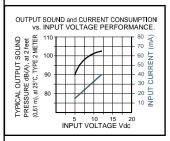
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** 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: 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. -40°C to +85°C. **Storage Temperature:** 

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.

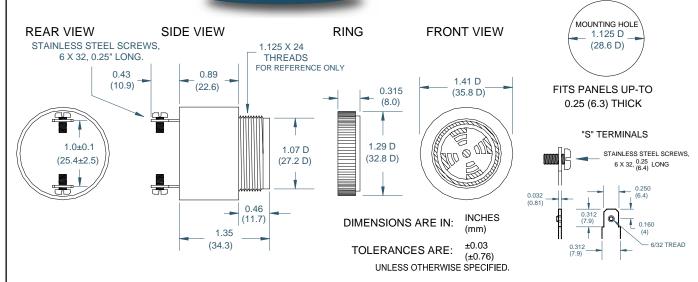
For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

### PANEL MOUNTING





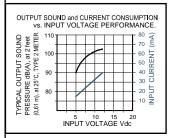
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# XB-09-312-S(S)D

### 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**

Life Expectancy:

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

**Operating Voltage:** 5-12 V/dc Nominal Operating Voltage: 12 Vdc 2900±250 Hz. **Operating Frequency:** 

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

**TOLERANCES ARE:** 

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE SIDE VIEW **REAR VIEW** RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D POSITIVE (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)BEEP 0.46 **INCHES** NEGATIVE (11.7)DIMENSIONS ARE IN: (mm)



1.35

(34.3)

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 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

Revision: 2.07

6/32 TREAD

CONTINUOUS

**NEGATIVE** 

# XB-09-312-S(U)

# Made in USA



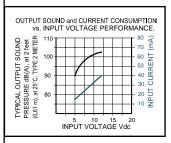
 Durable Stainless Steel 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology



The XB-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" guick-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.

6±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: 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.

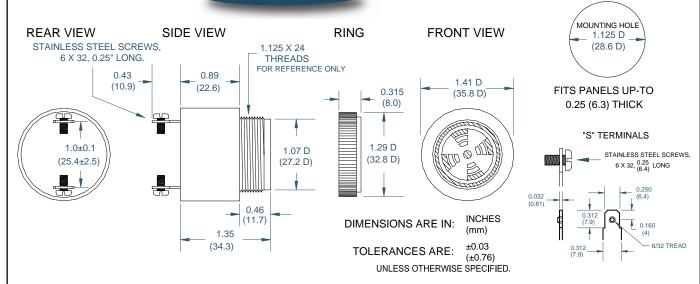
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

### PANEL MOUNTING





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## XB-09-312-S(U)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

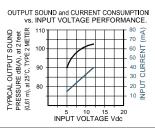
**Epoxy Encapsulated** Electronics

**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 2900±250 Hz. **Operating Frequency:** 

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.

RING

**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.

FRONT VIEW

1.41 D

(35.8 D)

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

0.315

(8.0)

1 29 D

(32.8 D)

STAINLESS STEEL SCREWS,

1.0±0.1

 $(25.4\pm2.5)$ 

BEEP

NEGATIVE

6 X 32, 0.25" LONG.

0.43

(10.9)

**REAR VIEW** 

COMMON

POSITIVE

CONTINUOUS

**NEGATIVE** 

#### **DIMENSIONS**

1.125 X 24

**THREADS** FOR REFERENCE ONLY

1 07 D

(27.2 D)

0.46

(11.7)

1.35

(34.3)

Life Expectancy:

SIDE VIEW

0.89

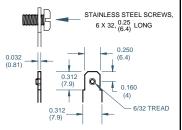
(22.6)



PANEL MOUNTING

FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS



**INCHES** DIMENSIONS ARE IN: (mm) **TOLERANCES ARE:** 

 $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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## XB-09-312-W(F)

# Made in USA



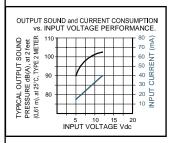
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

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. 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

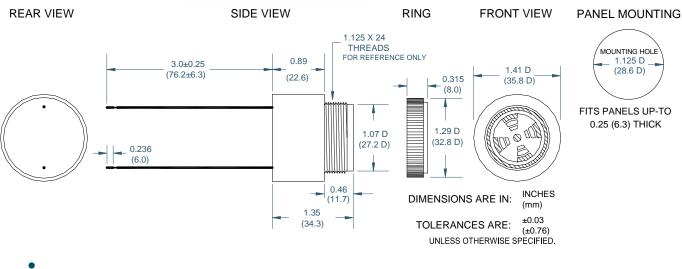
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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## XB-09-312-W(M)

### Made in USA



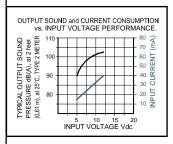
**Durable Stainless Steel** 304 Diaphragm

**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**

Termination:

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 5-12 Vdc Nominal Operating Voltage: 12 Vdc 2900±250 Hz. **Operating Frequency:** 

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. 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

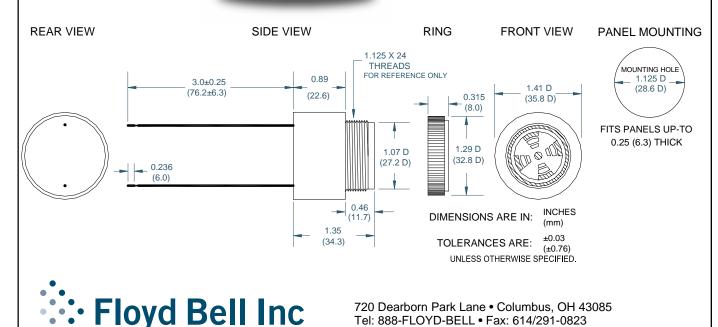
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**



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## XB-09-312-W(S)

# Made in USA



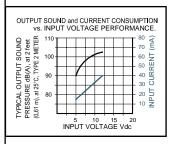
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

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. 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.

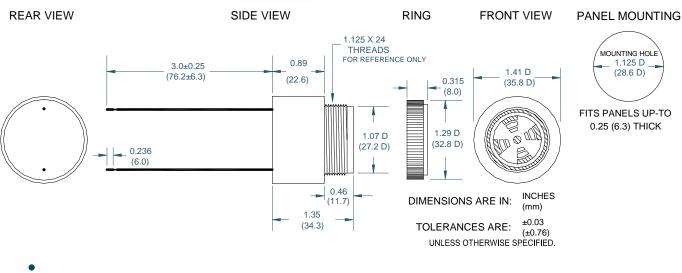
Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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**





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### **XB-09-312-W(U)**

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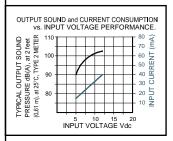
 Durable Stainless Steel 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric
 Technology



The XB-09-312-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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 5-12 Vdc
Nominal Operating Voltage: 12 Vdc
Operating Frequency: 2900±250 Hz.

6±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(Å), 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.

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

Similar 2 parts epoxy resir or silicor

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

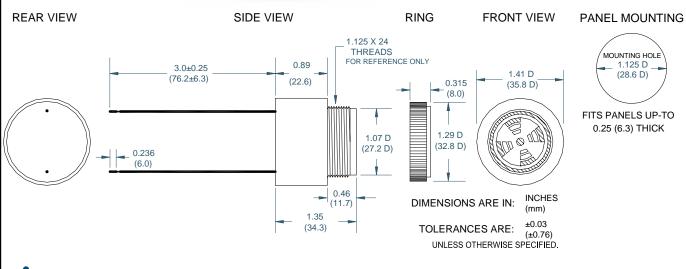
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





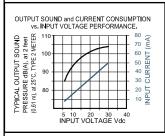
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### XB-09-630-Q(F)

# 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**

Termination:

Life Expectancy:

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. 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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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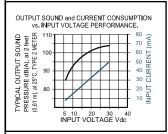
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## XB-09-630-Q(F)D

### 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 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second in Beep Mode

**Typical Operating Current:** 10 mA at 6 Vdc 50 mA at 30 Vdc

85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

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 Termination:

**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

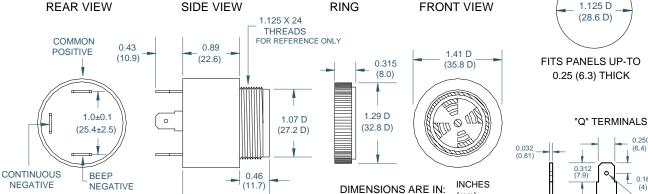
operating conditions.

### **DIMENSIONS**

1.35

(34.3)

#### PANEL MOUNTING



(mm) ±0.03 **TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

0.160 0.312



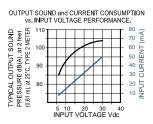
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### XB-09-630-Q(M)

# 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**

Termination:

Life Expectancy:

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. 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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D 0 (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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## XB-09-630-Q(M)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

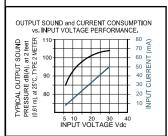
**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



REAR VIEW

COMMON

**POSITIVE** 

CONTINUOUS

NEGATIVE

1.0±0.1

 $(25.4 \pm 2.5)$ 

BEEP

**NEGATIVE** 

0.43

(10.9)

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 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second in Beep Mode

**Typical Operating Current:** 10 mA at 6 Vdc 50 mA at 30 Vdc

85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

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 Termination: 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

RING

**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.

FRONT VIEW

1.41 D

(35.8 D)

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

0.315

(8.0)

1.29 D

(32.8 D)

DIMENSIONS ARE IN:

**TOLERANCES ARE:** 

## **DIMENSIONS**

0.46

(11.7)

1.35 (34.3) 1.125 X 24 **THREADS** 

FOR REFERENCE ONLY

1.07 D

(27.2 D)

SIDE VIEW

0.89

(22.6)

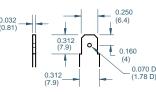
Life Expectancy:

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





0

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UNLESS OTHERWISE SPECIFIED.

**INCHES** 

(mm)

±0.03

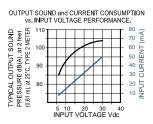
 $(\pm 0.76)$ 

### 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

Termination:

Life Expectancy:

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. 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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator 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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D 0 (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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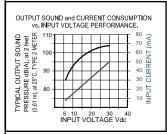
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## XB-09-630-Q(S)D

# 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**

Termination:

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. 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.

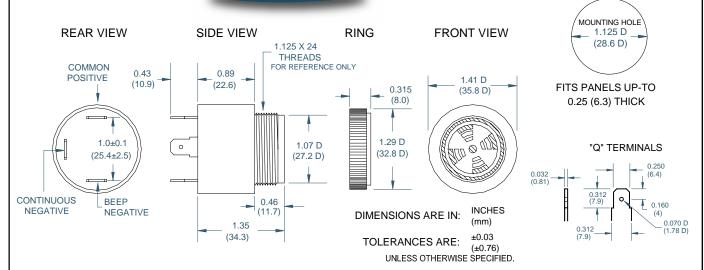
Warranty: For a period of two years from the date of manufacture under normal

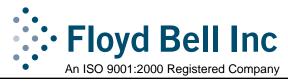
operating conditions.

#### DIMENSIONS

Life Expectancy:

#### PANEL MOUNTING





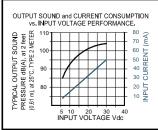
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### XB-09-630-Q(U)

# 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**

Termination:

Life Expectancy:

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: 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. 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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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### XB-09-630-Q(U)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

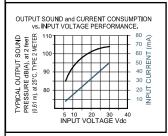
**Epoxy Encapsulated** Electronics

**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 2900±250 Hz. **Operating Frequency:** 

6±25% Pulses per second in Beep Mode

**Typical Operating Current:** 10 mA at 6 Vdc 50 mA at 30 Vdc

85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

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 Termination:

**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.

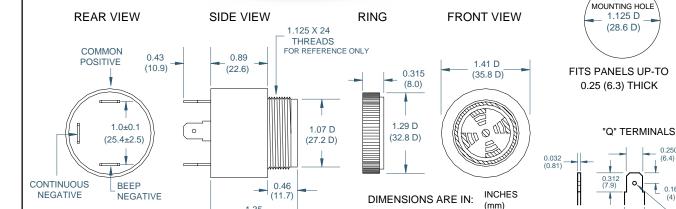
**TOLERANCES ARE:** 

### **DIMENSIONS**

1.35

(34.3)

#### PANEL MOUNTING





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UNLESS OTHERWISE SPECIFIED.

±0.03

 $(\pm 0.76)$ 

Revision: 2.07

0.160

0.312

### XB-09-630-S(F)

# Made in USA



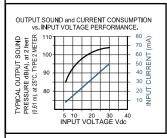
Durable Stainless Steel
 304 Diaphragm

 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**

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:** 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.

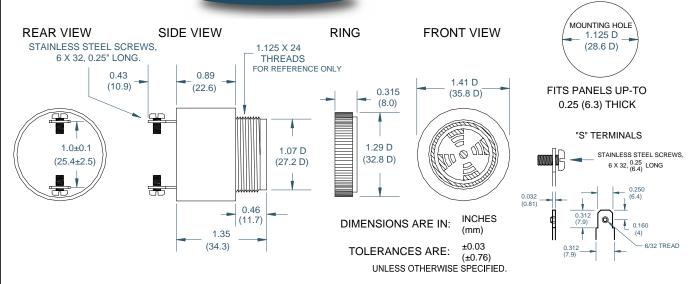
For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Warranty:

### PANEL MOUNTING





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## XB-09-630-S(F)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

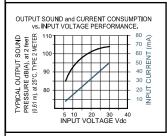
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

• Two Tones, One Package



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**

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:** 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  $+40^{\circ}$ C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

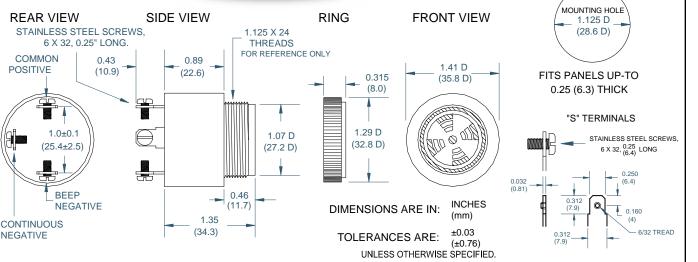
Warranty: For a period of two years from the date of manufacture under normal

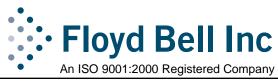
operating conditions.

### DIMENSIONS

Life Expectancy:

#### PANEL MOUNTING





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### XB-09-630-S(M)

# Made in USA



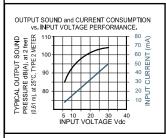
Durable Stainless Steel
 304 Diaphragm

 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**

**Typical Sound Pressure:** 

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

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.

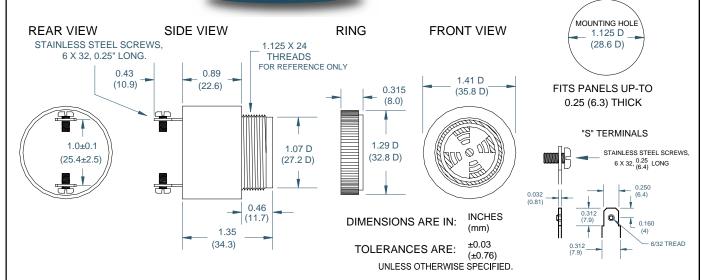
For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Warranty:

#### PANEL MOUNTING





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## XB-09-630-S(M)D

# Made in USA



 Durable Stainless Steel 304 Diaphragm

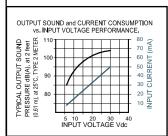
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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**

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:** 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** MOUNTING HOLE SIDE VIEW **REAR VIEW** RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D POSITIVE (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)BEEP 0.46 **INCHES** NEGATIVE (11.7)DIMENSIONS ARE IN: (mm) 1.35 CONTINUOUS (34.3)6/32 TREAD **NEGATIVE TOLERANCES ARE:**



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UNLESS OTHERWISE SPECIFIED.

 $(\pm 0.76)$ 

Revision: 2.07

PANEL MOUNTING

### XB-09-630-S(S)

# Made in USA



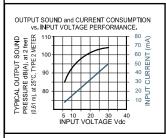
Durable Stainless Steel
 304 Diaphragm

 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**

**Typical Sound Pressure:** 

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

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.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal

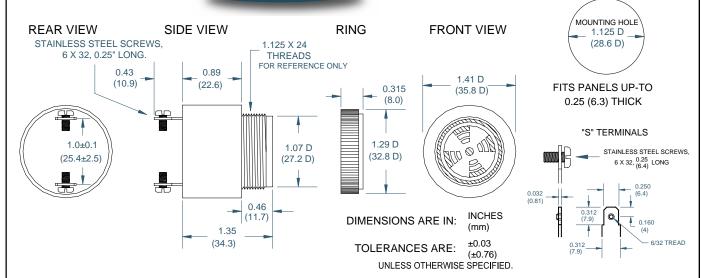
operating conditions.

### DIMENSIONS

Life Expectancy:

Warranty:

#### PANEL MOUNTING





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## XB-09-630-S(S)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

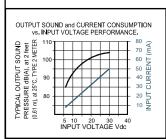
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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**

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:** 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.

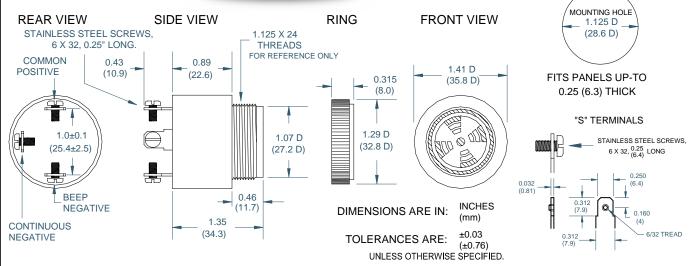
For a period of two years from the date of manufacture under normal

operating conditions.

# DIMENSIONS

Warranty:

#### PANEL MOUNTING





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## XB-09-630-S(U)

### Made in USA



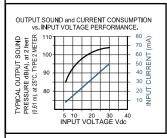
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



**REAR VIEW** 

STAINLESS STEEL SCREWS

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**

**Operating Mode:** Extra Loud Beep Tone

6-30 Vdc **Operating Voltage:** 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

85±5 dB(A), at 6 Vdc, at 24 inches (61 cm), at 25°C **Typical Sound Pressure:** 

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. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

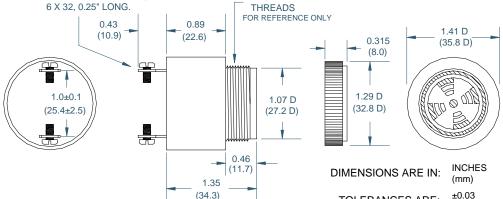
#### **DIMENSIONS**

Life Expectancy:

Warranty:

SIDE VIEW

#### RING FRONT VIEW 1.125 X 24 **THREADS**



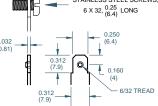
**TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

## PANEL MOUNTING



0.25 (6.3) THICK

## "S" TERMINALS STAINLESS STEEL SCREWS





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## XB-09-630-S(U)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

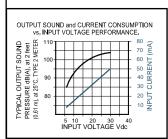
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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**

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:** 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** MOUNTING HOLE SIDE VIEW **REAR VIEW** RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS, (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D POSITIVE (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS, (32.8 D) $(25.4\pm2.5)$ (27.2 D) $6 \times 32, {0.25 \atop (6.4)}$ LONG (6.4)BEEP 0.46 **INCHES** NEGATIVE (11.7)DIMENSIONS ARE IN: (mm) 1.35 CONTINUOUS (34.3)6/32 TREAD **NEGATIVE TOLERANCES ARE:** $(\pm 0.76)$



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Revision: 2.07

PANEL MOUNTING

### XB-09-630-W(F)

# Made in USA



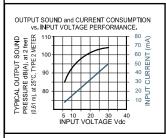
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

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. 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.

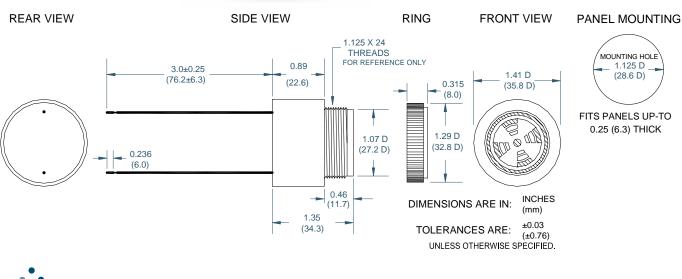
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:





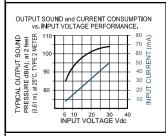
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### XB-09-630-W(M)

### 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**

Termination:

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 6-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±250 Hz. **Operating Frequency:** 

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. 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.

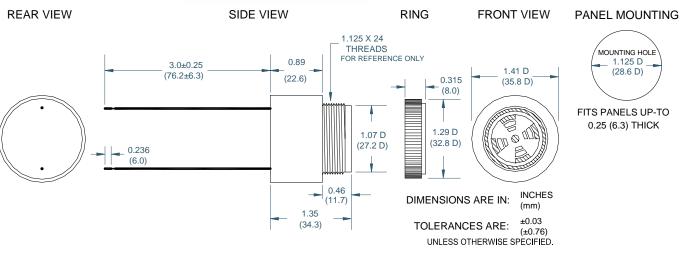
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

**DIMENSIONS** 





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## XB-09-630-W(S)

# Made in USA



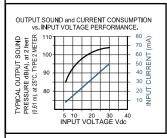
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

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. 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

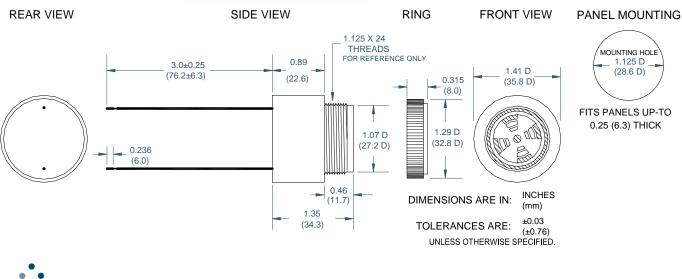
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**



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## XB-09-630-W(U)

# Made in USA



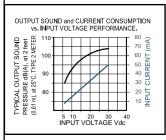
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric
 Technology



The XB-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**

Termination:

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

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. 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.

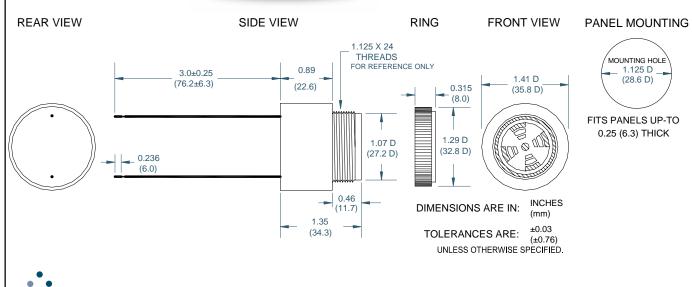
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

#### **DIMENSIONS**

Life Expectancy:



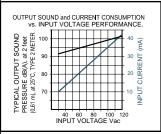
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## XB-V09-201-Q(F)

# Made in USA



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



The XB-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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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.

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

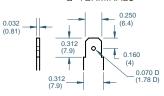
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





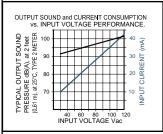
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## XB-V09-201-Q(M)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±25% Pulses per second

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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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.

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

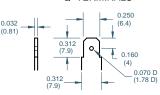
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





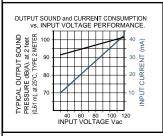
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## XB-V09-201-Q(S)

# 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(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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

1±25% Pulses per second

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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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.

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

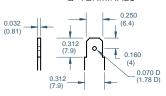
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





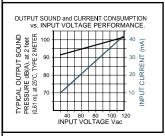
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## XB-V09-201-S(F)

### 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" guick-connect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

3±25% Pulses per second

**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: 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. **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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

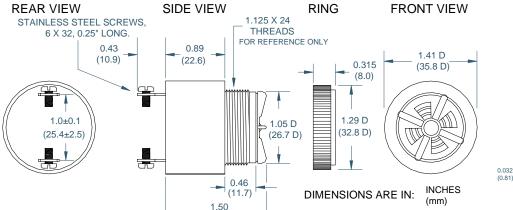
**TOLERANCES ARE:** 

UNLESS OTHERWISE SPECIFIÉD.

### **DIMENSIONS**

Life Expectancy:

### PANEL MOUNTING



(38.2)

"S" TERMINALS STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG 0.160 6/32 TREAD

MOUNTING HOLE

1.125 D

(28.6 D)

FITS PANELS UP-TO

0.25 (6.3) THICK



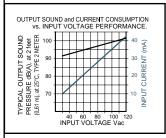
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## XB-V09-201-S(M)

### 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" guick-connect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second

**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: 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. **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**

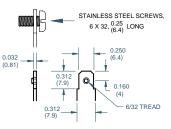
#### FRONT VIEW **REAR VIEW** SIDE VIEW **RING** 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





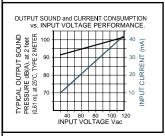
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## XB-V09-201-S(S)

### 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" guick-connect blades with screws added for connection to wires with lugs.

#### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 30-120 Vac Nominal Operating Voltage: 110 Vac 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second

**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: 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. **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**

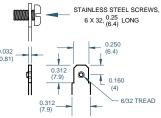
#### FRONT VIEW **REAR VIEW** SIDE VIEW **RING** 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:**

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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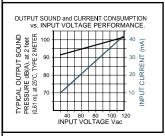
UNLESS OTHERWISE SPECIFIÉD.

## 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red a 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.

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

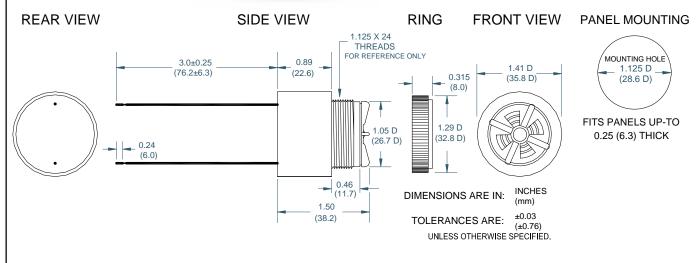
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





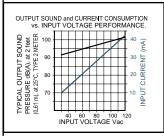
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## XB-V09-201-W(M)

# Made in USA



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



The XB-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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

2±25% Pulses per second

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 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red a 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.

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

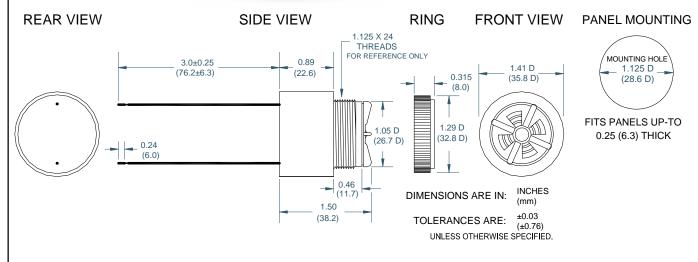
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





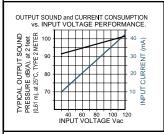
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## XB-V09-201-W(S)

# Made in USA



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



The XB-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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 30-120 Vac Nominal Operating Voltage: 110 Vac Operating Frequency: 2900±250 Hz.

1±25% Pulses per second

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 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red a 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.

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

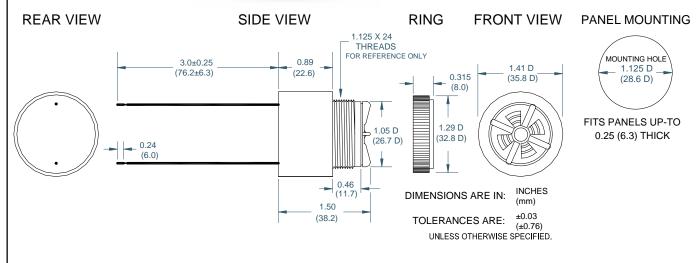
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





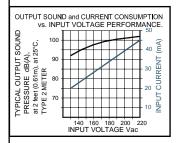
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## XB-V09-301-Q(F)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

Typical Operating Current: 20 mA at 130 Vac

ypical Operating Current: 20 mA at 130 Vac 45 mA at 220 Vac

**Typical Sound Pressure:** 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

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20°C to +65°C.

Storage Temperature: -20 °C to +65 °C. -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 94-VO, Black

Internal Circuit- Audio-oscillator 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

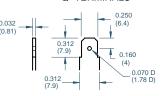
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





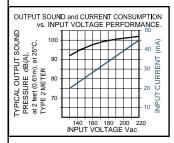
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## XB-V09-301-Q(M)

# 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

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

2±25% Pulses per second

Typical Operating Current: 20 mA at 130 Vac

ypical Operating Current: 20 mA at 130 Vac 45 mA at 220 Vac

Typical Sound Pressure: 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

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)
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.

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

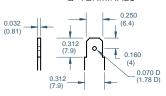
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

#### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "Q" TERMINALS





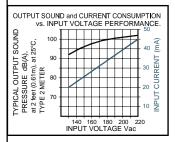
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# XB-V09-301-Q(S)

### 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second 20 mA at 130 Vac

**Typical Operating Current:** 45 mA at 220 Vac

**Typical Sound Pressure:** 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

Termination: Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C.

-40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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**

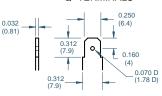
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





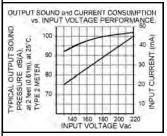
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# XB-V09-301-Q(U)

### 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

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac **Operating Frequency:** 2900±250 Hz.

6±25% Pulses per second

**Typical Operating Current:** 20 mA at 130 Vac

45 mA at 220 Vac

**Typical Sound Pressure:** 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

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

-20°C to +65°C. **Operating Temperature:** Storage Temperature: -40°C to +85°C

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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 Warranty:

operating conditions.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE FRONT VIEW REAR VIEW SIDE VIEW RING 1.125 D 1.125 X 24 (28.6 D) THREADS FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK 1.29 D 1.0±0.1 1.05 D "Q" TERMINALS (32.8 D) (25.4±2.5) (26.7 D) 0.032 0.46 0.160 INCHES DIMENSIONS ARE IN: (mm) 1.50 ±0.03 (38.2)TOLERANCES ARE: (+0.76)UNLESS OTHERWISE SPECIFIED.

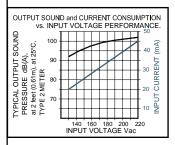
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# XB-V09-301-S(F)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

Typical Operating Current: 20 mA at 130 Vac

45 mA at 220 Vac

Typical Sound Pressure: 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.

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.

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.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Life Expectancy:

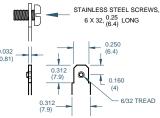
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 ±0.03 (38.2)**TOLERANCES ARE:**

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

## "S" TERMINALS





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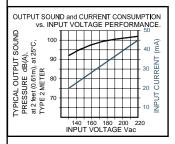
UNLESS OTHERWISE SPECIFIÉD.

# 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second 20 mA at 130 Vac

**Typical Operating Current:** 45 mA at 220 Vac

**Typical Sound Pressure:** 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.

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.

**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.

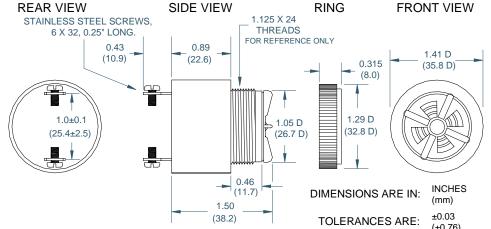
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**



1.125 D (28.6 D) FITS PANELS UP-TO 0.25 (6.3) THICK

"S" TERMINALS STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG 0.160 6/32 TREAD

PANEL MOUNTING

MOUNTING HOLE

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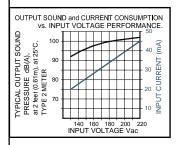
UNLESS OTHERWISE SPECIFIÉD.

# 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second **Typical Operating Current:** 20 mA at 130 Vac

45 mA at 220 Vac

**Typical Sound Pressure:** 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.

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. **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.

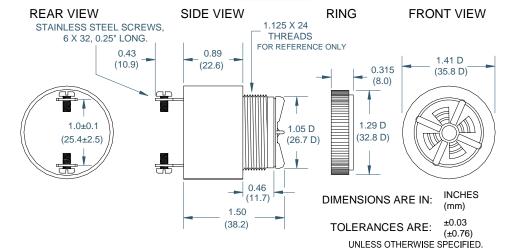
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

## PANEL MOUNTING



MOUNTING HOLE 1.125 D (28.6 D) FITS PANELS UP-TO 0.25 (6.3) THICK

"S" TERMINALS STAINLESS STEEL SCREWS 6 X 32, 0.25 LONG 0.160 6/32 TREAD

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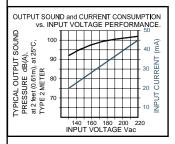
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# XB-V09-301-W(F)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

3±25% Pulses per second

Typical Operating Current: 20 mA at 130 Vac 45 mA at 220 Vac

Typical Sound Pressure: 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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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.

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

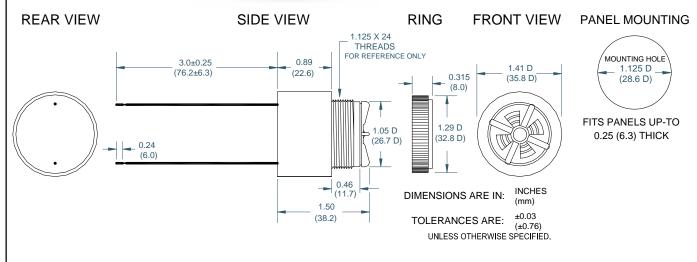
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





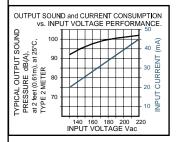
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# XB-V09-301-W(M)

### 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**

**Operating Mode:** Extra Loud Beep Tone

**Operating Voltage:** 130-220 Vac Nominal Operating Voltage: 220 Vac 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second 20 mA at 130 Vac

**Typical Operating Current:** 45 mA at 220 Vac

**Typical Sound Pressure:** 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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes. **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

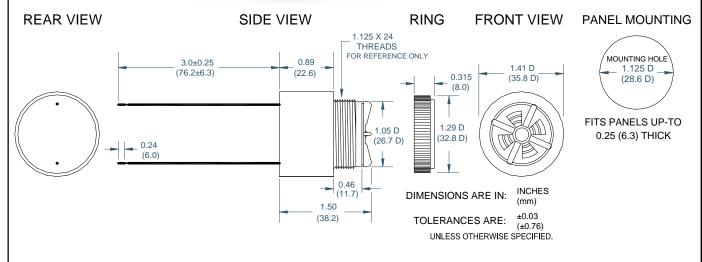
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





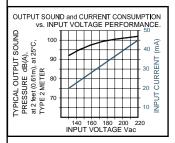
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# XB-V09-301-W(S)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 130-220 Vac Nominal Operating Voltage: 220 Vac Operating Frequency: 2900±250 Hz.

1±25% Pulses per second
Typical Operating Current: 20 mA at 130 Vac

45 mA at 220 Vac

Typical Sound Pressure: 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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red Termination Strength: 24AWG wire, Tinned Copper, Vinyl Insulated, Red 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.

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.

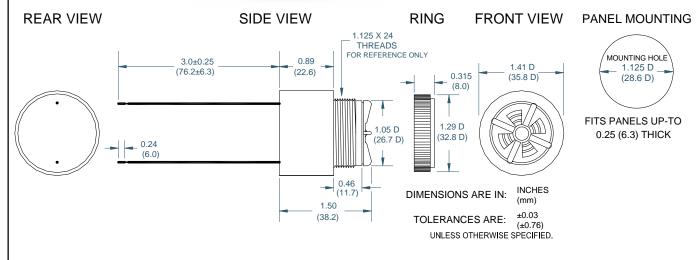
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:





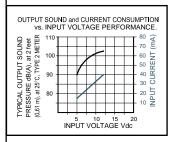
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# XB-V09-312-Q(F)

### 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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** 

Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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**

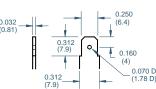
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 $\pm 0.03$ (38.2)TOLERANCES ARE: $(\pm 0.76)$

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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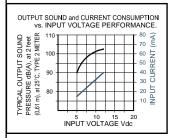
UNLESS OTHERWISE SPECIFIED.

# 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)

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.

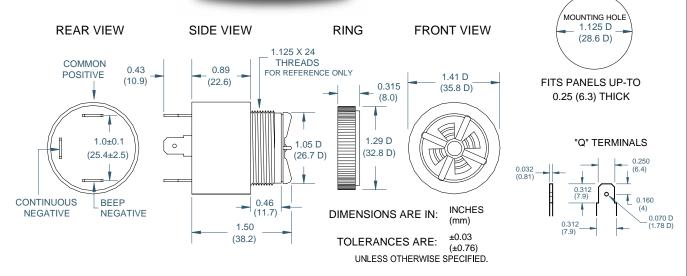
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

### PANEL MOUNTING





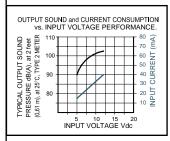
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# XB-V09-312-Q(M)

### 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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

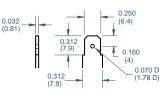
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





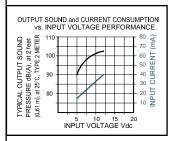
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# XB-V09-312-Q(M)D

### 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 2900±250 Hz. **Operating Frequency:** 

2±25% Pulses per second in Beep Mode

**Typical Operating Current:** 15 mA at 5 Vdc 40 mA at 12 Vdc

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **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.

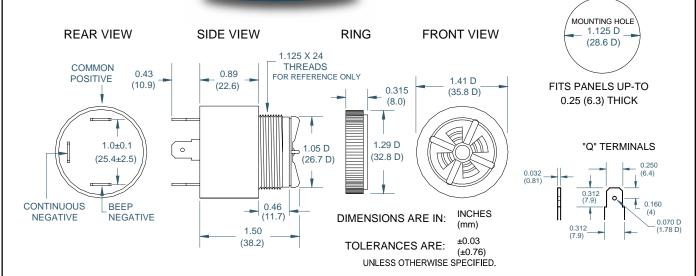
10 years under normal operating conditions.

Life Expectancy: Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





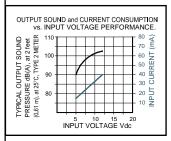
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# XB-V09-312-Q(S)

### 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**

**Typical Sound Pressure:** 

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** Nominal Operating Voltage: 12 Vdc

**Operating Frequency:** 2900±250 Hz.

1±25% Pulses per second 15 mA at 5 Vdc

**Typical Operating Current:** 40 mA at 12 Vdc

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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

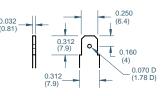
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





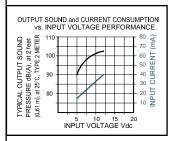
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# XB-V09-312-Q(S)D

### 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 2900±250 Hz. **Operating Frequency:** 

1±25% Pulses per second in Beep Mode

**Typical Operating Current:** 15 mA at 5 Vdc 40 mA at 12 Vdc

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

**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.

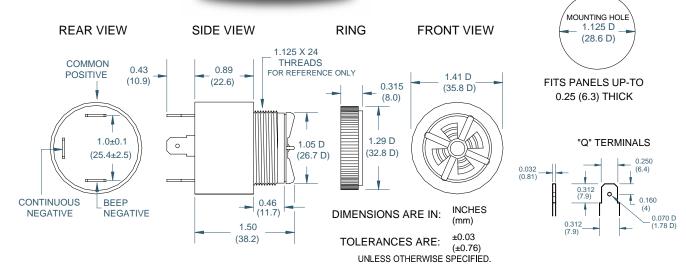
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:

### PANEL MOUNTING





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# XB-V09-312-Q(U)

### Made in USA



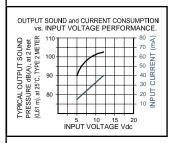
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** Nominal Operating Voltage: 12 Vdc **Operating Frequency:** 2900±250 Hz.

6±25% Pulses per second

**Typical Operating Current:** 15 mA at 5 Vdc 40 mA at 12 Vdc

With volume control fully open:

**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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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**

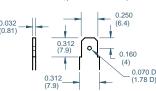
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 $\pm 0.03$ (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





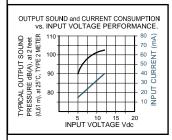
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## XB-V09-312-Q(U)D

### 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 2900±250 Hz. **Operating Frequency:** 

6±25% Pulses per second in Beep Mode **Typical Operating Current:** 15 mA at 5 Vdc

40 mA at 12 Vdc

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **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.

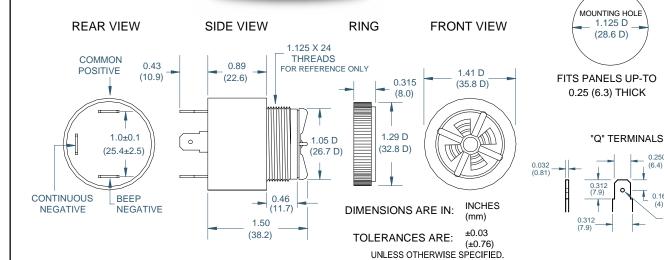
10 years under normal operating conditions.

Life Expectancy: 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

0.160

# XB-V09-312-S(F)

# Made in USA



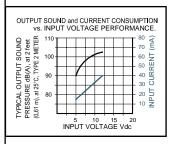
Durable Stainless Steel
 304 Diaphragm

 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

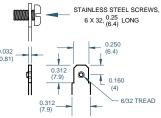
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS STAINLESS STE





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# XB-V09-312-S(F)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

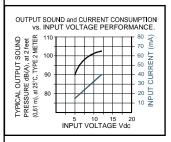
 Epoxy Encapsulated Electronics

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Warranty:

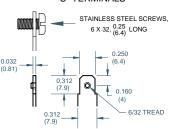
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D **POSITIVE** (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN: (mm) 1.50 CONTINUOUS (38.2)NEGATIVE **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### 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



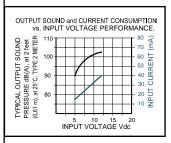
Durable Stainless Steel
 304 Diaphragm

 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.

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.

2±25% Pulses per second

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

Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in 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 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES**

1.50 (38.2) DIMENSIONS ARE IN:

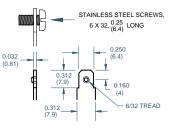
TOLERANCES ARE: ±0.03 (±0.76)
UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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(mm)

# XB-V09-312-S(M)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

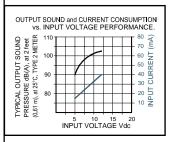
 Epoxy Encapsulated Electronics

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

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Warranty:

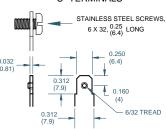
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D **POSITIVE** (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN: (mm) 1.50 CONTINUOUS (38.2)NEGATIVE **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





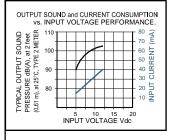
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# XB-V09-312-S(S)

# 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**

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:** 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

Salt Spray- Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in 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

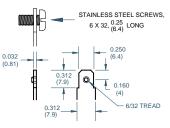
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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# XB-V09-312-S(S)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

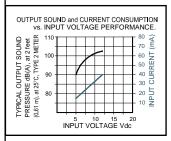
**Epoxy Encapsulated** Electronics

**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**

**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

With volume control fully open: **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

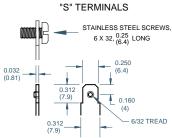
operating conditions.

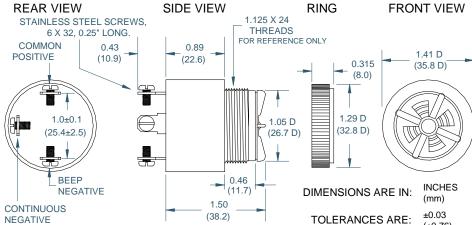
### **DIMENSIONS**

### MOUNTING HOLE **RING** FRONT VIEW 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

PANEL MOUNTING





Floyd Bell Inc An ISO 9001:2000 Registered Company

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 $(\pm 0.76)$ 

UNLESS OTHERWISE SPECIFIED.

# XB-V09-312-S(U)

### Made in USA



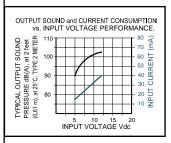
**Durable Stainless Steel** 304 Diaphragm

**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**

Operating Mode: Extra Loud Beep Tone

**Operating Voltage:** 5-12 Vdc Nominal Operating Voltage: 12 Vdc

2900±250 Hz. **Operating Frequency:** 6±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

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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**

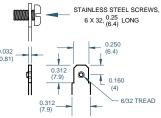
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

# "S" TERMINALS





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# XB-V09-312-S(U)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

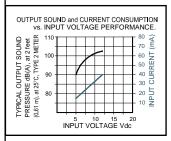
**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



COMMON

**POSITIVE** 

CONTINUOUS

NEGATIVE

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

**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.

**TOLERANCES ARE:** 

UNLESS OTHERWISE SPECIFIED.

### **DIMENSIONS**

1.50

(38.2)

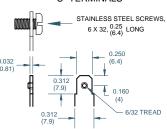
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN:

PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"S" TERMINALS





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(mm)

 $(\pm 0.76)$ 

# XB-V09-312-W(F)

# Made in USA



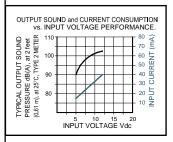
Durable Stainless Steel
 304 Diaphragm

 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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

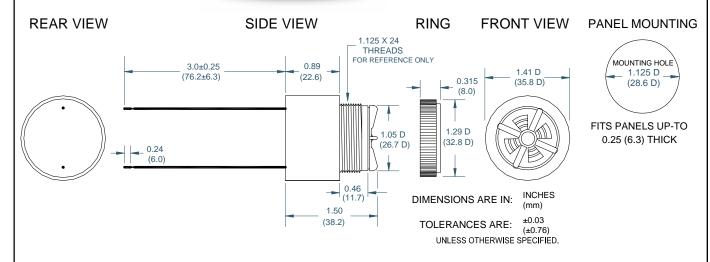
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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# XB-V09-312-W(M)

### Made in USA



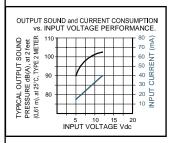
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** 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

With volume control fully open: **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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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

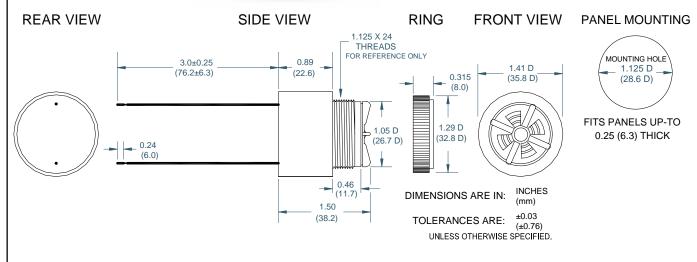
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**





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# XB-V09-312-W(S)

### Made in USA



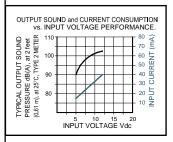
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Beep Tone

5-12 Vdc **Operating Voltage:** 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

With volume control fully open: **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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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

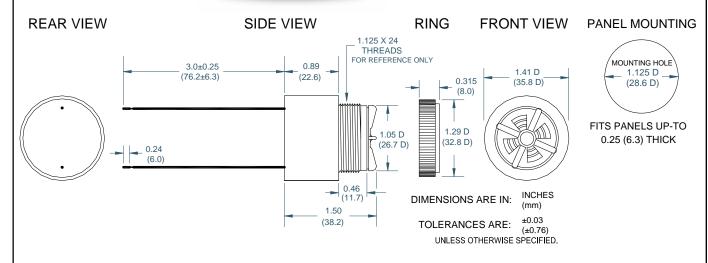
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

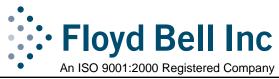
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**





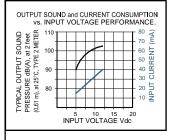
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# XB-V09-312-W(U)

# 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**

Operating Mode: Extra Loud Beep Tone

Operating Voltage: 5-12 Vdc
Nominal Operating Voltage: 12 Vdc

Operating Frequency: 2900±250 Hz. 6±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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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

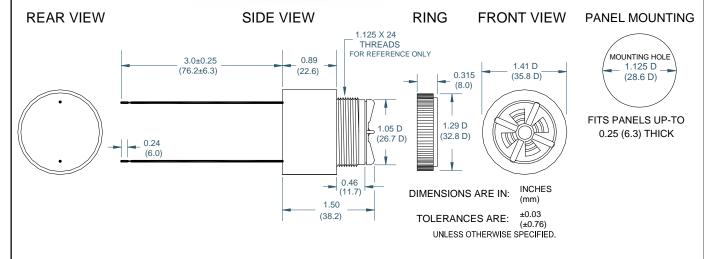
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

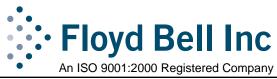
**Life Expectancy:** 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS





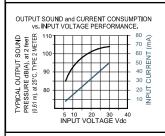
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# XB-V09-630-Q(F)

### Made in USA



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



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" quickconnect blades.

### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

6-30 Vdc **Operating Voltage:** 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** 

Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:

Warranty:

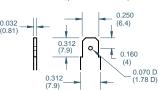
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 $\pm 0.03$ (38.2)TOLERANCES ARE: $(\pm 0.76)$

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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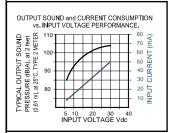
UNLESS OTHERWISE SPECIFIED.

# 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



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**

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

6-30 Vdc **Operating Voltage:** 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** 

Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

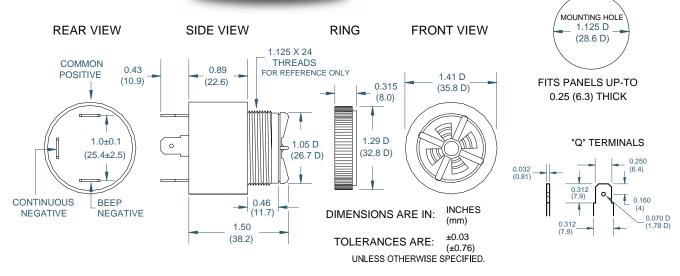
operating conditions.

### **DIMENSIONS**

Life Expectancy:

Warranty:

### PANEL MOUNTING





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# XB-V09-630-Q(M)

### Made in USA



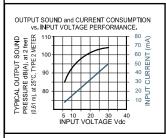
**Durable Stainless Steel** 304 Diaphragm

**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" quickconnect blades.

### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

6-30 Vdc **Operating Voltage:** 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:

Warranty:

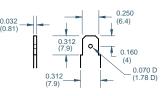
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





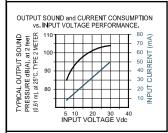
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## XB-V09-630-Q(M)D

### 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



**REAR VIEW** 

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**

**Typical Sound Pressure:** 

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

6-30 Vdc **Operating Voltage:** 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

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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C.

-40°C to +85°C. **Storage Temperature:** 

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

**RING** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

SIDE VIEW

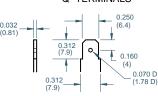
FRONT VIEW

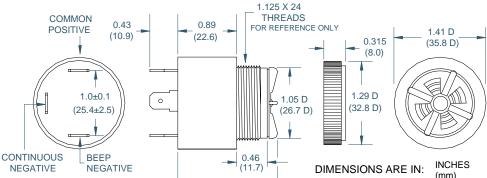


PANEL MOUNTING

FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





1.50

(38.2)

±0.03 **TOLERANCES ARE:**  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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# XB-V09-630-Q(S)

### Made in USA



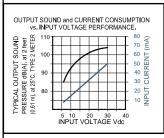
**Durable Stainless Steel** 304 Diaphragm

**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Reliable Piezoelectric Technology



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" quickconnect blades.

### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

6-30 Vdc **Operating Voltage:** 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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**

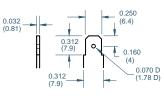
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 $\pm 0.03$ (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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## XB-V09-630-Q(S)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

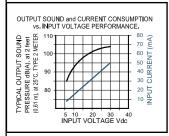
**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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**

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

6-30 Vdc **Operating Voltage:** 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** 

Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

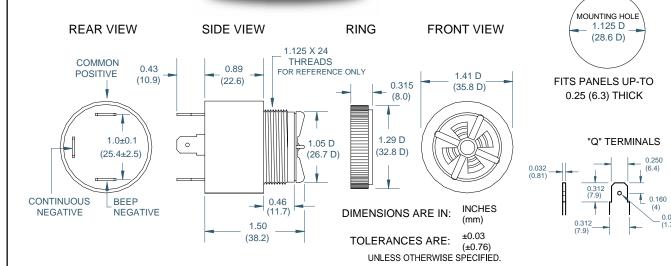
For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

### PANEL MOUNTING





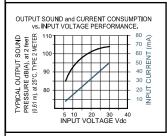
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# XB-V09-630-Q(U)

### 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" quickconnect blades.

### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Beep Tone

6-30 Vdc **Operating Voltage:** 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

With volume control fully open: **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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Warranty:

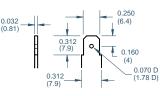
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 $\pm 0.03$ (38.2)TOLERANCES ARE: $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





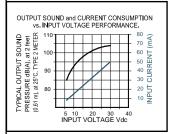
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# XB-V09-630-Q(U)D

### 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



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**

**Operating Mode:** Extra Loud Dual Function Beep/Continuous Tone

6-30 Vdc **Operating Voltage:** 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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.

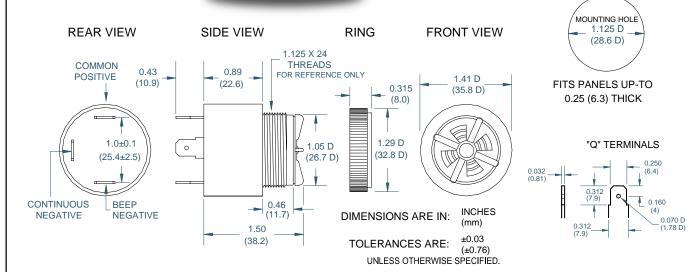
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





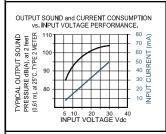
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## XB-V09-630-S(F)

### Made in USA



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



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

2900±250 Hz. **Operating Frequency:** 

**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

3±25% Pulses per second

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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**

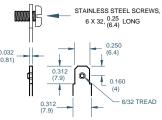
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 ±0.03 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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## XB-V09-630-S(F)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

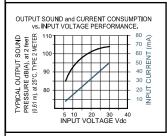
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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.

For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Warranty:

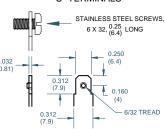
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D **POSITIVE** (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN: (mm) 1.50 CONTINUOUS (38.2)NEGATIVE **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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## XB-V09-630-S(M)

# Made in USA



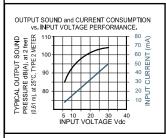
Durable Stainless Steel
 304 Diaphragm

 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

 Reliable Piezoelectric Technology



The XB-V09-630-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

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

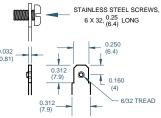
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 ±0.03 (38.2)**TOLERANCES ARE:**

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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UNLESS OTHERWISE SPECIFIÉD.

## XB-V09-630-S(M)D

# Made in USA



Durable Stainless Steel
 304 Diaphragm

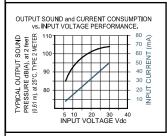
 Epoxy Encapsulated Electronics

UL Approved

 NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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.

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

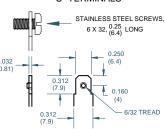
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D **POSITIVE** (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN: (mm) 1.50 CONTINUOUS (38.2)NEGATIVE **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





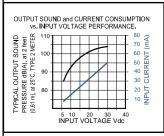
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## XB-V09-630-S(S)

# 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-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.

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

1±25% Pulses per second

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

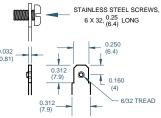
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 ±0.03 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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## XB-V09-630-S(S)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

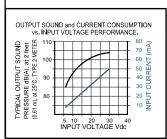
**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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 2900±250 Hz. **Operating Frequency:** 

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

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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**

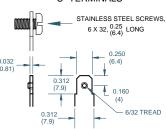
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D **POSITIVE** (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN: (mm) 1.50 CONTINUOUS (38.2)NEGATIVE **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





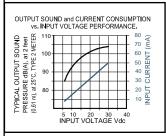
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## XB-V09-630-S(U)

# Made in USA



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



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.

Degrating 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

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.

For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Warranty:

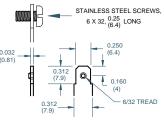
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 ±0.03 (38.2)**TOLERANCES ARE:**

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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UNLESS OTHERWISE SPECIFIÉD.

## XB-V09-630-S(U)D

### Made in USA



**Durable Stainless Steel** 304 Diaphragm

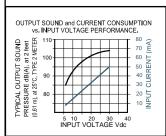
**Epoxy Encapsulated** Electronics

**UL** Approved

NEMA 4X Certified with Optional Gasket

Polarity Protected Circuitry

Two Tones, One Package



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 2900±250 Hz.

**Operating Frequency:** 

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

Pull test with a maximum of 22 pounds (10 kg) load **Termination Strength:** 

**Operating Temperature:** -20°C to +65°C. -40°C to +85°C. **Storage Temperature:** 

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** 

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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**

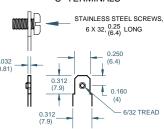
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32 0 25" LONG FOR REFERENCE ONLY COMMON 0.43 0.89 1.41 D **POSITIVE** (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) BEEP 0.46 **INCHES** (11.7)**NEGATIVE** DIMENSIONS ARE IN: (mm) 1.50 CONTINUOUS (38.2)NEGATIVE **TOLERANCES ARE:** $(\pm 0.76)$

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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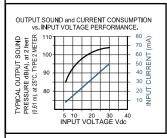
UNLESS OTHERWISE SPECIFIED.

## 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red Termination Strength: 24AWG wire, Tinned Copper, Vinyl Insulated, Red 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

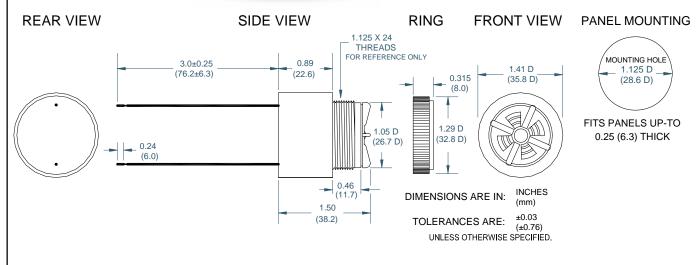
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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## XB-V09-630-W(M)

# Made in USA



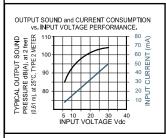
Durable Stainless Steel
 304 Diaphragm

 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**

Termination:

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. 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

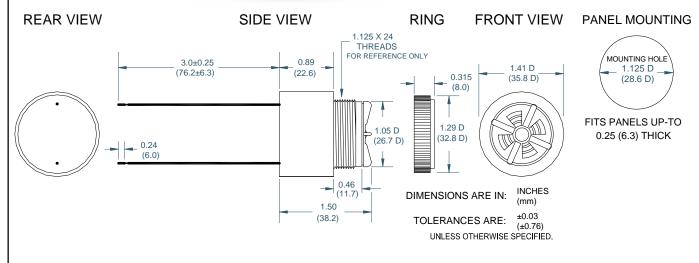
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





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## XB-V09-630-W(S)

# Made in USA



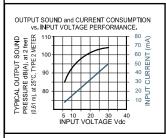
Durable Stainless Steel
 304 Diaphragm

 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red 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

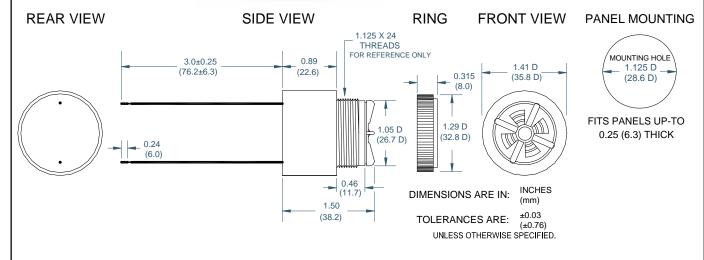
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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





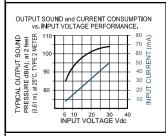
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## XB-V09-630-W(U)

# 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red a 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

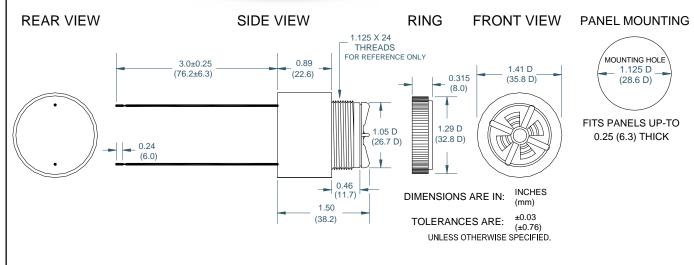
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





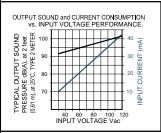
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## XC-05-201-P

### 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**

**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:** 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: 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. -40°C to +85°C. **Storage Temperature:** 

20% over maximum rated voltage for less than 5 minutes. Surge 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

**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.

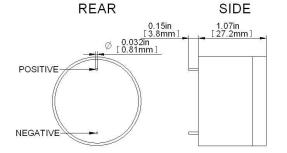
10 years under normal operating conditions.

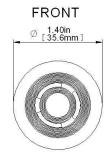
For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**

Life Expectancy:





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



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## XC-05-301-P

# Made in USA

## Image Not Available

Durable Stainless Steel
 304 Diaphragm

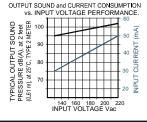
 Epoxy Encapsulated Electronics

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**

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. 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 2 PC pins, 0.032" (0.8 mm) diameter, electro-tin plate **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

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.

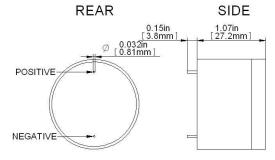
10 years under normal operating conditions.

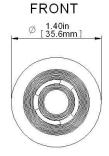
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

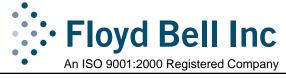
### **DIMENSIONS**

Life Expectancy:





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



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## XC-05-330-P

# Made in USA



Durable Stainless Steel
 304 Diaphragm

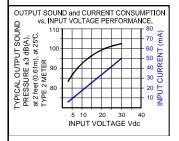
 Epoxy Encapsulated Electronics

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**

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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25°C. 3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plated brass

**Termination:** 3 PC pins, 0.032" (0.8 mm) diameter, electro-tin plar **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

Environmental Durability: Salt Spray-Withstand exposure to salt spray per ASTM B117 for a period of

300 hours with no decrease in sound output

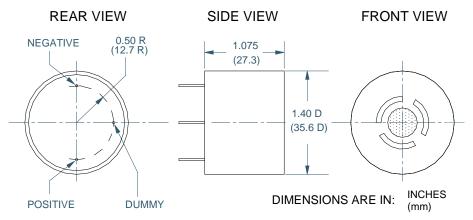
Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

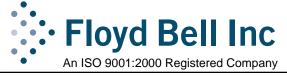
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**



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



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## XC-09-201-Q

# Made in USA



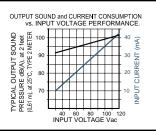
Durable Stainless Steel
 304 Diaphragm

 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**

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: 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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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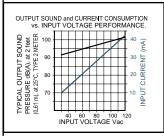
An ISO 9001:2000 Registered Company

## 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**

**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:** 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: 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** 

**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.

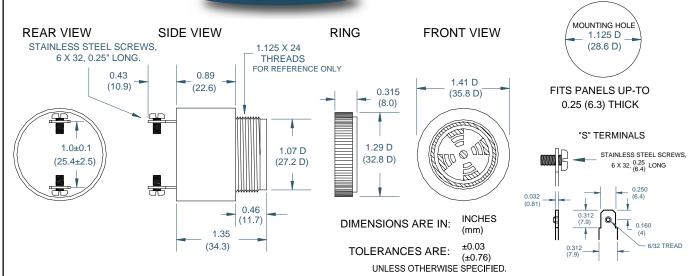
Life Expectancy:

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





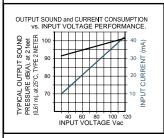
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## XC-09-201-W

### 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**

**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:** 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: 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

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300 hours with no decrease in sound output

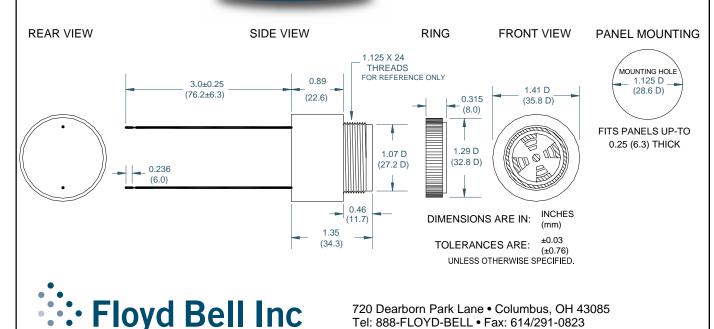
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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**



An ISO 9001:2000 Registered Company

## XC-09-212-Q

### Made in USA



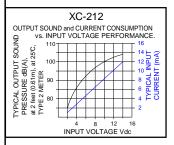
**Durable Stainless Steel** 304 Diaphragm

**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" guick-connect blades for push-on or direct solder attachment.

#### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Continuous Tone

**Operating Voltage:** 2-12 Vdc Nominal Operating Voltage: 12 Vdc **Operating Frequency:** 2900±500 Hz.

**Typical Operating Current:** 1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max

**Typical Sound Pressure:** 75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25℃.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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.

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

(32.8 D)

DIMENSIONS ARE IN:

**TOLERANCES ARE:** 

#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.07 D

0.46

(11.7)

1.35

(34.3)

(27.2 D)

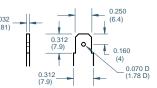
**DIMENSIONS** 

PANEL MOUNTING

MOUNTING HOLE 1.125 D (28.6 D)

FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS



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**INCHES** 

(mm)

±0.03

UNLESS OTHERWISE SPECIFIED.

 $(\pm 0.76)$ 

Revision: 2.12

(25.4±2.5)

## XC-09-212-S

# Made in USA



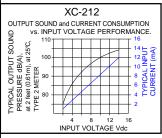
Durable Stainless Steel
 304 Diaphragm

 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**

Operating Mode: Extra Loud Continuous Tone

Operating Voltage: 2-12 Vdc Nominal Operating Voltage: 12 Vdc Operating Frequency: 2900±500 Hz.

Typical Operating Current: 1 mA at 2 Vdc, 5mA max

8 mA at 12 Vdc, 20mA max

**Typical Sound Pressure:** 75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25℃.

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.

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator 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 continu ously 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** 

An ISO 9001:2000 Registered Company

**RoHS Compliant** 

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 D STAINLESS STEEL SCREWS (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS (32.8 D) (25.4±2.5) (27.2 D) 6 X 32, 0.25 LONG 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: 0.160 (mm) 1.35 (34.3)6/32 TREAD ±0.03 **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. 720 Dearborn Park Lane • Columbus, OH 43085 Floyd Bell Inc Tel: 888-FLOYD-BELL • Fax: 614/291-0823

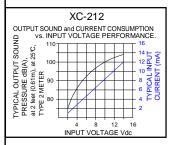
www.floydbell.com

## 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**

**Operating Mode:** Extra Loud Continuous Tone

**Operating Voltage:** 2-12 Vdc Nominal Operating Voltage: 12 Vdc **Operating Frequency:** 2900±500 Hz.

**Typical Operating Current:** 1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max

**Typical Sound Pressure:** 75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25℃. 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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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

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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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

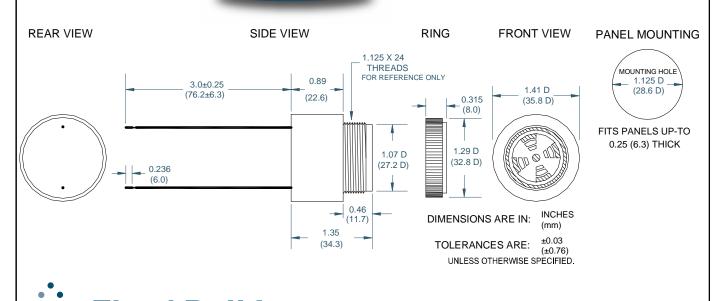
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

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

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### **DIMENSIONS**



Floyd Bell Inc

An ISO 9001:2000 Registered Company

## XC-09-301-Q

# Made in USA



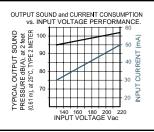
Durable Stainless Steel
 304 Diaphragm

 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) T
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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D "Q" TERMINALS $1.0 \pm 0.1$ 1.07 D (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 1.35 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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## XC-09-301-S

### Made in USA



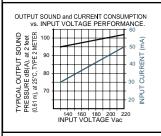
**Durable Stainless Steel** 304 Diaphragm

**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**

**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: 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** 

**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.

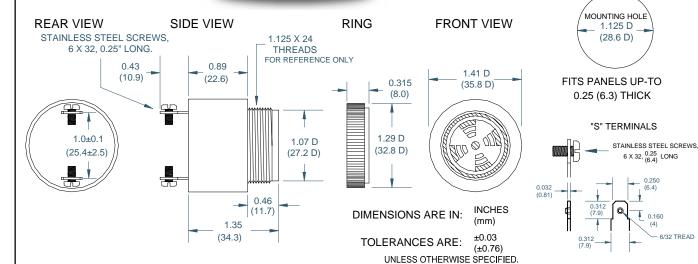
Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**

### PANEL MOUNTING





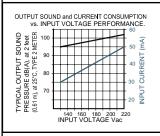
720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823 www.floydbell.com

## 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**

**Operating Mode:** Extra Loud Continuous Tone

130-220 Vac **Operating Voltage:** 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: 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

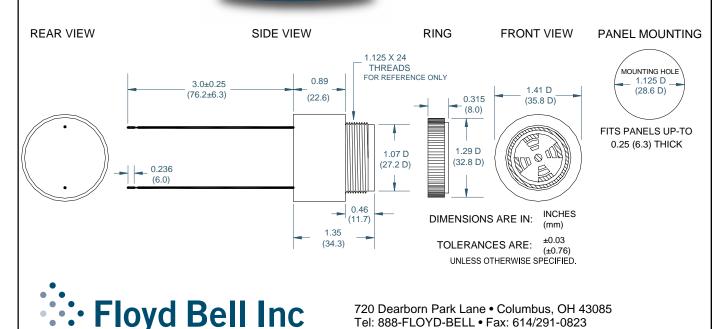
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

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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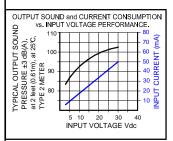
An ISO 9001:2000 Registered Company

## 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**

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

50 mA at 30 Vdc

**Typical Sound Pressure:** 82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A) at 30 Vdc, at 24 inches (61 cm), at 25℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination: Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8)

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator 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 continu ously 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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D 1.0+0.11.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 0.070 D 1.35 ±0.03 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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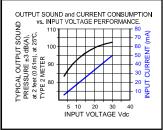
An ISO 9001:2000 Registered Company

## 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" guick-connect blades for push-on or direct solder attachment.

### **SPECIFICATIONS**

**Operating Mode:** Extra Loud Continuous Tone

**Operating Voltage:** 3-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±500 Hz. **Operating Frequency: 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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously 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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 D (28.6 D) 1 125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D FITS PANELS UP-TO (10.9)(22.6)0.315 (35.8 D) 0.25 (6.3) THICK (8.0)1.29 D 1.0±0.1 1.07 D "Q" TERMINALS (32.8 D) (27.2 D) (25.4±2.5) 0.312 (7.9) 0.160 0.46 **INCHES** DIMENSIONS ARE IN: (11.7)(mm) 0.070 D 1.35 ±0.03 (34.3)**TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED. Floyd Bell Inc 720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823

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## XC-09-330-S

# Made in USA



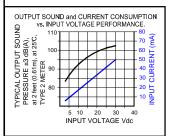
Durable Stainless Steel
 304 Diaphragm

 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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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Vibration-Withstands Vibration between 0 and 55 Hz. on all ax

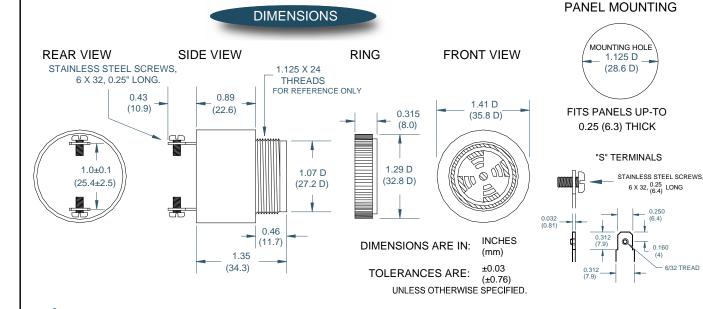
Life Expectancy: 10 years under normal operating conditions.

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.

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## XC-09-330-S

### Made in USA



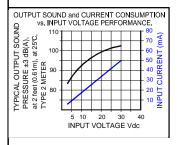
**Durable Stainless Steel** 304 Diaphragm

**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" guick-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 2900±500 Hz. **Operating Frequency: 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℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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

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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℃ continu ously 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.

#### PANEL MOUNTING **DIMENSIONS** MOUNTING HOLE **RING REAR VIEW** SIDE VIEW FRONT VIEW 1.125 D STAINLESS STEEL SCREWS (28.6 D) 1.125 X 24 6 X 32, 0.25" LONG. **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)FITS PANELS UP-TO 0.315 (35.8 D) (8.0)0.25 (6.3) THICK "S" TERMINALS 1 29 D 1.0±0.1 1 07 D STAINLESS STEEL SCREWS (32.8 D) (25.4±2.5) (27.2 D) 6 X 32, 0.25 LONG 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: 0.160 1.35 (34.3)6/32 TREAD ±0.03 **TOLERANCES ARE:** $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

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## XC-09-330-W

# Made in USA



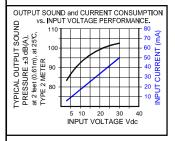
Durable Stainless Steel
 304 Diaphragm

 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**

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℃

103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black

Internal Circuit- Audio-oscillator 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

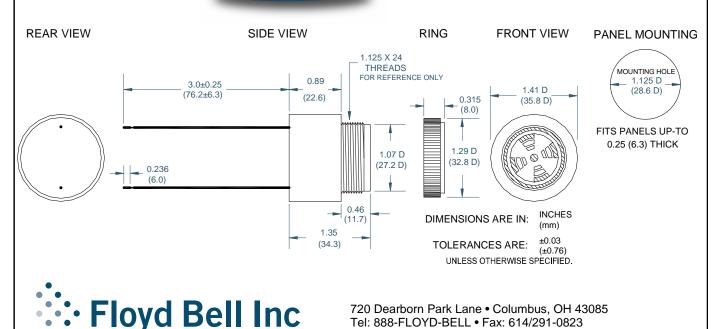
Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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## XC-V09-201-Q

### Made in USA



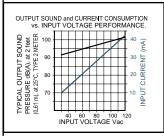
**Durable Stainless Steel** 304 Diaphragm

**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**

Termination:

**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. 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.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

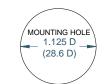
operating conditions.

### **DIMENSIONS**

Life Expectancy:

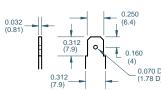
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: (±0.76)

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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UNLESS OTHERWISE SPECIFIED.

## XC-V09-201-S

# Made in USA



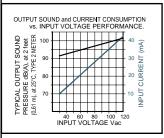
Durable Stainless Steel
 304 Diaphragm

 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**

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. 0.25 (6.3) Wide Quick Connect Blades with 0.25 (6.3) Long 6x32

Termination: 0.25 (6.3) Wide Quick Conn 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

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

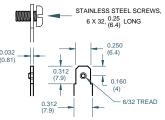
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "S" TERMINALS





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## XC-V09-201-W

# Made in USA



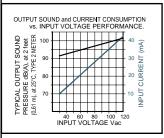
Durable Stainless Steel
 304 Diaphragm

 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**

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. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: 24AWG Wire, Tinned Copper, Vinyl Insulated, Red a 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

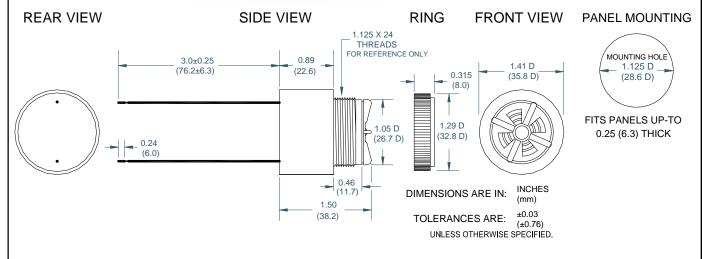
Humidity- 95% relative humidity at +40°C continuously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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**





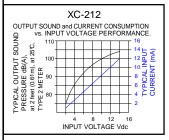
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## XC-V09-212-Q

# 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**

Operating Mode: Extra Loud Continuous Tone

Operating Voltage: 2-12 Vdc
Nominal Operating Voltage: 12 Vdc
Operating Frequency: 2900±500 Hz.

Typical Operating Current: 1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max

Typical Sound Pressure: 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thic **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously 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

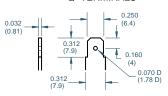
#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) $(25.4\pm2.5)$ (26.7 D) 0.46 INCHES (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: $(\pm 0.76)$

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





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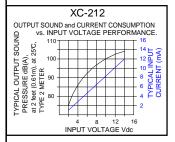
UNLESS OTHERWISE SPECIFIED.

## 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**

Operating Mode: Extra Loud Continuous Tone

Operating Voltage: 2-12 Vdc
Nominal Operating Voltage: 12 Vdc
Operating Frequency: 2900±500 Hz.

Typical Operating Current: 1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max

Typical Sound Pressure: 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.

**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:  $-20^{\circ}$  to  $+65^{\circ}$ C. Storage Temperature:  $-40^{\circ}$  to  $+85^{\circ}$ 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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

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

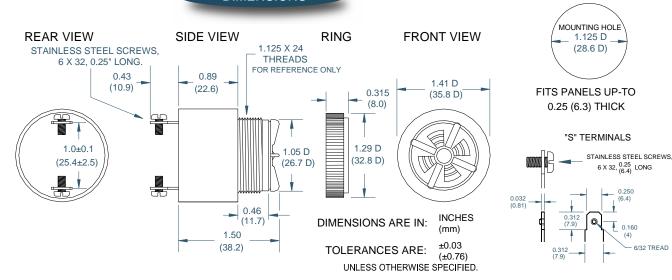
Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

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

### DIMENSIONS

## PANEL MOUNTING





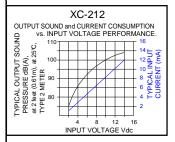
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## XC-V09-212-W

# 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**

Operating Mode: Extra Loud Continuous Tone

Operating Voltage: 2-12 Vdc
Nominal Operating Voltage: 12 Vdc
Operating Frequency: 2900±500 Hz.

Typical Operating Current: 1 mA at 2 Vdc, 5mA max 8 mA at 12 Vdc, 20mA max

Typical Sound Pressure: With volume control fully open:

75±5 dB(A), at 2 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 12 Vdc, at 24 inches (61 cm), at 25℃. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

**Termination:** Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Termination Strength: Pull test with a maximum of 22 pounds (10 kg) load

Operating Temperature: -20℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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

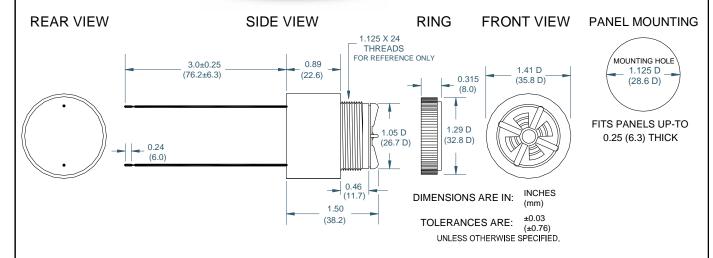
Humidity- 95% relative humidity at +40°C continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

**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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## XC-V09-301-Q

### Made in USA



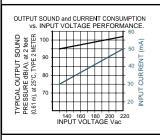
**Durable Stainless Steel** 304 Diaphragm

**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**

**Operating Mode:** Extra Loud Continuous Tone

130-220 Vac **Operating Voltage:** 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. Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness

Termination:

**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.

10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**

Life Expectancy:

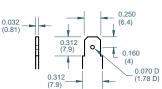
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 **THREADS** FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0±0.1 1.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** (11.7)DIMENSIONS ARE IN: (mm) 1.50 (38.2)TOLERANCES ARE: (±0.76) UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

"Q" TERMINALS





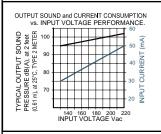
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## XC-V09-301-S

# 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**

Termination:

Operating Mode: Extra Loud Continuous Tone
Operating Voltage: 130-220 Vac

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. 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

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

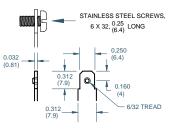
#### **REAR VIEW** SIDE VIEW **RING** FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS, **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6) 0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D) 0.46 **INCHES** DIMENSIONS ARE IN: (mm) 1.50 (38.2)**TOLERANCES ARE:** UNLESS OTHERWISE SPECIFIÉD.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





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## XC-V09-301-W

### Made in USA



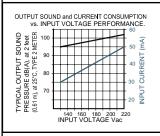
**Durable Stainless Steel** 304 Diaphragm

**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**

Termination:

**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. 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.

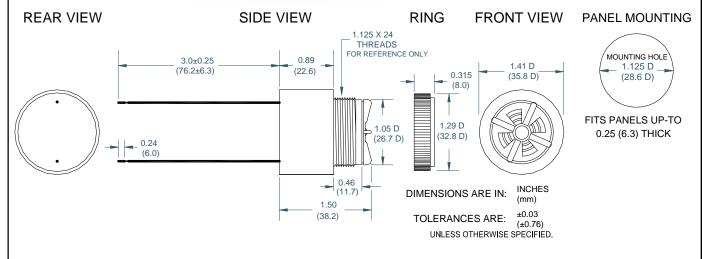
10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

Life Expectancy:





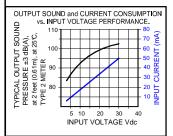
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## XC-V09-330-Q

### Made in USA



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



**REAR VIEW** 

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**

**Operating Mode:** Extra Loud Continuous Tone

**Operating Voltage:** 3-30 Vdc Nominal Operating Voltage: 30 Vdc 2900±500 Hz. **Operating Frequency: Typical Operating Current:** 6 mA at 3 Vdc

50 mA at 30 Vdc

**Typical Sound Pressure:** With volume control fully open:

82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃.

Quick Connect Blades, 0.25 (6.3) Width, 0.032 (0.8) Thickness Termination:

**Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

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℃ continu ously for 100 hours. Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

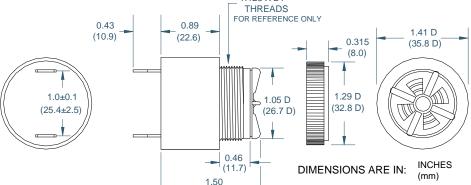
Life Expectancy: 10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### **DIMENSIONS**

#### SIDE VIEW **RING** FRONT VIEW 1.125 X 24



(38.2)

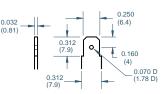
TOLERANCES ARE:  $(\pm 0.76)$ UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

### "Q" TERMINALS





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## XC-V09-330-S

# Made in USA



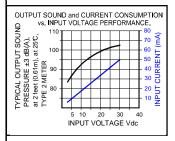
Durable Stainless Steel
 304 Diaphragm

 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

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: With volume control fully open:

82 $\pm$ 5 dB(A), at 3 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: 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℃ to +65℃. Storage Temperature: -40℃ to +85℃.

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 continu ously for 100 hours. Vibration- Withstands vibration between 0 and 55 Hz. on all axes.

10 years under normal operating conditions.

Warranty: For a period of two years from the date of manufacture under normal

operating conditions.

### DIMENSIONS

Life Expectancy:

#### **REAR VIEW** SIDE VIEW RING FRONT VIEW 1.125 X 24 STAINLESS STEEL SCREWS. **THREADS** 6 X 32, 0.25" LONG. FOR REFERENCE ONLY 0.43 0.89 1.41 D (10.9)(22.6)0.315 (35.8 D) (8.0)1.29 D 1.0+0.11.05 D (32.8 D) (25.4±2.5) (26.7 D)

0.46

(11.7)

1.50 (38.2) DIMENSIONS ARE IN: INCHES (mm)

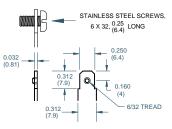
TOLERANCES ARE: \$\frac{\pmu}{(\pmu.0.76)}\$ (\pmu.0.76)
UNLESS OTHERWISE SPECIFIED.

### PANEL MOUNTING



FITS PANELS UP-TO 0.25 (6.3) THICK

#### "S" TERMINALS





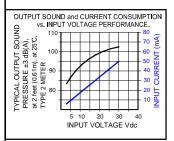
720 Dearborn Park Lane • Columbus, OH 43085 Tel: 888-FLOYD-BELL • Fax: 614/291-0823 www.floydbell.com

## 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**

**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:** With volume control fully open:

82±5 dB(A), at 3 Vdc, at 24 inches (61 cm), at 25℃ 103±5 dB(A), at 30 Vdc, at 24 inches (61 cm), at 25℃. 24AWG Wire, Tinned Copper, Vinyl Insulated, Red and Black

Termination: **Termination Strength:** Pull test with a maximum of 22 pounds (10 kg) load

**Operating Temperature:** -20℃ to +65℃. **Storage Temperature:** -40℃ to +85℃.

Surge Voltage: 20% over maximum rated voltage for less than 5 minutes.

Reverse Voltage Protection: To the maximum operating voltage.

**Underwriters Laboratory** Part Recognized By:

Case- Plastic "NORYL® N-190", Flame Retardant UL 94-VO, Black **Construction Materials:** 

Internal Circuit- Audio-oscillator 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℃ continu ously for 100 hours.

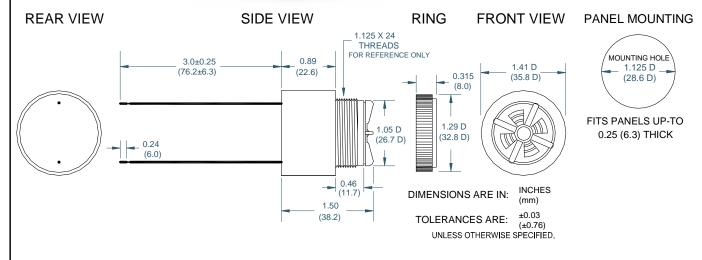
Vibration-Withstands vibration between 0 and 55 Hz. on all axes.

Life Expectancy: 10 years under normal operating conditions.

For a period of two years from the date of manufacture under normal Warranty:

operating conditions.

### **DIMENSIONS**





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