

IP series

Momentary pushbutton switches for harsh environments

Distinctive features and specifications



- ☐ Illuminated and non-illuminated
- ☐ Tactile feedback
- ☐ Wide variety of configurations
- ☐ Flat round actuator for optional marking
- ☐ Sealed to IP 67

ENVIRONMENTAL SPECIFICATIONS

- Degree of protection : IP 67
- Shock resistance : 100 g according to IEC 512-4, test 6c
- Vibration resistance : 10-500Hz - 10 g according to IEC 512-4, test 6d
- Salt spray : IEC 512-6, test 11f
- Robustness (non-illuminated sw.) : IK06 according to EN 50102 (1 joule)
- Operating temperature : -40°C to +125°C

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load : 500mA 48VAC - 200mA 50VDC - 200mA 250VAC
- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1 GΩ min. at 500VDC
- Dielectric strength : 1.500 VAC rms
- Electrical life at full load : 500.000 cycles
- Contact bounce : 10 ms

LED COMPONENT SPECIFICATIONS

LED colour	Forward current	Forward Voltage	Max. lumin. intensity
Super red (LOS)	20mA	2V	125 mcd
Yellow (LOY)	20mA	2V	125 mcd
Green (LOG)	10mA	2V	20 mcd
Blue (LOB)	10mA	3,5V	20 mcd
White (LOW)	20mA	3,5V	280 mcd

A resistor must be series-connected by the user.

Resistor value = $\frac{\text{supply voltage} - \text{LED forward voltage}}{\text{LED forward current}}$

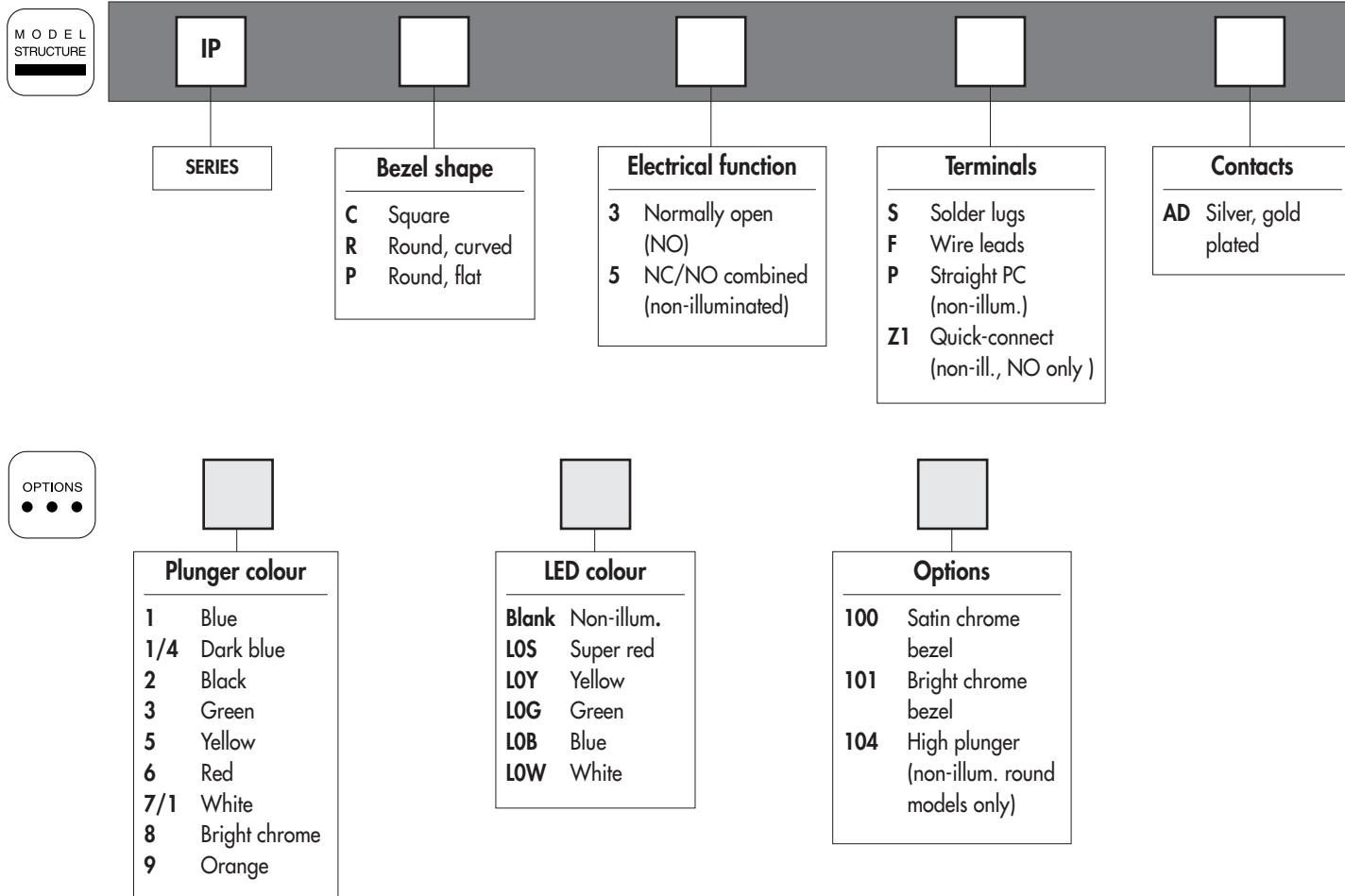
GENERAL SPECIFICATIONS

- Panel thickness : 1,5 mm (.059) min. 4 mm (.157 max.)
- Total travel : 1,5 mm (.059)
- Operating force : 2N to 5N
- Mechanical life : 1.000.000 cycles
- Torque : 1,5 Nm max. applied to nut
- Soldering : 320°C max. for 3 sec.

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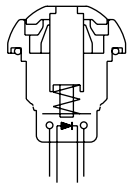
Overview



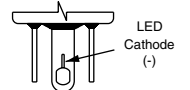
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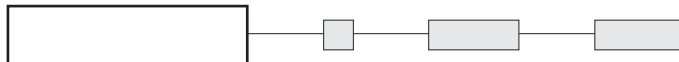
Square - illuminated



- High brightness illumination
- Five LED colours
- Tin plated LED terminals



MODEL
STRUCTURE



Solder lug terminals

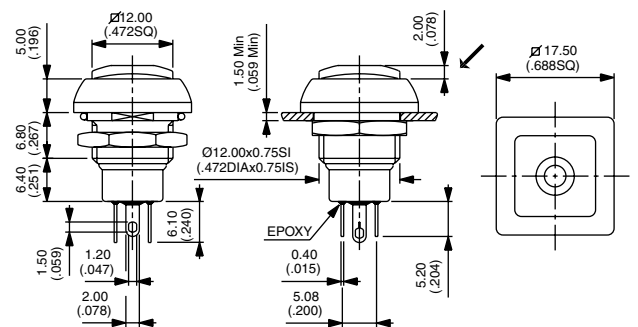


IPC3SAD



Normally Open

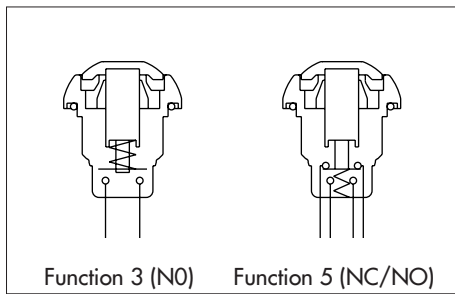
→ Flat



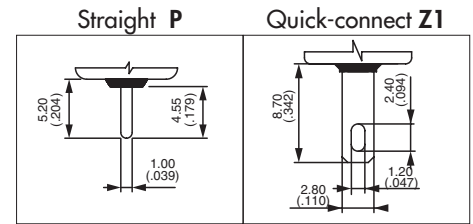
IP series

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Square - non-illuminated



- Double function (NC/NO combined) with a short behind-panel depth



MODEL STRUCTURE



Solder lug terminals



IPC3SAD



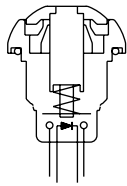
Normally Open

IPC5SAD

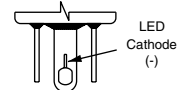
IP series

Momentary pushbutton switches for harsh environments

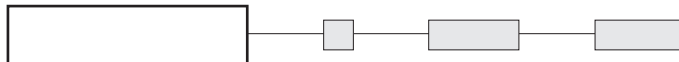
Round - illuminated



- High brightness illumination
- Five LED colours
- Tin plated LED terminals



MODEL STRUCTURE



Solder lug terminals



IPR3SAD



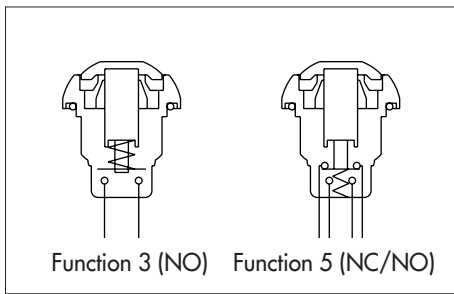
Normally Open

→ Flat

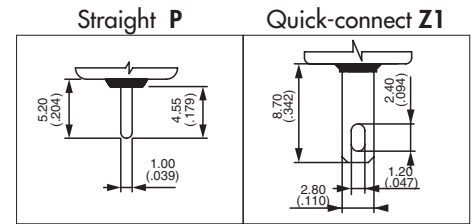
IP series

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Round - non-illuminated



- Double function (NC/NO combined) with a short behind-panel depth



MODEL STRUCTURE



B

Solder lug terminals



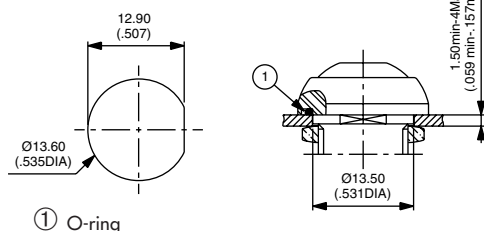
Curved actuator, NO
IPR3SAD
Curved actuator, NC/NO
IPR5S

IP series

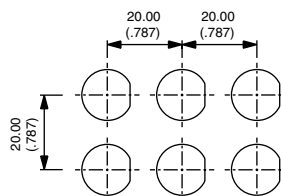
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MOUNTING

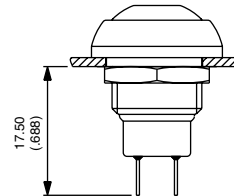
Panel cut-out



Matrix mounting



Back of panel space requirement



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LUMINANCE MEASUREMENT MODE

Test conditions

TEST RESULTS *		
Led types	Luminance	Forward current
LOS (super red)	4000 Cd/m ²	20mA
LOY (yellow)	3500 Cd/m ²	20mA
LOG (green)	400 Cd/m ²	10mA

* in our lab conditions

For blue and white Led, consult factory.

