

OEM Orientation Module

Model OS4-IND



Compact and lightweight, the Model OS4-IND is a rugged Orientation Module designed for industrial and academic use. It features a V9.1 orientation sensor, potted inside a robust black anodized case, reporting via an RS485 communication module. Windows GUI is provided for ease of use. The orientation sensor is a highly compact, six-degree-of-freedom orientation board that provides true orientation in world coordinates, with a wide range of VIN, from 2V to 18V. In addition to true orientation, the raw output data of the 3-axis magnetometer, 3-axis accelerometer and pressure sensors are easily accessible. Multiple sensors can be added in series and individually interrogated to suit your requirements and applications.

Applications

- Robotics
- Research
- OEM industrial products

Features

- Water resistant housing and connectors
- Small footprint
- Unique serial address allows multiple sensors on data bus
- 12 bar pressure sensor



Note: 3D orientation uses accelerometer and magnetometer sensors only.

Specifications

Sensors

Accelerometer

Range: x,y,z: +/- 2 g
or +/- 6 g
Bandwidth: x,y,z: 1.8 kHz
Nonlinearity: 0.50% FS

Magnetometer

Range: +/- 6 Gauss
Nonlinearity:
+/- 1 gauss 0.1% FS
+/- 3 gauss 0.4% FS
+/- 6 gauss 1.4% FS
Bandwidth: 5 MHz

Pressure

Range: 0-12 bar
Maximum: 30 bar
Resolution: 26 mbar

General

Orientation Range: x,y,z: 360°
A/D Resolution: 10 bit
Orientation Accuracy: +/- 0.5° typical for static test conditions
+/- 5.0°
Orientation Resolution: +/- 2.0°
Output Options: Acceleration (x,y,z), Magnetic field (x,y,z),
Actual orientation in world coordinates,
Angular rate (y,z)
Interface: RS485
Data rate: 72 Hz
Filtering: Sensors sampled at 144 Hz and filtered

Baud rate: 115200 baud
Supply voltage: 2-20 volts DC
Power consumption: less than 320 mW

Mechanical

Connectors: Circular, 4 pin, water resistant
Dimensions: 23 mm x 97 mm x 15 mm /
0.91" x 3.82" x 0.59"
Weight: 50 grams / 1.76 oz
Shock Limit: 1000g (unpowered), 500g (powered)
Operating Temp: -40°C to +75°C / -40°F to +167°F

Product Information:
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