

LAS1-AGQ Series

Installation aperture $\Phi 16\text{mm}$, $\Phi 19\text{mm}$, $\Phi 22\text{mm}$;

- ☆ The switch is "Snap Action | SPDT / DPDT";
- ☆ This series covers buttons, emergency stop buttons, knobs, and key buttons. The product range is complete and the configuration options are rich, which can meet the needs of users in various fields. The market is widely used and is one of the company's flagship products;
- ☆ Product waterproof grade IP65/IP67.



Switch Rating

Rated Insulation Voltage U_i		250V				
Thermal Current I_{th}		5A				
Rated voltage		12V	24V	110V	220V	
Rated Operation Current	AC 50/60Hz	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				

Minimum load: 3V AC/DC, 5mA (Reference)
Application scope depends on operating environment and load type.

Performance Characteristic

Operating Temp	-25°C~+55°C (Non freezing) Keep the switch air circulating well
Operating Humidity	45~85% RH(Non condensing)
Contact Resistance	$\leq 50\text{m}\Omega$
Insulation Resistance	$\geq 100\text{M}\Omega$ (500VDC)
Max. withstanding voltage	1500VAC, 50Hz, 1min
Vibration resistance	50Hz, The amplitude is about 1.2mm
Solder heat resistance	320°C 3s
Mechanical Life	Button 1,000,000 times, knob, key button 200,000 times
Electrical Life	50,000 cycles
Key material	Stainless Steel / Aluminum Alloy (Black) / Brass Chrome Plated (Only for LAS1-AGQ16)
Base material	PBT(LAS1-AGQ16 is PA)
Nut torque	About 0.6Nm
Torque	Button: about 1.5N (1NO1NC), about 3N (2NO2NC)
Operation Travel	About 3.1mm
Protection class	Button: IP65(IP67 can be customized), IK09 Knob, push-lock knob: IP65, IK02 key button: IP40, IK02

Standards and certification

Corresponding standard	Certification mark	Certification authority / certification number
UL508		UL / E254053
EN 60947-5-1:2004		VDE / 40050498
GB/T14048.5-2017		2020970305003363
EN 60947-5-1:2004		UDEM / RBT210131203ER-1

LED Specifications

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

Switch structure description

Type	Diagram	Symbol
C		

Pin Description

Legend	Directions
	<p>Up to two sets of switches can be configured. C1, NO1, NC1 and C2, NO2, NC2 are a group of switches respectively; C pin is a common pin, NO pin is a normally open pin, and NC pin is a normally closed pin; + and - pins are lamp bead pins, conventional lamp beads. There is no distinction between positive and negative poles in the configuration; the lamp bead is relatively independent from the switch, and the state of the lamp bead can be controlled through the switch or peripheral circuit.</p>

LAS1-AGQ series model description

LAS1-AGQ ☆ ★ - / / / /

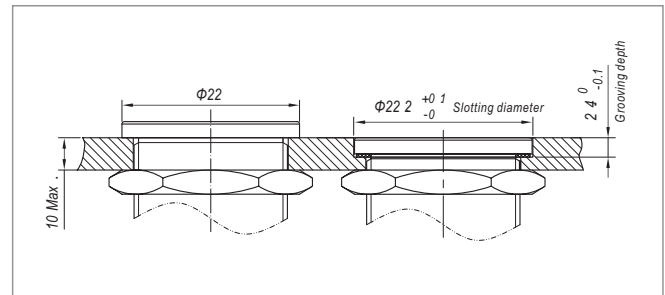
Symbol	Symbol name	Specify
	Mounting Aperture	16:Φ16mm / 22:Φ22mm / 30:Φ30mm / No digital means Φ19mm
★	Head shape	H: High round / No letter means flat round
	Contact Structure	11: 1NO1NC / 22: 2NO2NC / No digital means indicator
	Operation type	Z: Latching / X: Selector button / Y: Key button / TS: Emergency stop button / TSB: Type B emergency stop button / TSC: Type C emergency stop button / TSD: D-type emergency stop button / No letter means momentary
	Illuminated Type	D: Dot illuminated / E: Ring illuminated / DT: Single Power Symbol / ET: Ring+power symbol illuminated / No letters mean no lights
	Selector and key button operating positions	2: Second position / 3: Third position
	Selector and key button action types	1: Retention / 3: Fully Self-Double
	Color	R: Red / G: Green / Y: Yellow / B: Blue / W: White
	Voltage	6V / 12V / 24V / 110V / 220V other voltage levels can be customized.
	Housing Material	S: Stainless steel / A: Aluminium alloy (Black) / C: Chrome plated brass (optional for LAS1-AGQ16 only)

Note: Please read the catalog carefully, and choose the right part-number according to the sign.

Ultra-flat custom head display



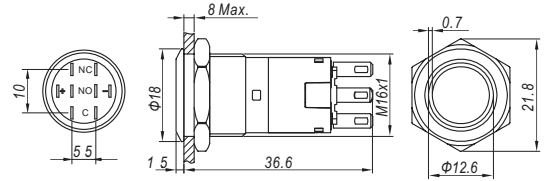
LAS1-AGQ ultra-flat anti-destructive metal button installation method





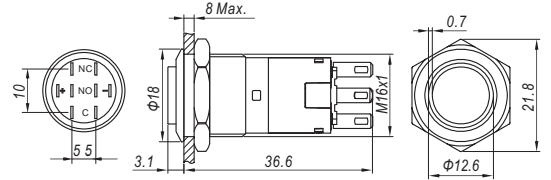
LAS1-AGQ16-□■/○

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Housing Material ○ S: Stainless steel /C: Chrome plated brass
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16F / Solder socket S04 / PCB socket S05



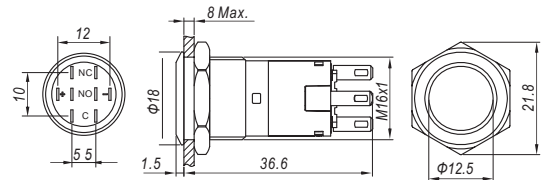
LAS1-AGQ16H-□■/○

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Housing Material ○ S: Stainless steel /C: Chrome plated brass
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16H / Solder socket S04 / PCB socket S05



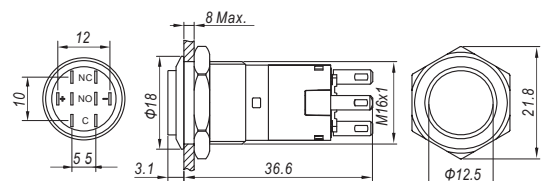
LAS1-AGQ16-□■E/△/▲/○

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material ○ S: Stainless steel /C: Chrome plated brass
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16F / Solder socket S04 / PCB socket S05



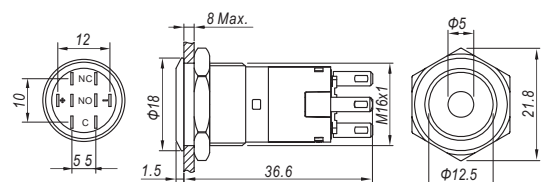
LAS1-AGQ16H-□■E/△/▲/○

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material ○ S: Stainless steel /C: Chrome plated brass
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16H / Solder socket S04 / PCB socket S05



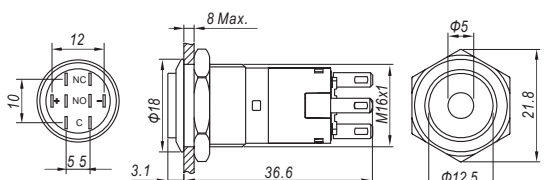
LAS1-AGQ16-□■D/△/▲/○

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material ○ S: Stainless steel /C: Chrome plated brass
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16F / Solder socket S04 / PCB socket S05



LAS1-AGQ16H-□■D/△/▲/○

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material ○ S: Stainless steel /C: Chrome plated brass
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16H / Solder socket S04 / PCB socket S05



Sealing cover M12-16F



Solder socket S04



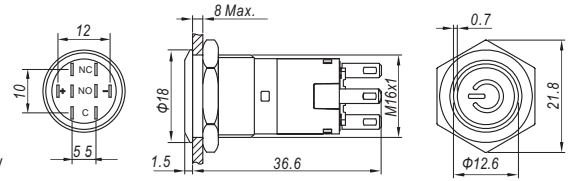
Circuit board socket S05



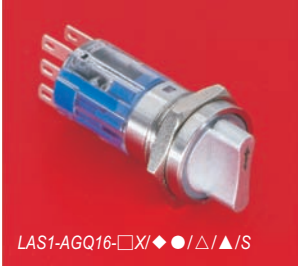
Panel plug M01



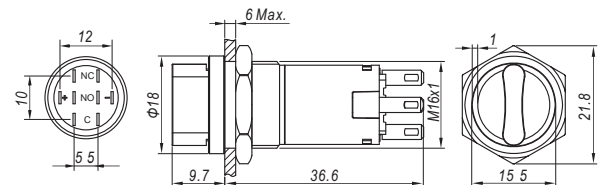
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material Stainless steel
 Protection class IP40(IP65 can be customized),IK09
 Applicable accessories Safety mask M12-16F / Solder socket S04 / PCB socket S05



LAS1-AGQ16-□■ET/△/▲/S



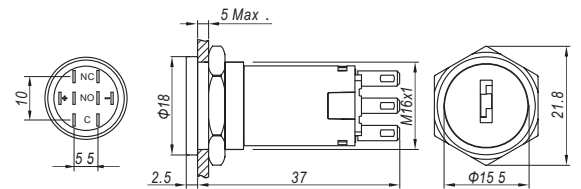
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position ◆ ● L R L C R
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material Stainless steel
 Protection class IP40,IK02
 Applicable accessories Solder socket S04 / PCB socket S05



LAS1-AGQ16-□X/◆●/△/▲/S



Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position ◆ ● L R L C R
 Housing Material Stainless steel
 Protection class IP40,IK02
 Applicable accessories Solder socket S04 / PCB socket S05

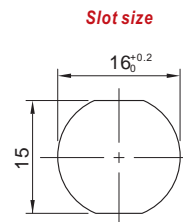


LAS1-AGQ16-□Y/◆●/S

Knob, key button working position contact status	Switch type	90° 2 position		45° 3 position	
	Action position	1NO1NC	2NO2NC	2NO2NC	
↻		NO C1	NO NC C1 C1	NO NC C1 C1	NO NC C1 C1
↑				NO NC C1 C1	NO NC C1 C1
↻		NO C1	NO NC NO NC C1 C1 C1 C1	NO NC C1 C1	NO NC C1 C1

Precautions

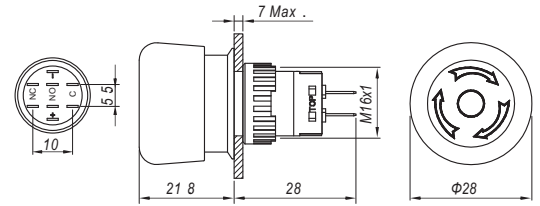
- The key button comes with 2 keys as standard.
- The knob and key button must be rotated in place when using.
- During the use of the knob and key button, the product is likely to rotate. It is recommended that the user refer to the figure on the right to make the groove.





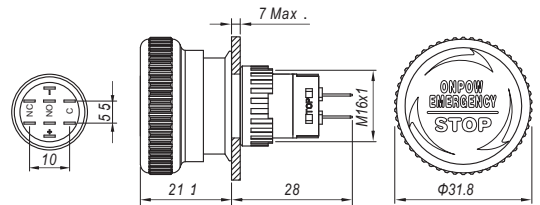
LAS1-AGQ16-□TSB

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP40(IP65 can be customized), IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / safety mask T34-16



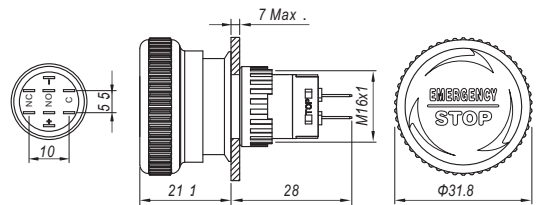
LAS1-AGQ16-□TSC

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP40(IP65 can be customized), IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / safety mask T34-16



LAS1-AGQ16-□TSD

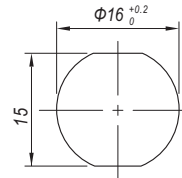
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP40(IP65 can be customized), IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / safety mask T34-16



Precautions

- When tightening the fixing nut on the installation panel, do not use the red head to fix it, otherwise the head structure of the product will be damaged.
- During the use of the push-lock and release button, the product is likely to rotate. It is recommended that the user refer to the figure on the right to make the groove.
- If necessary, the user can choose whether to reinforce the head of the product, please consult the sales staff for details.

Slot size



Solder socket S04



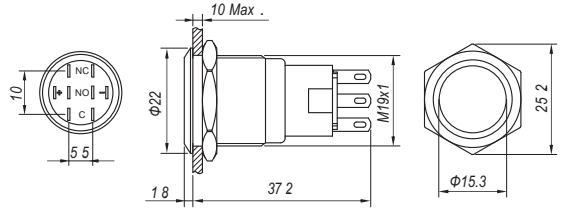
Circuit board socket S05



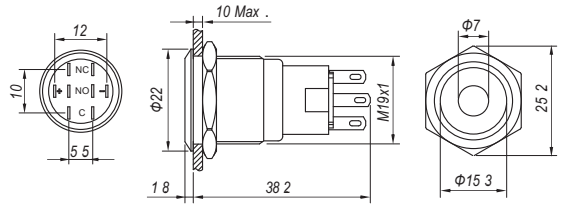
Panel plug M01



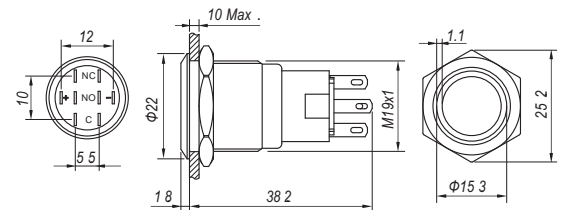
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Housing Material ○ S: Stainless steel / A: Aluminium alloy (Black)
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-19F / Solder socket S04 / PCB socket S05 / safety mask T21-19



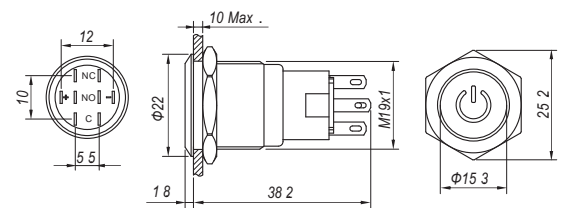
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material ○ S: Stainless steel / A: Aluminium alloy (Black)
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-19F / Solder socket S04 / PCB socket S05 / safety mask T21-19



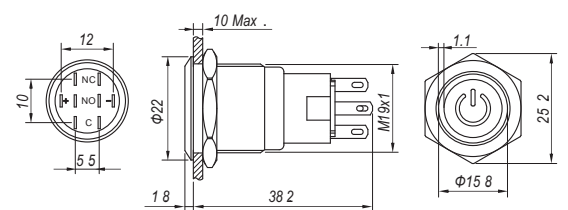
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
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Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-19F / Solder socket S04 / PCB socket S05 / safety mask T21-19



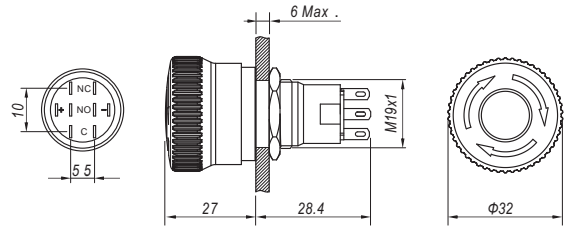
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-19F / Solder socket S04 / PCB socket S05 / safety mask T21-19





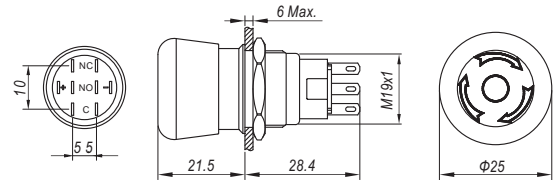
LAS1-AGQ-□TS

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05



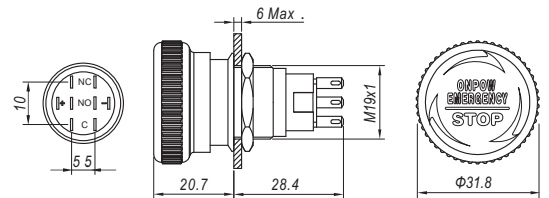
LAS1-AGQ-□TSB

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / safety mask T34-19



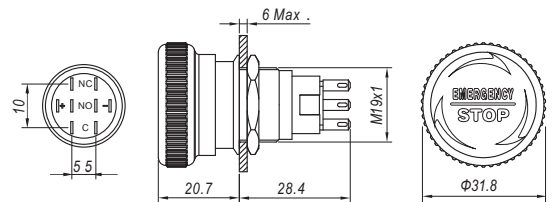
LAS1-AGQ-□TSC

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05



LAS1-AGQ-□TSD

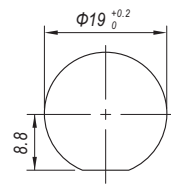
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05



Precautions

- When tightening the fixing nut on the installation panel, do not use the red head to fix it, otherwise the head structure of the product will be damaged.
- During the use of the push-lock and release button, the product is likely to rotate. It is recommended that the user refer to the figure on the right to make the groove.
- If necessary, the user can choose whether to reinforce the head of the product, please consult the sales staff for details.

Slot size



Solder socket S04



Circuit board socket S05



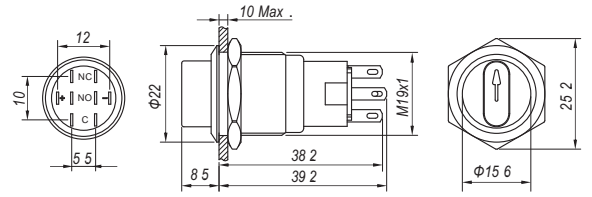
Safety mask T34-19



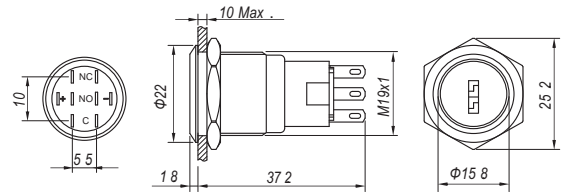
Panel plug M01



Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position
 Color **R G Y B W**
 Voltage 6V/12V/24V/110V/220V
 Housing Material ◎ Stainless steel
 Protection class IP65,IK09
 Applicable accessories Solder socket S04 / PCB socket S05



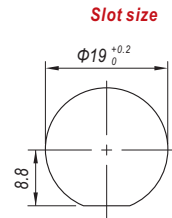
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position
 Housing Material ◎ Stainless steel
 Protection class IP65,IK09
 Applicable accessories Solder socket S04 / PCB socket S05



Knob, key button working position contact status	Action position	90° 2 position		45° 3 position	
		1NO1NC	2NO2NC	2NO2NC	

Precautions

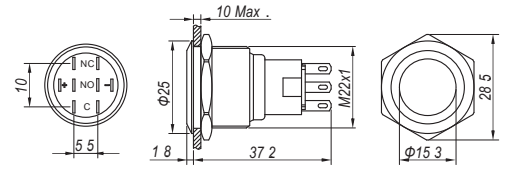
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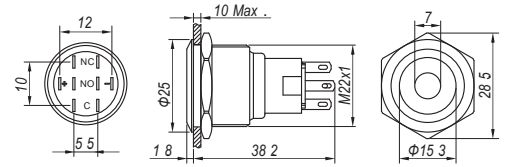
LAS1-AGQ22-□■/S

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-22F / Solder socket S04 / PCB socket S05 / safety mask T21-22



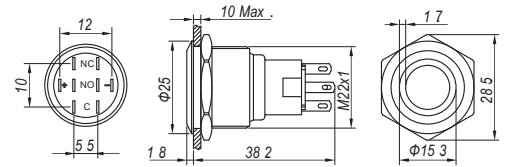
LAS1-AGQ22-□■D/▲/S

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-22F / Solder socket S04 / PCB socket S05 / safety mask T21-22



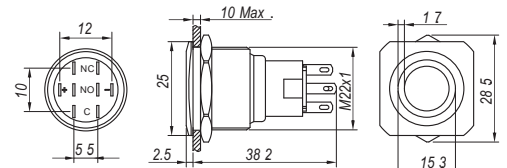
LAS1-AGQ22-□■E/▲/S

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-22F / Solder socket S04 / PCB socket S05 / safety mask T21-22



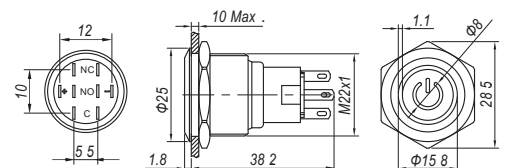
LAS1-AGQ22S-□■E/▲/S

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Solder socket S04 / PCB socket S05



LAS1-AGQ22-□■E/▲/S

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color R G Y B W
 Voltage 6V/12V/24V/110V/220V
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Safety mask M12-22F / Solder socket S04 / PCB socket S05 / safety mask T21-22



Sealing cover M12-22F



Solder socket S04



Circuit board socket S05



Safety mask T21-22

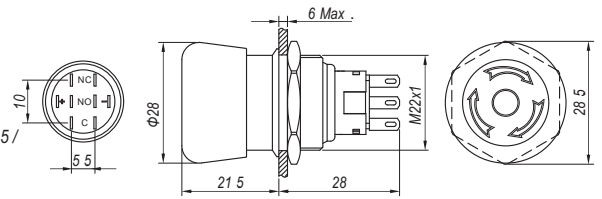


Panel plug M03



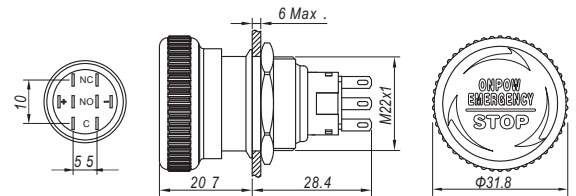
LAS1-AGQ22-□TSB

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / Safety mask T16



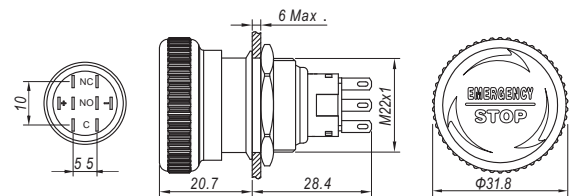
LAS1-AGQ22-□TSC

Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / Safety mask T16



LAS1-AGQ22-□TSD

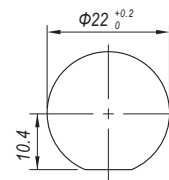
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / Safety mask T16



Precautions

- During the use of the push-lock and release button, the product is likely to rotate. It is recommended that the user refer to the figure on the right to make the groove.
- If necessary, the user can choose whether to reinforce the head of the product, please consult the sales staff for details.

Slot size



Solder socket S04



Circuit board socket S05



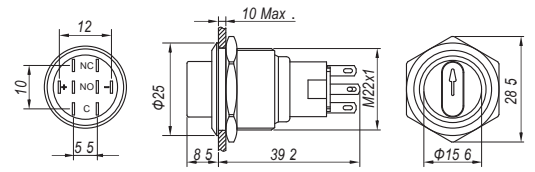
Safety mask T16



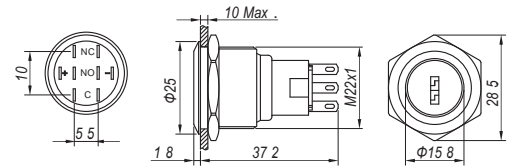
Panel plug M03



Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position
 Color **R G Y B W**
 Voltage 6V/12V/24V/110V/220V
 Housing Material ◎ Stainless steel
 Protection class IP65, IK09
 Applicable accessories Solder socket S04 / PCB socket S05



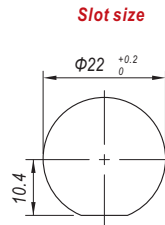
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position
 Housing Material ◎ Stainless steel
 Protection class IP40(IP65 can be customized), IK09
 Applicable accessories Solder socket S04 / PCB socket S05



Knob, key button working position contact status	Switch type Action position	90° 2 position		45° 3 position	
		1NO1NC	2NO2NC	2NO2NC	

Precautions

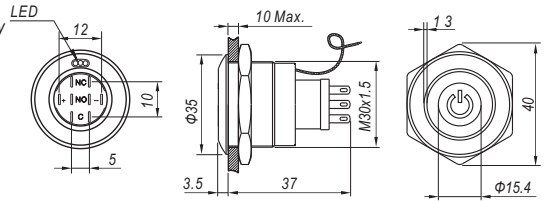
- The key button comes with 2 keys as standard.
- The knob and key button must be rotated in place when using.
- During the use of the knob and key button, the product is likely to rotate. It is recommended that the user refer to the figure on the right to make the groove.



Φ30mm Product drawing Specifications Overall dimensions



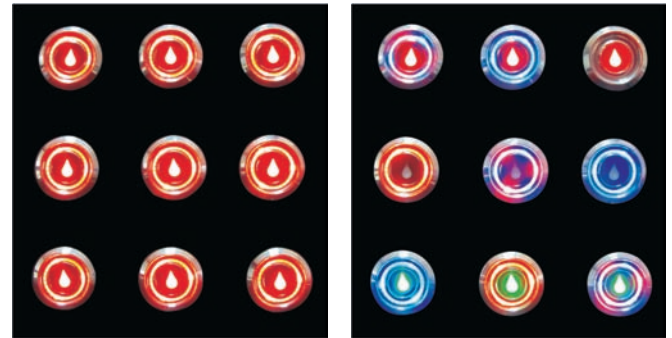
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color **R** **G** **Y** **B** **W**
 : Ring color , : Symbol color
 Voltage 6V/12V/24V
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized),IK09
 Applicable accessories Solder socket S04 / PCB socket S05



Description of GQ30 illuminated button luminous device

- Two color lights can be customized for the middle pattern part; You can also customize various luminous words and patterns.
- There are six light sources in the annular lamp section, which generally support up to two colors, pattern and annularFully independent with lamp, dual color with lamp can be realized with pattern with lamp, and between three states without lampTwo monochrome lamps can be realized by switching the annular band lamp, the dual color lamp is on at the same time, and the four lamps are not equippedSwitching between two states. Combination indicates multiple signal states, except for the switching of dual color strip lightsIn addition to two DC power supplies, switching of other states can be realized through one power supply.
- Built in protective resistor, no external connection is required.

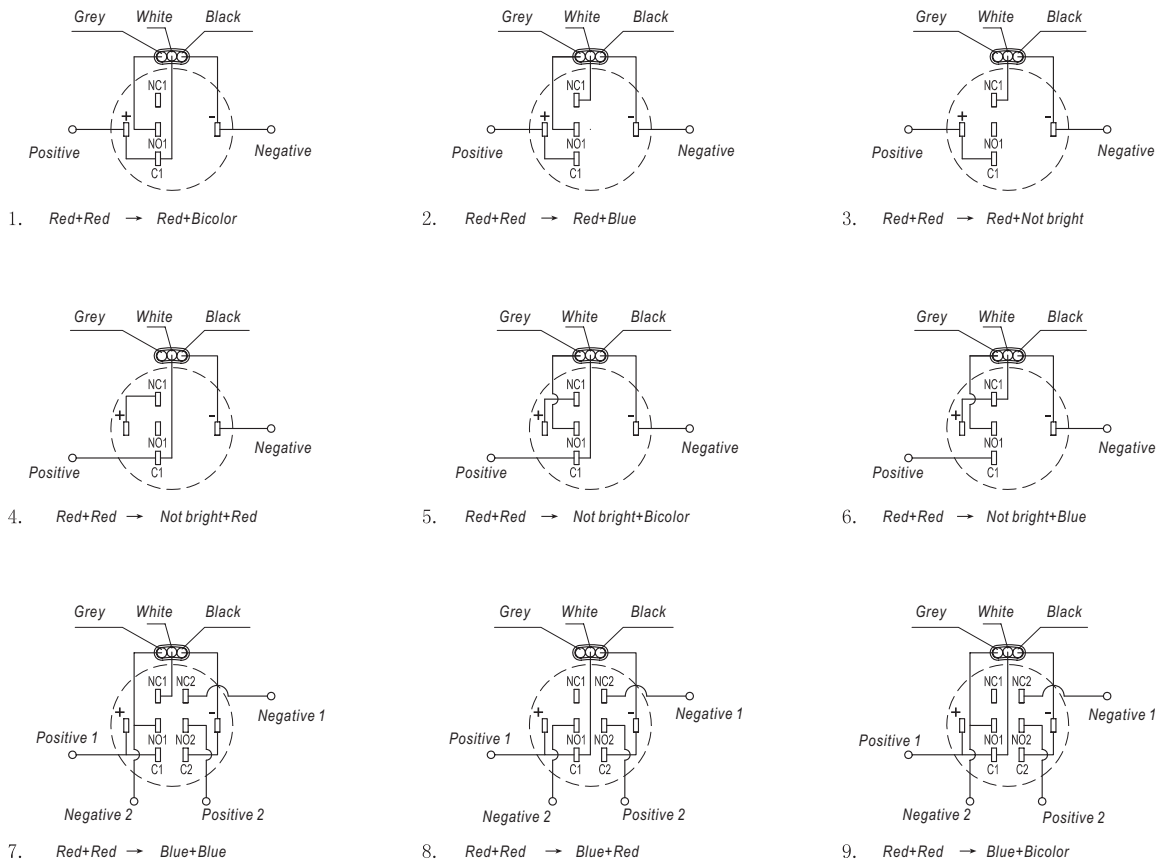
Display of nine commonly used luminous effects



The wiring method is as follows



Common wiring methods in the display of luminous effects (the sequence is shown in the left figure from left to right, from top to bottom):



Note : 7 8 9 Two DC power supplies shall be provided for the switching of bicolor lights in three states and patterns.

Φ 30mm Product drawing

Specifications

Overall dimensions



Contact Structure □ 11: 1NO1NC / 22: 2NO2NC

Operating position

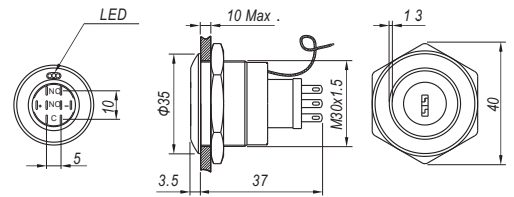
Color

Voltage 6V/12V/24V

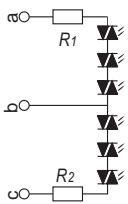
Housing Material ○ Stainless steel

Protection class IP40 (IP65 can be customized), IK09

Applicable accessories Solder socket S04 / PCB socket S05



Description of built-in luminous device



- Built in protective resistor, no external connection is required.
- Various color light emitting chips can be built in.
- It can achieve the indication form of multiple colors interlaced and lit at the same time, which is beautiful and unique.
- Multiple signal indications can be achieved through the direct or indirect control of the opening and closing states of various contacts of the key switch.



Knob, key button working position contact status	Switch type Action position	90° 2 position		45° 3 position	
		1NO1NC	2NO2NC	2NO2NC	



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