



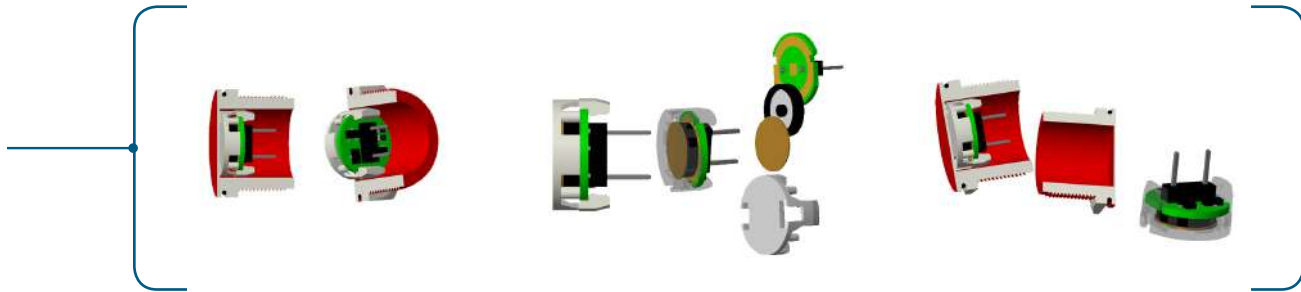
Leaders in Engineering, Innovation and Quality  
LANGIR brings Piezo Technology to perfection



**langir**<sup>®</sup>  
Piezo switch  
[www.piezo-switch.com](http://www.piezo-switch.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

LED



CASE / MATERIALS



## 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



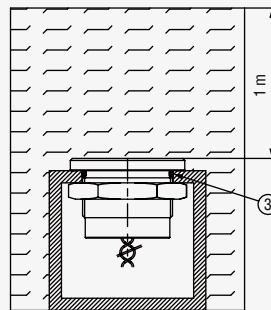
## ELECTRICAL SPECIFICATIONS

- 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



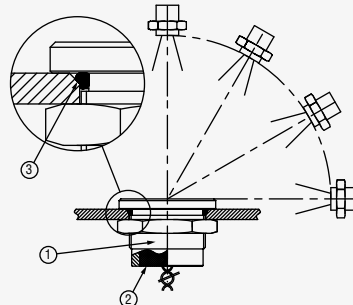
## SEALING

SEALING IP68



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

SEALING IP69K



- ① - One-piece bushing
- ② - Epoxy sealed terminals
- ③ - O-ring

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

**Dimensions: first dimensions are in mm while inches are shown as bracketed numbers.**

**Tolerance: The general tolerance for dimensions in this brochure is ± 0,3 (.012).**

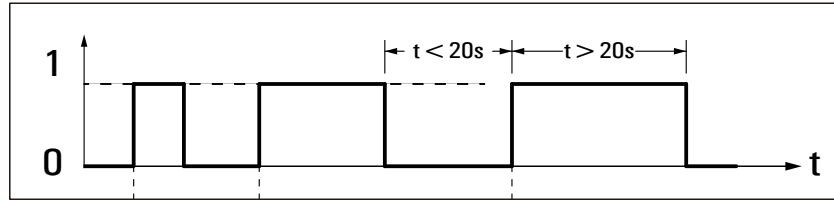
**Dimensions, specifications and data shown in this brochure are subject to change without notice.**



**ELECTRICAL FUNCTIONS**

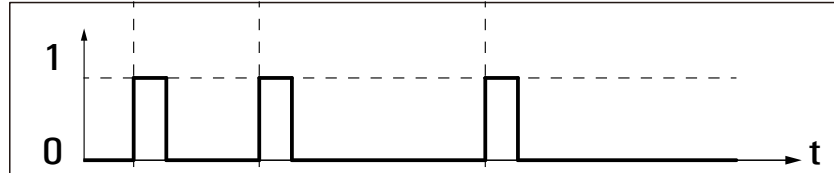
**FINGER PRESSURE applied to switch**

1 = pressure  
0 = no pressure



**OUTPUT**

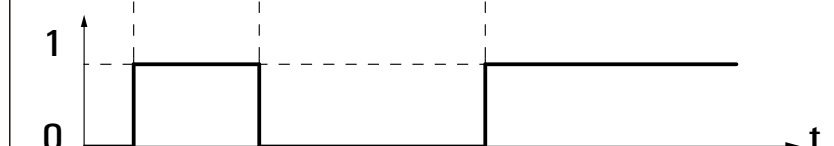
**Momentary NO (pulse)**  
No external power supply required



**Momentary NC (pulse)**  
No external power supply required



**Latching (ON - OFF)**  
Requires external power supply



1 = closed output 0 = open output



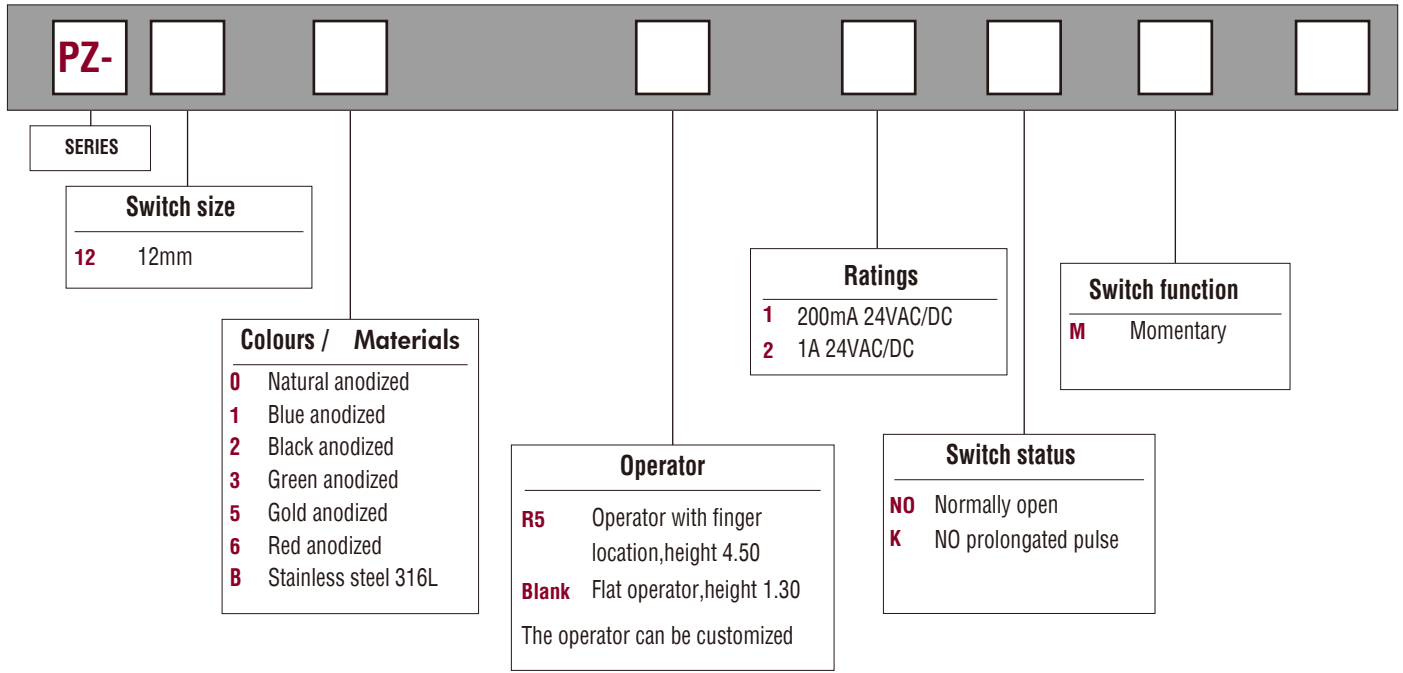
**WIRING DIAGRAMS**

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)



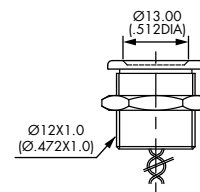
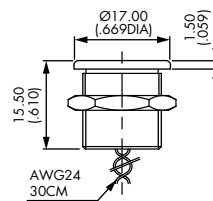
## Non-illuminated



PZ1251NOM

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



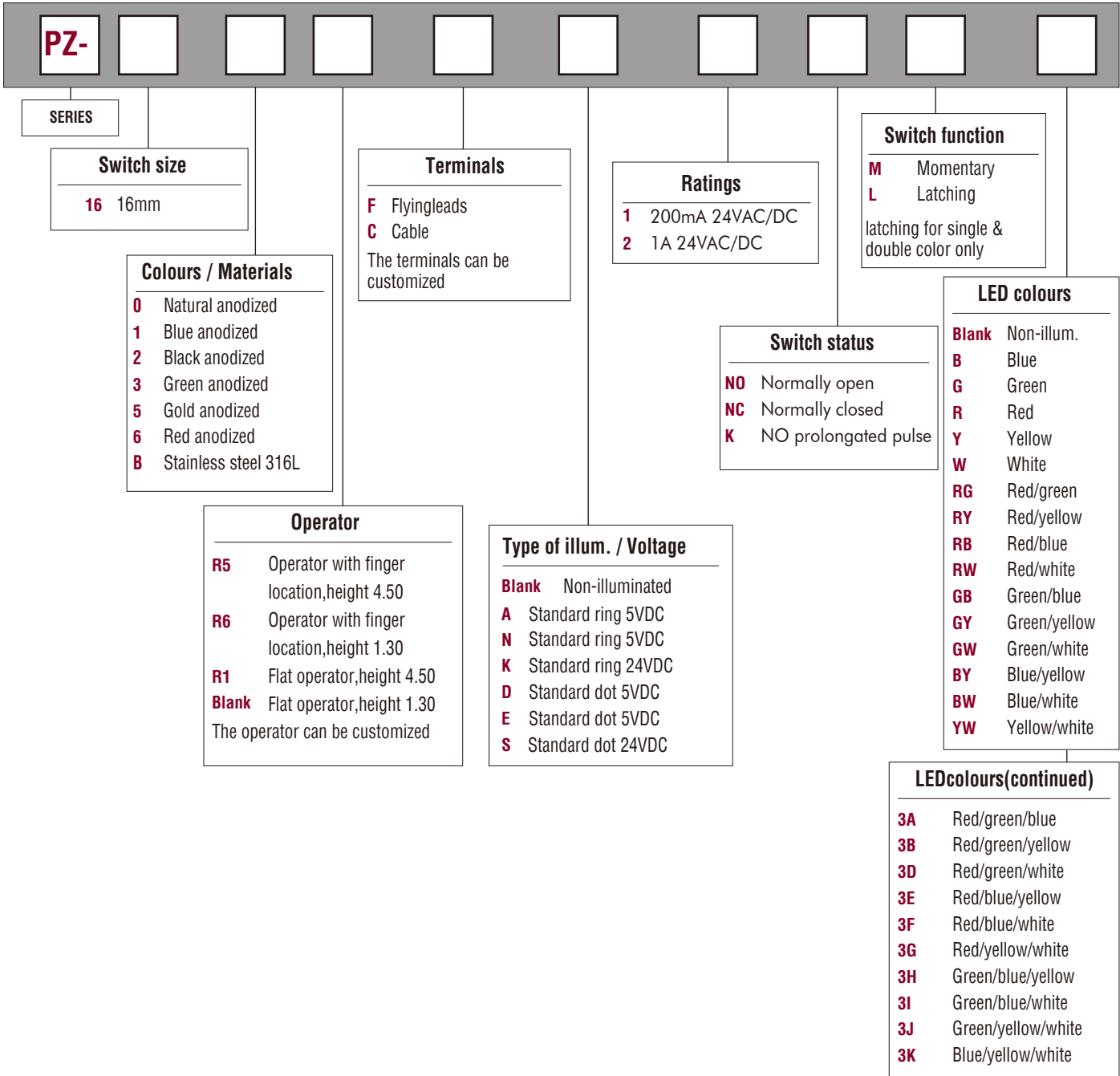
Packaging unit: 20 pieces

**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



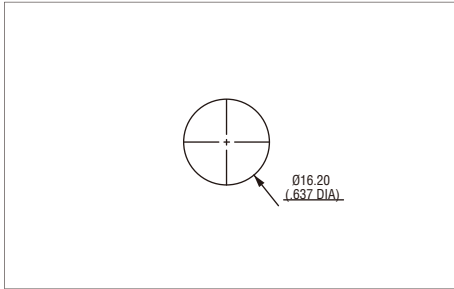
Packaging unit: 20 pieces

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# Piezo switch Ø 16 (.630)



Shown with flying lead terminals.

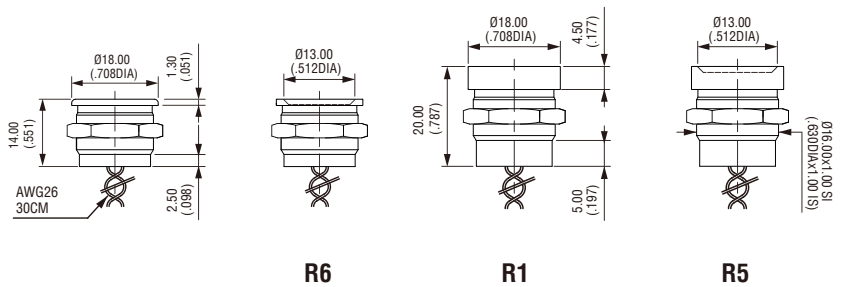
## Non-illuminated



PZ166F1NOM

Flat

Finger location

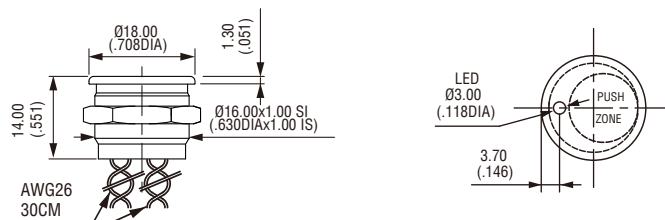


## Dot-illuminated



PZ16BFS1NOMR

Flat

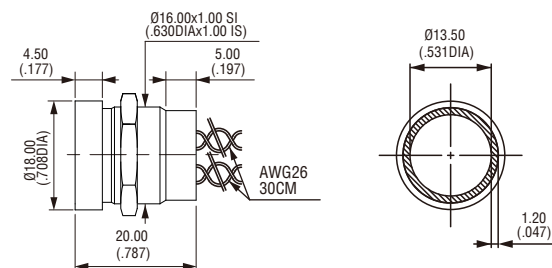


## Ring illuminated

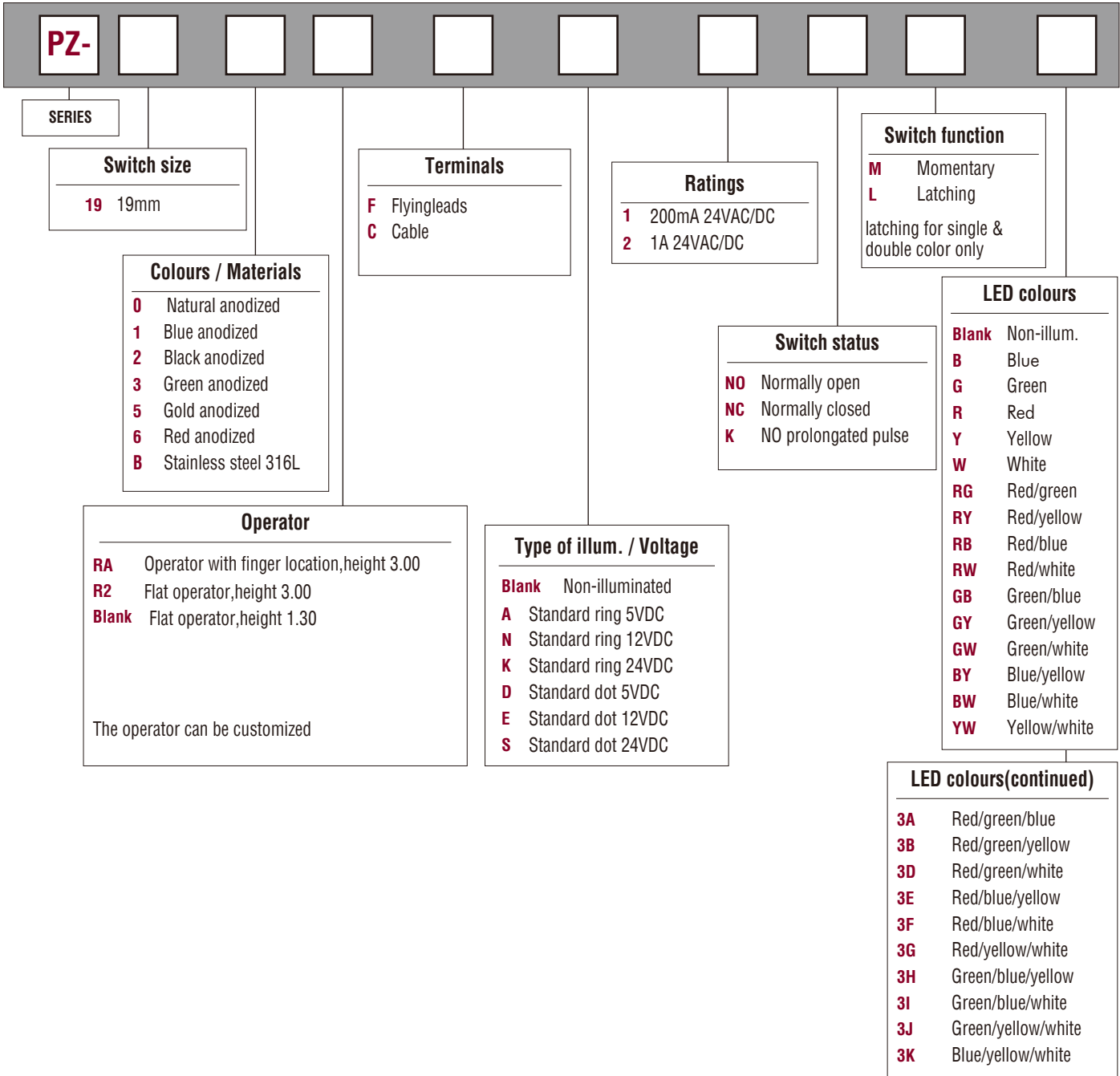


PZ160R1FN1NOMAG

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



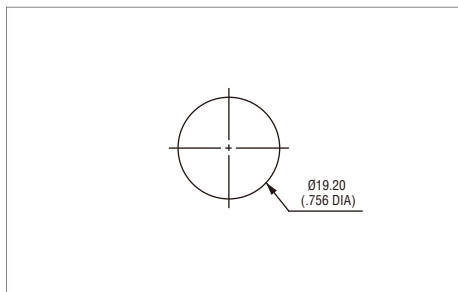
Packaging unit: 20 pieces

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Shown with flying lead terminals.

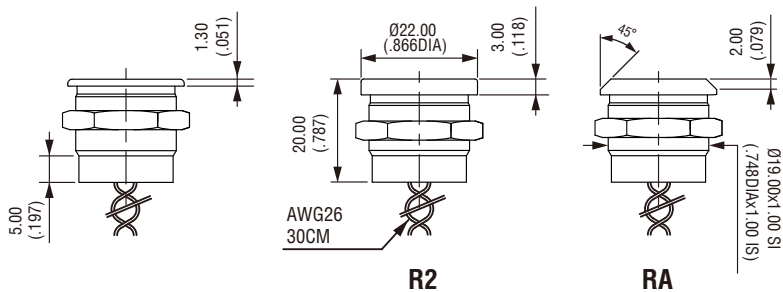
## Non-illuminated



PZ192F1NOM

Flat

Chamfer



R2

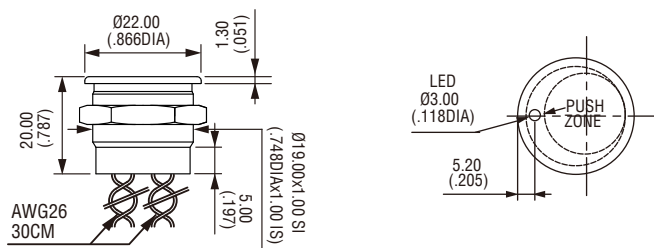
RA

## Dot-illuminated



PZ19BEF1NOMR

Flat



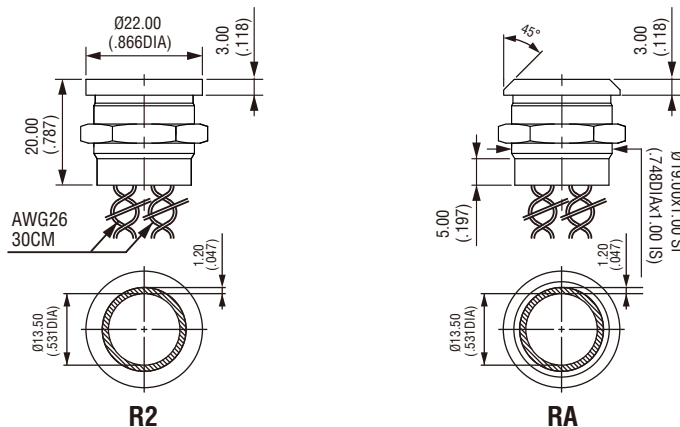
## Ring illuminated



PZ19BRAFKNOMR

Flat

Chamfer

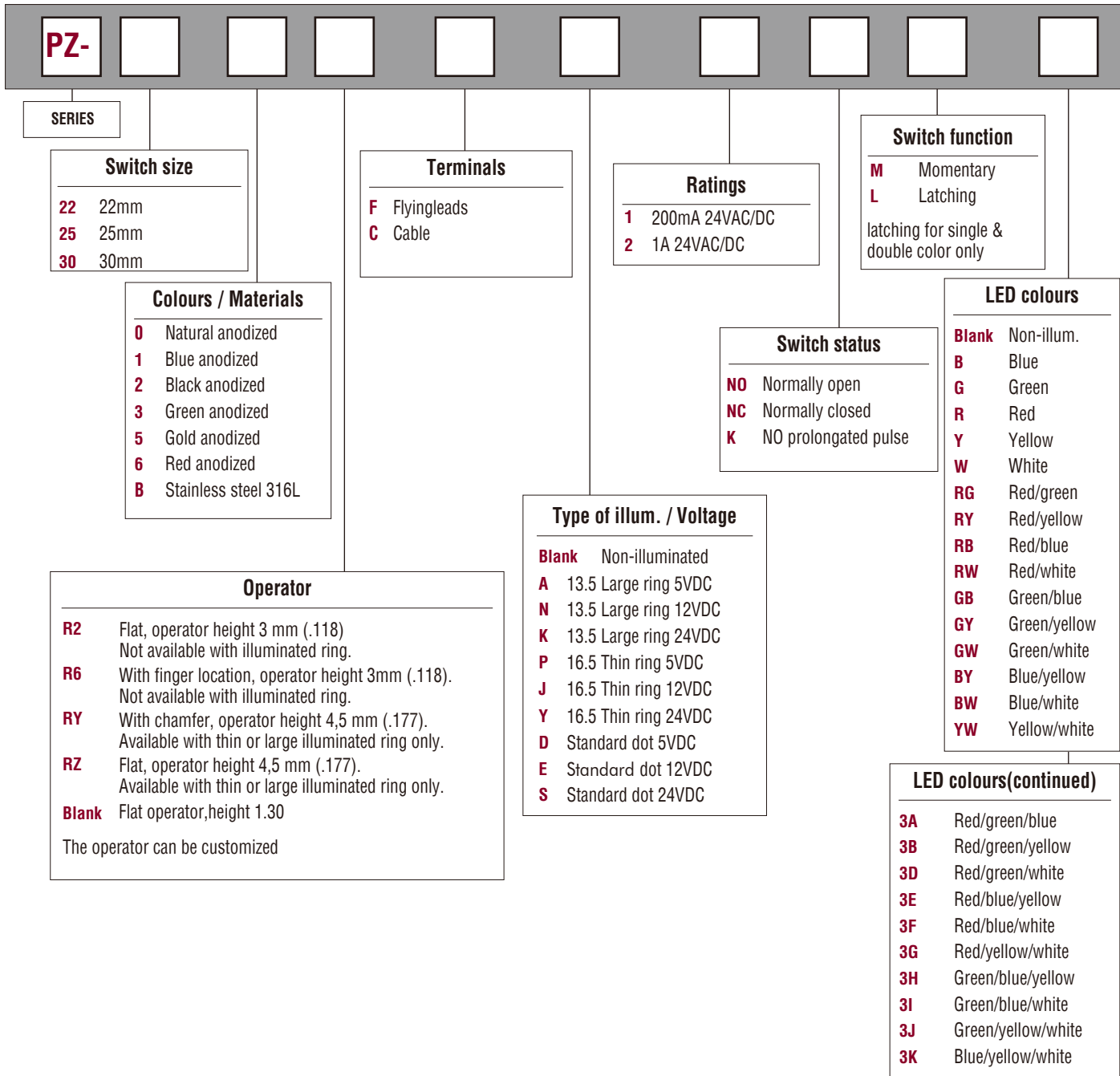


R2

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

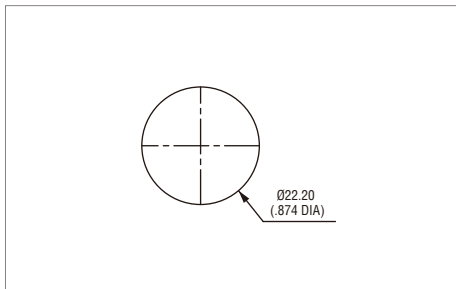


Packaging unit: 20 pieces

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Shown with flying lead terminals.

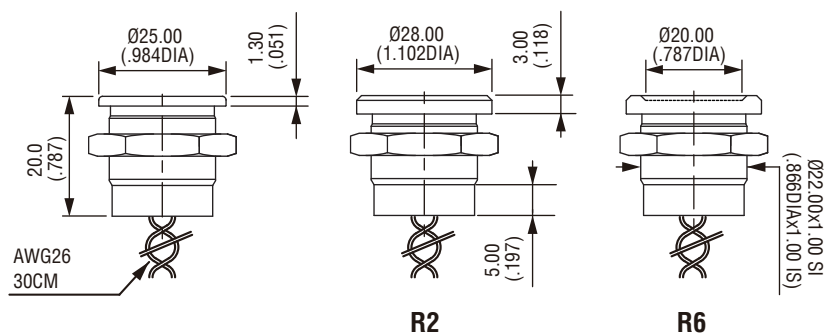
## Non-illuminated



PZ226F1NOM

Flat

Finger location



R2

R6

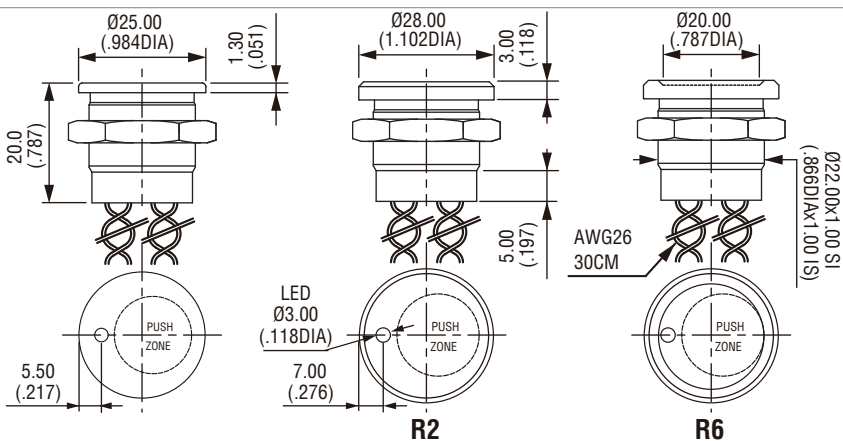
## Dot illuminated



PZ22BR2FD1NOMR

Flat

Finger location



R2

R6

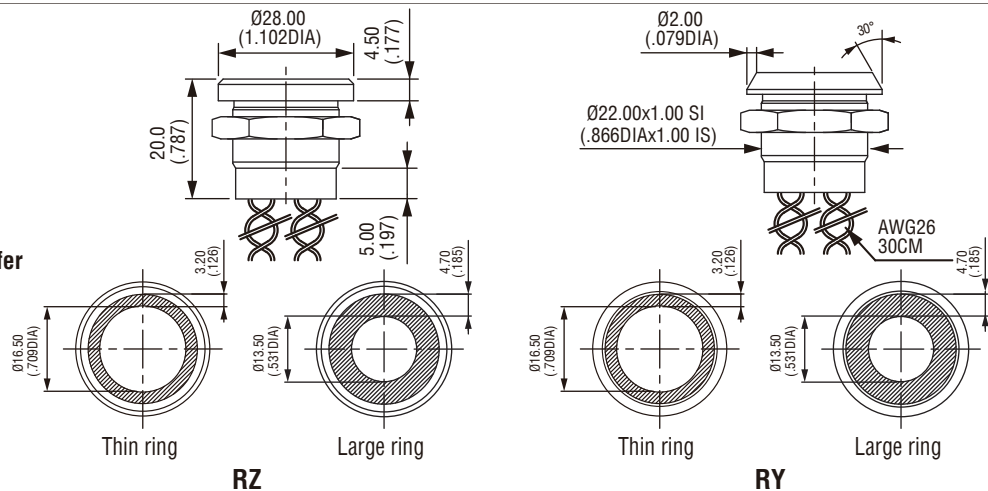
## Ring illuminated



PZ22BRYFJ1NOMR

Flat

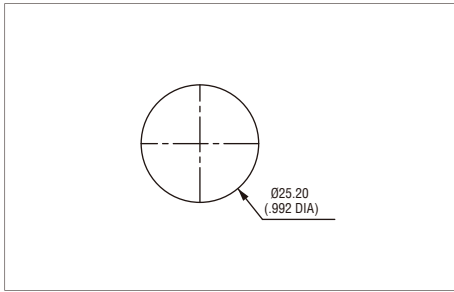
Chamfer



RZ

RY

# Piezo switch Ø 25(.984)



Shown with flying lead terminals.

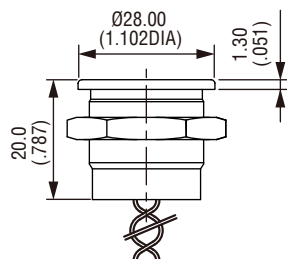
## Non-illuminated



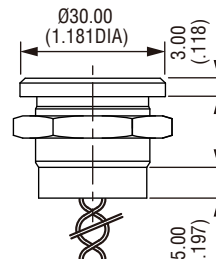
PZ25BF1NOM

Flat

Finger location



R2



R6

AWG26  
30CM

Ø25.00x1.00 SI  
(.984DIAx1.00 IS)

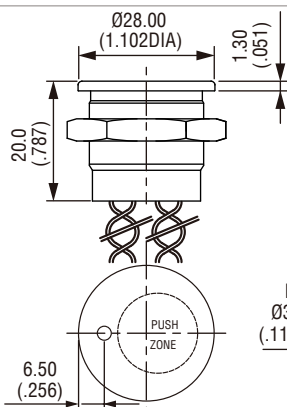
## Dot illuminated



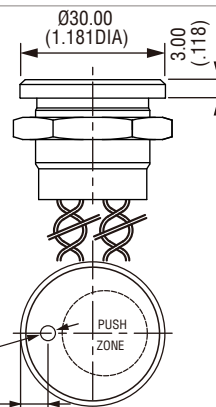
PZ25BR2FS1NOMR

Flat

Finger location



R2



R6

AWG26  
30CM

Ø25.00x1.00 SI  
(.984DIAx1.00 IS)

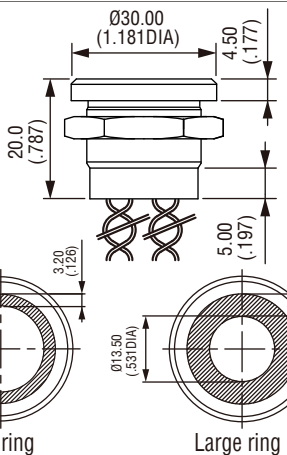
## Ring illuminated



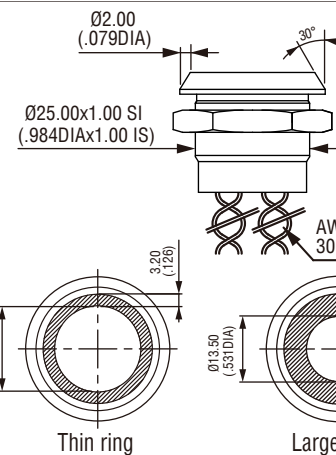
PZ25BRYFN1NOMR

Flat

Chamfer



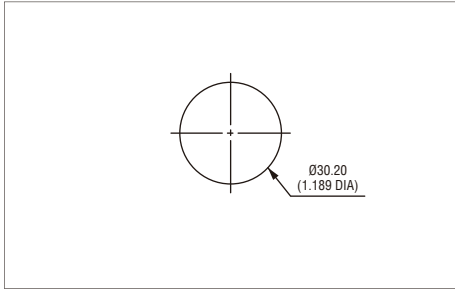
RZ



RY

Ø25.00x1.00 SI  
(.984DIAx1.00 IS)

AWG26  
30CM



Shown with flying lead terminals.

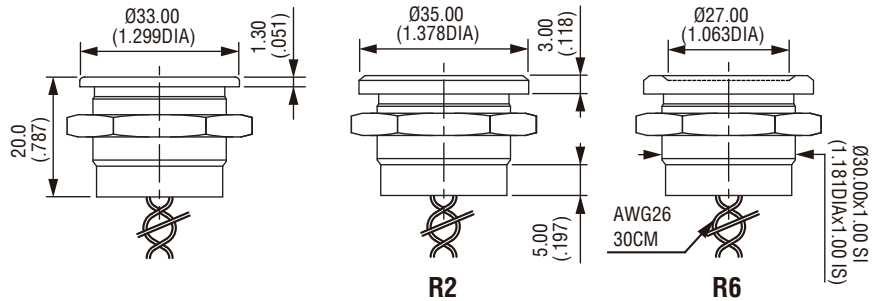
## Non-illuminated



PZ300R2F1NOM

Flat

Finger location



R2

R6

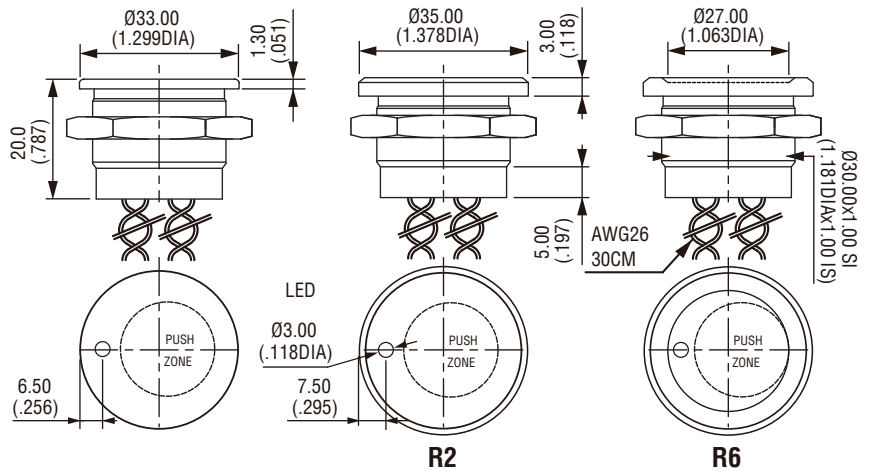
## Dot-illuminated



PZ30BFE1NOMG

Flat

Finger location



R2

R6

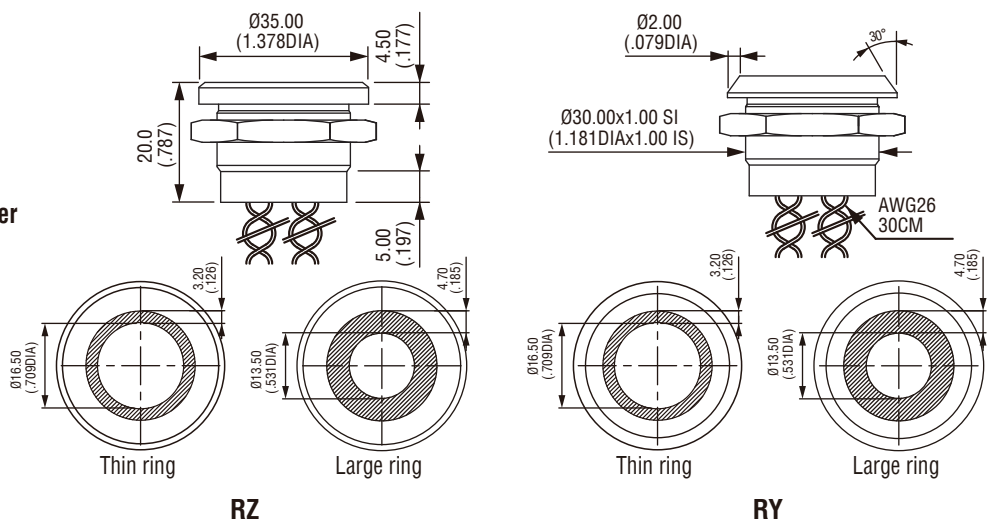
## Ring illuminated



PZ30BRZFJ1NOMR

Flat

Chamfer



RZ

RY

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