

Panel Actuators and Indicators

Type PB

Short-handle Selector Switches

CARLO GAVAZZI



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

Product description

Selector switches are mechanical switches that can be turned right, center or left to open or to close the electric contacts. They are mostly used to start/stop devices or to switch between two/three electric circuits. They should be ordered in parts (operator + holder + contact block) and installed in an enclosure.

Approvals



Types

SRS = Short-handle selector switch
ISRS = Illuminated¹ short-handle selector switch

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

Colours

R = Red
W = Clear/White (only illuminated)
K = Black (only not illuminated)
B = Blue (only illuminated)
Y = Yellow
G = Green

Ordering key

PB 22S ISRS 32 R

Series _____
 Dimension and Style _____
 Type _____
 Action _____
 Colour _____

Dimensions and styles

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

Actions

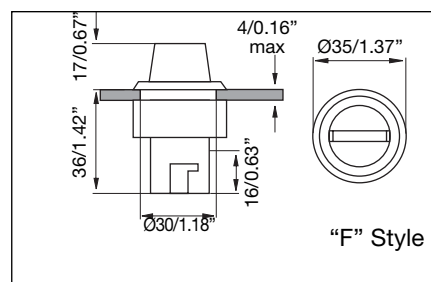
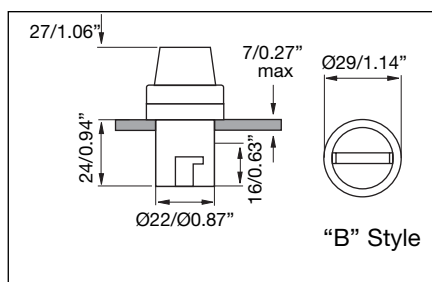
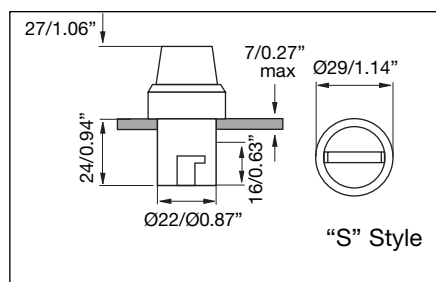
(the arrows indicate the spring return function)

21 = Two positions L R
22 = Two positions L[↔] C
 not for illuminated
23 = Two positions C[↔] R
 not for illuminated
31 = Three positions L C R
32 = Three positions L[↔] C[↔] R[↔]
 not for illuminated
33 = Three positions L[↔] C R
 not for illuminated
34 = Three positions L C[↔] R[↔]
 not for illuminated

General data

Peripheral of actuator	AL
Actuator	Pa
Mechanical life	≥30 x 10 ⁴ 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



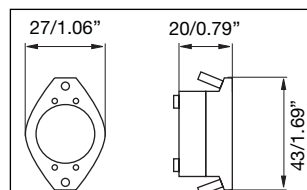
Holder type "M"

Code

Material

PB MB M

Zn + PBT



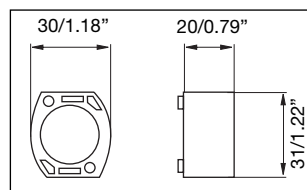
Holder type "P"

Code

Material

PB MB P

PBT



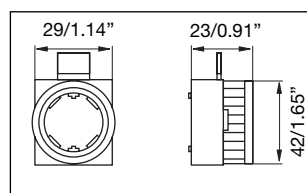
Holder type "N"

Code

Material

PB MB N

PC



Lamp Element



Ordering key

PALAMP R 220A

Type _____
 Colour _____
 Voltage _____

Approvals



Colours

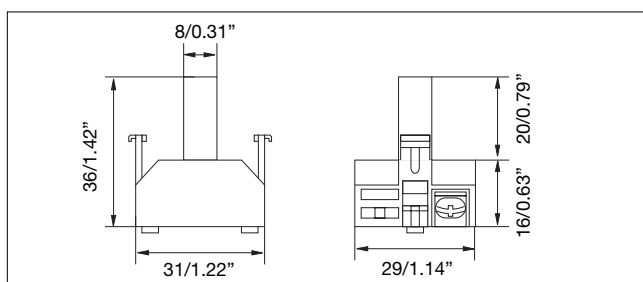
R = Red
 W = Clear/White
 B = Blue

Y = Yellow
 G = Green

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

CARLO GAVAZZI



- 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 \rightarrow NC contact)

Approvals



Terminals

Screw terminals

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

2 x 2.5mm² (0.004sq.inch)
 2 x 1.5mm² (0.002sq.inch)
 14 AWG
 1.2Nm (10.6in.lb.)

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)

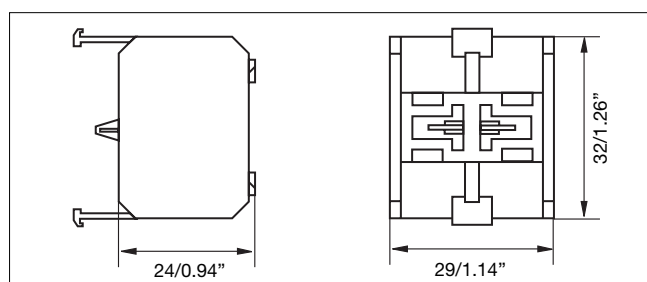
Contact code

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

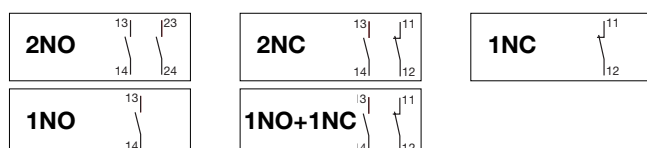
Contact characteristics

Contact Rating AC1	10A @ 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	-

Dimensions mm/inches

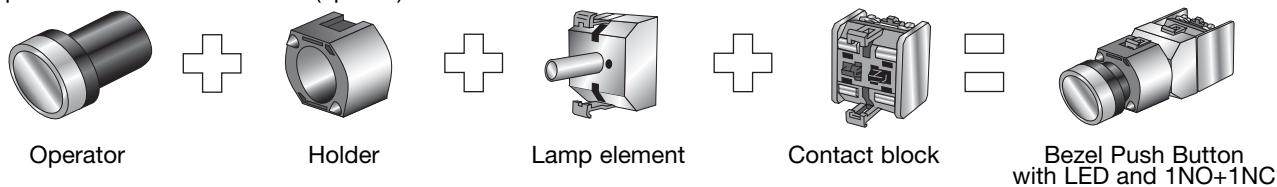


Wiring diagram

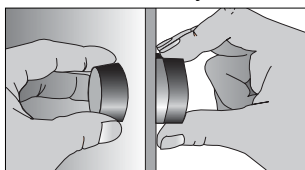


Assembling and Mounting

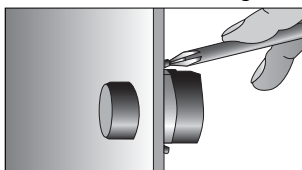
It come easy to get a complete product. Just to choose the operator, the holder, the lamp element if illuminated function is required and the contact block (up to 3).



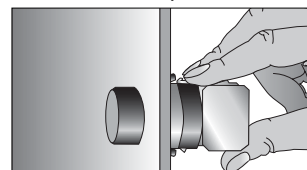
To install it, the only tool needed is a screwdriver. The same used to wiring the contact block can be used to fix the push-button.



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 Actuator



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



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