

SINGLE AXIS HALL EFFECT JOYSTICK WITH RETURN TO CENTER FEATURE



The JHS-RC0001 is a high reliability single axis, return to center joystick, resistant to the levels of temperature, shock, vibration and EMI/RFI typically found in off-highway environments. The contactless Hall Effect sensor eliminates many of the failures associated with traditional joystick technology. The JHS-RC has been tested to 4 million cycles with no sign of boot wear and no degradation of electrical performance. The electronics are sealed to IP68S. It offers resistance to RFI at 100V/M and EMI per MIL-STD-461D/SAE J1113-22; standard 0.5 to 4.5VDC proportional output. The JHS-RC is recommended for the construction and off-road vehicle market.

Features:

- Rugged compact design
- Hall Effect contactless sensing
- Tested to 4 million cycles
- Smooth spring return to center
- +/- 25° travel in a rugged housing
- Outstanding EMI/RFI immunity
- RoHS & WEEE compliant
- Redundant output available

Standard Characteristics/Ratings:

ELECTRICAL RATINGS: Vcc = 5V @ 20°C Load = 1mA

Electrical				
	Units	Min	Typ	Max
Supply Voltage	VDC	4.5	5	5.5
Output at Full Travel Direction 1 (+ Travel)	VDC @ 5V Vcc	4.25	4.5	4.75
Output at Full Travel Direction 2 (- Travel)	VDC @ 5V Vcc	0.25	0.50	0.75
Output at Center	VDC @ 5V Vcc	2.25	2.5	2.75
Supply Current Per Sensor (B = 0, Vcc = 5V, Io = 0)	mA	N/A	N/A	10

ELECTRONICS:

Seal Integrity: Electronics watertight per IP68S

MECHANICAL:

Mechanical Life: 4 million cycles

Travel Angle: 25° typical, 24° min to 26° max

Operating Force: 16 oz typical, 10 oz min to 22 oz max

ENVIRONMENTAL:

Operating Temp Range: -40°C to +85°C

Storage Temp Range: -65°C to 105°C

Humidity: 96% RH, 70°C, 96 hours

Drop: 3 feet max to concrete

Vibration: Per MIL-810F min integrity

RFI: Withstand 100V/M, 14KHz to 1GHz

EMI: Withstand per MIL-STD-461D/SAE J1113-22

MATERIALS:

Housing: Thermoplastic

Bellows: EPDM, black (typical)

Cable: 3/22 AWG (19 strands of 34 AWG TSC)
PVC/Polyurethane blend outer jacket

Mounting Hardware: 10-24 x 3/4 carriage bolts, self-locking nuts

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