

- 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