

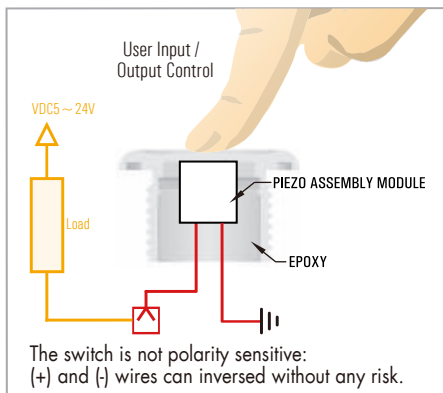
About Piezo Switches

Conventional electromechanical switches have moving parts that inevitably wear out. The reliability of the electromechanical switches can be reduced by contaminants such as moisture and dust that will foul contact points.

The solution is a Piezo Switch with no moving parts.

The switch is not polarity sensitive: (+) and (-) wires can be inverted without any risk.

How a Piezo switch works:



In piezo switches, a force applied to the switch surface transfers to the piezo disk creating an electrical pulse. This electrical signal is converted to an expected electrical output through a customizable electronic circuit. The duration of the electrical signal depends on the speed, force and duration of actuation.

The output of the switch is closed for a specified pulse duration depending on the electrical function chosen (see next page).

Main Applications:



Shower
(IP68 sealing)



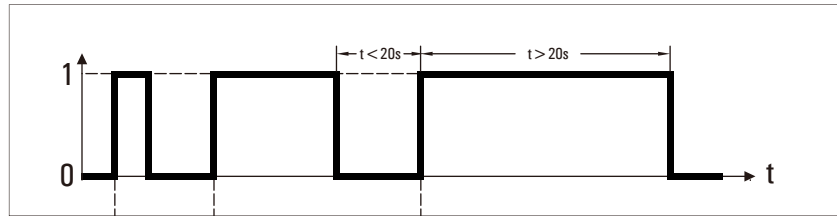
Bath
(IP68 sealing, customization)



Car wash
(IP68 sealing, long life)

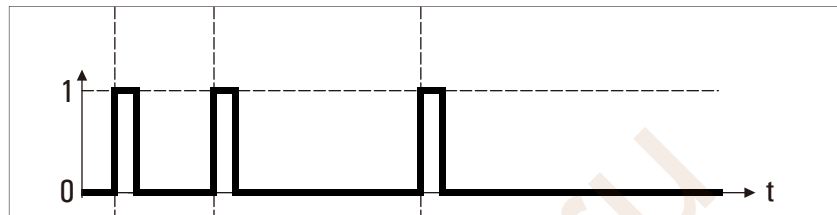
FINGER PRESSURE applied to switch

1 = pressure
0 = no pressure

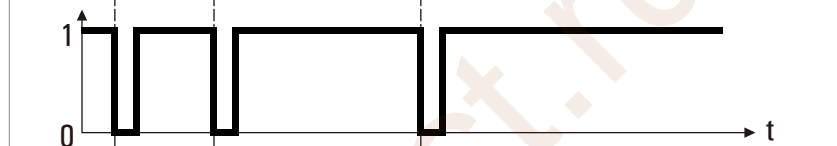


OUTPUT

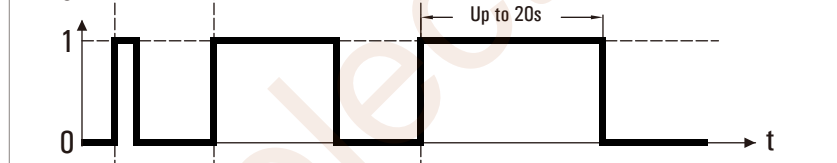
- Momentary NO (pulse)
No external power supply required



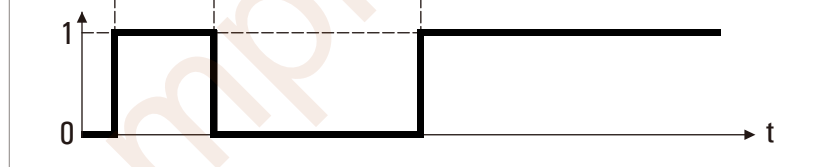
- Momentary NC (pulse)
No external power supply required



- Momentary NO prolonged pulse
No external power supply required



- Latching (ON - OFF)
Requires external power supply



1 = closed output 0 = open output

Wiring diagrams

	Non-illuminated	1 LED *	2 LEDs	3 LEDs
Momentary NO				
Momentary NC				
Momentary NO prolonged pulse				
Latching (ON - OFF)				

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

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

- ❑ Sealed to IP 68 and IP69K (switches mounted on panel)
- ❑ Easy to clean metal surface
- ❑ Very long life expectancy
- ❑ Ring or dot illumination

ENVIRONMENTAL SPECIFICATIONS

- Sealing : IP68 per IEC 529, IP69K per DIN 40050-9 (switches mounted on panel or not)
- Vibration resistance : 10-500 Hz / 10 g per IEC 60068-2-6
- Operating temperature : -40°C to +75°C
- EMC compatibility according to EN 61058-1 for the whole range
- EMC compatibility according to EN 61000-4 & EN61000-6-2 for model 1A (code 002)

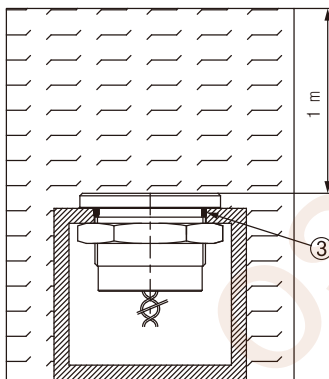
MATERIALS

- Case : aluminium, anodized or stainless steel 316L or brass, chrome plated
- Multi-wire leads section AWG24 length 300 mm, twisted by pair
- Cable, length 300 mm, section depending on switch model
- PC terminals : Gold or Tin plated

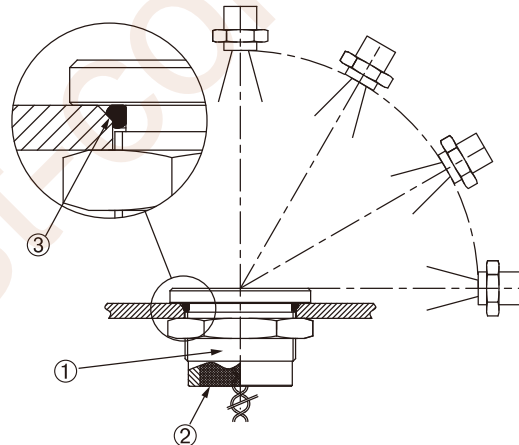
ELECTRICAL AND GENERAL SPECIFICATIONS

- Max. current/voltage rating : 200mA 5~24VAC/DC
- Switch resistance ON : 10 Ω max.
- Switch resistance OFF : 5M Ω min.
- Operating force : 6 to 15N
- Life expectancy : 50 million cycles
- LED consumption : Illuminated dot : 10mA - Illuminated ring : 20mA

SEALINGIP68



SEALINGIP69K



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

Continuous immersion in water

IP68 test conditions

Continuous immersion in water
(1 m, 24 hours)

High pressure, high temperature wash down

IP69K test conditions

- . Pressure : 80 - 120 bars
- . Distance : 15 cm
- . Temperature : 80°C \pm 5°C
- . 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 $\pm 0,3$ (.012).

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



Housing:

- A** =Aluminum
- S** =Stainless Steel 316L

Switch Size:

- 12** =12mm
- 16** =16mm
- 19** =19mm
- 22** =22mm
- 25** =25mm
- 30** =30mm

Colours / Materials:

- 0** Natural anodized
- 1** Blue anodized
- 2** Black anodized
- 3** Green anodized
- 5** Gold anodized
- 6** Red anodized
- B** Stainless Steel 316L

Operator:

- Blank** =Flat, operator height 12=1.50/ 16,19,22,25,30=1.30(non-illum.)
- R1** =Flat, operator height 4.50(16mm only)
- R2** =Flat, operator height 3.00(not available with ring illum.)
- R5** =Operator with finger location, height 12=1.5/ 16=4.50(non-illum.)
- R6** =Finger location, operator height 3.00(not available with ring illum.)
- RA** =Chamfer, operator height 3.00(19mm only)
- RY** =Chamfer, operator height 4.50 (available with thin or large ring illum. only)
- RZ** =Flat, operator height 4.50 (available with thin or large ring illum. only)

The operator can be customized

Marking:

Custom Markings Available

LED Colours:

- | | | |
|--------------|--------------------|-------------------------|
| Blank | Non-illum. | } LATCHING & DOT ILLUM. |
| B | Blue | |
| G | Green | |
| R | Red | |
| Y | Yellow | |
| W | White | |
| RG | Red/green | |
| RY | Red/yellow | |
| RB | Red/blue | |
| RW | Red/white | |
| GB | Green/blue | |
| GY | Green/yellow | |
| GW | Green/white | |
| BY | Blue/yellow | |
| YW | Yellow/white | |
| 3A | Red/green/blue | } MOMENTARY |
| 3B | Red/green/yellow | |
| 3D | Red/green/white | |
| 3E | Red/blue/yellow | |
| 3F | Red/blue/white | |
| 3G | Red/yellow/white | |
| 3H | Green/blue/yellow | |
| 3I | Green/blue/white | |
| 3J | Green/yellow/white | |
| 3K | Blue/yellow/white | |

Switch Action:

- M** =Momentary Action (2 wire leads)
- L** =Latching Action(3 wire leads only)

Switch Status:

- NO** =Normally Open
- NC** =Normally Closed
- K** =NO prolonged pulse

Input/Output:

- 1** =200mA 24VAC/DC(standard)
- 2** =1A 24VAC/DC

Illum. Options:

- Blank** Non-illum.
- R** =Ring for operator 13.5
- RO** =Ring for operator 16.5 (22, 25, 30mm only)
- D** =Dot

Type of illum./ voltage:

- Blank** Non-illum.
- A** Standard ring - 5VDC
- N** Standard ring - 12VDC
- K** Standard ring - 24VDC

LED Colours:



Colours / Materials:



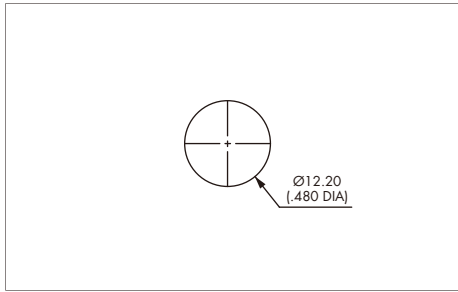
Notice: The Latching functions 3 Wire leads only. The 12mm switch NO only. NOT for 3 wire leads



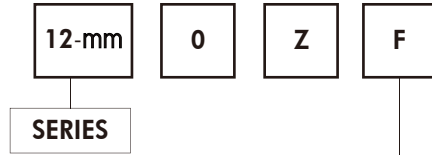
Mounting accessories standard hardware supplied :1 hex nut and 1 O-ring



Packaging unit: 20 pieces



Shown with flying lead terminals.



Bushing / operator

All models with \varnothing 12 bushing

R5 Operator with finger location.

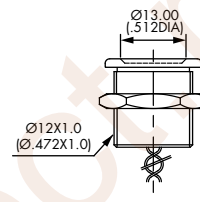
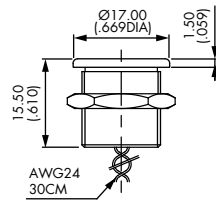
Blank Flat operator, height 1,20(.047)

Non-illuminated



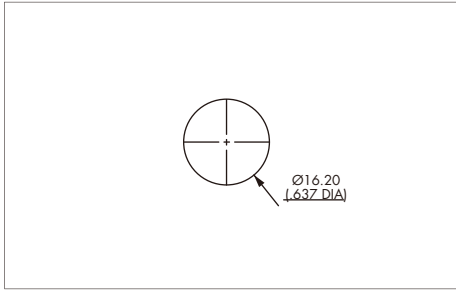
Flat

Finger location

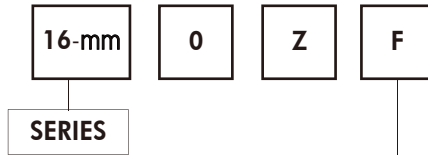


R5

Ost-compleo.com



Shown with flying lead terminals.



Bushing / operator

All models with Ø 16 bushing

R1 Flat operator, height 4,50(.177)

R5 Operator with finger location, height 4,50(.177) (non-illuminated)

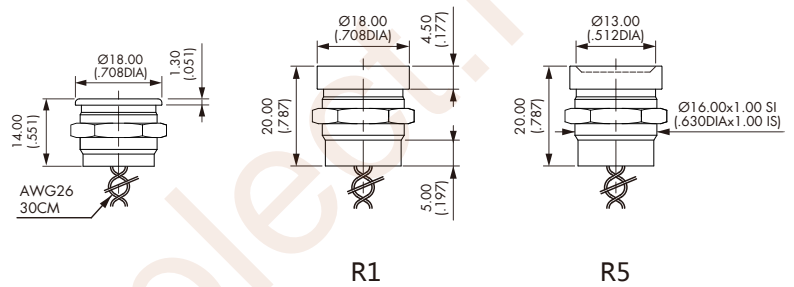
Blank Flat operator, height 1,30(.051)

Non-illuminated



Flat

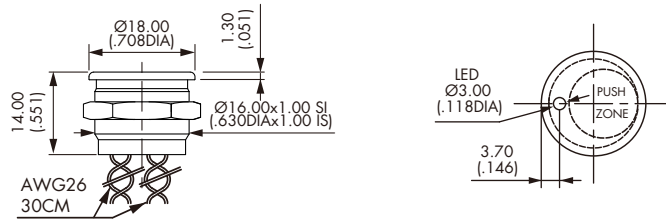
Finger location



Dot-illuminated



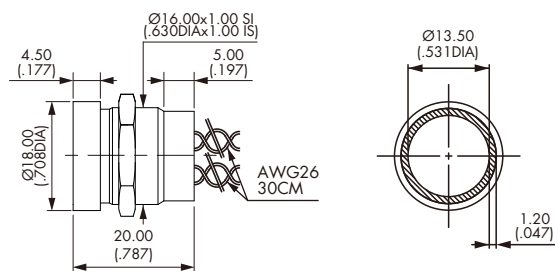
Flat

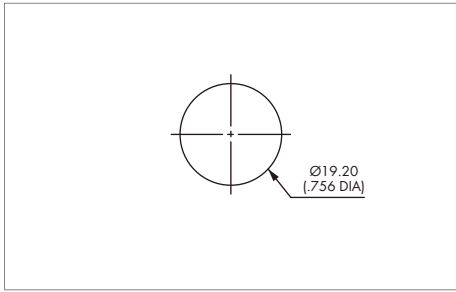


Ring illuminated

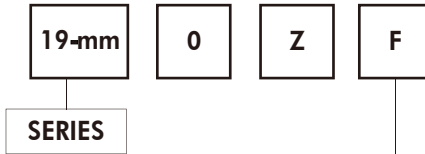


Flat operator, height 4,50 (.177)





Shown with flying lead terminals.



Bushing / operator

All models with Ø 19 bushing

R2 Flat operator, height 3,00(.118)

RA Operator with chamfer, height 3,00(.118)

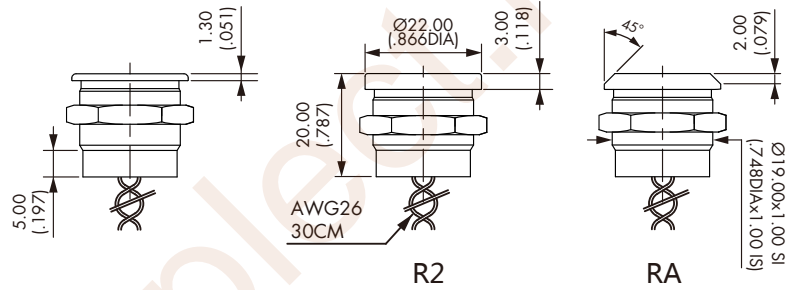
Blank Flat operator, height 1,30(.051)

Non-illuminated



Flat

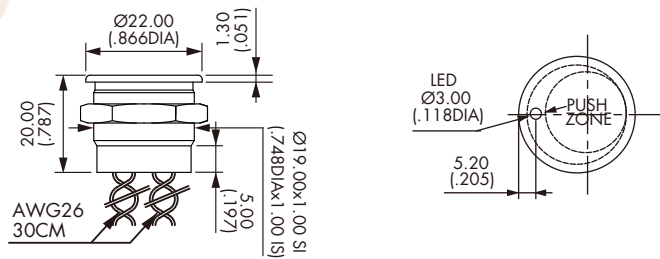
Chamfer



Dot-illuminated



Flat

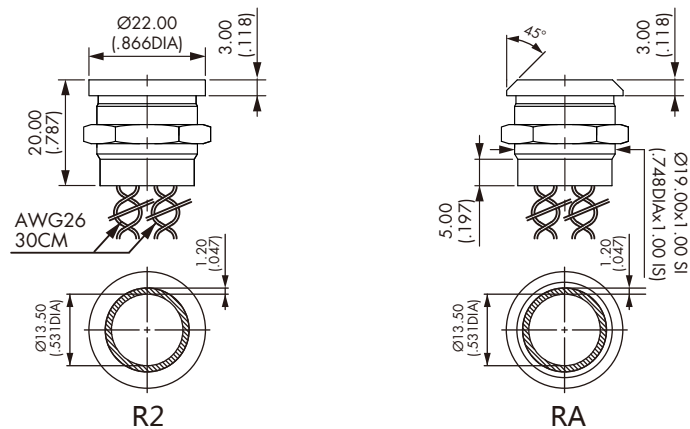


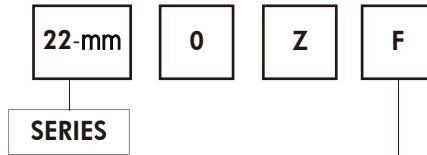
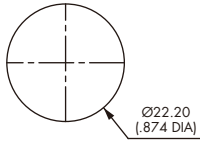
Ring illuminated



Flat

Chamfer





Bushing / operator

All models with Ø 22 bushing

- R2** Flat operator, height 3,00(.118) (non-illum.)
- R6** Finger location, operator height 3,00(.118) (non-illum.)
- RY** With chamfer, operator height 4,5 mm (.177) or large illuminated ring only
- RZ** Flat, operator height 4,5 mm (.177) or large illuminated ring only
- Blank** Flat actuator, height 1,30(.051)

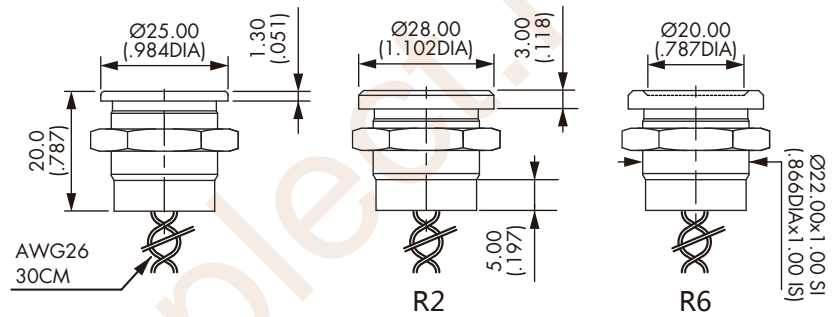
Shown with flying lead terminals.

Non-illuminated



Flat

Finger location

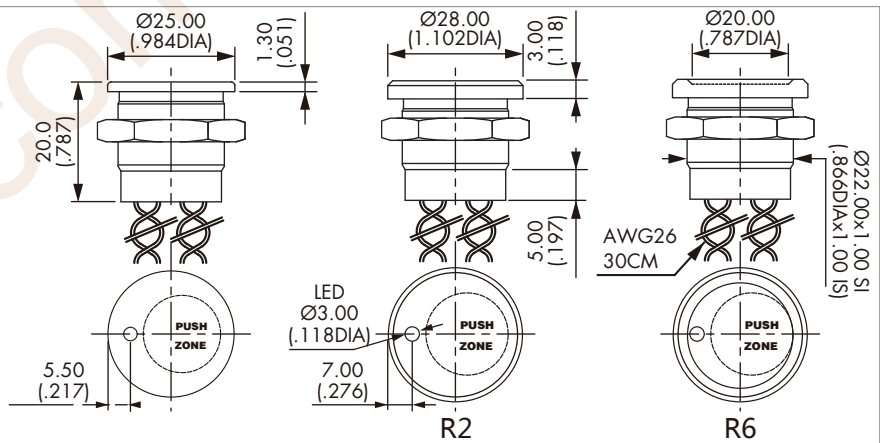


Dot illuminated



Flat

Finger location

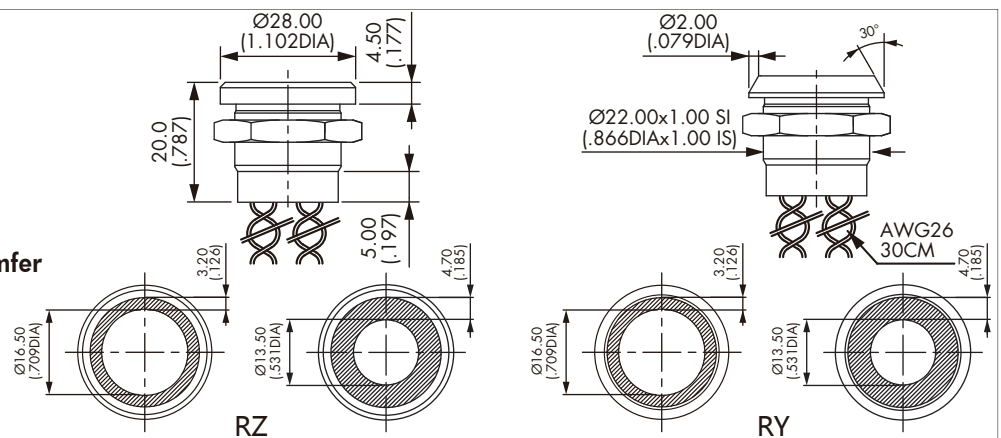


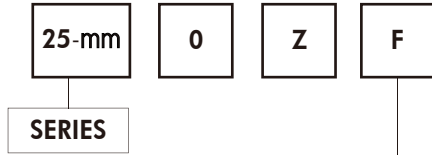
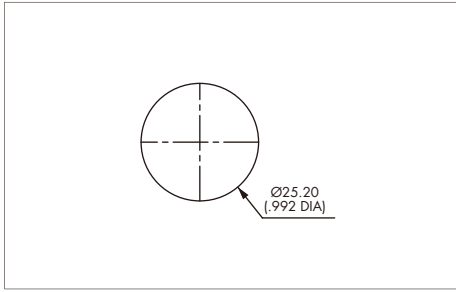
Ring illuminated



Flat

Chamfer





Shown with flying lead terminals.

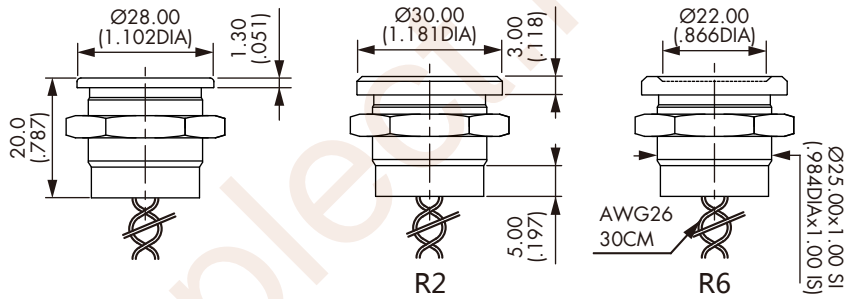
Bushing / actuator	
All models with Ø 25 bushing	
R2	Flat operator, height 3,00(.118) (non-illum.)
R6	Finger location, operator height 3,00(.118) (non-illum.)
RY	With chamfer, operator height 4,5 mm (.177) or large illuminated ring only
RZ	Flat, operator height 4,5 mm (.177) or large illuminated ring only
Blank	Flat actuator, height 1,30(.051)

Non-illuminated



Flat

Finger location

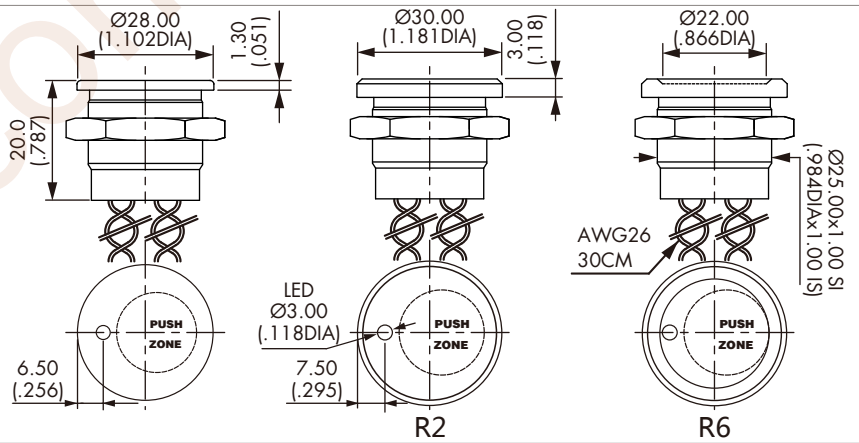


Dot illuminated



Flat

Finger location

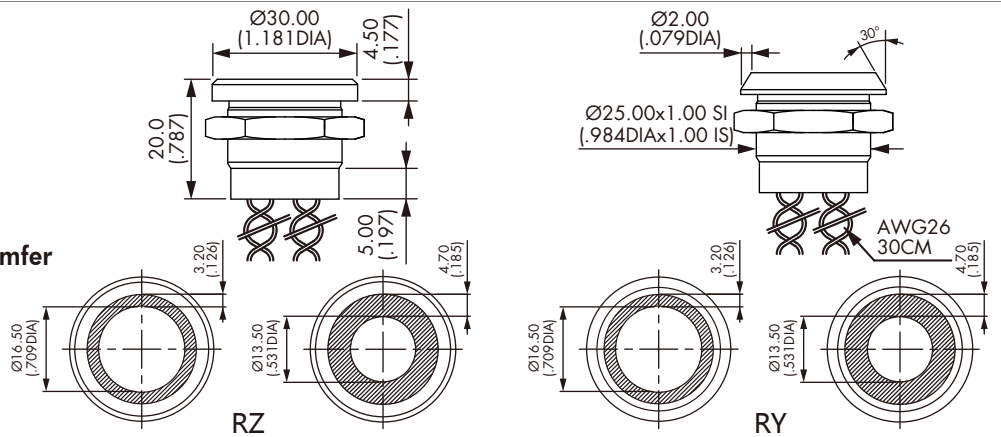


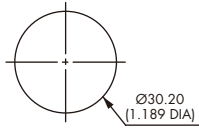
Ring illuminated



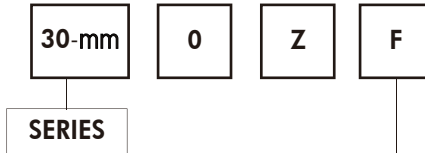
Flat

Chamfer





Shown with flying lead terminals.



Bushing / actuator

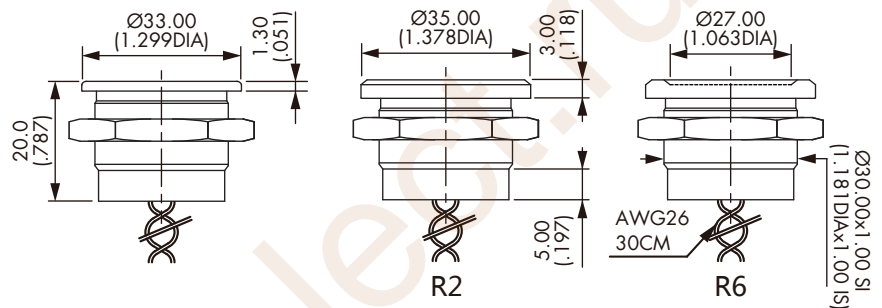
All models with Ø 30 bushing

- R2** Flat operator, height 3,00(.118) (non-illum.)
- R6** Finger location, operator height 3,00(.118) (non-illum.)
- RY** With chamfer, operator height 4,5 mm (.177) or large illuminated ring only
- RZ** Flat, operator height 4,5 mm (.177) or large illuminated ring only
- Blank** Flat actuator, height 1,30(.051)

Non-illuminated



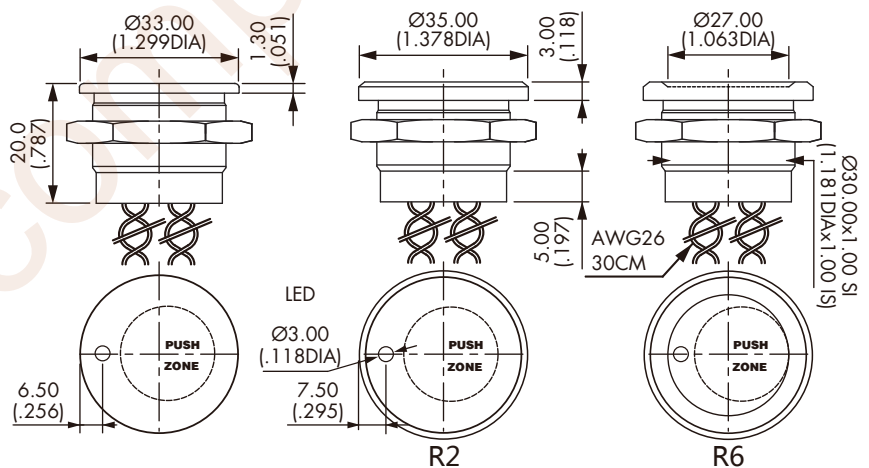
Flat
Finger location



Dot-illuminated



Flat
Finger location



Ring illuminated



Flat
Chamfer

