

# Panel Actuators and Indicators

## Type PL 22

### Two Colours Pilot Light



- Ø 22mm (Ø 0.87") dimension
- Two colours lamp
- High brightness pure colour LED
- High reliability and durability
- AC and DC voltage
- cULus and CE
- IEC/EN 60947-5-1, IEC/EN 60073, IEC/EN 60529, UL 508

### Product description

Pilot lights are panel mounted lamp assemblies consisting of the indicator housing, an internal lamp, terminals, and a lens. Applications include industrial control panels of all types, equipment indicator panels, status indicators and display lighting. The light source is high brightness pure colour LED.

### Ordering key

PL 22S TC RG 24\*

Series \_\_\_\_\_  
 Dimension \_\_\_\_\_  
 Type \_\_\_\_\_  
 Colour \_\_\_\_\_  
 Voltage \_\_\_\_\_

\* Not all configurations available – see page 6 for complete list

### Approvals



### Dimension and style

22S = Ø22mm (Ø0.87") standard size

### 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 <sup>2</sup> (≥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)
Degree of protection	IP 65

### Type

TC = Two colours

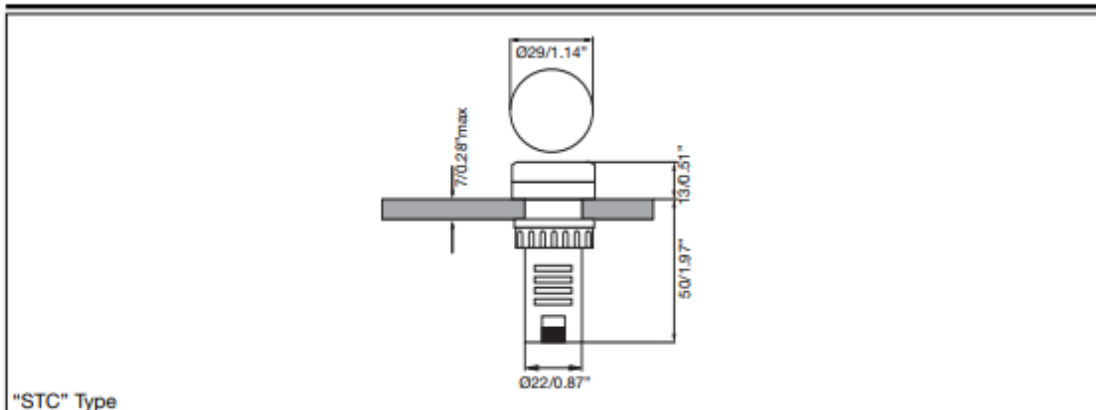
### Colours

RG= Red and Green

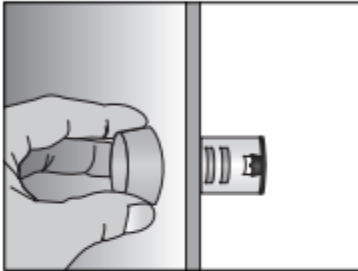
### Voltage

110 = 110VAC/DC  
 24 = 24VAC/DC  
 220A = 220VAC

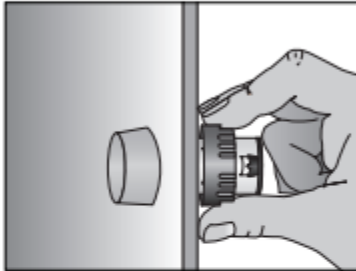
### Dimensions mm/inches



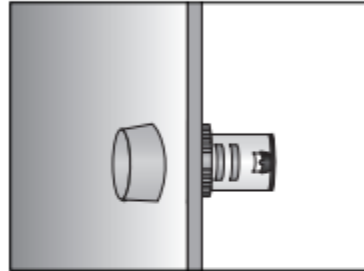
## Mounting



Just insert the pilot light into the hole of the pannel.

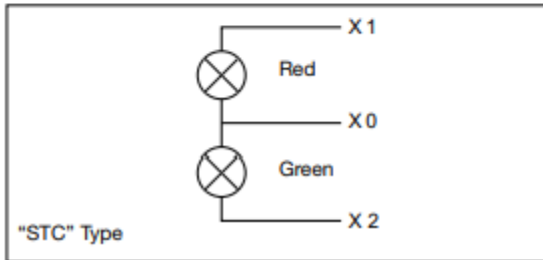


The pilot light will be secured at the back by the plastic nut



The pilot light has been installed.

## Wiring Diagram

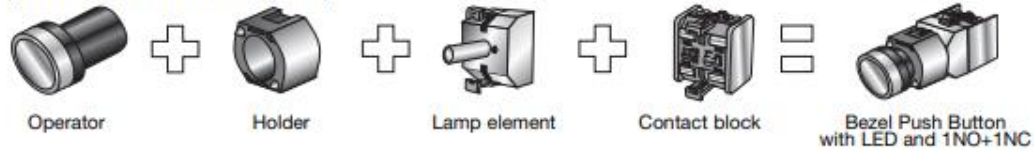


## Wiring Notes

- 1) Use 60°C or 75°C copper (CU) conductor and wire size range 18AWG, stranded or solid.
- 2) Terminal tightening torque 0.6Nm (5.3in.lb)
- 3) Recommended external fuse - listed or R/C fuses, Supplemental (JDYX, JDYX2) rated 3A maximum.

## 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).



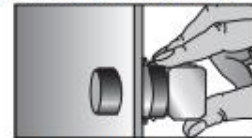
To install it, the only tool needed is a screwdriver. The same used to wiring the contact block can be used to fix the push-button.



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



### Protection cover

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

PC

PA PB COV



### Mounting ring Ø22mm (0.87")

Installed on plastic panel to strengthen mounting.

FE

PA MR 22



### Reducing ring for Pilot Light Ø22mm (0.87")

To mount the Ø22mm (0.87") pilot light into the hole for Ø25mm (0.98") or Ø30mm (1.18") of the panel.

ABS

Ø30mm/Ø1.18"

PA RR 3



### Fastening connector for Pilot Light Ø22mm (0.87")

Improve the quality of installation and reduce the time of installations.

PC

PA PL CONN



### Label frame

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

PC

10mm/0.39"

PA LBF 11

18mm/0.71"

PA LBF 18



### Warning plate

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

ABS

Ø60mm/Ø2.36"

PA WP 6

Ø90mm/Ø3.54"

PA WP 9



### Panel hole cap Ø22mm (0.87")

For blocking up prepared or useless holes on the panels.

ABS

PA PHC 22



# 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
- According to EN ISO 13850 (only NC slow action)
- IEC/EN 60947-5-1, IEC/EN 60947-5-5, UL 508

\* Not all configurations available – see page 6 for complete list

### 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.

### Approvals



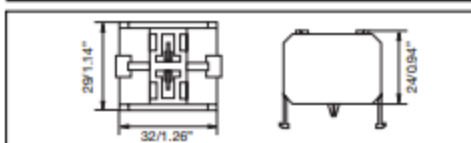
### Technical data

Contact resistance	≤50mΩ
Travel	5.8 ± 0.2mm (2.28" ± 0.08")
Rated insulation Voltage U <sub>i</sub>	660VAC/DC (acc. to IEC 60947-5-1) 600VAC/DC (acc. to UL508)
Rated imp. withstand voltage U <sub>imp</sub>	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)

### Terminals

<b>Screw terminals</b>	
Max. section single-core wire	2 x 2.5mm <sup>2</sup> (0.004sq.inch)
Max. section stranded wire	2 x 1.5mm <sup>2</sup> (0.002sq.inch)
Copper conductor wire	14 AWG @ 60°C or 75°C
	CU conductor
Terminal tightening torque	1.2Nm (10.6in.lb.)

### Dimensions mm/inches



### Ordering key

**PA 2 110 / 1 \***

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

### 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

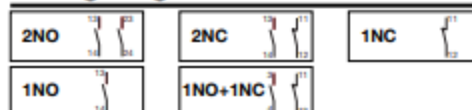
Contact Rating AC1	10A @ 250VAC		
Contact Rating	AC15	DC13	
(acc. to IEC 60947-5-1)	@ 24V 10A	6A	
	@ 110V 8A	1A	
	@ 220V 6A	0.5A	
	@ 380V 4A	-	
	@ 500V 2.5A	-	
<b>AC Contact Rating</b> (acc. to UL 508)	<b>A600</b>	<b>B600</b>	
<b>B600</b> (all snap codes)	@ 120V 6A	3A	
<b>A600</b> (all slow codes)	@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

Contact rating code designation	Terminal pitch (mm/inches)	Maximum current, amperes (acc. to UL508)								Maximum volt-amperes	
		120V		240V		480V		600V		Make	Break
A600	10	60	6.00	30	3.00	15	1.5	12	1.2	7200	720
B600	5	30	3.00	15	1.50	7.50	0.75	6	0.6	3600	360

Contact rating code designation	Terminal pitch (mm/inches)	Maximum current, amperes (acc. to UL508)			Maximum make or break volt-amperes @ 300V or less
		125V	250V	301 to 600V	
Q600	2.5	0.55	0.27	0.10	69
Q300	2.5	0.55	0.27	-	69

### Wiring diagram



# AVAILABLE PORTFOLIO CONFIGURATIONS

Flush Round Push Buttons		Pilot Lights		I/O Push Buttons	
PB22BF0B	PB22BIF0Y	PL22CHLB110	PL22SFLG24	PB22SIO0RG	PB22SIOL0RG
PB22BF0G	PB22SF0B	PL22CHLB24	PL22SFLR110	<b>Key Selector Switches</b>	
PB22BF0K	PB22SF0G	PL22CHLG110	PL22SFLR24		
PB22BF0R	PB22SF0K	PL22CHLG24	PL22SFLW110	<b>Push Button Boxes</b>	
PB22BF0W	PB22SF0R	PL22CHLR110	PL22SFLW24	PBBOX1HBG	PBBOX3HBY
PB22BF0Y	PB22SF0Y	PL22CHLR24	PL22SFLY110	PBBOX1HBY	PBBOX4HBG
PB22BIF0B	PB22SIF0G	PL22CHLW110	PL22SFLY24	PBBOX2HBG	PBBOX4HBY
PB22BIF0G	PB22SIF0R	PL22CHLW24	PL22SHLG110	PBBOX2HBY	PBBOX5HBG
PB22BIF0R	PB22SIF1G	PL22CHLY110	PL22SHLG220A	PBBOX3HBG	
PB22BIF0W		PL22CHLY24	PL22SHLG24	<b>Lamp Element</b>	
<b>Extended Push Buttons</b>		PL22CLLB220A	PL22SHLR110	PALAMPB110	PALAMPR24
PB22BE0G	PB22BIE0Y	PL22CLLB24	PL22SHLR12	PALAMPB24	PALAMPW110
PB22BE0K	PB22SIE0G	PL22CLLG110	PL22SHLR220A	PALAMPG110	PALAMPW12
PB22BE0R	PB22SIE0R	PL22CLLG220A	PL22SHLR24	PALAMPG220A	PALAMPW24
PB22BIE0R		PL22CLLG24	PL22SHLW110	PALAMPG24	PALAMPY110
<b>Red Emergency Stop Push Buttons</b>		PL22CLLR110	PL22SHLW24	PALAMPR110	PALAMPY24
PB22BEM41R	PB22SEM41R	PL22CLLR220A	PL22SHLY110	PALAMPR220A	
PB22BEM61R	PB22SEM61R	PL22CLLR24	PL22SHLY24	<b>Contact Block</b>	
PB22BKEM41R		PL22CLLW110	PL22SLLG110	PA2010/1	PA2100/2
<b>Mushroom Push Buttons</b>		PL22CLLW220A	PL22SLLG220A	PA2010/2	PA2110/1
PB22BIM41R	PB22SM40K	PL22CLLW24	PL22SLLG24	PA2020/1	PA2110/2
PB22BM40G	PB22SM40R	PL22CLLY110	PL22SLLR110	PA2020/2	PA2200/1
PB22BM40R	PB22SM41G	PL22CLLY12	PL22SLLR220A	PA2100/1	PA2200/2
PB22BM41R	PB22SM41R	PL22CLLY220A	PL22SLLR24	<b>Accessories</b>	
PB22BM60R	PB22SPPM41R	PL22CLLY24	PL22SLLW24	PASEALCOV	PAWP6
PB22SIM40R	PB22SPPM61R	PL22CRLB24	PL22SLLY24	PAPBCOV	PAWP9
PB22SIM41R		PL22SFLB24	PL22SRLR110	PAMR22	PAPHC22
<b>Short-Handle Selector Switches</b>		PL22SFLG110		PALBF11	PARR3
PB22BSRS21K	PB22SISRS21W	<b>Long-Handle Selector Switches</b>		PALBF18	PAPLCONN
PB22BSRS22K	PB22SISRS31G	PB22BLRS21K	PB22SLRS31K	<b>Holders</b>	
PB22BSRS31K	PB22SSRS21K	PB22BLRS31K	PB22SLRS32K	PBMBM	PBMBP
PB22BSRS33K	PB22SSRS31K	PB22BLRS21K		PBMBN	
PB22SISRS21R	PB22SSRS32K	<b>Two Color Pilot Lights</b>			
<b>Buzzer and Flashing Buzzer</b>		PL22STCRG110	PL22STCRG24		
PL22SBZK110	PL22SFBZR110	PL22STCRG220A			
PL22SBZK12	PL22SFBZR12				
PL22SBZK220A	PL22SFBZR220A				
PL22SBZK24	PL22SFBZR24				