

# SINGLE AXIS RETURN TO CENTER JOYSTICK

SINGLE AXIS HALL EFFECT JOYSTICK WITH RETURN TO CENTER FEATURE



The JHS-RC0001 is a high reliability single axis, spring-return-to-center joystick, resistant to the levels of temperature, shock, vibration and EMI/RFI typically found in off-highway construction environments. The contactless Hall effect sensor eliminates many of the failures associated with traditional joystick technology. The JHS-RC has been tested to four million cycles with no sign of boot wear and no degradation of electrical performance. The electronics are sealed to IP68S. It offers immunity to RFI and EMI per SAE J1113; 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
- Redundant output available
- RoHS compliant

Standard Characteristics/Ratings:				
<b>ELECTRICAL RATINGS: Rated at 5V @ 20°C Load = 1ma (4.7kΩ)</b>				
<b>Electrical</b>				
	<b>Units</b>	<b>Min</b>	<b>Typ</b>	<b>Max</b>
Supply Voltage	VDC	4.5	5	5.5
Output Tolerance at Full Travel Direction 1 (+ Travel)	VDC @ 5V Vcc	-.25	N/A	+.25
Output Tolerance at Full Travel Direction 2 (- Travel)	VDC @ 5V Vcc	-.25	N/A	+.25
Output Tolerance at Center	VDC @ 5V Vcc	-.25	N/A	+.25
Supply Current Per Sensor (B = 0, Vcc = 5V, Io = 0)	mA	N/A	N/A	10
<b>ELECTRONICS:</b>				
<b>Seal Integrity:</b>	Electronics watertight per IP68S			
<b>MECHANICAL:</b>				
<b>Mechanical Life:</b>	4 million cycles			
<b>Travel Angle:</b>	25° typical, 24° min to 26° max			
<b>Operating Force:</b>	2.5 lbs. typical, 1.5 lbs. min to 3.5 lbs. max			
<b>ENVIRONMENTAL:</b>				
<b>Operating Temp Range:</b>	-40°C to +85°C			
<b>Humidity:</b>	96% RH, 70°C, 96 hours			
<b>Vibration:</b>	Per MIL-810F min integrity			
<b>RFI:</b>	Withstand per SAE J1113			
<b>EMI:</b>	Withstand per SAE J1113			
<b>MATERIALS:</b>				
<b>Housing:</b>	Thermoplastic			
<b>Bellows:</b>	EPDM, black (typical)			
<b>Cable:</b>	3/22 AWG (19 strands of 34 AWG TSC) PVC/Polyurethane blend outer jacket			
<b>Mounting Hardware:</b>	10-24 x 3/4 carriage bolts, self-locking nuts			

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