

Piezo Switch

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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

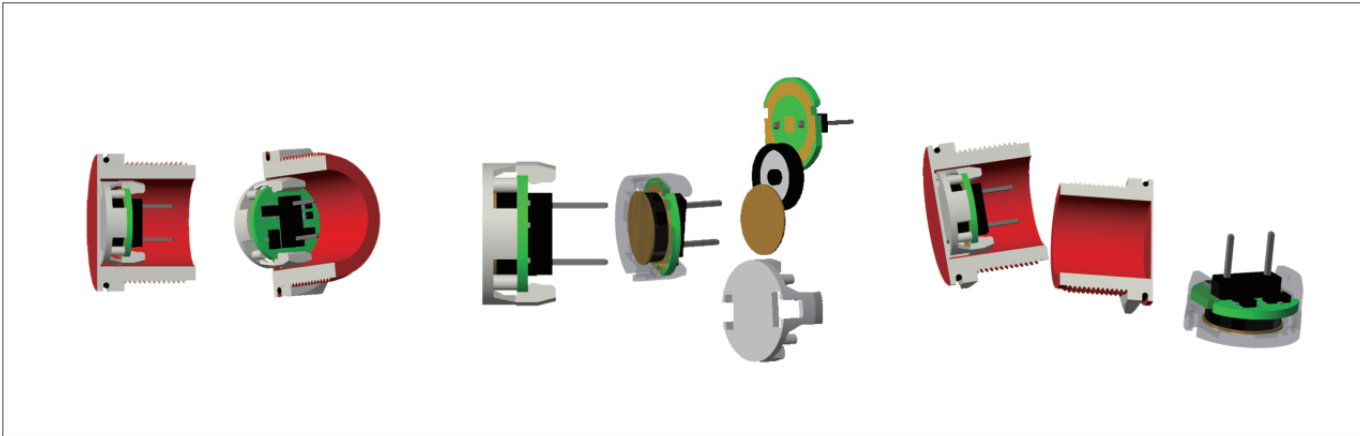


Piezo Switch

Technology

The LANGIR VPM (Versatile Piezo Module)

The principle behind the Langir Pizeo 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.

Specifications



Distinctive Features

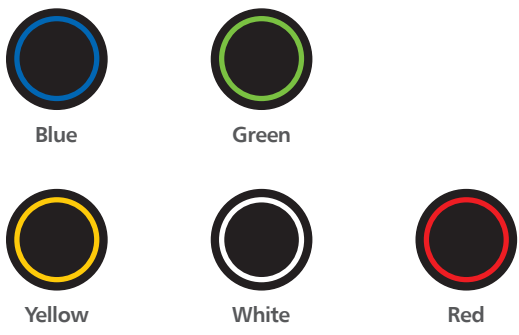
- Bushing diameter:
16 (.630), 19 (.748), 22 (.866) or 30 mm (1.181)
- Sealed to IP68 and IP69K (switches mounted on panel)
- Easy to clean metal surface
- Very long life expectancy
- Illumination or Non-illumination

Materials

- Case: aluminum, anodized or stainless steel 316L
- Multi-wire leads section 0.22mm² 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).

Color



General Specifications

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

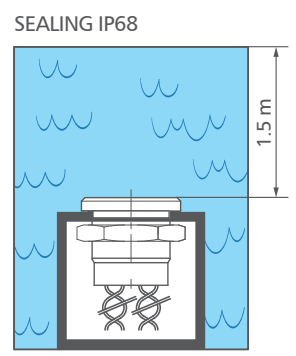
Environmental Specifications

- 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

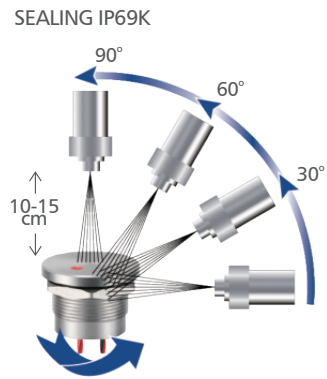
Electrical Specifications

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

Sealing



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



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

Specifications



Electrical Functions

FINGER PRESSURE
applied to switch

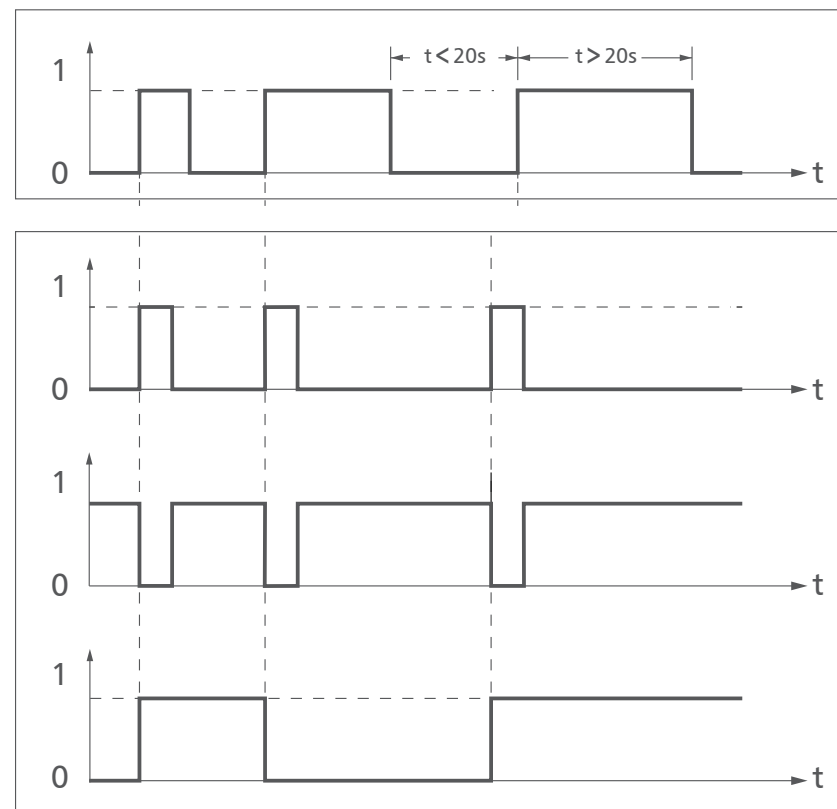
1 = pressure
0 = no pressure

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



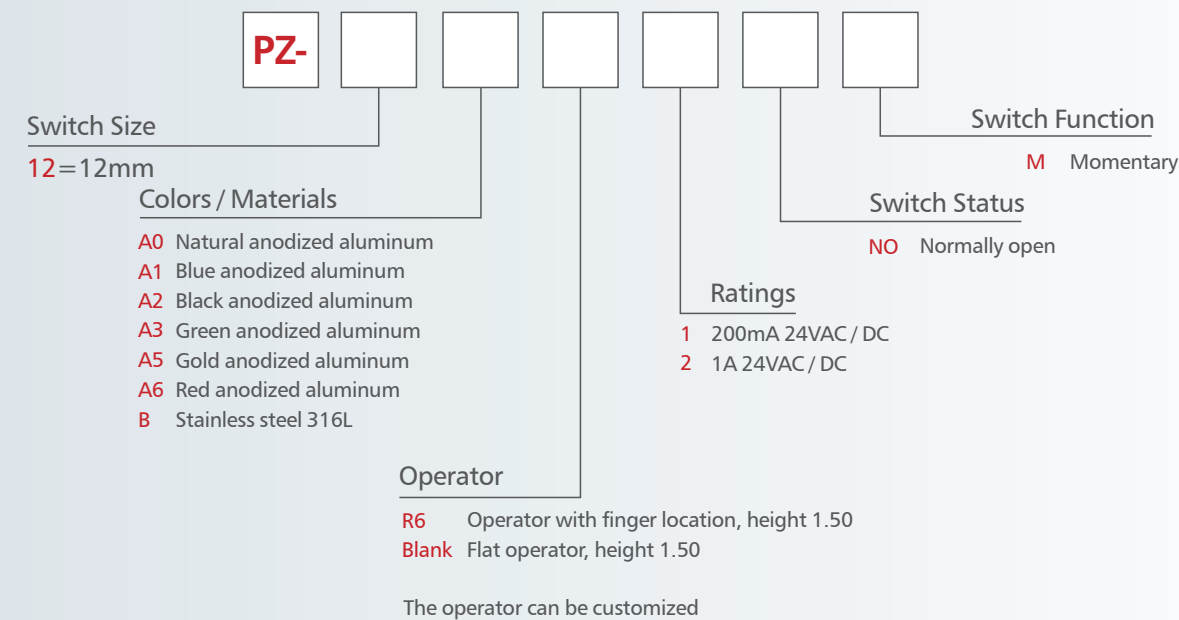
Wiring Diagrams

Function	Non-illuminated	1 LED*	2 LEDs	3 LEDs
Momentary NO				
Momentary NC				
Momentary NO Prolongated Pulse				
Latching (ON - OFF)				

Legend: B = black, A = same colour as LED
*LED colour is indicated by the bottom of the product.

Piezo Switch

Piezo Switch Ø 12 (.480)



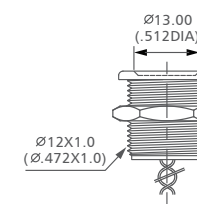
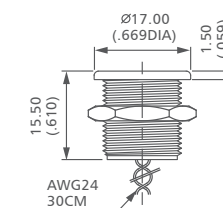
Non-illuminated



PZ12A01NOM

Flat

Finger location



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



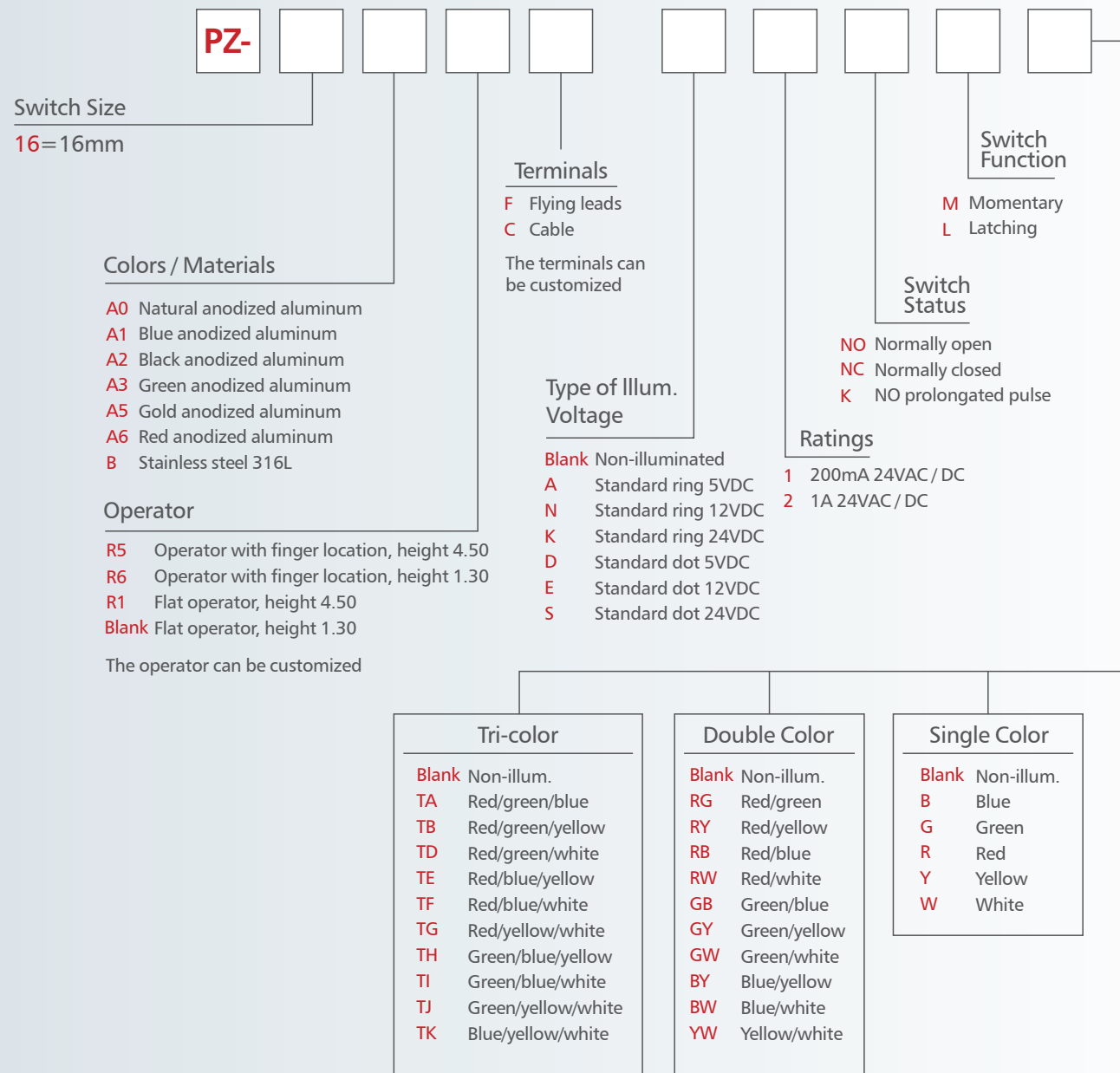
Packing unit: 20 pieces

For options not listed above, please contact LANGIR.

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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.



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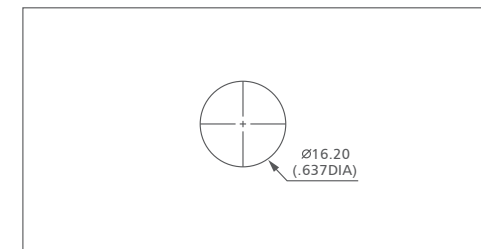
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Shown with flying lead terminals.

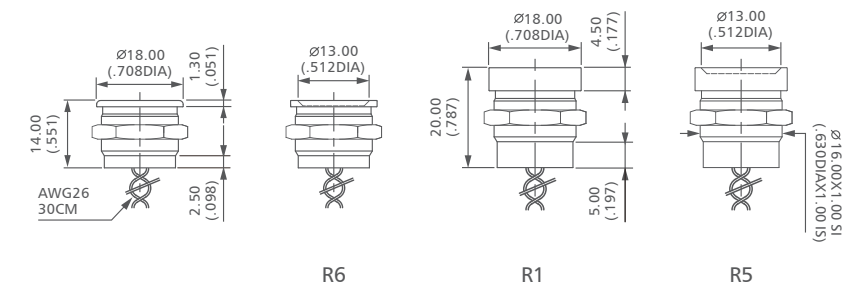
Non-illuminated



PZ16A6R1F1NOM

Flat

Finger location

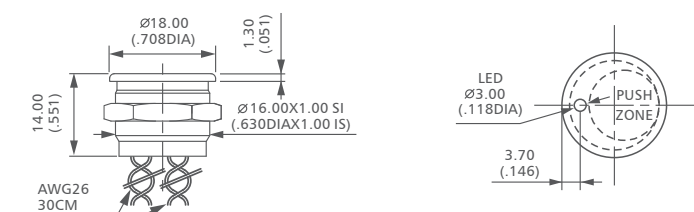


Dot illuminated



PZ16BFS1NOMG

Flat

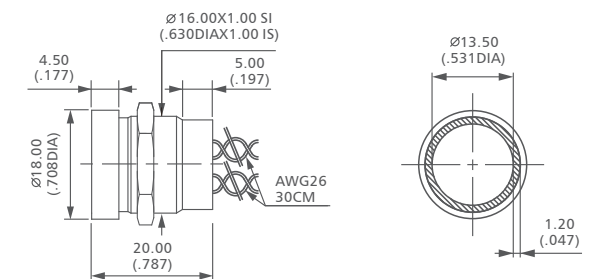


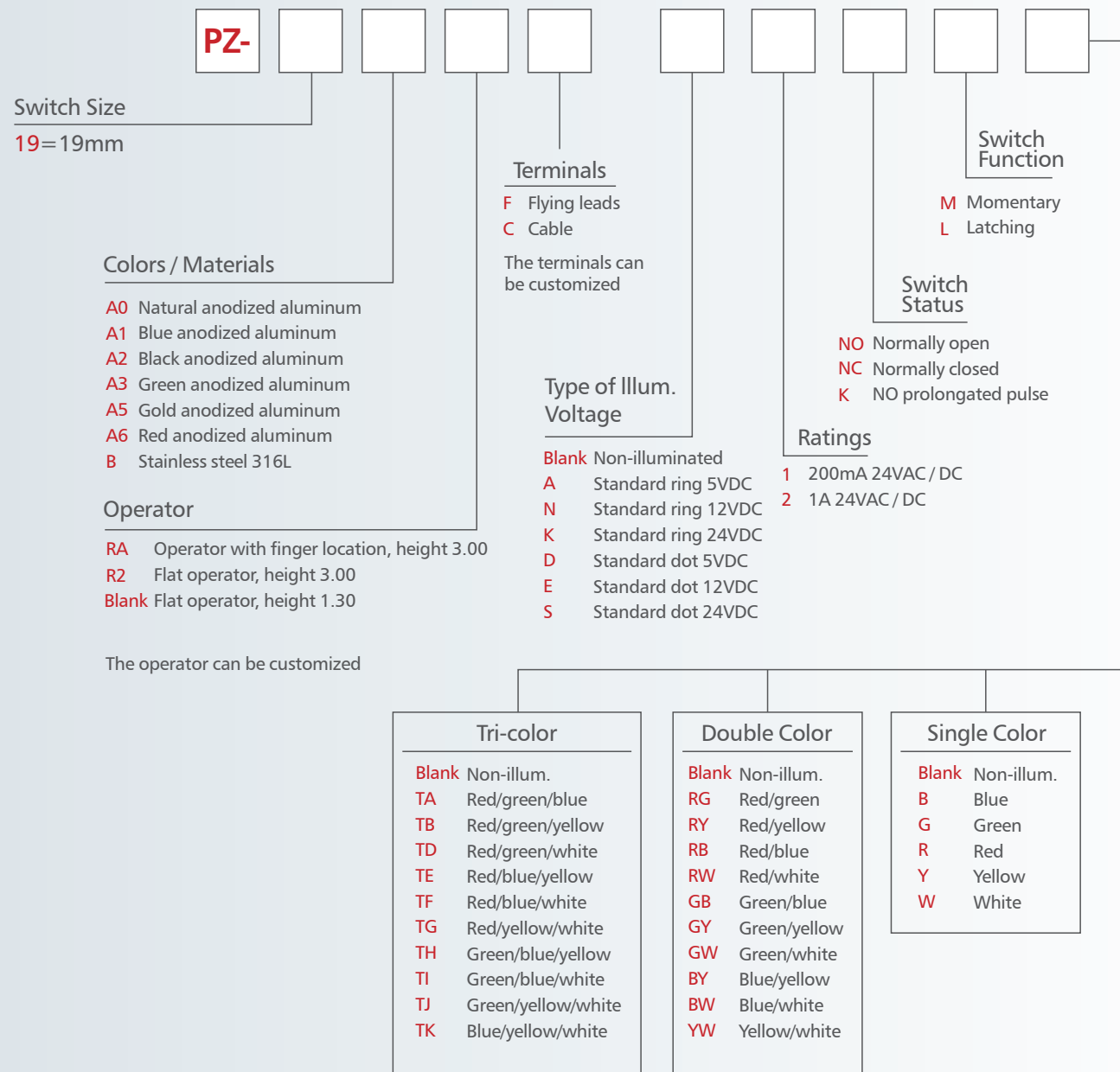
Ring illuminated



PZ16BR1FN1NOMR

Flat operator, height 4,50 (.177)





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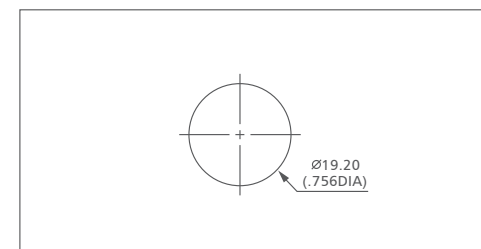
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Packing unit: 20 pieces

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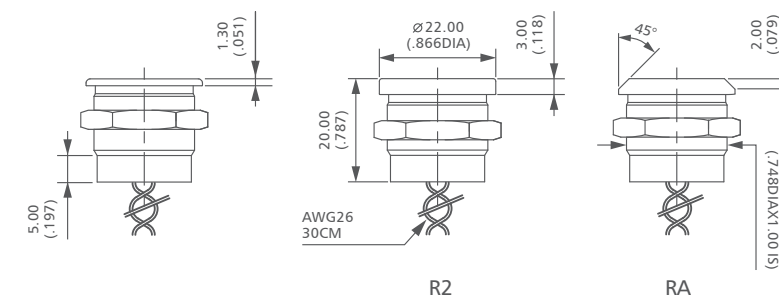
Non-illuminated



PZ19A3F1NOM

Flat

Chamfer

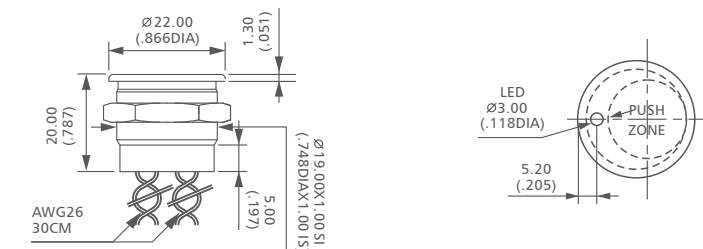


Dot illuminated



PZ19BFE1NOMG

Flat



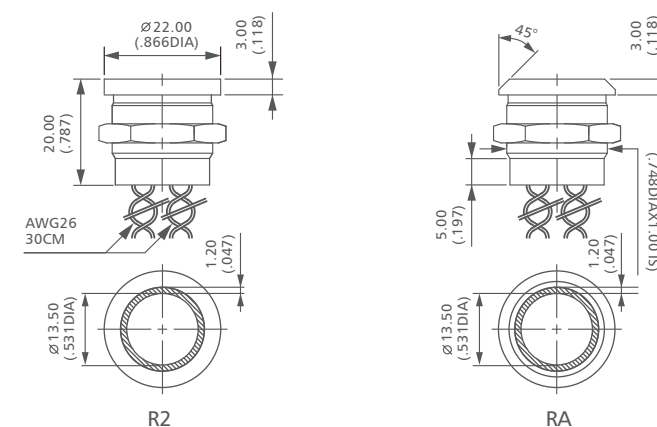
Ring illuminated



PZ19BRAFK1NOMR

Flat

Chamfer



PZ-

Switch Size

22=22mm

25=25mm

30=30mm

Colors / 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

- R2 Flat, operator height 3.0mm (.118)
 Not available with illuminated ring.
 R6 With finger location, operator height 3.0mm (.118). Not available with illuminated ring.
 RY With chamfer, operator height 4.5 mm (.177). Available with thin or large illuminated ring only.
 RZ Flat, operator height 4.5 mm (.177). Available with thin or large illuminated ring only.

Blank Flat operator, height 1.30

The operator can be customized

Terminals

- F Flying leads
 C Cable

The terminals can be customized

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
 D Standard dot 5VDC
 E Standard dot 12VDC
 S Standard dot 24VDC

Ratings

- 1 200mA 24VAC / DC
 2 1A 24VAC / DC

Switch Function

- M Momentary
 L Latching

Switch Status

- NO Normally open
 NC Normally closed
 K NO prolonged pulse

Tri-color

Blank Non-illum.

- TA Red/green/blue
 TB Red/green/yellow
 TD Red/green/white
 TE Red/blue/yellow
 TF Red/blue/white
 TG Red/yellow/white
 TH Green/blue/yellow
 TI Green/blue/white
 TJ Green/yellow/white
 TK Blue/yellow/white

Double Color

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

Single Color

Blank Non-illum.

- B Blue
 G Green
 R Red
 Y Yellow
 W White



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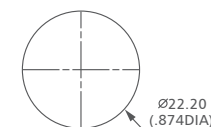
Packing unit: 20 pieces

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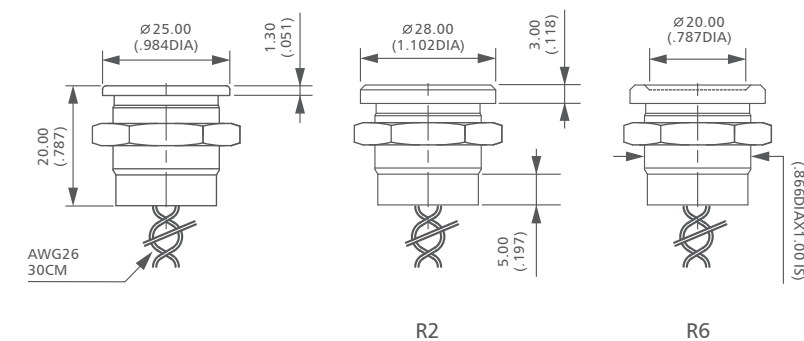
Non-illuminated



PZ22A6R6F1NOM

Flat

Finger location



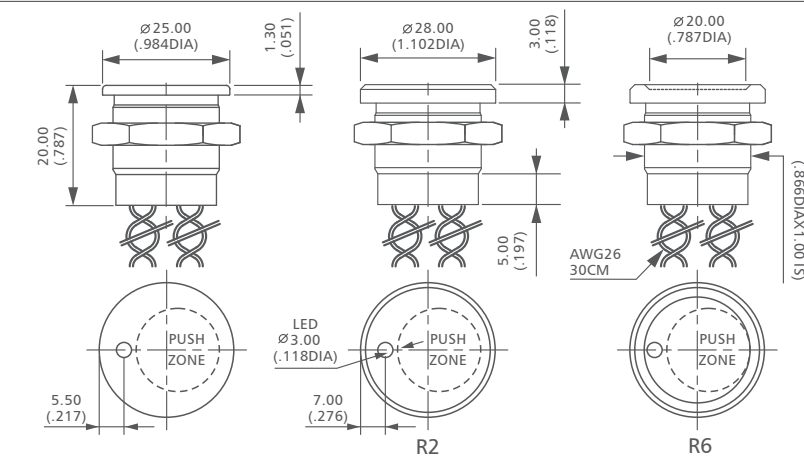
Dot illuminated



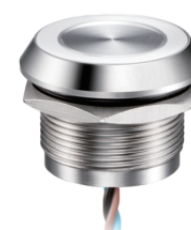
PZ22A0R2FD1NOMR

Flat

Finger location



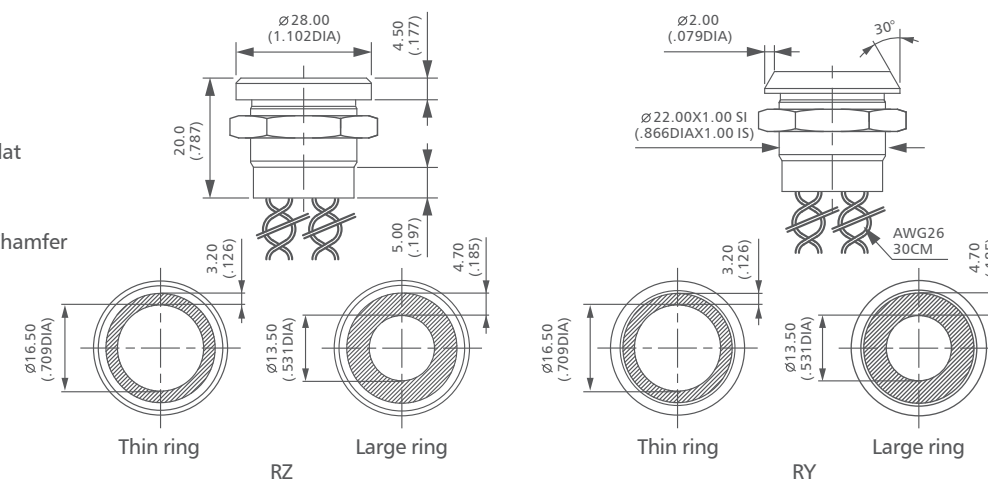
Ring illuminated

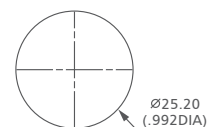


PZ22BRYFJ1NOLW

Flat

Chamfer





Shown with flying lead terminals.

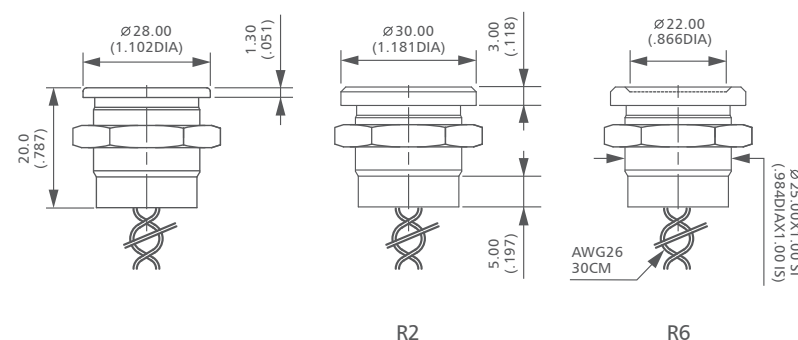
Non-illuminated



Flat

Finger location

PZ25BF1NOM



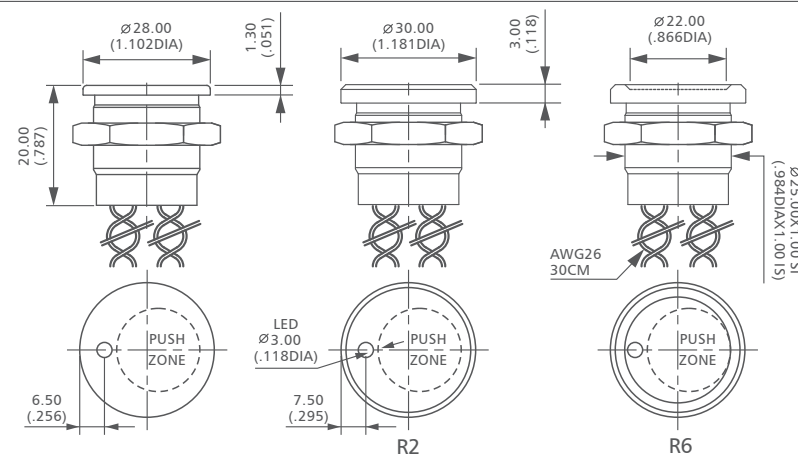
Dot illuminated



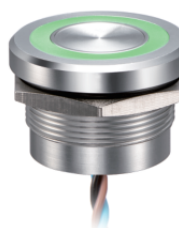
Flat

Finger location

PZ25BR2FS1NOLG



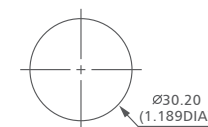
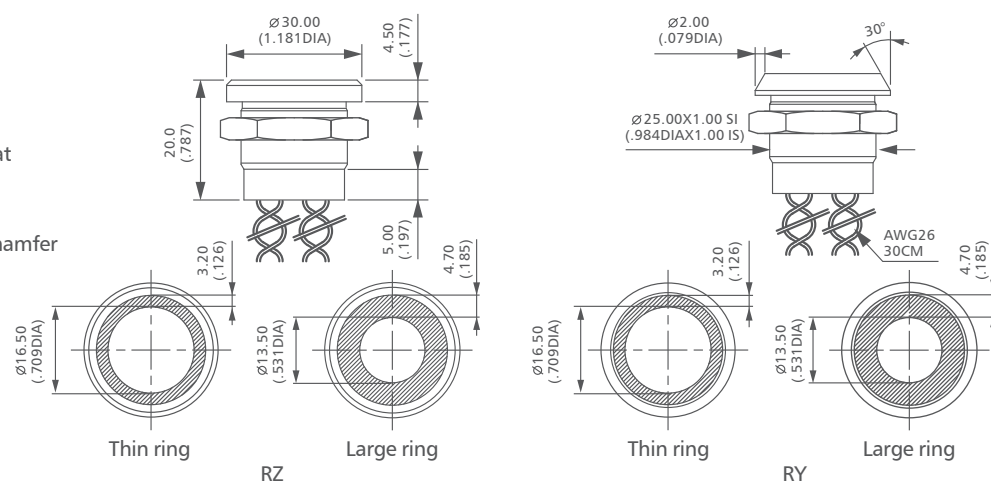
Ring illuminated



Flat

Chamfer

PZ25BRZFN1NOLG



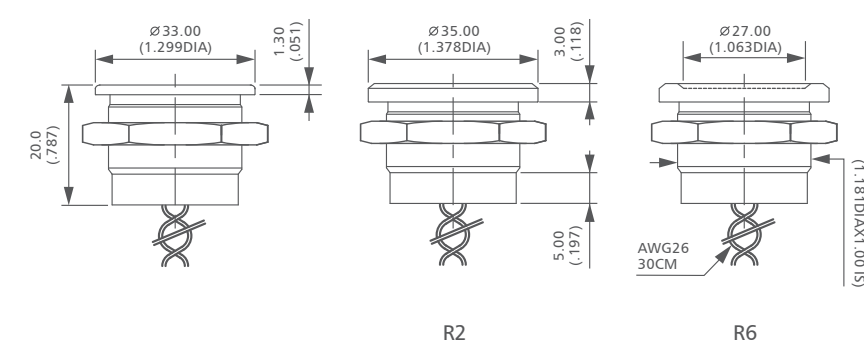
Shown with flying lead terminals.

Non-illuminated



Flat

PZ30BR2F1NOM



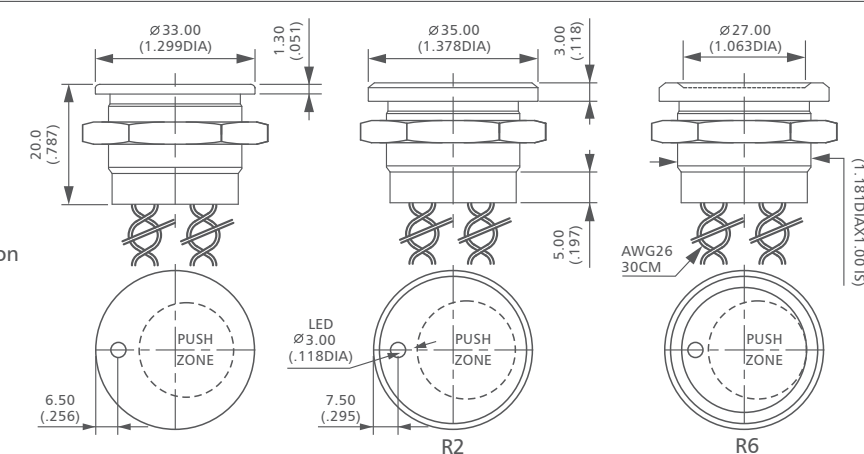
Dot illuminated



Flat

Finger location

PZ30BFE1NOMG



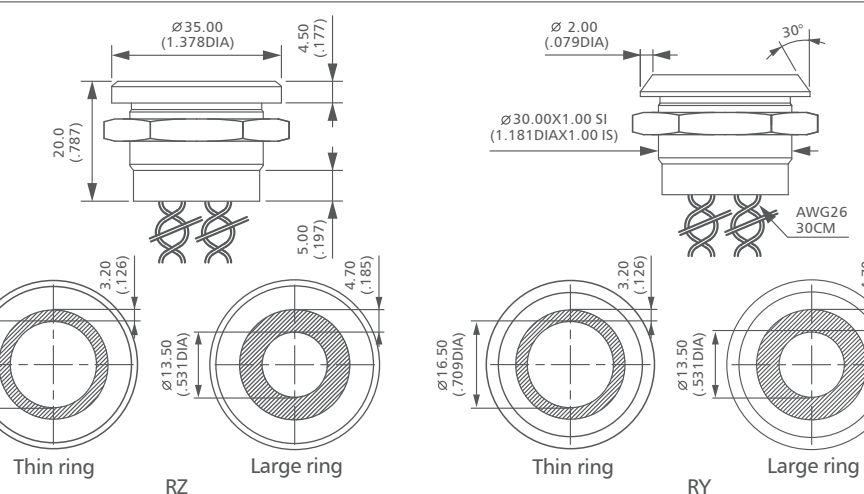
Ring illuminated



Flat

Chamfer

PZ30A2RYFJ1NOMRY



Plastic Piezo Switch

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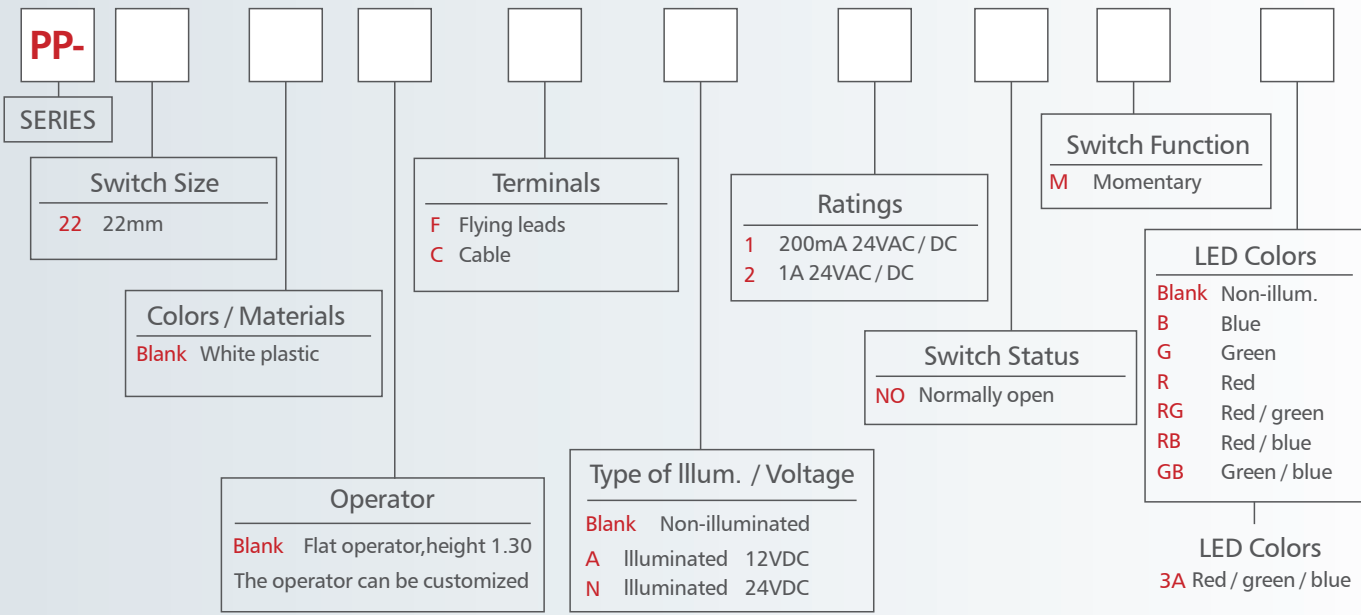
Leaders in engineering,
innovation and quality

LANGIR brings piezo
technology to perfection



Piezo Switch

Plastic Piezo Switch Ø22 (.866)



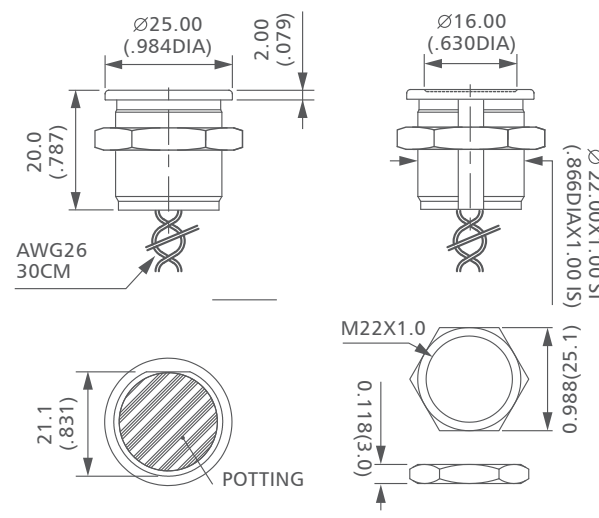
Plastic piezo switches offering rugged, sealed tamper and vandal proof solid stated switching.
Exceptional durability and reliability.
Fitted with red, green and blue LED's for illumination.

- 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

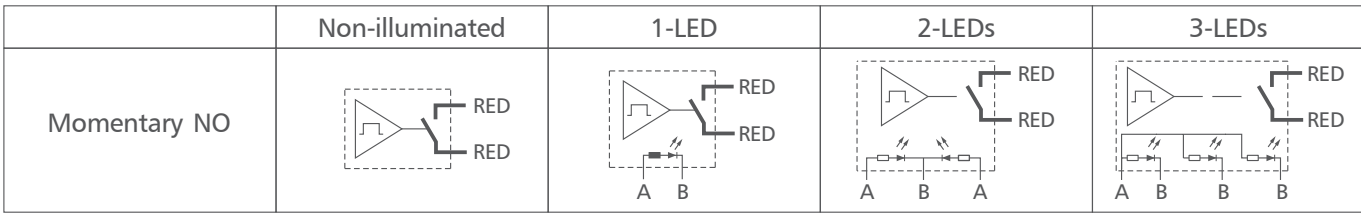
Specifications

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
	Green	9mA
	Blue	27mA
Ingress Protection	IP68	
Life time	50 million operations	
Material	POM	

Dimension



Wiring Diagrams



Legend: B=black, A=same color as LED *LED color is indicated by the bottom of the product.