

## LAS1 Series A Type Pushbutton Switches

### Characteristic

#### Specs

Having three head shape: round ( $\Phi 18\text{mm}$ ), square ( $18 \times 18\text{mm}$ ) and rectangular ( $18 \times 24\text{mm}$ ), containing pilot lamps, pushbuttons, illuminated push buttons, selector switches, key-lock switches, buzzer and emergency switches. The normal diameter of the installation hole is  $\Phi 16\text{mm}$ , and some type can be installed in  $\Phi 22\text{mm}$  hole easily with the diameter changing circle.

#### Functions

The product has stable property, small contact resistance, strong insulation resistance, anti-vibration and so on. It meets to standards of IEC60947-5-1, GB14048.5 etc.

#### Structure

The switch have the advantage of fast-break and self-cleaning, and each of them contains 1NO and 1NC terminal. Every pushbutton also can possess from one to two switch units.

#### Protective Degree

Its protective degree is IP40, IP65, some of type can reach IP67 with the seal cover.

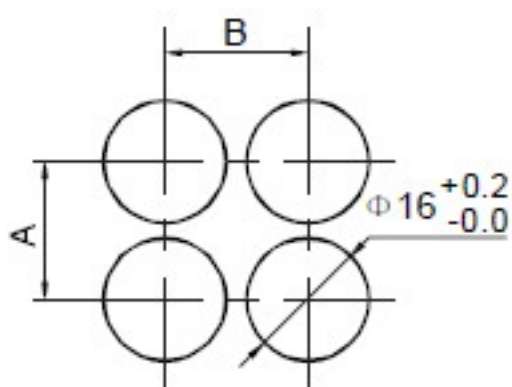
#### Lamp Ratings

Lamp Type	AC LED Lamp (Standard)			Neon Lamp		
	AC/DC6V	AC/DC12V	AC/DC24V	AC110V	AC220V	
Rated Voltage	AC/DC110V		AC/DC220V			
Cover Color:	R	G	Y	O	B	W
Life	About 40,000 hours			About 20,000 hours		

Note: the lamp contains a current-limiting resistor inside and doesn't need external connection.

DC LED lamp, dual-color LED lamp and other voltages can be customized.

#### Installation Dimensions



Category	A	B
Round	$\geq 18\text{mm}$	$\geq 18\text{mm}$
Square	$\geq 18\text{mm}$	$\geq 18\text{mm}$
Rectangular	$\geq 18\text{mm}$	$\geq 24\text{mm}$
Mushroom	$\geq 24\text{mm}$	$\geq 24\text{mm}$
Big square	$\geq 24\text{mm}$	$\geq 24\text{mm}$
Big rectangular	$\geq 18\text{mm}$	$\geq 24\text{mm}$

#### Implication of Type

LAS1-A	★	-	□	■	/	◇	◆	/	△	/	▲	/	◎
Code of series	The front shape: Y round F square J rectangular M mushroom DF big square DJ big rectangular	Contact Structure: 11 1NO1NC 22 2NO2NC	Code name of derivative products: D pilot lamp Z alternate type X selector type Y key-lock type TS emergency B buzzer type No letter means momentary	◇: expresses selector and key-lock series: 2 two position 3 three position ◆: expresses key-lock retention position	color:: R red G green Y yellow O orange B blue W white N black	Lamp Voltage (Please check the lamp rating)	Protective Degree: P IP65 FP IP67 No letter means IP40						

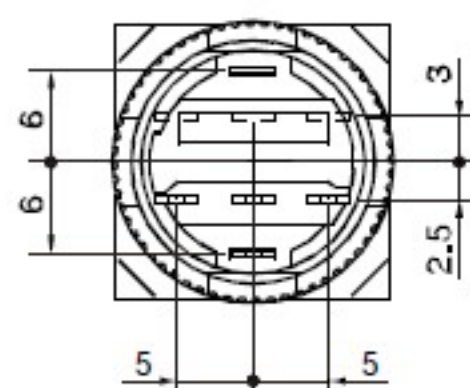
#### Switch Ratings

Thermal Current I <sub>th</sub>	5A		
Rated Voltage	24V	125V(110V)	250V(220V)
Direct Current	1A	0.2A	0.1A
Alternating Current	P.F=1	5A	3A
	P.F=0.7	3A	2A

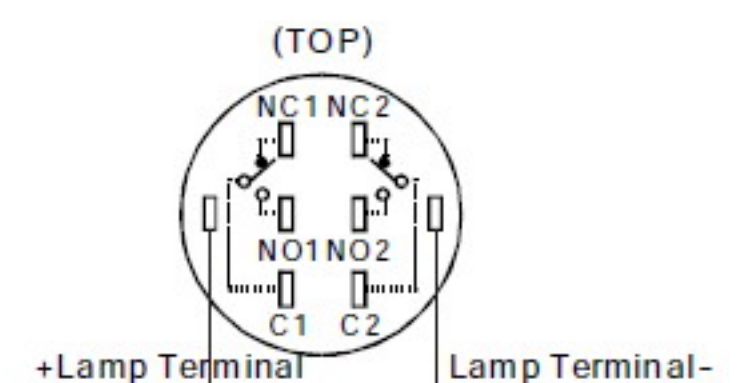
#### Specifications

Operating Temperature	-25°C ~ +55°C (no freezing)		
Operating Humidity	45 ~ 85%RH (no condensation)		
Contact Material	- silver - silver alloy - gold-clad silver, cladding thickness is 3 μm		
Contact Resistance	$\leq 50\text{M}\Omega$		
Insulation Resistance	$\geq 100\text{M}\Omega$		
Dielectric strength	Between contact and lamp terminals:	2000V, AC 50Hz, 1 min	
	Between terminal of the same pole:	1000V, AC 50Hz, 1 min	
	Between terminal of different pole:	2000V, AC 50Hz, 1 min	
Vibration Resistance	50Hz, Amplitude 1.2mm p-p		
Shock Resistance	$\geq 10\text{g}$		
Life	Mechanical	Momentary Type	1,000,000 times
		Alternate and Selector Type	500,000 times
		Key-lock and Emergency Type	200,000 times
	Electrical	$\geq 50,000$ times	
Terminal	Diameter of welded wire: 2 × 0.8mm Area of copper wire: 0.75mm <sup>2</sup> max Connecting link: 2.8 × 0.5mm		
Solder Heat Resistance	230°C (no more than 3 second)		
Operating Travel	(Pushbuttons) about 3mm		

#### Bottom View






#### Terminal Arrangement



# LAS1 Series A Type Pushbutton Switches

## LAS1-A Pilot lamp

### Product Outline

Model Number	LAS1-AY-D/ $\Delta$ / $\blacktriangle$ / $\circ$	LAS1-AF-D/ $\Delta$ / $\blacktriangle$ / $\circ$	LAS1-AJ-D/ $\Delta$ / $\blacktriangle$ / $\circ$
Shape			
Remarks	<b>R G Y O B W</b>		



## LAS1-A Pushbuttons, Illuminated Pushbuttons

### Product Outline

Note: SPDT single - pole double - throw, DPDT double - pole double Throw.

Shape	Contact	Operating Type	Type Number	Remarks
Round (can be illuminated) 	SPDT	Momentary	LAS1-AY-11/ $\Delta$ / $\blacktriangle$ / $\circ$	<b>R G Y O B W N</b> ◎ The black cover can't be used with the illuminated push buttons ◎ Protective Degree: IP40, IP65, IP67; IP67 should be installed with seal covers.
		Alternate	LAS1-AY-11Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
	DPDT	Momentary	LAS1-AY-22/ $\Delta$ / $\blacktriangle$ / $\circ$	
		Alternate	LAS1-AY-22Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
Square (can be illuminated) 	SPDT	Momentary	LAS1-AF-11/ $\Delta$ / $\blacktriangle$ / $\circ$	
		Alternate	LAS1-AF-11Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
	DPDT	Momentary	LAS1-AF-22/ $\Delta$ / $\blacktriangle$ / $\circ$	
		Alternate	LAS1-AF-22Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
Rectangular (can be illuminated) 	SPDT	Momentary	LAS1-AJ-11/ $\Delta$ / $\blacktriangle$ / $\circ$	
		Alternate	LAS1-AJ-11Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
	DPDT	Momentary	LAS1-AJ-22/ $\Delta$ / $\blacktriangle$ / $\circ$	
		Alternate	LAS1-AJ-22Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
Mushroom (can be illuminated) 	SPDT	Momentary	LAS1-AM-11/ $\Delta$ / $\blacktriangle$ / $\circ$	<b>R G Y</b> ◎ Protective Degree: IP40, IP65.
		Alternate	LAS1-AM-11Z/ $\Delta$ / $\blacktriangle$ / $\circ$	
	DPDT	Momentary	LAS1-AM-22/ $\Delta$ / $\blacktriangle$ / $\circ$	
		Alternate	LAS1-AM-22Z/ $\Delta$ / $\blacktriangle$ / $\circ$	

Note: SPDT signal-pole double-throw, DPDT double-pole double-throw.

Shape	Contact	Operating Type	Type Number	Remarks
Big Square (can be illuminated) 	SPDT	Momentary	LAS1-ADF-11/△/▲/○	R G Y ◎ Protective Degree: IP40, IP65.
		Alternate	LAS1-ADF-11Z/△/▲/○	
	DPDT	Momentary	LAS1-ADF-22/△/▲/○	
		Alternate	LAS1-ADF-22Z/△/▲/○	
Big Rectangular (can be illuminated) 	SPDT	Momentary	LAS1-ADJ-11/△/▲/○	
		Alternate	LAS1-ADJ-11Z/△/▲/○	
	DPDT	Momentary	LAS1-ADJ-22/△/▲/○	
		Alternate	LAS1-ADJ-22Z/△/▲/○	

## Shape and Dimensions

