

## LAS1 Series B Type(AH16) Pushbutton Switches

### Product Overview

#### 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 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.

#### Performance

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 four switch units.

#### Protective Degree

The standard degree is IP40, some of type can reach IP67 with the seal cover. And the pin insert type can be made in IP65.

### 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:					
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.

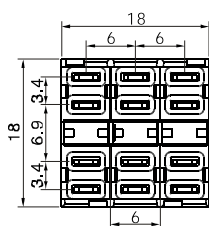
### Switch Ratings

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

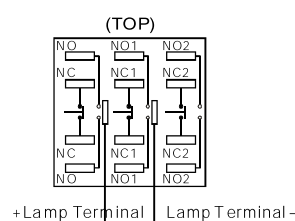
### Specifications

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		≤ 50 mΩ
Insulation Resistance		≥ 100 MΩ
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 1.2 mm p-p
Shock Resistance		≥ 10g
Life	Mechanical	
	Momentary Type	1,000,000 times
	Alternate and Selector Type	500,000 times
	Key-lock and Emergency Type	200,000 times
	Electrical	≥ 50,000 times
Terminal		Diameter of welded wire: 2 × 0.8 mm Area of copper wire: 0.75 mm <sup>2</sup> max Connecting link: 2.8 × 0.5 mm
Solder Heat Resistance		230°C (no more than 3 second)
Operating Travel		(Pushbuttons) about 3 mm

### Bottom View

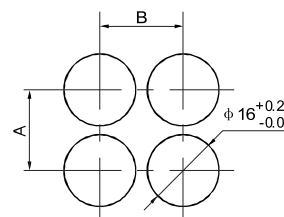


### Terminal Arrangement



### Installation Dimensions

Category	A	B
Round	≥ 18mm	≥ 18mm
Square	≥ 18mm	≥ 18mm
Rectangular	≥ 18mm	≥ 24mm
Mushroom	≥ 32mm	≥ 32mm




### Implication of Type

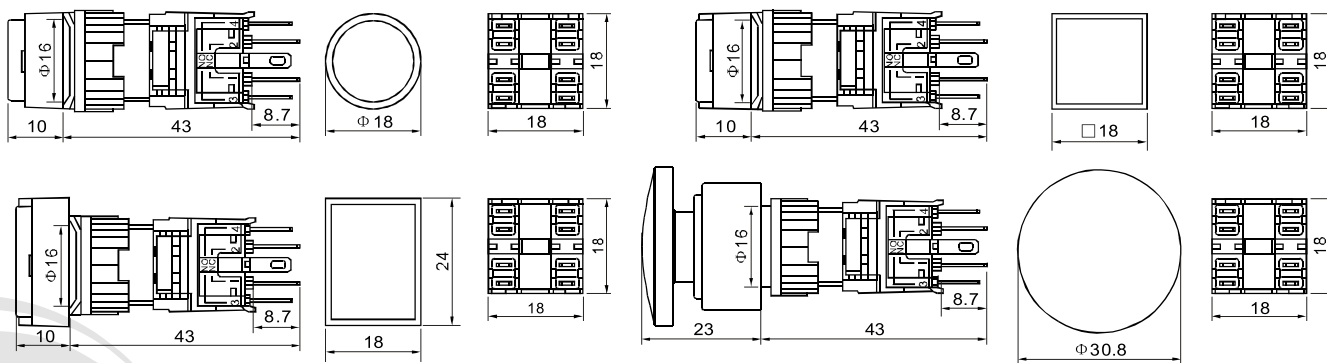
LAS1-B								★	—	□	■	/	◇◆	/	△	/	▲	/	◎
Code of series	The front shape:: Y round F square J rectangular	Contact Structure: 11 1NO1NC 22 2NO2NC 33 3NO3NC	Code name of derivative products: D pilot lamp Z alternate type X selector type Y key-lock type M mushroom type TS emergency type No letter means momentary	◇ The position of selector and key - lock switch: 2 two position 3 three position ◆ the operating type of selector and key - lock switch: 1 Maintain 2 Half return 3 Self return	Color:: R red G green Y yellow O orange B blue W white N black	Voltage of the illuminated part is included in the lamp ratings form.	Protective Degree: FP IP67 No letter means IP40												

## LAS1-B Pilot Lamp, Pushbuttons & Illuminated Pushbuttons

### Product Cutline










Shape	Contact	Operation Type	Type Number	Remarks
Round(can be illuminated) 	--	Pilot Lamp	LAS1 - BY - D/△/▲/○	<div> <div>R</div> <div>G</div> <div>Y</div> <div>O</div> <div>B</div> <div>W</div> </div> Protective Degree: IP40, IP67 ; IP67 should be installed with the seal cover.
	1NO1NC	Momentary	LAS1 - BY - 11/△/▲/○	
		Alternate	LAS1 - BY - 11Z/△/▲/○	
	2NO2NC	Momentary	LAS1 - BY - 22/△/▲/○	
		Alternate	LAS1 - BY - 22Z/△/▲/○	
	3NO3NC	Momentary	LAS1 - BY - 33/△/▲/○	
		Alternate	LAS1 - BY - 33Z/△/▲/○	
Square(can be illuminated) 	--	Pilot Lamp	LAS1 - BF - D/△/▲/○	
	1NO1NC	Momentary	LAS1 - BF - 11/△/▲/○	
		Alternate	LAS1 - BF - 11Z/△/▲/○	
	2NO2NC	Momentary	LAS1 - BF - 22/△/▲/○	
		Alternate	LAS1 - BF - 22Z/△/▲/○	
	3NO3NC	Momentary	LAS1 - BF - 33/△/▲/○	
		Alternate	LAS1 - BF - 33Z/△/▲/○	
Rectangular(can be illuminated) 	--	Pilot Lamp	LAS1 - BJ - D/△/▲/○	
	1NO1NC	Momentary	LAS1 - BJ - 11/△/▲/○	
		Alternate	LAS1 - BJ - 11Z/△/▲/○	
	2NO2NC	Momentary	LAS1 - BJ - 22/△/▲/○	
		Alternate	LAS1 - BJ - 22Z/△/▲/○	
	3NO3NC	Momentary	LAS1 - BJ - 33/△/▲/○	
		Alternate	LAS1 - BJ - 33Z/△/▲/○	
Mushroom 	1NO1NC	Momentary	LAS1 - BM - 11/△	<div> <div>R</div> <div>G</div> </div>
		Alternate	LAS1 - BM - 11Z/△	
	2NO2NC	Momentary	LAS1 - BM - 22/△	
		Alternate	LAS1 - BM - 22Z/△	
	3NO3NC	Momentary	LAS1 - BM - 33/△	
		Alternate	LAS1 - BM - 33Z/△	

### Shape and Dimensions



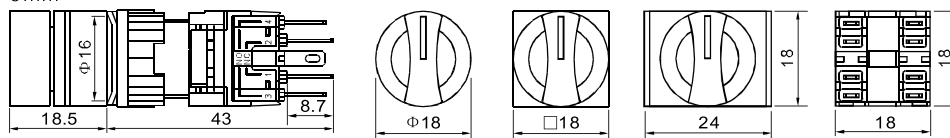
## LAS1-B Selector Switches

### Product Cutline

Shape	Type	Type Number	Remarks
	 90° 2 position maintain	LAS1 - BY - □X/21	<ul style="list-style-type: none"> <li>⦿ All the covers are black.</li> <li>⦿ Can't be used with lamp.</li> <li>⦿ Can control three circuit outputs.(you can ask us for the circuit diagram if you need)</li> </ul>
	 90° 2 position return	LAS1 - BY - □X/23	
	 90° 3 position maintain	LAS1 - BY - □X/31	
	 90° 3 position half return	LAS1 - BY - □X/32	
	 90° 3 position self return	LAS1 - BY - □X/33	
	 90° 2 position maintain	LAS1 - BF - □X/21	
	 90° 2 position return	LAS1 - BF - □X/23	
	 90° 3 position maintain	LAS1 - BF - □X/31	
	 90° 3 position half return	LAS1 - BF - □X/32	
	 90° 3 position self return	LAS1 - BF - □X/33	
	 90° 2 position maintain	LAS1 - BJ - □X/21	
	 90° 2 position return	LAS1 - BJ - □X/23	
	 90° 3 position maintain	LAS1 - BJ - □X/31	
	 90° 3 position half return	LAS1 - BJ - □X/32	
	 90° 3 position self return	LAS1 - BJ - □X/33	













### Shape and Dimensions







- ⦿ Panel Thickness 0.5~5mm



## LAS1-B Key-lock Switches

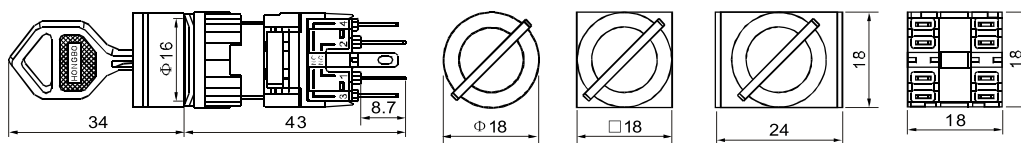
### Product Cutline

Shape	Type	Type Number	Remarks
	 90° 2 position maintain	LAS1 - BY - □Y/21	<ul style="list-style-type: none"> <li>⦿ Two keys are supplied, which can be out in both positions.</li> <li>⦿ All the keys are same.</li> </ul>
	 90° 2 position return	LAS1 - BY - □Y/23	
	 90° 3 position maintain	LAS1 - BY - □Y/31	
	 90° 3 position half return	LAS1 - BY - □Y/32	
	 90° 3 position self return	LAS1 - BY - □Y/33	
	 90° 2 position maintain	LAS1 - BF - □Y/21	
	 90° 2 position return	LAS1 - BF - □Y/23	
	 90° 3 position maintain	LAS1 - BF - □Y/31	
	 90° 3 position half return	LAS1 - BF - □Y/32	
	 90° 3 position self return	LAS1 - BF - □Y/33	

Shape	Type	Type Number	Remarks
	 90° 2 position maintain	LAS1 - BJ - □Y/21	<ul style="list-style-type: none"> <li>Two keys are supplied, which can be out in both positions.</li> <li>All the keys are same.</li> </ul>
	 90° 2 position return	LAS1 - BJ - □Y/23	
	 90° 3 position maintain	LAS1 - BJ - □Y/31	
	 90° 3 position half return	LAS1 - BJ - □Y/32	
	 90° 3 position self return	LAS1 - BJ - □Y/33	




### Shape and Dimensions

- Panel Thickness 0.5~5mm



## LAS1-B Emergency Pushbuttons

### Product Cutline

Shape	Contact	Type Number	Remarks
A Type(can be illuminated) 	Monopole	LAS1 - BY - 11TSA/Δ/▲	
	Dipole	LAS1 - BY - 22TSA/Δ/▲	
	Three - pole	LAS1 - BY - 33TSA/Δ/▲	
B type 	Monopole	LAS1 - BY - 11TSB/Δ	
	Dipole	LAS1 - BY - 22TSB/Δ	
	Three - pole	LAS1 - BY - 33TSB/Δ	

### Shape and Dimensions

- Panel Thickness 0.5~5mm

