# **Panel Actuators and Indicators** Type PB22 I/O Push Buttons





- Ø 22mm (Ø0.87") Standard style
- Compact design
- ON/OFF function
- I red and O green
- Yellow Light made by LED
- Spring return
- cULus and CE
- IEC/EN 60947-5-1, UL 508, IEC 73, IEC/EN 60529



## Product description

I/O push button 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/devices

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

### **Approvals**







### Types

**IO** = IO Push Button (ON-OFF type)

IOL = IO Push Button (ON-OFF type) illuminated1

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

### Ordering key PB 22S IOL 0 RG Series **Dimension and Style** Type Action Colour

### Dimensions and style

22S = Ø22mm (Ø0.87") Standard style

### Action

Symbol-

0 = Spring return

### Colours

RG= Red and Green

BW= Black background White symbol

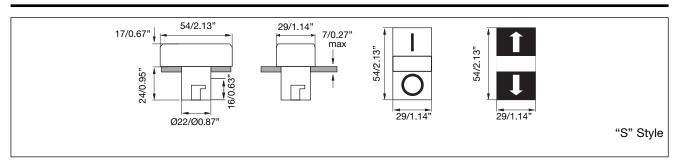
# **Symbol**

UP= Up and down arrows

### General data

Peripheral of actuator	AL
Actuator	Pa
Mechanical life	≥3 x 10° 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

## **Dimensions - Push Buttons mm/inches**





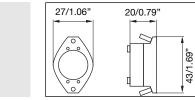
## **Holders**



### Holder type "M"

Code

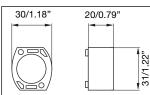
Material



### Holder type "P"

Code

Material





Holder type "N"

Code

Material



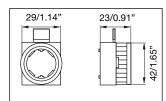
PB MB M

Zn + PBT

PB MB P

PBT

РС



# **Lamp Element**



# Ordering key

# PALAMP R 220A

			1	1 1
Type				
Туре —			•	
Colour –				l l
Voltage	-			

# **Approvals**







### **Colours**

R = Red

Y = Yellow

**W** = Clear/White **B** = Blue

G = Green

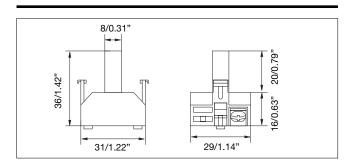
# Voltage

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

### **Technical data**

Rated imp. withstand voltage U <sub>imp</sub>	2500VAC 50Hz 1min.
Rated insulation Voltage U <sub>i</sub>	500VAC
Allowable voltage fluctuation	±20%
Continuous operating life	≥100.000h
Ultrahigh brightness	≥100cd/m² (≥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)

# **Dimensions** mm/inches



# **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  $\bigcirc$  NC contact)

# **Approvals**







# **Terminals**

### **Screw terminals**

Max. section sigle-core wire Max. section stranded wire Copper conductor wire Terminal tightening torque

2 x 2.5mm<sup>2</sup> (0.004sq.inch) 2 x 1.5mm<sup>2</sup> (0.002sq.inch) **14 AWG** 1.2Nm (10.6in.lb.)

# Technical data

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

# 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		

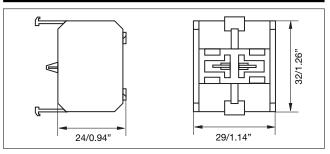
### **Contact characteristics**

Contact Rating AC1	10A @ 25	OVAC	
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 (A60	0) 5A (I	B600)
(acc. to UL 508)	2.5A (Q60	0/Q300)	ĺ
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
<b>Q600</b> (100, 200 slow codes)	@ 250V	0.27A	0.27A
Q300 (010, 020, 110 slow codes)	@ 480V	0.10A	-
,	@ 600V	0.10A	-

# Wiring diagram

2NO	13    23	2NC \( \bigc\) \( \big	1NC \( \int_{12}^{11} \)
1NO	13 \ 14	1NO+1NC \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	

### **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).



















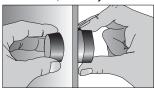
Operator

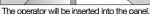
Lamp element

Contact block

Bezel Push Button with LED and 1NO+1NC

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





PA 2 SHIELD

**PA MR 22** 

The contact block is snapped on.

# **Accessories for Panel Actuators**











### Terminal shield

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

Mounting ring Ø22mm (0.87")

Installed on plastic panel to strengthen mounting.

Mounting ring Ø25mm (0.98")

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

Panel hole cap Ø22mm (0.87")

For blocking up prepared or useless holes on the panels.

PC

FΕ

FΕ

**ABS** 

**PA MR 25** 

PA PHC 22

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