IX series

Pushbutton switches for harsh environments • bushing Ø 12 mm • momentary NO & NC/NO

DISTINCTIVE FEATURES

Backlighted marking in a compact case

Strong tactile feedback

NO or NC/NO

High sealing level, no space between actuator and bushing (IP67/IP69K)

ENVIRONMENTAL SPECIFICATIONS

- Operating and storage temperature : -40 °C to +85 °C (-40 °F to +185 °F)
- Front panel sealing : IP67 according to IEC 60529, IP69K according to DIN 40050-9
- Shock resistance: 100 g according to IEC 512-4, test 6c
- Salt spray: IEC 512-6, test 11f
- UV-resistant membrane : ISO 4892-2 : 2013 ; method A, cycle 1 ; 750h

ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load:
  - Gold plated contact (**0**):
  100 mA 28 VDC, 1,000,000 cycles
  - Silver contact (**1**):
  2 A 28 VDC, 100,000 cycles

For W terminals, current has to be limited to 400 mA.

- Initial contact resistance : 100 mΩ max.
- Insulation resistance : 1 GΩ min. at 500 VDC
- Dielectric strength : 1,500 Vrms
- Contact bounce : 10 ms

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LED COMPONENT SPECIFICATIONS

LED color	Forward current	Typ. forward voltage	Max. forward voltage
Red (R)	20 mA	1.9 V	2.5 V
Yellow (Y)	20 mA	2.3 V	2.8 V
Green (G)	20 mA	4 V	4.5 V
Blue (B)	20 mA	3.2 V	3.7 V
White (W)	20 mA	3.3 V	4 V
Red/green (F)	20 mA	Red: 2 V / green: 3.2 V	Red: 2.8 V / green: 3.7 V

A resistor must be series-connected by the user.

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

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GENERAL SPECIFICATIONS

- Panel thickness : 2 to 8 mm
- Total travel : 2 mm (.078) ± 0.3 mm
- Typical operating force :
  Function 3 (NO): 7 N ± 2 N
  Function 5 (NO/NC): 8 N ± 2 N
- Low level/mech. life : 1,000,000 cycles
- Torque : 0.55 Nm (0.6 Nm max.) applied to nut and actuator firmly pushed during the tightening process.
- Soldering : 320 °C (608 °F) max. for 3 sec.

MATERIALS

- Case : thermoplastic UL94-V0
- Actuator : silicone
- Bushing : ABS UL94 HB
- Contacts :
  0 : brass, gold plated
  1 : silver
- Output wires : AWG24, section 0.23 mm² - 500 mm
- Terminal seal : epoxy

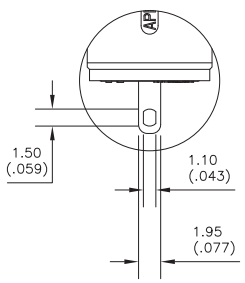
APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

CONNECTIONS

WIRES TERMINALS

- Contact NO : black color / Contact NC : blue color
- LED : **+** : red color
  - : white color

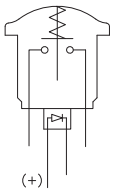
TERMINALS



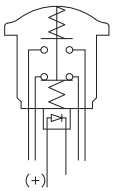
Solder lug **S**

ELECTRICAL FUNCTION

ILLUMINATED MODELS

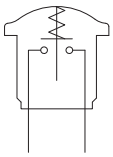


Function 3 (NO)

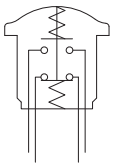


Function 5 (NC/NO)

NON-ILLUMINATED MODELS



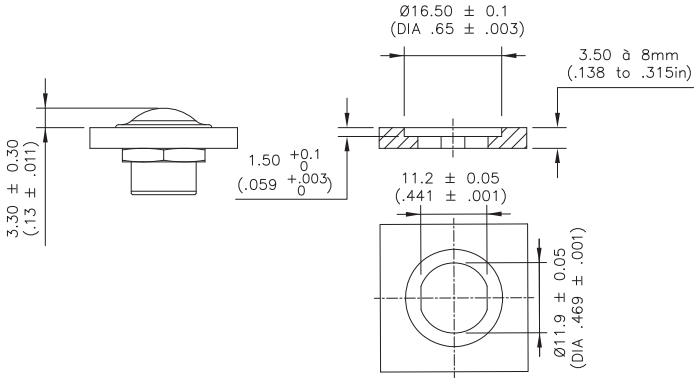
Function 3 (NO)



Function 5 (NC/NO)

MOUNTING

RECOMMENDED PANEL CUT-OUT (IP69K)



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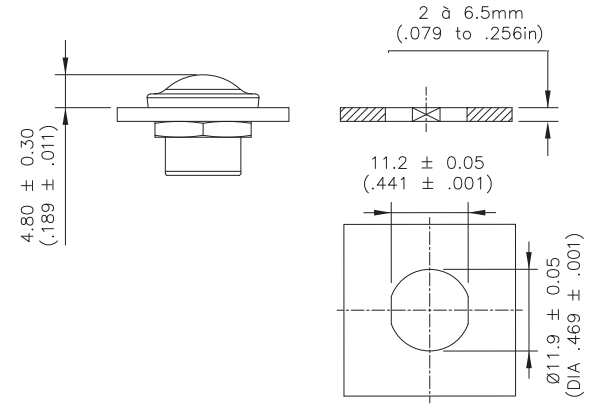
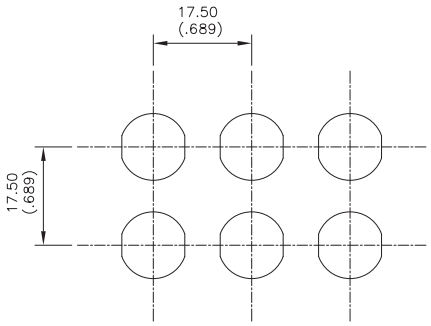
MOUNTING (CONTINUED)

OTHER PANEL CUT-OUT



MATRIX MOUNTING



IX series

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BUILD YOUR PART NUMBER

BASIC PART NUMBER

IX _ _ _ _

SERIES

ACTUATOR SHAPES

P	Round, elastomeric membrane

ELECTRICAL FUNCTION

3	Normally open (NO)
5	NC/NO combined

TERMINALS

S	Solder lugs
W	24 AWG wires

CONTACTS

0	Gold plated
1	Silver

OPTIONS

_ _ _ _

ACTUATOR COLORS

1	Blue
B	Dark blue
2	Black
3	Green
4	Grey
5	Yellow
6	Red
7	White
9	Orange

LED COLORS

M	Non-illuminated
R	Red
Y	Yellow
G	Green
B	Blue
W	White
F	Red/green

MARKING STYLE

Blank	No marking
R	Laser etched Black actuator and white marking only

MARKING

Blank	No marking
XN9	⏻
XCD	●
XKH	Illuminated ring

Other marking on request

ABOUT THIS SERIES

On the following pages, you will find successively basic part numbers of switches and options in the same order as in above chart.

Notice : please note that not all combinations of above numbers are available. Refer to the following pages for further information.

Mounting accessories : Standard hardware supplied : 1 hex nut 14 mm (.551) across flats.

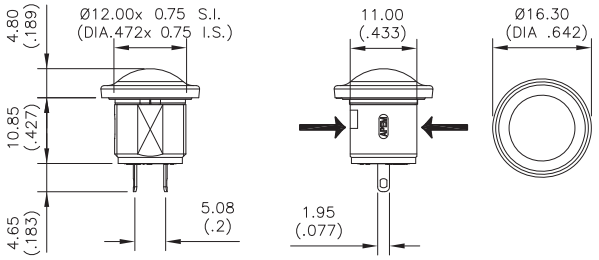
IX series

Pushbutton switches for harsh environments • bushing Ø 12 mm • momentary NO & NC/NO

SOLDER LUG TERMINALS NON-ILLUMINATED - NO

IXP3S••M

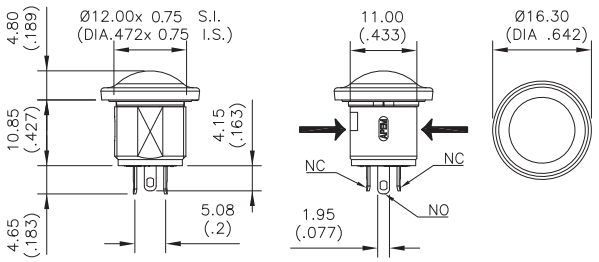
→ Flat



SOLDER LUG TERMINALS NON-ILLUMINATED - NC/NO

IXP5S••M

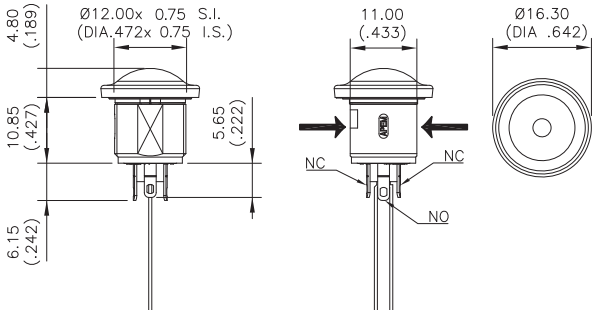
→ Flat



SOLDER LUG TERMINALS ILLUMINATED - NC/NO

IXP5S

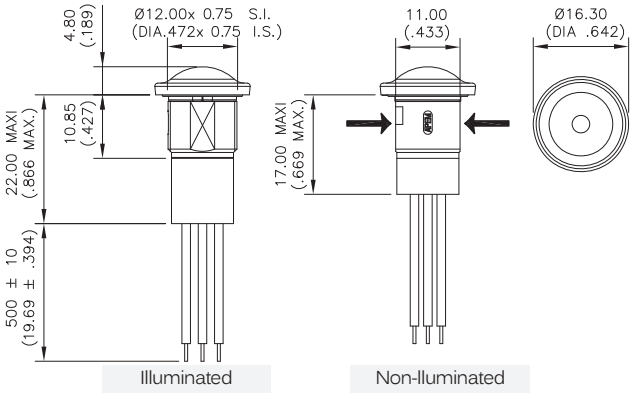
→ Flat



FLYING LEAD TERMINALS ILLUMINATED - NC/NO

IXP5W

→ Flat



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ACTUATOR COLORS

BASIC P/N

1	Blue	**5**	Yellow
B	Dark blue	**6**	Red
2	Black	**7**	White
3	Green	**9**	Orange
4	Grey		

LED COLORS

BASIC P/N

M	Non-illuminated
R	Red
Y	Yellow
G	Green
B	Blue
W	White
F	Red/green

MARKING STYLE

BASIC P/N

Blank	No marking
R	Laser etched - Black actuator and white marking only

MARKING

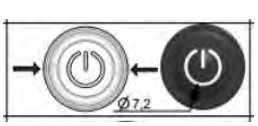
BASIC P/N

Blank	No Marking
XN9	⏻ - Symbol "power"
XCD	● - Symbol "dot"
XKH	○ - Illuminated ring

Other marking on request

Example of IX switch with marking.
Please note that the anti-rotation flats are pointed with the arrows.

→ Flat



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