

# IX series

Pushbutton switches for harsh environments •  
bushing  $\varnothing$  12 mm • momentary NO & NC/NO



## DISTINCTIVE FEATURES

NAMUR output option (Normally Open)

Backlighted marking in a compact case

Strong tactile feedback

NO or NC/NO

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



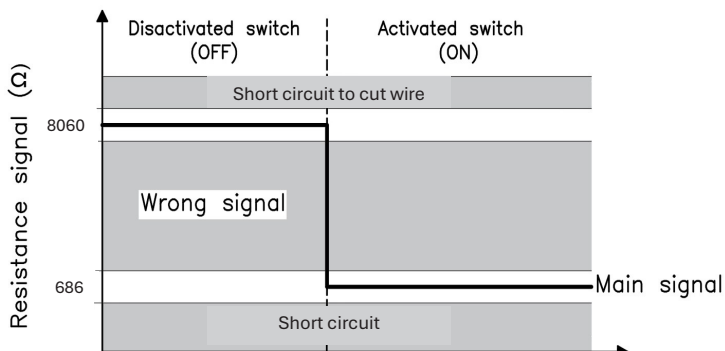
## ENVIRONMENTAL SPECIFICATIONS

- Operating and storage temperature :  $-40\text{ }^{\circ}\text{C}$  to  $+85\text{ }^{\circ}\text{C}$  ( $-40\text{ }^{\circ}\text{F}$  to  $+185\text{ }^{\circ}\text{F}$ )
- Front panel sealing : IP67 according to IEC 60529,  
IP69K according to DIN 40050-9
- Shock resistance: semi-sine  $100\text{m/s}^2$  16ms,  $1000\text{m/s}^2$  2ms, 6  
directions according to IEC60068-2-27 not documented for NAMUR D  
option
- Salt spray: 96h according to IEC60068-2-11 test Ka
- 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
- Initial contact resistance : 100 m $\Omega$  max. not applicable for function D
- Insulation resistance : 1 G $\Omega$  min. at 500 VDC not applicable for function D
- Dielectric strength : 1,500 Vrms not applicable for function D
- Contact bounce : 10 ms
- Function D (Namur)



The company reserves the right to change specifications without notice.



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

## GENERAL SPECIFICATIONS

- Panel thickness : 2 to 8 mm
- Total travel : 2 mm (.078) ± 0.3 mm
- Typical operating force :  
Function 3 (NO) and D (Namur) : 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 : thermoplastic
- Contacts :  
0 : brass, gold plated  
1 : silver
- Output wires : AWG24, section 0.23 mm<sup>2</sup> - 500 mm
- Terminal seal : epoxy

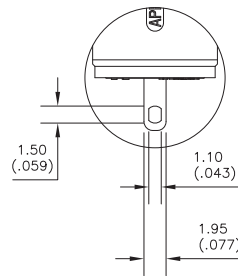
APEM products may be recycled at end-of-life for the re-claiming of valuable metal components.

## CONNECTIONS

### WIRES TERMINALS

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

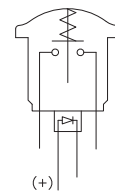
## TERMINALS



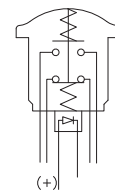
Solder lug S

## ELECTRICAL FUNCTION

### ILLUMINATED MODELS

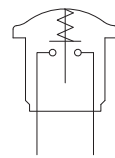


Function 3 (NO)

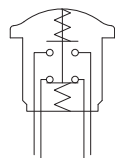


Function 5 (NC/NO)

### NON-ILLUMINATED MODELS

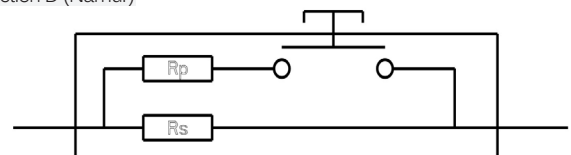


Function 3 (NO)



Function 5 (NC/NO)

### Function D (Namur)



RP:750 Ω ±10%

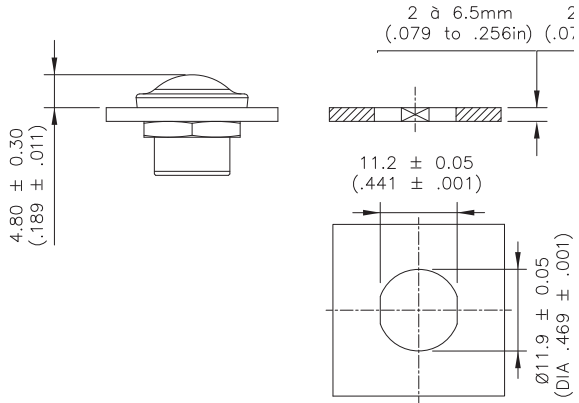
RS:8060 Ω ±10%

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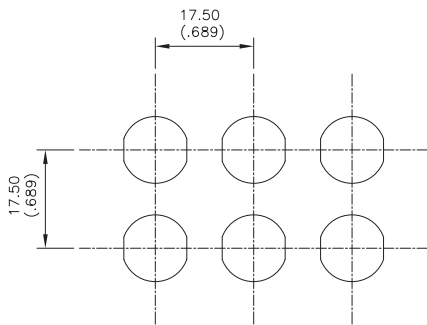


## MOUNTING

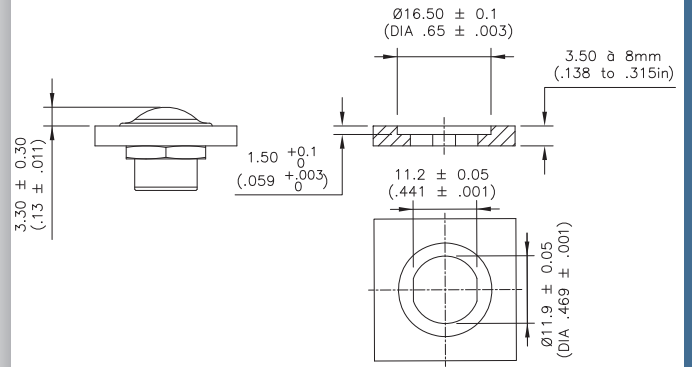
### OTHER PANEL CUT-OUT



### MATRIX MOUNTING



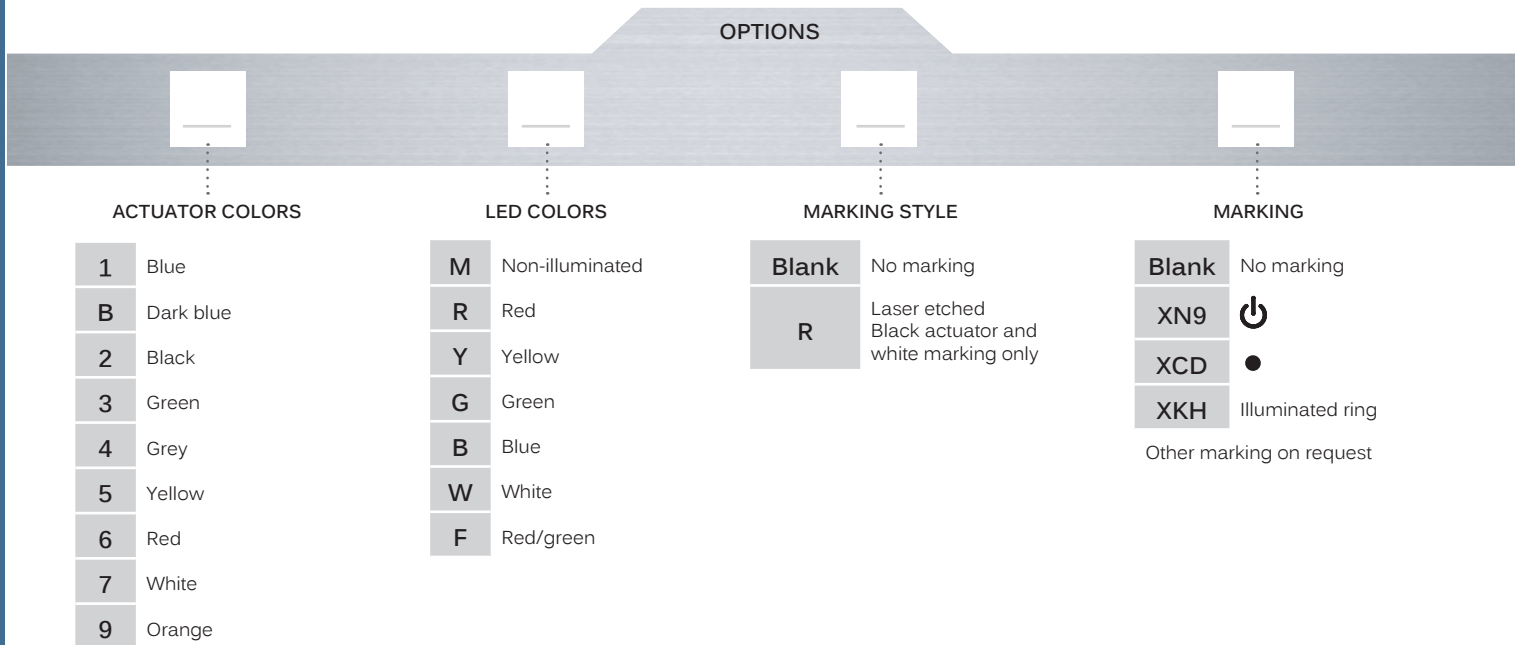
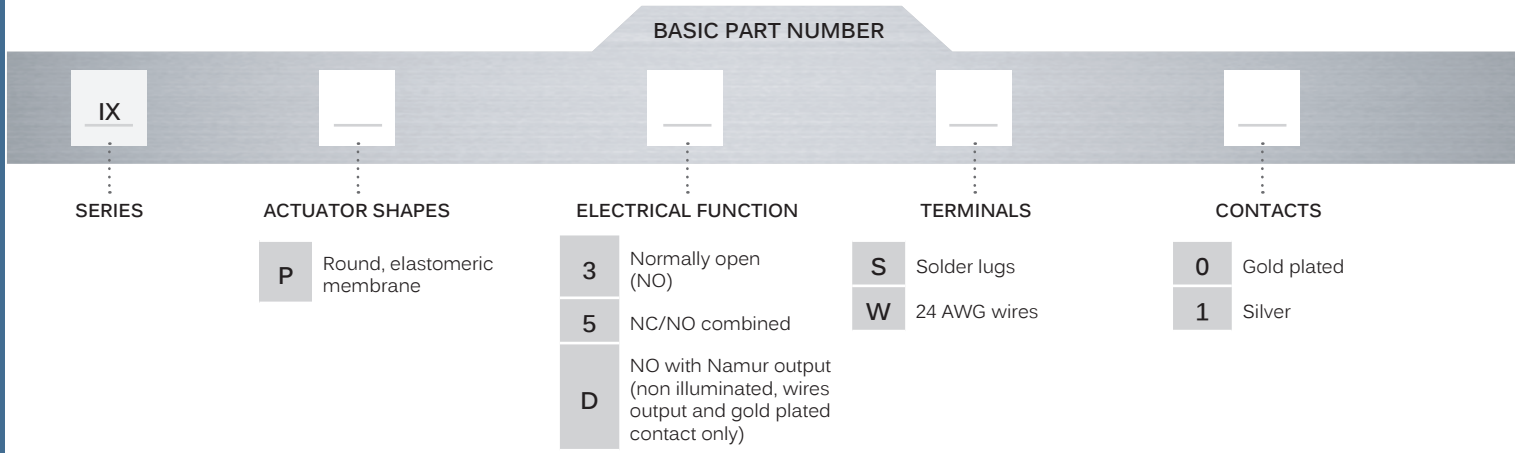
### RECOMMENDED PANEL CUT-OUT (IP69K)



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## BUILD YOUR PART NUMBER



## 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.

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SOLDER LUG TERMINALS  
NON-ILLUMINATED - NO



IXP3S••M

SOLDER LUG TERMINALS  
NON-ILLUMINATED - NC/NO



IXP5S••M

SOLDER LUG TERMINALS  
ILLUMINATED - NC/NO



IXP5S

FLYING LEAD TERMINALS  
ILLUMINATED - NC/NO



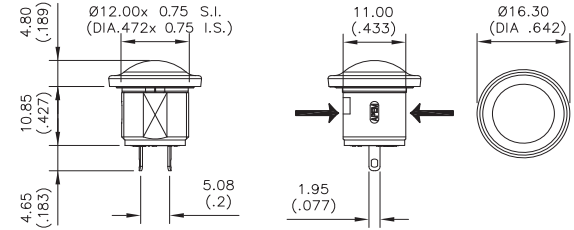
IXP5W

FLYING LEAD TERMINALS  
- NON ILLUMINATED - NAMUR

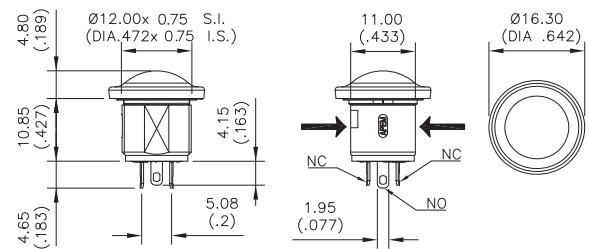


IXPDW--M

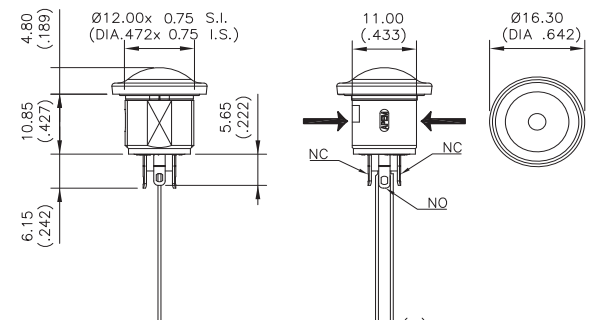
→ Flat



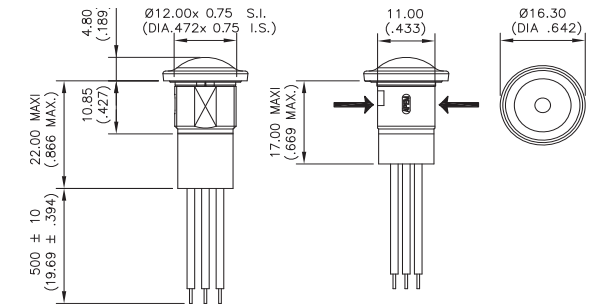
→ Flat



→ Flat



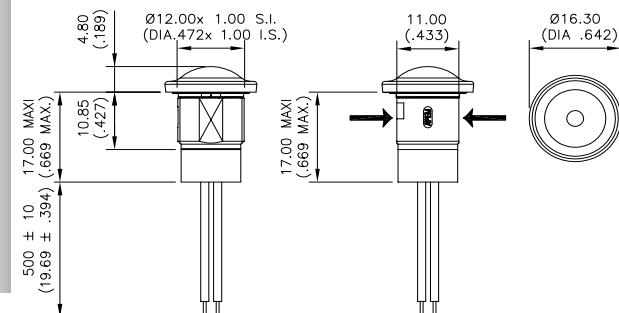
→ Flat



Illuminated

Non-Illuminated

→ Flat



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## ACTUATOR COLORS



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

## 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   |  - 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

