## JC 025/030 SINGLE-AXIS FINGERTIP ROCKER



Developed for applications where compact size and minimal above panel height is paramount, the JC025/030 rockers are very low profile whilst still providing precise fingertip control in one axis.
Designed for use with an electronic controller, the conductive plastic elements in the JC025/030 generate analogue and switched reference signals proportional to the distance and direction over which the rocker is moved. The analogue output can be configured to provide signals for fault detection circuits within the controller. A center tap on the analogue track provides an accurate voltage reference for the center
position or a zero point for a bipolar supply voltage.

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. With the absence of microswitches and camshafts there is no need to maintain the rockers throughout their operating life in excess of 5 million cycles.
Typical applications include remote control chest packs and low profile panel assemblies.


JC030


| Tracks | N | R | Q | * |
| :--- | :--- | :--- | :--- | :--- |
| Track Resistance | $1 \mathrm{k} 6 \Omega$ | $2 \mathrm{k} \Omega$ | $3 \mathrm{k} 2 \Omega$ |  |
| Output Voltage Range | $0 \%$ to $100 \%$ Vs | $10 \%$ to $90 \%$ Vs | $25 \%$ to $75 \%$ Vs |  |
| Directional Switch Gap | $\pm 2.5^{\circ}$ | $\pm 2.5^{\circ}$ | $\pm 2.5^{\circ}$ |  |


| Center Return Spring | STD |
| :--- | :--- |
| Breakout Force | 5 N |
| Operating Force | 15 N |

* Other track resistances - check for availability


Panel mounting details


Panel mounting details
JC030

## Specifications

| Mechanical |  |  |
| :--- | :--- | :--- |
| Breakout Force | 5 N | 14mm radius from center |
| Operating Force | 15 N | Full deflection, 14 mm radius from center |
| Maximum Applied Force | 50 N | Full deflection, 14 mm radius from center |
| Mechanical Angle of Movement | $\pm 12^{\circ}$ |  |
| Electrical Angle of Movement | $\pm 10^{\circ}$ |  |
| Expected Life (Operations) | $>5$ million |  |
| Mass | 30 g |  |


| Environmental |  |
| :--- | :--- |
| Operating Temperature Range | $-25^{\circ} \mathrm{C}$ to $+70^{\circ} \mathrm{C}$ |
| Storage Temperature Range | $-40^{\circ} \mathrm{C}$ to $+80^{\circ} \mathrm{C}$ |
| Environmental Sealing Above the Flange | IP65 (when correctly panel sealed) |
|  | Unit supplied with "0" ring |


| Electrical General | Potentiometer wiper - See Design Note in rear of Data Sheet |
| :--- | :--- |
| Maximum Load Current | Directional switches - 200mA Resistive |
|  | 0.25 W at $25^{\circ} \mathrm{C}$ |

## Analogue Track

| Total track Resistance | $1 \mathrm{k} 6 \Omega, 2 \mathrm{k} \Omega$ or $3 \mathrm{k} 2 \Omega$ | Tolerance $\pm 20 \%$ |
| :---: | :---: | :---: |
| Output Voltage Range | $0 \%$ to $100 \%$ Vs or $10 \%$ to $90 \%$ Vs |  |
|  | or $25 \%$ to $75 \% \mathrm{Vs}$ | Tolerance $\pm 2 \%$ |
| Center Tap Voltage (1M $\Omega$ Load) | $50 \% \mathrm{Vs}$ | Tolerance $\pm 2 \%$ |
| Center Tap Angle | $1.5{ }^{\circ}$ either side of center | Tolerance $\pm 1 \%$ |
| Directional Switch |  |  |
| Directional or Center Off Switch | Standard |  |
| Switch Operating Angle | $2.5{ }^{\circ}$ either side of center | Tolerance $\pm 1^{\circ}$ |
| Maximum Supply Voltage (Vs) | 35 Vdc (Switch only) |  |
| Termination Details |  |  |
| Description | Wire Color |  |
| Positive supply voltage | Pink/Gray |  |
| Center tap | Yellow/Red |  |
| Negative or zero supply voltage | White/Red |  |
| Output voltage signal | Pink |  |
| $\mathrm{N} / \mathrm{O}$ signal handle forward | Green |  |
| N/O signal handle back | Blue/Orange |  |
| Common terminal for directional switches | Black |  |

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[^0]:    All dimensions in mm

