Push Buttons
Selector Switches
& Pilot Lights
<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Overview</td>
<td>2</td>
</tr>
<tr>
<td>Introduction</td>
<td>3</td>
</tr>
<tr>
<td>Quick Selection</td>
<td>6</td>
</tr>
<tr>
<td>Ordering Key</td>
<td>8</td>
</tr>
<tr>
<td>Flush Round Push Buttons</td>
<td>10</td>
</tr>
<tr>
<td>Extended Push Buttons</td>
<td>11</td>
</tr>
<tr>
<td>Emergency Stop Push Buttons</td>
<td>12</td>
</tr>
<tr>
<td>Mushroom Push Buttons</td>
<td>13</td>
</tr>
<tr>
<td>Short-handle Selector Switches</td>
<td>14</td>
</tr>
<tr>
<td>Long-handle Selector Switches</td>
<td>15</td>
</tr>
<tr>
<td>Key Selector Switches</td>
<td>16</td>
</tr>
<tr>
<td>I/O Push Buttons</td>
<td>17</td>
</tr>
<tr>
<td>Contact Blocks</td>
<td>18</td>
</tr>
<tr>
<td>Lamp Elements</td>
<td>19</td>
</tr>
<tr>
<td>Pilot Lights</td>
<td>20</td>
</tr>
<tr>
<td>Two Colours Pilot Lights</td>
<td>21</td>
</tr>
<tr>
<td>Buzzers</td>
<td>22</td>
</tr>
<tr>
<td>Accessories</td>
<td>23</td>
</tr>
</tbody>
</table>

Push Buttons
Selector Switches & Pilot Lights
Push Buttons

**General Specification**

**Drilling Diameter Ømm/inches**
- Ø22/0.87" - Ø30/1.18"

**Dimensions H x Ømm/inches**
- 42xØ29 / 1.65"xØ1.14"
- 44xØ35 / 1.73"xØ1.38"
- 49-51xØ40-Ø60 / 1.93"-2"xØ1.57"-Ø2.36"

**Type PB**
- **Flush Round**
- **Extended**
- **Red Emergency Stop**
- **Mushroom**

**Series**

**Type PB**
- **Flush Round**
- **Extended**
- **Red Emergency Stop**
- **Mushroom**

**Dimensions H x Ømm/inches**
- Ø22/0.87" - Ø30/1.18"

**General Specification**

**Spring Returned**
- Yes

**Maintained**
- Yes

**Available colours**
- R, W, K, B, Y, G*

**Lamp add-on possibility**
- Yes (turn to release)

**Approvals/Marks**
- CE, cULus

**Detailed information**
- On page 11

---

**Series**

**Type PB**
- **Short-handle**
- **Long-handle**
- **Key Switches**
- **I/O Push Button**

**Dimensions H x Ømm/inches**
- 51 x 29 / 2"xØ1.14"
- 53 x 35 / 2.08"xØ1.38"
- 72 x 29 / 2.83"xØ1.14"
- 64 x 35 / 2.52"xØ1.38"
- 41 x 29 / 1.61"xØ1.14"

**General Specification**

**Spring Returned**
- Yes

**Three position**
- Yes

**Available colours**
- R, Y, G, B, W, K*

**Lamp add-on possibility**
- Neutral (metal)

**Approvals/Marks**
- CE, cULus

**Detailed information**
- On page 16

---

* R=Red, W=Clear/White, K=Black (not for illuminated versions), B=Blue, Y= Yellow, G=Green

Specifications are subject to change without notice. Pictures are just an example. 310708
### Pilot Lights

#### Series

<table>
<thead>
<tr>
<th>Type PL</th>
<th>High lens</th>
<th>Type PL</th>
<th>Round Lens</th>
<th>Type PL</th>
<th>Low Lens</th>
<th>Type PL</th>
<th>Teeth Lens</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Diameter Ømm/inches</td>
<td>Ø22/0.87&quot;</td>
<td>Ø22/0.87&quot;</td>
<td>Ø22/0.87&quot;</td>
<td>Ø22/0.87&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions H x Ømm/inches</td>
<td>Ø29 x 52**/67</td>
<td>Ø29 x 52**/67</td>
<td>Ø29 x 52**/67</td>
<td>Ø29 x 52**/67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light source</td>
<td>LED</td>
<td>LED</td>
<td>LED</td>
<td>LED</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brightness / Sound volume</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approvals</td>
<td>CE, cULus</td>
<td>CE, cULus</td>
<td>CE, cULus</td>
<td>CE, cULus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>6VAC/DC</td>
<td>12VAC/DC</td>
<td>24VAC/DC</td>
<td>48VAC/DC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>110VAC/DC</td>
<td>220VDC - 220VAC</td>
<td>380VAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detailed information</td>
<td>On page</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td>20</td>
<td></td>
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</tr>
</tbody>
</table>

#### Series

<table>
<thead>
<tr>
<th>Type PL</th>
<th>Flash Light</th>
<th>Type PL</th>
<th>Two Colours</th>
<th>Type PL</th>
<th>Flashing Buzzer</th>
<th>Type PL</th>
<th>Buzzer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drilling Diameter Ømm/inches</td>
<td>Ø22/0.87&quot;</td>
<td>Ø22/0.87&quot;</td>
<td>Ø22/0.87&quot;</td>
<td>Ø22/0.87&quot;</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Dimensions H x Ømm/inches</td>
<td>Ø29 x 52**/67</td>
<td>Ø29 x 52**/67</td>
<td>Ø29 x 52**/67</td>
<td>Ø29 x 52**/67</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Colours</td>
<td>R, W, B, Y, G*</td>
<td>R*</td>
<td>RG*</td>
<td>K*</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Light source</td>
<td>LED</td>
<td>LED</td>
<td>LED</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Brightness / Sound volume</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td>≥100cd/m² (≥9.29ftc)</td>
<td>80dB @ 10cm (3.94&quot;)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Approvals</td>
<td>CE, cULus</td>
<td>CE, cULus</td>
<td>CE, cULus</td>
<td>CE, cULus</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Voltage</td>
<td>6VAC/DC</td>
<td>12VAC/DC</td>
<td>24VAC/DC</td>
<td>48VAC/DC</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>110VAC/DC</td>
<td>220VDC - 220VAC</td>
<td>380VAC</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Detailed information</td>
<td>On page</td>
<td>20</td>
<td>21</td>
<td>22</td>
<td>22</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* R=Red, W=Clear/White, K=Black (not for illuminated versions), B=Blue, Y=Yellow, G=Green  ** Compact Version

Specifications are subject to change without notice. Pictures are just an example. 310708
The Push Buttons and The Selector Switches

Carlo Gavazzi has developed a new range of push buttons, selector switches and pilot lights in order to complete own offer on automation market and give more solutions to own customers.

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...

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. The switch function can be maintained or spring return. In a maintained the actuator stays in thrown position (on-off). In a spring return the switch must be held in position; it reverts to normal position when actuating force is removed.

Different models of operators are available like push-button (also illuminated type), mushroom push-button, red emergency stop push-button, key push-button, selector switch with two or three positions … … to meet most of the markets and the customers needs. They are available with a various selection of colours (6) and a wide range of supply voltages (from 6V to 380V). The screws (+,-  Pozidrive 2) of terminals are dispatched open to facilitate the work of wiring that can also be done separately, before the contact block is snapped on the holder. Besides, Carlo Gavazzi has developed the contact block with unloseable screws system, so it is impossible to lose screw while unscrewing. The illuminated functions are made by high-brightness pure colour LED. It is a guarantee of more efficiency and reliability. Infact, the LED technology reach over than 100.000 hours of service life and the power consumption is lower than filament bulb type. The degree of protections is IP65. It allows to install them also in tough environments e.g. wet or dusty conditions.

Buttons style and mounting type

This new range has been developed, thinking to the needs of the installations, with three different styles of shape of push-buttons and three different types of mounting. By combining the styles and the types of mounting, it is possible to obtain up to 9 different versions for the same product.

S type operator
It is standard style Ø22 (for panel hole 22mm (0.87”)): black plastic head

B type operator
It is bezel style Ø22 (for panel hole 22mm (0.87”)): black plastic head with metal plated circular bezel

F type operator
It is flush style Ø30 (for panel hole 30mm (1.18”)): black plastic head with metal plated circular bezel for flush mounting

Three different types of mounting are available:

M type holder
It is metal mounting base: installation and fixing are made by diagonal screws; so it is on the safe side.

P type holder
It is plastic mounting base: the middle base’s material is high strength PBT plastic. The straight screws are used for installation.

N type holder
It is nut mounting base: using nut for clamping, so it makes installation easily and reduce work intensity by big percentages

The contact block

The contact block is the switching element equipped with 2 independent electric contacts. 10 different version of contact blocks are available to meet the needs of the installations and of the customers. Pole and throw configurations can be single pole single throw (SPST) or double pole single throw (DPST), SPST is a switch that makes or breaks the connection of a single conductor in a single branch circuit. DPST is a switch that makes or breaks the connection of two circuit conductors in a single branch circuit. A normally open (NO) switch has contacts that are open or disconnected in their unactuated (normal) position. A normally closed (NC) switch has contacts that are closed or connected in their unactuated (normal) position.

They are snap or slow action types with positive opening of NC contact type. The contact rating of 10A @ 250V AC1 allows to reach high operating performance. The type of the contact is clearly identified by the colour (red for normally closed and green for normally open).

<table>
<thead>
<tr>
<th>Snap Action</th>
<th>Slow Action</th>
<th>Contact Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>PA2010/1</td>
<td>PA2010/2</td>
<td>1NC</td>
</tr>
<tr>
<td>PA2100/1</td>
<td>PA2100/2</td>
<td>1NO</td>
</tr>
<tr>
<td>PA2020/1</td>
<td>PA2020/2</td>
<td>2NC</td>
</tr>
<tr>
<td>PA2200/1</td>
<td>PA2200/2</td>
<td>2NO</td>
</tr>
<tr>
<td>PA2110/1</td>
<td>PA2110/2</td>
<td>1NO+1NC</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice. Pictures are just an example. 310708
Simple to choose and to install

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

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.

The Pilot Lights

The main function of a pilot light is to signalize when an event occurs or to indicate a state. For example, the red light is normally used to indicate that there is voltage on the electrical installation or equipment.

Only one code is enough to choose the product. The LED is delivered already installed, so you should only select the rating voltage and the colour.

The source of light is LED. It gives an optimum perception due to the ideal colour rendering. Beside, it is reliable and cost-saving due to its long lifetime.

All with dimension of Ø22 (for panel hole 22mm (0.87”)), they offer different solutions, from the shape of the lens (high, low, rounded, teeth profile) to the type of functions (light, flashing, two-color, buzzer). Different rating voltage are available, either in AC or in DC, in order to meet all the requirement of the market. A wide selection of colours (red, green, yellow, white and blue) allows to choose the right colour for the right function.

The pilot light can be easily and safely assembled by one person with just a few movements of the hand.

The installations is simply made by plastic nut.

Simple to install

Just to 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.
Specifications

European Directives

The guarantee of free movement of goods within the European Community assumes elimination of any regulatory differences between the member states. European Directives set up common rules that are included in the legislation of each state while contradictory regulations are cancelled. There are three main directives:

• Low Voltage Directive 73/23/EEC, amended by Directive 93/68/EEC concerning electrical equipment from 50 to 1000 V a.c. and from 75 to 1500 V d.c. This specifies that compliance with the requirements that is sets out is acquired once the equipment conforms to the standards harmonised at European level.


Technical Data

Rated capacity acc. to IEC 60947-5-1

<table>
<thead>
<tr>
<th>AC</th>
<th>DC</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>13</td>
</tr>
<tr>
<td>220V/6A</td>
<td>24V/6A</td>
</tr>
<tr>
<td>380V/4A</td>
<td>48V/3A</td>
</tr>
<tr>
<td>500V/2.5A</td>
<td>110V/1A</td>
</tr>
<tr>
<td>660V/2A</td>
<td>220V/0.5A</td>
</tr>
</tbody>
</table>

Rated capacity acc. to UL 508

Snap action type

| B600 | Q600 |

NO slow action type

A600 | Q600 |

NC slow action type

A600 | Q300 |

Contact resistance

≤50mΩ (hard silver contact)

Rated Impulse withstand Voltage \( U_{imp} \)

2500VAC 50Hz 1min.

Mechanical life

Normal button ≥3x10^6 cycles
Selector ≥30x10^6 cycles
Key button ≥5x10^10 cycles
Emergency button ≥5x10^6 cycles

Electrical life

≥30x10^6 cycles

Rated thermal current \( I_{th} \)

10A

Rated insulation voltage \( U_i \)

660VAC/DC (acc. to IEC 60947-5-1)
600VAC/DC (acc. to UL508)

Operating temperature

-25 ~ +70°C  (-13 ~ +158°F)

Storage temperature

-30 ~ +80°C  (-22 ~ +176°F)

Parts Material

Peripheral of actuator

AL

Holder

Zn or PBT, PC

Actuator

PA6

Contact

AgNi

Switch housing

PC

Contact parts

Cu

Specifications are subject to change without notice. Pictures are just an example. 310708
<table>
<thead>
<tr>
<th>Series</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB</td>
<td>Push Button (or Selector switch)</td>
</tr>
<tr>
<td>PL</td>
<td>Pilot Light</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dimension and Style</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>22S</td>
<td>Ø 22mm (0.87&quot;) Standard design</td>
</tr>
<tr>
<td>22B</td>
<td>Ø 22mm (0.87&quot;) Bezel design (only for Push Buttons)</td>
</tr>
<tr>
<td>30F</td>
<td>Ø 30mm (1.18&quot;) Flush design (only for Push Buttons)</td>
</tr>
<tr>
<td>22C</td>
<td>Ø 22mm (0.87&quot;) Compact design (only for Pilot light)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Push Buttons and Selector Switches types</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>Flush round</td>
</tr>
<tr>
<td>E</td>
<td>Extended round</td>
</tr>
<tr>
<td>IF</td>
<td>Illuminated Flush round</td>
</tr>
<tr>
<td>IE</td>
<td>Illuminated Extended round</td>
</tr>
<tr>
<td>M4</td>
<td>Mushroom Ø40mm (Ø1.57&quot;)</td>
</tr>
<tr>
<td>M6</td>
<td>Mushroom Ø60mm (Ø2.36&quot;)</td>
</tr>
<tr>
<td>IM4</td>
<td>Illuminated Mushroom Ø40mm (Ø1.57&quot;)</td>
</tr>
<tr>
<td>IM6</td>
<td>Illuminated Mushroom Ø60mm (Ø2.36&quot;)</td>
</tr>
<tr>
<td>EM4</td>
<td>Red Emergency Stop Ø40mm (Ø1.57&quot;)</td>
</tr>
<tr>
<td>EM6</td>
<td>Red Emergency Stop Ø60mm (Ø2.36&quot;)</td>
</tr>
<tr>
<td>KM4</td>
<td>Key-Reset Emergency Stop Red Ø40mm (Ø1.57&quot;)</td>
</tr>
<tr>
<td>SRS</td>
<td>Short-handle Selector Switch</td>
</tr>
<tr>
<td>ISRS</td>
<td>Illuminated Short-handle Selector Switch (only action 21 or 31)</td>
</tr>
<tr>
<td>LRS</td>
<td>Long-handle Selector Switch</td>
</tr>
<tr>
<td>KRS</td>
<td>Key Selector Switch (only action 21 or 31)</td>
</tr>
<tr>
<td>IO</td>
<td>IO Push Button (ON-OFF type)</td>
</tr>
<tr>
<td>IOL</td>
<td>IO Push Button (ON-OFF type) illuminated</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Pilot Light types</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>HL</td>
<td>High Lens</td>
</tr>
<tr>
<td>RL</td>
<td>Round Lens</td>
</tr>
<tr>
<td>LL</td>
<td>Low Lens</td>
</tr>
<tr>
<td>TC</td>
<td>Two Colours</td>
</tr>
<tr>
<td>TL</td>
<td>Teeth Lens</td>
</tr>
<tr>
<td>BZ</td>
<td>Buzzer</td>
</tr>
<tr>
<td>FBZ</td>
<td>Flashing Buzzer</td>
</tr>
<tr>
<td>FL</td>
<td>Flash Light</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Actions</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>Only for Pilot Light</td>
</tr>
<tr>
<td>0</td>
<td>Spring return (not for red emergency stop)</td>
</tr>
<tr>
<td>1</td>
<td>Maintained</td>
</tr>
<tr>
<td>21</td>
<td>Two positions L R</td>
</tr>
<tr>
<td>22</td>
<td>Two positions L, C</td>
</tr>
<tr>
<td>23</td>
<td>Two positions C, R</td>
</tr>
<tr>
<td>31</td>
<td>Three positions L, C, R</td>
</tr>
<tr>
<td>32</td>
<td>Three positions L, C, R</td>
</tr>
<tr>
<td>33</td>
<td>Three positions L, C, R</td>
</tr>
<tr>
<td>34</td>
<td>Three positions L, C, R</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Colours (only Red for emergency stop types)</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Red</td>
</tr>
<tr>
<td>G</td>
<td>Green</td>
</tr>
<tr>
<td>Y</td>
<td>Yellow</td>
</tr>
<tr>
<td>W</td>
<td>Clear/White</td>
</tr>
<tr>
<td>B</td>
<td>Blue</td>
</tr>
<tr>
<td>K</td>
<td>Black (not for illuminated versions)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Voltages (only for Pilot Light)</th>
<th>Key extraction position (only for Key Selector Switch)</th>
</tr>
</thead>
<tbody>
<tr>
<td>06 = 6VAC / DC</td>
<td>KL = on the left position</td>
</tr>
<tr>
<td>12 = 12VAC / DC</td>
<td>KC = on the center position</td>
</tr>
<tr>
<td>24 = 24VAC / DC</td>
<td>KR = on the right position</td>
</tr>
<tr>
<td>48 = 48VAC / DC</td>
<td></td>
</tr>
<tr>
<td>110 = 110VAC / DC</td>
<td></td>
</tr>
<tr>
<td>220D = 220VDC</td>
<td></td>
</tr>
<tr>
<td>220A = 220VAC</td>
<td></td>
</tr>
<tr>
<td>380A = 380VAC</td>
<td></td>
</tr>
</tbody>
</table>

1 = Light function is obtained by the lamp element pg.19
2 = Spring return
2 = position available only for Pilot Light or Key extraction position

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### Quick selection

<table>
<thead>
<tr>
<th>Actions</th>
<th>Colours</th>
<th>Voltages</th>
</tr>
</thead>
<tbody>
<tr>
<td>0 = Spring Return</td>
<td>R = Red</td>
<td>06 = 6VAC/DC</td>
</tr>
<tr>
<td>1 = Maintained</td>
<td>G = Green</td>
<td>12 = 12VAC/DC</td>
</tr>
<tr>
<td>21 = Two pos. L R</td>
<td>Y = Yellow</td>
<td>24 = 24VAC/DC</td>
</tr>
<tr>
<td>22* = Two pos. L*R</td>
<td>W = Clear/White</td>
<td>48 = 48VAC/DC</td>
</tr>
<tr>
<td>31 = Three pos. L C R</td>
<td></td>
<td>110 = 110VAC/DC</td>
</tr>
</tbody>
</table>

* : not for illuminated |

** : spring return

### Push round push buttons

<table>
<thead>
<tr>
<th>PB 22S F</th>
<th>PB 22B F</th>
<th>PB 30F F</th>
</tr>
</thead>
</table>

### Extended push buttons

<table>
<thead>
<tr>
<th>PB 22S E</th>
<th>PB 22B E</th>
<th>PB 30F E</th>
</tr>
</thead>
</table>

### Mushroom push buttons

<table>
<thead>
<tr>
<th>PB 22S M4</th>
<th>PB 22B M4</th>
<th>PB 30F M4</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB 22S M6</td>
<td>PB 22B M6</td>
<td>PB 30F M6</td>
</tr>
</tbody>
</table>

### Emergency mushroom push buttons

<table>
<thead>
<tr>
<th>PB 22S EM4 1R</th>
<th>PB 22B EM4 1R</th>
<th>PB 30F EM4 1R</th>
</tr>
</thead>
<tbody>
<tr>
<td>PB 22S KM6 1R</td>
<td>PB 22B KM6 1R</td>
<td>PB 30F KM6 1R</td>
</tr>
</tbody>
</table>

### Short-handle selector switches

<table>
<thead>
<tr>
<th>PB 22S SRS</th>
<th>PB 22B SRS</th>
<th>PB 30F SRS</th>
</tr>
</thead>
</table>

### Long-handle Selector Switches

<table>
<thead>
<tr>
<th>PB 22S LRS</th>
<th>PB 22B LRS</th>
<th>PB 30F LRS</th>
</tr>
</thead>
</table>
Quick selection

**Actions**

<table>
<thead>
<tr>
<th>Action Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>Spring Return</td>
</tr>
<tr>
<td>1</td>
<td>Maintained</td>
</tr>
<tr>
<td>21</td>
<td>Two pos. L R</td>
</tr>
<tr>
<td>22</td>
<td>Two pos. L C R</td>
</tr>
<tr>
<td>23</td>
<td>Two pos. C R</td>
</tr>
<tr>
<td>31</td>
<td>Three pos. L C R</td>
</tr>
</tbody>
</table>

**Colours**

<table>
<thead>
<tr>
<th>Letter</th>
<th>Colour</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Red</td>
</tr>
<tr>
<td>G</td>
<td>Green</td>
</tr>
<tr>
<td>Y</td>
<td>Yellow</td>
</tr>
<tr>
<td>W</td>
<td>Clear/White</td>
</tr>
<tr>
<td>B</td>
<td>Blue</td>
</tr>
<tr>
<td>K</td>
<td>Black</td>
</tr>
</tbody>
</table>

**Voltagess**

<table>
<thead>
<tr>
<th>Voltage Code</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td>6VAC/DC</td>
</tr>
<tr>
<td>12</td>
<td>12VAC/DC</td>
</tr>
<tr>
<td>24</td>
<td>24VAC/DC</td>
</tr>
<tr>
<td>48</td>
<td>48VAC/DC</td>
</tr>
<tr>
<td>110</td>
<td>110VAC/DC</td>
</tr>
<tr>
<td>220D</td>
<td>220VDC</td>
</tr>
<tr>
<td>220A</td>
<td>220VAC</td>
</tr>
<tr>
<td>380A</td>
<td>380VAC</td>
</tr>
</tbody>
</table>

**Key selector switches**

- PB 30F KRS A KL
- PB 30F KRS A KC
- PB 30F KRS A KR

**Metal holder**

- PB MB M

**Plastic holder**

- PB MB P

**Nut holder**

- PB MB N

**Lamp element**

- PA LAMP

**Contact blocks**

- PA2010/1
- PA2010/2
- PA2020/1
- PA2020/2
- PA2110/1
- PA2110/2

**Example of a complete product**

- PB22BIF 0G + PBMBP + PALAMP G24 + PA2110/1

**High lens pilot light**

- PL 22C HL
- PL 22S HL

**Round lens pilot light**

- PL 22C RL
- PL 22S RL

**Low lens pilot light**

- PL 22C LL
- PL 22S LL

**Teeth lens pilot light**

- PL 22C TL
- PL 22S TL

**Flash lens pilot light**

- PL 22S FL

**Two colours pilot light**

- PL 22S TC RG

**Flashing buzzer**

- PL 22S FBZ R

**Buzzer**

- PL 22S BZ K

Specifications are subject to change without notice. Pictures are just an example. 310708
Panel Actuators and Indicators
Type PB
Flush Round Push Buttons

PB 22S
PB 22B
PB 30F

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

Series  PB 22S
Dimension and Style BB 22S IF 0 R
Type  PB 22S IF 0 R
Action  PB 22S IF 0 R
Colour  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

Colours

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

Types

F = Flush round
IF = Illuminated flush round
1 = Light function is obtained by the lamp element pg.19

Approvals

cULus
CE
RoHS

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PB
Extended Push Buttons

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.

Approvals
- cULus and CE
- IEC/EN 60947-5-1, UL 508, IEC/EN 60073, IEC/EN 60529

Types
- E = Extended round
- IE = Illuminated extended round

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

Ordering key
- 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
- 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

Dimensions - Push Buttons mm/inches

Dimensions - Holders mm/inches

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PB
Red Emergency Stop Push Buttons

Product description
The STOP function is obtained by pushing the head while the reset is obtained by turning clockwise the head or the key. It is used in dangerous situations when emergency measures are required. They should be ordered in parts (operator + holder + contact block) and installed in an enclosure.

Approvals
UL
RoHS

Types
EM4 = Red emergency stop Ø40mm (Ø1.57")
EM6 = Red emergency stop Ø60mm (Ø2.36")
KM4 = Red key-reset emergency stop Ø40mm (Ø1.57")

Colour
R = Red

Ordering key
PB 22S EM4 1 R

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

Action
1 = Maintained

General data
Peripheral of actuator
Actuator Pa
Mechanical life ≥ 5 x 10⁴ 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

Dimensions - Holders mm/inches

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PB
Mushroom Push Buttons

Product description
Mushroom 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 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 IM4 0 R

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

Dimension and Style
PB 22S = Ø22mm (Ø0.87”) Standard and bezel style
PB 22B = Ø22mm (Ø0.87”) Flush style
PB 30F = Ø30mm (Ø1.18”) Head style

Action
0 = Spring return
1 = Maintained

Colour
R = Red
W = Clear/White (only illuminated)
K = Black (only not illuminated)

Types
M4 = Mushroom Ø40mm (Ø1.57”)
M6 = Mushroom Ø60mm (Ø2.36”)
IM4 = Illuminated mushroom Ø40mm (Ø1.57”)
IM6 = Illuminated mushroom Ø60mm (Ø2.36”)

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

Approvals
cULus and CE
IEC/EN 60947-5-1, UL 508, IEC/EN 60073, IEC/EN 60529

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
### Panel Actuators and Indicators

**Type PB**  
Short-handle Selector Switches

- 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

- UL Listed
- CE
- RoHS

### Types

- **SRS** = Short-handle selector switch  
- **ISRS** = Illuminated short-handle selector switch

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

### Colours

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

### Ordering key

<table>
<thead>
<tr>
<th>Series</th>
<th>PB 22S ISRS 32 R</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension and Style</td>
<td></td>
</tr>
<tr>
<td>Type</td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td></td>
</tr>
</tbody>
</table>

### Dimensions and styles

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

### Actions

- **21** = Two positions L R  
- **22** = Two positions L C  
- **23** = Two positions C R  
- **31** = Three positions L C R

### General data

- **Peripheral of actuator** | AL  
- **Actuator** | Pa  
- **Mechanical life** | ≥30 x 10⁴ 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

<table>
<thead>
<tr>
<th>Style</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;S&quot;</td>
<td>27/1.06&quot; x 7/0.27&quot; x 029/1.14&quot;</td>
</tr>
<tr>
<td>&quot;B&quot;</td>
<td>27/1.06&quot; x 7/0.27&quot; x 029/1.14&quot;</td>
</tr>
<tr>
<td>&quot;F&quot;</td>
<td>27/1.06&quot; x 7/0.27&quot; x 035/1.37&quot;</td>
</tr>
</tbody>
</table>

### Dimensions - Holders mm/inches

<table>
<thead>
<tr>
<th>Style</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;P&quot;</td>
<td>30/1.18&quot; x 20/0.79&quot;</td>
</tr>
<tr>
<td>&quot;M&quot;</td>
<td>27/1.06&quot; x 20/0.79&quot;</td>
</tr>
<tr>
<td>&quot;N&quot;</td>
<td>29/1.14&quot; x 20/0.91&quot;</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PB
Long-handle Selector Switches

- 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
- cULus and CE
- IEC/EN 60947-5-1, UL 508, IEC/EN 60073, IEC/EN 60529

PB 22S
PB 22B
PB 30F

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

Series
Dimension and Style
Type
Action
Colour

Ordering key
PB 22S LRS 32 R

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
23 = Two positions C R
31 = Three positions L C R
32 = Three positions L C R
33 = Three positions L C R
34 = Three positions L C R

Colours
R = Red
K = Black
Y = Yellow
G = Green

General data
Peripheral of actuator AL
Actuator Pa
Mechanical life ≥30 x 10⁴ 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

Dimensions - Holders mm/Inches

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
### Panel Actuators and Indicators
#### Type PB
#### Key Selector Switches

**Select key**

<table>
<thead>
<tr>
<th>PB 22S</th>
<th>PB 30F</th>
</tr>
</thead>
</table>

**Product description**

Key selector switches are mechanical switches that can be turned right, center or left to open or to close the electric contacts. Mostly used to switch between two/three circuits. When the key is pulled-out no any other action can be done. They should be ordered in parts (operator + holder + contact block) and installed in an enclosure.

**Approvals**

- cULus
- CE
- RoHS

**Types**

- KRS = Key selector switch

**Key extraction position**

- KL = on the left position
- KC = on the center position
- KR = on the right position

**Ordering key**

| PB 22S KRS 31 KC |

**Dimensions and styles**

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

**Actions**

- 21 = Two positions L R
- 31 = Three positions L C R

**General data**

- Peripheral of actuator: AL
- Actuator: Pa
- Mechanical life: ≥ 5 x 10⁴ 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**

- 21/0.83”
- 7/0.27”
- Ø29/1.14”

**Dimensions - Holders mm/inches**

- 30/1.18”
- 20/0.79”
- 27/1.06”

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PB22
I/O Push Buttons

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

<table>
<thead>
<tr>
<th>Series</th>
<th>PB 22S IOL 0 RG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension and Style</td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td></td>
</tr>
</tbody>
</table>

Ordering key

<table>
<thead>
<tr>
<th>Series</th>
<th>PB 22S IOL 0 RG</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimension and Style</td>
<td></td>
</tr>
<tr>
<td>Action</td>
<td></td>
</tr>
<tr>
<td>Colour</td>
<td></td>
</tr>
</tbody>
</table>

RG = Red and Green

Ordered key

PB 22S IOL 0 RG

Dimensions and style

22S = Ø22mm (Ø0.87”) Standard style

Action

0 = Spring return

Colour

RG = Red and Green

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network.
Panel Actuators and Indicators
Type PA2
Contact Block

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

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

Technical data
Contact resistance ≤50mΩ
Travel 5.8 ± 0.2mm (2.28" ± 0.08")
Rated insulation Voltage $U_i$
Rated imp. withstand voltage $U_{imp}$
Minimum switching power
Min Current
Min Voltage
Switch housing
Contact parts
Contact material
Standard
Optional
Optional for aggressive atmospheres
Operating temperature
Storage temperature

Wiring diagram

Contact characteristics
Contact Rating AC1 10A @ 250VAC
Contact Rating (acc. to IEC 60947-5-1)
Contact Rating (acc. to UL 508)
AC Contact Rating
B600 (all snap codes)
A600 (all slow codes)
DC Contact Rating
Q600 (all snap codes)
Q600 (100, 200 slow codes)
Q300 (010, 020, 110 slow codes)

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)
2 NC contacts (DPST)
1 NC contact (SPST)
1 NO contact (SPST)
1 NC + 1 NO contacts (DPST)

Contact resistance
Travel
Rated insulation Voltage $U_i$
Rated imp. withstand voltage $U_{imp}$
Minimum switching power
Min Current
Min Voltage
Switch housing
Contact parts
Contact material
Standard
Optional
Optional for aggressive atmospheres
Operating temperature
Storage temperature

Dimensions mm/inches

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 200808
Panel Actuators and Indicators
Type PALAMP
Lamp Element

Product description
The illuminated function in a push button is obtained using the lamp element. To choose it just to choose two different characteristics: the colour and the supply voltage. It is made by high-brightness pure colour LED. It is a guarantee of more efficiency and reliability. Infact, the LED technology reach over than 100,000 hours of service life and the power consumption is lower than filament bulb type.

Ordering key
PALAMP R 220A

Approvals

Colours
R = Red
W = Clear/White
B = Blue
Y = Yellow
G = Green

Voltage

<table>
<thead>
<tr>
<th>Type</th>
<th>Colour</th>
<th>Voltage</th>
</tr>
</thead>
<tbody>
<tr>
<td>06</td>
<td></td>
<td>6VAC/DC</td>
</tr>
<tr>
<td>12</td>
<td></td>
<td>12VAC/DC</td>
</tr>
<tr>
<td>24</td>
<td></td>
<td>24VAC/DC</td>
</tr>
<tr>
<td>48</td>
<td></td>
<td>48VAC/DC</td>
</tr>
<tr>
<td>110</td>
<td></td>
<td>110VAC/DC</td>
</tr>
<tr>
<td>220D</td>
<td></td>
<td>220VDC</td>
</tr>
<tr>
<td>220A</td>
<td></td>
<td>220VAC</td>
</tr>
<tr>
<td>380A</td>
<td></td>
<td>380VAC</td>
</tr>
</tbody>
</table>

Technical data

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated imp. withstand voltage $U_{imp}$</td>
<td>2500VAC 50Hz 1min.</td>
</tr>
<tr>
<td>Rated insulation Voltage $U_i$</td>
<td>500VAC</td>
</tr>
<tr>
<td>Allowable voltage fluctuation</td>
<td>±20%</td>
</tr>
<tr>
<td>Continuous operating life</td>
<td>≥100,000h</td>
</tr>
<tr>
<td>Ultrahigh brightness</td>
<td>≥100cd/m² (≥9.29ftc)</td>
</tr>
<tr>
<td>Applying frequency</td>
<td>50-60Hz</td>
</tr>
<tr>
<td>Current consumption (AC/DC)</td>
<td>≤18mA</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-25 to +70°C (-13 to +158°F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-30 to +80°C (-22 to +176°F)</td>
</tr>
</tbody>
</table>

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PL 22
Pilot Lights

- Ø 22mm (0.87") dimension
- Compact versions
- Different colours choice
- 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.

Approvals

Technical data
- Rated imp. withstand voltage $U_{\text{imp}}$ 2500VAC 50Hz 1min.
- Rated insulation Voltage $U_{i}$ 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)
- Degree of protection IP 65

Ordering key

Dimensions

Types
- HL = High Lens
- RL = Round Lens
- LL = Low Lens
- TL = Teeth Lens
- FL = Flash Light

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

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

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network. 310708
Panel Actuators and Indicators
Type PL 22
Two Colours Pilot Light

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.

Approvals

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/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)
 Degree of protection: IP 65

Dimensions mm/Inches

Ordering key
PL 22S TC RG 24

Specifications are subject to change without notice. Pictures are just an example. For special features and/or customization, please ask to our sales network.
Panel Actuators and Indicators
Type PL 22
Buzzer and Flashing Buzzer

PL 22S BZK

PL 22S FBZR

Product description
Pilot lights and Buzzer are panel mounted device assemblies consisting of the housing, an internal lamp or buzzer, terminals, and a cover. Applications include industrial control panels of all types, equipment indicator panels, status alarm indicator. The buzzer volume is 95dB @ 10cm (3.94”), the current is 20mA.

Approvals

Technical data

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rated imp. withstand voltage $U_{imp}$</td>
<td>2500VAC 50Hz 1min.</td>
</tr>
<tr>
<td>Rated insulation Voltage $U_i$</td>
<td>500VAC</td>
</tr>
<tr>
<td>Allowable voltage fluctuation $\pm 20%$</td>
<td></td>
</tr>
<tr>
<td>Continuous operating life $\leq 100,000$</td>
<td></td>
</tr>
<tr>
<td>Ultrahigh brightness $\geq 1000cd/m^2 (\geq 9.29ftc)$</td>
<td></td>
</tr>
<tr>
<td>Applying frequency $50-60Hz$</td>
<td></td>
</tr>
<tr>
<td>Current consumption (AC/DC) $15-20$mA</td>
<td></td>
</tr>
<tr>
<td>Sound volume $95dB @ 10cm (3.94&quot;)$</td>
<td></td>
</tr>
<tr>
<td>Operating temperature $-25$ to $+70^\circ C (-13$ to $+158^\circ F)$</td>
<td></td>
</tr>
<tr>
<td>Storage temperature $-30$ to $+80^\circ C (-22$ to $+176^\circ F)$</td>
<td></td>
</tr>
<tr>
<td>Degree of protection $IP 40$</td>
<td></td>
</tr>
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</table>

Types

<table>
<thead>
<tr>
<th>Type</th>
<th>Description</th>
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</thead>
<tbody>
<tr>
<td>BZ</td>
<td>Buzzer</td>
</tr>
<tr>
<td>FBZ</td>
<td>Flashing buzzer</td>
</tr>
</tbody>
</table>

Colours

<table>
<thead>
<tr>
<th>Colour</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>R</td>
<td>Red only for FBZ type</td>
</tr>
<tr>
<td>K</td>
<td>Black only for BZ type</td>
</tr>
</tbody>
</table>

Voltages

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>6VAC/DC</td>
<td>110VAC/DC</td>
</tr>
<tr>
<td>12VAC/DC</td>
<td>220VDC</td>
</tr>
<tr>
<td>24VAC/DC</td>
<td>220VAC</td>
</tr>
<tr>
<td>48VAC/DC</td>
<td>380VAC</td>
</tr>
</tbody>
</table>

Dimensions mm/inches

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Accessories for Push Buttons, Selector Switches and Pilot Lights

### Holder type “M”
- **Material**: Zn + PBT
- **Note**: To install push button
- **Code**: PB MB M

### Holder type “P”
- **Material**: PBT
- **Note**: To install push button
- **Code**: PB MB P

### Holder type “N”
- **Material**: PC
- **Note**: To install push button
- **Code**: PB MB N

### Sealing cover IP67
- **Material**: Silicon rubber
- **Note**: Always on the head of operators, waterproof and dust, IP67.
- **Code**: PA SEAL COV

### Shield
- **Material**: Stainless steel
- **Note**: Always on the head of button, prevent strike and mistaking operation.
- **Code**: PA PB SHIELD

### Protection cover
- **Material**: PC
- **Note**: Always on the head of button, prevent strike and mistaking operation. Lockable.
- **Code**: PA PB COV

### Terminal shield
- **Material**: PC
- **Note**: Installed behind the wiring screws of the contact block to avoid electric shock.
- **Code**: PA 2 SHIELD

### Mounting ring Ø22mm (0.87”)
- **Material**: FE
- **Note**: Installed on plastic panel to strengthen mounting.
- **Code**: PA MR 22

### Mounting ring Ø25mm (0.98”)
- **Material**: FE
- **Note**: When the mounting hole is Ø25mm (0.98”), it should be add to the panel.
- **Code**: PA MR 25

### Front bezel set Ø30mm (1.18”)
- **Material**: AL
- **Note**: For Ø30mm (1.18”) panel hole, to have a thinner effect.
- **Code**: PA FBZL 30

### Label frame
- **Material**: PC
- **Note**: Hang it on the push button or pilot light, for symbol or text explanation.
- **Code**: PA LBF 11, PA LBF 18

### Warning plate
- **Material**: ABS
- **Note**: Thickness 1.5mm/0.059”
- **Code**: PA WP 6, PA WP 9

### Yellow protection ring
- **Material**: ABS Rubber
- **Note**: To protect button and to prevent strike or mistaking operation.
- **Code**: PA YPR 4, PA YPR 6

### Reducing ring for Pilot Light Ø22mm (0.87”)
- **Material**: ABS
- **Note**: To mount the Ø22mm (0.87”) pilot light into the hole for Ø25mm (0.98”) or Ø30mm (1.18”) of the panel.
- **Code**: PA RR 2, PA RR 3

### Fastening connector for Pilot Light Ø22mm (0.87”)
- **Material**: PC
- **Note**: Improve the quality of installation and reduce the time of installations.
- **Code**: PA PL CONN

### Panel hole cap Ø22mm (0.87”)
- **Material**: ABS
- **Note**: For blocking up prepared or useless holes on the panels.
- **Code**: PA PHC 22

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OUR SALES NETWORK IN EUROPE

AUSTRIA - Carlo Gavazzi GmbH
Ketzergasse 374, A-1230 Wien
Tel: +43 1 888 4112
Fax: +43 1 889 10 53
office@carlogavazzi.at

BELGIUM - Carlo Gavazzi NV/SA
Schaarbeeklei 213/1, B-1800 Vilvoorde
Tel: +32 2 257 4120
Fax: +32 2 257 4125
sales@carlogavazzi.be

DENMARK - Carlo Gavazzi Handel A/S
Over Hadsundvej 42, DK-8370 Hadsen
Tel: +45 89 60 2100
Fax: +45 86 98 15 30
handel@carlogavazzi.dk

FINLAND - Carlo Gavazzi OY AB
Petakentie 2-4, FI-00630 Helsinki
Tel: +358 9 755 2000
Fax: +358 9 755 20010
myynti@carlogavazzi.fi

FRANCE - Carlo Gavazzi Sarl
2ac de Paris Nord II, 69, rue de la Belle Etoile, F-95856 Roissy CDG Cedex
Tel: +33 1 49 39 98 60
Fax: +33 1 48 63 27 43
french.team@carlogavazzi.fr

GERMANY - Carlo Gavazzi GmbH
Rudolf-Diesel-Strasse 23, D-64331 Weiterstadt
Tel: +49 6151 81000
Fax: +49 6151 81 00 40
kontakt@carlogavazzi.de

GREAT BRITAIN - Carlo Gavazzi UK Ltd
7 Springlakes Industrial Estate, Deadbrook Lane, Hants GU12 4UH, GB-Aldershot
Tel: +44 1 252 339600
Fax: +44 1 252 32 6799
sales@carlogavazzi.co.uk

HEADQUARTERS
Carlo Gavazzi Automation SpA
Via Milano 13, I-20020 Lainate (MI), ITALY
Tel: +39 02 931 762
Fax: +39 02 931 730 00
info@carlogavazzi.it

SINGAPORE - Carlo Gavazzi Automation Singapore Pte. Ltd.
#04-01 UE Print Media Hub, Singapore 341567
Tel: +65 67 466 990
Fax: +65 67 466 980

SPAIN - Carlo Gavazzi SA
Avda. Iparaguirre, 80-B2, E-48940 Leioa (Bizkaia)
Tel: +34 94 480 4037
Fax: +34 94 480 10 61
gavazzi@carlogavazzi-sa.es

SWEDEN - Carlo Gavazzi AB
V:a Kyrkogatan 1, S-652 24 Karlstad
Tel: +46 54 85 1125
Fax: +46 54 85 11 77
gavazzi@carlogavazzi.se

SWITZERLAND - Carlo Gavazzi AG
Verkauf Schweiz/Vente Suisse
Sumpfstrasse 32, CH-632 Steinhausen
Tel: +41 41 747 4535
Fax: +41 41 740 45 40
verkauf_vente@carlogavazzi.ch

AUSTRIA - Carlo Gavazzi GmbH
Ketzergasse 374, A-1230 Wien
Tel: +43 1 888 4112
Fax: +43 1 889 10 53
office@carlogavazzi.at

CANADA - Carlo Gavazzi LTEE
3777 Boulevard du Tricentenaire
Montreal, Quebec H1B 5W3
Tel: +1 514 644 2544
Fax: +1 514 644 28 08
info@carlogavazzi.com

ITALY - Carlo Gavazzi SpA
Via Milano 13, I-20020 Lainate
Tel: +39 02 931 762
Fax: +39 02 931 730 00
info@carlogavazzi.it

NETHERLANDS - Carlo Gavazzi BV
Wijzeremerweg 23, NL-1948 NT Beverwijk
Tel: +31 251 22 9345
Fax: +31 251 22 60 55
info@carlogavazzi.nl

NORWAY - Carlo Gavazzi AS
Melkeveien 13, N-3919 Porsgrunn
Tel: +47 35 93 0800
Fax: +47 35 93 08 01
gavazzi@carlogavazzi.no

OUR PRODUCTION SITES

CARLO GAVAZZI

HEADQUARTERS
Carlo Gavazzi Automation SpA
Via Milano, 13 - I-20020
Lainate (MI), ITALY
Tel: +39 02 931 762
info@carlogavazzi-automation.com
www.carlogavazzi.com/ac

Further information on
www.gavazziautomation.com www.carlogavazzi.com/ac