

Control and signalling devices Ø 22.5

Salient features

This range of Ø 22.5 pushbuttons, selector switches, illuminated switches, illuminated selector switches and pilot lights have been designed to provide the following salient features:

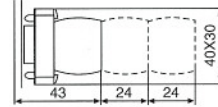
- Economy of space
- Aesthetically elegant
- SELF WIPING CONTACT
- Robust in materials of construction
- Simple to fix - screw driver is all that required
- Safe in operation
- Fixing method unaffected by excessive vibration-unit does not rotate
- Very good flame resistance
- Protection against electric shock (unit earthed)
- Shrouded terminals

Actuators

The circular actuators have chrome plated metal bezels, and are interchangeable on the different types of contact elements.

Contact elements

The contact elements are double break and have **self wiping** contacts. The elements are interchangeable and can be stacked without additional hardware. 1 to 6 elements (NO or NC) can be used with non illuminated actuators, whereas, 1 to 4 elements (NO or NC) can be used for illuminated actuators. **Gold plated NO and NC contact elements for low voltage, low current switching circuits < 25 mA, are available.**



Illuminated pushbuttons and pilot lights

Pilot lights and illuminated switches are suitable for direct connection, through series resistor, through series resistor and diode, using bayonet cap filament bulb type BA9S, as follow :

Supply voltage for direct connection without series resistor	: 6V-130V
Supply voltage through series resistor	: 12V-415V
Supply voltage through series resistor and diode	: 230V AC
Bulb	: Filament, type BA9S with OAL max., 28 mm

Pilot lights and illuminated switches are available with integral LED chips, suitable for operating at various voltages namely 6V, 12V, 24V, 30V, 48V, 63.5V, 110V, 125V, 230V AC or DC and 415V AC. Pilot lights and illuminated actuators are available with LED bulbs (bayonet cap, BA9S design with OAL max. 28 mm) suitable for operating at various voltages namely 24V, 48V, 110V and 230V. On request an extra short circuit protection consisting of built in fuse in the LED modules can be provided.

Specific models of pilot lights are available with integral LED chips suitable for operating over wide range of voltage 24V to 230V AC or DC.

Pilot lights are available with built in transformers suitable for operating at 230, 110 volts AC input and 6V, 12V and 24V output.

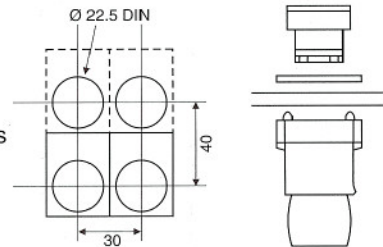
Terminals

Contact elements and pilot lights are designed to have shrouded terminals with combi screws.

Fixing

The control devices Ø 22.5 can be fixed in any position on panels of 1 to 6 mm thickness. We recommend minimum fixing centers of 30 mm X 40 mm. However, the dimensions and configuration should be decided on the basis of the application. The actuators and the lense assemblies lock on to the holding bracket using a bayonet type of fixing which enables a simple and fast assembly. The complete assembly is locked into position on the panel by two M4 pointed screws on the bracket, tightened equally from the rear. The screws should be tightened adequately to such an extent as to pierce through the paint on the panel from inside. These screws also ensure the earthing of the unit.

Fixing arrangement



Electrical and mechanical characteristics

Environment

Standard conformity	: CSA - C22.2 No. 14-95, UL508, EN 60947 - 5 - 1 2000
Approvals	: CSA - C22.2 No. 14-95, UL508, VDE 0660
Degree of protection	: IP 65 as per IEC 529, NEMA 4X, 12 as per UL 50
Ambient	: - 25 C to + 70 C
Operating position	: All positions

Contact Block

Rated insulation voltage	: 500 V
Rated thermal current	: 10 A
Contact operation	: Self wiping , slow break NO or NC
Make and break capacity	
As per IEC 947 - 5 - (1) 1990	: AC 15 4 A, 415V AC
	: DC 13 0.5 A, 110V DC

As per CSA - C22.2 No. 14-95, UL508,

Terminal capacity	: minimum 1 x 0.5 mm ² , maximum 2 x 1.5 mm ² or 1 x 2.5 mm ²
Terminal marking	: 1-2 for NC, 3-4 for NO
Short circuit protection	: 10 A cartridge fuse HRC type, rated for resistive loading
Mechanical life	: Over 1 million operations

Electric rating		V	24	120	230	V	24	110
(for 1 million operation cycles, operation at 3600 cycles per hour, load factor 0.5)	: AC 15	A	4	3	2	DC 13	A	0.5 0.2

Modules for pilot light & illuminated switches with integral LED / multichip LED bulb (BA9S cap)

Current consumptions (applicable to all colours)

24 VAC/DC, 110 VAC & 240 VAC	: max. 20 mA
110 VDC	: max. 15 mA
220 VDC	: max. 10 mA
Service life (at nominal voltage and at ambient temperature of 25°C)	: 100,000 hours

Voltage limits (nominal voltage)	: < 20% of rated voltage >
Short circuit protection	: on specific request
Terminal capacity	: min. 1 x 0.5 mm ² , max. 2 x 1.5 mm ² or 1 x 2.5 mm ²

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Fig 1 to 7