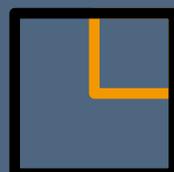




Leaders in Engineering, Innovation and Quality  
LANGIR brings Piezo Technology to perfection

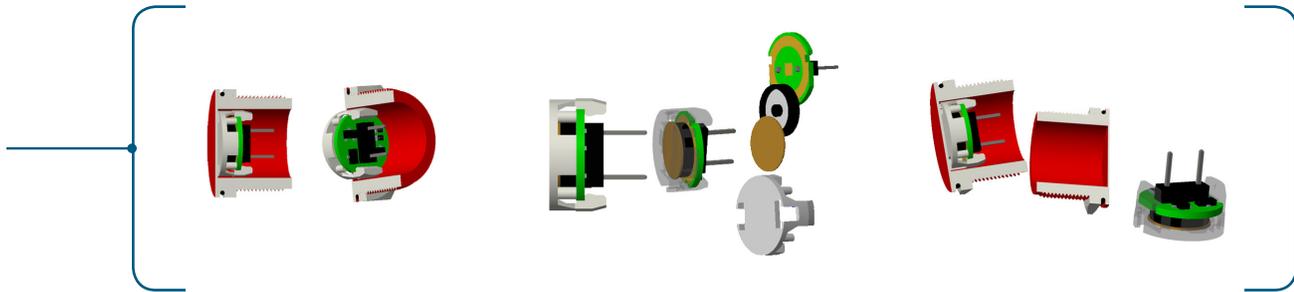


**langir**<sup>®</sup>

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



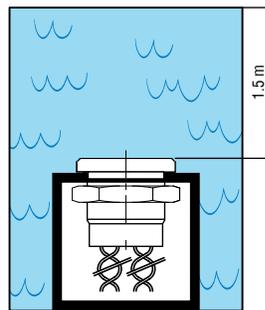
## ELECTRICAL SPECIFICATIONS

- Max. current/voltage rating with resistive load :
  - Function NO : standard 200 mA 24 VAC/DC, 1 A 24 VAC/DC or request
  - Function NC : standard max. 600 mA 24 VAC/DC
- Switch resistance ON : 10Ω max.
- Switch resistance OFF : 5 MΩ min.
- Life expectancy : 50 million cycles
- LED consumption : Illuminated dot 10 mA - Illuminated ring 20 mA



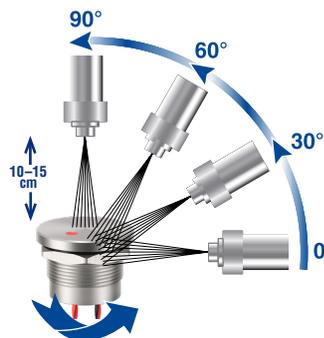
## SEALING

SEALING IP68



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

SEALING IP69K



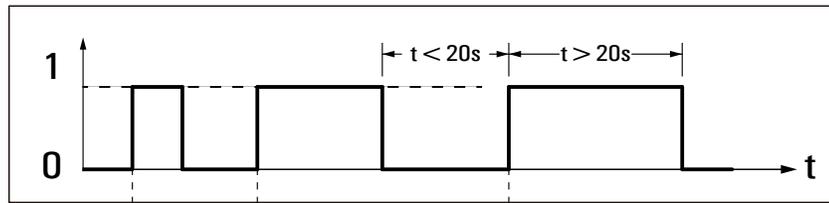
High pressure, high temperature wash down  
IP69K test conditions

- . 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

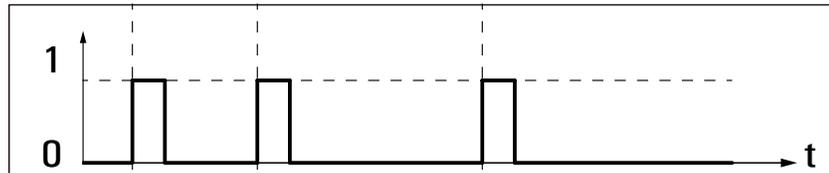

**ELECTRICAL FUNCTIONS**
**FINGER PRESSURE applied to switch**

1 = pressure

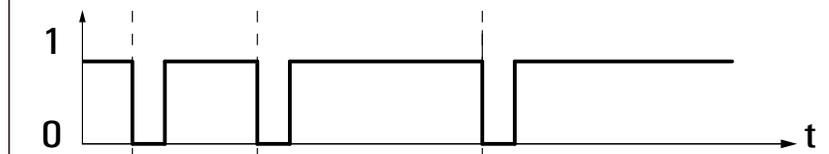
0 = no pressure


**OUTPUT**
**Momentary NO (pulse)**

No external power supply required


**Momentary NC (pulse)**

No external power supply required


**Latching (ON - OFF)**

Requires external power supply



1 = closed output 0 = open output

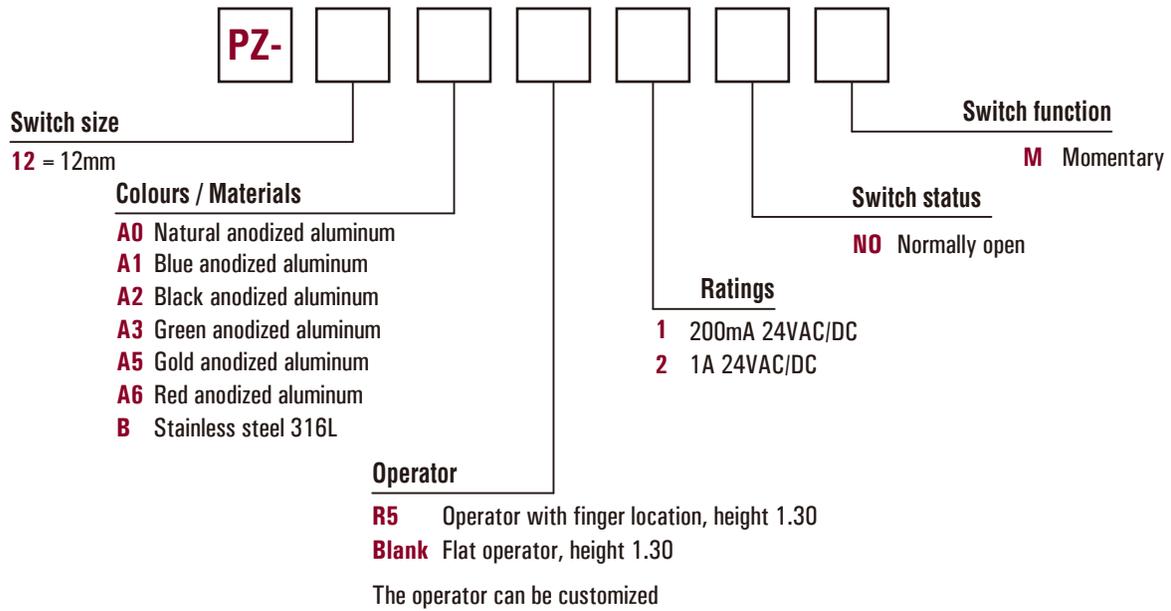

**WIRING DIAGRAMS**

Function	Non-illuminated	1 LED *	2 LEDs	3 LEDs
Momentary NO				
Momentary NC				
Momentary NO prolonged pulse				
Latching (ON - OFF)				BR brown +V BK black GND BL blue output

Legend: B = black, A = same colour as LED

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

# Piezo switch Ø 12 (.480)



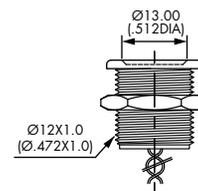
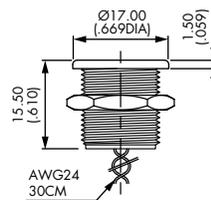
## Non-illuminated



PZ1201NOM

Flat

Finger location



R5



**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 and 1 O-ring



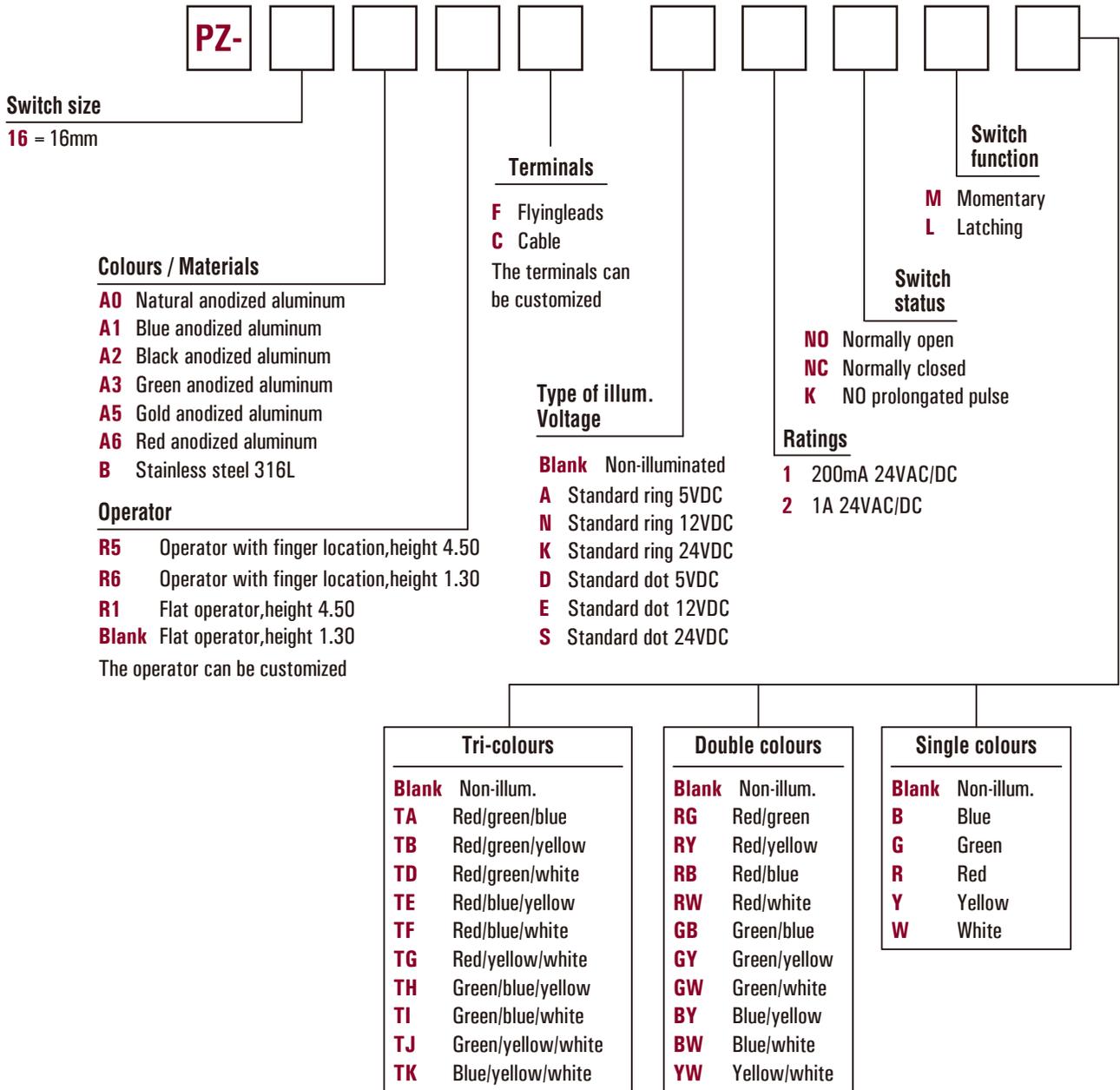
Packaging unit: 20 pieces

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

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LANGIR Company reserves the right to modify or cancel the relevant parameters of this file does not advance notice. If in doubt, please contact customer service hotline.

# Piezo switch Ø 16 (.630)



**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 and 1 O-ring



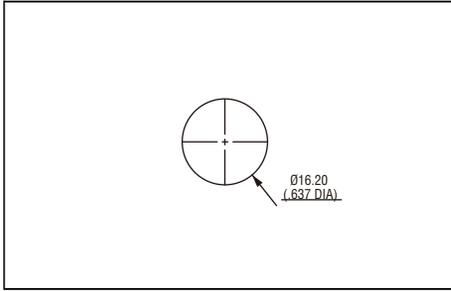
Packaging unit: 20 pieces

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# Piezo switch Ø 16 (.630)



Shown with flying lead terminals.

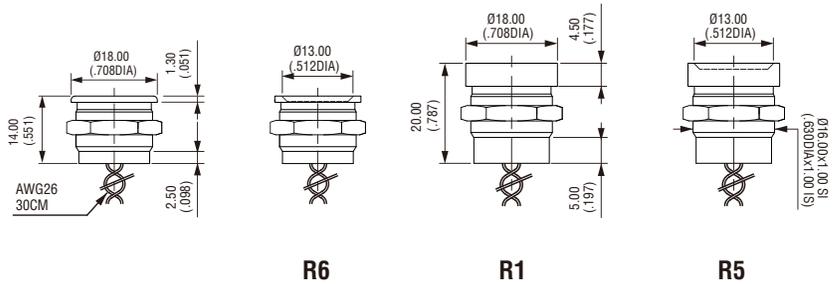
## Non-illuminated



PZ16A6R11NOM

Flat

Finger location

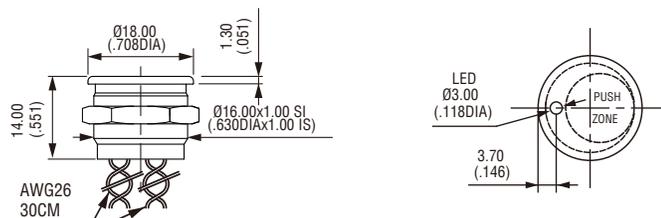


## Dot-illuminated



PZ16BFS1NOMG

Flat

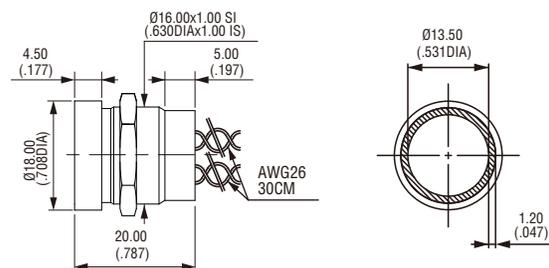


## Ring illuminated

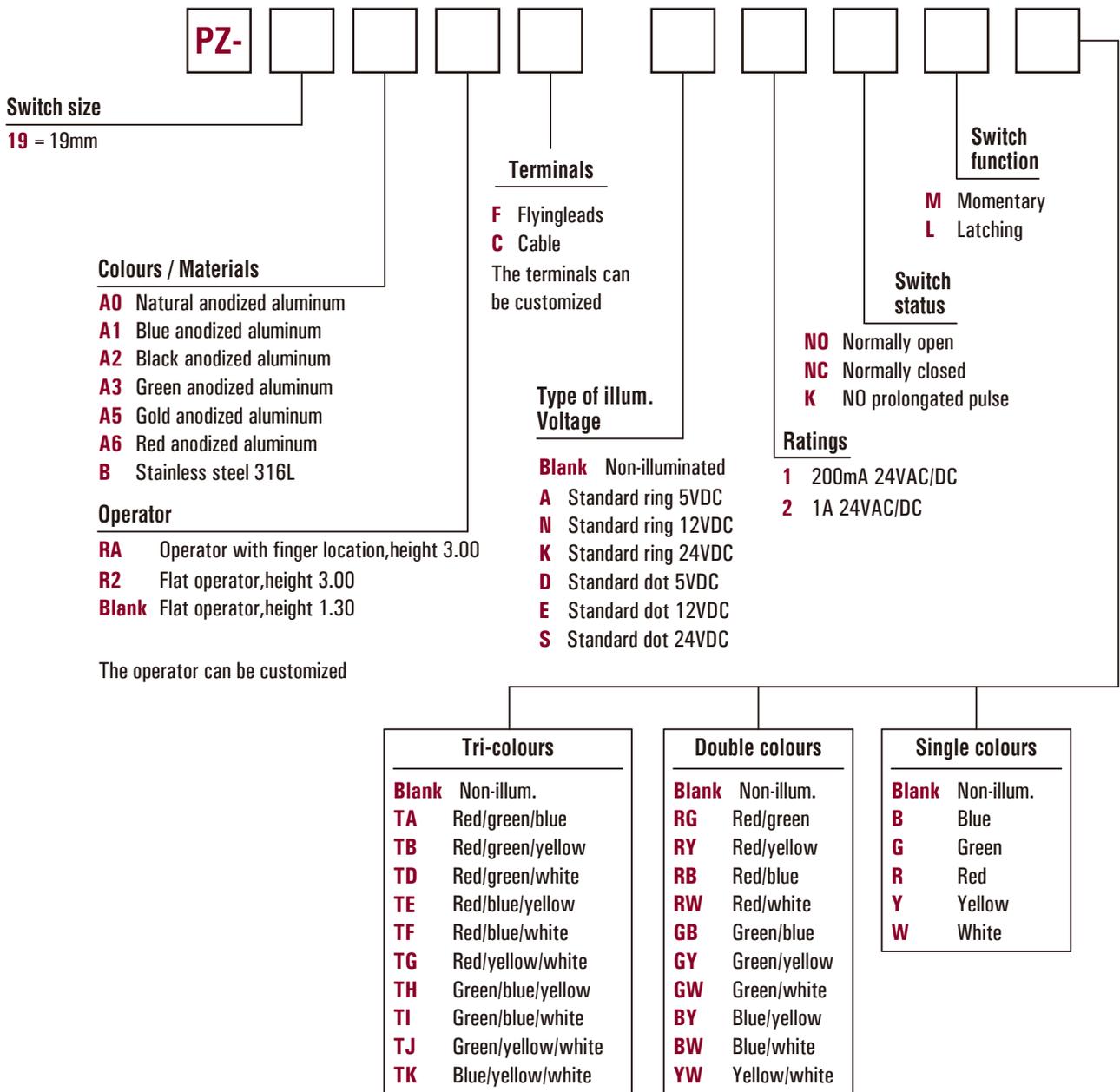


PZ16BR1FN1NOMR

Flat operator, height 4,50 (.177)



# Piezo switch Ø 19 (.748)



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 and 1 O-ring

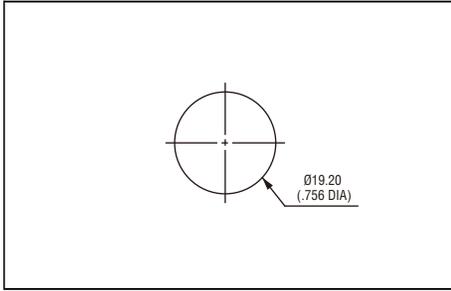


Packaging unit: 20 pieces

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Shown with flying lead terminals.

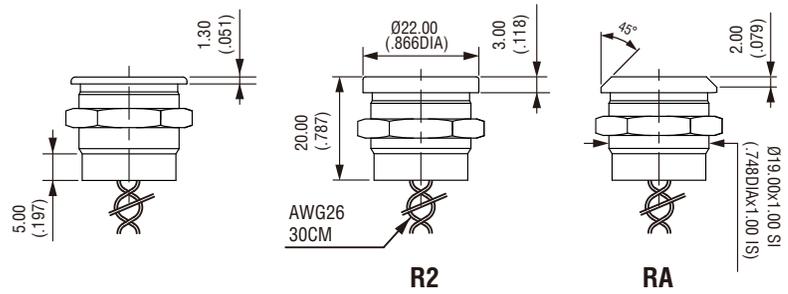
## Non-illuminated



PZ19A3F1NOM

Flat

Chamfer



R2

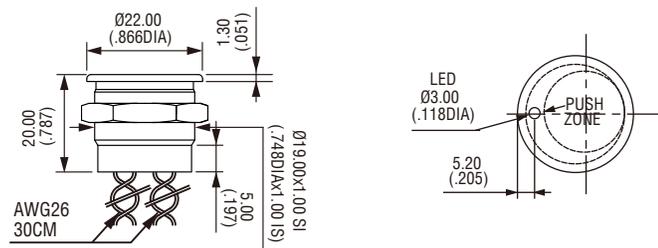
RA

## Dot-illuminated



PZ19BFE1NOMR

Flat



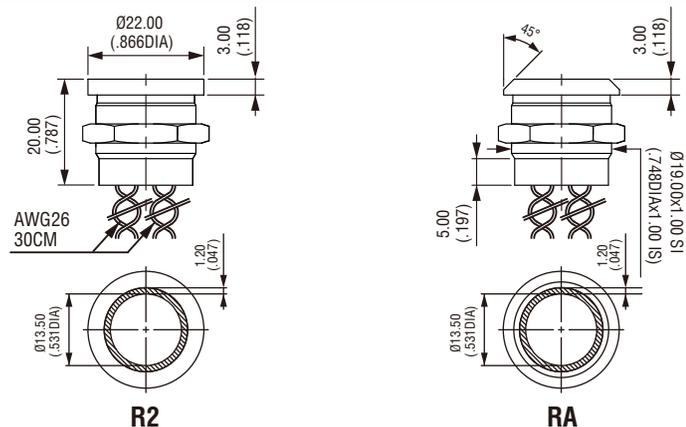
## Ring illuminated



PZ19BRAFK1NOMR

Flat

Chamfer

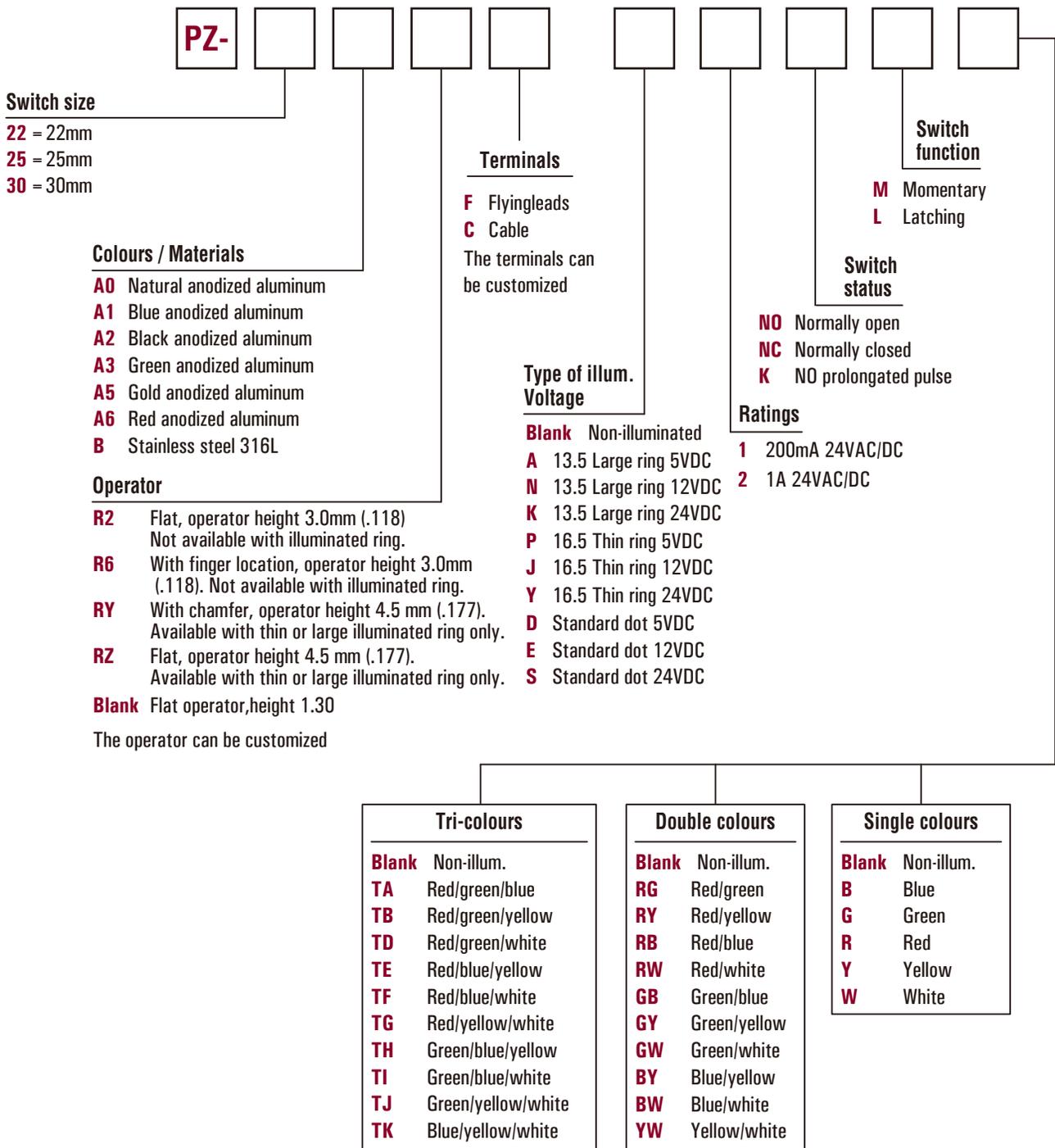


R2

RA

# Piezo switch

Ø 22(.866), Ø 25(.984) and Ø 30(1.181)



**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 and 1 O-ring

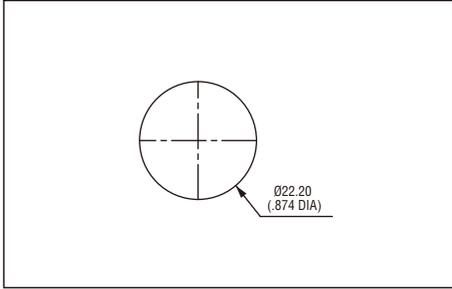


Packaging unit: 20 pieces

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Shown with flying lead terminals.

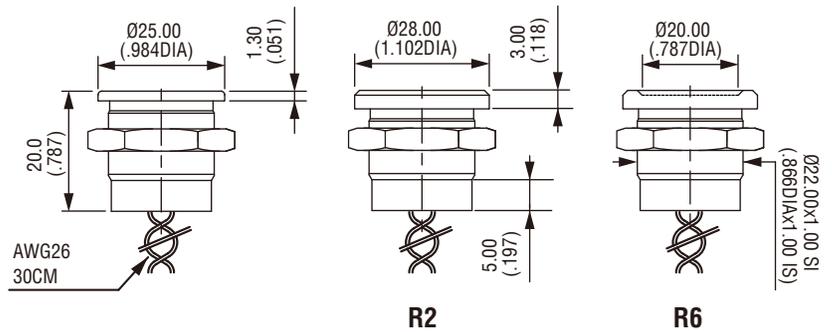
## Non-illuminated



PZ22A6R6F1NOM

Flat

Finger location



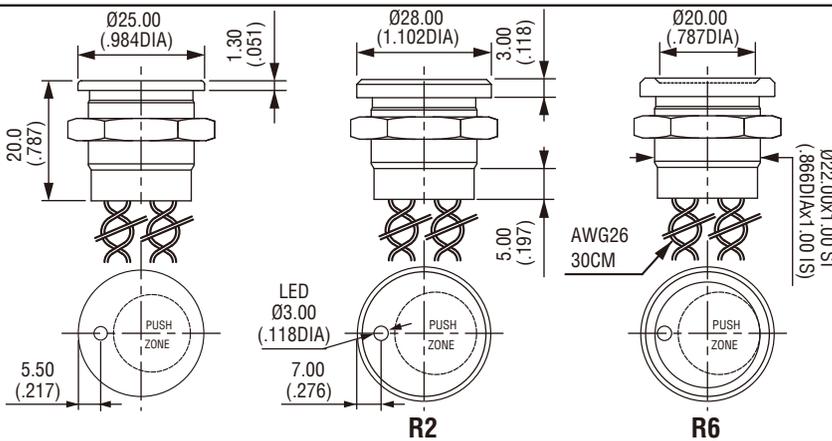
## Dot illuminated



PZ22A0R2D1NOMR

Flat

Finger location



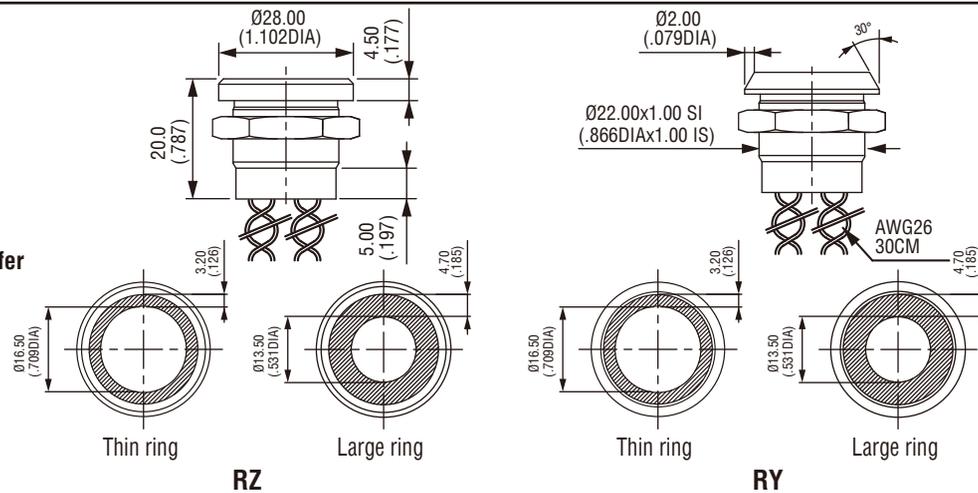
## Ring illuminated



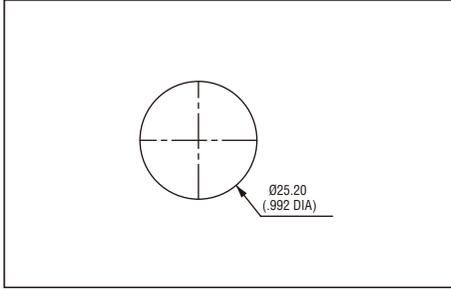
PZ22BRYFJ1NOLW

Flat

Chamfer



# Piezo switch Ø 25(.984)



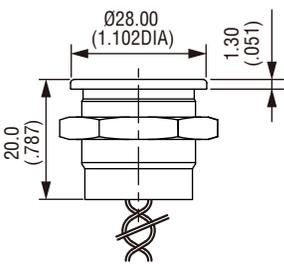
Shown with flying lead terminals.

### Non-illuminated

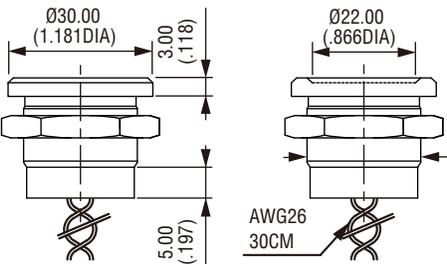


**Flat**

**Finger location**



**R2**



**R6**

Ø25.00x1.00 SI  
(.984DIAx1.00 IS)

AWG26  
30CM

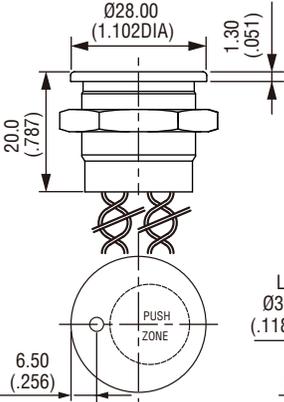
PZ25BF1NOM

### Dot illuminated

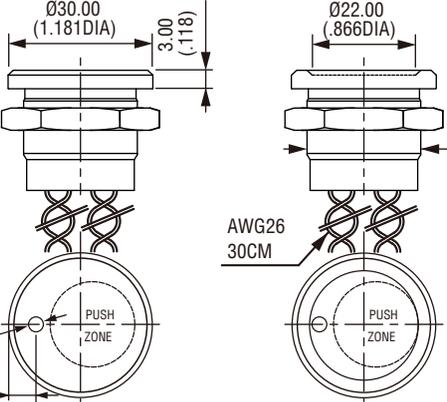


**Flat**

**Finger location**



**R2**



**R6**

Ø25.00x1.00 SI  
(.984DIAx1.00 IS)

AWG26  
30CM

LED Ø3.00 (.118DIA)

PUSH ZONE

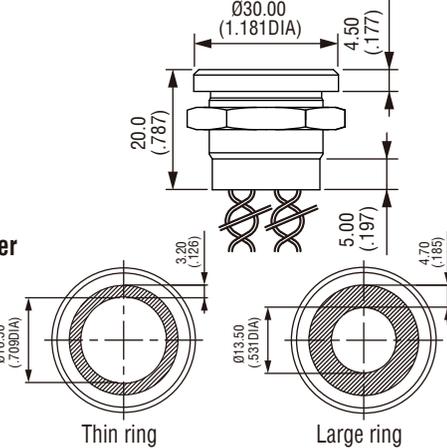
PZ25BR2FS1NOLG

### Ring illuminated

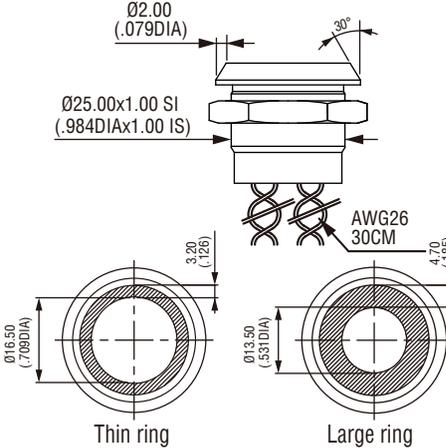


**Flat**

**Chamfer**



**RZ**



**RY**

Ø25.00x1.00 SI  
(.984DIAx1.00 IS)

AWG26  
30CM

30°

Ø2.00 (.079DIA)

Thin ring

Large ring

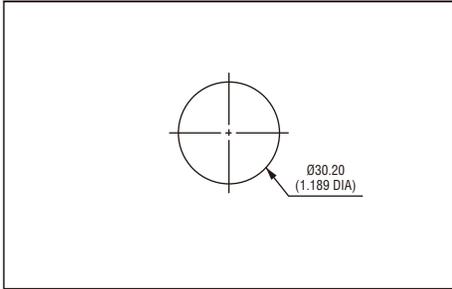
Thin ring

Large ring

PZ25BRZFN1NOLG

# Piezo switch Ø 30(1.181)

PIEZO SWITCH



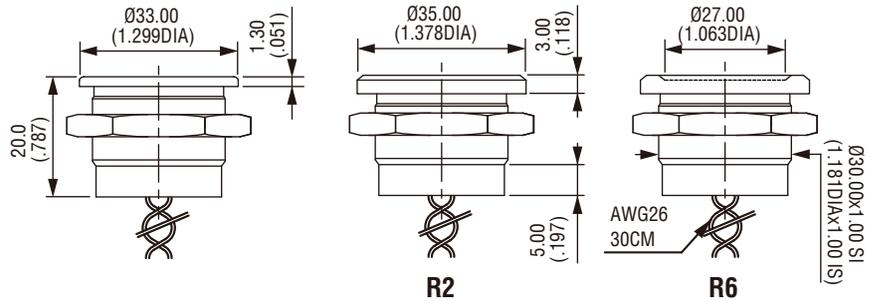
Shown with flying lead terminals.

## Non-illuminated



PZ30BR2F1NOM

Flat



R2

R6

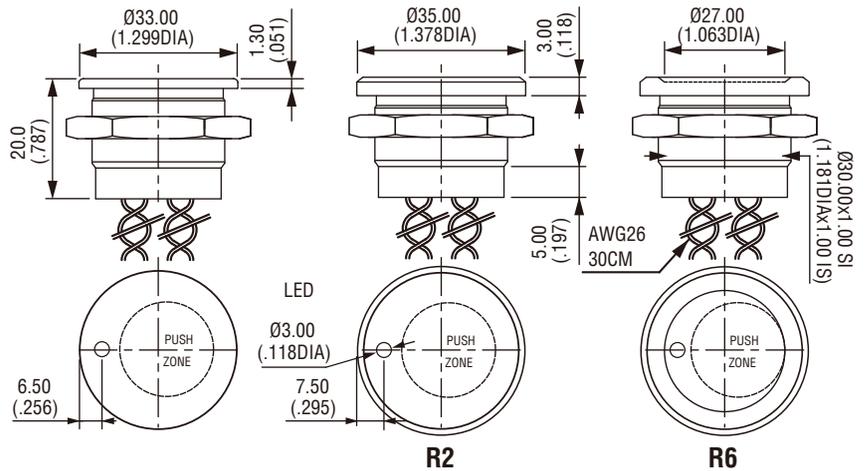
## Dot-illuminated



PZ30BFE1NOMG

Flat

Finger location



R2

R6

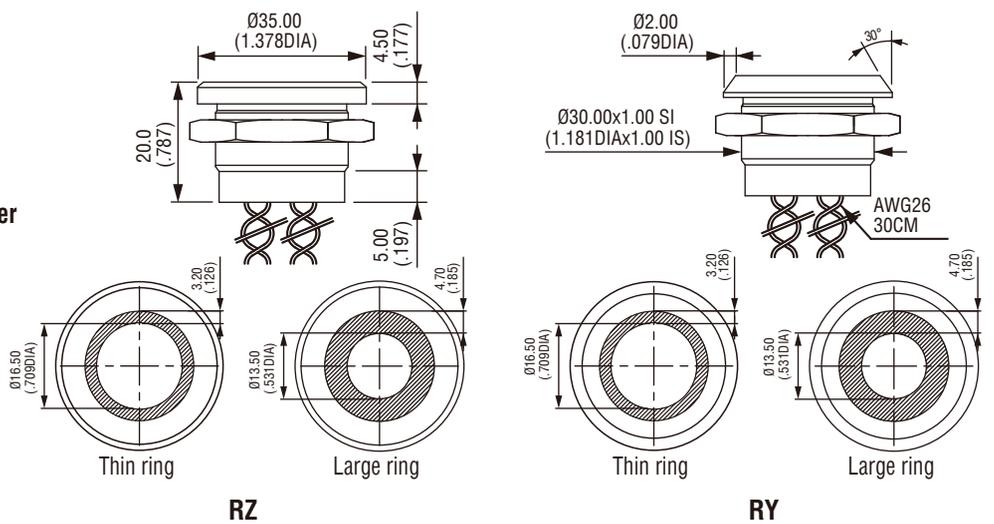
## Ring illuminated



PZ30A2RYFJ1NOMRY

Flat

Chamfer



RZ

RY

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