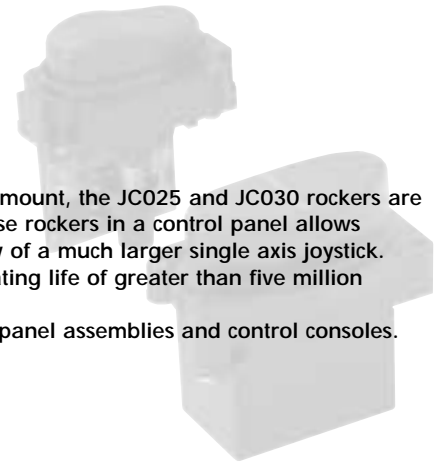


# JC025 AND JC030

## SINGLE AXIS ROCKER



Developed for applications where compact size and minimal above panel height is paramount, the JC025 and JC030 rockers are very low profile whilst still providing precise fingertip control in one axis. The use of these rockers in a control panel allows designers to develop very low profile assemblies whilst still maintaining the functionality of a much larger single axis joystick. These rockers have been designed for maintenance-free operation throughout an operating life of greater than five million operations.

Typical applications include remote control chest packs, pendant controllers, low profile panel assemblies and control consoles.

### PERFORMANCE MECHANICAL

|                            |   |                          |                 |
|----------------------------|---|--------------------------|-----------------|
| Breakout force             | N | 5*                       |                 |
| Operating force            | N | 15*                      | Full deflection |
| Maximum allowable force    | N | 50*                      | Full deflection |
| Rocker operating angle     | ° | ±10                      |                 |
| Rocker action              |   | Self centering           |                 |
| Expected life (operations) |   | >5 million               |                 |
| Weight                     | g | 30                       |                 |
|                            |   | *14mm radius from center |                 |

### ENVIRONMENTAL

|                          |    |  |
|--------------------------|----|--|
| Operating temperature    | °C | -25 to +70                                   |
| Storage temperature      | °C | -40 to +80                                   |
| Environmental protection |    |  |
| JC025                    |    | IP65 (when correctly panel sealed) IEC 60529 |
| JC030                    |    | IP60 (when correctly panel sealed) IEC 60529 |
|                          |    | Units supplied with O ring seal              |

### ELECTRICAL

#### Analogue Track

|                              |     |                                      |
|------------------------------|-----|--------------------------------------|
| Resolution                   |     | Virtually infinite                   |
| Track resistance (±20%)      | kΩ  | 1.8, 2, 2.9 or 5                     |
| Track electrical angle       | °   | ±9                                   |
| Output voltage range         | %   | 0-100, 10-90 or 25-75 of input (±2%) |
| Center tap voltage (no load) | %   | 48 - 52 of applied voltage           |
| Center tap angle             | °   | 1.5 either side of center            |
| Supply voltage - maximum     | Vdc | 22                                   |
| Wiper circuit impedance      | MΩ  | Greater than 0.1**                   |
| Power dissipation @ 25°C     | W   | 0.25 (no load)                       |

\*\* The long life resistive elements require a high impedance load in the wiper circuit to minimise the current flowing through the wiper for optimum conditions

#### Switch -

#### Directional or Center Off

|                          |     |   |
|--------------------------|-----|---|
| Switch operating angle   | °   | 2.5 either side of center   |
| Supply voltage - maximum | Vdc | 35  |
| Load current - maximum   | mA  | 5 resistive (or 200 with reduced switch life of 1 million operations) |

### ORDERING CODES

JC025 - .... - .... - BLK

Track resistance  
**N** = 1.8k 0-100%  
**E** = 5k 0-100%  
**R** = 2k 10-90%  
**Q** = 2.9k 25-75%

Rocker profile  
**STD** = standard  
**V00** = V profile

## JC030 - .... - V00 - BLK

Track resistance

No option on rocker profile for JC030

**N** = 1.8k 0-100%

**E** = 5k 0-100%

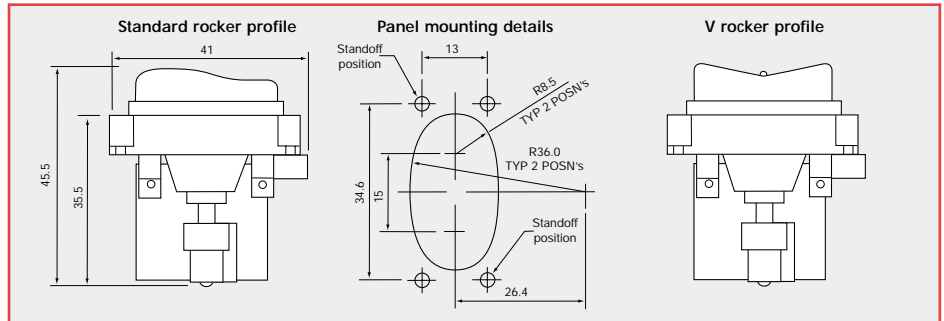
**R** = 2k 10-90%

**Q** = 2.9k 25-75%

## DIMENSIONS AND MOUNTING OPTIONS

### JC025

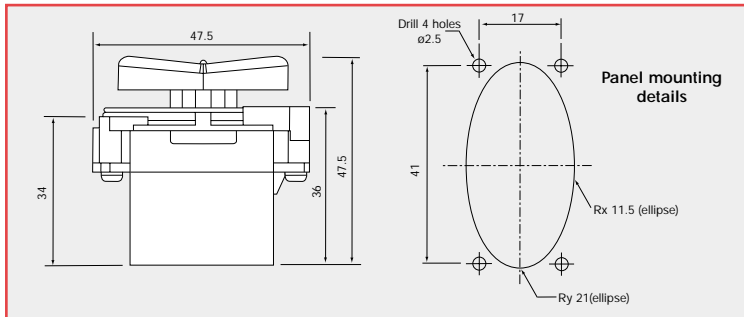
It is recommended that the JC025 is fitted from the back of the mounting panel using four M3 x 6mm female, self-clinching stand-offs (e.g. PEM ref. CSS M3-6) fitted to the back of the panel at opposite positions. The stand-offs are used in conjunction with four M3 x 6mm pan head screws. The panel cut-out and centers for the stand-offs are as shown in the panel mounting detail below.



The recommended panel thickness is 3mm. The O ring supplied must be used to seal the JC025 rocker assembly to the mounting panel to enable IP65 protection.

### JC030 - V profile only

It is recommended that the JC030 is fitted from the back of the mounting panel using four thread forming screws (supplied). Tighten the screws until initial contact with the body occurs ensuring body/flange relationship is square and flat. Continue tightening in 1/4 turn increments until a torque of 0.1 - 0.15Nm is achieved. The panel cut-out and centers are as shown below.



The recommended panel thickness is 3mm. The O ring supplied must be used to seal the JC030 rocker assembly to the mounting panel to enable IP60 protection. Supplied with 4 x panhead Pozidrive self tapping screws for mounting to panel.

Penny+Giles has designed the JC030 to meet IP60 rating, but it is the final responsibility of the customer to approve the product in it's application.

## ELECTRICAL CONNECTIONS

PTFE insulated 7/0.120 (28AWG) flying leads, 300mm long

### Description

Positive voltage supply  
Center tap  
Negative or zero voltage supply  
Output voltage signal  
N/O switch, rocker backward  
N/O switch, rocker forward  
Common terminal for switch

### Wire color

Pink/Grey  
Yellow/Red  
White/Red  
Pink  
Green  
Blue/Orange  
Black