

# LCA Series



## LCA Part-number Description

LCA★-11■◇/△/▲/S/※

Symbol	Symbol name	Specify
★	Mounting hole	19: Φ19mm / 22: Φ22mm / 25: Φ25mm / 30: Φ30mm
11	Contact structure	11: 1NO1NC
■	Operation type	No letter means momentary / Z(latching)
◇	Illumination	E: Ring / ET: Ring + power symbol / no letter means non-illumination
△	LED color	R: Red / G: Green / Y: Yellow / B: Blue / W: White
▲	LED voltage	6V / 12V / 24V / 110V / 220V with internal resistor, Other voltage can be customized
○	Housing material	S: stainless steel
※	Protecting level	no letter means IP65 / FP: IP67

Note: please carefully read the specific description of the product and select the corresponding code in the table according to different symbols.

### Performance Characteristic

Operating temperature	-25°C~+55°C(no freezing), keep the air flowing around illuminated push button
Operation Humidity	45~85%RH(no condensation)
Contact Resistor	≤50mΩ
Insulation Resistor	≥100MΩ(500VDC)
Maximum withstand voltage	1000VAC, 50Hz, 1min
Vibration Resistance	50Hz, Amplitude 1.2mm
Solder Heat Resistance	320°C 3s
Switch rating	15A/250VAC(Resistive load)
	10A/250VAC(Inductive load)
	0.3A/250VDC(Inductive load)
Mechanical Life	500K cycles
Electrical Life	50K cycles
Base material	PA
Nut Torque	Around 0.6Nm
Operation Pressure	Around 4N
Operation Travel	Around 2.5mm
Protecting level	IP65(Momentary type can be customized to IP67),IK08

### LED Specifications

LED life	Current	Allowable voltage fluctuation range	Circuit diagram
≥40000 hours	≤24V about 15mA ≥110V about 2mA	DC: ±10% AC: ±20%	<p>The product has built-in protective resistance, and the lamp bead wiring has no distinction between positive and negative poles.</p>

### Switch Rating

Voltage(V)	Current(A)		Inductive load	
	Non electrical inductive load	Resistive load	LED load	Electromotor load
AC250	15	2	10	3
DC8	15	4	10	6
DC30	10	4	10	4
DC125	0.6	0.1	0.6	0.1
DC250	0.3	0.05	0.3	0.05

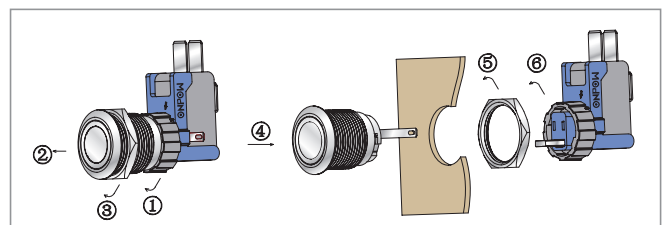
### Contact specification

Contact	style	rivet
	material alloy	silver
	interval	1mm
inrush current		Max.36A

### Contact structure type

Type	Diagram	sign
C		

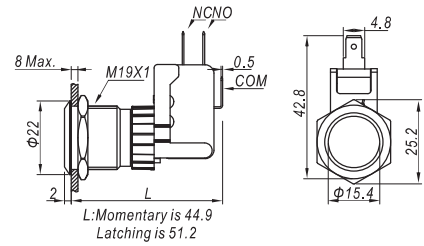
### Installation schematic



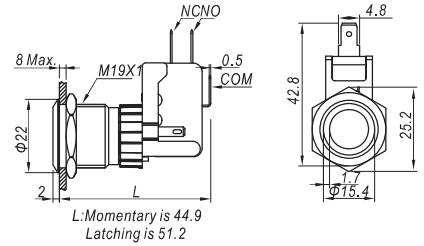
Φ 19、22mm Picture Specifications Dimensions



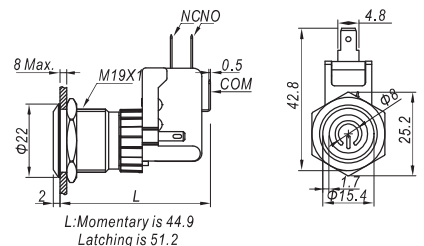
Contact structure 11: 1NO1NC  
 Operation type ■ No letter means Momentary / Z: Latching  
 Housing material S: Stainless steel  
 Terminal Type: Switch Pin terminal (4.8x0.5mm)  
 LED pins terminal (2.8x0.5mm)  
 Protection level ※ No letter means IP65 / FP: IP67 (only for momentary type)



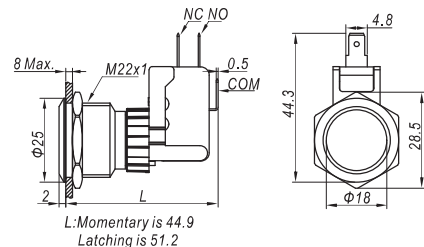
Contact structure 11: 1NO1NC  
 Operation type ■ No letter means Momentary / Z: Latching  
 LED color △ R G Y B W  
 LED voltage ▲ 6V / 12V / 24V / 110V / 220V  
 Housing material S: Stainless steel  
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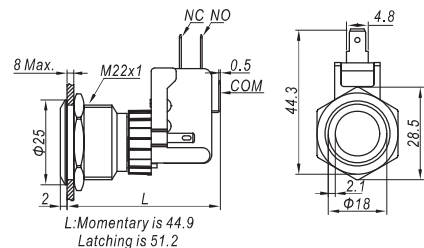
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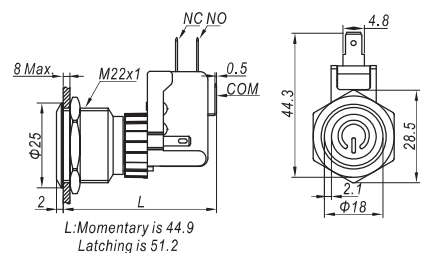
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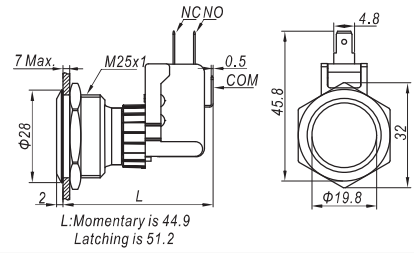
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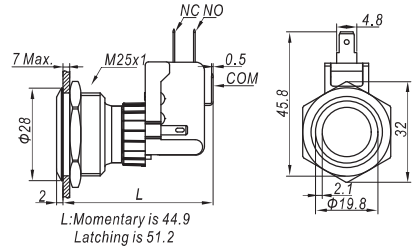
Φ 25、30mm Picture Specifications Dimensions



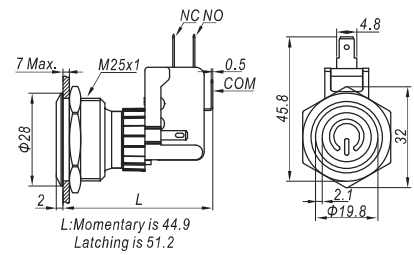
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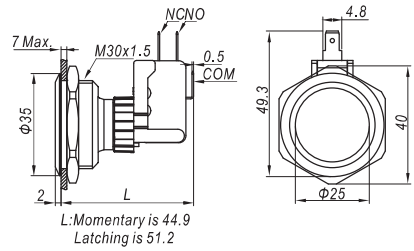
Contact structure 11: 1NO1NC  
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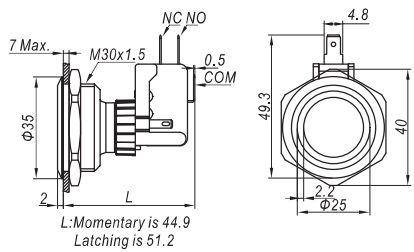
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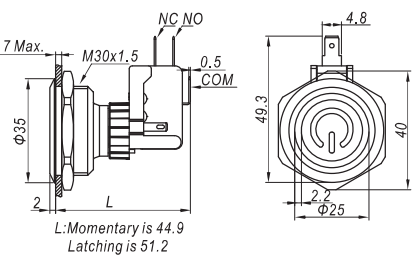
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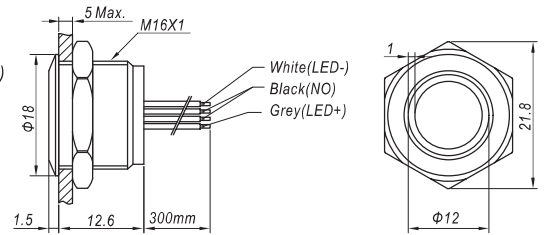
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 Operation type ■ No letter means Momentary / Z: Latching  
 LED color △ R G Y B W  
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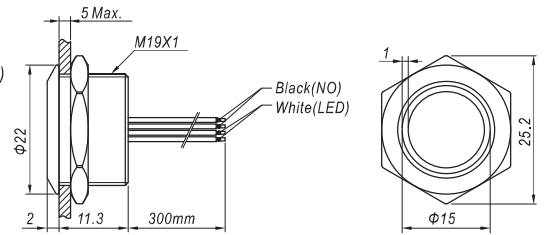
Φ 16、19、22mm Picture Specifications Dimensions



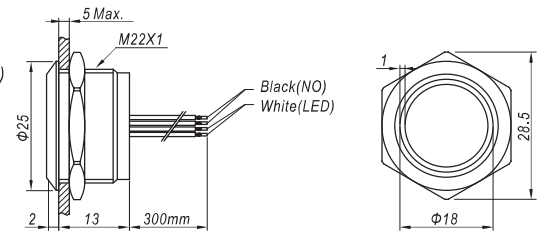
Contact structure 1NO(Momentary)  
 Terminal Type 24AWG 30cm wire leading (Pin terminal can be customized)  
 LED color Δ R G Y B W  
 LED voltage ▲ 6V / 12V / 24V  
 Housing material S: Stainless steel  
 Protection level IP65,IK05



Contact structure 1NO(Momentary)  
 Terminal Type 24AWG 30cm wire leading (Pin terminal can be customized)  
 LED color Δ R G Y B W  
 LED voltage ▲ 6V / 12V / 24V  
 Housing material S: Stainless steel  
 Protection level ※ No letter means IP65 / FP:IP67



Contact structure 1NO(Momentary)  
 Terminal Type 24AWG 30cm wire leading (Pin terminal can be customized)  
 LED color Δ R G Y B W  
 LED voltage ▲ 6V / 12V / 24V  
 Housing material S: Stainless steel  
 Protection level IP65,IK05



Performance Characteristic

Operating temperature	-25°C~ +55°C(no freezing), keep the air flowing around illuminated push button
Operation Humidity	45~85%RH(no condensation)
Contact Resistor	≤ 100mΩ
Insulation Resistor	≥ 100MΩ (500VDC)
Maximum withstand voltage	1000VAC, 50Hz, 1min
Vibration Resistance	50Hz, Amplitude 1.2mm
Solder Heat Resistance	320°C. 3s
Switch rating	50mA/24VDC
Mechanical Life	≈50K cycles
Electrical Life	≈50K cycles
Base material	PBT
Nut Torque	Around 0.6Nm
Operation Pressure	Around 3.8N(MTA16), Around 7.8N(MTA19), Around 5N(MTA22)
Operation Travel	0.5mm
Protecting level	IP65(MTA19F can be customized to IP67), IK05

LED Specifications

LED life	Current	Allowable voltage fluctuation range	Circuit diagram
≥ 40000 hours	≤ 24V about 15mA	DC: ± 10%	<p>The product has built-in protective resistance, and the lamp bead wiring has no distinction between positive and negative poles.</p>



## PS series

### Feature

- ★ Pressure-activated switch
- ★ 50 million life cycles
- ★ Mounting hole: 12, 16, 19, 22mm
- ★ Operation type: Momentary or latching
- ★ Waterproof level IP68, IP69K
- ★ It works in many harsh environments.

### Performance Characteristic

Max. current / voltage rating: 200mA 24VAC/DC  
 Switch resistance ON: 10 Ω max.  
 Switch resistance OFF: 5M Ω min.  
 Operating force: 5 to 10N  
 Operating life: 50 million cycles  
 LED consumption: Illuminated dot: 10mA Illuminated ring: 20mA  
 Protecting level IP68/IP69K, IK06 (Stainless steel)  
 Vibration resistance: 10-500Hz / 10g  
 Operating temperature: -40°C to +75°C (Instantaneous temperature difference not exceeding 20°C)  
 Terminal type: 26AWG, length 300mm, twisted by pair

#### PS Part-number Description

PS ☆ ★ □ ■ ◆ ◇ △ ▲

Symbol	Symbol name	Specify
☆	Mounting hole	12: Φ12mm / 16: Φ16mm / 19: Φ19mm / 22: Φ22mm
★	Operator	1P: Flat operator. height 1.0 (non illuminated) / 3P: Flat operator. height 3.0 / 3Z: Flat operator. height 3.0 / 5P: Flat operator height 4.5 / 5Z: With finger location, height 4.5 (non illuminated)
□	Electrical function	10: NO(pulse) / 01: NC(pulse) / 10Z: NO(latching) / T30: 30 seconds delay (requires external power supply)
■	Terminal type	Y: wire leading (length 30cm) Other wire length can be customized
◆	Color / Material	NT: Natural anodized / BU: Blue anodized / BK: Black anodized / GD: Gold anodized / GN: Green anodized / RD: Red anodized / SS: Stainless steel
◇	Switch rating	1: 200mA 24VAC/DC
△	LED color	No letter means non illuminated / Momentary type with LED: R Red G Green Y Yellow B Blue W White / latching type with LED: NR Non-illum. / Red, NG Non-illum. / Green, NB Non-illum. / blue, Other LED color can be customized.
▲	LED voltage and type	No letter means non illuminated / 05T: Thin ring-5VDC / 12T: thin ring-12VDC / 24T: Thin ring-24VDC. 05L: large ring-5VDC/12T: large ring-12VDC/24T: large ring-24VDC. 05D: Dot illum.-5VDC / 12D: Dot illum.-12VDC/24D: Dot illum.-24VDC

Note: please carefully read the specific description of the product and select the corresponding code in the table according to different symbols.



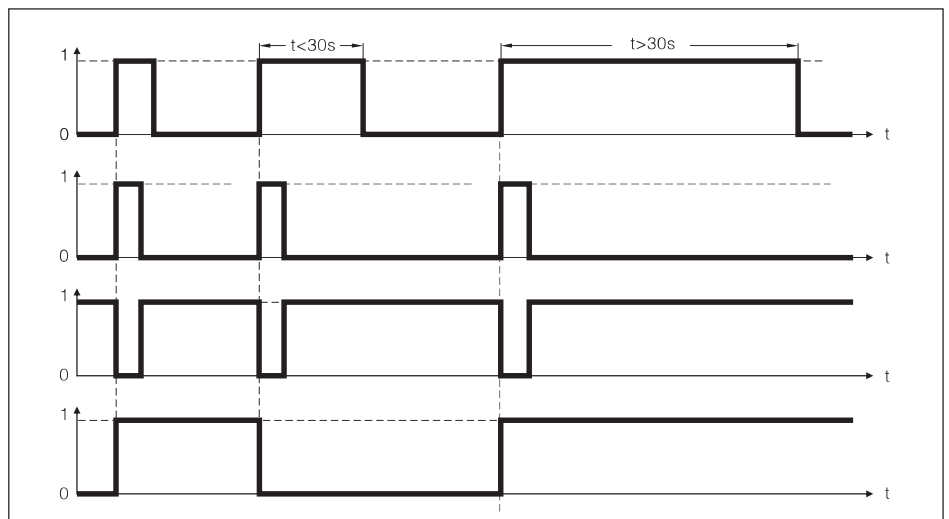
**Operating status description**

**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



**Wiring diagram**

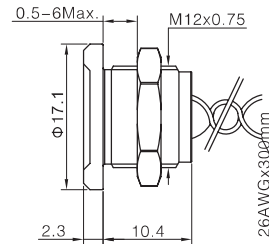
	Non-illuminated	1 ED*	2 LEDs	3 LEDs
<b>Momentary NO (pulse)</b>				
<b>Momentary NO (pulse)</b>				
<b>Latching (ON-OFF)</b>				

NOTE: X means the color of the wire depends on the color of the LED.

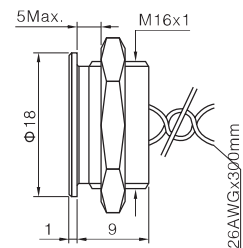
Φ 12、16mm Picture Specifications Dimensions



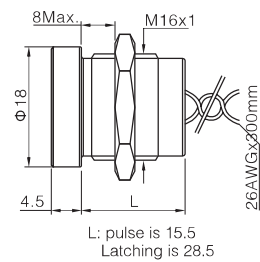
Electrical function 1NO (pulse)  
 Housing color SS: Stainless steel  
 Rating current 200mA  
 Housing material Stainless steel  
 Protection level IP68, IP69K



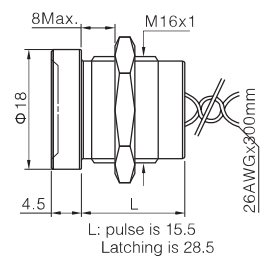
Electrical function  1NO (pulse)/ 01 NC (pulse)  
 Housing color  NT Natural anodized / BU Blue anodized / BK Black anodized / GD Gold anodized / GN Green anodized / RD Red anodized / SS Stainless steel  
 Voltage 24VAC/DC  
 Rating current 200mA  
 Housing material Aluminum /Stainless steel  
 Protection level IP68, IP69K



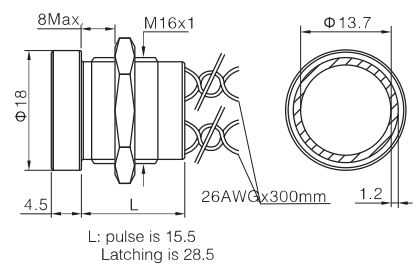
Electrical function  1NO (pulse) / 01 NC (pulse) / 10Z: NO latching  
 Housing color  NT Natural anodized / BU Blue anodized / BK Black anodized / GD Gold anodized / GN Green anodized / RD Red anodized / SS Stainless steel  
 Voltage 24VAC/DC  
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 Voltage 24VAC/DC  
 Rating current 200mA  
 Housing material Aluminum / Stainless steel  
 Protection level IP68, IP69K



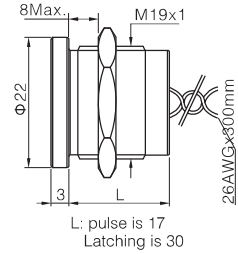
Electrical function 1NO (pulse)/ 01 NC (pulse)/10Z: NO latching  
 Housing color NT Natural anodized / BU Blue anodized / BK Black anodized / GD Gold anodized / GN Green anodized / RD Red anodized / SS Stainless steel  
 LED color  R  G  Y  B  W  
 Voltage 5V, 12V, 24V  
 Rating current 200mA  
 Housing material Aluminum / Stainless steel  
 Protection level IP68



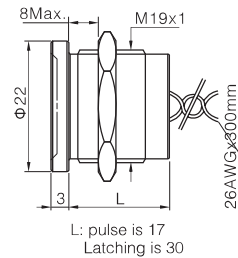
⌀ 19mm Picture Specifications Dimensions



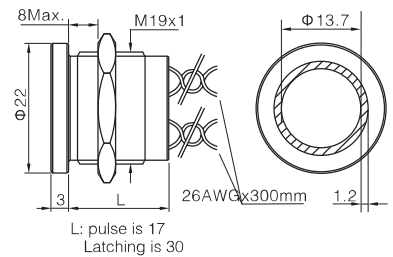
Electrical function □ 1NO (pulse) / 01 NC (pulse) / 10Z: NO latching  
 Housing color ◆ NT Natural anodized / BU Blue anodized / BK Black anodized /  
 GD Gold anodized / GN Green anodized / RD Red anodized /  
 SS Stainless steel  
 Voltage 24VAC/DC  
 Rating current 200mA  
 Housing material Aluminum / Stainless steel  
 Protection level IP68, IP69K



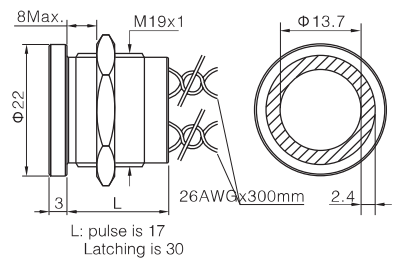
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 SS Stainless steel  
 Voltage 24VAC/DC  
 Rating current 200mA  
 Housing material Aluminum / Stainless steel  
 Protection level IP68, IP69K



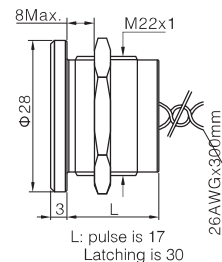
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 LED color R G Y B W  
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 Rating current 200mA  
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 Protection level IP68, IP69K

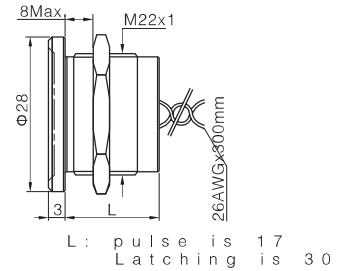




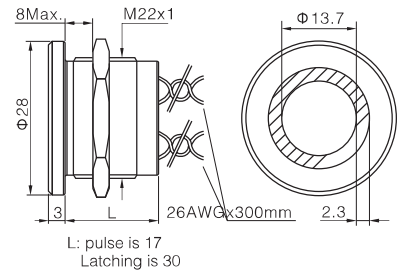
Φ 22mm Picture Specifications Dimensions



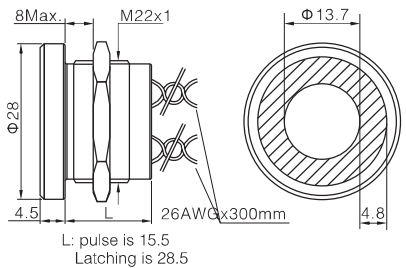
Electrical function □ 1NO (pulse) / 01 NC (pulse) / 10Z: NO latching  
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 Voltage 24VAC/DC  
 Rating current 200mA  
 Housing material Aluminum / Stainless steel  
 Protection level IP68, IP69K



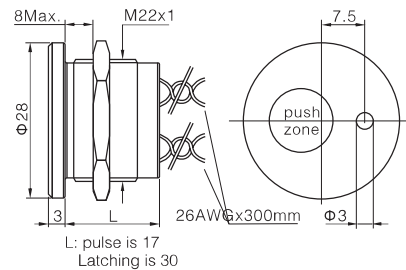
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 Protection level IP68



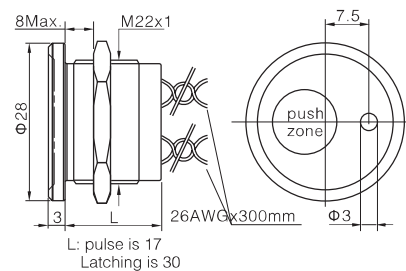
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 Rating current 200mA  
 Housing material Aluminum  
 Protection level IP68



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 Protection level IP68



**Features**

- ★ Finger touch trigger (can be triggered even wearing medical rubber glove)
- ★ Can be triggered by flowing water
- ★ Electrical endurance: 5 million cycles
- ★ Mounting hole size: 16, 19, 22, 25mm
- ★ With momentary, latching or delay function
- ★ IP degree: IP67, IP69K



**TS Part Number Description**

TS ☆ ★ □ ■ ◆ ▲

Symbol	Symbol name	Specify
☆	Mounting hole	16: Φ16mm / 19: Φ19mm / 22: Φ22mm / 25: Φ25mm
★	Operator	H: High thin ring / A: Standard thin ring / D: Standard large ring / B: Finger location thin ring / C: Super flat Thin ring / E: Finger location Large ring / F: Super flat Large ring
□	Electrical function	10: NO Momentary (High level output type) / 10B: NO Momentary (Low level output type) / 01: NC Momentary (High level output type) / 01B: NC Momentary (Low level output type) / 10Z: NO Latching (High level output type) / 10ZB: NO Latching (Low level output type) / 01Z: NC Latching (High level output type) / 01ZB: NC Latching (Low level output type) / 10T30: NO type, no matter how long you press it, prolonged 30s / 01T30: NC type, no matter how long you press it, prolonged 30s / 10C30: NO type, prolonged no more than 30s, the close time according to how long you push it. / 01C30: NC type, prolonged no more than 30s, the close time according to how long you push it.
■	Wiring type	Y: wire leading (length 30cm), the length of the lead can be made to order.
◆	Housing material	SS: Stainless steel
▲	LED color	Blank: Non-illum. 1 LED single light: NR Non-illum./red NG Non-illum./green NO Non-illum./orange NB Non-illum./blue NW Non-illum./white RN red/Non-illum GN green/Non-illum. ON orange/Non-illum. BN blue/Non-illum. WN white/Non-illum. 2 LED bi-color light: RG red/green RB red/blue BG blue/green WO white/orange GR green/red BR blue/red GB green/blue OW orange/white
▲	LED Voltage	Blank Non-illum. / 5VDC / 12VDC / 24VDC

**Specification**

Max. current/voltage rating: 500mA/24VDC  
 Operating voltage: 5VDC 12VDC 24VDC  
 Electrical endurance: 50 million cycles  
 Insulation Resistance: 600VDC 10MΩ  
 Operating temperature: -25-55°C  
 Protection level: IP67, IP69K, IK06 (Stainless steel)  
 Terminal type: 22AWG, flat cable, cable length is about 30cm.

LED color: **R G Y B W**

LED Life: 40000 hours (Reference)

Dropping Way: Internal Resistor

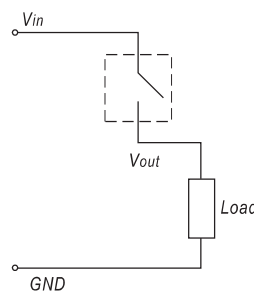
LED status:

1 LED: LED lights when the output circuit closes.

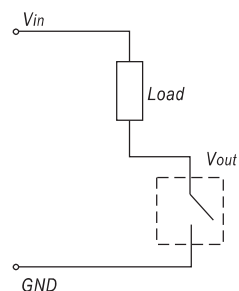
2 LED: When the output circuit open, first LED color lights Second LED lights when the output circuit closes.

**Wiring instructions**

Wiring diagram of switch high level output:



Wiring diagram of switch low level output:



Note: high level output is used to control positive (positive voltage);  
 The low level output is used to control the negative (negative voltage)

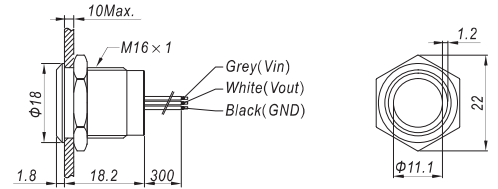
Φ 22mm Picture

Specifications

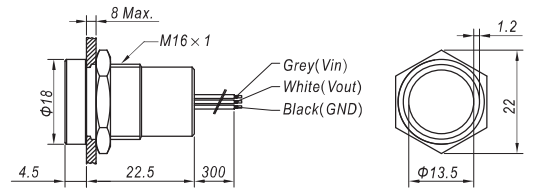
Dimensions



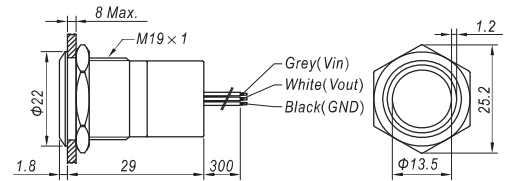
Mounting hole Φ16mm  
 Switch Rating 500mA / 24VDC  
 Illuminated type Ring illumination  
 Housing Material Stainless steel  
 Wire specification UL1430 22AWG  
 IP Degree IP67



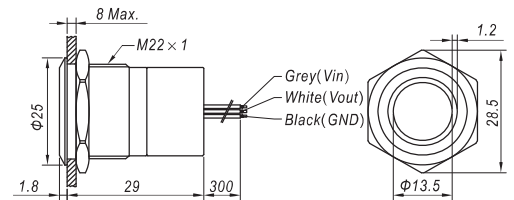
Mounting hole Φ16mm  
 Switch Rating 500mA / 24VDC  
 Illuminated type Ring illumination  
 Housing Material Stainless steel  
 Wire specification UL1430 22AWG  
 IP Degree IP67



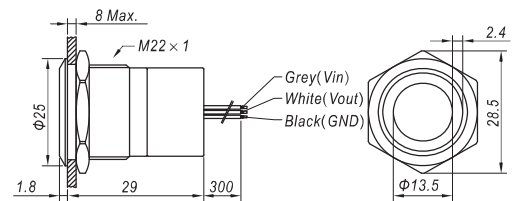
Mounting hole Φ19mm  
 Switch Rating 500mA / 24VDC  
 Illuminated type Ring illumination  
 Housing Material Stainless steel  
 Wire specification UL1430 22AWG  
 IP Degree IP67



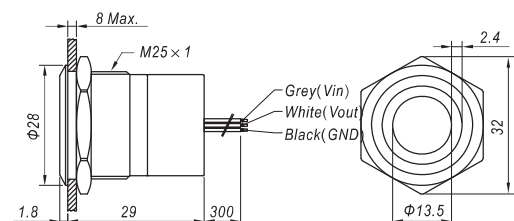
Mounting hole Φ22mm  
 Switch Rating 500mA / 24VDC  
 Illuminated type Ring illumination  
 Housing Material Stainless steel  
 Wire specification UL1430 22AWG  
 IP Degree IP67



Mounting hole Φ22mm  
 Switch Rating 500mA / 24VDC  
 Illuminated type Ring illumination  
 Housing Material Stainless steel  
 Wire specification UL1430 22AWG  
 IP Degree IP67



Mounting hole Φ25mm  
 Switch Rating 500mA / 24VDC  
 Illuminated type Ring illumination  
 Housing Material Stainless steel  
 Wire specification UL1430 22AWG  
 IP Degree IP67



Wiring diagram

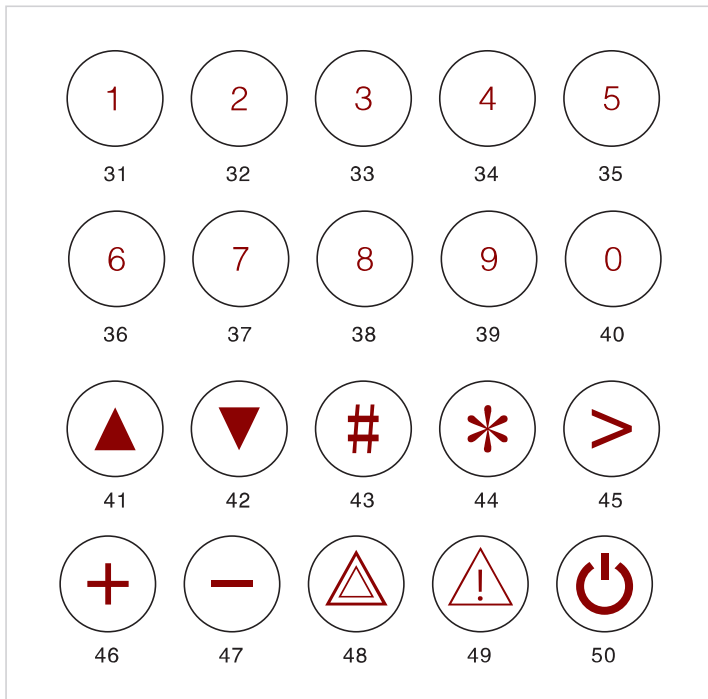
Switch Functions	Non-Illuminated	1 LED		2 LED
<p>OFF- <math>\Phi</math>N)</p> <p>10 NO-MOM</p> <p>High level output type)</p>				
<p>OFF- <math>\Phi</math>N)</p> <p>10B NO-MOM</p> <p>Low level output type)</p>				
<p>ON- <math>\Phi</math>FF)</p> <p>01 NC-MOM</p> <p>High level output type)</p>				
<p>ON- <math>\Phi</math>FF)</p> <p>01B NC-MOM</p> <p>Low level output type)</p>				
<p>OFF- <math>\Phi</math>N)</p> <p>10Z NO-Latching</p> <p>High level output type)</p>				
<p>OFF- <math>\Phi</math>N)</p> <p>10ZB NO-Latching</p> <p>Low level output type)</p>				
<p>ON- <math>\Phi</math>FF)</p> <p>01Z NC-Latching</p> <p>High level output type)</p>				
<p>ON- <math>\Phi</math>FF)</p> <p>01ZB NC-Latching</p> <p>Low level output type)</p>				

**Wiring diagram**

Switch Functions	Non-Illuminated	1 LED		2 LED
<p>OFF- (QN)</p> <p>10C30</p> <p>NO type, prolonged no more than 30s, the close time according to how long you push it.</p>				
<p>ON- (QFF)</p> <p>01C30</p> <p>NC type, prolonged no more than 30s, the close time according to how long you push it.</p>				
<p>OFF- (QN)</p> <p>10T30</p> <p>NO type, no matter how long you press it, prolonged 30s</p>				
<p>ON- (QFF)</p> <p>01T30</p> <p>NC type, no matter how long you press it, prolonged 30s</p>				

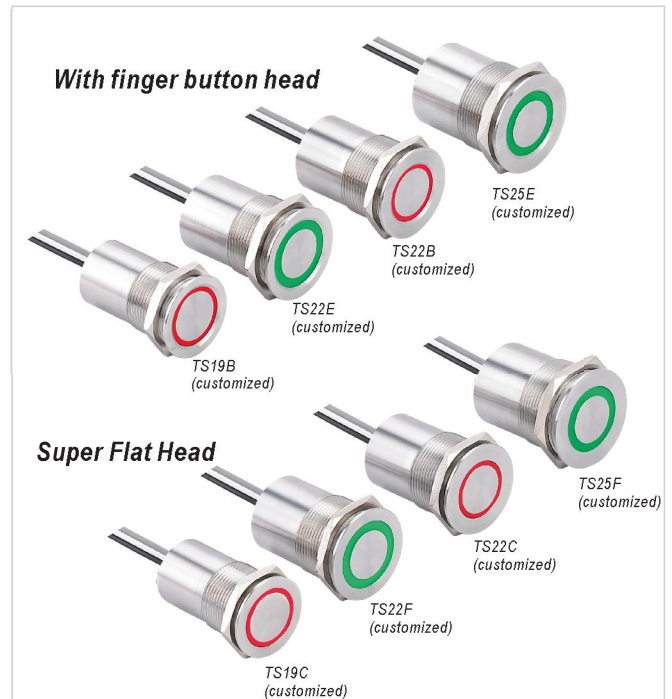
**Custom pattern**

The following is part of the pattern number query if you need special patterns can be customized according to customer needs



**Custom head**

The following is part of the custom head for the choice of special head or appearance can be customized according to customer needs



# Digital Code Rotary Switches

## Characteristics

- Full closed structure  
Full closed, have the excellent characteristics of preventing oil and water, the Product Degree: IP65.
- Easy for wire connect  
Use the digital coding, and easy for wire connect, can be connected with the linker.
- Easy to set the numerical value  
Changing the fixing screw position to change the setting.
- Use the gold-clad contact.  
Use the double slide gold-clad contact to keep the contact resistance steady, and improve the work reliability.
- Preventing the wrong signal.  
According to the coding, can be set to INHIBIT terminal and PARITY terminal.
- Firmand reliable, the distortion distance strength is 3Nm.
- Ensure over 50,000 times operations.
- Mainly fit for choosing CNC mechanical panel's wave bands of operation mode, axial direction, rate and the percentage of speed.

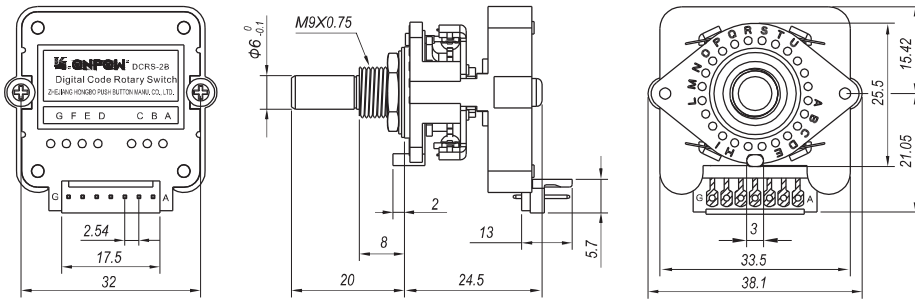
## Product Outline



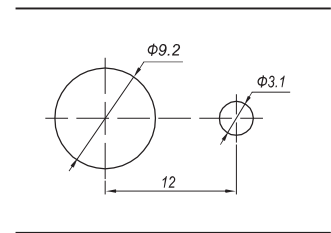
## Specifications

- Rated capacity: 5VDC/0.25A, 25VAC/0.5A, 50VAC/0.05A
- Insulation Resistance:  $\geq 500M\Omega$
- Dielectric Strength: 250VAC between term; 1500VAC between termand frame.
- Protective Degree: IP65
- Operating Temperature:  $-20^{\circ}C \sim 70^{\circ}C$
- Storage Temperature:  $-40^{\circ}C \sim 70^{\circ}C$

## Shape & Dimensions



## Installation Dimensions



## State Setting

You can fix the setting crews to the corresponding start and end positions according to the requirements.

- 30° switching, setting action range is 0 ~ 11

	00	01	02	03	04	05	06	07	08	09	10	11
Start Position	A	C	E	G	I	K	M	O	Q	S	U	W
End Position	C	E	G	I	K	M	O	Q	S	U	W	A

- 15° switching, setting action range is 0 ~ 23

	00	01	02	03	04	05	06	07	08	09	10	11
Start Position	A	B	C	D	E	F	G	H	I	J	K	L
End Position	C	D	E	F	G	H	I	J	K	L	M	N
	12	13	14	15	16	17	18	19	20	21	22	23
Start Position	M	N	O	P	Q	R	S	T	U	V	W	X
End Position	O	P	Q	R	S	T	U	V	W	X	A	B

## Implication of Type

DCRS	-	□	■	-	◇ / ◆	-	◎
Code Number	Coding Mode: 00 point-to-point output 01 binary system 02 binary complementary system 03 binary cyclic system(Gray code) 04 binary cyclic complementary system (Gray complementary code)	Rotation angle & digit: J 15°(0 ~ 23) N 30°(0 ~ 11)	Start point setting/end point setting: For example:0/23 24 position 0/11 12 position Start and end positions can be set according to the need.	Connecting mode: CS: vertical joint CB: level joint No letter means no joint.			

Note: The name of coding mode and its corresponding type are different with the old version. Please choose cautiously.

Output Code Chart

INHIBIT: inhibition terminal; PARITY: parity check terminal;  
COMMON: common terminal; ●: ON operation output

DCRS-01N-◇/◆-○: 30° ,binary

Terminals	Digitally	Setting Values(0~11)											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1		●		●		●		●		●		●
F	2			●		●		●		●		●	
B	4				●		●		●		●		●
E	8					●		●		●		●	
C	PARITY		●		●		●		●		●		●
G	INHIBIT	○	○	○	○	○	○	○	○	○	○	○	○
D	COMMON	Common Terminal											

DCRS-00N-◇/◆-○: 30° ,point-to-point output

Terminals	Digitally	Setting Values(0~11)											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1		●										
F	2						●						
B	4			●									
E	8					●							
C	PARITY				●								
G	INHIBIT												
D	COMMON	Common Terminal											

DCRS-02N-◇/◆-○: 30° , binary complementary

Terminals	Digitally	Setting Values(0~11)											
		0	1	2	3	4	5	6	7	8	9	10	11
A	1	●		●		●		●		●		●	
F	2	●	●			●	●			●	●		
B	4	●	●	●	●					●	●	●	●
E	8	●	●	●	●	●	●	●	●				
C	PARITY	●	●		●		●	●		●	●		●
G	INHIBIT	○	○	○	○	○	○	○	○	○	○	○	○
D	COMMON	Common Terminal											

DCRS-01J-◇/◆-○: 15° , binary

Terminals	Digitally	Setting Values(0~23)																							
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	1		●		●		●		●		●		●		●		●		●		●		●		●
F	2			●		●			●		●			●		●			●		●			●	
B	4				●		●		●		●			●		●			●		●			●	
E	8					●		●		●		●		●		●		●		●		●		●	
C	PARITY		●		●		●		●		●		●		●		●		●		●		●		●
G	INHIBIT	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
D	COMMON	Common Terminal																							

DCRS-02J-◇/◆-○: 15° , binary complementary

Terminals	Digitally	Setting Values(0~23)																							
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	1	●		●		●		●		●		●		●		●		●		●		●		●	
F	2	●	●			●	●			●	●			●	●			●	●			●	●		
B	4	●	●	●	●			●	●	●	●			●	●	●	●			●	●	●	●		
E	8	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
C	PARITY	●	●		●		●	●		●	●		●	●		●	●		●	●		●	●		●
G	INHIBIT	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
D	COMMON	Common Terminal																							

DCRS-03J-◇/◆-○: 15° , binary cyclic (Gray code)

Terminals	Digitally	Setting Values(0~23)																							
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	1		●	●		●	●		●	●		●	●		●	●		●	●		●	●		●	●
F	2			●	●		●	●		●	●		●	●		●	●		●	●		●	●		●
B	4				●	●		●	●		●	●		●	●		●	●		●	●		●	●	
E	8					●	●		●	●		●	●		●	●		●	●		●	●		●	●
C	PARITY		●		●		●	●		●	●		●	●		●	●		●	●		●	●		●
G	INHIBIT	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
D	COMMON	Common Terminal																							

DCRS-04J-◇/◆-○: 15° , binary cyclic complementary(Gray complementary code)

Terminals	Digitally	Setting Values(0~23)																							
		0	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23
A	1		●		●		●		●		●		●		●		●		●		●		●		●
F	2			●		●			●		●			●		●			●		●			●	
B	4				●		●		●		●			●		●			●		●			●	
E	8					●		●		●		●		●		●		●		●		●		●	
C	PARITY		●		●		●		●		●		●		●		●		●		●		●		●
G	INHIBIT	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
D	COMMON	Common Terminal																							

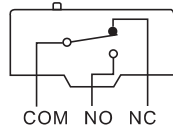
**Product Feature**

- Wide range of actuators; and the operating position can be adjusted.
- High opening and closing capacity (15A)
- High precision
- Wide range of operating speed

**Model Code**

- LTM-1□ □: Transmission Type
- 306: Plunger Button Type      701: Lever Type
- 307: Plunger Long Button Type      702: Short Lever Type
- 308: Roller Plunger type      703: Roller Lever Type
- 309: Cross roller plunger type      704: Roller Short Lever Type
- 705: Roller Long Lever Type

**Contact Diagram**



**Specifications**

Operation Speed	0.01mm to 1m/sec(Plunger type)
Operation Frequency	Mechanical: times/minute      Electrical: times/minute
Contact Resistance	15mΩ Max. ( in the initial)
Insulation Resistance	Over 100MΩ (Below 500VDC)
Dielectric Strength	1,000VAC, 50/60Hz for 1 minute between discontinuous terminal
	1,500VAC, 50/60Hz for 1 minute between current carrying parts and non-current carrying parts
	1,500VAC, 50/60Hz for 1 minute between Terminal and GND
Vibration Resistance	10 to 50Hz: 1.5mm bi-amplitude
Shock Resistance	Mechanical Durability: 1,000m/Sec <sup>2</sup> (About 100G'S)
	Malfunction Durability: 300m/Sec <sup>2</sup> (About 30G'S)
Operation Temperature	In use: 10~ +80°C(No freezing)
Operation Humidity	Below 95%RH
Life	Mechanical: Above 10,000,000 operations
	Electrical: Above 500,000 operations
Weight	22 to 58g
IP Degree	IP65

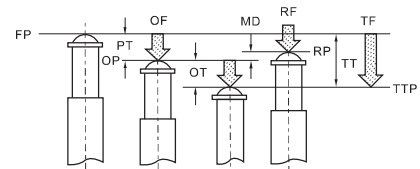
**Ratings**

Rated voltage	Non-Inductive Load(A)		Inductive Load (A)				Inrush current(A)	
	Resistive Load		Lamp Load		Inductive Load		Motor Load	
	NC	NO	NC	NO	NC	NO	NC	NO
125VAC	15	3	1.5	15	5	2.5	Below 30	Below 15
250VAC	15	2.5	1.25	15	3	1.5		
500VAC	3	1.5	0.75	2.5	1.5	0.75		
8VDC	15	3	1.5	15	5	2.5		
14VDC	15	3	1.5	10	5	2.5		
30VDC	6(2)	3	1.5	5	5	2.5		
125VDC	0.4	0.4	0.4	0.05	0.05	0.05		
250VDC	0.2	0.2	0.2	0.03	0.03	0.03		

- Notes: 1. The power factor of Inductive Load is over 0.4(AC).  
And usually the time constant is below 7 msec(DC).
2. The inrush current of Lamp Load is 10 times as than in stable condition,  
and Motor current is 6 times as than in stable condition.

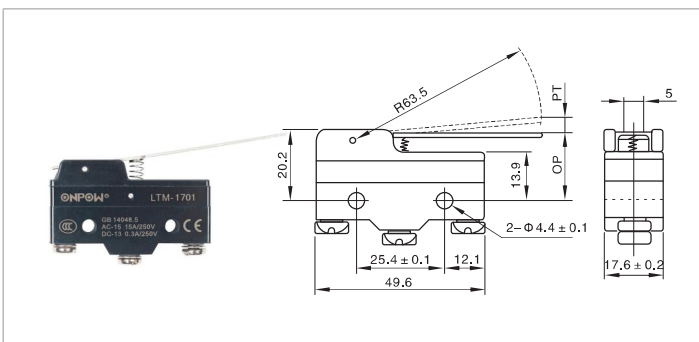
**Operating Characteristics**

Type	LTM-1701	LTM-1702	LTM-1703	LTM-1704	LTM-1705	LTM-1306	LTM-1307	LTM-1308 LTM-1309
OF Max.	70g	160g	100g	160g	10g	350g	350g	350g
RF Min.	14g	28g	22g	42g	3g	114g	114g	114g
PT Max.	10mm	3mm	7.1mm	2.7mm	20mm	0.4mm	0.4mm	0.4mm
OT Min.	5.6mm	2mm	4mm	2.4mm	5.6mm	1.6mm	5.5mm	3.58mm
MD Max.	1.27mm	1mm	1.02mm	0.5mm	3mm	0.05mm	0.05mm	0.05mm
PF Max.	28.2mm	24.8mm	36.5mm	32.5mm				
OP	19±0.8	19±0.4	30.2±0.8	30.2±0.4	19±0.8	21.5±0.5	21.8 0.8	33.4±1.2

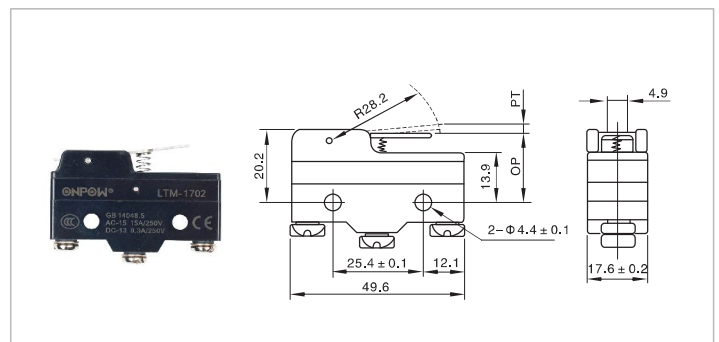


- FP: Free Position      RF: Release Force
- OP: Operating Position      RP: Release Position
- PT: Pre-Travel      TT: Total Travel
- OF: Operating Force      TF: Total travel Force
- OT: Over Travel      TTP: Total Travel Position
- MD: Movement Differential

**LTM-1701**

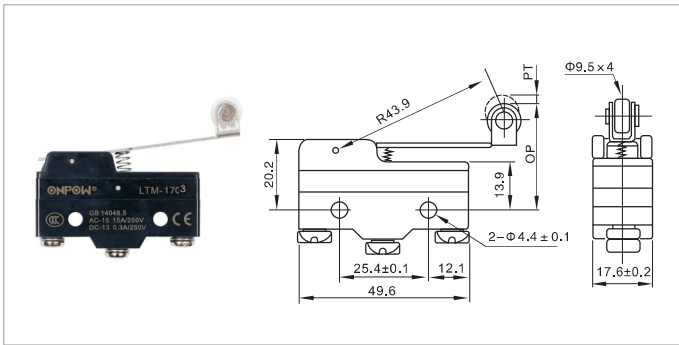


**LTM-1702**

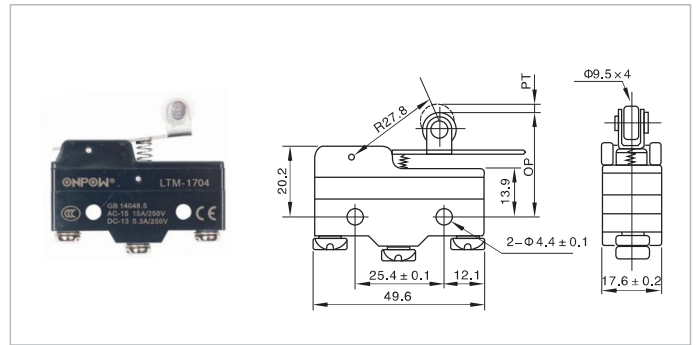




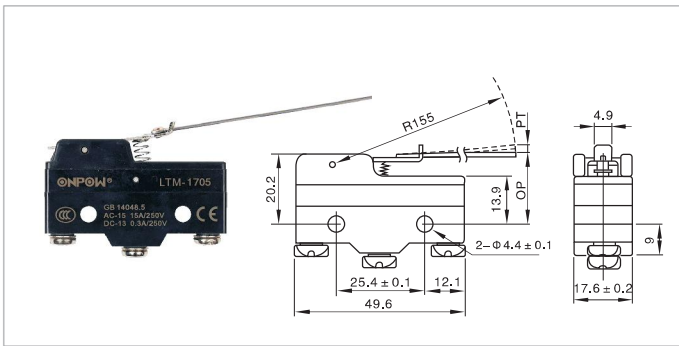
LTM-1703



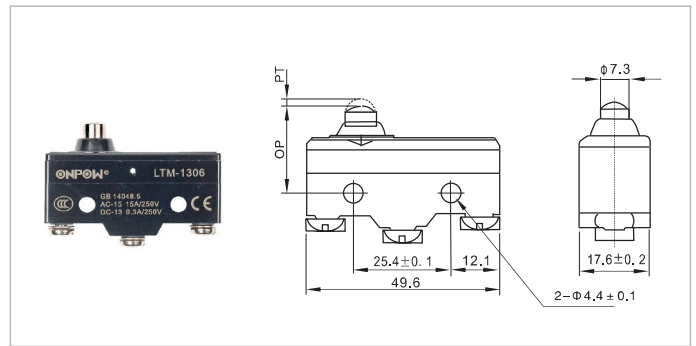
LTM-1704



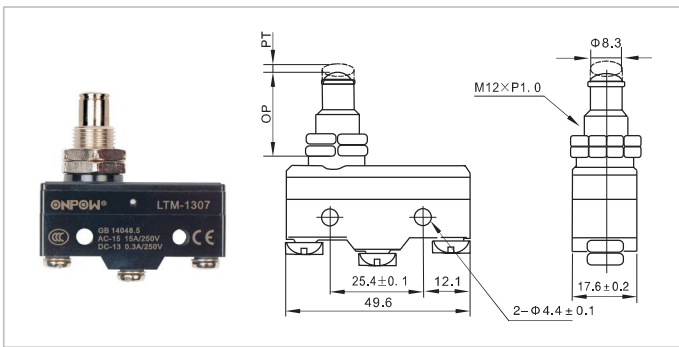
LTM-1705



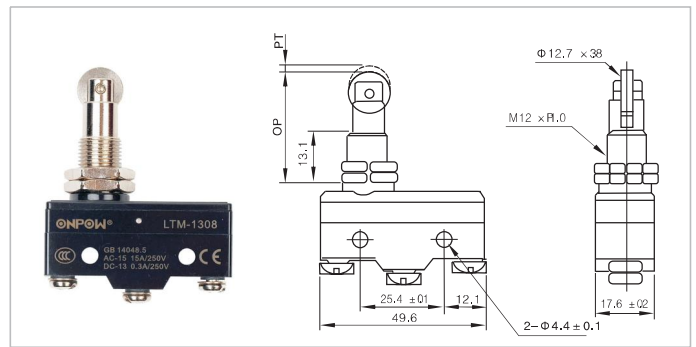
LTM-1306



LTM-1307



LTM-1308



LTM-1309

