

Pushbutton Switches

Illuminated Pushbutton Switches IP40/IP65/IP67

PB72 Series



Characteristics:

- The installation hole's diameter of the series pushbutton: $\Phi 16\text{mm}$.
- Every pushbutton can possess from one to four switch units.
- Use the gold-clad silver contact or silver contact.
- The front shape: Round ($\Phi 18\text{mm}$) Square ($18 \times 18\text{mm}$) Rectangular ($18 \times 24\text{mm}$)
- Many types are available: pilot lamp, pushbutton, illuminated pushbutton, selector switch, and keylock switch.
- IP Protective Degree: IP40, IP65, IP67

Specifications:

Operating Temperature	-25 °C to +55 °C (no freezing)
Operating Humidity	45 to 85%RH (no condensation)
Contact material	— silver — silver CdO — gold-clad silver
Contact pressure	$\approx 0.3\text{N}$ (30g)
Contact Resistance	$\leq 50\text{m}\Omega$
Insulation Resistance	$\geq 100\text{M}\Omega$
Rated insulation voltage	250V, AC/DC
Dielectric Strength	Between contact and lamp terminals 2000V, AC 50Hz, 1min
	Between terminals of the same pole 1000V, AC 50Hz, 1min
	Between terminals of different pole 2000V, AC 50Hz, 1min
Vibration Resistance	50Hz, Amplitude 1.2mm p-p
Shock Resistance	$\geq 10\text{g}$ in all three planes
Soldering Information	Less than 3s at 230 °C
Life	Mechanical 1,000,000 times
	Electrical $\geq 50,000$ times
Terminal	Diameter of welded wire: 2x 0.8mm max Area of copper wire: 0.75mm ² max
Operating force	200gf~500gf (according to the quantity of switch units)
Operating travel	$\approx 3\text{mm}$ (pushbutton)
IP Protective Degree	IP40, IP65, IP67

Switch Ratings :

Thermal Current (I_{th})	5A		
Rated Voltage	24V	125V (110V)	250V (220V)
Direct Current (DC)	2A	0.2A	0.1A
Alternating current (AC)	P.F=1	5 A	3A
	P.F=0.7	3A	2A

Lamp Ratings :

Lamp Type	AC LED Lamp (Standard)			Neon Lamp		
Rated V oltag e	AC/DC6V	AC/DC 12V	AC/DC 24V	AC110V	AC220V	
	AC/DC 110V		AC/DC 220V			
Base Color	red, green, yellow, orange, blue, white			red, green		
Life	About 40000 hours			About 20000 hours		

Note: The lamp contains current-limiting resistor inside and doesn't need external connection.
DC LED lamp, dual-color LED lamp and other voltages can be customized.

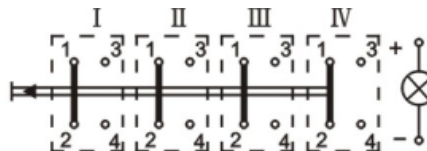
Circuit Diagram :

Every pushbutton can possess four switch units at most.

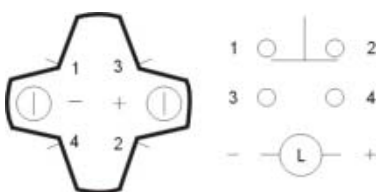
Specifications:

Self-clear away dirt, quick-break switch system and can be used as DPDT switch.

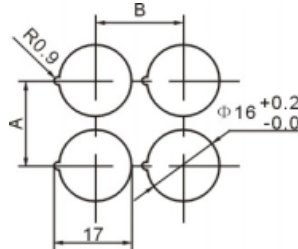
Every switch unit also possesses a pair of NO contacts and a pair of NC contacts. Here is the circuit:



Bottom Preview



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	$\geq 18\text{mm}$	$\geq 24\text{mm}$

How to order:

PB72

1 FRONT SHAPE:

Y Round
F Square
J Rectangular
M Mushroom
DF Big Square
DJ Big Rectangular

2 CONTACT STRUCTURE:

11 1NO 1NC
22 2NO 2NC
33 3NO 3NC
44 4NO 4NC

3 DERIVATIVE CODE:

blank Momentary
D Pilot Lamp
Z Alternate Type
Y Key Lock Type
X Selector Type

4 POSITION

(for selector type & keylock type only):

2 Two Positions
3 Three Positions

5 COLOR:

C Red
F Green
E Yellow
D Orange
G Blue
B White
A Black

6 LAMP RATINGS (see table above):

free LED AC 12V (for example)
text The specific rating of the lamp with illuminated button is included in the illuminated unit ratings form.

7 TERMINATION:

blank Weld Type
JC Quick Connect Type

8 IP PROTECTIVE DEGREE:

blank IP40
IP65
IP67

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PB72 Series

PB72 Pilot lamp

Product Cutline

Model number	PB72Y_D_	PB72F_D_	PB72J_D_
Shape	ROUND 	SQUARE 	RECTANGULAR 
Remark	C Red F Green E Yellow D Orange G Blue B White A Black		

PB72 Pushbuttons, Illuminated Pushbuttons

Product Cutline

Shape	Contact Configuration	Operation Type	Type No.	Remarks
ROUND 	1NO 1NC	Momentary	PB72Y11_	C Red F Green E Yellow D Orange G Blue B White A Black • Can be used with lamp • The black cover can't be used with the illuminated pushbuttons. • IP40,IP65,IP67 is allowable
		Alternate	PB72Y11Z_	
	2NO 2NC	Momentary	PB72Y22_	
		Alternate	PB72Y22Z_	
	3NO 3NC	Momentary	PB72Y33_	
		Alternate	PB72Y33Z_	
	4NO 4NC	Momentary	PB72Y44_	
		Alternate	PB72Y44Z_	
SQUARE 	1NO 1NC	Momentary	PB72F11_	
		Alternate	PB72F11Z_	
	2NO 2NC	Momentary	PB72F22_	
		Alternate	PB72F22Z_	
	3NO 3NC	Momentary	PB72F33_	
		Alternate	PB72F33Z_	
	4NO 4NC	Momentary	PB72F44_	
		Alternate	PB72F44Z_	
RECTANGULAR 	1NO 1NC	Momentary	PB72J11_	C Red F Green E Yellow D Orange G Blue B White A Black • Can be used with lamp • The black cover can't be used with the illuminated pushbuttons. • IP40,IP65 is allowable
		Alternate	PB72J11Z_	
	2NO 2NC	Momentary	PB72J22_	
		Alternate	PB72J22Z_	
	3NO 3NC	Momentary	PB72J33_	
		Alternate	PB72J33Z_	
	4NO 4NC	Momentary	PB72J44_	
		Alternate	PB72J44Z_	
MUSHROOM 	1NO 1NC	Momentary	PB72M11_	
		Alternate	PB72M11Z_	
	2NO 2NC	Momentary	PB72M22_	
		Alternate	PB72M22Z_	
	3NO 3NC	Momentary	PB72M33_	
		Alternate	PB72M33Z_	
	4NO 4NC	Momentary	PB72M44_	
		Alternate	PB72M44Z_	

Pushbutton Switches

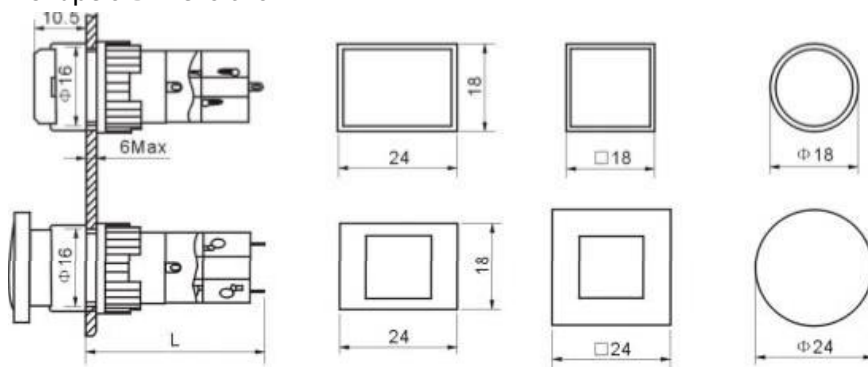
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PB72 Series

BIG SQUARE 	1NO 1NC	Momentary	PB72DF11_
		Alternate	PB72DF11Z_
	2NO 2NC	Momentary	PB72DF22_
		Alternate	PB72DF22Z_
	3NO 3NC	Momentary	PB72DF33_
		Alternate	PB72DF33Z_
	4NO 4NC	Momentary	PB72DF44_
		Alternate	PB72DF44Z_
BIG RECTANGULAR 	1NO 1NC	Momentary	PB72DJ11_
		Alternate	PB72DJ11Z_
	2NO 2NC	Momentary	PB72DJ22_
		Alternate	PB72DJ22Z_
	3NO 3NC	Momentary	PB72DJ33_
		Alternate	PB72DJ33Z_
	4NO 4NC	Momentary	PB72DJ44_
		Alternate	PB72DJ44Z_

- C** Red
F Green
E Yellow
D Orange
G Blue
B White
A Black
- Can be used with lamp
 - The black cover can't be used with the illuminated pushbuttons.
 - IP40,IP65 is allowable

Shape & Dimensions



Category	L
Indicator	20mm
1NO, 1NC	29mm
2NO, 2NC	36.5mm
3NO, 3NC	44mm
4NO, 4NC	51.5mm

PB72 Selector Switches:

Product Cutline

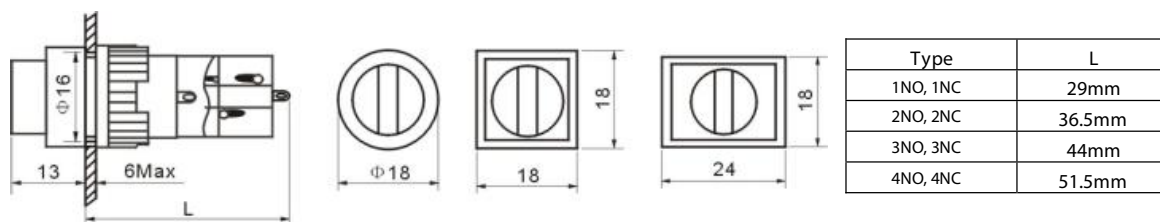
Shape	Contact Configuration	Type No.	Remarks
ROUND 	1NO 1NC	PB72Y11X2_	C Red F Green A Black • Can be used with lamp • IP40 is allowable • The black cover can't be used with the illuminated  90° 2 Position Maintained.
	2NO 2NC	PB72Y22X2	
	3NO 3NC	PB72Y33X2	
	4NO 4NC	PB72Y44X2	
SQUARE 	1NO 1NC	PB72F11X2_	
	2NO 2NC	PB72F22X2	
	3NO 3NC	PB72F33X2	
	4NO 4NC	PB72F44X2	
RECTANGULAR 	1NO 1NC	PB72J11X2_	
	2NO 2NC	PB72J22X2	
	3NO 3NC	PB72J33X2	
	4NO 4NC	PB72J44X2	

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PB72 Series

Shape & Dimensions

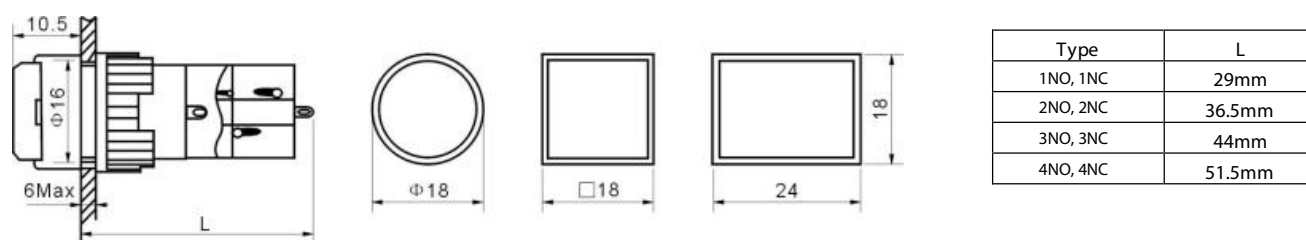


PB72 Key Lock Switches

Product Outline

Shape	Contact Configuration	Type No.	Remarks
ROUND 	1NO 1NC	PB72Y11Y2_	 90° 2 Position Maintained. • Two keys are supplied, the keys can be out in both position. • IP40 is allowable
	2NO 2NC	PB72Y22Y2	
	3NO 3NC	PB72Y33Y2	
	4NO 4NC	PB72Y44Y2	
SQUARE 	1NO 1NC	PB72F11Y2_	
	2NO 2NC	PB72F22Y2	
	3NO 3NC	PB72F33Y2	
	4NO 4NC	PB72F44Y2	
RECT ANGULAR 	1NO 1NC	PB72J11Y2_	
	2NO 2NC	PB72J22Y2	
	3NO 3NC	PB72J33Y2	
	4NO 4NC	PB72J44Y2	

Shape & Dimensions



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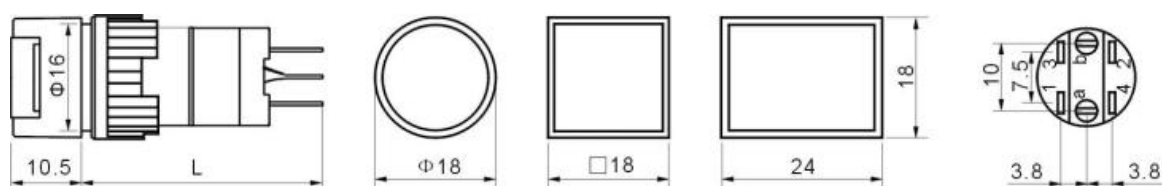
PB72 Series

PB72 Pilot lamp, Pushbuttons and Illuminated Pushbuttons (JC: Quick Connect Type)

Product Outline

Shape	Contact Configuration	Operation T ype	Type No.	Remarks
ROUND 	--	Pilot Lamp	PB72Y_D_JC_	CRed FGreen EYellow DOrange GBlue BWhite ABlack • Can be used with lamp • The black cover can't be used with the illuminated pushbuttons. • IP40,IP65,IP67 is allowable
	1NO 1NC	Momentary	PB72Y11_JC	
		Alternate	PB72Y11Z_JC	
	2NO 2NC	Momentary	PB72Y22_JC	
		Alternate	PB72Y22Z_JC	
	SQUARE 	--	Pilot Lamp	
1NO 1NC		Momentary	PB72F11_JC	
		Alternate	PB72F11Z_JC	
2NO 2NC		Momentary	PB72F22_JC	
		Alternate	PB72F22Z_JC	
RECTANGULAR 		--	Pilot Lamp	
	1NO 1NC	Momentary	PB72J11_JC	
		Alternate	PB72J11Z_JC	
	2NO 2NC	Momentary	OB72J22_JC	
		Alternate	PB72J22Z_JC	

Shape & Dimensions



Type	L
1NO, 1NC	36mm
2NO, 2NC	44mm