

Panel Actuators and Indicators

Type PB

Flush Round Push Buttons



- Ø 22mm (Ø0.87") Standard and bezel style
- Ø 30mm (Ø1.18") Flush style
- Self-hold or spring return
- Button colour choice
- Illuminated version made by LED
- cULus and CE
- IEC/EN 60947-5-1, UL 508, IEC/EN 60073, IEC/EN 60529

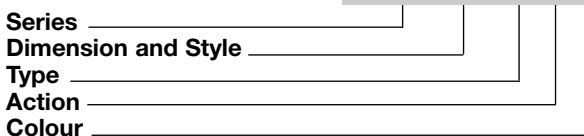
Product description

Pushbutton switches are mechanical switches that are pushed down to open or to close the electric contacts. They are mostly used to start/stop electric circuits or

devices like lamps, motors, etc. They should be ordered in parts (operator + holder + contact block) and installed in an enclosure.

Ordering key

PB 22S IF 0 R



Dimensions and styles

- 22S = Ø22mm (Ø0.87") Standard style
- 22B = Ø22mm (Ø0.87") Bezel style
- 30F = Ø30mm (Ø1.18") Flush style

Actions

- 0 = Spring return
- 1 = Maintained

General data

Peripheral of actuator	AL
Actuator	Pa
Mechanical life	≥3 x 10 ⁶ cycles
Operating temperature	-25 to +70°C (-13 to +158°F)
Storage temperature	-30 to +80°C (-22 to +176°F)
Degree of protection	IP 65

Approvals



Types

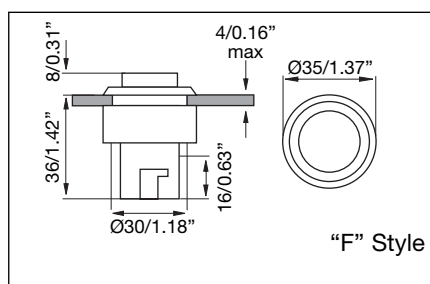
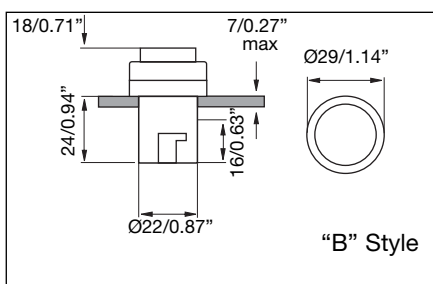
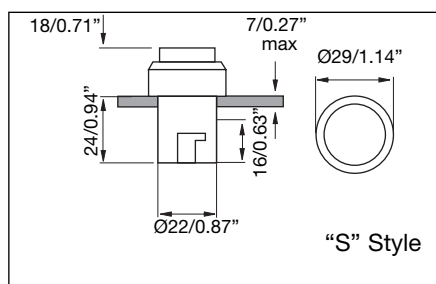
- F = Flush round
- IF = Illuminated¹ flush round

¹ = Light function is obtained by the lamp element pg.19

Colours

- R = Red
- W = Clear/White
- K = Black
- B = Blue
- Y = Yellow
- G = Green

Dimensions - Push Buttons mm/inches



Holders



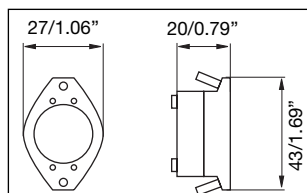
Holder type "M"

Code

PB MB M

Material

Zn + PBT



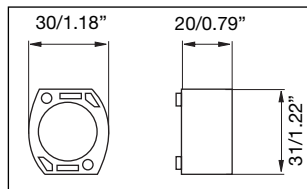
Holder type "P"

Code

PB MB P

Material

PBT



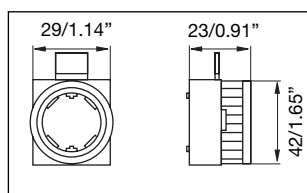
Holder type "N"

Code

PB MB N

Material

PC



Lamp Element



Ordering key

PALAMP R 220A

Type _____
 Colour _____
 Voltage _____

Approvals



Colours

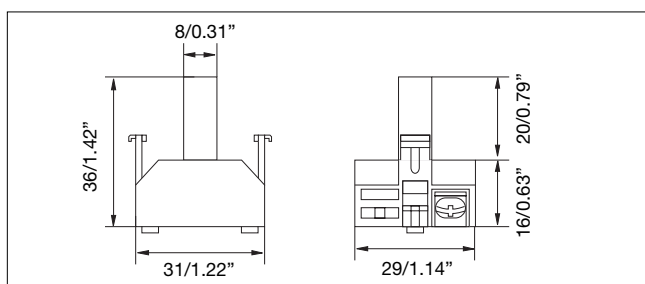
R = Red
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Voltage

06 = 6VAC/DC	110 = 110VAC/DC
12 = 12VAC/DC	220D = 220VDC
24 = 24VAC/DC	220A = 220VAC
48 = 48VAC/DC	380A = 380VAC

Dimensions mm/inches



Technical data

Rated imp. withstand voltage U_{imp}	2500VAC 50Hz 1min.
Rated insulation Voltage U_i	500VAC
Allowable voltage fluctuation	±20%
Continuous operating life	≥100.000h
Ultrahigh brightness	≥100cd/m ² (≥9.29ftc)
Applying frequency	50-60Hz
Current consumption (AC/DC)	≤18mA
Operating temperature	-25 to +70°C (-13 to +158°F)
Storage temperature	-30 to +80°C (-22 to +176°F)

Panel Actuators and Indicators

Type PA2

Contact Block



- High switching power
- Double switch
- Industrial applications
- 10A switching capacity
- Up to 500VAC
- Modular mounting (up to 3 elements)
- Screw terminals
- High reliability
- cULus and CE
- IEC/EN 60947-5-1, IEC/EN 60947-5-5, UL 508

Product description

Switching element equipped with two independent elements. Available in different switching configurations. Pole and throw configurations can be single pole single throw (SPST) or double pole single throw (DPST). Elements can be snapped to each other on the bottom, up to 3.

Ordering key

PA 2 110 / 1

Type _____
 Number of contacts _____
 Contact code _____
 Options (1 = Snap action _____
 2 = Slow action with forced opening ⊕ NC contact)

Approvals



Terminals

Screw terminals	
Max. section single-core wire	2 x 2.5mm ² (0.004sq.inch)
Max. section stranded wire	2 x 1.5mm ² (0.002sq.inch)
Copper conductor wire	14 AWG
Terminal tightening torque	1.2Nm (10.6in.lb.)

Contact code

Contact configuration	Contact code
2 NO contacts (DPST)	200
2 NC contacts (DPST)	020
1 NC contact (SPST)	010
1 NO contact (SPST)	100
1 NC + 1 NO contacts (DPST)	110

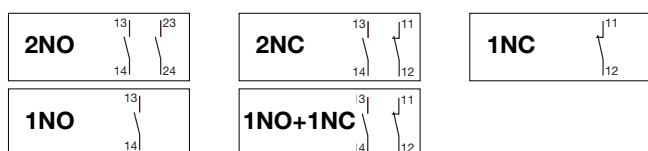
Technical data

Contact resistance	≤50mΩ
Travel	5.8 ± 0.2mm (2.28" ± 0.08")
Rated insulation Voltage U_i	660VAC/DC (acc. to IEC 60947-5-1) 600VAC/DC (acc. to UL508)
Rated imp. withstand voltage U_{imp}	2500VAC 50Hz 1min.
Minimum switching power	
Min Current	100mA
Min Voltage	24V
Switch housing	PC
Contact parts	Cu
Contact material	
Standard	Hard silver
Optional	Gold/silver
Optional for aggressive atmospheres	Silver/palladium
Operating temperature	-25 to +70°C (-13 to +158°F)
Storage temperature	-30 to +80°C (-22 to +176°F)

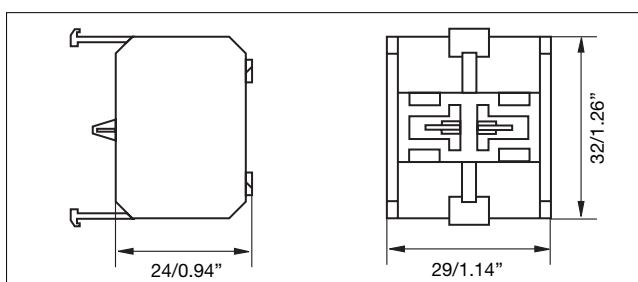
Contact characteristics

Contact Rating AC1	10A @ 250VAC		
Contact Rating	AC15	DC13	
(acc. to IEC 60947-5-1)			
@ 24V	10A	6A	
@ 110V	8A	1A	
@ 220V	6A	0.5A	
@ 380V	4A	-	
@ 500V	2.5A	-	
Thermal Contact Rating	10A (A600)	5A (B600)	
(acc. to UL 508)	2.5A (Q600/Q300)		
AC Contact Rating (acc. to UL 508)	A600	B600	
B600 (all snap codes)	@ 120V 6A	3A	
A600 (all slow codes)	@ 240V 3A	1.5A	
	@ 480V 1.5A	0.75A	
	@ 600V 1.2A	0.6A	
DC Contact Rating (acc. to UL 508)	Q600	Q300	
Q600 (all snap codes)	@ 125V 0.55A	0.55A	
Q600 (100, 200 slow codes)	@ 250V 0.27A	0.27A	
Q300 (010, 020, 110 slow codes)	@ 480V 0.10A	-	
	@ 600V 0.10A	-	

Wiring diagram

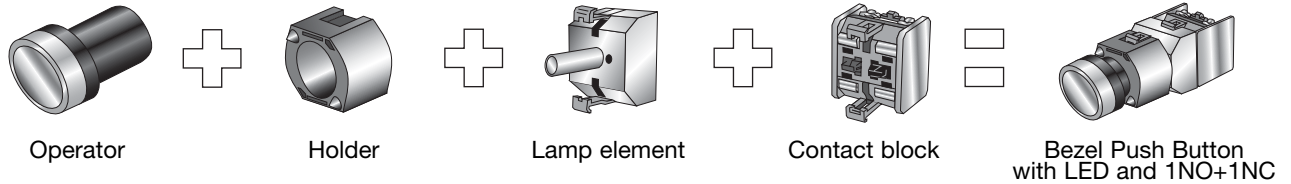


Dimensions mm/inches

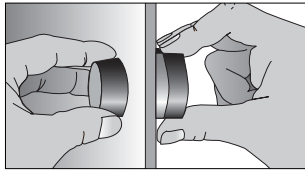


Assembling and Mounting

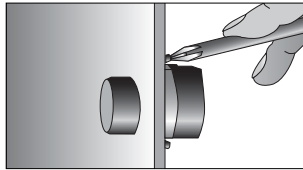
It come easy to get a complete product. Just to choose the operator, the holder, the lamp element if illuminated function is required and the contact block (up to 3).



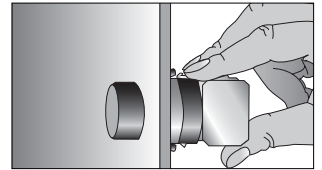
To install it, the only tool needed is a screwdriver. The same used to wiring the contact block can be used to fix the push-button.



The operator will be inserted into the panel.



The holder will be secured at the back by two screws or nut.



The contact block is snapped on.

Accessories for Panel Actuators



Sealing cover IP67

Always on the head of operators, waterproof and dust, IP67.

Silicon rubber

PA SEAL COV

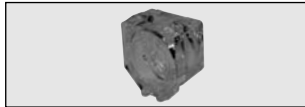


Shield

Always on the head of button, prevent strike and mistaking operation.

Stainless steel

PA PB SHIELD



Protection cover

Always on the head of button, prevent strike and mistaking operation. Lockable.

PC

PA PB COV



Terminal shield

Installed behind the wiring screws of the contact block to avoid electric shock.

PC

PA 2 SHIELD



Mounting ring Ø22mm (0.87")

Installed on plastic panel to strengthen mounting.

FE

PA MR 22



Mounting ring Ø25mm (0.98")

When the mounting hole is Ø25mm (0.98"), it should be add to the panel.

FE

PA MR 25



Front bezel set Ø30mm (1.18")

For Ø30mm (1.18") panel hole, to have a thinner effect.

AL

PA FBZL 30



Label frame

Hang it on the push button or pilot light, for symbol or text explanation.

PC

10mm/0.39"
18mm/0.71"

PA LBF 11
PA LBF 18



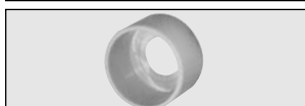
Warning plate

For emergency stop push buttons. Thickness 1.5mm/0.059"

ABS

Ø60mm/Ø2.36"
Ø90mm/Ø3.54"

PA WP 6
PA WP 9



Yellow protection ring

To protect button and to prevent strike or mistaking operation.

ABS
Rubber

Ø40mm/Ø1.57"
Ø60mm/Ø2.36"

PA YPR 4
PA YPR 6



Panel hole cap Ø22mm (0.87")

For blocking up prepared or useless holes on the panels.

ABS

PA PHC 22