

LAS1-AGQ Series

- ☆Installation aperture Φ16mm, Φ19mm, Φ22mm;
- ☆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 Ui			250V			
Thermal Current Ith			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℃~+55℃ (Non freezing) Keep the switch air circulating well
Operating Humidity	45~85% RH(Non condensing)
Contact Resistance	≤ 50mΩ
Insulation Resistance	≥ 100MΩ (500VDC)
Max. withstanding voltage	1500VAC, 50Hz, 1min
Vibration resistance	50Hz, The amplitude is about 1.2mm
Solder heat resistance	320℃ 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	≤ 24V about 15mA ≥ 110V about 2mA	DC: ± 10%	 The product has built-in protective resistance, and the lamp bead wiring has no distinction between positive and negative poles.

Switch structure description

Type	Diagram	Symbol
C		

Pin Description

Legend	Directions
	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.

LAS1-AGQ series model description

LAS1-AGQ☆★-□■◇/●/△/▲/◎

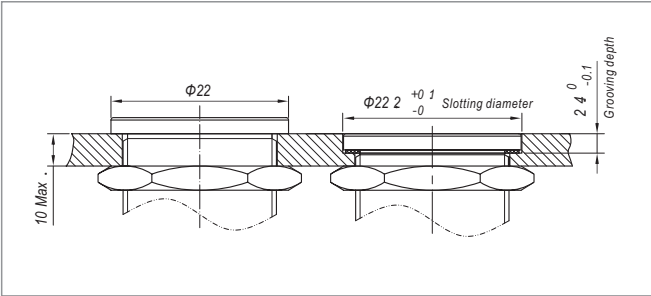
Symbol	Symbol name	Specify
☆	Mounting Aperture	16:Φ16mm / 22:Φ22mm / 30:Φ30mm / No digital means Φ19mm
★	Head shape	H: High round / No letter means flat round
□	Contact Structure	11: 1NO1NC / 22: 2NO2NC / No digital means indicator
■	Operation type	Z: Latching / X: Selector button / Y: Key button / TS: 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



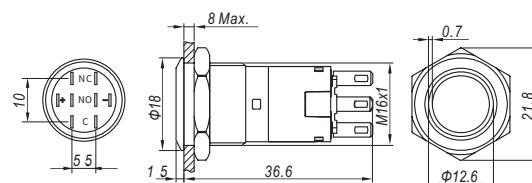
LAS1-AGQ ultra-flat anti-destructive metal button installation method





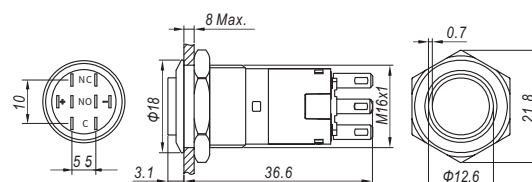
LAS1-AGQ16-□■/○

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



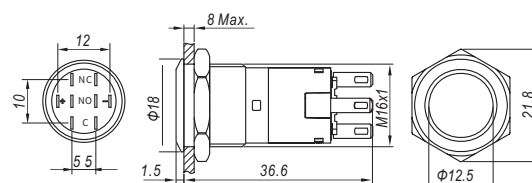
LAS1-AGQ16H-□■/○

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



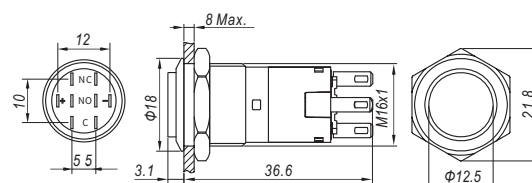
LAS1-AGQ16-□■E/△/▲/○

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



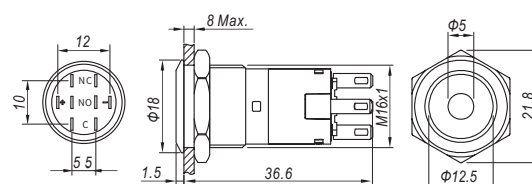
LAS1-AGQ16H-□■E/△/▲/○

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



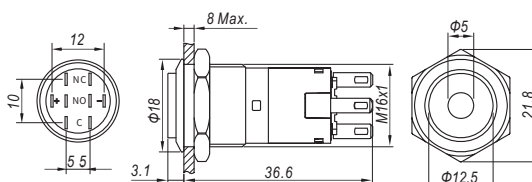
LAS1-AGQ16-□■D/△/▲/○

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



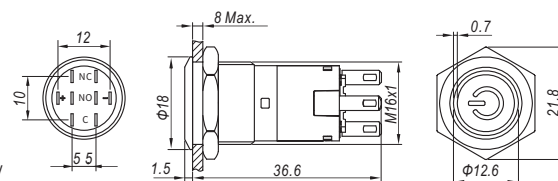
Circuit board socket
S05



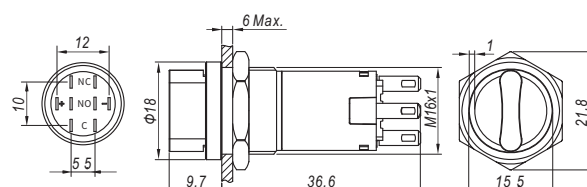
Panel plug
M01



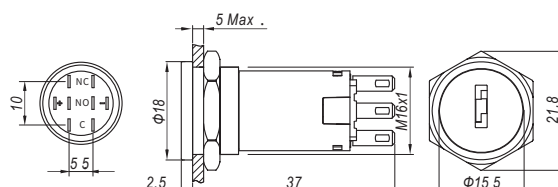
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color △ R G Y B W
 Voltage ▲ 6V/12V/24V/110V/220V
 Housing Material Stainless steel
 Protection class IP40(IP65 can be customized), IK09
 Applicable accessories Safety mask M12-16F / Solder socket S04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



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



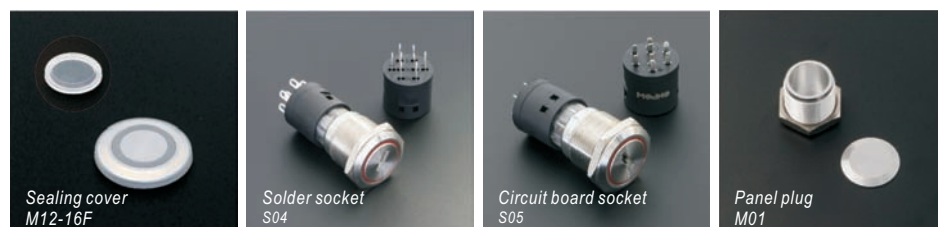
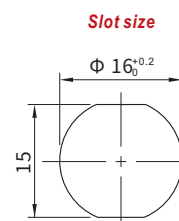
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operating position ◆ ● L R L C R
 Housing Material Stainless steel
 Protection class IP40, IK02
 Applicable accessories Solder socket S04 / PCB socket S05



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

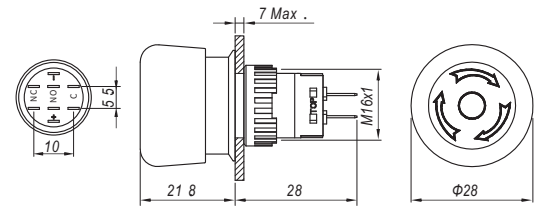
Precautions

- 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.

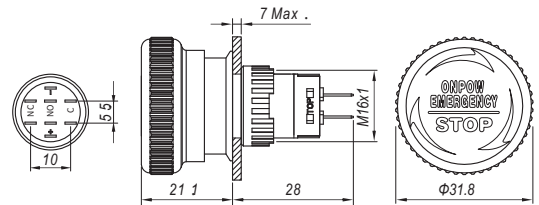




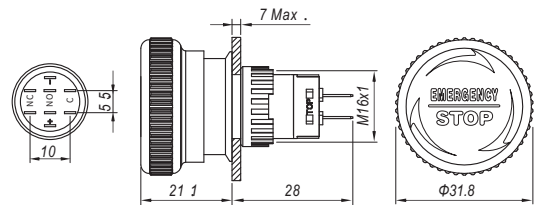
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP40(IP65 can be customized), IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / safety mask T34-16



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



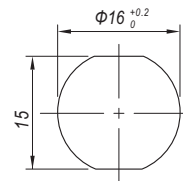
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP40(IP65 can be customized), IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / safety mask T34-16



Precautions

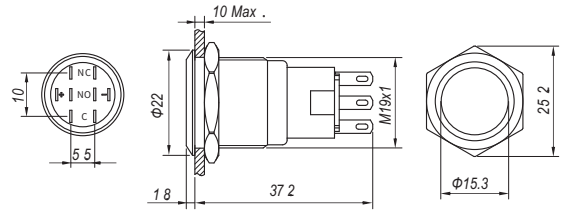
- When tightening the fixing nut on the installation panel, do not use the red head to fix it, otherwise the head structure of the product will be damaged.
- During the use of the push-lock and release button, the product is likely to rotate. It is recommended that the user refer to the figure on the 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

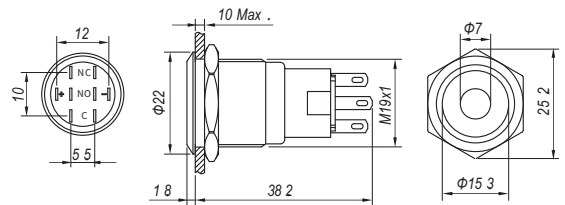




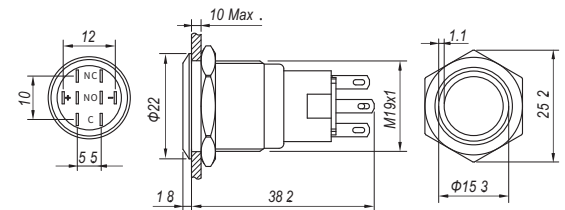
Contact Structure	□	11: 1NO1NC / 22: 2NO2NC
Operation type	■	Z: Latching / No letter means momentary
Housing Material	◎	S: Stainless steel / A: Aluminium alloy (Black)
Protection class		IP65(IP67 can be customized), IK09
Applicable accessories		Safety mask M12-19F / Solder socket S04 / PCB socket S05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



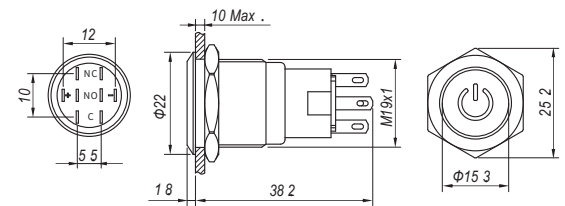
Contact Structure ☐	11: 1NO1NC / 22: 2NO2NC
Operation type ☒	Z: Latching / No letter means momentary
Color ☐	☒ R ☒ G ☒ Y ☒ B ☐ W
Voltage ☒	6V/12V/24V/110V/220V
Housing Material ☐	S: Stainless steel / A: Aluminium alloy (Black)
Protection class	IP65(IP67 can be customized), IK09
Applicable accessories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



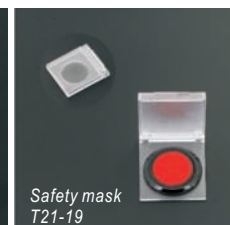
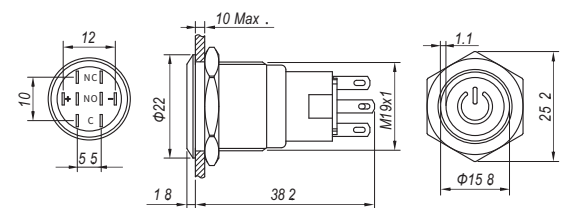
Contact Structure ☐	11: 1NO1NC / 22: 2NO2NC
Operation type ☒	Z: Latching / No letter means momentary
Color ☐	☒ R ☒ G ☒ Y ☒ B ☒ W
Voltage ☒	6V/12V/24V/110V/220V
Housing Material ☒	S: Stainless steel / A: Aluminium alloy (Black)
Protection class	IP65 (IP67 can be customized), IK09
Applicable accessories	Safety socket 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



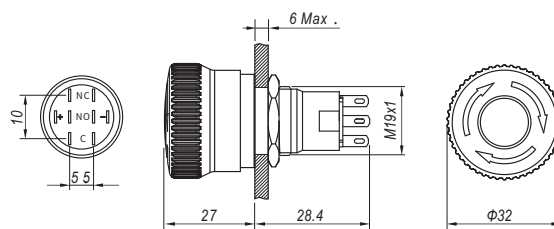
Contact Structure □	11: 1NO1NC / 22: 2NO2NC
Operation type ■	Z: Latching / No letter means momentary
Color △	R G Y B W
Voltage ▲	6V/12V/24V/110V/220V
Housing Material	Stainless steel
Protection class	IP65(IP67 can be customized),IK09
Applicable accessories	Safety mask M12-19F / Solder socket S04 / PCB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





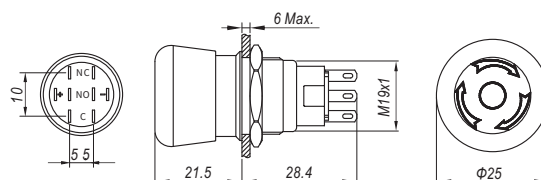
LAS1-AGQ-□TS

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



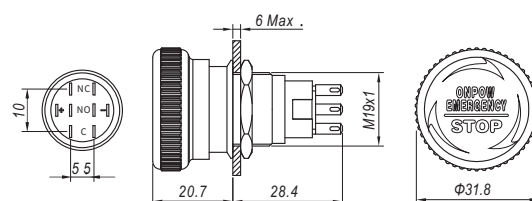
LAS1-AGQ-□TSB

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



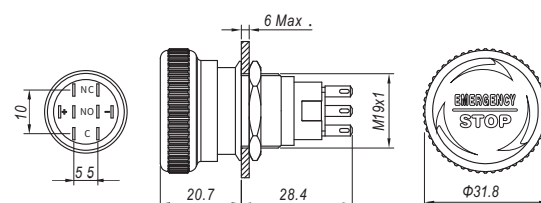
LAS1-AGQ-□TSC

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

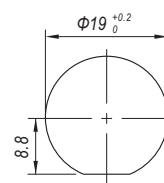
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
Housing Material Aluminum alloy
Protection class IP65,IK02
Applicable accessories Solder socket S04 / PCB socket S05



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.

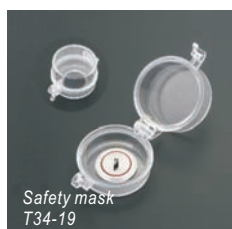
Slot size



Solder socket
S04



Circuit board socket
S05



Safety mask
T34-19



Panel plug
M01



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

Operating position ◆●

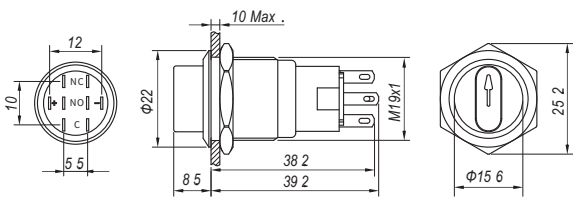
Color △ R G Y B W

Voltage ▲ 6V/12V/24V/110V/220V

Housing Material ◎ Stainless steel

Protection class IP65,IK09

Applicable accessories Solder socket S04 / PCB socket S05



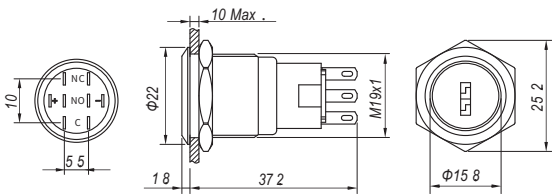
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC

Operating position ◆●

Housing Material ◎ Stainless steel

Protection class IP65,IK09

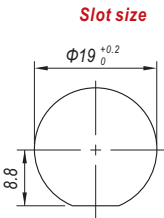
Applicable accessories Solder socket S04 / PCB socket S05



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

Precautions

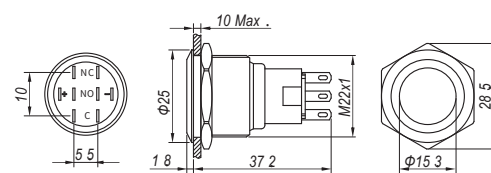
- The key button comes with 2 keys as standard.
- The knob and key button must be rotated in place when using.
- During the use of the knob and key button, the product is likely to rotate. It is recommended that the user refer to the figure on the right to make the groove.





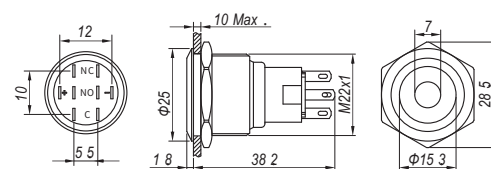
LAS1-AGQ22-□■/S

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



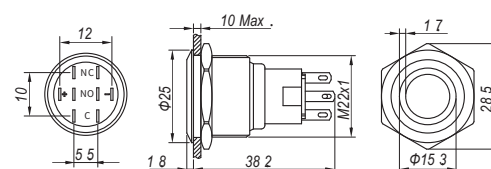
LAS1-AGQ22-□■D/△/▲/S

Contact Structure ☐	11: 1N01NC / 22: 2N02NC
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



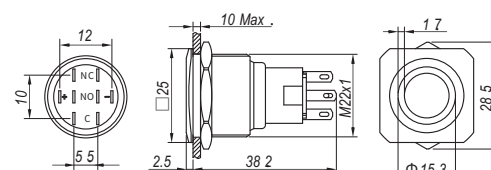
LAS1-AGQ22-□□E/△/▲/S

Contact Structure ☐	11: 1N01NC / 22: 2N02NC
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



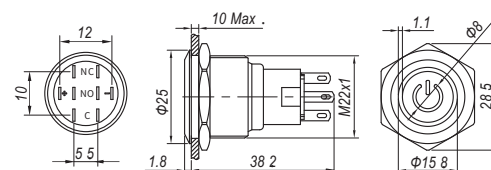
LAS1-AGQ22S-□■E/△/▲/S

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-□■ET/△/▲/S

Contact Structure ☐	11: 1N01NC / 22: 2N02NC
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



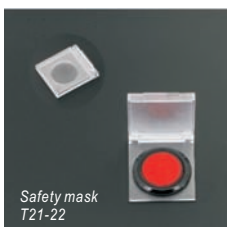
Sealing cover
M12-22E



Solder socket
S04



Circuit board socket
S05

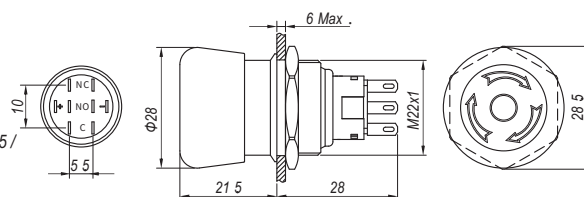


Safety mask
T21-22

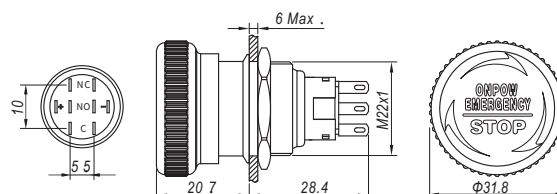
Panel plug
M03



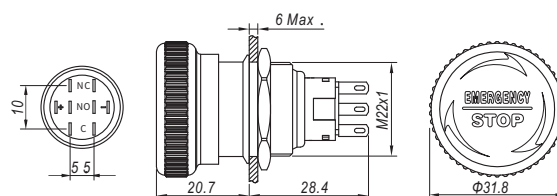
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / Safety mask T16



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



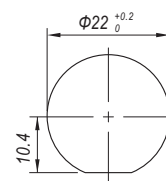
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Housing Material Aluminum alloy
 Protection class IP65,IK02
 Applicable accessories Solder socket S04 / PCB socket S05 / Safety mask T16



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





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

Operating position◆●

L

R

21

31

L

C

R

Color △

R

G

Y

B

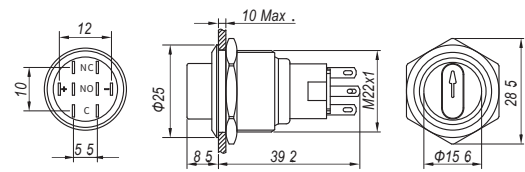
W

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◆●

L

R

21

31

L

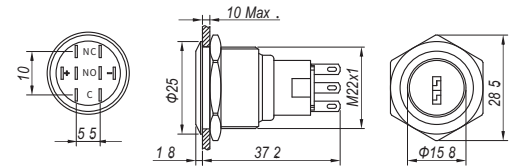
C

R

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.

Slot size



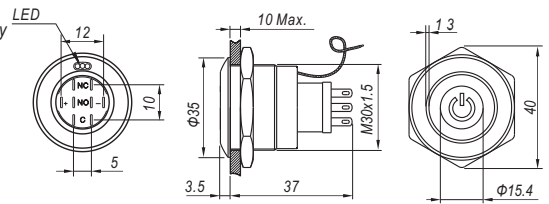
Φ30mm Product drawing

Specifications

Overall dimensions



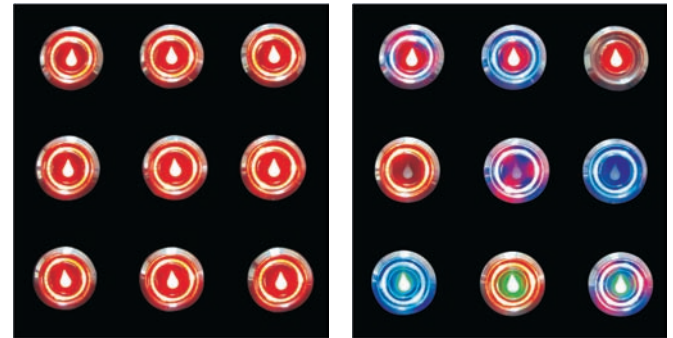
Contact Structure □ 11: 1NO1NC / 22: 2NO2NC
 Operation type ■ Z: Latching / No letter means momentary
 Color △ R G Y B W
 Voltage ▲ 6V/12V/24V
 Housing Material S: Stainless steel
 Protection class IP65(IP67 can be customized), IK09
 Applicable accessories Solder socket S04 / PCB socket S05



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



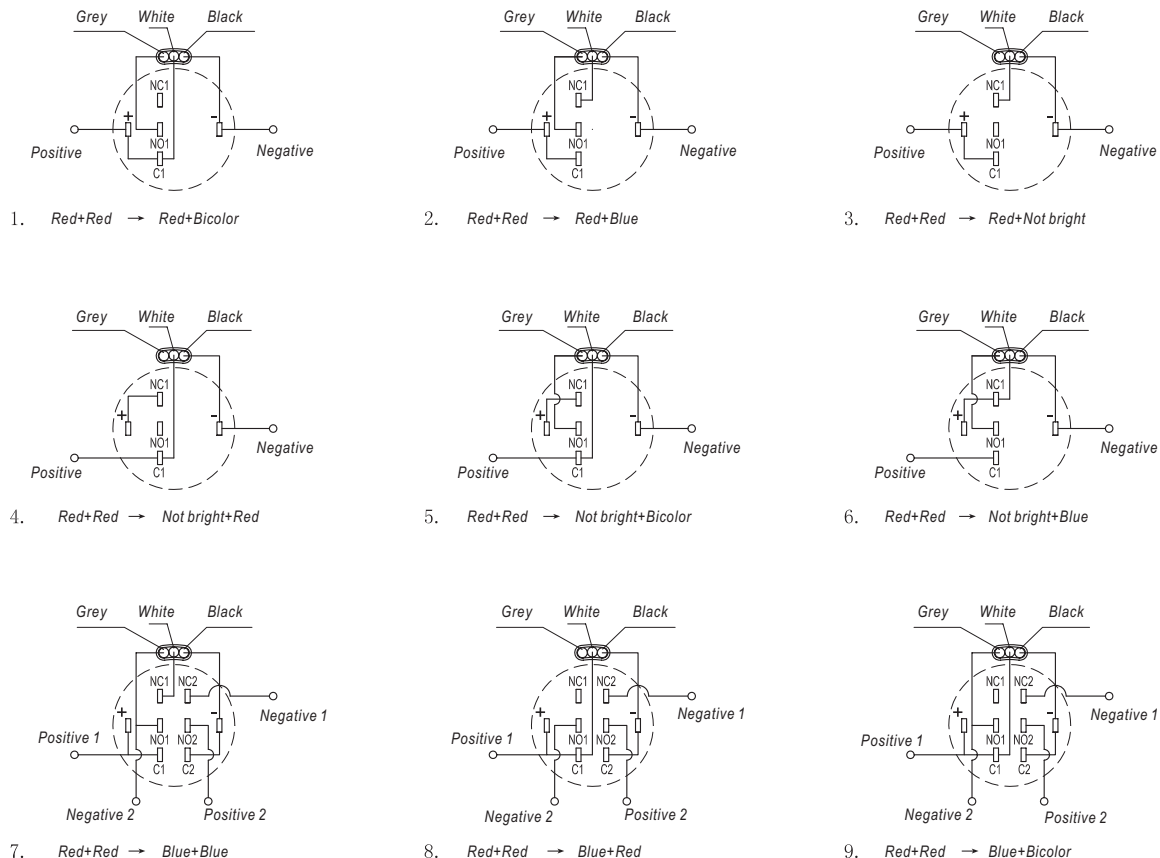
Effect before switching

Effect after switching

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.

⌀ 30mm Product drawing

Specifications

Overall dimensions



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

Operating position ◆●

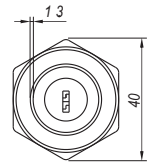
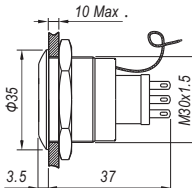
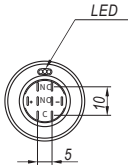
Color △ R G Y B W

Voltage ▲ 6V/12V/24V

Housing Material ○ Stainless steel

Protection class IP40(IP65 can be customized),IK09

Applicable accessories Solder socket S04 / PCB socket S05



LED

10 Max.

1.3

40

3.5

37

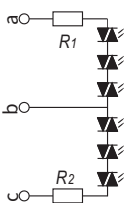
Φ35

10

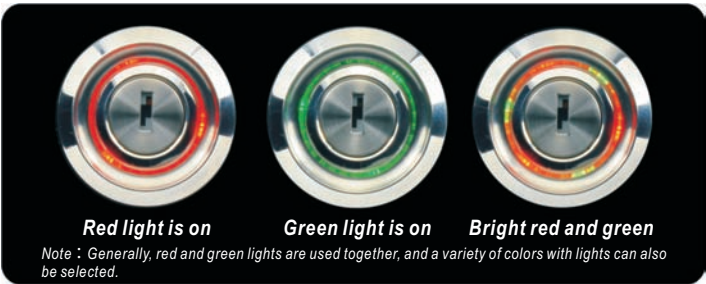
5

M30x1.5

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	
					
					

