

- Extremely robust design for arduous applications
- Centre detent for enhanced return-to-center performance
- Under panel depth has been minimized to 78mm
- Pivot-point position minimizes handle cable flex
- Rated for 5 million cycles
- Hall-effect sensor technology
- Dual outputs with sense options
- Electronics sealed to IP69K
- Can be supplied as 'base-only'
- More functions, e.g. CAN interface, to follow
- Multiple handle options ...

**HE****AMF****MG**

The JC8000 offers high mechanical strength for very heavy-duty applications and features a centre detent that provides guaranteed return-to-centre, as well as a positive feel to the operator, throughout 5 million cycles. While maintaining an overall minimum under-panel depth of the joystick body, the shaft pivot-point position has been designed to be as low as possible so as to ensure a high strength capability in the small body space envelope. This reduction in angular deflection reduces wear on base-to-handle wiring, so enhancing overall reliability.

Hall-effect sensing eliminates contact wear and provides safety functionality via dual outputs, which can be set to positive or negative ramps, or a combination of both. Electronic robustness is assured with sealing of the internal PCB to a rating of IP69K.

A choice of multi-function handles are available, plus the option of 'base-only' enabling custom handles to be fitted. Beyond this initial release, further models will be introduced to provide increased handle functionality, CAN bus interfaces and mechanical variation.

SPECIFICATIONS

SUPPLY

| | |
|---------------------------------|--|
| SUPPLY VOLTAGE | 5Vdc \pm 0.5Vdc |
| OUTPUT VOLTAGE (FACTORY SET) | 0.5–4.5V 1.0–4.0V 1.25–3.75V |
| CENTRE REFERENCE | 44.5–55.5% of supply voltage |
| OUTPUT SENSE | The dual outputs can be configured to have positive ramps, negative ramps or a combination of both. |
| CURRENT CONSUMPTION | 64mA |
| CONNECTION | Flying lead |

MECHANICAL

| | |
|--------------------|---------------------------------|
| BREAKOUT TORQUE | 1.2Nm |
| OPERATING TORQUE | 1.2Nm |
| MAXIMUM LEVER LOAD | 240Nm |
| MECHANICAL ANGLE | $\pm 16^\circ$ on X- and Y-axes |
| GATE | Square |
| EXPECTED LIFE | 5 million cycles |
| WEIGHT | 1.1kg without handle |

ENVIRONMENTAL

| | |
|--------------------------|--|
| OPERATING TEMPERATURE | -40°C to 80°C |
| STORAGE TEMPERATURE | -50°C to 85°C |
| ENVIRONMENTAL PROTECTION | IP66 above panel IP69K electronics |
| EMC IMMUNITY LEVEL | 100V/m |
| EMC EMISSIONS LEVEL | Complies with EN 55011 |
| ESD IMMUNITY LEVEL | EN 61000-4-2 ± 15 kV air discharge |
| VIBRATION | EN 60068-2-64 random, 3.6gn, 10-200Hz, 2h per axis |
| SHOCK | EN 60068-2-27 25gn, 10ms, 500 in 6 directions |