

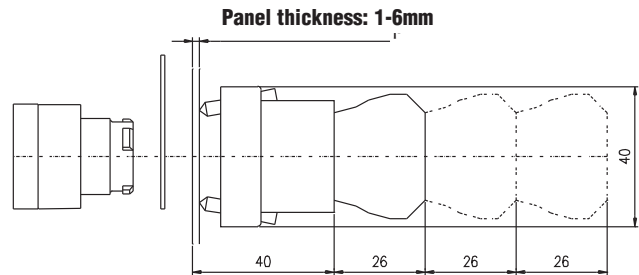
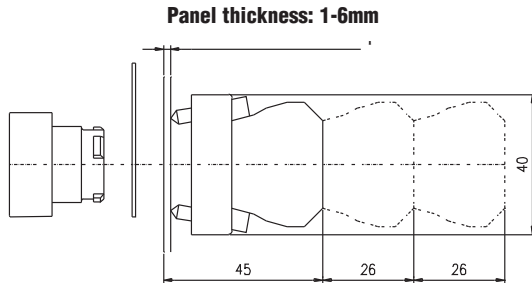
# 22 mm Plastic Pilot Devices Specifications

## Assembly information

These pushbuttons and indicator lights are supplied with the appropriate contact blocks, unless otherwise indicated. Use these drawings as a guide to make sure there is adequate clearance behind the panel.

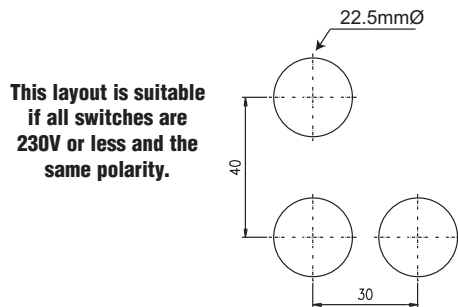
### Pushbuttons and selector switches

### Lighted pushbuttons and selector switches/pilot lights

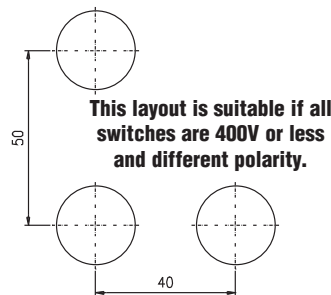


## Panel holes

For safe operation, use these mounting hole drawings to ensure that there is adequate space between switches.

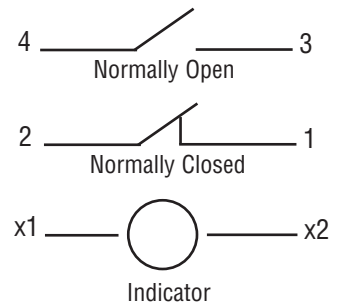


This layout is suitable if all switches are 230V or less and the same polarity.



This layout is suitable if all switches are 400V or less and different polarity.

## Typical Wiring



**NOTE:** Contact blocks can be arranged up to three deep by two wide.

## Specifications

These specifications apply to all the 22 mm plastic pushbuttons and switches.

Physical Specifications	
<b>Standards Reference</b>	CEI EN 60947-5-1, CSA C22-2 n.14
<b>Approvals</b>	CSA, IMQ (where specified), UL File E189258
<b>Enclosure Material</b>	Fiberglass reinforced thermoplastic
<b>Contacts Material</b>	Gold plated silver
<b>Protection Degree</b>	IP 40 for GCX3151-24, GCX3151-120, GCX3153-24 and GCX3153-120. IP 65 for all others. (See Appendix of this catalog for explanation of IP ratings according to IEC 144 CEI 70-1.)
<b>Electric Shock Protection</b>	IEC 536, Class II
<b>Temperature Ratings</b>	Storage: -40° to 80°C (-40° to 176° F) Operating: -25° to +70°C (-13° to 158° F)
<b>Working Positions</b>	All working positions are allowed
<b>Mechanical Life</b>	Pushbuttons, selector switches, joy stick switches: 1,000,000 operations Emergency mushrooms and push-push pushbuttons: 300,000 operations
<b>Positive Opening Operation</b>	(according to IEC 947-5-1) All functions incorporating an NC contact are positive opening operation

Electrical Specifications	
<b>Rated Thermal Current (contact block)</b>	A300, Q300 (Refer to page e24-51 for further information)
<b>Rated Insulation Voltage</b>	Ui 660V according to CEI EN 60947-5-1, 300V according to CSA C22-2 n.14 and UL 508
<b>Dielectric Strength</b>	3KV (1 second)
<b>Insulation Resistance</b>	2MΩ min. (500VDC)
<b>Initial Contact Resistance</b>	≤25mΩ
<b>Short-Circuit Protection*</b>	Cartridge fuses gl 10 A-500V 10, 3x3811 100 KA
<b>Terminal Markings</b>	According to CENELEC EN 50013
<b>Connections</b>	Single screw with non-loosening plate clamp, 14AWG max.
<b>Contacts Operation</b>	Self-cleaning types EN01 (N.C.) EN 10 (N.O.) slow action, positive opening
<b>Operation Frequency</b>	3600 operations per hour max.
<b>Utilization Category</b>	<b>AC15</b> (Control of AC electromagnetic loads) 24 volts AC at 10 amps 130 volts AC at 6.5 amps <b>DC13</b> (Control of DC electromagnetic loads) 24 volts DC at 1.5 amps 110 volts DC at 0.5 amps

\*Note: Recommended, not supplied

# 22 mm Plastic Joystick Selector Switches

## Joystick selector switches

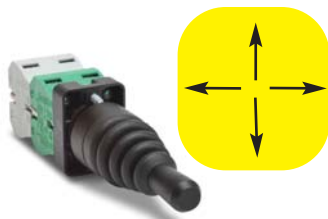
Four models available



**ECX3510** (Two-position momentary)

**ECX3512** (Two-position maintained)

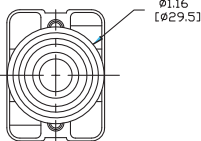
Moving the joystick **UP** will close contact on one side. Moving it **DOWN** will close contact on other side.



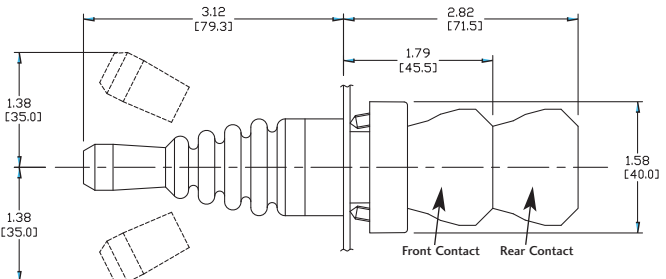
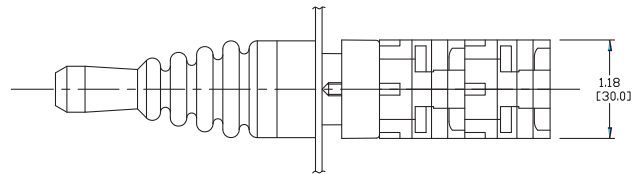
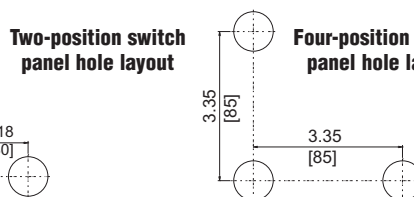
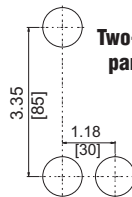
**ECX3520** (Four-position momentary)

**ECX3524** (Four-position maintained)

- Moving the joystick **UP** will close Green contact on one side and moving it **DOWN** will close Gray contact located behind it.
- Moving the joystick **RIGHT** will close Green contact on other side and moving it **LEFT** will close Gray contact located behind it.



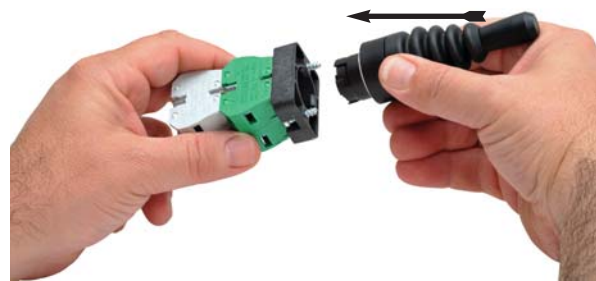
## Dimensions



Note: All dimensions are in inches [millimeters].

## Important installation note

It is very important that the joystick be assembled correctly to ensure proper operation.



Insert operator into support base (panel is not shown).



Twist clockwise until it clicks into place. Carefully tighten the securing screws. Do not over-tighten. If the operator is not "clicked" into position before the screws are tightened, the switch will not work properly.

Part Number	Description	Price
<b>ECX3510</b>	22 mm plastic joystick-style selector switch, <b>two-position momentary</b> , two N.O. contact blocks <-->	
<b>ECX3512</b>	22 mm plastic joystick-style selector switch, <b>two-position maintained</b> , two N.O. contact blocks <-->	
<b>ECX3520</b>	22 mm plastic joystick-style selector switch, <b>four-position momentary</b> , four N.O. contact blocks <-->	
<b>ECX3524</b>	22 mm plastic joystick-style selector switch, <b>four-position maintained</b> , four N.O. contact blocks <-->	



Note: Four-position switches use two special contact blocks which are not replaceable.

Note: When using switches having two-deep contact blocks (4-position joysticks) with the 22 mm plastic enclosures, use enclosures that are 74 mm deep; 51 mm-deep enclosures are too shallow.