



EOZ

SOLUTIONS & COMPONENTS



 **secme**

CATALOGUE

HEITO



ABOUT US?

From miniature switches to vandal resistant pushbuttons, from standard keyboards to integrated front panels, our customers' requests evolve and become more complex.

EOZ succeeds in meeting the demands of adaptation and performance in extremely diverse business sectors. EOZ modified its functional structure in order to focus on the know-how we have acquired over the last 80 years



The EOZ structure arose from this necessity and continues to pursue this direction in its research for future solutions.

From SECME to EOZ, a French experience

- **1932:** Creation of SECME. It represents one of the oldest French companies specializing in electromechanical components
- **1998:** Group EAO and SECME becomes an SAS
- **2010:** Creation of SAS EOZ by M. Loïc Gauthier and Mrs Audrey Marques after acquisition of the assets from EAO SECME SAS
- **2022:** Takeover of HEITO by EOZ and Relocation of the production plant to Limoges-Fourches (77550)



Indeed, in order to meet customer expectations and requirements ever more efficiently, EOZ owns.

- An entire range of keyboards, components and customised interfaces
- Machines required for production and development of new projects
- Intellectual property goods (trademarks, patents, ...), including the brand SECME

The major advantage of EOZ lies in mastering all the phases of development of its product lines, from creation to commercialization.

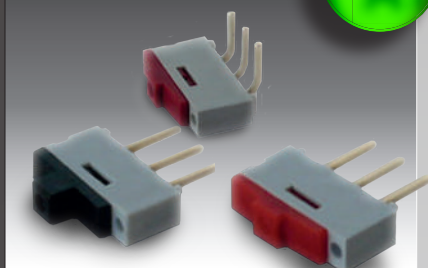


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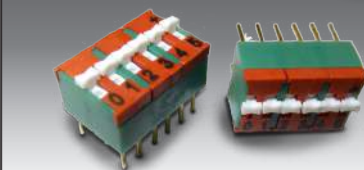
1K2

A1



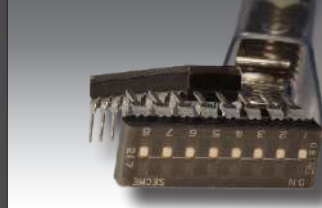
INTERDIL

A2



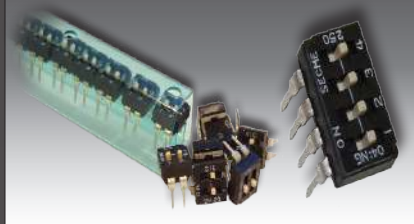
AUTODIL

A3



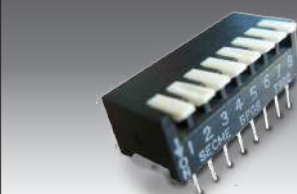
DILECO

A4



DILPIANO

A5



DJET Ø6.35mm

A6

Toggle and pushbutton



DJET Ø10mm

A7

Toggle



DJET Ø10mm

A8

Pushbutton



DJET

A9

Accessories



M.series

B1



M.series Axess

B2



S.series

B3



S.series Lite

B4



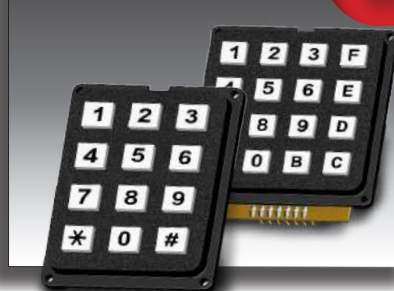
A.series

B5



ECO.series

B6



FL.series C1 C2
Illuminated and non-illuminated Ø12 and Ø13.5mm

FL.series C3
Dual color Ø12 and Ø13.5 mm

FL.series C4
Customized

R.series Ø16mm D1
Slow action

R.series D2 D3
 Ø16mm
Snap action and dual color

R.series D4 D5 D6
 Ø19mm
Slow and Fast action

R.series D7 D8
 Ø19mm
Snap action and dual color

R.series Ø22mm D9

R.series Ø22mm D10
Micro-actuation dual colors

V 12 series E1

V 16 series E2
V 16 BO & compatible accessories

V 23 & 24 series E3

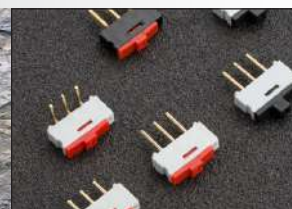
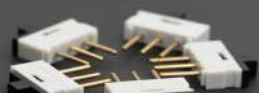
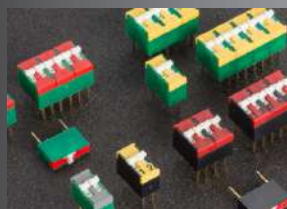
V 3 & 4 series E4

Sensors E5



EOZ

SOLUTIONS & COMPONENTS



 **secme**

COMPONENTS

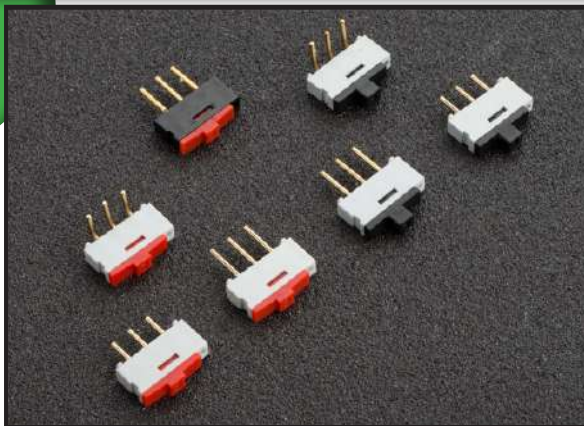
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1K2



A1



COMPONENTS

Recommended for all PCB applications as the most compact changeover switch on the market, the 1K2 is ideal as a jumper replacement.

A standard (red) or extended (black) slide actuator gives instant recognition of switch position.

Electrical life 1 000 operations

- Resistance to wave soldering at 250° C, 5 sec.
- Choice of straight or right angle PCB mounting
- Saline mist 24 hours, 96 hours (tropicalised version),
- Damp heat 4 days, 21 days (tropicalised version),
- Electrical life 1 000 operations
- Cursor position

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Nominal Current	500 mA
Minimum Current	1 mA
Nominal Voltage	12 V
Maximum Voltage	24 V
Minimum Voltage	10 mV
Electrostatic breakdown value	5 kV
Isolation resistance	≥10000 MΩ at 100Vdc
Contact resistance	≤22 Ω
Electrical life	1000 actuations
Electric strength as per EN IEC 60512-2	250 V _{rms} , 50 Hz, 1 min

MECHANICAL CHARACTERISTICS

Switching action	Maintained		
Actuating travel	1.6 mm		
Operating temperature	-40°C ... +85°C		
Shock resistance as per IEC 60512-4-6c	50 g, 11 ms		
Environmental resistance	Standard «Gold cont.»		Tropical «Gold cont.»
- Damp heat as per EN IEC 60512-11f	4 days		21 days
- Saline mist as per EN IEC 60512-11f	24 hours		96 hours

Manual spot welding guideline

The 1K2 is designed for machine wave flow soldering. If manual soldering needs to be done, the following guidelines have to be adhered to (in accordance to IEC 60068-2-20):

Size of tip of soldering iron: 3mm dia.

- Type of solder: Sn/Ag/Cu
- Soldering temperature: 350°C at 370°C
- Soldering time: 1s at 5s max
- In order to avoid overheating, a small break has to be observed between each solder-application
- The soldering iron has to be kept clean at all times.
- It is mandatory to tin the tip of the soldering iron before the soldering can take place.
- When soldering, the tip of the iron has to first pre-heat the «inter-section» between pin and circuit, before applying the solder.

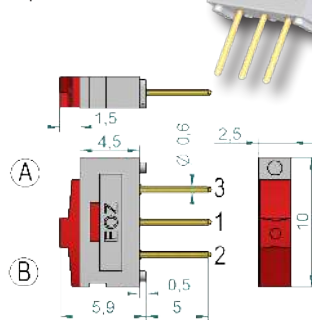
STANDARD PART NUMBERS

Change-over slide switch 1-pole	Part Numbers
Pins axial (standard version), plastic black raised slider	09.03290.01
Pins axial (standard version), plastic red slider	09.03201.02
Pins axial (3 mm), plastic black raised slider	09.03290.01X116
Pins axial (3 mm), plastic red slider	09.03201.02X115
Pins axial (tropicalised version), plastic red slider	19.03201.01
Pins bent at right-angles (standard version) plastic black raised slider	09.10290.01
Pins bent at right-angles (standard version) plastic red slider	09.10201.02

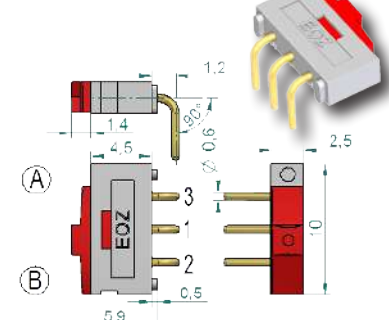
Further options and information available: www.eozonline.com

DIMENSIONS

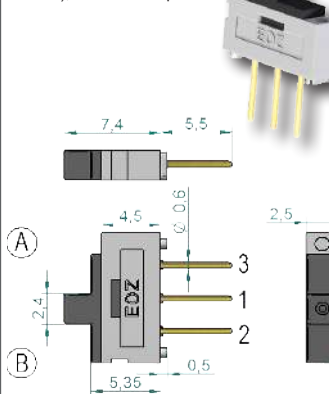
Pins axial (standard version), Red plastic slider



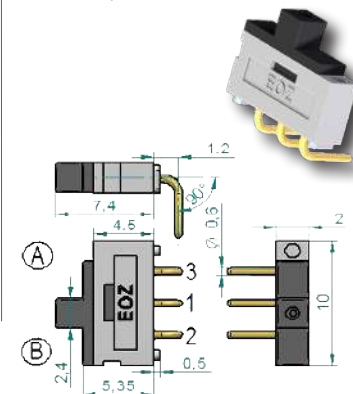
Right-angles bented pins (standard version) Red plastic slider



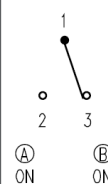
Pins axial (standard version), Black raised plastic



Right-angles bented pins (standard version) Black raised plastic slider

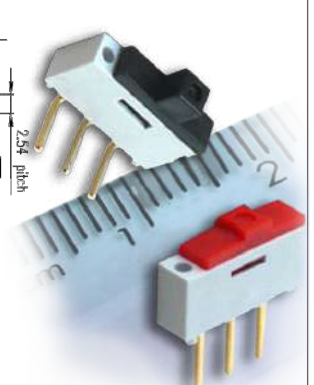
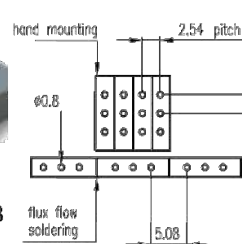


CONNEXIONS



Cursor position B

MOUNTING

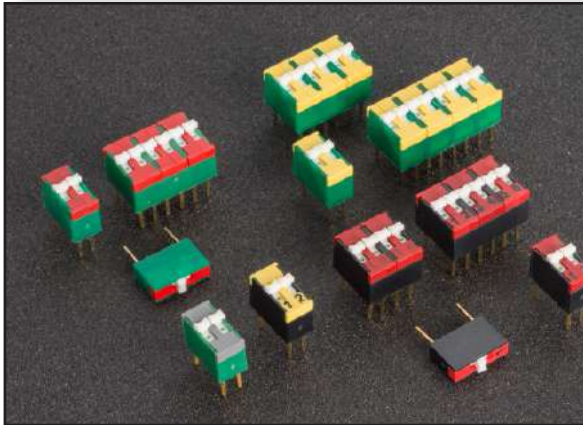




INTERDIL

secme

A2



COMPONENTS

Recommended for all PCB applications as changeover switch

Electrical life 3 000 operations

- Resistance to wave soldering at 250° C, 5 sec.
- Saline mist 96 hours tropicalised version,
- Damp heat 10 days, 21 days (tropicalised version),
- Self-extinguishing as per UL 94VO

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Nominal Current	500 mA
Minimum Current	1 mA
Nominal Voltage	12 V
Maximum Voltage	24 V
Minimum Voltage	10 mV
Contact power rating	6 W
Isolation resistance	≥10000 MΩ at 500Vdc
Contact resistance	≤30 mΩ
Electrical life	3000 actuations
Electric strength as per EN IEC 60512-2	250 V _{rms} , 50 Hz, 1 min

MECHANICAL CHARACTERISTICS

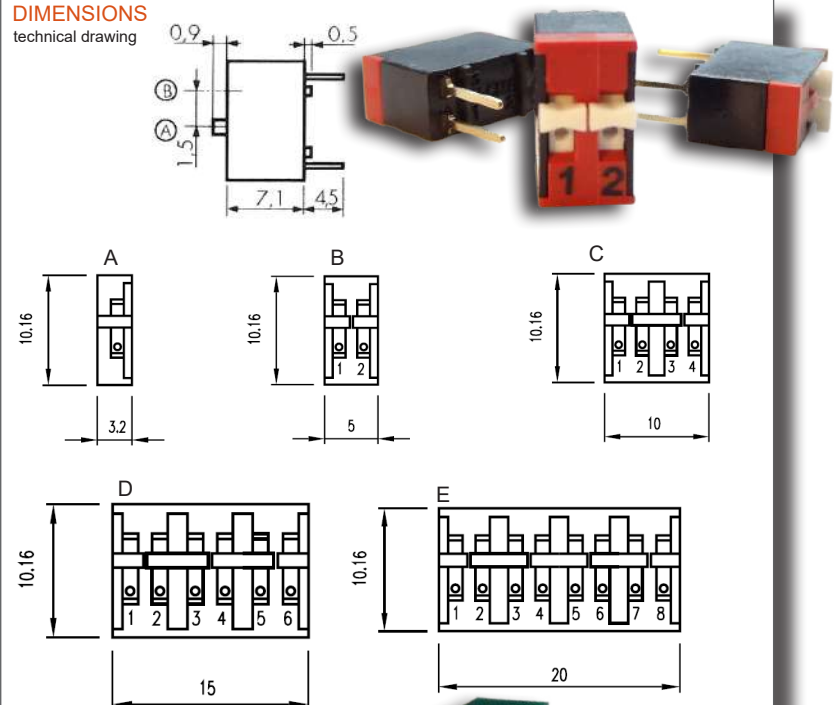
Switching action	Maintained
Actuating travel	1.5 mm nominal
Operating temperature	-40°C ... +85°C
Shock resistance	30 g
Environmental resistance	Standard «gold-plated cont.»
- Damp heat as per EN IEC 60512-111	10 days
- Saline mist as per EN IEC 60512-111	96 hours

STANDARD PART NUMBERS

PCB slide switch	no. of poles	Technical drawing	Part Numbers
Switch tropical contact output in sealed, wave soldering.	1	2 A	19.10000.01
Switch standard contact, not in sealed exit, no wave soldering.	1	2 A	09.10000.03
Switch standard contact output in sealed, wave soldering.	1	2 A	09.10000.39
Switch tropical contact output in sealed, wave soldering.	2	7 B	19.20000.01
Switch standard contact, not in sealed exit, no wave soldering.	2	7 B	09.20000.03
Switch standard contact output in sealed, wave soldering.	2	7 B	09.20000.39
Switch tropical contact output in sealed, wave soldering.	4	9 C	19.22000.01
Switch standard contact, not in sealed exit, no wave soldering.	4	9 C	09.22000.03
Switch standard contact output in sealed, wave soldering.	4	9 C	09.22000.39
Switch tropical contact output in sealed, wave soldering.	6	8 D	19.22200.01
Switch standard contact output in sealed, wave soldering.	6	8 D	09.22200.39
Switch tropical contact output in sealed, wave soldering.	8	6 E	19.22220.01
Switch standard contact output in sealed, wave soldering.	8	6 E	09.22220.39
Changeover tropical contact output in sealed, wave soldering.	1	1 B	19.40000.01
Changeover standard contact, not in sealed exit, no wave soldering	1	1 B	09.40000.03
Changeover standard contact output in sealed, wave soldering.	1	1 B	09.40000.39
Changeover standard contact output in sealed, wave soldering.	2	3 C	09.44000.39
Changeover standard contact output in sealed, wave soldering.	3	5 D	09.44400.39
Changeover standard contact output in sealed, wave soldering.	4	4 E	09.44440.39
Double Switch standard contact output in sealed, wave soldering.	1	10 B	09.70000.39
Double Switch standard contact output in sealed, wave soldering.	2	11 C	09.77000.39
Double Switch standard contact, not in sealed exit, no wave soldering	1	10 B	09.70000.03

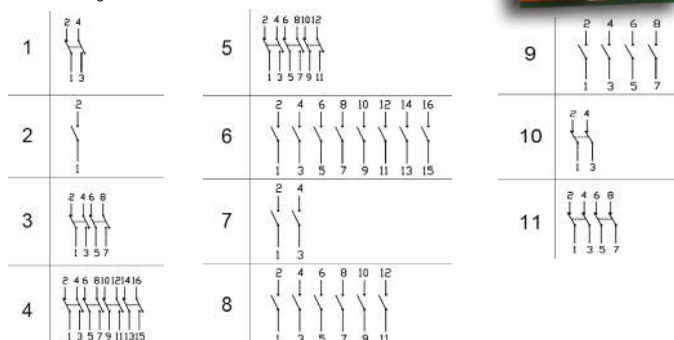
DIMENSIONS

technical drawing

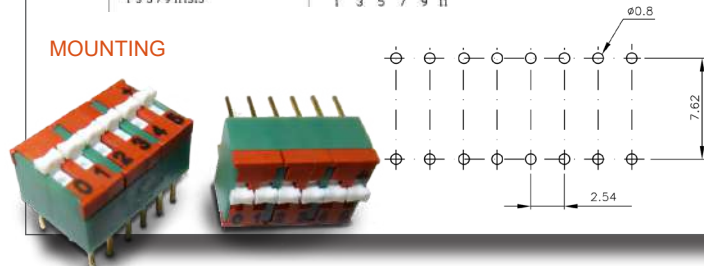


CONNEXIONS

Circuit drawing



MOUNTING



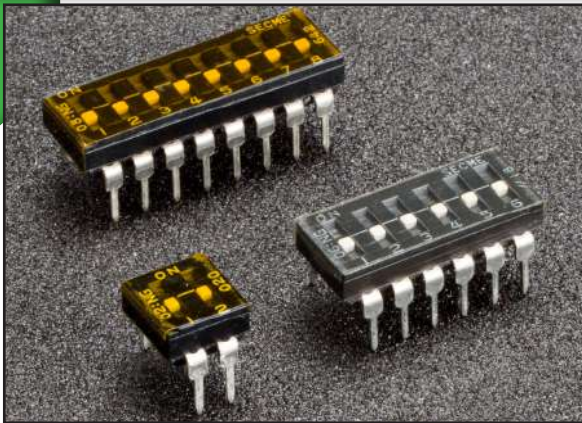
Further options and information available: www.eozonline.com



AUTODIL

secme

A3

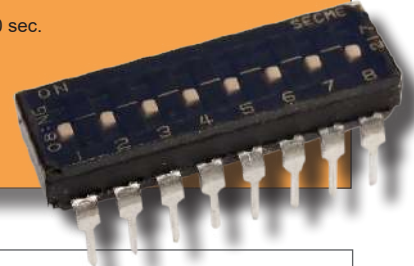


COMPONENTS

Recommended for all PCB applications as an auto insertable, sealed and low profile dip switch.

Electrical life DIP Switch: 2000 cycles

- Resistance to wave soldering at 260° C, 60 sec.
- Low profile dip switch
- Auto insertable
- Damp heat 21 days



TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Contact rating	
Non switching	100 mA , 50 Vdc
Switching	100 mA , 20 Vdc
Dry circuit	0.1 mA, 5 Vdc
Contact power rating	2 W
Isolation resistance	≥10000 MΩ
Contact resistance	≤25 mΩ
Electrical life	2000 cycles
Electric strength	500 Vdc / 1 min
as per EN IEC 60512-2	

MECHANICAL CHARACTERISTICS

Switching action	Maintained / Off-On
Actuating travel	1.27 mm
Operating temperature Std:	-20°C ... +85°C
SMD:	-55°C ... +85°C
Environmental resistance	
- Damp heat	21 days
- Saline mist	48 hours
Packaging Std:	Tube
SMD:	Bobine or Tube

DIP Switch STANDARD PART NUMBERS

Autodil slide switch	±Aa (mm) dimension	Quantity per Tube	circuit drawing	Part Numbers
Dip-Switch 02 Poles	6.55	85	1	09.20040.02
Dip-Switch 04 Poles	11.63	45	2	09.20040.04
Dip-Switch 06 Poles	16.71	30	3	09.20040.06
Dip-Switch 08 Poles	21.79	25	4	09.20040.08
Dip-Switch 10 Poles	26.87	20	5	09.20040.10

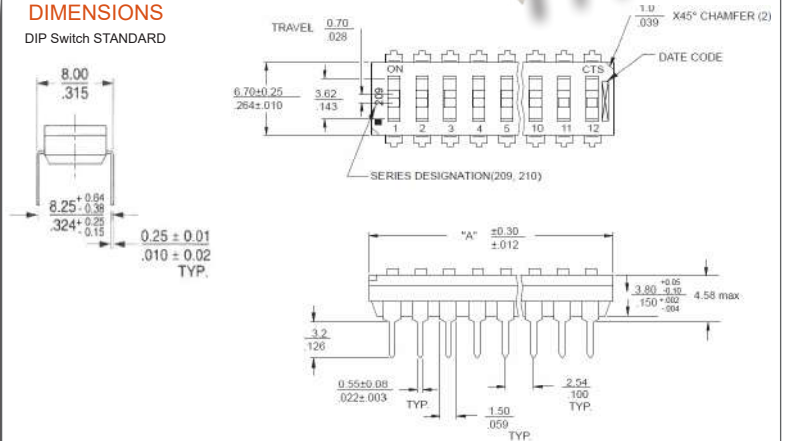
DIP Switch SMD PART NUMBERS

Autodil SMD DIP switch	±Aa (mm) dimension	Quantity per bobine	circuit drawing	Part Numbers
Dip-Switch 02 Poles	6.55	1000	1	09.20091.02
Dip-Switch 04 Poles	11.63	1000	2	09.20091.04
Dip-Switch 06 Poles	16.71	1000	3	09.20091.06
Dip-Switch 08 Poles	21.79	1000	4	09.20091.08
Autodil slide switch				
Dip-Switch 10 Poles	21.79	25	4	09.20092.08

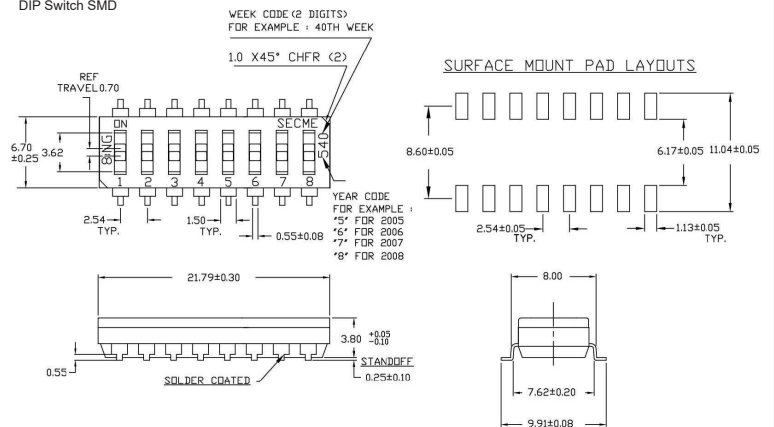
Further options and information available: www.eozonline.com

DIMENSIONS

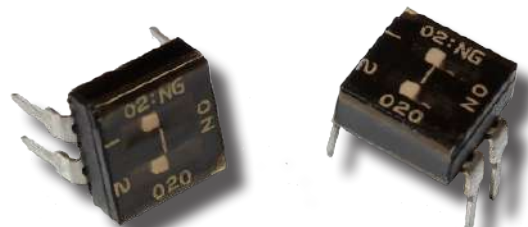
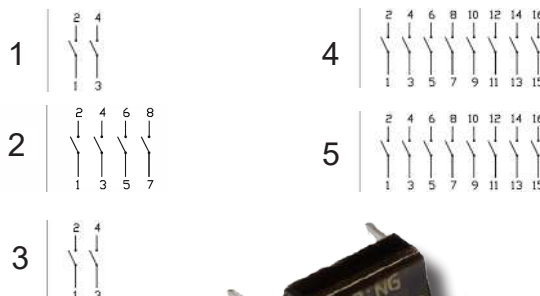
DIP Switch STANDARD



DIP Switch SMD



CONNEXIONS

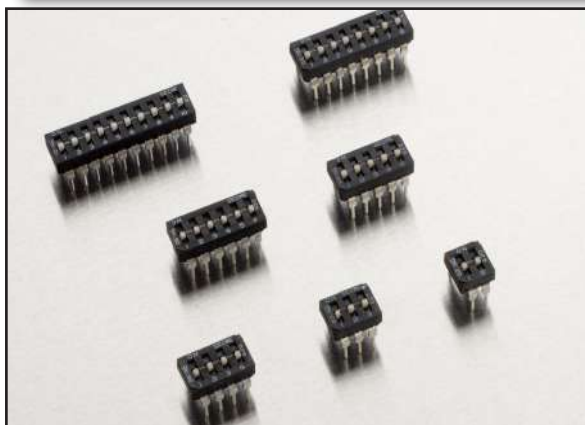




DILECO

secme

A4



COMPONENTS

Recommended for all PCB applications as an auto insertable, raised actuators and economic dip switch.

Electrical life 1 000 cycles

- Allowable solder time: up to 60 seconds at 260°C
- Low-cost dip switch
- Redundant, wiping contact
- RoHS compliant.
- Available with low profile, medium and extended height



TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Contact rating	
Non switching	100 mA or 50VDC maximum
Switching	100 mA, 20 VDC
Dry circuit	0.1 mA, 5 VDC
Switch capacitance	5 pf
Isolation resistance	≥1000 MΩ at 100Vdc
Contact resistance	100mΩ Min. ≤ 500mΩ Max.
Electrical life	1000 actuations
Electric strength	500VDC, 1 min., between adjacent switches

MECHANICAL CHARACTERISTICS

Switching action	Maintained
Operating temperature	-40°C ... +85°C
Vibration	15 G's between 10 HZ to 2K Hz
Shock resistance	50 G's
Environmental resistance	
- Damp heat as per EN IEC 60512-11f	21 days
- Saline mist as per EN IEC 60512-11f	48 hours

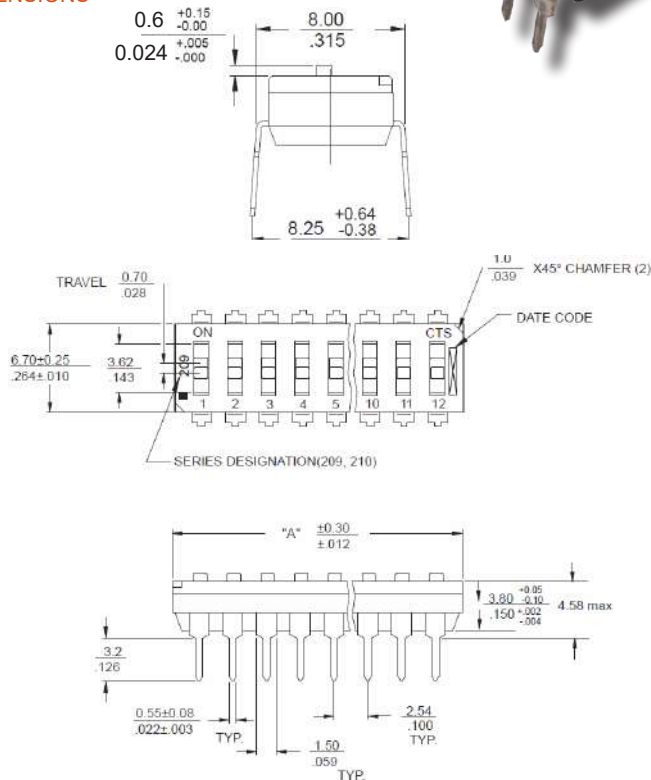
STANDARD PART NUMBERS

	«A» (mm) dimension	Quantity per tube	Part Numbers
Standard raised actuators 0.6mm version 4.4mm height on PCB			
Dip-Switch 02 Poles	6.55	85	09.300BH.02
Dip-Switch 03 Poles	9.09	60	09.300BH.03
Dip-Switch 04 Poles	11.63	45	09.300BH.04
Dip-Switch 05 Poles	14.17	40	09.300BH.05
Dip-Switch 06 Poles	16.71	40	09.300BH.06
Dip-Switch 08 Poles	21.79	25	09.300BH.08
Dip-Switch 10 Poles	26.87	20	09.300BH.10
On request, flat actuators version 3.8mm height on PCB			
Dip-Switch 04 Poles	11.63	1	09.28940.04
Dip-Switch 06 Poles	16.71	1	09.28940.06

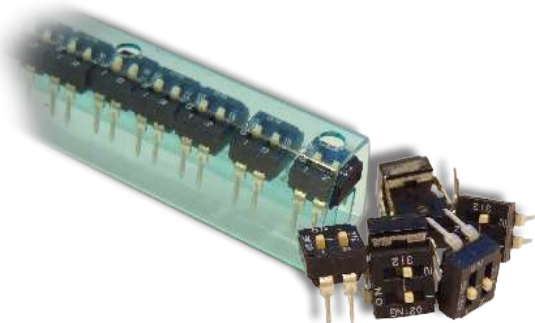
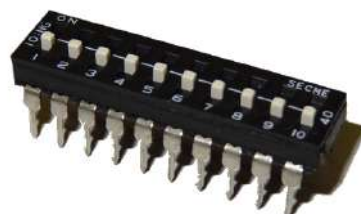
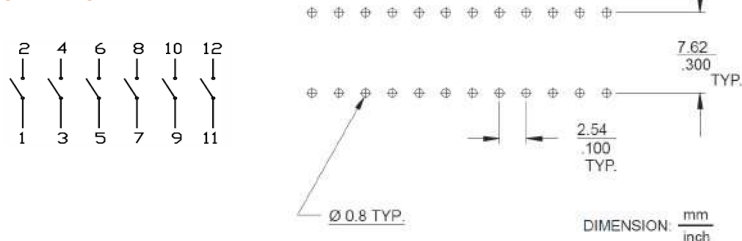
Further options and information available: www.eozonline.com

Anti-Static tube packaging

DIMENSIONS



CONNEXIONS

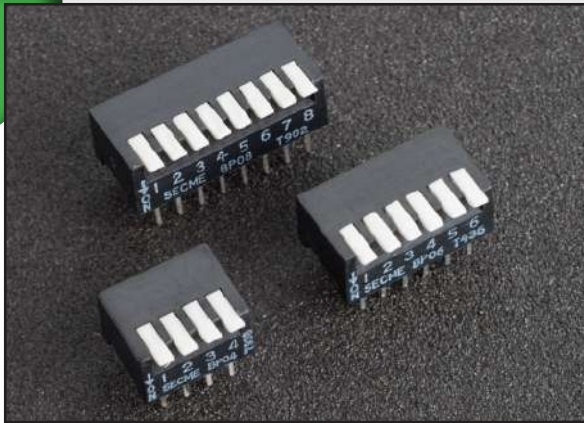




DILPIANO



A5



COMPONENTS

Side actuated dip switch.

Electrical life 1 000 operations

- Resistance to wave soldering at 260° C, 5 sec.
- Lock-over-center design provides positive detent action
- Tin plated terminals for better solderability
- UL 94V-0 plastics
- RoHS compliant

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Contact rating	
Non switching	100 mA or 50VDC maximum
Switching	50 mA, 24 VDC
Switch capacitance	<5 pF max between adjacent closed switches
Isolation resistance	≥1000 MΩ at 100Vdc
Contact resistance	100mΩ Min. ≤ 500mΩ Max.
Electrical life	2000 switching 50 mA @ 24 VDC
Electric strength	500 VAC for 1 min, between adjacent switches

MECHANICAL CHARACTERISTICS

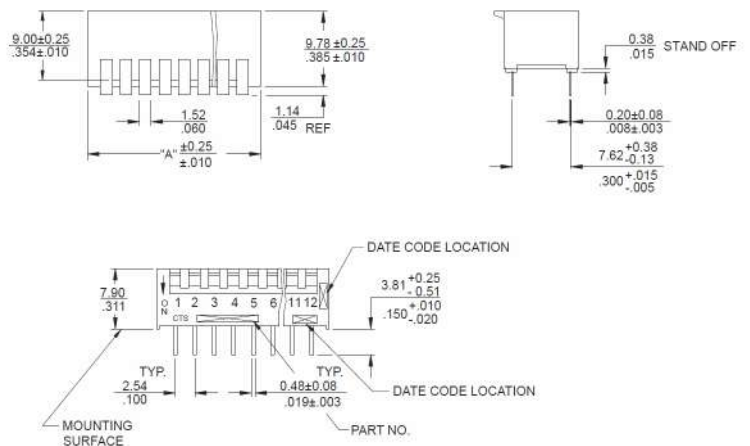
Switching action	Maintained
Operating temperature	-40°C ... +85°C
Vibration	15 G's between 10 HZ to 2K HZ
Shock resistance	25 g
Environmental resistance	
- Damp heat	as per EN IEC 60512-11f
- Saline mist	as per EN IEC 60512-11f

STANDARD PART NUMBERS

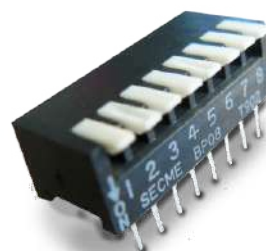
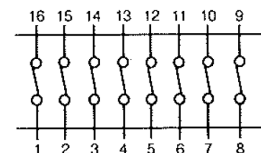
Slide switch	«A» (mm) dimension	Quantity per tube	Part Numbers
Switch 02 Poles	7.26	75	09.400BP.02
Switch 04 Poles	12.34	45	09.400BP.04
Switch 06 Poles	17.42	30	09.400BP.06
Switch 08 Poles	22.50	25	09.400BP.08

Further options and information available: www.eozonline.com

DIMENSIONS



CONNEXIONS





DJET Ø 6.35 mm

Toggle Switch and Pushbutton



A6



COMPONENTS

Recommended for outdoor applications, military and avionics equipment, telecommunications, medical equipment, power supplies. The professional toggle and pushbutton switches are available in one or two pole version available.

Electrical life 100 000 operations

- Front panel thickness: Min. 1.2 mm
- Switching system: Positive snap-action
- Damp heat: 56 days (Gold contact versions only)
- Tightening torque: Rear nut 125 Ncm
Ruffle 30

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

	Standard «silver cont.»	Tropical «gold cont.»
Operating: voltage	10V	10 mV
current	50 mA	100 µA
Switch rating «Resistive circuit»		
Voltage	220 V 110 V 48 V 24 V 12 V	
Current	1.5A 2.5A 1A 2.25A 4.5A	
Inductive circuit: 50 % of above values		
Isolation resistance	≥100000 MΩ at 500Vdc	
Contact resistance	≤10 mΩ	≤10 mΩ
Electrical life (actuations)	100 000	100 000
Electric strength		
1000 Vrms, 50 Hz between terminals on the same pole		
2000 Vrms, 50 Hz between all terminals connected together and ground		
2000 Vrms, 50 Hz between terminals of adjacent poles		

MECHANICAL CHARACTERISTICS

Storage temperature	-40 °C ... +85 °C		
Operating temperature	-40°C ... +85°C		
Protection degree	IP 65		
Shock resistance	as per IEC 60512-4 100 g		
Environmental resistance	Standard «silver cont.»	Tropical «gold cont.»	
- Damp heat	as per EN IEC 60512-111	-	56 days
- Saline mist	as per EN IEC 60512-111	-	96 hours

STANDARD PART NUMBERS

Toggle switch Ø6.35mm metal chrome	Switching action	contact	Numbers	Technical drawing
• Standard «silver» contact	#	MA-MA	1 01.17301.21	3
• Standard «silver» contact	#	MA-MA	2 02.17312.21	2
Pushbutton switch Ø6.35mm metal mat-black				
• Tropical «gold» contact	#	MA-MO	1 17.17851.30	1
Pushbutton switch Ø6.35mm metal chrome				
• Standard «silver» contact	#	MA-MO	1 07.17801.21	1
• Tropical «gold» contact	#	MA-MO	1 17.17851.21	1

Switching action: MA= Maintained, MO= Momentary

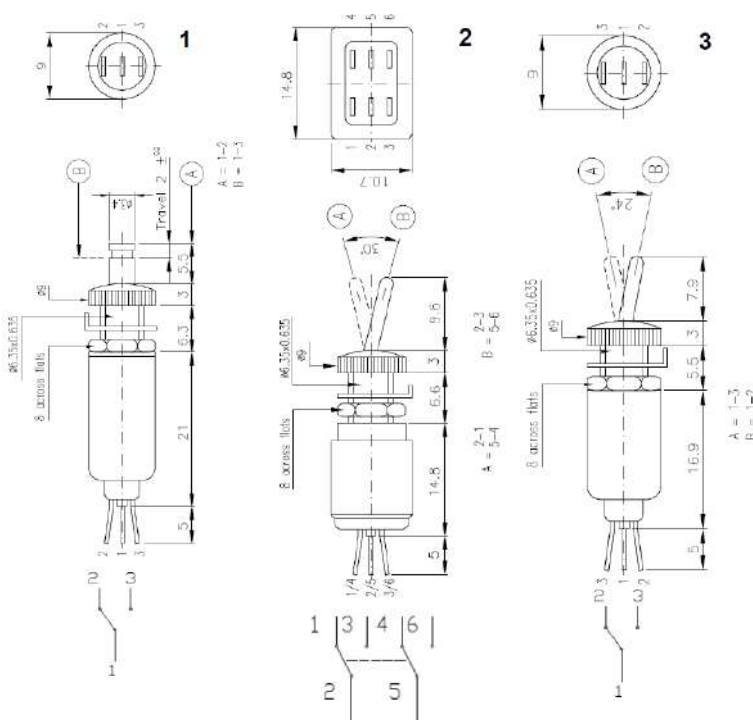
= Silicone Cap available page 17

Further options and information available: www.eozonline.com



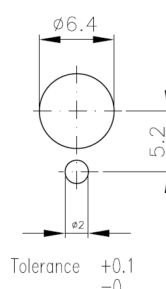
DIMENSIONS

technical drawing



MOUNTING

FRONT PANEL
MOUNTING HOLE:





DJET Ø 10mm Toggle Switch



A7



COMPONENTS

Recommended for outdoor applications, military and avionics equipment, telecommunications, medical equipment, power supplies. The professional toggle switches are available in one or two pole version. The switches can be IP 65 with fitted silicone cap or IP 67 front sealed.

Electrical life 100 000 operations

- Switching system: positive snap-action
- Front panel thickness: Min. 1.2 mm
- Damp heat: 56 days (Gold contact versions only)
- Tightening torque: Rear nut 125 Ncm
Ruffle 30

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

	Standard «silver cont.»	Tropical «gold cont.»
Operating: voltage	10V	10 mV
current	50 mA	100 µA
Switch rating «Resistive circuit»		
Voltage	220 V 110 V 48 V 24 V 12 V	
Current	1.5A 2.5A 1A 2.25A 4.5A	
Inductive circuit: 50 % of above values		
Isolation resistance	≥100000 MΩ at 500Vdc	
Contact resistance	≤10 mΩ	≤10 mΩ
Electrical life (actuations)	100 000	100 000
Electric strength		
1000 Vrms, 50 Hz between terminals on the same pole		
2000 Vrms, 50 Hz between all terminals connected together and ground		
2000 Vrms, 50 Hz between terminals of adjacent poles		

MECHANICAL CHARACTERISTICS

Storage temperature	-40 °C ... +85 °C	
Operating temperature	-40°C ... +85°C	
Protection degree	IP 67 (sealed 10 mm dia. version only) IP 65 with protective cap #	
Shock resistance	as per IEC 60512-4	100 g
Environmental resistance		
- Damp heat	as per EN IEC 60512-11f	56 days
- Saline mist	as per EN IEC 60512-11f	96 hours

STANDARD PART NUMBERS

Toggle switch Ø10mm metal mat-black	Switching action	contact	Numbers	Technical drawing
• Tropical «gold» contact, IP67 «front sealing»	MA-MA	1	11.17201.30	1
Toggle switch Ø10mm metal mat-chrome				
• Tropical «gold» contact, IP67 «front sealing»	MA-MA	1	11.17201.22	1
• Standard «silver» contact, IP67 «front sealing»	MA-MA	1	11.17271.22	1
• Standard «silver» contact, IP67 «front sealing»	MA-MA	2	12.17273.22	3
Toggle switch Ø10mm metal chrome				
• Tropical «gold» contact	MA-MA	1	11.17051.21	2
• Tropical «gold» contact #	MA-MA	2	12.17063.21	3
• Standard «silver» contact	MA-MA	1	01.17001.21	2
• Standard «silver» contact #	MA-MA	2	02.17013.21	3

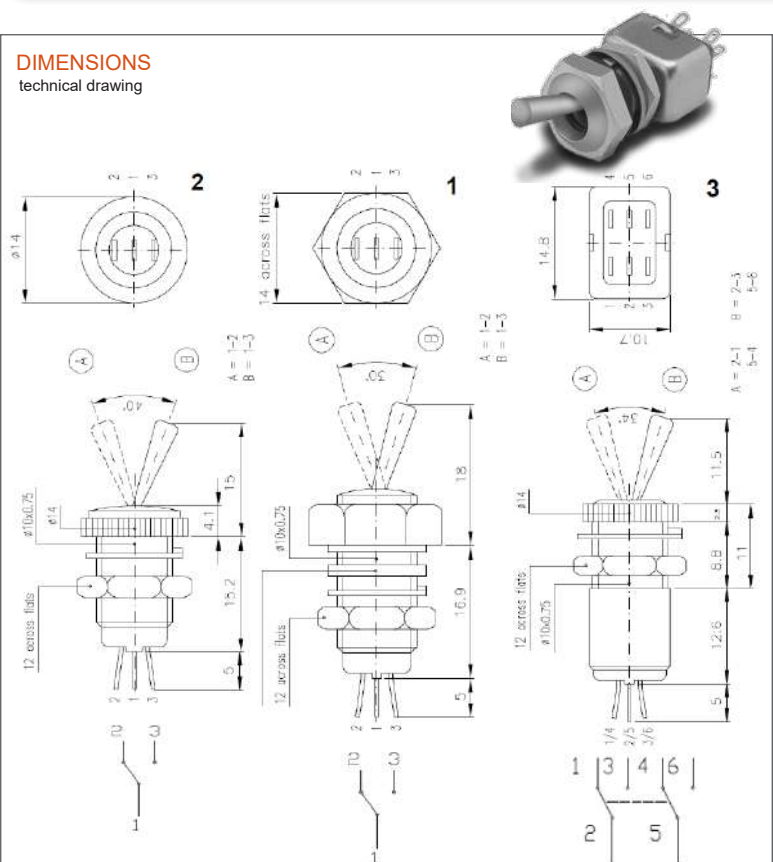
Switching action: MA= Maintained.

= Silicone Cap available page 17

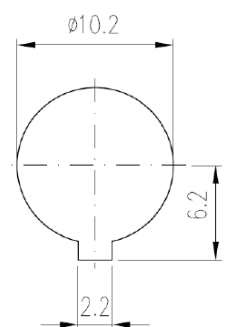
Further options and information available: www.eozonline.com

DIMENSIONS

technical drawing



MOUNTING



Tolerance +0.1
-0 mm





TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

				Standard «silver cont.»	Tropical «gold cont.»
Operating: voltage				10V	10 mV
current				50 mA	100 µA
Switch rating «Resistive circuit»					
Voltage	220 V	110 V	48 V	24 V	12 V
Current	1.5A	2.5A	1A	2.25A	4.5A
Inductive circuit: 50 % of above values					
Isolation resistance			≥100000 MΩ at 500Vdc		
Contact resistance			≤10 mΩ		≤10 mΩ
Electrical life (actuations)			100 000		100 000

Electric strength

1000 Vrms, 50 Hz between terminals on the same pole
2000 Vrms, 50 Hz between all terminals connected together and ground
2000 Vrms, 50 Hz between terminals of adjacent poles

MECHANICAL CHARACTERISTICS

Storage temperature	-40 °C ... +85 °C	
Operating temperature	-40°C ... +85°C	
Protection degree	IP 67 (sealed 10 mm dia. version only) IP 65 with protective cap	
Shock resistance as per IEC 60512-4	100 g	
Environmental resistance	Standard «silver cont.»	Tropical «gold cont.»
- Damp heat as per EN IEC 60512-11f	-	56 days
- Saline mist as per EN IEC 60512-11f	-	96 hours

STANDARD PART NUMBERS

Pushbutton Ø10mm metal mat-black		Switching action	contact	Numbers	Technical drawing
• Tropical «gold» contact, IP67 «front sealing»	MO	2	18.17253.30	1	
• Tropical «gold» contact, IP67 «front sealing»	MO	1	17.17252.30	2	
• Standard «silver» contact, IP67 «front sealing»	MO	1	17.17282.30	2	
• Tropical «gold» contact	MO	1	17.17551.30	3	
• Tropical «gold» contact	MO	1	17.17552.30	5	
• Tropical «gold» contact #	MO	2	18.17563.30	4	
Pushbutton Ø10mm metal mat-chrome					
• Tropical «gold» contact, IP67 «front sealing»	MO	1	17.17252.22	2	
• Standard «silver» contact, IP67 «front sealing»	MO	1	17.17282.22	2	
Pushbutton Ø10mm metal chrome					
• Tropical «gold» contact, IP67 «front sealing»	MO	2	18.17253.22	1	
• Standard «silver» contact, IP67 «front sealing»	MO	2	18.17283.22	1	
• Tropical «gold» contact	MO	1	17.17552.21	5	
• Tropical «gold» contact #	MO	2	18.17563.21	4	
• Standard «silver» contact	MO	1	07.17502.21	5	
• Standard «silver» contact #	MO	2	08.17513.21	4	

Switching action: MO= Momentary

= Silicone Cap available page 17

Further options and information available: www.eozonline.com

COMPONENTS

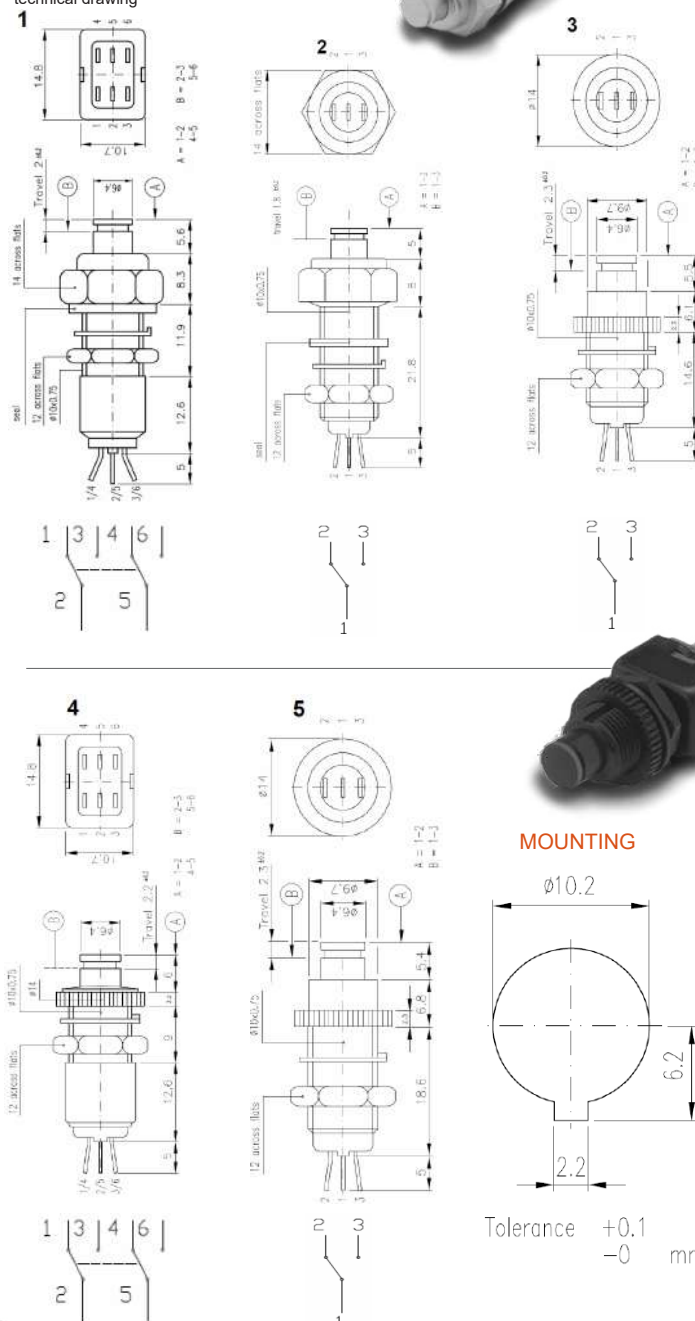
Recommended for outdoor applications, military and avionics equipment, telecommunications, medical equipment, power supplies.

The professional toggle switches are available in one or two pole version. The switches can be IP 65 with fitted silicone cap or IP 67 front sealed.

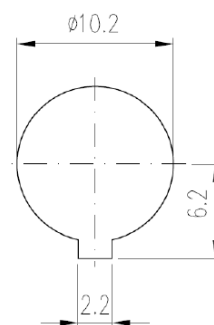
Electrical life 100 000 operations

- Switching system: positive snap-action
- Front panel thickness: Min. 1.2 mm
- Damp heat: 56 days (Gold contact versions only)
- Tightening torque: Rear nut 125
Ruffle 30

3 DIMENSIONS



MOUNTING



Tolerance +0.1
-0 mm





Accessories DJET

Toggle Switch and Pushbutton

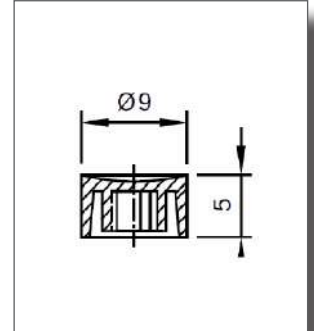


A9



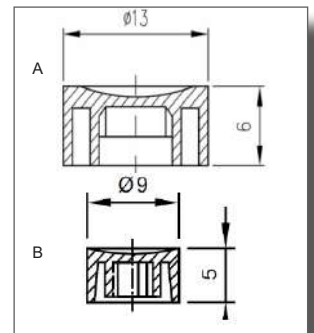
Cap for pushbutton Ø 6.35 mm

Type	Front ring	Reference
Cap Ø 9 mm	Plastic black	20.17804.01
Type	Front ring	Reference
Cap Ø 9 mm	Plastic red	20.17804.02



Cap for pushbutton Ø 10 mm

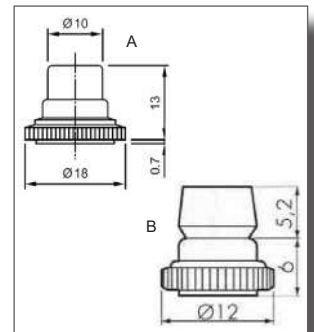
Type	Front ring	Reference	Draw.
Cap Ø 9 mm	Plastic black	20.17504.01	B
Cap Ø 13 mm	Plastic black	20.17254.01	A
Type	Front ring	Reference	Draw.
Cap Ø 9 mm	Plastic red	20.17504.02	B



Protective cap for pushbutton

with black silicone cap

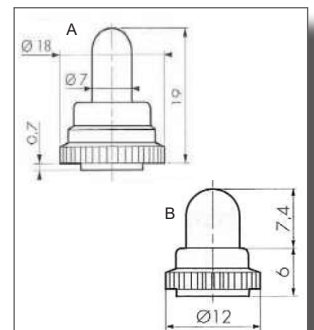
Type	Front ring	Reference	Draw.
Cap for Ø 10 mm	Metal chrome	20.17292.21	A
Cap for Ø 6.35 mm	Metal chrome	20.25292.21	B
Cap for Ø 6.35 mm	Metal black	20.25292.30	B



Protective cap for toggle switch

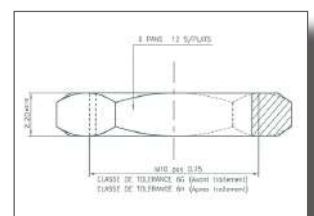
with black silicone cap

Type	Front ring	Reference	Draw.
Cap Ø for 10 mm	Metal chrome	20.17291.21	A
Cap Ø for 6.35 mm	Metal chrome	20.25291.21	B
Cap Ø for 6.35 mm	Metal black	20.25291.30	B



Hexagon nut for pushbutton

Type	Front ring	Reference
Ø10 mm	Metal chrome matt	20.17016.21





EOZ

SOLUTIONS & COMPONENTS



KEYPADS

M.series	18	B1
M.series Axess	19	B2
S.series	20	B3
S.series Lite	21	B4
A.series	22	B5
ECO.series	23	B6

M.series

B1



Keypads

Thanks to a 30 year experience in the conception and manufacturing of keypad devices, EOZ has developed the M.series keypad range, designed to operate in varied environments and which can be used in different applications.

Electrical life 1 million actuations for dome version

Electrical life 4 million actuations for membrane version

- Choice available for key shape and dimension
- Anti-twist keys and anti pull off keys
- Laser engraving for a high flexibility
- Standard colours of keys (other colours available):
 - Key top: natural (grey), green, red, yellow
 - Illumination: yellow and blue (standard)



TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Power supply:	5 VDC, 240mA
Illuminated versions:	blue, red, green, yellow and white.
Contact resistance	Dome version: < 1 Ohm Membrane version: < 200 Ohms
Electrostatic breakdown value	15kV with a metallic front plate

MECHANICAL CHARACTERISTICS

Storage temperature	-40°C to +85°C (-30°C for illuminated)
Operating temperature	-25°C to +85°C
Protection degree	IP 67 (front face)
Shock resistance	IK 09 for standard versions with a 3mm thick front plate
Actuation force:	Dome version: 4.5N +/- 30% Membrane version: 1.9N +/- 30%
Key travel:	0.5 ± 0.3 mm
Lifetime (actuations/key):	1 million actuations
Environmental resistance	4 million actuations
- Damp heat (@+40°C) as per EN IEC 60512-6	21 days
- Saline mist as per EN IEC 60512-6	96 Hours
- Dry heat (@+85°C) as per EN IEC 60512-6	21 days
- UV resistance	56 days

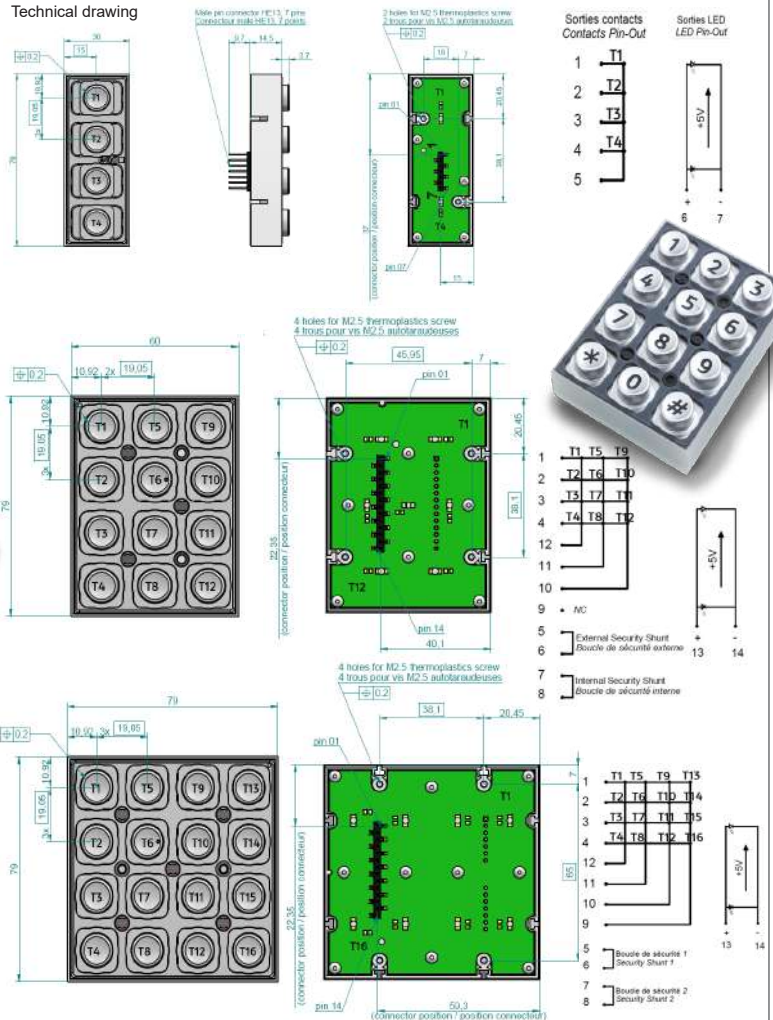
STANDARD PART NUMBERS

4 Key version with 1.2.3.4 marking	Interface	Part numbers
• Non illuminated membrane	Common point	M04PARSANLPA
• Non illuminated domes	Common point	M04PARSANSPA
• Yellow illuminated membrane	Common point	M04IARSAYLPA
• Yellow illuminated domes	Common point	M04IARSAYSIPA
12 Key version with Telephone marking		
• Non illuminated membrane	Matrix	M12PARSANLMT
• Non illuminated domes	Matrix	M12PARSANSMT
• Yellow illuminated membrane	Matrix	M12IARSAYLMT
• Yellow illuminated domes	Matrix	M12IARSAYSMT
• Blue illuminated membrane	Matrix	M12IARSABLMT
• Blue illuminated domes	Matrix	M12IARSABSMT
16 Key version with Hexadecimal marking		
• Non illuminated membrane	Matrix	M16PARSANLMH
• Non illuminated domes	Matrix	M16PARSANSMH
• Yellow illuminated membrane	Matrix	M16IARSAYLMH
• Yellow illuminated domes	Matrix	M16IARSAYSMH
• Blue illuminated membrane	Matrix	M16IARSABLMH
• Blue illuminated domes	Matrix	M16IARSABSMH
16 Key version with marking Banking		
• Non illuminated membrane	Matrix	M16PARSANLMB
• Non illuminated domes	Matrix	M16PARSANMB
Mounting element		
• Bracket		FIX.M001

Further options and information available: www.eozonline.com

DIMENSIONS

Technical drawing



MOUNTING

The keypads can be mounted from the rear, with different options possible:

- Brackets: 2 mounting clips made of ABS polycarbonate
- 4 holes in the back of the housing of the keypad for customised integration
- Tightening torque: 50 Ncm ± 5 Ncm (screws for thermoplastic)

TYPE OF STANDARD KEYS

- Standard colors: Natural aluminium, red, yellow and green
- Specific colors on request: blue, orange, anthracite grey....



M.series Axess



Keypads

A low-profile version of the M.series rugged keypad has been added to the range of products offered by EOZ – your solutions partner.

Just 8mm deep, the M.series “Axess” offers the same design flexibility and versatility as its larger brother, but with a lower behind-panel depth.

Electrical life 1 million actuations

- Modularity is at the heart of the design
- Colour of LED illumination.
- M.series Axess, a low-profile keypad offering design flexibility.

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Power supply:	5 VDC, 240mA
Illuminated versions:	blue and yellow as standard, red, green, and white on request
Contact resistance	Dome version: < 1 Ohm
Electrostatic breakdown value	10kV with a metallic front plate

MECHANICAL CHARACTERISTICS

Storage temperature	-40°C to +85°C (-30°C for illuminated)
Operating temperature	-25°C to +85°C
Protection degree	IP 65 (front face)
Shock resistance	IK 09 for standard versions with a 3mm thick front plate
Actuation force:	4.5N +/- 30%
Key travel:	0.5 ± 0.3 mm
Lifetime (actuations/key):	1 million actuations

Environmental resistance

- Damp heat (@+40°C) as per EN IEC 60512-6	21 days
- Saline mist as per EN IEC 60512-6	96 Hours
- Dry heat (@+85°C) as per EN IEC 60512-6	21 days
- UV resistance	56 days

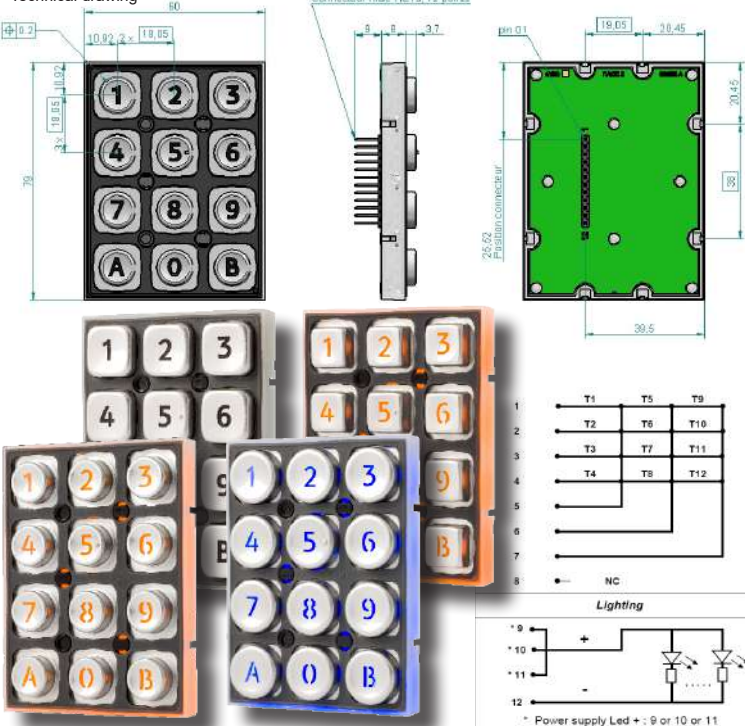
STANDARD PART NUMBERS

	Shape	Seize	Dimension keys	Part numbers
12 Key Non illuminated version with A and B «Function» marking				
• Non illuminated	Round	Small	Ø 12	AXN12001
• Non illuminated	Square	Small	11.6 x 11.6	AXN12002
• Non illuminated	Round	Big	Ø 15.6	AXN12003
• Non illuminated	Square	Big	15 x 15	AXN12004
12 Key YELLOW illuminated version A and B «Function» with marking				
• Yellow illuminated	Round	Small	Ø 12	AXL12011
• Yellow illuminated	Square	Small	11.6 x 11.6	AXL12012
• Yellow illuminated	Round	Big	Ø 15.6	AXL12013
• Yellow illuminated	Square	Big	15 x 15	AXL12014
12 Key BLEU illuminated version with A and B «Function» marking				
• Blue illuminated	Round	Small	Ø 12	AXL12021
• Blue illuminated	Square	Small	11.6 x 11.6	AXL12022
• Blue illuminated	Round	Big	Ø 15.6	AXL12023
• Blue illuminated	Square	Big	15 x 15	AXL12024
Mounting element				FIX.AX01
• Bracket				

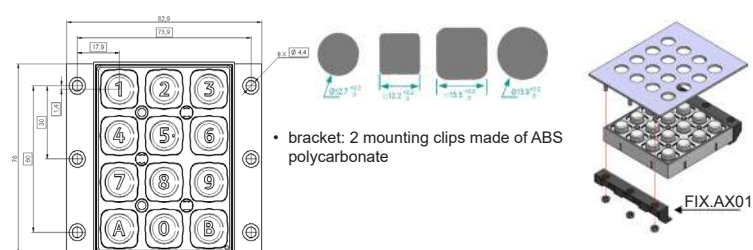
Further options and information available: www.eozonline.com

DIMENSIONS

Technical drawing



MOUNTING



TYPE OF STANDARD KEYS

- Standard colors: Natural aluminium, red, yellow and green
- Specific colors on request: blue, orange, anthracite grey...



S.series

B3



Keypads

The 12 or 16 key S-series keypads are specially designed for public environment applications, such as vending machines, ticket machines, payment terminals, telephones, access control systems and industrial machinery.

Electrical life 4 million actuations / key

- The S-series therefore has high resistance to impact and vandalism (IK10) and is also sealed to IP 67
- KEYS: The metal anti pull-off keys are highly resistant to shock and fire.
- MARKING: Customised markings or symbols in different colours are available on request

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Power supply:	Nominal 5 V, 5 mA
	Maximum voltage 24 V
	Minimum voltage 0.5 V
	Minimum current 0.1 mA
Illumination	
Current consumption for single LED:	20 mA at 2.1 V (yellow and green)
	20 mA at 1.9 V (red)
	10 mA at 3.4 V (blue)
NOTE: A load resistor may need to be connected by the customer in order to power the LED correctly. Luminosity and wave length scattering caused by technologie used in the LED manufacturing processes may lead to visual differences in our products	
Contact resistance	≤200 Ω
Electrostatic breakdown value	5 kV
Isolation resistance	≥1000 MΩ at 100 VDC
Electric strength	as per EN IEC 60512-2 1500 Vrms, 50 Hz, 1 min.,

MECHANICAL CHARACTERISTICS

Storage temperature	-30 °C ... +85 °C
Operating temperature	-25°C ... +85°C
Protection degree	IP 67 as per IEC 60529, mounted
Shock resistance	IK 10 (20J)
Actuation force:	2 N ±1N
Key travel:	1.5 mm ±0.3 mm
Lifetime (actuations/key):	4 million actuations
Rebound time:	≤40 ms
Environmental resistance	
- Damp heat (@+40°C) as per EN IEC 60512-6	21 days
- Saline mist as per EN IEC 60512-6	96 Hours
- Dry heat (@+85°C) as per EN IEC 60512-6	10 days

STANDARD PART NUMBERS

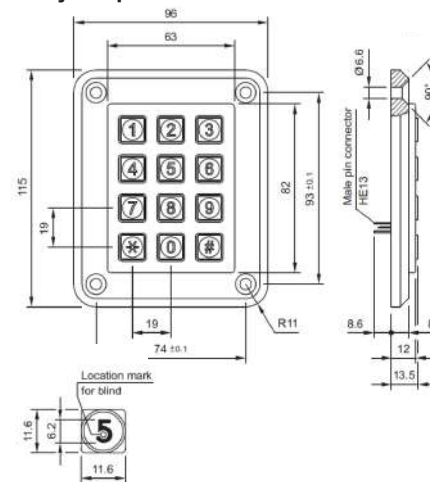
12 Keys version with TELEPHONE marking		Part numbers
• Non Illuminated / Black	Common point «PC»	S.12100.001
• Non Illuminated / Black	Matrix «XY»	S.12150.001
• Blue Illuminated	Common point «PC»	S.12100.211
• Blue Illuminated	Matrix «XY»	S.12150.211
• Yellow Illuminated	Common point «PC»	S.12100.241
• Yellow Illuminated	Matrix «XY»	S.12150.241
16 Keys version with HEXADECIMAL marking		Part numbers
• Non Illuminated / Black	Common point «PC»	S.16300.001
• Non Illuminated / Black	Matrix «XY»	S.16350.001
• Blue Illuminated	Common point «PC»	S.16300.211
• Blue Illuminated	Matrix «XY»	S.16350.211
• Yellow Illuminated	Common point «PC»	S.16300.241
• Yellow Illuminated	Matrix «XY»	S.16350.241

Further options and information available: www.eozonline.com

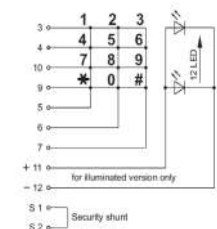
DIMENSIONS

Technical drawing

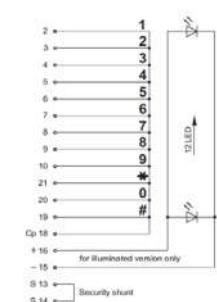
12 Keys telephone



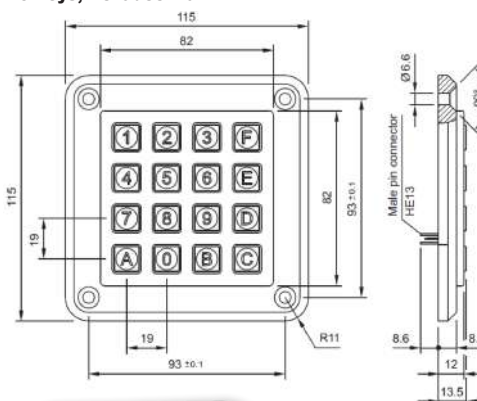
Matrix:



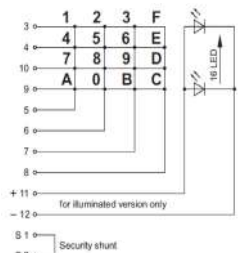
Common point:



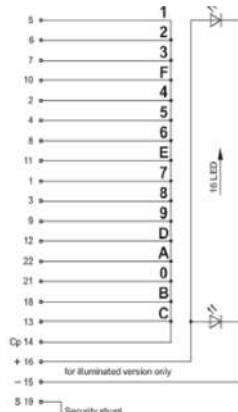
16 Keys, Hexadecimal



Matrix:



Common point:



S.series Lite



Keypads

The S.series Lite looks like a metal keypad, but the keys and housing are crafted from polycarbonate which is known for its incredible strength and high-impact resistance.

It is also protected to IP67 against water, oil and dirt ingress and the metal-look finish is scratch-resistant to ensure long-lasting good

Electrical life 4 million actuations / key

- KEYS: Polycarbonate (PC), metal-look
- MARKING: Precision marking using laser etching and marking. Customised markings or symbols on request.

B4

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Power supply:	Nominal 5 V, 5 mA
	Maximum voltage 24 V
	Minimum voltage 0.5 V
	Minimum current 0.1 mA
Illumination (by LED)	5V (all colours)
	blue and yellow as standard, red, green, and white on request
Contact resistance	≤200 Ω
Electrostatic breakdown value	5 kV
Isolation resistance	≥1000 MΩ at 100 VDC
Electric strength as per EN IEC 60512-2	1500 Vrms, 50 Hz, 1 min.,

MECHANICAL CHARACTERISTICS

Storage temperature	-30 °C ... +85 °C
Operating temperature	-25°C ... +85°C
Protection degree	IP 67 as per IEC 60529, mounted
Shock resistance	IK 09
Actuation force:	2 N ±1N
Key travel:	1.5 mm ±0.3 mm
Lifetime (actuations/key):	4 million actuations
Rebound time:	≤40 ms
Environmental resistance	
- Damp heat (@+40°C) as per EN IEC 60512-6	21 days
- Saline mist as per EN IEC 60512-6	96 Hours
- Dry heat (@+85°C) as per EN IEC 60512-6	10 days

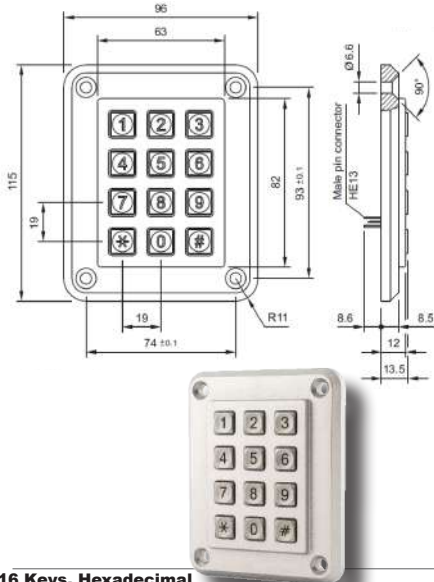
STANDARD PART NUMBERS

12 Keys version with TELEPHONE marking	Circuit	Part numbers
• Non Illuminated / Black	Common point «PC»	SL.12100.001
• Non Illuminated / Black	Matrix «XY»	SL.12150.001
• Blue Illuminated	Common point «PC»	SL.12100.211
• Blue Illuminated	Matrix «XY»	SL.12150.211
• Yellow Illuminated	Common point «PC»	SL.12100.241
• Yellow Illuminated	Matrix «XY»	SL.12150.241
16 Keys version with HEXADECIMAL marking	Circuit	Part numbers
• Non Illuminated / Black	Common point «PC»	SL.16300.001
• Non Illuminated / Black	Matrix «XY»	SL.16350.001
• Blue Illuminated	Common point «PC»	SL.16300.211
• Blue Illuminated	Matrix «XY»	SL.16350.211
• Yellow Illuminated	Common point «PC»	SL.16300.241
• Yellow Illuminated	Matrix «XY»	SL.16350.241

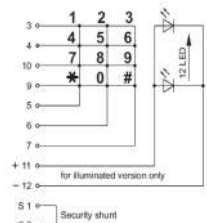
Further options and information available: www.eozonline.com

DIMENSIONS

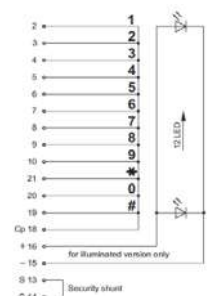
Technical drawing
12 Keys telephone



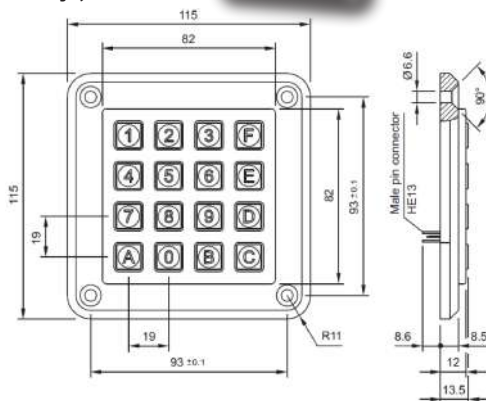
Matrix:



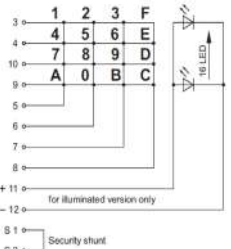
Common point:



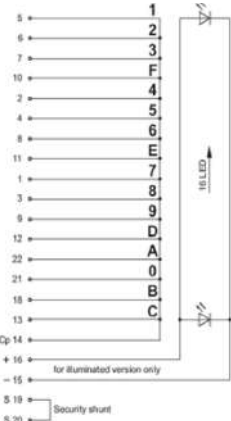
16 Keys, Hexadecimal



Matrix:



Common point:



A.series

B5



Keypads

The low profile 12 or 16 key A.series keypads are specially designed for public environment applications, such as vending machines, ticket machines, payment terminals, telephones, access control systems and industrial machinery.

Electrical life 1 Million actuations / key

- The aluminum keys are available with either flat or concave profile
- Anti-pull-of and resistant to shock and fire
- Full IP67 front face sealing



TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Power supply:	Nominal 24 V, 50 mA Maximum voltage 50 V Minimum voltage 5 V Minimum current 1 mA
Contact resistance	≤1 Ω
Electrostatic breakdown value	5 kV
Isolation resistance	≥1000 MΩ at 100 VDC
Electric strength as per EN IEC 60512-2	1500 Vrms, 50 Hz, 1 min.,

MECHANICAL CHARACTERISTICS

Storage temperature	-40°C to +85°C (-30°C for illuminated)
Operating temperature	-25°C to +85°C
Protection degree	IP 67 as per IEC 60529
Shock resistance	IK 09
Actuation force:	4.3 N ±30%
Key travel:	1 mm ±0.2 mm
Lifetime (actuations/key):	1 million actuations
Rebound time:	≤1 ms
Environmental resistance	
- Damp heat (@+40°C) as per EN IEC 60512-6	21 days
- Saline mist as per EN IEC 60512-6	48 Hours
- Dry heat (@+85°C) as per EN IEC 60512-6	10 days

STANDARD PART NUMBERS

	Aluminum natural key cap	Keys dimension	Part numbers
12 Key version with FUNCTION «A and B» marking			
• Matrix «XY»	Concave	Ø 12	AAN12001
• Matrix «XY»	Flat	Ø 11.3	AAN12011
• Common point «PC»	Concave	Ø 12	AAN12051
• Common point «PC»	Flat	Ø 11.3	AAN12061
12 Key version with TELEPHONE marking			
• Matrix «XY»	Concave	Ø 12	AAN12005
• Matrix «XY»	Flat	Ø 11.3	AAN12015
• Common point «PC»	Concave	Ø 12	AAN12055
• Common point «PC»	Flat	Ø 11.3	AAN12065
16 Key version with HEXADECIMAL marking			
• Matrix «XY»	Concave	Ø 12	AAN16001
• Matrix «XY»	Flat	Ø 11.3	AAN16011

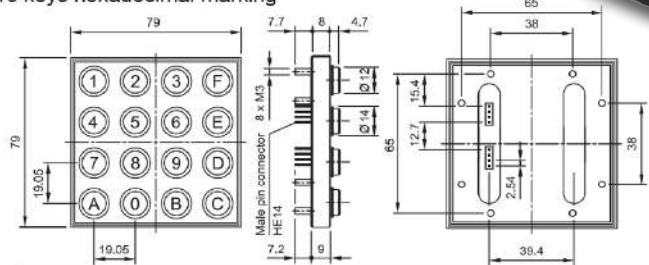
Further options and information available: www.eozonline.com



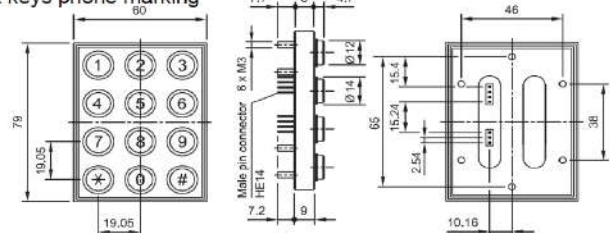
DIMENSIONS

Technical drawing

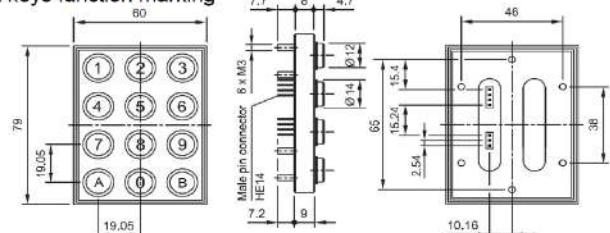
16 keys hexadecimal marking



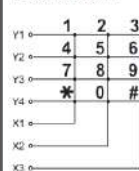
12 keys phone marking



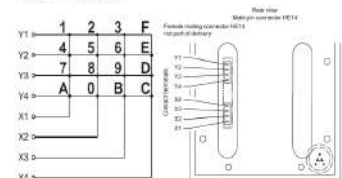
12 keys function marking



12 keys, Matrix point.

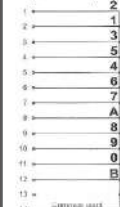


16 keys, Matrix point.



MOUNTING

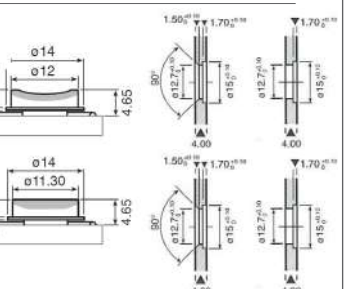
12 keys, common point



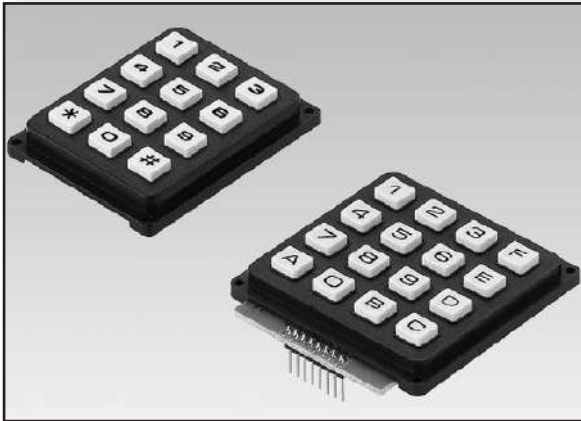
CONCAVE



FLAT



ECO.series



Keypads

The ECO keypads are suited to all indoor applications including data-entry systems, remote controls, telephone, point of sales terminals or alarm systems.

The ECO range of low-cost, flush-mount keypads are rugged, economical devices available in 12-key telephone style and 16-key hexadecimal layouts.

Electrical life 1 Million actuations / key

B6

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Power supply:	Nominal 24V, 20 mA
	Maximum voltage 24 V
	Minimum voltage 500 mV
	Minimum current 10 mA
Contact resistance	≤200 Ω
Electrostatic breakdown value	5 kV
Isolation resistance	≥100 0 MΩ at 100 VDC
Switch rating	0.5 W

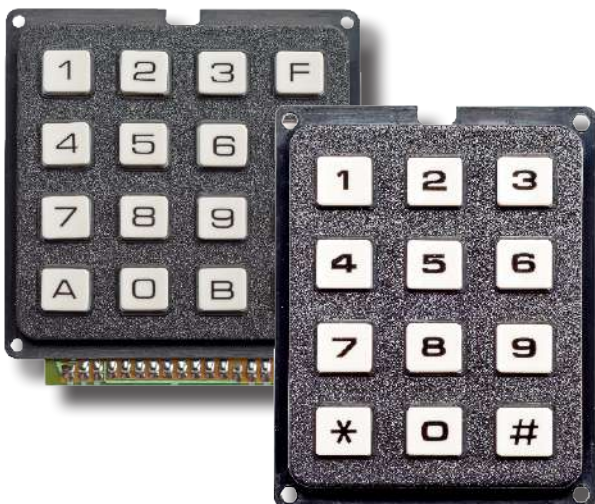
MECHANICAL CHARACTERISTICS

Storage temperature	-40°C ... +65°C
Operating temperature	-20°C ... +60°C
Protection degree	IP 40
Shock resistance	IK 09
Actuation force:	1.2N ±35%
Key travel:	1.4 MM ±0.1N
Lifetime (actuations/key):	1 million actuations
Rebound time:	≤2 ms

STANDARD PART NUMBERS

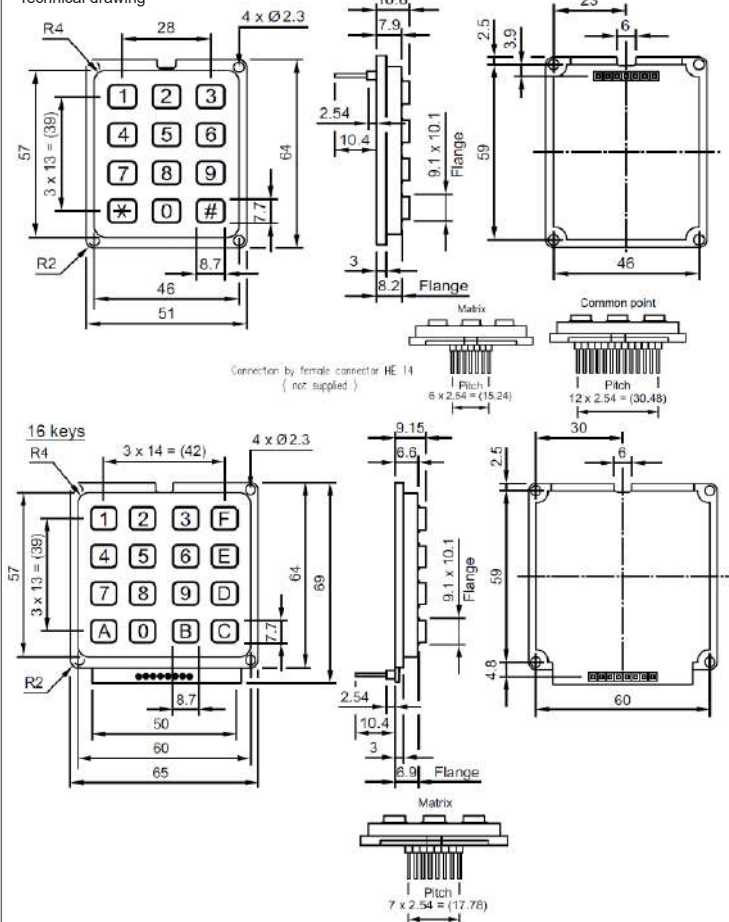
Packaging of 10 pcs		
12 Key version with TELEPHONE marking		
• Common point « PC »	Key cap plastic white	Part numbers ECO.12100.06
• Matrix « XY »	plastic white	ECO.12150.06
16 Key version with HEXADECIMAL marking		
• Matrix « XY »	plastic white	ECO.16250.06

Further options and information available: www.eozonline.com



DIMENSIONS

Technical drawing



CONNECTION for 16 keys

	X1	X2	X3	X4
Y1	1	2	3	F
Y2	4	5	6	E
Y3	7	8	9	D
Y4	A	0	B	C

Matrix « XY »

CONTACTS

Y4	Y3	Y2	Y1	X4	X3	X2	X1
----	----	----	----	----	----	----	----

Common point

CONTACTS

PC	C	B	0	A	D	9	8	7	E	6	5	4	F	3	2	1
----	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---	---

CONNECTION for 12 keys

	X1	X2	X3
Y1	1	2	3
Y2	4	5	6
Y3	7	8	9
Y4	*	0	#

Matrix « XY »

CONTACTS

X3	X2	X1	Y4	Y3	Y2	Y1
----	----	----	----	----	----	----

Common point

CONTACTS

3	6	9	#	2	5	8	0	1	4	7	PC
---	---	---	---	---	---	---	---	---	---	---	----

PC = Common point



EOZ

SOLUTIONS & COMPONENTS



FULL LIGHTING RANGE

FL.series

Non-illuminated and Illuminated pushbutton Ø 12 mm	25	C1
Non-illuminated and Illuminated pushbutton Ø 13.5 mm	26	C2
Dual color Illuminated customisation.	27	C3
Customized symbol laser symbols	28	C4

FL.series pushbutton Ø12

ILLUMINATED and NON-ILLUMINATED



The EOZ FL.series, available in 12mm mounting hole sizes, is a unique high brightness full face illuminated switch range that includes a non-illuminated version as a plug-in replacement for competitor products.

These rugged plastic body switches have a superb tactile feedback, are sealed to IP67 and are available with high brightness single illumination. There is a choice of six different coloured switches.

Designed and manufactured in France, the switches have one normally open gold plated contact with a 5N actuation force and a travel of 2.3mm.

Mechanical life 1 Million actuations

- Full face illuminated switch
- Full IP67 front face sealing

Weld at the soldering iron 300°C (max), 3 seconds (max).

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Electrical life	500 000 cycles
Terminals type	Pin terminal (2.8x0.5mm)
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2500VAC 50Hz 5 seconds
Contact travel	1.2 mm ±0.3 mm
Current rating (typical)	400mA at 32 VAC resistive
	100mA at 50 VDC resistive
	125mA at 125 VAC resistive
Voltage LED	5V
Current LED	65 mA (max)

MECHANICAL CHARACTERISTICS

The front shape	Domed
Contact function	Momentary
Contact arrangement	1NO
Mechanical lifetime	1,000,000 cycles
Panel thickness	1 to 6 mm
Torque	0.3 Nm
Actuating force	5 N ±30%
Operation travel	2.3 mm ±0.3

ENVIRONMENTAL CHARACTERISTICS

IK shock resistance. (EN 50102)	IK06 (front face)
Ingress protection	IP67 (front face)
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C
Saline mist	48 hours
Cyclic temperature / humidity test «ZiAD» (CEI 6068-2-38)	240 hours (cycles of -10°C in 65°C / 93% humidity)

STANDARD PART NUMBERS

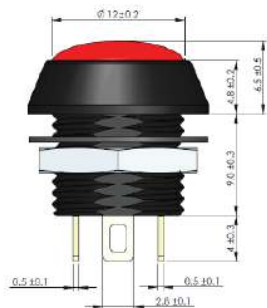
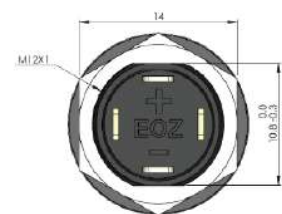
ILLUMINATED



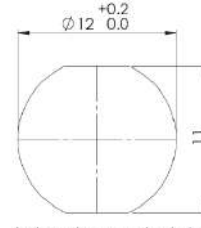
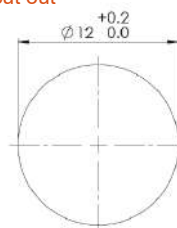
NON-ILLUMINATED



Ø12 mm



Panel cut out



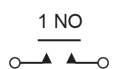
Anti rotation mounting hole

Further options and information available: www.eozonline.com

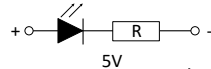
Switching Operation

Double-break and fast-action*

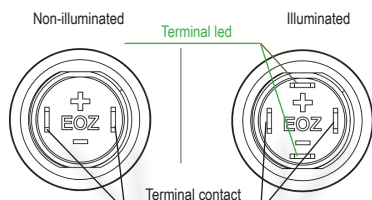
Diagram



Led circuit diagram



Terminal position



*Fast tactile sensation «5N». The contact is made by the reversal of a membrane helped by a spring.

C1

FL.series pushbutton Ø13.5 mm

ILLUMINATED and NON-ILLUMINATED



The EOZ FL.series available in 13.5mm mounting hole sizes is a unique high brightness full face illuminated switch range that includes a non-illuminated version as a plug-in replacement for competitor products.

These rugged plastic body switches have a superb tactile feedback, are sealed to IP67 and are available with high brightness single illumination. There is a choice of six different coloured switches.

Designed and manufactured in France, the switches have one normally open gold plated contact with a 5N actuation force and a travel of 2.3 mm.

Mechanical life 1 Million actuations

- Full face illuminated switch
- Full IP67 front face sealing

Weld at the soldering iron 300°C (max), 3 seconds (max).

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Electrical life	500 000 cycles
Terminals type	Pin terminal (2.8×0.5mm)
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2500VAC 50Hz 5 seconds
Contact travel	1.2 mm ±0.3 mm
Current rating (typical)	400mA at 32 VAC resistive
	100mA at 50 VDC resistive
	125mA at 125 VAC resistive
Voltage LED	5V
Current LED	65 mA (max)

MECHANICAL CHARACTERISTICS

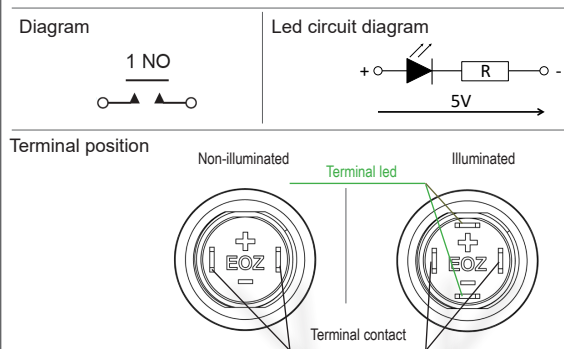
The front shape	Domed
Contact function	Momentary
Contact arrangement	1NO
Mechanical lifetime	1,000,000 cycles
Panel thickness	1 to 6 mm
Torque	0.3 Nm
Actuating force	5 N ±30%
Operation travel	2.3 mm ±0.3

ENVIRONMENTAL CHARACTERISTICS

IK shock resistance. (EN 50102)	IK06 (front face)
Ingress protection	IP67 (front face)
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C
Saline mist	48 hours
Cyclic temperature / humidity test «ZiAD» (CEI 6068-2-38)	
240 hours (cycles of -10°C in 65°C / 93% humidity)	

Switching Operation

Double-break and fast-action*



STANDARD PART NUMBERS

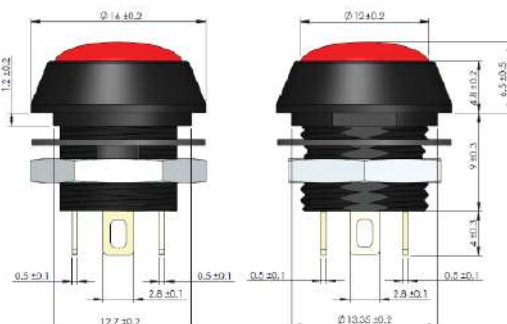
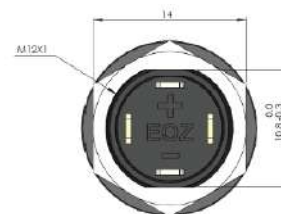
ILLUMINATED



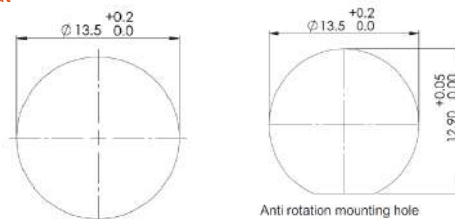
NON-ILLUMINATED



Ø13.5 mm



Panel cut out



Further options and information available: www.eozonline.com

*Fast tactile sensation «5N». The contact is made by the reversal of a membrane helped by a spring.

FL.series pushbutton Ø12 and Ø13.5

DUAL-COLOR ILLUMINATED



The unique high brightness full face illuminated of EOZ FL.series is also available in Dualcolor with white translucent lenses for the version 12mm and 13.5mm mounting hole sizes.

The Dualcolor FL series allows our customer to immediately display a change in status or function. As standard, we have a mix of Red, Blue and Green version but we can offer more colour and combination on demand.

Mechanical life 1 Million actuations

- Full face illuminated switch
- Full IP67 front face sealing

Weld at the soldering iron 300°C (max), 3 seconds (max).

TECHNICAL SPECIFICATIONS

ELECTRICAL SPECIFICATIONS

Electrical life	500 000 cycles
Terminals type	Pin terminal (2.8x0.5mm)
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2500VAC 50Hz 5 seconds
Contact travel	1.2 mm ±0.3 mm
Current rating (typical)	400mA at 32 VAC resistive
	100mA at 50 VDC resistive
	125mA at 125 VAC resistive
Voltage LED	5V
Current LED	65 mA (max)

MECHANICAL CHARACTERISTICS

The front shape	Domed
Contact function	Momentary
Contact arrangement	1NO
Mechanical lifetime	1,000,000 cycles
Panel thickness	1 to 6 mm
Torque	0.3 Nm
Actuating force	5 N ±30%
Operation travel	2.3 mm ±0.3

ENVIRONMENTAL CHARACTERISTICS

IK shock resistance. (EN 50102)	IK06 (front face)
Ingress protection	IP67 (front face)
Operating temperature	-40°C to +85°C
Storage temperature	-40°C to +85°C
Saline mist	48 hours
Cyclic temperature / humidity test «Z/AD» (CEI 6068-2-38)	240 hours (cycles of -10°C in 65°C / 93% humidity)

STANDARD PART NUMBERS

Pushbutton Ø12	Pushbutton Ø13.5	Illumination color	Illumination color
FL12DGB5	FL13DGB5	Blue or Green**	
FL12DRB5	FL13DRB5	Blue or Red**	
FL12DRG5	FL13DRG5	Green or Red**	

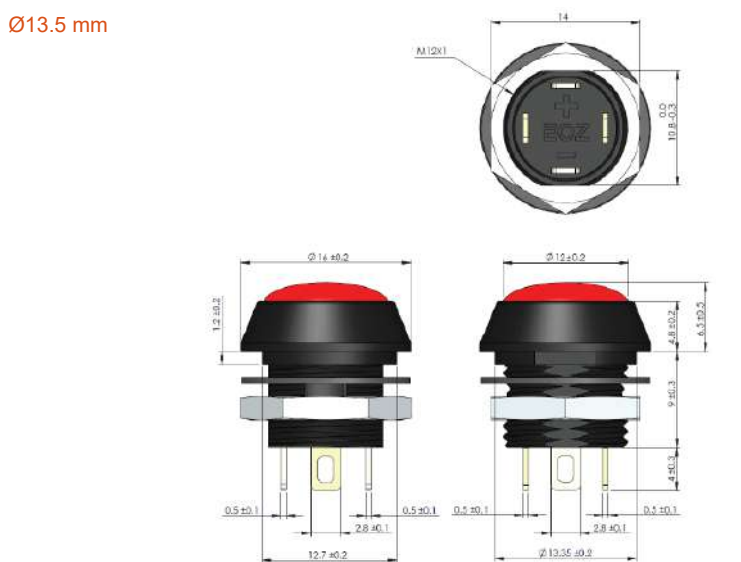
** inverted polarity

Other led colors upon request

Ø12 mm



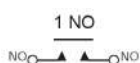
Ø13.5 mm



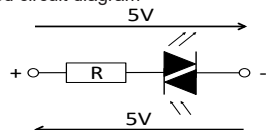
Switching Operation

Double-break and fast-action*

Diagram



Led circuit diagram

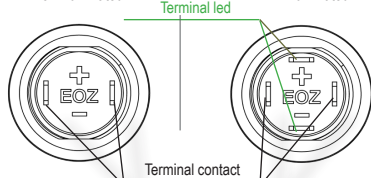


Terminal position

Non-illuminated

Terminal led

Illuminated



FL.series range

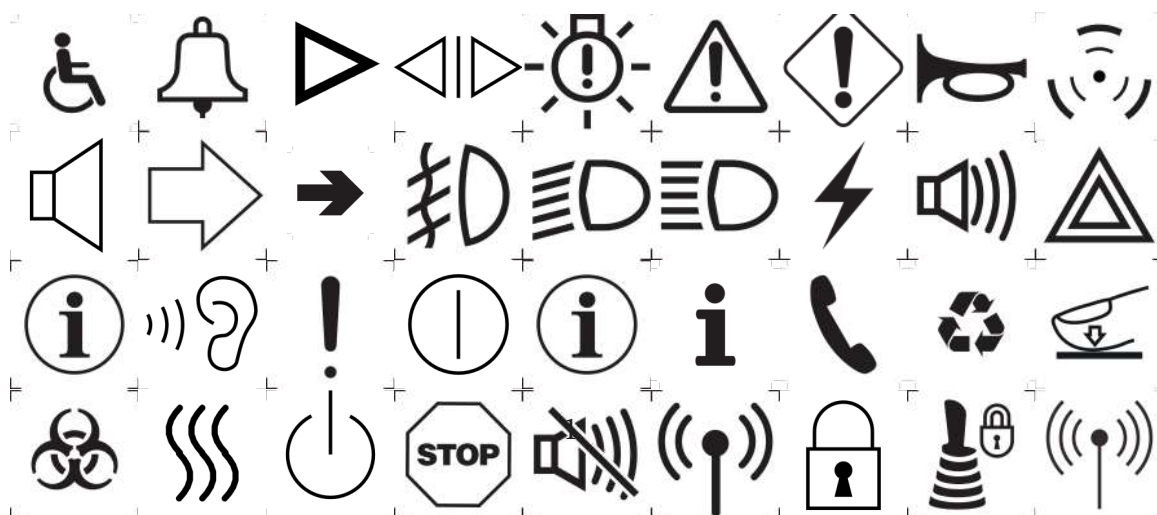
CUSTOMIZED LASER SYMBOLS



MARKING



Laser marking



AVAILABLE SOON:

IP68 and IP69K protection cap

RGB Illumination

UV Printing

Cristal body

Indicator range



Cristal body



UV Printing



Protection cap



EOZ

SOLUTIONS & COMPONENTS



ANTI-VANDAL PUSHBUTTONS

R.series Ø16 mm

Slow-action contact	30	D1
Illuminated slow-action contact	31	D2
Snap-action contact	32	D3
Dual color, snap-action contact	33	D4

R.series Ø19 mm

Slow-action contact	34	D5
Fast-action contact	35	D6
Single snap-action contact	36	D7
Dual color, snap-action contact	37	D8

R.series Ø22 mm

Snap-action contact	38	D9
Micro-travel dual-color illuminated	39	D10

R.series Anti-vandal pushbutton Ø16 mm

Slow-action contact



ELECTRICAL SPECIFICATIONS

Switching rate max:	1th:2A Ui:36VDC
Electrical life	200 000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000V, A C50Hz, 5 seconds
Terminals type	Screw Terminal, torque max 0.2 Nm Pin Terminal (2×0.5mm)

MECHANICAL CHARACTERISTICS

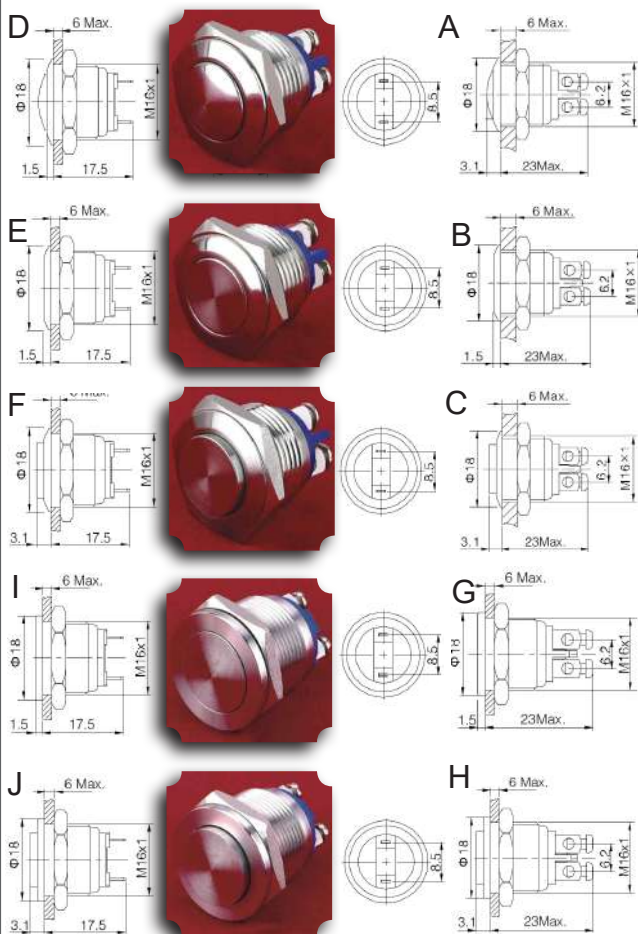
The front shape	Domed / Flush	Operation travel	About 1.5mm
Contact function:	Momentary	IK Degree	IK08
Operating temp	-20°C / +55°C	IP Degree	IP65
Mechanical lifetime	1,000,000 cycles	Contact arrangement	1NO (1NC on request)
Panel thickness	1...6mm	Head color	-
Torque	0.6 Nm	Color LED	-
Actuating force	About 4N	Lifetime LED	-

Switching Operation Slow-action contact

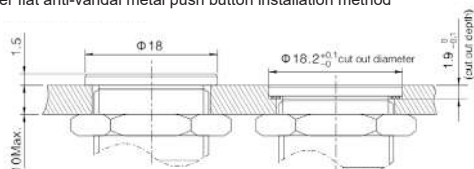
Sign



Diagram



Super flat anti-vandal metal push button installation method



Further options and information available: www.eozonline.com

NON-ILLUMINATED STANDARD PART NUMBERS

	Front shape	Material	Numbers	Draw
Pushbutton, screw terminals (ST)				
• Screw Terminal (ST)	DOMED (DF)	Stainless steel (S)	R16DFSSSTAG	A
• Screw Terminal (ST)	DOMED (DF)	Nickel plated brass (N)	R16DFNSTAG	A
• Screw Terminal (ST)	DOMED (DF)	Al alloy black (A)	R16DFFASTAG	A
• Screw Terminal (ST)	FLUSH (FF)	Stainless steel (S)	R16FFSSSTAG	B
• Screw Terminal (ST)	FLUSH (FF)	Nickel plated brass (N)	R16FFNSTAG	B
• Screw Terminal (ST)	FLUSH (FF)	Al alloy black (A)	R16FFFASTAG	B
• Screw Terminal (ST)	RAISED (FR)	Stainless steel (S)	R16FRSSSTAG	C
• Screw Terminal (ST)	RAISED (FR)	Nickel plated brass (N)	R16FRNSTAG	C
• Screw Terminal (ST)	RAISED (FR)	Al alloy black (A)	R16FRFASTAG	C
• Screw Terminal (ST)	SUPER FLUSH (PF)	Stainless steel (S)	R16PFSSSTAG	G
• Screw Terminal (ST)	SUPER FLUSH (PF)	Nickel plated brass (N)	R16PFNSTAG	G
• Screw Terminal (ST)	SUPER RAISED (PR)	Stainless steel (S)	R16PRSSSTAG	H
• Screw Terminal (ST)	SUPER RAISED (PR)	Nickel plated brass (N)	R16PRNSTAG	H
Pushbutton, pin terminal (2×0.5mm) (SP)				
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Stainless steel (S)	R16DFSSSPAG	D
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Nickel plated brass (N)	R16DFNSPAG	D
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Al alloy black (A)	R16DFASPAG	D
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Stainless steel (S)	R16FFSSSPAG	E
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Nickel plated brass (N)	R16FFNSPAG	E
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Al alloy black (A)	R16FFASPAG	E
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Stainless steel (S)	R16FRSSSPAG	F
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Nickel plated brass (N)	R16FRNSPAG	F
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Al alloy black (A)	R16FRASPAG	F
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Stainless steel (S)	R16PFSSSPAG	I
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Nickel plated brass (N)	R16PFNSPAG	I
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Stainless steel (S)	R16PRSSSPAG	J
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Nickel plated brass (N)	R16PRNSPAG	J



R.series Anti-vandal pushbutton Ø16 mm

ILLUMINATED, Slow-action contact



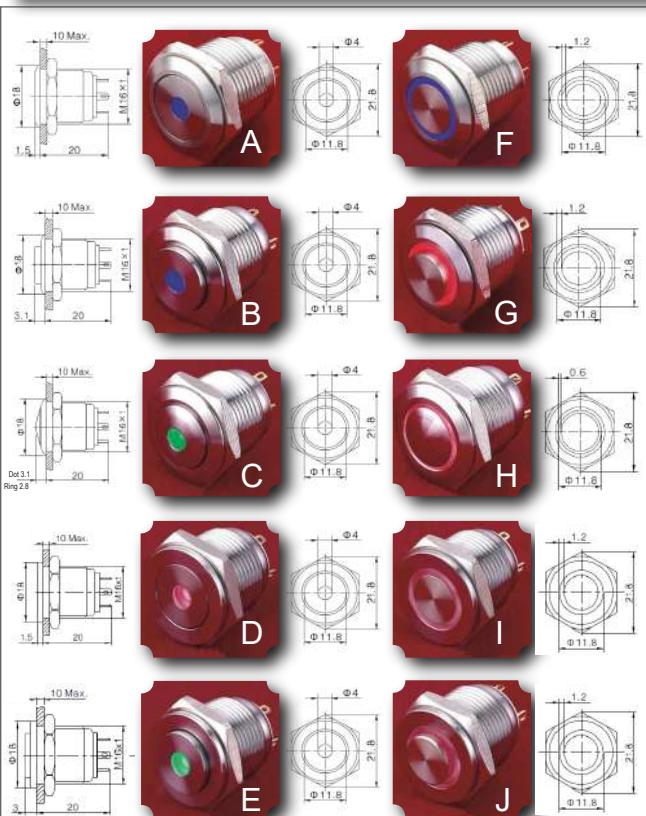
ELECTRICAL SPECIFICATIONS

Switching rate max:	1th:2A Ui:36VDC
Electrical life	200 000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000V,A C50Hz,5 seconds
Terminals type	Screw Terminal, torque max 0.2 Nm Pin Terminal (2×0.5mm)

LED color	
LED rated voltage AC/DC	1.8V 2.8V
LED rated amper	About 15mA
Contact arrangement:	1NO
Switching Operation	Slow-action contact
Double-break slow-motion contact	
Using AC/DC led lamp, the terminal will not have any difference between anode and cathode	

Resistance configuration table. External resistance

Current - Limiting	Operating Voltage(U)	6V	12V
	Colors	270Ω, 1/4W 220Ω, 1/4W	820Ω, 1/2W 680Ω, 1/2W
Formula	Operating Voltage(U)	24V	36V
	Colors	1.5kΩ, 1W 1.5kΩ, 1W	2.7kΩ, 1W 2.7kΩ, 1W

$$R = \frac{U - U_e}{I_e}$$


Further options and information available: www.eozonline.com



MECHANICAL CHARACTERISTICS

The front shape	Domed / Flush	Operation travel	About 1.5mm
Contact function:	Momentary	IK Degree	IK08
Operating temp	-20°C / +55°C	IP Degree	IP65
Mechanical lifetime	1,000,000 cycles	Contact arrangement	1NO (1NC on request)
Panel thickness	1...6mm	Head color	-
Torque	0.6 Nm	Color LED	
Actuating force	About 4N	Lifetime LED	40 000 hours

DOT ILLUMINATED STANDARD PART NUMBERS

	Front shape	Colors of LED	Material	Numbers	Draw
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Stainless steel (S)	R16FFSSPAGDR A	
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Al alloy black (A)	R16FFASPAGDR A	
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Stainless steel (S)	R16FRSSPAGDR B	
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Al alloy black (A)	R16FRASPAGDR B	
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Stainless steel (S)	R16DFSSPAGDR C	
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Al alloy black (A)	R16DFASPAGDR C	
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Stainless steel (S)	R16PFSSPAGDR D	
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Al alloy black (A)	R16PFASPAGDR D	
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Stainless steel (S)	R16PRSSPAGDR E	
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Al alloy black (A)	R16PRASPAGDR E	
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Stainless steel (S)	R16FFSSPAGDG A	
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Al alloy black (A)	R16FFASPAGDG A	
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Stainless steel (S)	R16FRSSPAGDG B	
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Al alloy black (A)	R16FRASPAGDG B	
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Stainless steel (S)	R16DFSSPAGDG C	
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Al alloy black (A)	R16DFASPAGDG C	
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Stainless steel (S)	R16PFSSPAGDG D	
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Al alloy black (A)	R16PFASPAGDG D	
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Stainless steel (S)	R16PRSSPAGDG E	
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Al alloy black (A)	R16PRASPAGDG E	
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Stainless steel (S)	R16FFSSPAGDB A	
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Al alloy black (A)	R16FFASPAGDB A	
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Stainless steel (S)	R16FRSSPAGDB B	
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Al alloy black (A)	R16FRASPAGDB B	
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Stainless steel (S)	R16DFSSPAGDB C	
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Al alloy black (A)	R16DFASPAGDB C	
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Stainless steel (S)	R16PFSSPAGDB D	
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Al alloy black (A)	R16PFASPAGDB D	
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Stainless steel (S)	R16PRSSPAGDB E	
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Al alloy black (A)	R16PRASPAGDB E	

RING ILLUMINATED STANDARD PART NUMBERS

	Front shape	Colors of LED	Material	Numbers	Draw
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Stainless steel (S)	R16FFSSPAGRR A	F
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Al alloy black (A)	R16FFASPAGRR A	F
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Stainless steel (S)	R16FRSSPAGRR B	G
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Al alloy black (A)	R16FRASPAGRR B	G
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Stainless steel (S)	R16DFSSPAGRR C	H
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Al alloy black (A)	R16DFASPAGRR C	H
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Stainless steel (S)	R16PFSSPAGRR D	I
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Al alloy black (A)	R16PFASPAGRR D	I
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Stainless steel (S)	R16PRSSPAGRR E	J
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Al alloy black (A)	R16PRASPAGRR E	J
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Stainless steel (S)	R16FFSSPAGRG A	F
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Al alloy black (A)	R16FFASPAGRG A	F
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Stainless steel (S)	R16FRSSPAGRG B	G
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Al alloy black (A)	R16FRASPAGRG B	G
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Stainless steel (S)	R16DFSSPAGRG C	H
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Al alloy black (A)	R16DFASPAGRG C	H
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Stainless steel (S)	R16PFSSPAGRG D	I
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Al alloy black (A)	R16PFASPAGRG D	I
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Stainless steel (S)	R16PRSSPAGRG E	J
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Al alloy black (A)	R16PRASPAGRG E	J
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Stainless steel (S)	R16FFSSPAGRB A	F
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)		Al alloy black (A)	R16FFASPAGRB A	F
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Stainless steel (S)	R16FRSSPAGRB B	G
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)		Al alloy black (A)	R16FRASPAGRB B	G
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Stainless steel (S)	R16DFSSPAGRB C	H
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)		Al alloy black (A)	R16DFASPAGRB C	H
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Stainless steel (S)	R16PFSSPAGRB D	I
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)		Al alloy black (A)	R16PFASPAGRB D	I
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Stainless steel (S)	R16PRSSPAGRB E	J
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)		Al alloy black (A)	R16PRASPAGRB E	J

Replace the symbol ▲ with the desired nominal voltage led below: 6v / 12v / 24v / 36v «others upon request»

D2

R.series Anti-vandal pushbutton Ø16 mm

ILLUMINATED, Snap-action contact



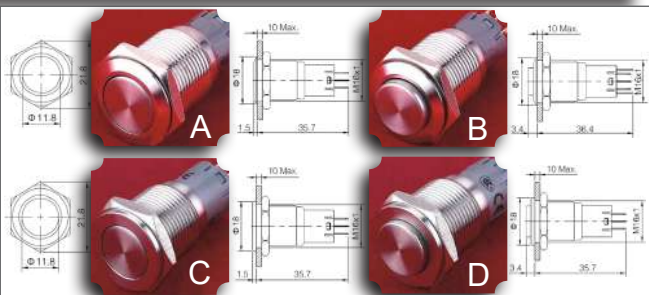
ELECTRICAL SPECIFICATIONS

Switching rate max	1th:3A Ui:250VAC
Electrical life	50 000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000V.A C50Hz,5 seconds
Terminals type	Pin Terminal(1.8×0.4mm)

LED color	R G B	colors of the led upon request	O W Y	Led circuit diagram
LED rated voltage AC/DC	6V 12V 24V 36V	110V 220V		
LED rated amper	15mA	2mA		
Contact arrangement	1NO/1NC «Available in 2NO/2NC»			
Switching Operation	Snap-action contact			

Single-break and snap-action contact

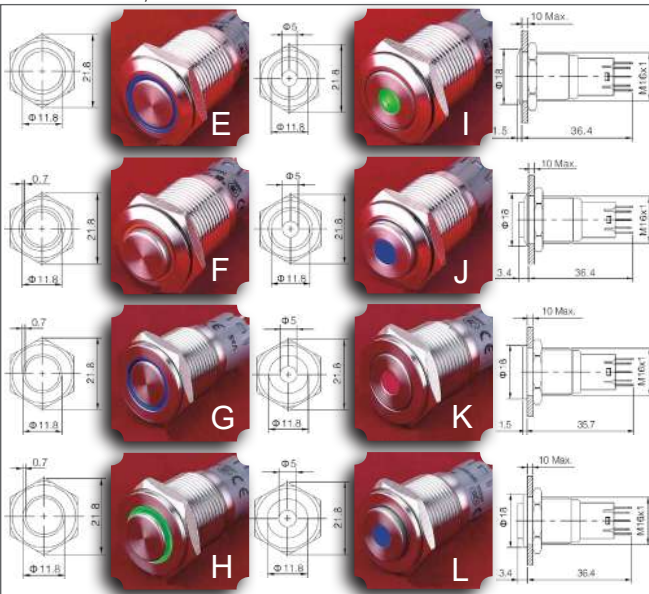
Using AC/DC led lamp, the terminal will not have any difference between anode and cathode



NON-ILLUMINATED STANDARD PART NUMBERS

Front shape	Material	Numbers	Draw
Pushbutton, MOMENTARY ACTION (G), contact 1NO/1NF			
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	Stainless steel (S)	R16FFSSP1G	A
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	Nickel plated brass (N)	R16FFNSP1G	A
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	Stainless steel (S)	R16FRSSP1G	B
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	Nickel plated brass (N)	R16FRNSP1G	B
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	Stainless steel (S)	R16PFSSP1G	C
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	Nickel plated brass (N)	R16PFNSP1G	C
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	Stainless steel (S)	R16PRSSP1G	D
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	Nickel plated brass (N)	R16PRNSP1G	D
Pushbutton, MAINTAINED ACTION (Z), contact 1NO/1NF			
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	Stainless steel (S)	R16FFSSP1Z	A
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	Nickel plated brass (N)	R16FFNSP1Z	A
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	Stainless steel (S)	R16FRSSP1Z	B
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	Nickel plated brass (N)	R16FRNSP1Z	B
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	Stainless steel (S)	R16PFSSP1Z	C
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	Nickel plated brass (N)	R16PFNSP1Z	C
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	Stainless steel (S)	R16PRSSP1Z	D
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	Nickel plated brass (N)	R16PRNSP1Z	D

Nota: 2 NC / 2NO on request



MECHANICAL CHARACTERISTICS

The front shape	Flush / Raised	Operation travel	About 2.8 mm
Contact function	Momentary / Maintained	IK Degree	IK09
Operating temp	-20°C / +55°C	IP Degree	IP67
Mechanical lifetime	200,000 cycles	Contact arrangement	1NO/1NC or 2NO/2NC
Panel thickness	1 ~ 10 mm	Head color	Local Colour
Torque	0.6 Nm	Color LED	R G B W
Actuating force	2.5 ~ 4 N	Lifetime LED	40 000 hours

DOT ILLUMINATED STANDARD PART NUMBERS

Front shape	Colors of LED	Material	Numbers	Draw
Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)				
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	R	Stainless steel (S)	R16FFSSP1GDR	I
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	R	Nickel plated brass(N)	R16FFNSP1GDR	I
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	R	Stainless steel (S)	R16FRSSP1GDR	J
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	R	Nickel plated brass(N)	R16FRNSP1GDR	J
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	R	Stainless steel (S)	R16PFSSP1GDR	K
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	R	Nickel plated brass(N)	R16PFNSP1GDR	K
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	R	Stainless steel (S)	R16PRSSP1GDR	L
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	R	Nickel plated brass(N)	R16PRNSP1GDR	L
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	G	Stainless steel (S)	R16FFSSP1GDG	I
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	G	Nickel plated brass(N)	R16FFNSP1GDG	I
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	G	Stainless steel (S)	R16FRSSP1GDG	J
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	G	Nickel plated brass(N)	R16FRNSP1GDG	J
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	G	Stainless steel (S)	R16PFSSP1GDG	K
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	G	Nickel plated brass(N)	R16PFNSP1GDG	K
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	G	Stainless steel (S)	R16PRSSP1GDG	L
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	G	Nickel plated brass(N)	R16PRNSP1GDG	L
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	B	Stainless steel (S)	R16FFSSP1GDB	I
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	B	Nickel plated brass(N)	R16FFNSP1GDB	I
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	B	Stainless steel (S)	R16FRSSP1GDB	J
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	B	Nickel plated brass(N)	R16FRNSP1GDB	J
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	B	Stainless steel (S)	R16PFSSP1GDB	K
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	B	Nickel plated brass(N)	R16PFNSP1GDB	K
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	B	Stainless steel (S)	R16PRSSP1GDB	L
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	B	Nickel plated brass(N)	R16PRNSP1GDB	L

MAINTAINED ACTION(Z) ALSO AVAILABLE

RING ILLUMINATED STANDARD PART NUMBERS

Front shape	Colors of LED	Material	Numbers	Draw
Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)				
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	R	Stainless steel (S)	R16FFSSP1GRR	E
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	R	Nickel plated brass(N)	R16FFNSP1GRR	E
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	R	Stainless steel (S)	R16FRSSP1GRR	F
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	R	Nickel plated brass(N)	R16FRNSP1GRR	F
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	R	Stainless steel (S)	R16PFSSP1GRR	G
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	R	Nickel plated brass(N)	R16PFNSP1GRR	G
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	R	Stainless steel (S)	R16PRSSP1GRR	H
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	R	Nickel plated brass(N)	R16PRNSP1GRR	H
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	G	Stainless steel (S)	R16FFSSP1GRG	E
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	G	Nickel plated brass(N)	R16FFNSP1GRG	E
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	G	Stainless steel (S)	R16FRSSP1GRG	F
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	G	Nickel plated brass(N)	R16FRNSP1GRG	F
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	G	Stainless steel (S)	R16PFSSP1GRG	G
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	G	Nickel plated brass(N)	R16PFNSP1GRG	G
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	G	Stainless steel (S)	R16PRSSP1GRG	H
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	G	Nickel plated brass(N)	R16PRNSP1GRG	H
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	B	Stainless steel (S)	R16FFSSP1GRB	E
Pin Terminal (1.8×0.4mm) (SP) FLUSH (FF)	B	Nickel plated brass(N)	R16FFNSP1GRB	E
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	B	Stainless steel (S)	R16FRSSP1GRB	F
Pin Terminal (1.8×0.4mm) (SP) RAISED (FR)	B	Nickel plated brass(N)	R16FRNSP1GRB	F
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	B	Stainless steel (S)	R16PFSSP1GRB	G
Pin Terminal (1.8×0.4mm) (SP) SUPER FLUSH (PF)	B	Nickel plated brass(N)	R16PFNSP1GRB	G
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	B	Stainless steel (S)	R16PRSSP1GRB	H
Pin Terminal (1.8×0.4mm) (SP) SUPER RAISED (PR)	B	Nickel plated brass(N)	R16PRNSP1GRB	H

MAINTAINED ACTION(Z) ALSO AVAILABLE

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»

Nota: 2 NC / 2NO upon request



R.series Anti-vandal pushbutton Ø16 mm

DUAL COLOR, Snap-action contact



ELECTRICAL SPECIFICATIONS

Switching rate max	1th:3A Ui:250VAC
Electrical life	50 000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC
Terminals type	Pin Terminal(1.8×0.4mm)

LED color	R G B	colors of the led upon request	O W Y	Led circuit diagram
LED rated voltage AC/DC	6V 12V 24V 36V	110V 220V		
LED rated amper	15mA	2mA		
Contact arrangement	1NO/1NC «Available in 2NO/2NC»			
Switching Operation	Snap-action contact			

Single-break and snap-action contact

Using AC/DC led lamp, the terminal will not have any difference between anode and cathode

MECHANICAL CHARACTERISTICS

Thefront shape	Flush / Raised	Operation travel	About 2.8 mm
Contact function	Momentary / Maintained	IK Degree	IK09
Operating temp	-20°C / +55°C	IP Degree	IP67
Mechanical lifetime	200,000 cycles	Contact arrangement	1NO/1NC or 2NO/2NC
Panel thickness	1 ~ 10 mm	Head color	-
Torque	0.6 Nm	Color LED	R G B O W Y
Actuating force	2.5 ~ 4 N	Lifetime LED	40 000 hours

DOT ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)						Numbers	Draw
Pin Terminal (SP)	Front shape	Colors of LED	Material				
Pin Terminal (SP)	FLUSH (FF)	R G	Stainless steel (S)			R16FFSSP1GDRG ▲	I
Pin Terminal (SP)	FLUSH (FF)	R G	Nickel plated brass(N)			R16FFNSP1GDRG ▲	I
Pin Terminal (SP)	RAISED (FR)	R G	Stainless steel (S)			R16FRSSP1GDRG ▲	J
Pin Terminal (SP)	RAISED (FR)	R G	Nickel plated brass(N)			R16FRNSP1GDRG ▲	J
Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Stainless steel (S)			R16PFSSP1GDRG ▲	K
Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Nickel plated brass(N)			R16PFNSP1GDRG ▲	K
Pin Terminal (SP)	SUPER RAISED (PR)	R G	Stainless steel (S)			R16PRSSP1GDRG ▲	L
Pin Terminal (SP)	SUPER RAISED (PR)	R G	Nickel plated brass(N)			R16PRNSP1GDRG ▲	L
Pin Terminal (SP)	FLUSH (FF)	G B	Stainless steel (S)			R16FFSSP1GDBG ▲	I
Pin Terminal (SP)	FLUSH (FF)	G B	Nickel plated brass(N)			R16FFNSP1GDBG ▲	I
Pin Terminal (SP)	RAISED (FR)	G B	Stainless steel (S)			R16FRSSP1GDBG ▲	J
Pin Terminal (SP)	RAISED (FR)	G B	Nickel plated brass(N)			R16FRNSP1GDBG ▲	J
Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Stainless steel (S)			R16PFSSP1GDBG ▲	K
Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Nickel plated brass(N)			R16PFNSP1GDBG ▲	K
Pin Terminal (SP)	SUPER RAISED (PR)	G B	Stainless steel (S)			R16PRSSP1GDBG ▲	L
Pin Terminal (SP)	SUPER RAISED (PR)	G B	Nickel plated brass(N)			R16PRNSP1GDBG ▲	L
Pin Terminal (SP)	FLUSH (FF)	R B	Stainless steel (S)			R16FFSSP1GDBR ▲	I
Pin Terminal (SP)	FLUSH (FF)	R B	Nickel plated brass(N)			R16FFNSP1GDBR ▲	I
Pin Terminal (SP)	RAISED (FR)	R B	Nickel plated brass(N)			R16FRNSP1GDBR ▲	J
Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Stainless steel (S)			R16PFSSP1GDBR ▲	K
Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Nickel plated brass(N)			R16PFNSP1GDBR ▲	K
Pin Terminal (SP)	SUPER RAISED (PR)	R B	Stainless steel (S)			R16PRSSP1GDBR ▲	L
Pin Terminal (SP)	SUPER RAISED (PR)	R B	Nickel plated brass(N)			R16PRNSP1GDBR ▲	L

MAINTAINED ACTION(Z) ALSO AVAILABLE

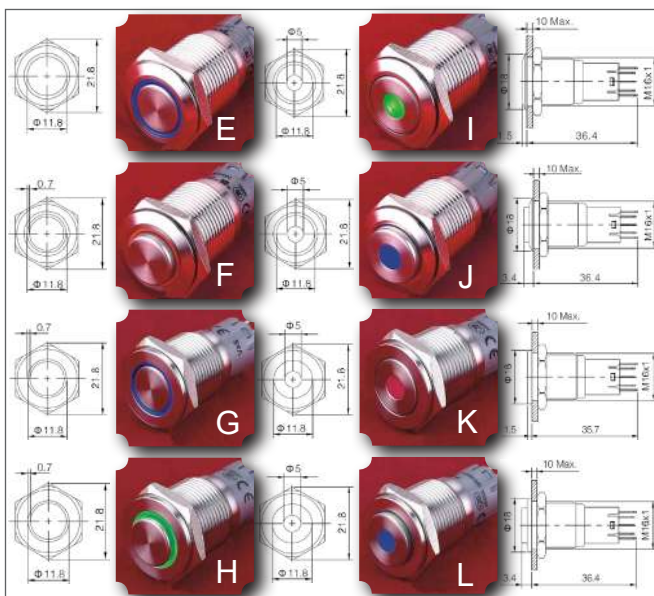
RING ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)						Numbers	Draw
Pin Terminal (SP)	Front shape	Colors of LED	Material				
Pin Terminal (SP)	FLUSH (FF)	R G	Stainless steel (S)			R16FFSSP1GRRG ▲	E
Pin Terminal (SP)	FLUSH (FF)	R G	Nickel plated brass(N)			R16FFNSP1GRRG ▲	E
Pin Terminal (SP)	RAISED (FR)	R G	Stainless steel (S)			R16FRSSP1GRRG ▲	F
Pin Terminal (SP)	RAISED (FR)	R G	Nickel plated brass(N)			R16FRNSP1GRRG ▲	F
Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Stainless steel (S)			R16PFSSP1GRRG ▲	G
Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Nickel plated brass(N)			R16PFNSP1GRRG ▲	G
Pin Terminal (SP)	SUPER RAISED (PR)	R G	Stainless steel (S)			R16PRSSP1GRRG ▲	H
Pin Terminal (SP)	SUPER RAISED (PR)	R G	Nickel plated brass(N)			R16PRNSP1GRRG ▲	H
Pin Terminal (SP)	FLUSH (FF)	G B	Stainless steel (S)			R16FFSSP1GRGB ▲	E
Pin Terminal (SP)	FLUSH (FF)	G B	Nickel plated brass(N)			R16FFNSP1GRGB ▲	E
Pin Terminal (SP)	RAISED (FR)	G B	Stainless steel (S)			R16FRSSP1GRGB ▲	F
Pin Terminal (SP)	RAISED (FR)	G B	Nickel plated brass(N)			R16FRNSP1GRGB ▲	F
Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Stainless steel (S)			R16PFSSP1GRGB ▲	G
Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Nickel plated brass(N)			R16PFNSP1GRGB ▲	G
Pin Terminal (SP)	SUPER RAISED (PR)	G B	Stainless steel (S)			R16PRSSP1GRGB ▲	H
Pin Terminal (SP)	SUPER RAISED (PR)	G B	Nickel plated brass(N)			R16PRNSP1GRGB ▲	H
Pin Terminal (SP)	FLUSH (FF)	R B	Stainless steel (S)			R16FFSSP1GRBR ▲	E
Pin Terminal (SP)	FLUSH (FF)	R B	Nickel plated brass(N)			R16FFNSP1GRBR ▲	E
Pin Terminal (SP)	RAISED (FR)	R B	Stainless steel (S)			R16FRSSP1GRBR ▲	F
Pin Terminal (SP)	RAISED (FR)	R B	Nickel plated brass(N)			R16FRNSP1GRBR ▲	F
Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Stainless steel (S)			R16PFSSP1GRBR ▲	G
Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Nickel plated brass(N)			R16PFNSP1GRBR ▲	G
Pin Terminal (SP)	SUPER RAISED (PR)	R B	Stainless steel (S)			R16PRSSP1GRBR ▲	H
Pin Terminal (SP)	SUPER RAISED (PR)	R B	Nickel plated brass(N)			R16PRNSP1GRBR ▲	H

MAINTAINED ACTION(Z) ALSO AVAILABLE

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»

Nota: 2 NC / 2NO upon request



Further options and information available: www.eozonline.com



R.series Anti-vandal pushbutton Ø19 mm

Slow-action contact



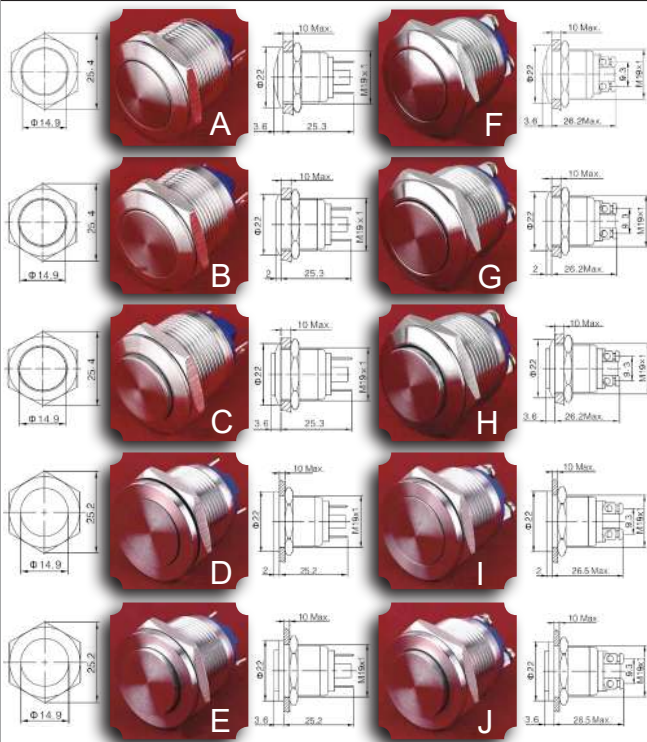
ELECTRICAL SPECIFICATIONS

Switching rate max:	1th:2A Ui: 36VDC
Electrical life	200.000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC
Terminals type	Pin terminal(2×0.5mm) Screw terminal, torque max 0.2 Nm

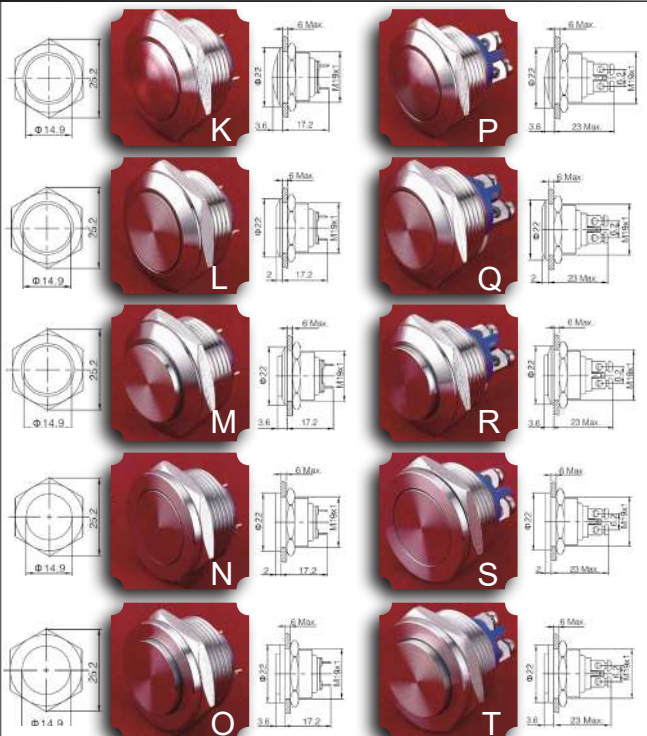
MECHANICAL CHARACTERISTICS

The front shape	Domed / Flush / Raised	Operation travel	1.8 ~ 2.5 mm
Contact function	Momentary	Actuating force	About 4N
Operating temp	-20°C / +55°C	IK Degree	IK09
Mechanical lifetime	1.000.000 cycles	IP Degree	IP65
Panel thickness	standard: 1 ~ 10 short: 1 ~ 6	Contact arrangement	1NO
Torque	0.8 Nm		

NON-ILLUMINATED STANDARD PART NUMBERS



NON-ILLUMINATED SHORT AFTERBODY PART NUMBERS



Further options and information available: www.eozonline.com

Switching Operation Slow-action contact

Sign

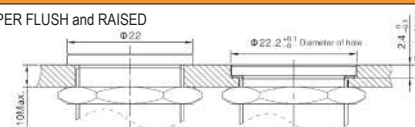
Diagram



NON-ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal (SP)	Front shape	Material	Numbers	Draw
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Stainless steel (S)	R19DFSSPAG	A
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Nickel plated brass (N)	R19DFNSPAG	A
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Al alloy black (A)	R19DFASPAG	A
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Stainless steel (S)	R19FFSSPAG	B
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Nickel plated brass (N)	R19FFNSPAG	B
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Al alloy black (A)	R19FFASPAG	B
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Stainless steel (S)	R19FRSSPAG	C
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Nickel plated brass (N)	R19FRNSPAG	C
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Al alloy black (A)	R19FRASPAG	C
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSPAG	D
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Nickel plated brass (N)	R19PFNSPAG	D
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Al alloy black (A)	R19PFASPAG	D
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Stainless steel (S)	R19PRSSPAG	E
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Nickel plated brass (N)	R19PRNSPAG	E
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Al alloy black (A)	R19PRASPAG	E
• Screw Terminal (ST)	DOMED (DF)	Stainless steel (S)	R19DFSSTAG	F
• Screw Terminal (ST)	DOMED (DF)	Nickel plated brass (N)	R19DFNSTAG	F
• Screw Terminal (ST)	DOMED (DF)	Al alloy black (A)	R19DFASTAG	F
• Screw Terminal (ST)	FLUSH (FF)	Stainless steel (S)	R19FFSSTAG	G
• Screw Terminal (ST)	FLUSH (FF)	Nickel plated brass (N)	R19FFNSTAG	G
• Screw Terminal (ST)	FLUSH (FF)	Al alloy black (A)	R19FFASTAG	G
• Screw Terminal (ST)	RAISED (FR)	Stainless steel (S)	R19FRSSTAG	H
• Screw Terminal (ST)	RAISED (FR)	Nickel plated brass (N)	R19FRNSTAG	H
• Screw Terminal (ST)	RAISED (FR)	Al alloy black (A)	R19FRASTAG	H
• Screw Terminal (ST)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSTAG	I
• Screw Terminal (ST)	SUPER FLUSH (PF)	Nickel plated brass (N)	R19PFNSTAG	I
• Screw Terminal (ST)	SUPER FLUSH (PF)	Al alloy black (A)	R19PFASTAG	I
• Screw Terminal (ST)	SUPER RAISED (PR)	Stainless steel (S)	R19PRSSTAG	J
• Screw Terminal (ST)	SUPER RAISED (PR)	Nickel plated brass (N)	R19PRNSTAG	J
• Screw Terminal (ST)	SUPER RAISED (PR)	Al alloy black (A)	R19PRASTAG	J

• Mounting drawing of R19 SUPER FLUSH and RAISED



NON-ILLUMINATED SHORT AFTERBODY PART NUMBERS

Pushbutton, pin terminal (SP)	Front shape	Material	Numbers	Draw
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Stainless steel (S)	R19DFSSP4G	K
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Nickel plated brass (N)	R19DFNSP4G	K
• Pin Terminal (2×0.5mm) (SP)	DOMED (DF)	Al alloy black (A)	R19DFASP4G	K
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Stainless steel (S)	R19FFSSP4G	L
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Nickel plated brass (N)	R19FFNSP4G	L
• Pin Terminal (2×0.5mm) (SP)	FLUSH (FF)	Al alloy black (A)	R19FFASP4G	L
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Stainless steel (S)	R19FRSSP4G	M
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Nickel plated brass (N)	R19FRNSP4G	M
• Pin Terminal (2×0.5mm) (SP)	RAISED (FR)	Al alloy black (A)	R19FRASP4G	M
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSP4G	N
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Nickel plated brass (N)	R19PFNSP4G	N
• Pin Terminal (2×0.5mm) (SP)	SUPER FLUSH (PF)	Al alloy black (A)	R19PFASP4G	N
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Stainless steel (S)	R19PRSSP4G	O
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Nickel plated brass (N)	R19PRNSP4G	O
• Pin Terminal (2×0.5mm) (SP)	SUPER RAISED (PR)	Al alloy black (A)	R19PRASP4G	O
• Screw Terminal (ST)	DOMED (DF)	Stainless steel (S)	R19DFSST4G	P
• Screw Terminal (ST)	DOMED (DF)	Nickel plated brass (N)	R19DFNST4G	P
• Screw Terminal (ST)	DOMED (DF)	Al alloy black (A)	R19DFAST4G	P
• Screw Terminal (ST)	FLUSH (FF)	Stainless steel (S)	R19FFSST4G	Q
• Screw Terminal (ST)	FLUSH (FF)	Nickel plated brass (N)	R19FFNST4G	Q
• Screw Terminal (ST)	FLUSH (FF)	Al alloy black (A)	R19FFAST4G	Q
• Screw Terminal (ST)	RAISED (FR)	Stainless steel (S)	R19FRSST4G	R
• Screw Terminal (ST)	RAISED (FR)	Nickel plated brass (N)	R19FRNST4G	R
• Screw Terminal (ST)	RAISED (FR)	Al alloy black (A)	R19FRAST4G	R
• Screw Terminal (ST)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSST4G	S
• Screw Terminal (ST)	SUPER FLUSH (PF)	Nickel plated brass (N)	R19PFNST4G	S
• Screw Terminal (ST)	SUPER FLUSH (PF)	Al alloy black (A)	R19PFASP4G	S
• Screw Terminal (ST)	SUPER RAISED (PR)	Stainless steel (S)	R19PRSST4G	T
• Screw Terminal (ST)	SUPER RAISED (PR)	Nickel plated brass (N)	R19PRNST4G	T
• Screw Terminal (ST)	SUPER RAISED (PR)	Al alloy black (A)	R19PRASP4G	T

Nota: 1NC upon request

R.series Anti-vandal pushbutton Ø19 mm

Fast-action contact



ELECTRICAL SPECIFICATIONS

Switching rate max	1th:5A Ui:250VAC
Electrical life	50 000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC, 50 Hz, 5s
Terminals type	Pin Terminal (2.8×0.5mm) Screw Terminal, torque max 0.2 Nm

LED color:		colors of the led upon request		Led circuit diagram
LED rated voltage AC/DC	6V 12V 24V 36V 110V 220V			
LED rated amper	15mA 2mA			
Switching Operation	Fast-action contact			
Double-break and fast-action contact				
Using AC/DC led lamp, the terminal will not have any difference between anode and cathode				

NON-ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal, MOMENTARY ACTION (G), contact 1NO/1NF	Front shape	Material	Numbers	Draw
• Pin Terminal (SP)	FLUSH (FF)	Stainless steel (S)	R19FFSSP3G	A
• Pin Terminal (SP)	FLUSH (FF)	Black Zn-Al alloy (A)	R19FFASP3G	A
• Screw Terminal (ST)	FLUSH (FF)	Stainless steel (S)	R19FFSST3G	H
• Screw Terminal (ST)	FLUSH (FF)	Black Zn-Al alloy (A)	R19FFAST3G	H
• Pin Terminal (SP)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSP3G	B
Pushbutton, pin terminal, MAINTAINED ACTION (Z), contact 1NO/1NF				
• Pin Terminal (SP)	FLUSH (FF)	Stainless steel (S)	R19FFSSP3Z	A
• Pin Terminal (SP)	FLUSH (FF)	Black Zn-Al alloy (A)	R19FFASP3Z	A
• Screw Terminal (ST)	FLUSH (FF)	Stainless steel (S)	R19FFSST3Z	H
• Screw Terminal (ST)	FLUSH (FF)	Black Zn-Al alloy (A)	R19FFAST3Z	H
• Pin Terminal (SP)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSP3Z	B

MECHANICAL CHARACTERISTICS

The front shape	Flush	Operation travel	About 2.5 mm
Contact function	Momentary / Maintained	IK Degree	IK09
Operating temp	-20°C / +55°C	IP Degree	IP65
Mechanical lifetime	1,000,000 cycles	Contact arrangement	1NO/1NC
Panel thickness	1 ~ 10 mm	Head color	-
Torque	0.8 Nm	Color LED	
Actuating force	About 4N	Lifetime LED	40 000 hours

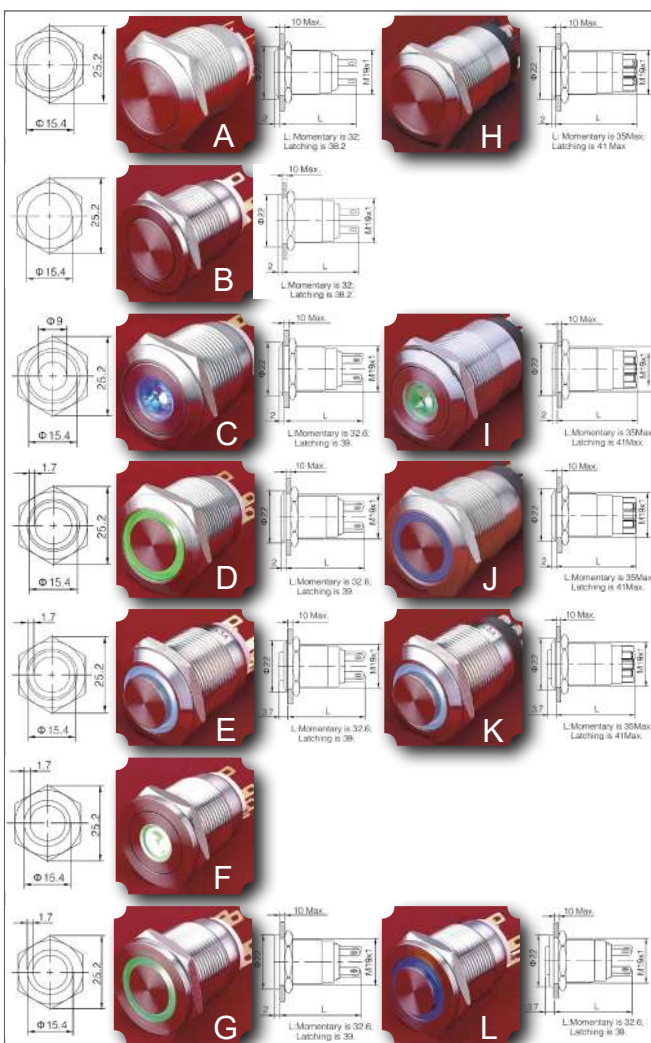
DOT ILLUMINATED STANDARD PART NUMBERS

Pushbutton, MOMENTARY ACTION (G)	Front shape	Colors of LED	Numbers of The Crust Material	Draw
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAGDR▲ R19FFASPAGDR▲	C
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAGDR▲	I
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAGDR▲	F
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAGDG▲ R19FFASPAGDG▲	C
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAGDG▲	I
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAGDG▲	F
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAGDB▲ R19FFASPAGDB▲	C
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAGDB▲	I
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAGDB▲	F
Pushbutton, MAINTAINED ACTION (Z)				
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAZDR▲ R19FFASPAZDR▲	C
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAZDR▲	I
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAZDR▲	F
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAZDG▲ R19FFASPAZDG▲	C
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAZDG▲	I
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAZDG▲	F
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAZDB▲ R19FFASPAZDB▲	C
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAZDB▲	I
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAZDB▲	F

RING ILLUMINATED STANDARD PART NUMBERS

Pushbutton, MOMENTARY ACTION (G)	Front shape	Colors of LED	Numbers of The Crust Material	Draw
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAGRR▲ R19FFASPAGRR▲	D
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAGRR▲	J
• Pin Terminal (SP)	RAISED (FR)		R19FRSSPAGRR▲ R19FRASPAGRR▲	E
• Screw Terminal (ST)	RAISED (FR)		R19FRSSTAGRR▲ R19FRASTAGRR▲	K
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAGRR▲	G
• Pin Terminal (SP)	SUPER RAISED (PR)		R19PRSSPAGRR▲	L
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAGRG▲ R19FFASPAGRG▲	D
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAGRG▲	J
• Pin Terminal (SP)	RAISED (FR)		R19FRSSPAGRG▲ R19FRASPAGRG▲	E
• Screw Terminal (ST)	RAISED (FR)		R19FRSSTAGRG▲ R19FRASTAGRG▲	K
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAGRG▲	G
• Pin Terminal (SP)	SUPER RAISED (PR)		R19PRSSPAGRG▲	L
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAGRB▲ R19FFASPAGRB▲	D
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAGRB▲	J
• Pin Terminal (SP)	RAISED (FR)		R19FRSSPAGRB▲ R19FRASPAGRB▲	E
• Screw Terminal (ST)	RAISED (FR)		R19FRSSTAGRB▲ R19FRASTAGRB▲	K
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAGRB▲	G
• Pin Terminal (SP)	SUPER RAISED (PR)		R19PRSSPAGRB▲	L
Pushbutton, MAINTAINED ACTION (Z)				
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAZRR▲ R19FFASPAZRR▲	D
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAZRR▲	J
• Pin Terminal (SP)	RAISED (FR)		R19FRSSPAZRR▲ R19FRASPAZRR▲	E
• Screw Terminal (ST)	RAISED (FR)		R19FRSSTAZRR▲ R19FRASTAZRR▲	K
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAZRR▲	G
• Pin Terminal (SP)	SUPER RAISED (PR)		R19PRSSPAZRR▲	L
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAZRG▲ R19FFASPAZRG▲	D
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAZRG▲	J
• Pin Terminal (SP)	RAISED (FR)		R19FRSSPAZRG▲ R19FRASPAZRG▲	E
• Screw Terminal (ST)	RAISED (FR)		R19FRSSTAZRG▲ R19FRASTAZRG▲	K
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAZRG▲	G
• Pin Terminal (SP)	SUPER RAISED (PR)		R19PRSSPAZRG▲	L
• Pin Terminal (SP)	FLUSH (FF)		R19FFSSPAZRB▲ R19FFASPAZRB▲	D
• Screw Terminal (ST)	FLUSH (FF)		R19FFSSTAZRB▲	J
• Pin Terminal (SP)	RAISED (FR)		R19FRSSPAZRB▲ R19FRASPAZRB▲	E
• Screw Terminal (ST)	RAISED (FR)		R19FRSSTAZRB▲ R19FRASTAZRB▲	K
• Pin Terminal (SP)	SUPER FLUSH (PF)		R19PFSSPAZRB▲	G
• Pin Terminal (SP)	SUPER RAISED (PR)		R19PRSSPAZRB▲	L

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»



D6

R.series Anti-vandal pushbutton Ø19 mm

ILLUMINATED, Snap-action contact



ELECTRICAL SPECIFICATIONS

Switching rate max:	lth:5A Ui: 250VDC
Electrical life	50.000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC
Terminals type	Pin terminal(2.8×0.5mm)

MECHANICAL CHARACTERISTICS

The front shape	Flush / Raised ...	Operation travel	~ 3.1mm
Contact function	Momentary/Maintained	Actuating force	About 2.5 ~ 4N
Operating temp	-20°C / +55°C	IK Degree	IK09
Mechanical lifetime	1.000.000 cycles	IP Degree	IP67
Panel thickness	standard: 1 ~ 10 mm	Contact arrangement	1NO / 1NC
Torque	0.8 Nm	Lifetime LED	40 000 hours

DOT ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)	Front shape	Colors of LED	Material	Numbers	Draw
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Red (R)	Stainless steel (S)	R19FFSSP1GDR ▲	D
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Red (R)	Nickel plated brass(N)	R19FFNSP1GDR ▲	D
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Red (R)	Al alloy black (A)	R19FFASP1GDR ▲	D
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Red (R)	Stainless steel (S)	R19PFSSP1GDR ▲	F
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Red (R)	Nickel plated brass(N)	R19PFNSP1GDR ▲	F
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Green (G)	Stainless steel (S)	R19FFSSP1GDG ▲	D
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Green (G)	Nickel plated brass(N)	R19FFNSP1GDG ▲	D
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Green (G)	Al alloy black (A)	R19FFASP1GDG ▲	D
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Green (G)	Stainless steel (S)	R19PFSSP1GDG ▲	F
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Green (G)	Nickel plated brass(N)	R19PFNSP1GDG ▲	F
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Blue (B)	Stainless steel (S)	R19FFSSP1GDB ▲	D
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Blue (B)	Nickel plated brass(N)	R19FFNSP1GDB ▲	D
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Blue (B)	Al alloy black (A)	R19FFASP1GDB ▲	D
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Blue (B)	Stainless steel (S)	R19PFSSP1GDB ▲	F
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Blue (B)	Nickel plated brass(N)	R19PFNSP1GDB ▲	F

MAINTAINED ACTION(Z) ALSO AVAILABLE

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»

Nota: 2 NC / 2NO upon request

RING ILLUMINATED STANDARD PART NUMBERS

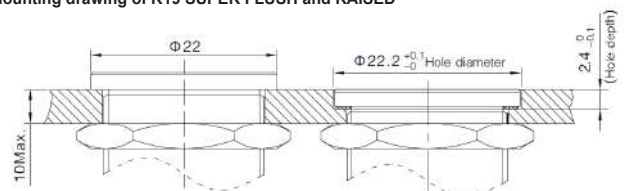
Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)	Front shape	Colors of LED	Material	Numbers	Draw
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Red (R)	Stainless steel (S)	R19FFSSP1GRR ▲	C
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Red (R)	Nickel plated brass(N)	R19FFNSP1GRR ▲	C
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Red (R)	Al alloy black (A)	R19FFASP1GRR ▲	C
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Red (R)	Stainless steel (S)	R19PFSSP1GRR ▲	E
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Red (R)	Nickel plated brass(N)	R19PFNSP1GRR ▲	E
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Green (G)	Stainless steel (S)	R19FFSSP1GRG ▲	C
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Green (G)	Nickel plated brass(N)	R19FFNSP1GRG ▲	C
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Green (G)	Al alloy black (A)	R19FFASP1GRG ▲	C
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Green (G)	Stainless steel (S)	R19PFSSP1GRG ▲	E
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Green (G)	Nickel plated brass(N)	R19PFNSP1GRG ▲	E
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Blue (B)	Stainless steel (S)	R19FFSSP1GRB ▲	C
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Blue (B)	Nickel plated brass(N)	R19FFNSP1GRB ▲	C
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Blue (B)	Al alloy black (A)	R19FFASP1GRB ▲	C
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Blue (B)	Stainless steel (S)	R19PFSSP1GRB ▲	E
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Blue (B)	Nickel plated brass(N)	R19PFNSP1GRB ▲	E

MAINTAINED ACTION(Z) ALSO AVAILABLE

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»

Nota: 2 NC / 2NO upon request

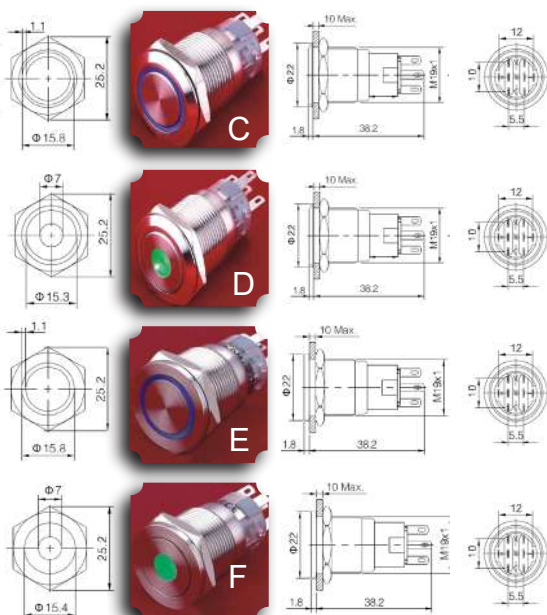
Mounting drawing of R19 SUPER FLUSH and RAISED



NON-ILLUMINATED STANDARD PART NUMBERS

Pushbutton, MOMENTARY ACTION (G), contact 1NO/1NF	Front shape	Material	Numbers	
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Stainless steel (S)	R19FFSSP1G	A
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Nickel plated brass (N)	R19FFNSP1G	A
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Al alloy black (A)	R19FFASP1G	A
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSP1G	B
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Nickel plated brass (N)	R19PFNSP1G	B
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Al alloy black (A)	R19PFASP1G	B
Pushbutton, MAINTAINED ACTION (Z), contact 1NO/1NF				
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Stainless steel (S)	R19FFSSP1Z	A
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Nickel plated brass (N)	R19FFNSP1Z	A
• Pin Terminal (2.8×0.5mm) (SP) FLUSH (FF)	FLUSH (FF)	Al alloy black (A)	R19FFASP1Z	A
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Stainless steel (S)	R19PFSSP1Z	B
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Nickel plated brass (N)	R19PFNSP1Z	B
• Pin Terminal (2.8×0.5mm) (SP) SUPER FLUSH (PF)	SUPER FLUSH (PF)	Al alloy black (A)	R19PFASP1Z	B

LED color	Colors of the led upon request	LED circuit diagram
LED rated voltage AC/DC	6V 12V 24V 110V 220V	
LED rated amper	15mA 2mA	
Contact arrangement	1NO/1NC «Available in 2NO/2NC»	
Switching Operation	Snap-action contact	
Single-break and snap-action contact		
Using AC/DC led lamp, the terminal will not have any difference between anode and cathode		



Further options and information available: www.eozonline.com

R.series Anti-vandal pushbutton Ø19 mm

DUAL COLOR, Snap-action contact



ELECTRICAL SPECIFICATIONS

Switching rate max	Ith:3A Ui:250VAC
Electrical life	50 000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC, 50 Hz, 5s
Terminals type	Pin Terminal (2.8×0.5mm)

MECHANICAL CHARACTERISTICS

The front shape	Flush / raised	Operation travel	About 3.1 mm
Contact function	Momentary / Maintained	IK Degree	IK09
Operating temp	-20°C / +55°C	IP Degree	IP67
Mechanical lifetime	1,000,000 cycles	Contact arrangement	1NO/1NC
Panel thickness	1 ~ 10 mm	Head color	-
Torque	0.8 Nm	Color LED	R G B Y W
Actuating force	2.5 ~ 4 N	Lifetime LED	40 000 hours

LED color	R G B	colors of the led upon request	O W Y	Led circuit diagram
LED rated voltage AC/DC	6V 12V 24V 36V	110V 220V		
LED rated amper	15mA	2mA		
Contact arrangement	1NO/1NC «Available in 2NO/2NC»			
Switching Operation	Snap-action contact			

Single-break and snap-action contact

Using AC/DC led lamp, the terminal will not have any difference between anode and cathode

DOT ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)						Draw
	Front shape	Colors of LED	Material	Numbers		
• Pin Terminal (SP)	FLUSH (FF)	R G	Stainless steel (S)	R19FFSSP1GDR▲	B	
• Pin Terminal (SP)	FLUSH (FF)	R G	Nickel plated brass(N)	R19FFNSP1GDR▲	B	
• Pin Terminal (SP)	FLUSH (FF)	R G	Al alloy black (A)	R19FFASP1GDR▲	B	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Stainless steel (S)	R19PFSSP1GDR▲	D	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Nickel plated brass(N)	R19PFNSP1GDR▲	D	
• Pin Terminal (SP)	FLUSH (FF)	G B	Stainless steel (S)	R19FFSSP1GDB▲	B	
• Pin Terminal (SP)	FLUSH (FF)	G B	Nickel plated brass(N)	R19FFNSP1GDB▲	B	
• Pin Terminal (SP)	FLUSH (FF)	G B	Al alloy black (A)	R19FFASP1GDB▲	B	
• Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Stainless steel (S)	R19PFSSP1GDB▲	D	
• Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Nickel plated brass(N)	R19PFNSP1GDB▲	D	
• Pin Terminal (SP)	FLUSH (FF)	R B	Stainless steel (S)	R19FFSSP1GDB▲	B	
• Pin Terminal (SP)	FLUSH (FF)	R B	Al alloy black (A)	R19FFASP1GDB▲	B	
• Pin Terminal (SP)	FLUSH (FF)	R B	Nickel plated brass(N)	R19FFNSP1GDB▲	B	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Stainless steel (S)	R19PFSSP1GDB▲	D	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Nickel plated brass(N)	R19PFNSP1GDB▲	D	

MAINTAINED ACTION(Z) ALSO AVAILABLE

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»

Nota: 2 NC / 2NO upon request

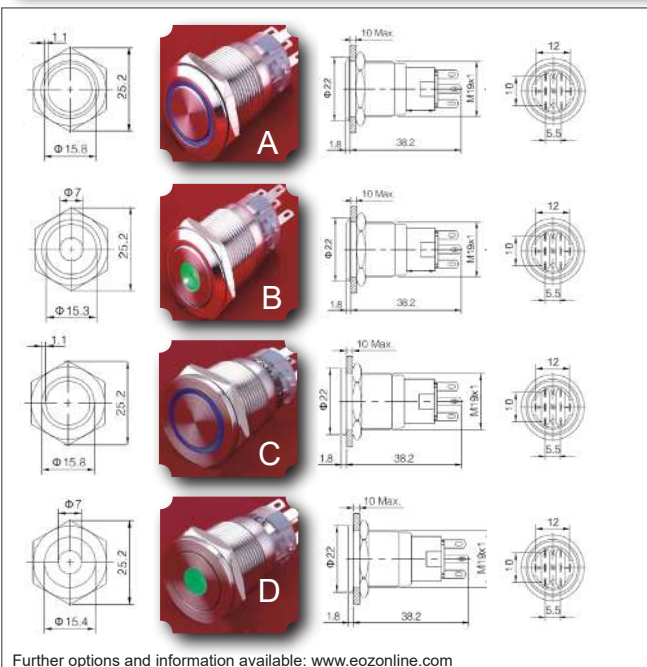
RING ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal, 1NO/1NC, MOMENTARY ACTION (G)						Draw
	Front shape	Colors of LED	Material	Numbers		
• Pin Terminal (SP)	FLUSH (FF)	R G	Stainless steel (S)	R19FFSSP1GRR▲	A	
• Pin Terminal (SP)	FLUSH (FF)	R G	Nickel plated brass(N)	R19FFNSP1GRR▲	A	
• Pin Terminal (SP)	FLUSH (FF)	R G	Al alloy black (A)	R19FFASP1GRR▲	A	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Stainless steel (S)	R19PFSSP1GRR▲	C	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R G	Nickel plated brass(N)	R19PFNSP1GRR▲	C	
• Pin Terminal (SP)	FLUSH (FF)	G B	Stainless steel (S)	R19FFSSP1GRGB▲	A	
• Pin Terminal (SP)	FLUSH (FF)	G B	Nickel plated brass(N)	R19FFNSP1GRGB▲	A	
• Pin Terminal (SP)	FLUSH (FF)	G B	Al alloy black (A)	R19FFASP1GRGB▲	A	
• Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Stainless steel (S)	R19PFSSP1GRGB▲	C	
• Pin Terminal (SP)	SUPER FLUSH (PF)	G B	Nickel plated brass(N)	R19PFNSP1GRGB▲	C	
• Pin Terminal (SP)	FLUSH (FF)	R B	Stainless steel (S)	R19FFSSP1GRB▲	A	
• Pin Terminal (SP)	FLUSH (FF)	R B	Nickel plated brass(N)	R19FFNSP1GRB▲	A	
• Pin Terminal (SP)	FLUSH (FF)	R B	Al alloy black (A)	R19FFASP1GRB▲	A	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Stainless steel (S)	R19PFSSP1GRB▲	C	
• Pin Terminal (SP)	SUPER FLUSH (PF)	R B	Nickel plated brass(N)	R19PFNSP1GRB▲	C	

MAINTAINED ACTION(Z) ALSO AVAILABLE

Replace the symbol ▲ with the desired nominal voltage led below:
6v / 12v / 24v / 110v / 220v «others upon request»

Nota: 2 NC / 2NO upon request



Further options and information available: www.eozonline.com



D8

R.series Anti-vandal pushbutton Ø22 mm

Snap-action contact



ELECTRICAL SPECIFICATIONS

Switching rate max:	1th:5A Ui:250VAC
Electrical life	50,000 cycles
Contact resistance	≤50mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC
Terminals type	Pin Terminal (2.8×0.5mm)

LED color:	R G B	colors of the led upon request	O W Y	Led circuit diagram
LED rated voltage AC/DC	6V 12V 24V 36V	110V 220V		
LED rated amper	15mA	2mA		
Contact arrangement	1NO/1NC			
Switching Operation	Snap-action contact			

Double-break and snap-action contact

Using AC/DC led lamp, the terminal will not have any difference between anode and cathode

NON-ILLUMINATED STANDARD PART NUMBERS

Front shape	Contact	Material	Numbers	Draw
Pushbutton, pin terminal, MOMENTARY ACTION (G)				
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAG	A
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAG	B
Pushbutton, pin terminal, MAINTAINED ACTION (Z)				
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZ	A
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZ	B

MECHANICAL CHARACTERISTICS

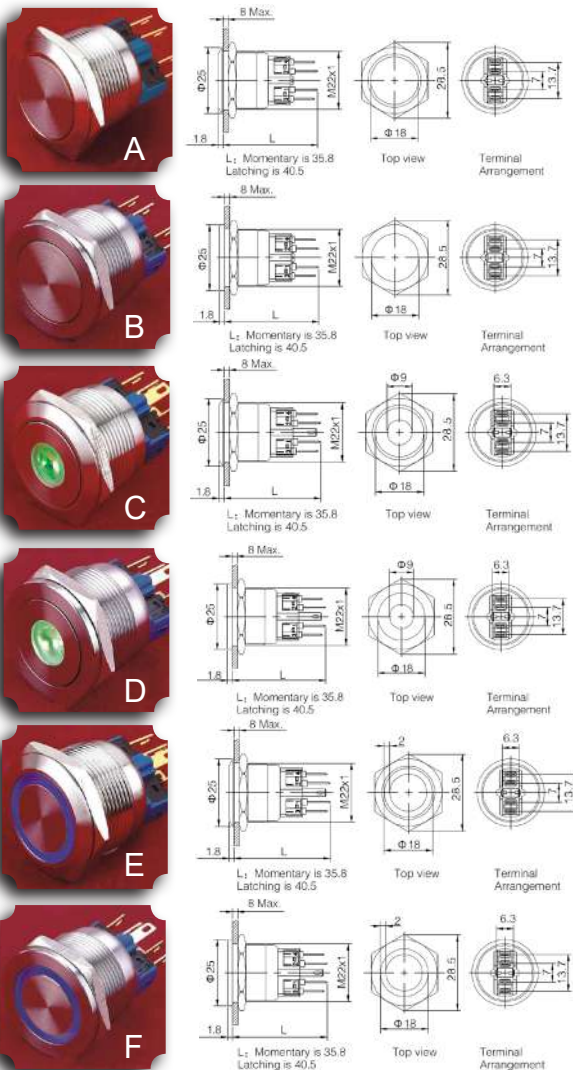
The front shape	Flush	Operation travel	About 2.8 mm
Contact function	Momentary / Maintained	IK Degree	IK10
Operating temp	-20°C / +55°C	IP Degree	IP67
Mechanical lifetime	1,000,000 cycles	Contact arrangement	1NO/1NC
Panel thickness	1 ~ 8mm	Head color	-
Torque	1 Nm	Color LED	R G B O W Y
Actuating force	About 4N	Lifetime LED	40 000 hours

DOT ILLUMINATED STANDARD PART NUMBERS

Front shape	Contact	Material	Numbers	Draw
Pushbutton, pin terminal, MOMENTARY ACTION (G)				
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAGDR	C
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAGDG	C
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAGDB	C
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAGDR	D
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAGDG	D
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAGDB	D
Pushbutton, pin terminal, MAINTAINED ACTION (Z)				
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZDR	C
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZDG	C
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZDB	C
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZDR	D
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZDG	D
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZDB	D

RING ILLUMINATED STANDARD PART NUMBERS

Front shape	Contact	Material	Numbers	Draw
Pushbutton, pin terminal, MOMENTARY ACTION (G)				
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAGR	C
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAGRG	C
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAGRB	C
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAGR	D
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAGRG	D
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAGRB	D
Pushbutton, pin terminal, MAINTAINED ACTION (Z)				
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZR	E
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZRG	E
Pin Terminal (SP) FLUSH (FF)	1NO/1NC	Stainless steel (S)	R22FFSSPAZRB	E
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZR	F
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZRG	F
Pin Terminal (SP) SUPER FLUSH (PF)	1NO/1NC	Stainless steel (S)	R22PFSSPAZRB	F



Further options and information available: www.eozonline.com



THESE MODELS ARE ALSO AVAILABLE IN Ø25, Ø28 and Ø30 mm.
PLEASE CONTACT FOR MORE INFORMATION

R.series Anti-vandal pushbutton Ø22 mm

MICRO-TRAVEL dual-color illuminated



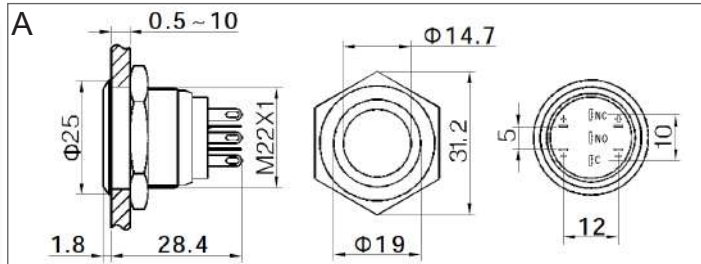
ELECTRICAL SPECIFICATIONS

Switching rate max	1A/125VAC, 0.5A/250VAC
Electrical life	300,000 cycles
Contact resistance	≤30mΩ
Insulation resistance	≥1000MΩ
Dielectric strength	2000VAC
Terminals type	Pin Terminal(2.4×0.3mm)

MECHANICAL CHARACTERISTICS

The front shape	Flush	Operation travel	About 0.5mm
Contact function	Momentary	IK Degree	IK09
Operating temp	-20°C / +55°C	IP Degree	IP67
Mechanical lifetime	1,000,000 cycles	Contact arrangement	1NO/1NC
Panel thickness	1 ~ 10mm	Head color	-
Torque	0.8 Nm	Color LED	R G Y O B W
Actuating force	About 15N	Lifetime LED	40 000 hours

LED color	R G B	colors of the led upon request	O W Y	Led circuit diagram
LED rated voltage AC/DC	6V	12V 24V	110V 220V	
LED rated amper	15mA		5mA	
Contact arrangement	1NO/1NC NO — NC —		 (LED1) (LED2)	
Switching Operation				
single-break fast-motion changeover contact				
Using AC/DC led lamp, the terminal will not have any difference between anode and cathode				



Flame display



- Micro-travel, nice operating hand feeling;
- Using inner switch module, reliable and sensitive connection;
- Using two lamps; have many LED color to recognize different signal. The same color flame in crescent ring, the different color can generate third mixed flame color at the blending place.
- Used for low-current circuit to control the on-off signal of electronic logic circuit.

RING ILLUMINATED STANDARD PART NUMBERS

Pushbutton, pin terminal (2.8×0.5mm), MOMENTARY ACTION (G)					
	Front shape	Colors of LED		Material	Numbers
• Pin Terminal (SP)	FLUSH (FF)	1NO/1NC	 	Stainless steel (S)	R22FFSSPAGMR 
• Pin Terminal (SP)	FLUSH (FF)	1NO/1NC	 	Stainless steel (S)	R22FFSSPAGMRG 
• Pin Terminal (SP)	FLUSH (FF)	1NO/1NC	 	Stainless steel (S)	R22FFSSPAGMG 

Replace the symbol ▲ with the desired nominal voltage led below: 6v / 12v / 24v / 110v / 220v «others upon request»

Information

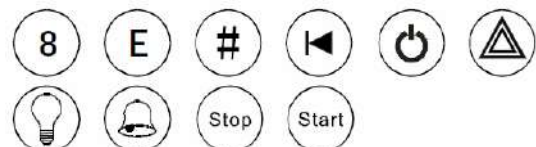
The Notice for Pin Welding

Any incorrect welding operations all possibly cause damage to plastic deformation, bad-contact switch ect. When soldering the pinterminals of switches and signal lamps, we should pay attention to the following points. Because it's easy to have the switch damaged if improper-operation.

- 1.Using suitable electric soldering iron and quickening welding speed. We suggest you use 30Welectric soldering iron and finish within 2 seconds when it reaches 320 .
- 2.Using right amount of scaling powder and putting the pin-terminals downwards when soldering.
- 3.It's better to use connectors than direct welding.

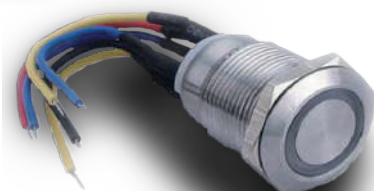
Customized Symbol Laser engraving

It has been the trend to laser engrave character and sign or customize lighting character and sign on the surface of metal push button. Customized metal surface makes the product personalized, and it has been a new trend.



Another symbol upon request or on the website eozonline.com

Customize the connection



Customize outside color



D10



EOZ

SOLUTIONS & COMPONENTS



VIGITHERME

VIGITHERME

V 12 series	41	E1
V 16 & V 16 BO series	41	E2
Compatible fixing	42	
Compatible cabling	43	
Compatible moulding	44	
V 23 & V 24 series	45	E3
V 3 & V 4 series	46	E4
PT100 & PT1000 sensors	47	E5

V 12 series

HEITO



The Vigitherme V 12 is a model with very small dimensions. It comes in the form of a hexagonal nickel-plated brass case, 8mm in width, ending in an ISO threaded pitch of 4mm. Sections under tension are insulated. Switching power is 1A under 48V. Fixed contact and moving contact are both in solid gold. Contact can be at opening (O) or closing (F). It is connected by two gold-plated plugs 0,8mm in width, by soldering or by standard female plug.

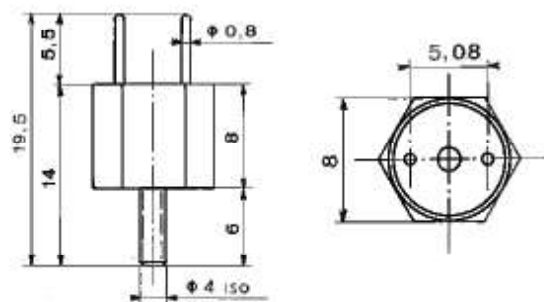
The Vigitherme V 12 is a top of the range model intended for demanding applications where the size parameters are essential. It is used particularly in aeronautical and military fields.

TECHNICAL SPECIFICATIONS

Temperature range	-40°C to +180°C
Current rating	1 A
Voltage rating	48 V
Types of contacts	opening – closing
Composition of contacts	solid gold
Voltage proof between terminations and ground	500 V DC
Contact resistance	± 10 mΩ
Connection	0.8 mm width golden plug
Maximum operating temperature	+ 200°C

DIMENSIONS

Technical drawing



The restoring temperature, if it is specified, must be at least 5° below the operating temperature. The standard tolerance is ± 3° up to 130° and ± 5° above.

V 16 & V 16 BO series

APPROVALS : NFC93450 – UL873

HEITO

The Vigitherme V 16 comes in a cylindrical case PPS Ryton, terminating in a stainless steel cover cup. The bi-metallic disc is located behind this cover cup which thus constitutes the temperature-sensitive portion. Sections under tension are insulated. Switching power is 6 A under 250 V. Contact can be at Opening (O) or Closing (F). The two outlet terminals can receive 2,8mm clips or be soldered.

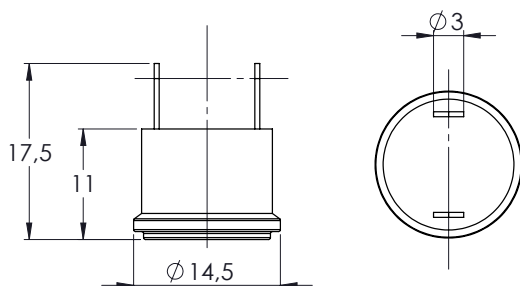
M16 BO WITH MANUAL REACTIVATION :

In the V 16 BO the contact opens by temperature increase but it does not close after cooling. To close it again it is necessary to press the white button located in the middle.



DIMENSIONS

Technical drawing



TECHNICAL SPECIFICATIONS

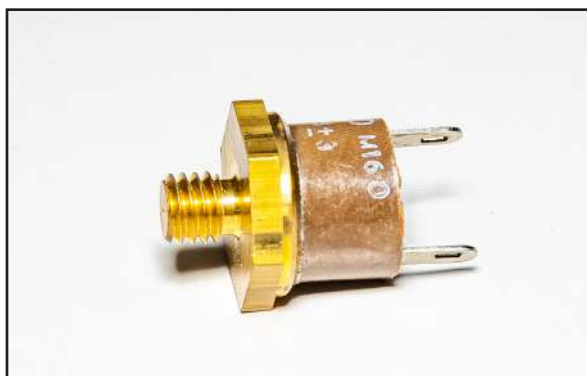
	Vigitherme 16	Vigitherme 16 BO
Temperature range	-40°C to +180°C	30°C to +180°C
Current rating	6 A	10 A
Voltage rating	250 V	250 V
Types of contacts	opening – closing	opening
Composition of contacts	solid silver	solid silver
Voltage proof between terminations and ground	4 000 V AC	4 000 V AC
Contact resistance	≈ 10 mΩ	≈ 10 mΩ
Connection	terminal for 2.8 mm clips – can also be soldered	
Maximum operating temperature	+ 200°C	+ 200°C

E1

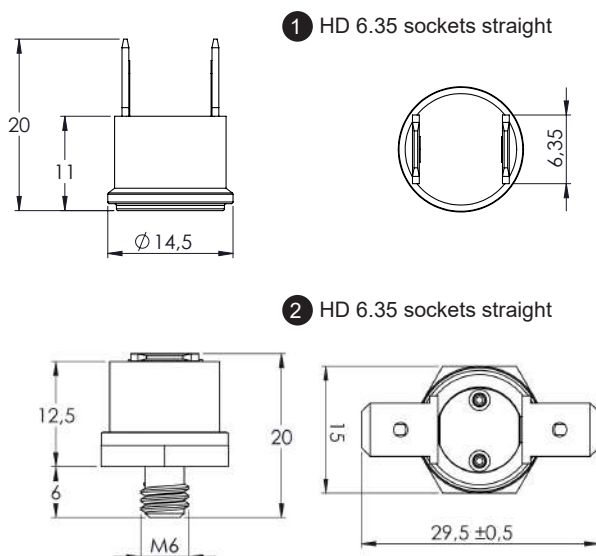
V 16 & V 16 BO series

COMPATIBLE FIXING

HEITO



DIMENSIONS Technical drawing



SOCKETS FOR CLIPS OF 6,35 mm

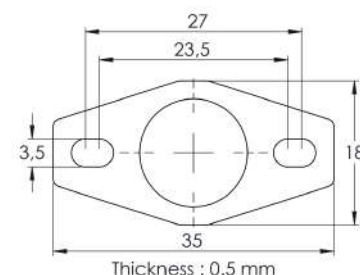
The Vigitherme V 16 can be equipped, in option, of sockets able to receive clips of 6,35 mm. Please add the following option to the reference on order:

- 1 HD for upright vertical sockets
- 2 HC for horizontal sockets



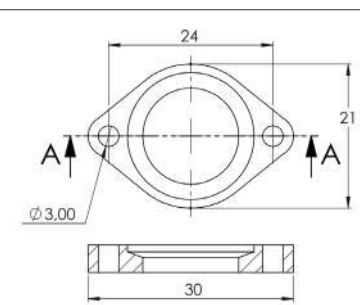
V34 SUPPORT

The Vigitherme V 16 can be fixed on a flat surface by two screws with the help of a stainless V34 steel plate. For using in the air, it can also be held between two V34 plates.



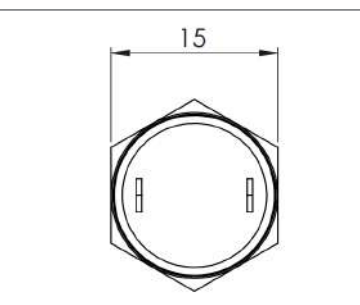
V38 SUPPORT

A high temperature nylon flange which allows attachment of the Vigitherme onto a flat surface by mean of two screws.



V6 THREADED BASE

Any Vigitherme V 16 can be mounted on to a V6 threaded base, consisting of a 15 mm wide hexagonal support in stainless steel or brass with a threaded end – 6 mm in width and 6 mm in standard length. Any other different dimension of the threaded end can be used on request.



STORAGE LOW TEMPERATURE:

The Vigitherme V 16 can be specified to withstand a storage temperature of -55°C. Please add the mention K4 on order.

V 16 & V 16 BO series

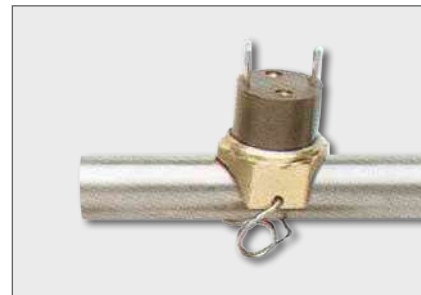
COMPATIBLE FIXING

HEITO

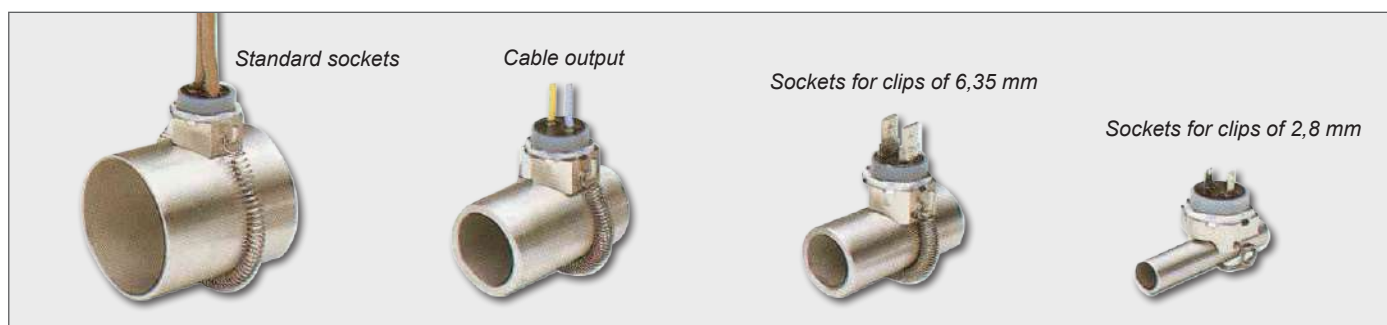


C MOUNTING ON PIPE

To insulate a Vigitherme and ensure its fixity on a pipe, it can be mounted on a brass support which base can be curved to fit the pipe diameter.



There are several connection possibilities:



V 16 & V 16 BO series

COMPATIBLE CABLING

HEITO

The V16 Vigitherme can be provided cabled with two separated wires or a two or four conductors cable. The length must be specified in the order.

2 Wires :

ETFE : 0.22 mm² or 0.34 mm² (-55° +150°C)

SILICON : 0.6 mm² (-60° + 180°C)

PTFE : 0.5 mm² or 0.9 mm² (-90° +200°C)

2 Conductors cable :

Silicon : 2 x 0.5mm² or 2 x 1.5 mm² (-60° + 180°C)

4 Conductor cable :

Silicon 4 x 0.75 mm² (-60 + 180°C)



P11 PROTECTIV HOOD

This is a black rubber polychloroprene hood which protects and insulate the terminals of an V16 Vigitherme.

Bore of the cables-through orifice: 6,7 mm²



P12 PROTECTIVE HOOD

This is a black rubber polychloroprene hood which protects and insulate the terminals of an V16 Vigitherme.

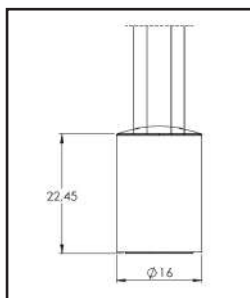
Bore of the cables-through orifice: 4 mm²



V 16 & V 16 BO series

COMPATIBLE MOULDINGS

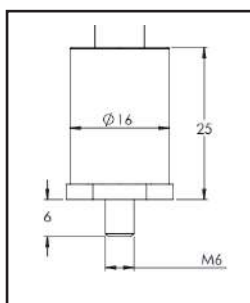
HEITO



A1

To ensure both perfect insulation and absolute tightness, the Vigitherme can be cased in an epoxy resin. The standard A1 moulding is a cylinder and its dimensions are the following :

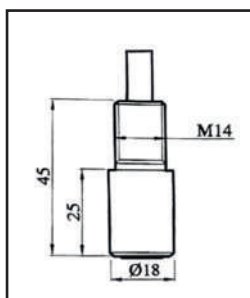
Height: 22.45 mm
Diameter: 16 mm



V6 - A1

The A1 moulding can be made on a Vigitherme M16 with a V6 threaded base. Dimensions of the cylindrical part are :

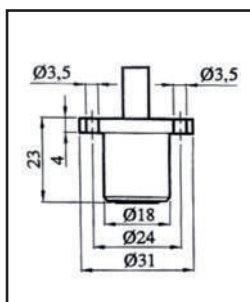
Height: 23 mm
Diameter: 16 mm



A2

The A2 moulding enables heat control for fluids and can be fixed through a wall.

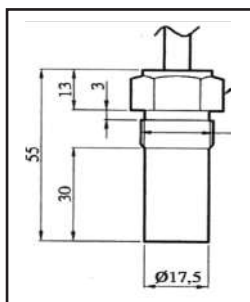
Total height: 45 mm
Diameter: 18 mm
Thread diameter: 14 mm



A3

The A3 enables ambient heat control inside an enclosure and can be directly wall-mounted.

Total height: 23 mm
Diameter: 18 mm
Fixing holes centre distance: 24 mm



A5

The A5 moulding is designed for the monitoring of the temperature of an oil casing or for using as a fire detector. It consists of a brass head and a sensitive part at the other end of a PTFE cylinder.

Body diameter: 22 mm Cylinder diameter: 17.5 mm
Body thread: M20 Cylinder height: 30 mm



Every moulding is manufactured with an epoxied resin. All the mouldings are IP 68 waterproof.

V 23 series

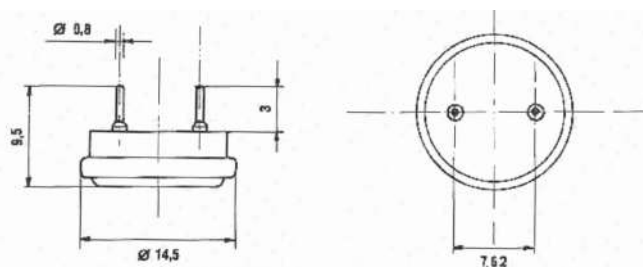
HEITO



The V23 Vigitherme is a very thin model : 6,5 mm in height. The two pins allow a direct mounting on a printing circuit with a pitch of 7,62 mm.

DIMENSIONS

Technical drawing



TECHNICAL SPECIFICATIONS

Temperature range	-40°C to +180°C
Current rating	5 A
Voltage rating	250 V
Types of contacts	opening – closing
Composition of contacts	solid silver
Voltage proof between terminations and ground	2 000 V AC
Contact resistance	≈ 10 mΩ



ACCESSORY

The V 23 Vigitherme can be optionally equipped with the stainless steel V34 small plate which can be attached by mean of two screws.

V 24 series

HEITO

The V 24 Vigitherme is a very thin model : 7,5 mm, with out by threads, particularly aimed at windings of motors or transformers.

Connection 2 isolated ETFE threads:

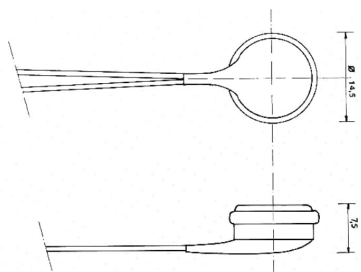
- Section 0,38mm
- Length 30 cm

On request : any other quality or dimensions of cables



DIMENSIONS

Technical drawing



TECHNICAL SPECIFICATIONS

Temperature range	-40°C to +180°C
Current rating	2 A
Voltage rating	250 V
Types of contacts	opening – closing
Composition of contacts	solid silver
Voltage proof between terminations and ground	2 000 V AC
Contact resistance	≈ 40 mΩ



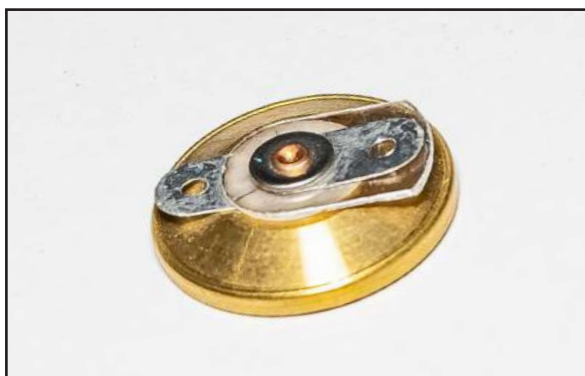
ACCESSORY

The V 24 Vigitherme can be optionally equipped with the stainless steel V34 small plate which can to be attached by mean of two screws.

E3

V 3 series

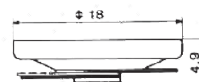
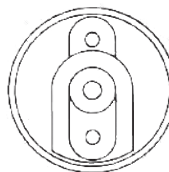
HEITO



The V 3 Vigitherme comes in a brass case in the shape of a cone with two exit terminals. Its design makes it particularly remarkable in terms of its capacity to withstand shocks, accelerations and vibrations.

DIMENSIONS

Technical drawing



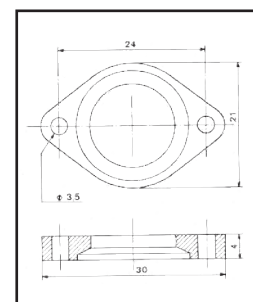
TECHNICAL SPECIFICATIONS

Temperature range	-10°C to +210°C
Current rating	0.5 A
Voltage rating	250 V
Types of contacts	opening – closing
Contacts	1 contact for ground
Voltage proof between contacts (open)	1 200 V AC
Contact resistance	≈ 60 mΩ
Connection	welding terminals
Insulation resistance between open contacts	10 000 mΩ



ACCESSORY

The V39 support provides electrical isolation and enables an V3 or V31 Vigitherme to be mounted. It is made up of a 0.2mm thick teflon sheet which goes between the metallic surface and the Vigitherme, and of a collar in high-temperature nylon which facilitates attaching the assembly by 2 screws.



V 4 series

HEITO

The V 4 Vigitherme is made of a stainless steel case and a nylon body carrying the connecting screw terminals. The parts under tension are insulated from the ground of the apparatus. The bi-metallic disc is located at the bottom of the stainless steel case which then constitutes the portion sensitive to temperature.

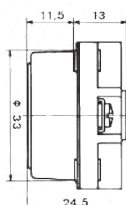
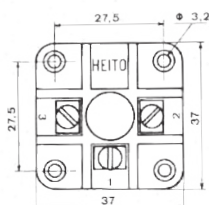
A V 4 B version that does not return to initial state by cooling is also available. To reactivate it, it is necessary to press the red button located in the middle.

Attachment : by 2 or 4 screws of 3 mm



DIMENSIONS

Technical drawing



TECHNICAL SPECIFICATIONS

Temperature range	0°C to +110°C
Current rating	10 A
Voltage rating	250 V
Types of contacts	opening - closing - inverting
Composition of contacts	solid silver
Voltage proof between terminations and ground	4 000 V AC
Contact resistance	≈ 6 mΩ
Connection	screw terminals
Maximum operating temperature	+120°C
Attachment	by 2 or 4 3mm screws

ACCESSORY

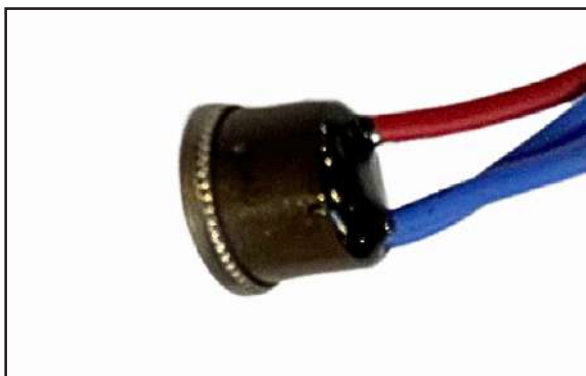
P 4 SMALL PROTECTIVE PLATE As an option a small black bakelite protective plate can equip the V4 Vigitherme. It is attached by 2 3mm screws and nuts. It enables the reactivation button to be pressed without touching the connection under tension (here with V4 B).



PT100 & PT1000 sensors

VALUES ACCORDING TO CEI751 B CLASS NORM

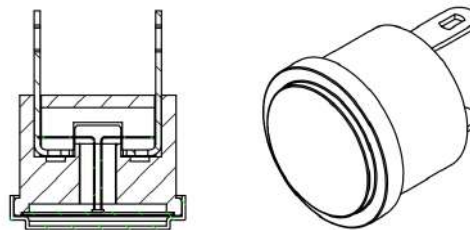
HEITO



Temperature sensors with platinum resistance manufactured in cases similar to the Vigitherme thermostats. The resistance is insulated from the casing.

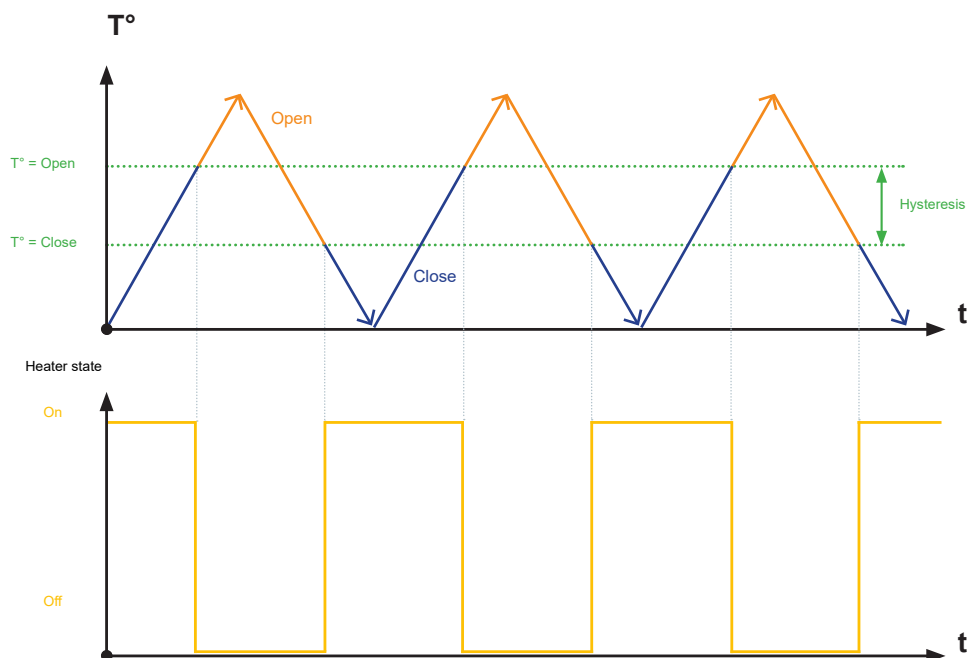
TECHNICAL SPECIFICATIONS

Resistance at 0°	100 or 1000 Ω
Temperature sensitive range	-50° to +200°
Connections	with 2, 3 or 4 wires
Connections with 2 sockets	as welding terminals, for 2,8 mm clips or for 6,35 mm clips
Choice of possible fixing	V34 support, hexagonal threaded base, pipe mounting or wall-mount



PT 100 probe adaptable on any other product case

ALL OUR PRODUCTS ARE TESTED IN VENTILATED OVENS



The specifications are given at atmospheric pressure.

The data in this catalog with all due care and reserves the right to make changes to the products without notice. The user of these data will at all times be responsible for their correct application. In case of uncertainty or doubt, we advise contacting EOZ to verify whether these data corresponds to the required application.

E5

80 years have passed since we satisfied our first customer. We are still dedicated to offering the same level of quality and customisation to all our partners.

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