



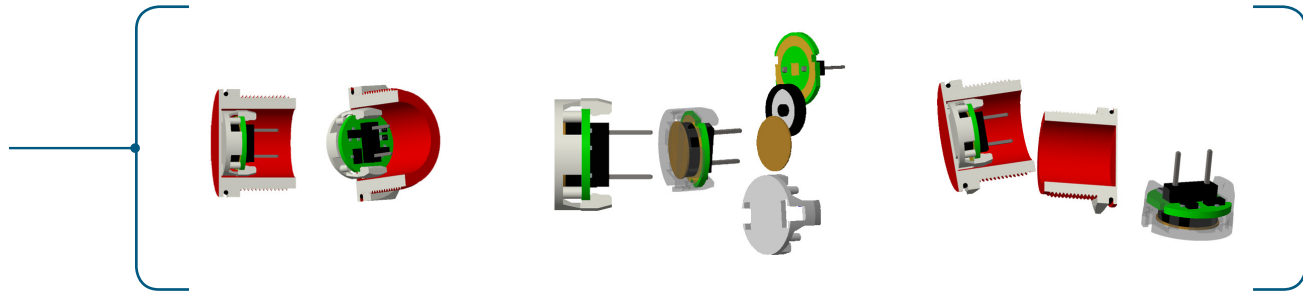
**Leaders in Engineering, Innovation and Quality**  
**LANGIR brings Piezo Technology to perfection**

**angir**

Piezo switch  
[www.langir.com](http://www.langir.com)

## THE LANGIR VPM (VERSATILE PIEZO MODULE)

The principle behind the Langir Piezo technology is the assembly of all the necessary components into a single unit (the Module) which eliminates the need to handle multiple components for every single Push Point Manufactured.



The VPM is a solid state (no moving parts), stand alone module which may be easily arranged in any configuration by simply clicking it in to the housing. The VPM also features a few significant advantages:

### NO SOLDERING NO ADHESIVE

Unlike other common Piezo electric technologies, the VPM is a mechanically assembled structure. It features a very stable structure unaffected by extreme temperature fluctuations and not prone to deterioration of components.

No adhesive is used in the assembly process and there is no need for soldering wires directly to the sensitive Piezo ceramic.

Dependency on employee skills and workmanship is greatly reduced and the module, placed behind a 0.6mm thick metal membrane, is extremely durable and reliable.

## APPLICATIONS



**Shower**



**Bath**



**Car wash**



**Marine**



**Medical**



## DISTINCTIVE FEATURES

Bushing diameter:  
 16 (.630), 19 (.748), 22 (.866) or 30 mm (1.181)

Sealed to IP68 and IP69K (switches mounted on panel)

Easy to clean metal surface

Very long life expectancy

Illumination or Non-illumination



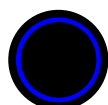
## MATERIALS

- Case : aluminum, anodized or stainless steel 316L
- Multi-wire leads section 0.22 mm<sup>2</sup> length 300 mm, twisted by pair
- Cable, length 300 mm, section depending on switch model
- PC terminals : bronze, tin plated

Note : to maintain the ESD performance, always add a ground washer when the panel is made of non-conductive material (PVC, polycarbonate).



## COLOR



Blue



Green



Yellow



White



Red



## GENERAL SPECIFICATIONS

- Operating force : 2 to 6 N
- Torque : 2.5 Nm min. - 3 Nm max.



## ENVIRONMENTAL SPECIFICATIONS

- Sealing : IP68 per IEC 60529, IP69K per DIN 40050-9 (switches mounted on panel)
- Vibration resistance : 10-500 Hz / 10 g per IEC 60068-2-6
- Operating temperature : -40 °C to +75 °C (-40 °F to + 167 °F)
- EMC compatibility according to EN 61058-1 for the whole range
- EMC compatibility according to EN 61000-4 & EN61000-6-2 for 1A



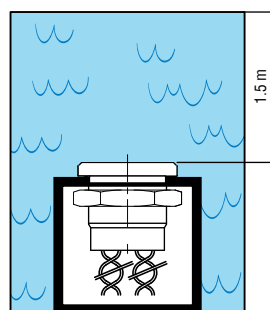
## ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating : 400mA 5~60V DC or request
- Switch resistance ON : 10Ω max.
- Switch resistance OFF : 5 MΩ min.
- Life expectancy : 50 million cycles
- LED state for output image option :  
 1 LED: the LED is ON when the output is closed.  
 2 LEDs: first color is ON when the output is open. second color is ON when the output is closed.



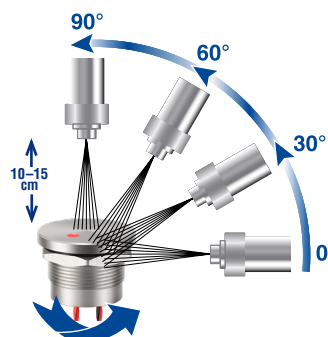
## SEALING

SEALING IP68



Continuous immersion in water  
 IP68 test conditions  
 Continuous immersion in water  
 (1.5 m, 24 hours)

SEALING IP69K



High pressure, high temperature wash down  
 IP69K test conditions

- Pressure : 80 - 120 bars
- Distance : 15 cm
- Temperature : 80 °C ± 5 °C (176 °F ± 41 °F)
- Flow : 14 - 16 l/mn
- Duration : 30 seconds per position

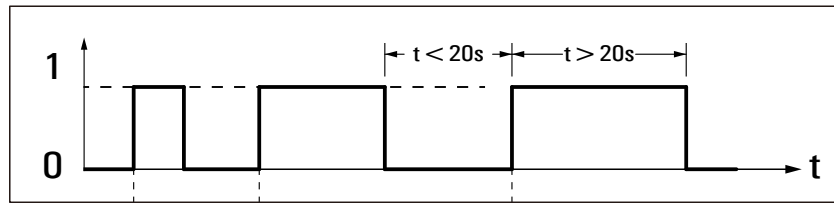


## ELECTRICAL FUNCTIONS

### FINGER PRESSURE applied to switch

1 = pressure

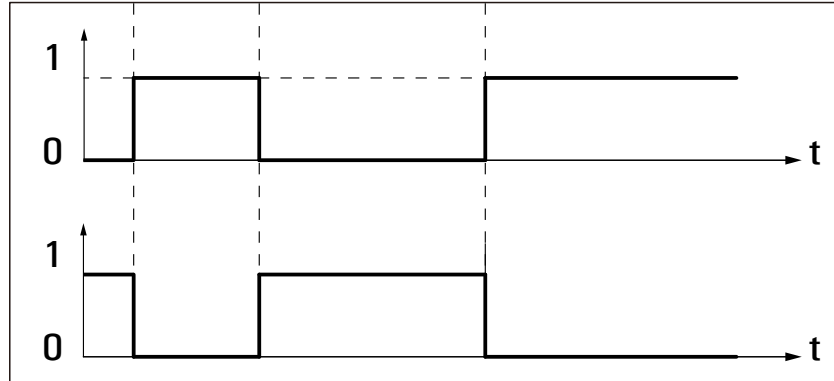
0 = no pressure



### OUTPUT

#### NO

Requires external power supply



#### NC

Requires external power supply

1 = closed output 0 = open output



## WIRING DIAGRAMS

Function	Non-illuminated	1 LED		2 LEDs	
		Output indicator	Independent	Output indicator	Independent
NO					
NC					

Legend: A = same colour as LED

\* LED colour is indicated by the bottom of the product.

**OCP-**
**Switch size**

**16** = 16mm  
**19** = 19mm  
**22** = 22mm  
**25** = 25mm

**Colours / Materials**

**A0** Natural anodized aluminum  
**A1** Blue anodized aluminum  
**A2** Black anodized aluminum  
**A3** Green anodized aluminum  
**A5** Gold anodized aluminum  
**A6** Red anodized aluminum  
**B** Stainless steel 316L

**Operator**

**R1** Flat, operator height 4.5 mm  
 Available with illuminated ring 16mm only.  
**R2** Flat, operator height 3.00  
 Available with illuminated ring 19mm only.  
**RY** With chamfer, operator height 4.5 mm (.177).  
 Available with thin or large illum. ring 22, 25mm only.  
**RZ** Flat, operator height 4.5 mm (.177).  
 Available with thin or large illum. ring 22, 25mm only.  
**Blank** Chamfer, operator height 16=2.00/ 19=3.00

The operator can be customized

**Terminals**

**F** Flyingleads  
**X** Cable  
**C** Connector

The terminals can be customized

**Switch status**

**NO** Normally open  
**NC** Normally closed

**Switch function**

**Blank** Latching or request

**Type of illum. Voltage**

**Blank** Non-illuminated  
**A** 13.5 Large ring 5VDC  
**N** 13.5 Large ring 12VDC  
**K** 13.5 Large ring 24VDC  
**P** 16.5 Thin ring 5VDC  
**J** 16.5 Thin ring 12VDC  
**Y** 16.5 Thin ring 24VDC  
 P, J, Y for dia. 22 & 25only

**Single colours**

**Blank** Non-illum.  
**B** Blue  
**G** Green  
**R** Red  
**Y** Yellow  
**W** White

**Double colours**

**Blank** Non-illum.  
**RG** Red/green  
**RY** Red/yellow  
**RB** Red/blue  
**RW** Red/white  
**GB** Green/blue  
**GY** Green/yellow  
**GW** Green/white  
**BY** Blue/yellow  
**BW** Blue/white  
**YW** Yellow/white

**LED function**

**S** Independent  
**C** Output indicator



Mounting accessories standard hardware supplied :1 hex nut and 1 O-ring

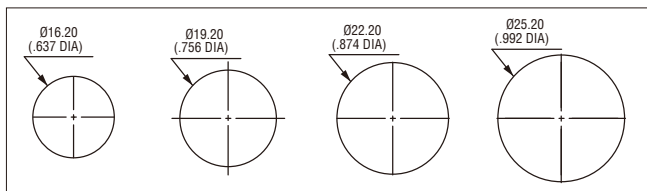


Packaging unit: 20 pieces

**For options not listed above, please contact LANGIR.**

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Shown with flying lead terminals.

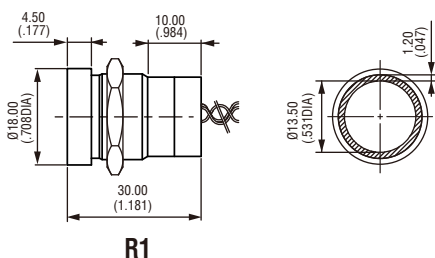
### Bushing Ø 16 mm (.630)



OCP16BR1FAN0BC

Flat

Chamfer



R1

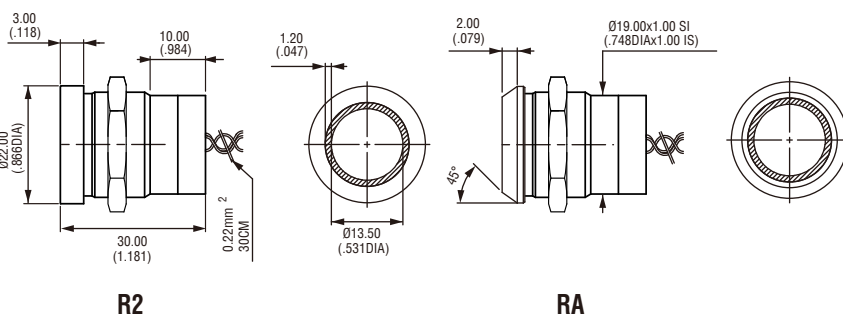
### Bushing Ø 19 mm (.748)



OCP19BR2FKN0BC

Flat

Chamfer



R2

RA

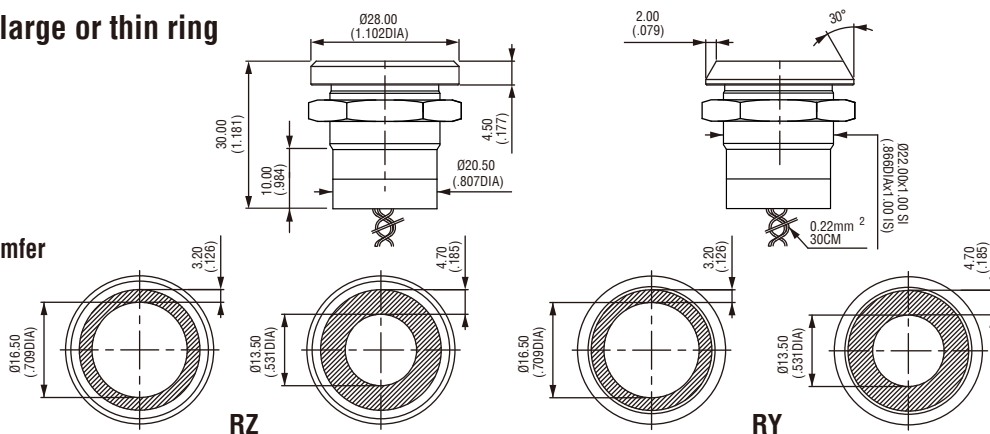
### Bushing Ø 22 mm (.866) - large or thin ring



OCP22BRYFNNORS

Flat

Chamfer



RZ

RY

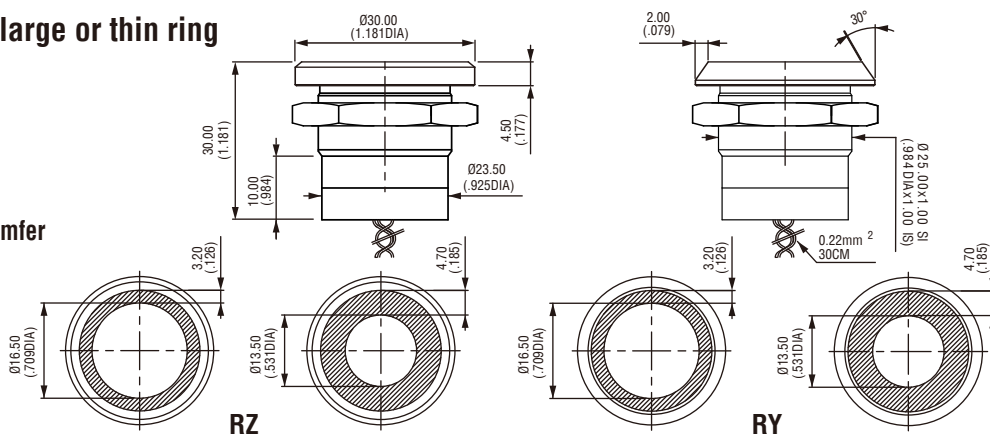
### Bushing Ø 25 mm (.984) - large or thin ring



OCP25BRZFJNOBS

Flat

Chamfer



RZ

RY

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