

UP TO 10 MILLION OPERATIONAL CYCLES IN ALL DIRECTIONS



JHM with Center P9 Switch



JHM with Hall Effect Rocker

The JHM series Medium Hall Effect Joystick is a full function operator control in a package that will fit in an armrest or on a panel. It utilizes OTTO's patented Hall Effect technology for unmatched life and reliability. Electronics are sealed and it has an operational life of 10 million cycles in all directions. Additional options include CANopen® and CAN J1939 versions, multiple analog and digital auxiliary control outputs, redundant sensors and a variety of output configurations, along with a variety of grip and switch options.

## Features:

- Designed for armrest & panel mounting
- Proven contactless analog output Hall Effect technology
- Electronics sealed to IP68S
- Up to 10 million operational cycles in all directions
- Available with a variety of grip & switch options
- Redundant sensors available
- Various output configurations

### Standard Characteristics/Ratings:

#### GENERAL:

**Sensor Type:** Hall Effect analog, factory programmed with temperature compensation, ground and supply line break detection, over voltage and reverse voltage protection

**Design:** Contactless sensing

**Magnet:** Dual bar permanent magnet

#### ELECTRICAL RATINGS: Rated at Vcc = 5V @ 20°C Load = 1mA (4-7KΩ)

Electrical	Units	Min	Typ	Max
Supply Voltage	VDC	4.5	5	5.5
Output Voltage Tolerance +Y, -Y, +X, -X 0° Deflection	VDC @ 5V Vcc	-0.25	N/A	+0.25
Output Voltage Tolerance at Full Travel +Y, -Y, +X, -X Direction	VDC @ 5V Vcc	-0.25	N/A	+0.25
Supply Current Per Sensor	mA	N/A	N/A	10
Output Source Current Limit	mA	-1	N/A	1

#### MECHANICAL:

**Mechanical Life:** In all directions, 1,000,000 cycles min up to 10,000,000 cycles depending on configuration

**Travel Angle:** 18° min to 22° max

**Overtravel Angle:** 0.5° min to 1.5° max

**Operating Force:** With bellows, 20°C to 85°C at grip 0.5 lb. min to 3.5 lbs. max

#### ENVIRONMENTAL:

**Operating Temp Range:** Low force -20°C to +85°C  
High force -40°C to +85°C

**Drop:** 1 meter max to concrete

**Panel:** Sealed to IP64

**Electronics:** Sealed to IP68S

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

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

#### MATERIALS:

**Housing:** Thermoplastic, black

**Bellows:** Neoprene or silicone, black

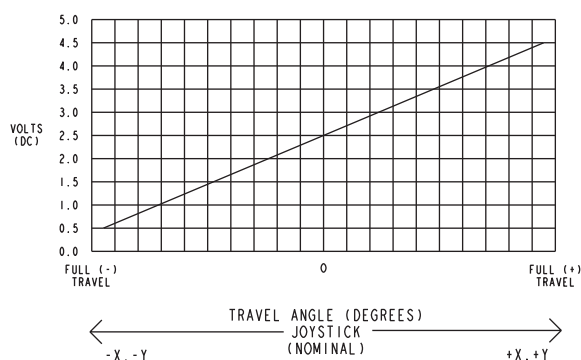
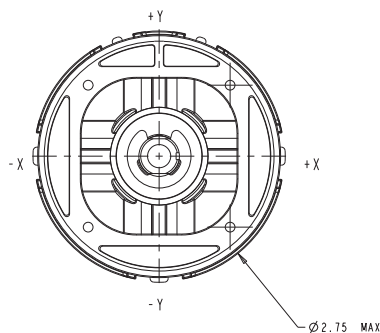
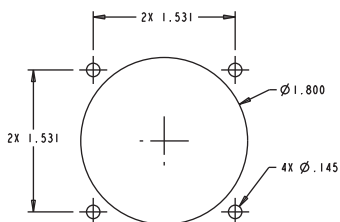
**Wires:** Per customer application

**Mounting Hardware:** Panhead screws

# MEDIUM HALL EFFECT JOYSTICK

UP TO 10 MILLION OPERATIONAL CYCLES IN ALL DIRECTIONS

SUGGESTED PANEL OPENING:  
RECOMMENDED PANEL THICKNESS: .050 TO .150



Shown is an example of one output per axis configuration. For additional output configurations, contact factory. Redundant sensors are available, please contact factory.

