

Piezo Switch

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**Leaders in engineering,
innovation and quality**

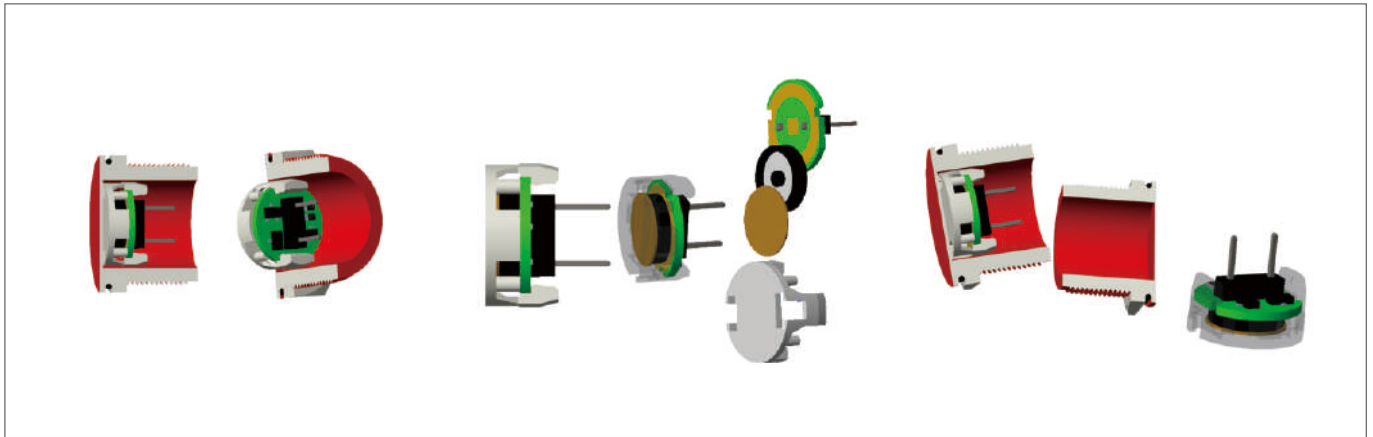
**LANGIR brings
piezo technology to
perfection**



- Shower
- Bath
- Marine
- Yacht controls
- Railway
- Industrial controls
- Electromedicine
- Access control
- Car wash device
- Bike system
- Parking

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.



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



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



Materials

- Case: aluminum, anodized or stainless steel 316L
- Multi-wire leads section 0.22mm² length 300mm, twisted by pair
- Case, length 300mm, 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).



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 : 5MΩ max.
- Life expectancy : 50 million cycles
- LED consumption: illuminated dot 10mA - illuminated ring 20mA



Color



Blue



Green



Yellow



White

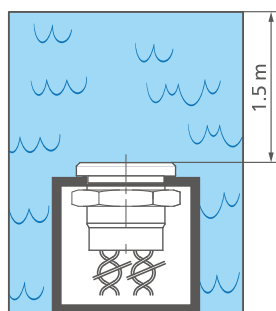


Red



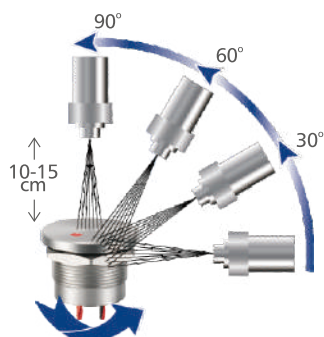
Sealing

SEALING IP68



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

SEALING IP69K



High pressure, high temperature wash
down IP69K test conditions

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



General Specifications

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

Specifications



Electrical Functions

FINGER PRESSURE applied to switch

1 = pressure

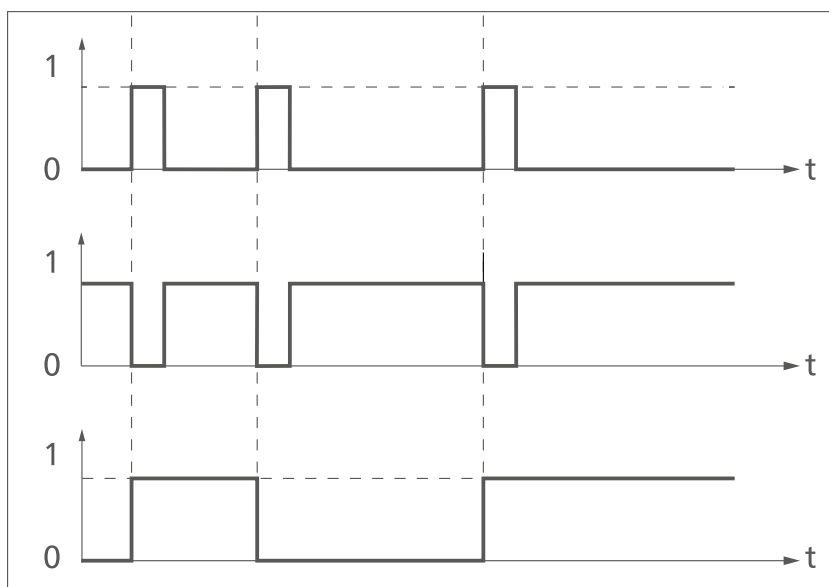
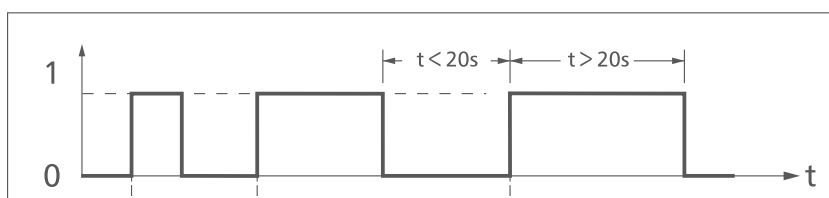
0 = no pressure

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

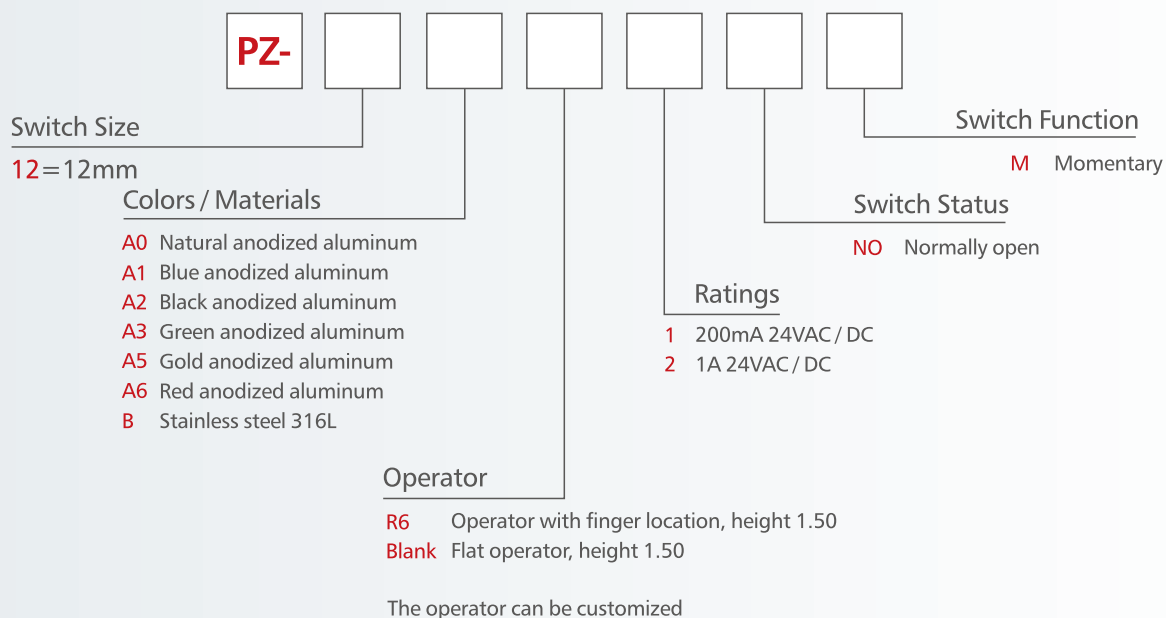


Wiring Diagrams

Function	Non-illuminated	1 LED*	2 LEDs	3 LEDs
Momentary NO				
Momentary NC				
Momentary NO Prolongated 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.



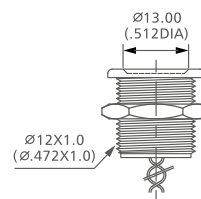
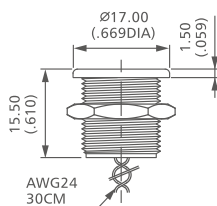
Non-illuminated



PZ12A01NOM

Flat

Finger location



R6



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



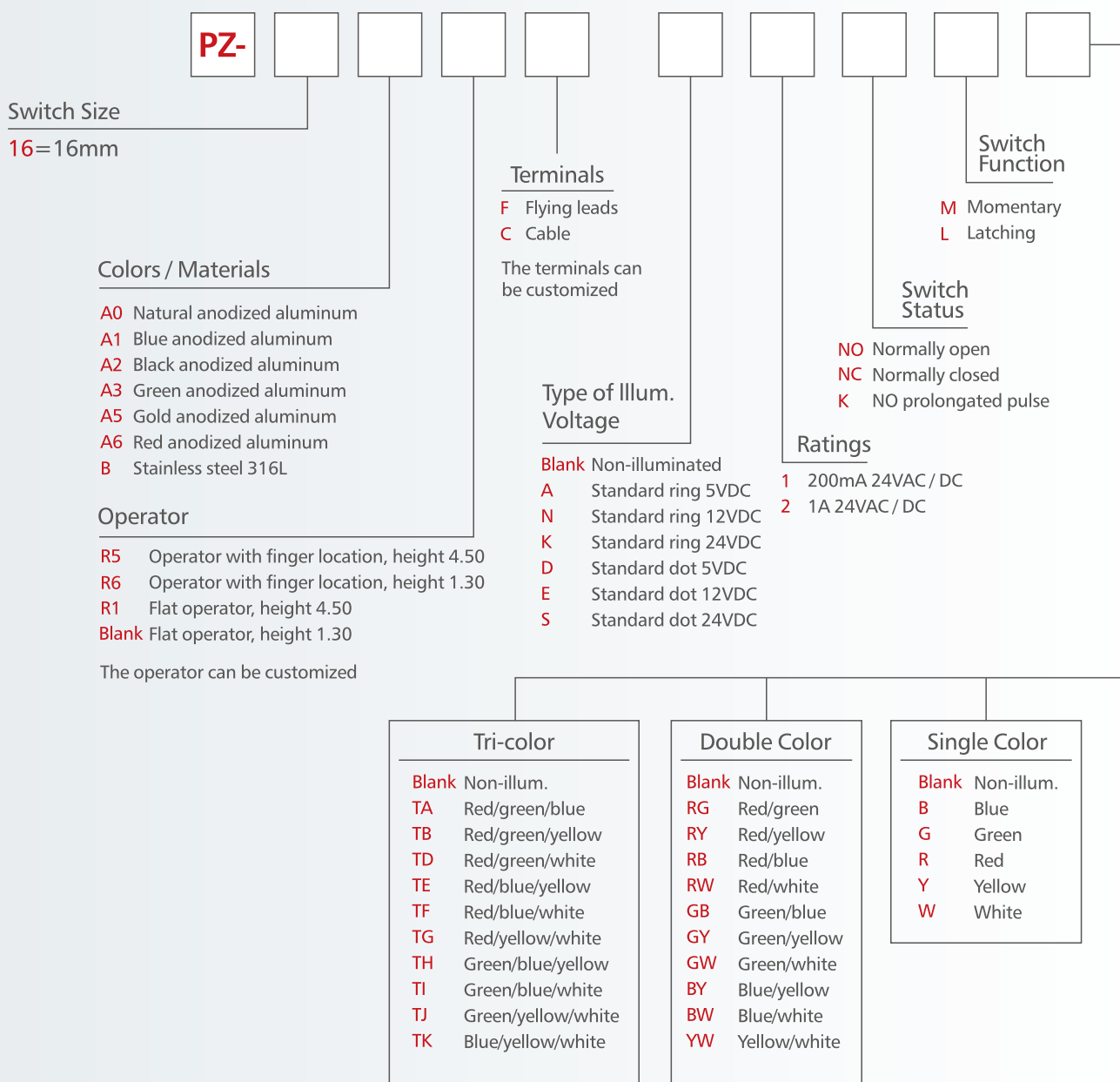
Packing unit: 20 pieces

For options not listed above, please contact LANGIR.

The appearance of the products listed on this file, color, parameters are for reference only, issued a kind of LANGIR Company shall prevail.

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.



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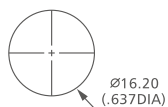
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Shown with flying lead terminals.

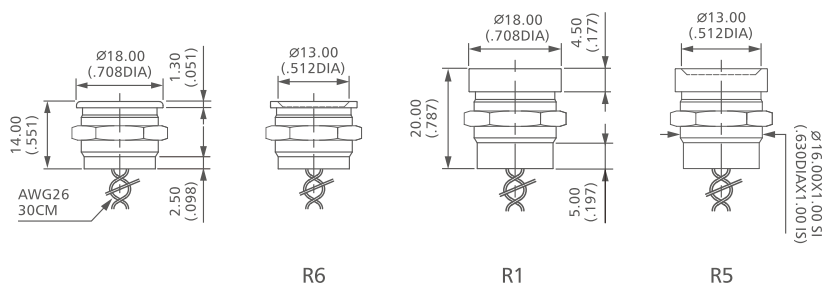
Non-illuminated



PZ16A6R1F1NOM

Flat

Finger location



R6

R1

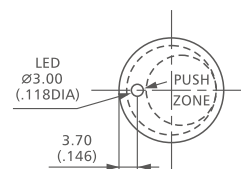
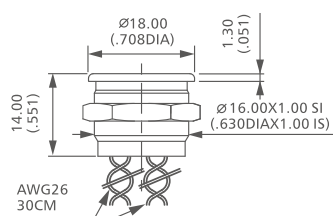
R5

Dot illuminated



PZ16BFS1NOMG

Flat

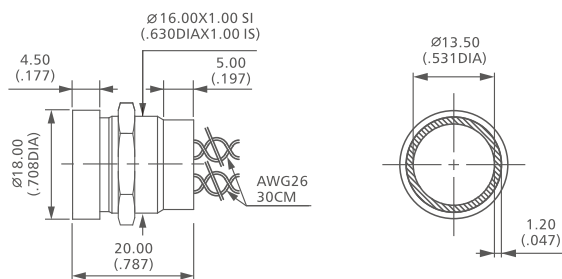


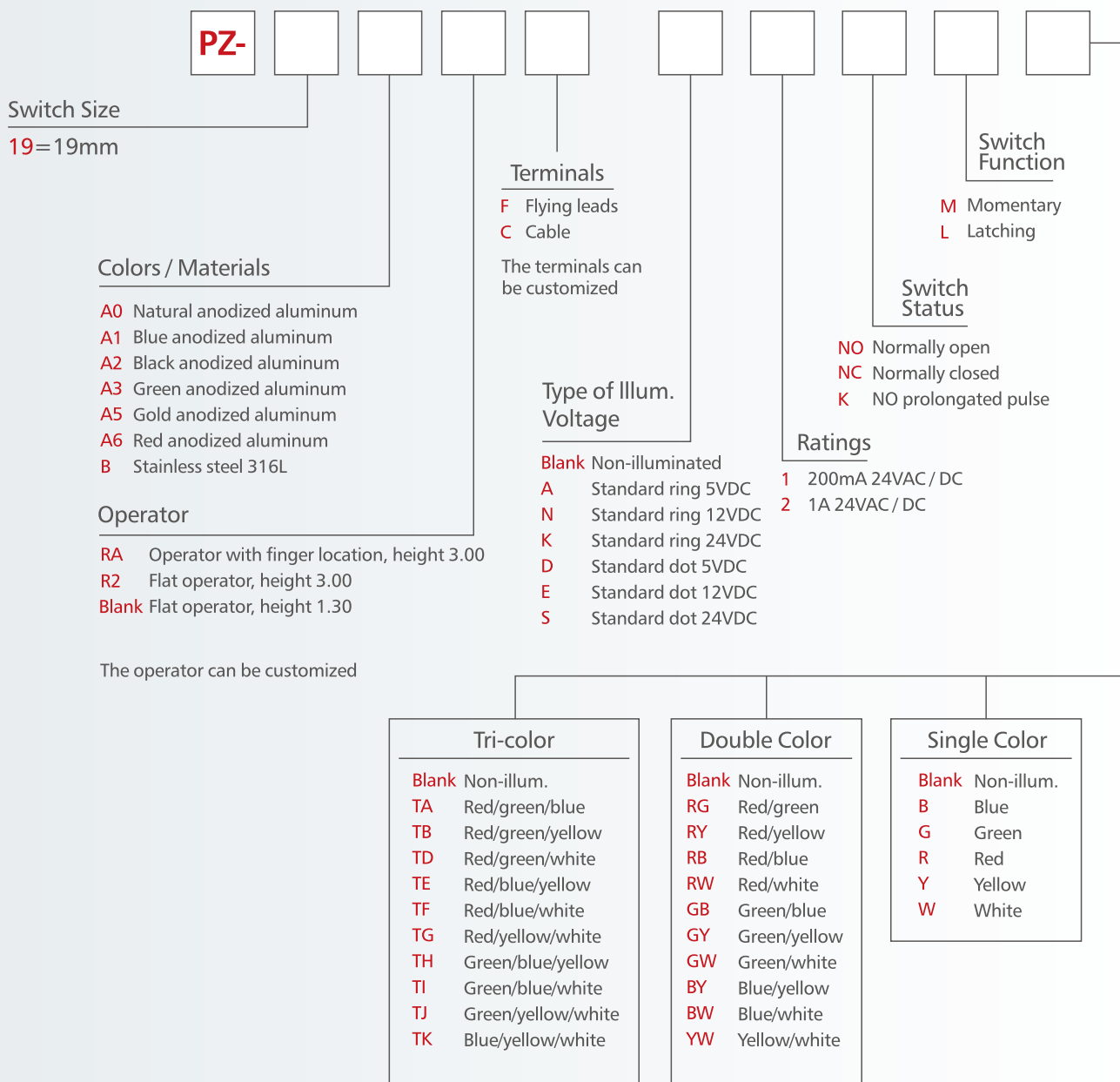
Ring illuminated



PZ16BR1FN1NOMR

Flat operator, height 4,50 (.177)





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

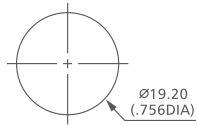


Packing unit: 20 pieces

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Piezo Switch



Shown with flying lead terminals.

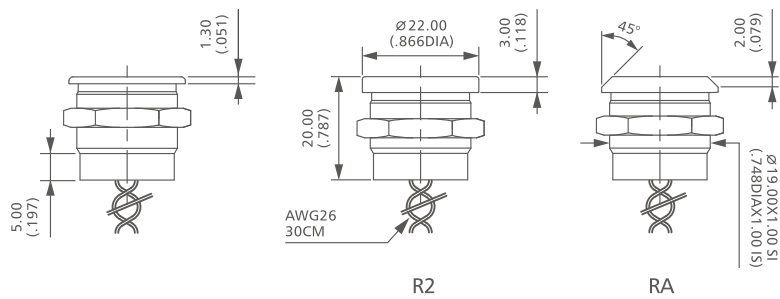
Non-illuminated



PZ19A3F1NOM

Flat

Chamfer



R2

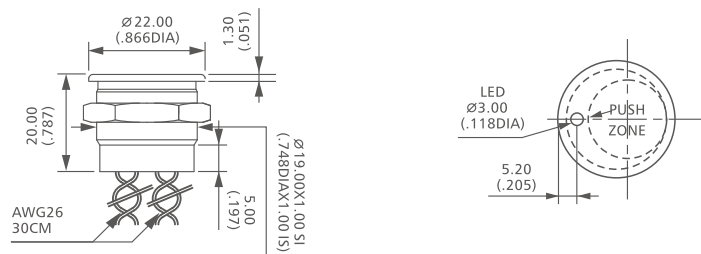
RA

Dot illuminated



PZ19BE1NOMG

Flat



LED
Ø3.00
(.118DIA)

PUSH
ZONE

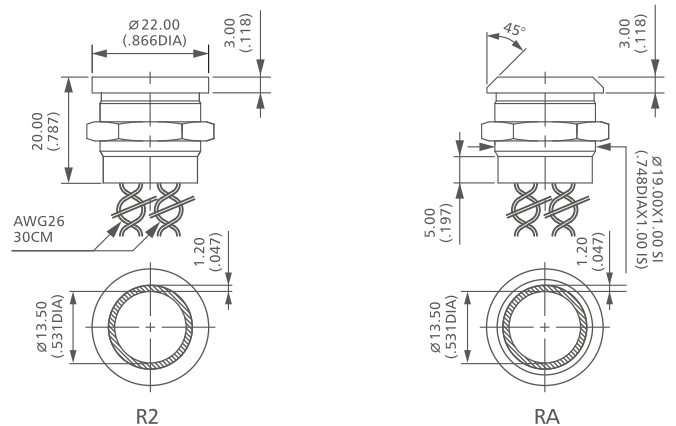
Ring illuminated



PZ19BRAFK1NOMR

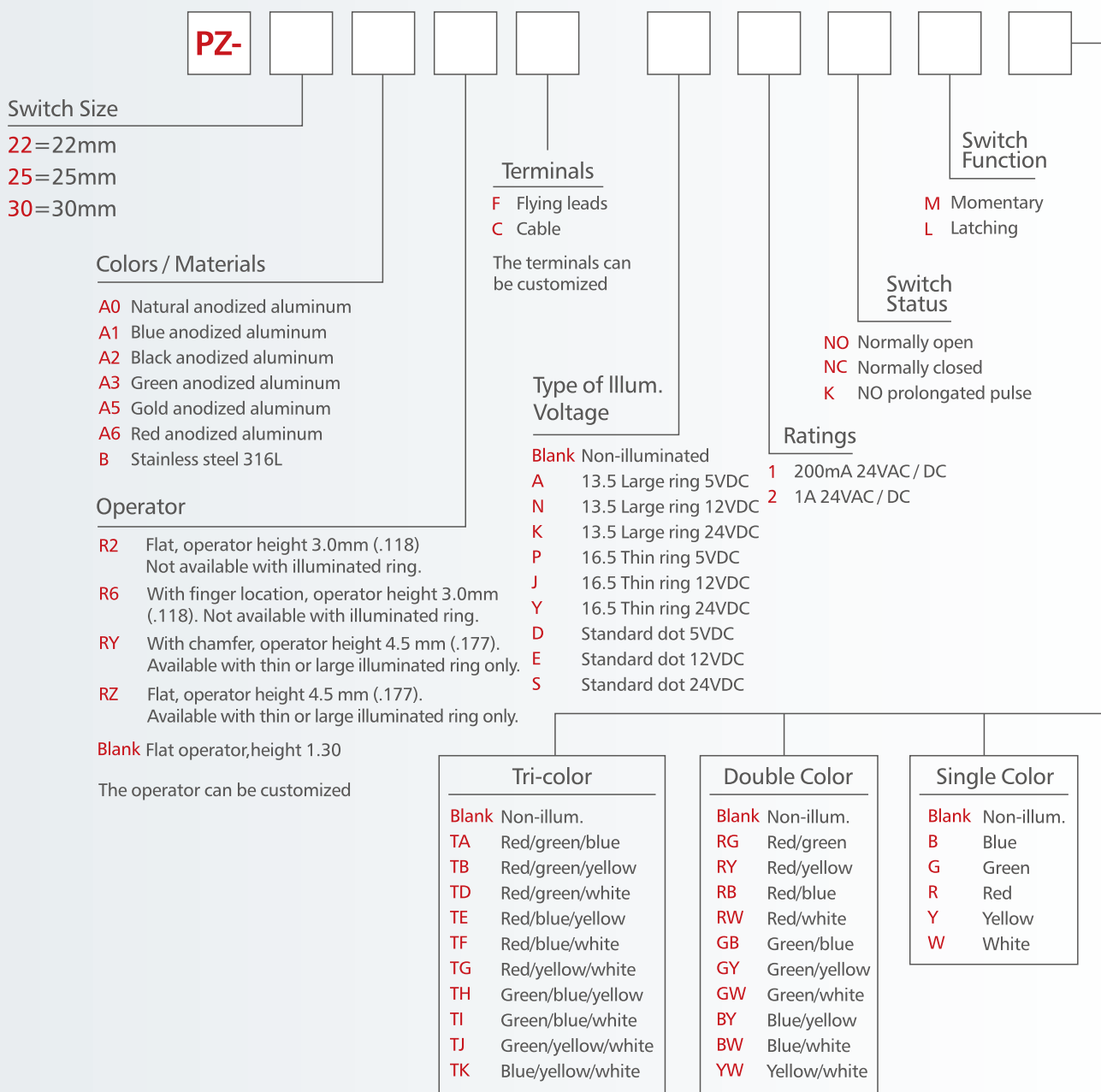
Flat

Chamfer



R2

RA



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



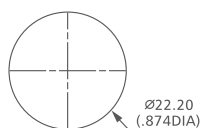
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Shown with flying lead terminals.

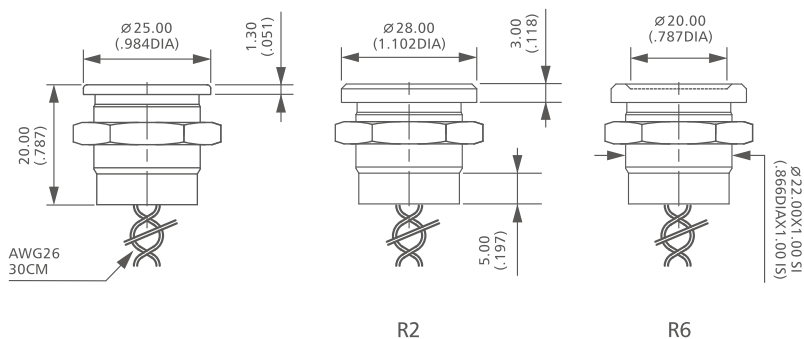
Non-illuminated



PZ22A6R6F1NOM

Flat

Finger location



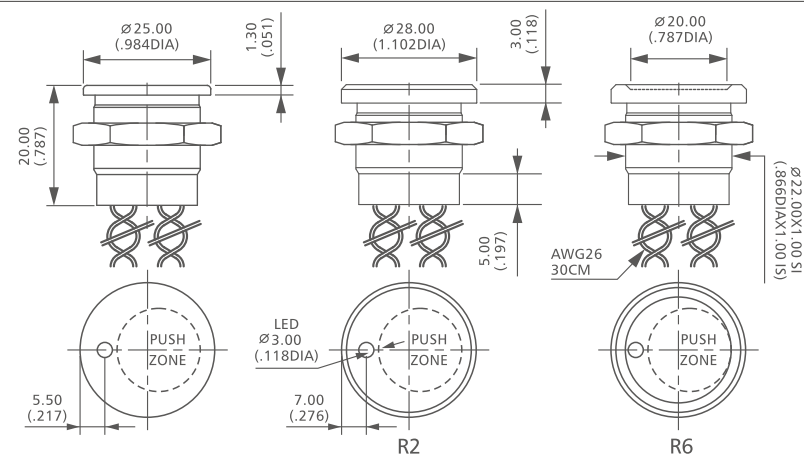
Dot illuminated



PZ22A0R2FD1NOMR

Flat

Finger location



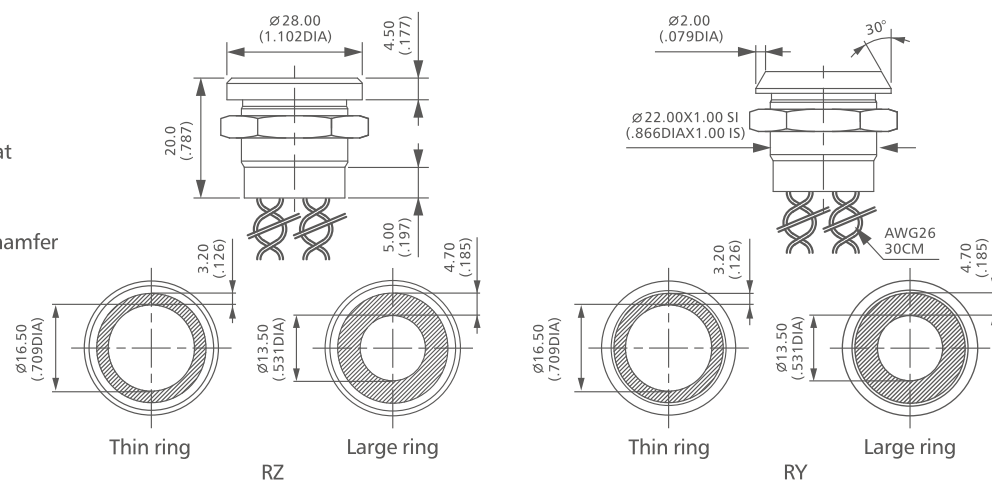
Ring illuminated

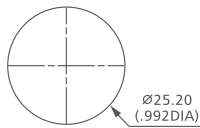


PZ22BRYFJ1NOLW

Flat

Chamfer





Shown with flying lead terminals.

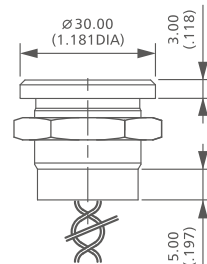
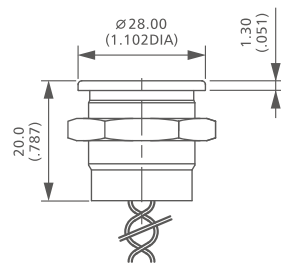
Non-illuminated



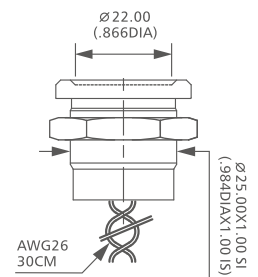
PZ25BF1NOM

Flat

Finger location



R2



R6

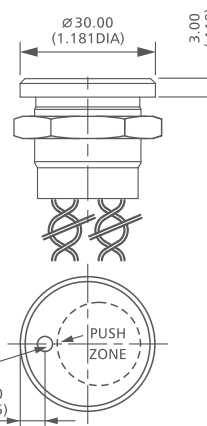
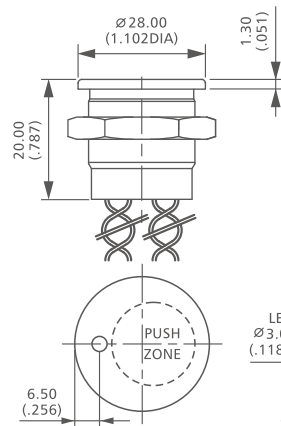
Dot illuminated



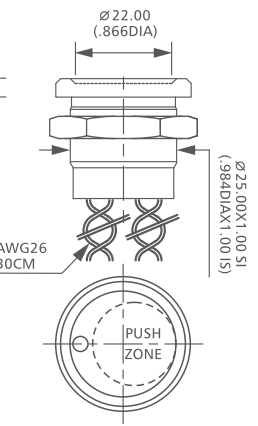
PZ25BR2FS1NOLG

Flat

Finger location



R2



R6

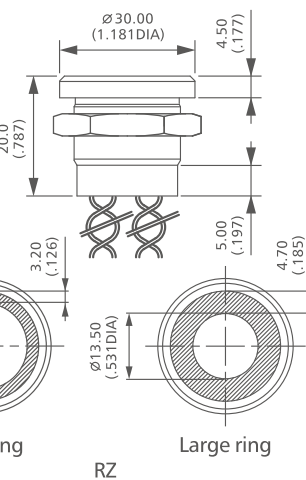
Ring illuminated



PZ25BRZF1NOLG

Flat

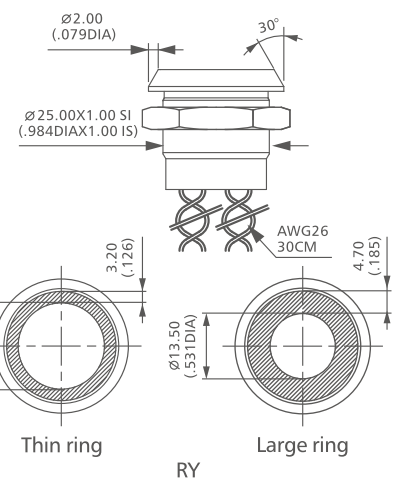
Chamfer



Thin ring

RZ

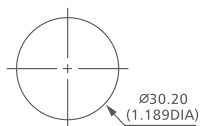
Large ring



Thin ring

RY

Large ring



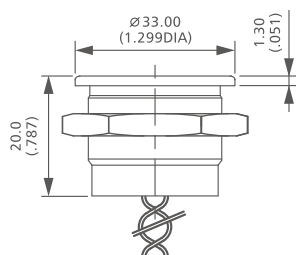
Shown with flying lead terminals.

Non-illuminated

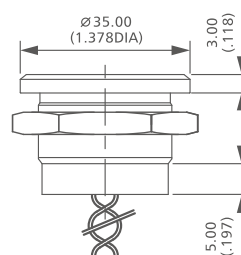


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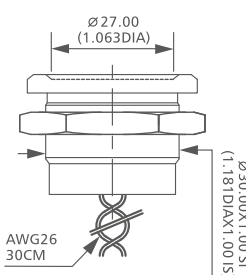
Flat



R2



R6



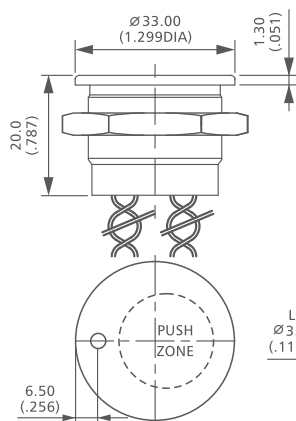
Dot illuminated



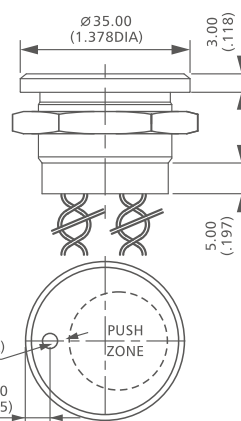
PZ30BFE1NOMG

Flat

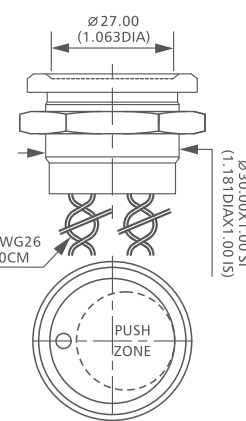
Finger location



R2



R6



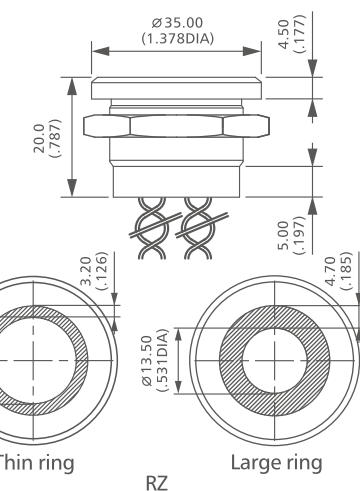
Ring illuminated



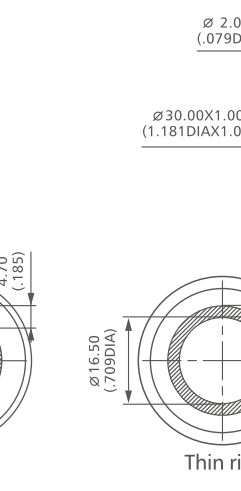
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Flat

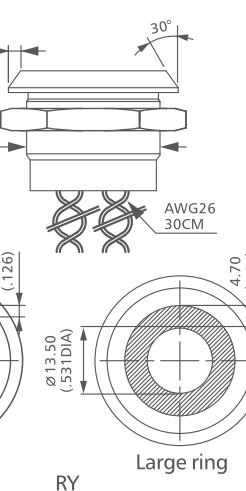
Chamfer



RZ



RY



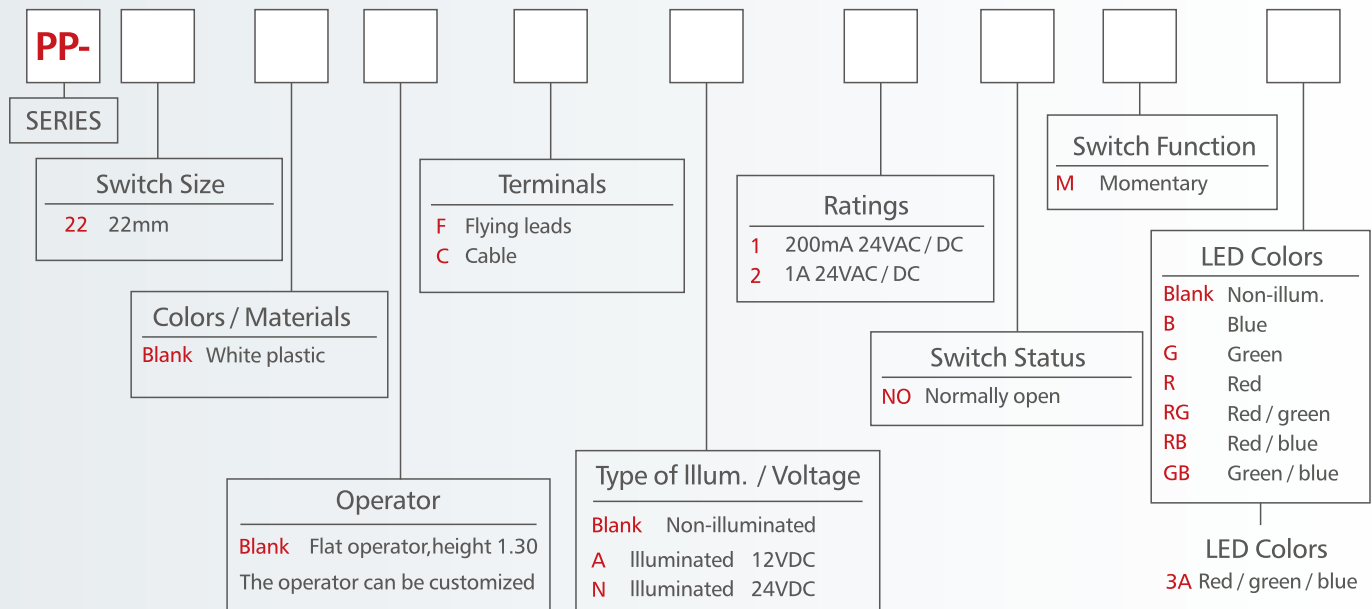
Plastic Piezo Switch

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**Leaders in engineering,
innovation and quality**

**LANGIR brings piezo
technology to perfection**





Plastic piezo switches offering rugged, sealed tamper and vandal proof solid stated switching.

Exceptional durability and reliability.

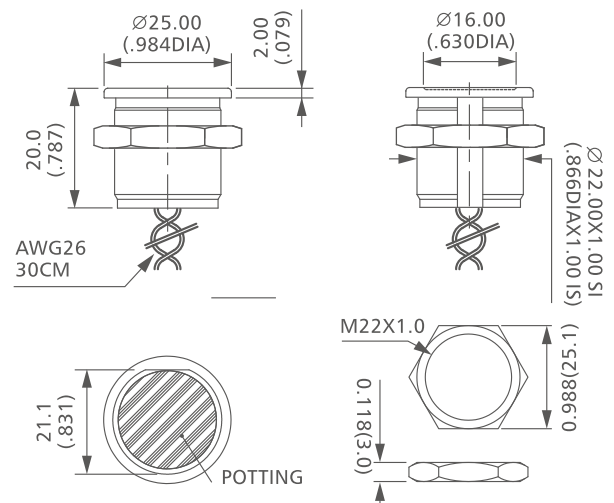
Fitted with red, green and blue LED's for illumination.

- 25mm diameter actuator
- 22.2mm diameter mounting hole
- Normally open, momentary action
- Make impulse time of 125-300 msec
- Recessed face
- Wire termination
- IP68 Sealed
- Available in 12V and 24V LED's

Specifications

Operating voltage:	1-24V AC / DC	
Switching current	0.2A(standard) / 1A options	
Actuation force	3-5N	
Operating temperature	-20°C ~ +70°C	
LED operating voltage	12DC max OR 24V DC max	
LED max current consumption:	(12V)	(24V)
Red	18mA	18mA
Green	9mA	9mA
Blue	27mA	16mA
Ingress Protection	IP68	
Life time	50 million operations	
Material	POM	

Dimension



Wiring Diagrams

	Non-illuminated	1-LED	2-LEDs	3-LEDs
Momentary NO				

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

*LED color is indicated by the bottom of the product.