



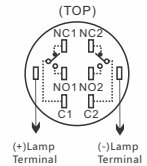
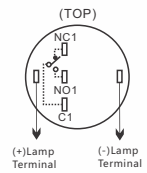
Illustration	Lens Colour	Lamp Voltage	Possible Contact Configuration			Part Number	Contact Diagram
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### Round Pushbutton

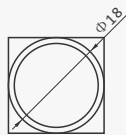
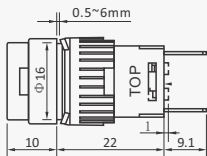
#### Momentary/Spring Return



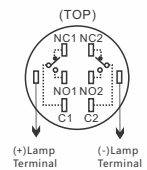
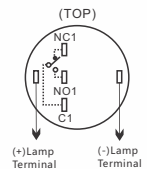
● Red			1CO	1NO	1NC		<b>90P1-LAS1-AY-11/R/P/GT</b>
● Green			1CO	1NO	1NC		<b>90P1-LAS1-AY-11/G/P/GT</b>
● Yellow			1CO	1NO	1NC		<b>90P1-LAS1-AY-11/Y/P/GT</b>
● Blue			1CO	1NO	1NC		<b>90P1-LAS1-AY-11/B/P/GT</b>
○ White			1CO	1NO	1NC		<b>90P1-LAS1-AY-11/W/P/GT</b>
● Black			1CO	1NO	1NC		<b>90P1-LAS1-AY-11/N/P/GT</b>
● Red			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/R/P/GT</b>
● Green			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/G/P/GT</b>
● Yellow			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/Y/P/GT</b>
● Blue			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/B/P/GT</b>
○ White			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/W/P/GT</b>
● Black			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/N/P/GT</b>



#### Maintained/Latching



● Red			1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/R/P/GT</b>
● Green			1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/G/P/GT</b>
● Yellow			1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/Y/P/GT</b>
● Blue			1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/B/P/GT</b>
○ White			1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/W/P/GT</b>
● Black			1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/N/P/GT</b>
● Red			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/R/P/GT</b>
● Green			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/G/P/GT</b>
● Yellow			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/Y/P/GT</b>
● Blue			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/B/P/GT</b>
○ White			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/W/P/GT</b>
● Black			2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/N/P/GT</b>

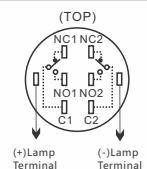
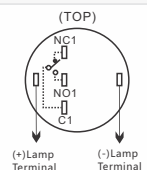


### Round Illuminated Pushbutton

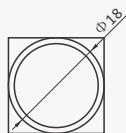
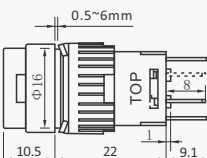
#### Momentary/Spring Return



● Red	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11/R/024/P/GT</b>
● Green	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11/G/024/P/GT</b>
● Yellow	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11/Y/024/P/GT</b>
● Blue	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11/B/024/P/GT</b>
○ White	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11/W/024/P/GT</b>
● Red	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/R/024/P/GT</b>
● Green	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/G/024/P/GT</b>
● Yellow	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/Y/024/P/GT</b>
● Blue	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/B/024/P/GT</b>
○ White	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22/W/024/P/GT</b>



#### Maintained/Latching



● Red	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/R/024/P/GT</b>
● Green	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/G/024/P/GT</b>
● Yellow	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/Y/024/P/GT</b>
● Blue	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/B/024/P/GT</b>
○ White	24V		1CO	1NO	1NC		<b>90P1-LAS1-AY-11Z/W/024/P/GT</b>
● Red	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/R/024/P/GT</b>
● Green	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/G/024/P/GT</b>
● Yellow	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/Y/024/P/GT</b>
● Blue	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/B/024/P/GT</b>
○ White	24V		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AY-22Z/W/024/P/GT</b>

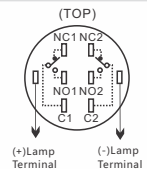
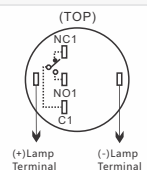




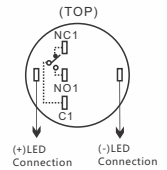
Illustration	Lens Colour	Lamp Voltage	Possible Contact Configuration			Part Number	Contact Diagram
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### Square Pushbutton

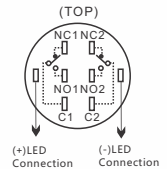
#### Momentary/Spring Return



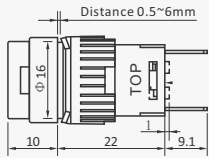
Red		1CO	1NO	1NC		<b>90P1-LAS1-AF-11/R/P/GT</b>
Green		1CO	1NO	1NC		<b>90P1-LAS1-AF-11/G/P/GT</b>
Yellow		1CO	1NO	1NC		<b>90P1-LAS1-AF-11/Y/P/GT</b>
Blue		1CO	1NO	1NC		<b>90P1-LAS1-AF-11/B/P/GT</b>
White		1CO	1NO	1NC		<b>90P1-LAS1-AF-11/W/P/GT</b>
Black		1CO	1NO	1NC		<b>90P1-LAS1-AF-11/N/P/GT</b>



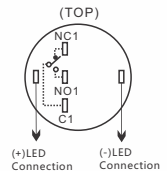
Red		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/R/P/GT</b>
Green		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/G/P/GT</b>
Yellow		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/Y/P/GT</b>
Blue		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/B/P/GT</b>
White		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/W/P/GT</b>
Black		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/N/P/GT</b>



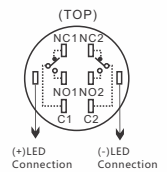
#### Maintained/Latching



Red		1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/R/P/GT</b>
Green		1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/G/P/GT</b>
Yellow		1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/Y/P/GT</b>
Blue		1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/B/P/GT</b>
White		1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/W/P/GT</b>
Black		1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/N/P/GT</b>



Red		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/R/P/GT</b>
Green		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/G/P/GT</b>
Yellow		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/Y/P/GT</b>
Blue		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/B/P/GT</b>
White		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/W/P/GT</b>
Black		2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/N/P/GT</b>

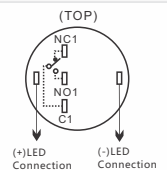


### Square Illuminated Pushbutton

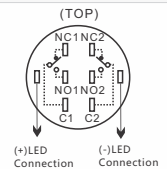
#### Momentary/Spring Return



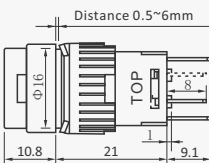
Red	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11/R/024/P/GT</b>
Green	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11/G/024/P/GT</b>
Yellow	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11/Y/024/P/GT</b>
Blue	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11/B/024/P/GT</b>
White	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11/W/024/P/GT</b>



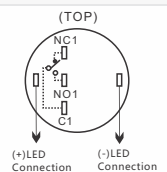
Red	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/R/024/P/GT</b>
Green	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/G/024/P/GT</b>
Yellow	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/Y/024/P/GT</b>
Blue	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/B/024/P/GT</b>
White	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22/W/024/P/GT</b>



#### Maintained/Latching



Red	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/R/024/P/GT</b>
Green	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/G/024/P/GT</b>
Yellow	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/Y/024/P/GT</b>
Blue	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/B/024/P/GT</b>
White	24V	1CO	1NO	1NC		<b>90P1-LAS1-AF-11Z/W/024/P/GT</b>



Red	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/R/024/P/GT</b>
Green	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/G/024/P/GT</b>
Yellow	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/Y/024/P/GT</b>
Blue	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/B/024/P/GT</b>
White	24V	2CO	2NO	2NC	1NO 1NC	<b>90P1-LAS1-AF-22Z/W/024/P/GT</b>

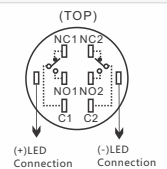




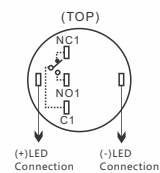
Illustration	Lens Colour	Lamp Voltage	Possible Contact Configuration			Part Number	Contact Diagram
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### Rectangle Pushbutton

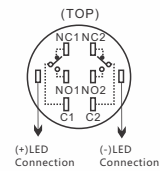
#### Momentary/Spring Return



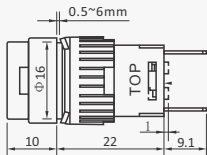
Red		1CO	1NO	1NC		90P1-LAS1-AJ-11/R/P/GT
Green		1CO	1NO	1NC		90P1-LAS1-AJ-11/G/P/GT
Yellow		1CO	1NO	1NC		90P1-LAS1-AJ-11/Y/P/GT
Blue		1CO	1NO	1NC		90P1-LAS1-AJ-11/B/P/GT
White		1CO	1NO	1NC		90P1-LAS1-AJ-11/W/P/GT
Black		1CO	1NO	1NC		90P1-LAS1-AJ-11/N/P/GT



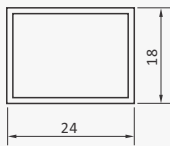
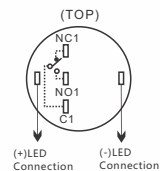
Red		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/R/P/GT
Green		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/G/P/GT
Yellow		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/Y/P/GT
Blue		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/B/P/GT
White		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/W/P/GT
Black		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/N/P/GT



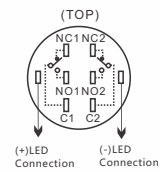
#### Maintained/Latching



Red		1CO	1NO	1NC		90P1-LAS1-AJ-11Z/R/P/GT
Green		1CO	1NO	1NC		90P1-LAS1-AJ-11Z/G/P/GT
Yellow		1CO	1NO	1NC		90P1-LAS1-AJ-11Z/Y/P/GT
Blue		1CO	1NO	1NC		90P1-LAS1-AJ-11Z/B/P/GT
White		1CO	1NO	1NC		90P1-LAS1-AJ-11Z/W/P/GT
Black		1CO	1NO	1NC		90P1-LAS1-AJ-11Z/N/P/GT



Red		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/R/P/GT
Green		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/G/P/GT
Yellow		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/Y/P/GT
Blue		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/B/P/GT
White		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/W/P/GT
Black		2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/N/P/GT

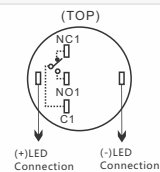


### Rectangle Illuminated Pushbutton

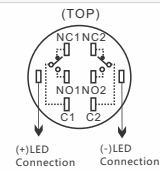
#### Momentary/Spring Return



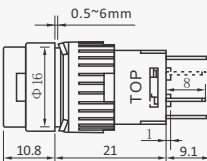
Red	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11/R/024/P/GT
Green	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11/G/024/P/GT
Yellow	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11/Y/024/P/GT
Blue	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11/B/024/P/GT
White	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11/W/024/P/GT



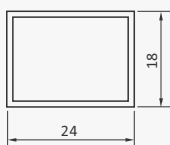
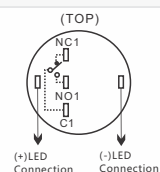
Red	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/R/024/P/GT
Green	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/G/024/P/GT
Yellow	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/Y/024/P/GT
Blue	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/B/024/P/GT
White	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22/W/024/P/GT



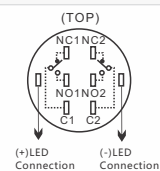
#### Maintained/Latching



Red	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11Z/R/024/P/GT
Green	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11Z/G/024/P/GT
Yellow	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11Z/Y/024/P/GT
Blue	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11Z/B/024/P/GT
White	24V	1CO	1NO	1NC		90P1-LAS1-AJ-11Z/W/024/P/GT



Red	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/R/024/P/GT
Green	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/G/024/P/GT
Yellow	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/Y/024/P/GT
Blue	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/B/024/P/GT
White	24V	2CO	2NO	2NC	1NO 1NC	90P1-LAS1-AJ-22Z/W/024/P/GT



## TECHNICAL INFORMATION:

### Product Description:

#### + Specification:

The bezel of the products is available in 3 shapes: **Round** (Ø18mm), **Square** (18 x 18mm), **Rectangle** (18 x 24mm).

Including the Pilot Lights, Pushbuttons, Illuminated Pushbuttons, Selector Switches, Key Switches, Emergency Stops and Buzzers.

The **mounting cut-out is Ø16mm**, some products can be equipped with an adaptor ring to install the product in the **Ø22mm mounting cut-out**.

#### + Data:

The product has the characteristics of stable performance, low contact resistance, strong insulation, resistance to vibration and shock, etc.; meets IEC60947-5-1, GB14048.5 and other standards.

#### + Construction:

Snap-Action switching element. Each switching element contains a normally Open and a normally Close.

Each button can be configured with a maximum of 2 switching elements. Gold plated terminal gives protection against corrosion in harsh environment.

#### + Protection Rating

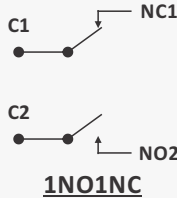
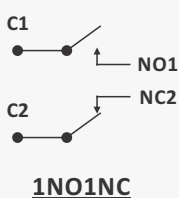
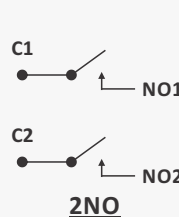
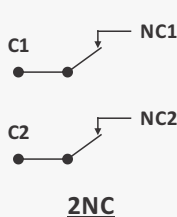
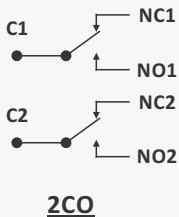
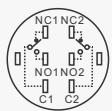
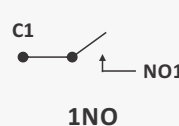
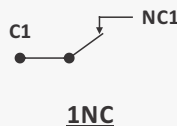
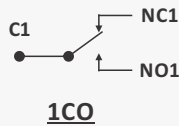
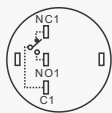
Products have **IP65**. By adding **S09 Sealing Cover**, the protection can be extended to **IP67**.

\* *except Buzzer which is IP40.*

Rated Insulation Voltage		250V				
Thermal Current I <sub>th</sub>		5A temperature do not exceed the highest rated allowed current				
Rated Operating Voltage		12V	24V	110V	220V	
Rated Operating Current	Frequency 50/60 Hz	Resistive Load	-	-	1A	0.5A
		Inductive Load	-	-	0.7A	0.5A
	DC	Resistive Load	1A	1A	0.2A	-
		Inductive Load	0.7A	0.7A	0.1A	-
Contact Material		Silver Alloy				

Bulb Type	Dual Direction LED					
	AC/DC 6V	AC/DC 12V	AC/DC 24V			
Rated Voltage	AC/DC 110V	AC/DC 220V				
Illumination Colors	R	G	Y	O	B	W
Lifespan	approx. 40,000 hours					

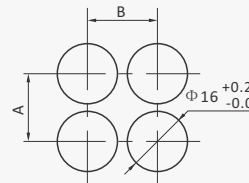
#### + Possible Contact Configuration:



#### + Specification Features:

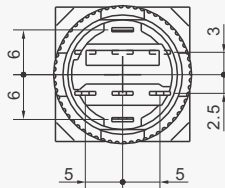
Operation Environment	(-)25°C ~ (+) 55°C (no freezing) Contact Body surroundings must have airflow		
Environment	45-85% RH (no condensation)		
Contact Resistance	≤ 50mΩ		
Insulation Resistance	≥ 100MΩ		
Overvoltage:	Between the Contact Terminals & Lamp	2000 V, 50 Hz AC, 1 Minute	
	Between the Same Terminal	1500 V, 50 Hz, 1 Minute	
	Between the Different Terminal	2000 V, 50 Hz, 1 Minute	
Vibration Assistance	50 Hz, Amplitude Approx 1.2mm		
Shock Assistance	Until 10g		
Lifespan:	Mechanics	Momentary	1,000,000
		Latching, Selector	500,000
		Key, Emergency	200,000
	Electrical	50,000 and above	
Wire Connection	Soldering Diameter: 2 x 0.08mm Largest copper wire area: 0.75mm <sup>2</sup> Faston Terminals: 2.8 x 0.5		
Solder Heat Resistance	320°C (or 30 watt soldering iron) not more than 2 sec.		
Travel	Pushbutton Approx. 3mm travel		
Operating Force	(On Lens Cap) According to no. of contacts ± 4 Newton (100gf ~400gf)		

#### + Cut-out Dimensions:



Type	A	B
Circle	≥ 18mm	≥ 18mm
Sqaure	≥ 18mm	≥ 18mm
Rectangle	≥ 18mm	≥ 24mm
Mushroom	≥ 24mm	≥ 24mm

#### + Bottom View:



#### + Terminal configuration:

