JOYSTICKS

OTTO
Expect Excellence.

HALL EFFECT TECHNOLOGY JOYSTICK

The JH Series Joystick is designed around the rugged mechanism of a traditional 4-way hydraulic joystick, but it utilizes contactless Hall effect technology for increased life and more dependable performance in the field. This combination provides performance and features never before available in an electronic joystick. The JH series uses OTTO's field-proven dual magnet configuration found in OTTO's HPL Linear Output Hall Effect switches. The Hall effect sensors are fully protected against electromagnetic and radio frequency interference (EMI and RFI) up to 100V/M. Programmable sensors with built-in magnetic temperature compensation logic ensure consistent and repeatable operation. The JH series is designed for maximum flexibility in features and in tactile feel. A wide variety of input and output configurations are available to satisfy different applications. The modular electronic package can be configured for both standard and custom I/O requirements including CANbus and other output options available.

Features:

- **Adapts to a wide variety of shaft styles**
- **15 million cycle life in all directions**
- **300 lbs. static load strength at grip reference point (grp)**
- **Electronics sealed to IP68S**
- **EMI/RFI shielding up to 100V/M**
- **Factory programmable pretravel & overtravel**
- **Analog, CANbus, USB & other custom output options available**
- **Redundant outputs available**
- **Fail safe & neutral indicator**
- **Single and dual axis available**
- **Z axis available with universal grip only**
- **Programmable sensors**
- **5V standard regulator available to accommodate a 9-32VDC power supply**
- **Various output configurations**
- **Available with a variety of grip & switch options**
- **RoHS/WEEE/Reach compliant**

JH Joystick Shown with OTTO Medium Universal Grip, K1 Rockers and P3 Pushbutton Switches

Specifications Subject To Change Without Notice

GS Global Resources • 1-800-261-8735 • gsglobalresources.com
926 Perkins Drive, Mukwonago, WI 53149

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Standard Characteristics/Ratings:

GENERAL:

Sensor Type:	Hall effect analog, 1 or 2 outputs per axis
Design:	Dual magnet

ELECTRICAL RATINGS: Rated at 5V @ 20°C Load = 1ma (4.7kΩ)

Electrical	Units	Min	Typ	Max
Output Voltage 0° to 2° Deflection Tolerance at Center @ 5V Vcc	VDC	-0.15	N/A	+0.15
Output Voltage 19° to 20° Deflection Tolerance at Full Load @ 5V Vcc	VDC	-0.15	N/A	+0.15
Supply Current Per Sensor	mA	N/A	N/A	10
Output Source Current Limit	mA	-1	N/A	1

MECHANICAL:

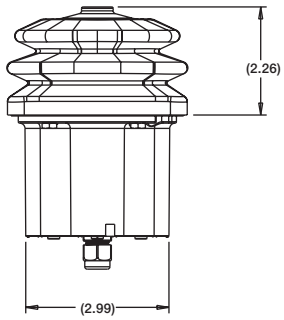
Mechanical Life:	9,000,000 min. up to 15,000,000 in all directions depending on configuration
Travel Angle:	20° typical
Overtravel Angle:	0.5° min to 1.5° max
Operating Force:	With bellows, 20°C to 85°C at grip, 3.5 lbs. min to 5.5 lbs. max With bellows, -40°C at grip, 13.0 lbs. min to 18.0 lbs. max

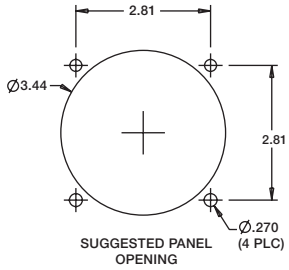
ENVIRONMENTAL:

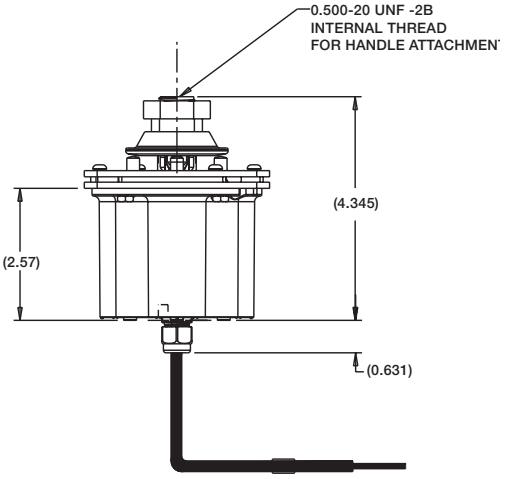
Operating Temp Range:	-40°C to +85°C
Humidity:	96% RH, 70°C, 96 hours
Vibration:	10g, 10Hz to 2KHz swept sinusoidal
Electronics:	Sealed to IP68S
EMI/RFI:	Per SAE J1113 (typical), contact factory for details
Sand/Dust:	Without bellows, withstand per SAE J1455

MATERIALS:

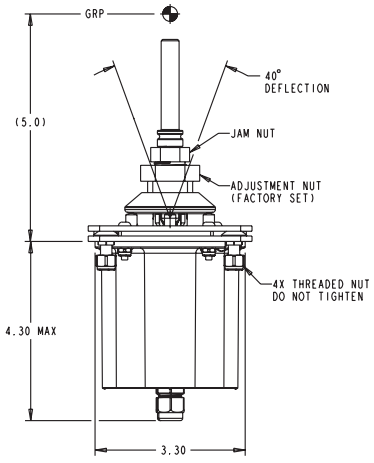
Housing:	Polyester
Bellows:	EPDM, black
Cable:	22 AWG (19 strands of 34 AWG TSC)
Mounting Hardware:	1/4-20 x 3/4 carriage bolts, self-locking nuts







Hall Joystick



CANbus Technology Joystick (22 or 24 AWG)