Precision Triaxial Fluxgate Magnetometer
FGM-301

Description:
The FGM-301 is the best product for measuring DC and low frequency magnetic fields in three dimensions. This is a compact magnetic sensing device suitable for a wide variety of magnetic field measurement applications. Being an analog sensor, the FGM-301 provides high resolution and low signal delay. This product is far more stable and linear than magneto-resistive and magneto-inductive magnetometers.

Watson Industries has been developing state-of-the-art fluxgate magnetometers for almost thirty years to provide the FGM-301. As a result, this magnetometer is relied on for precision measurements in very critical projects around the world, including near the north and south poles.

Watson Magnetometer features:
- High Accuracy
- High Resolution
- High Reliability
- Low Noise
- Low Power
- Small Size and Weight
- Two Year Warranty
- Engineering Support

Applications:
- Navigation systems
- Magnetic field measurements
- Geological mapping
- Precision heading reference
- Solar Storm Monitoring

Options:
Custom Voltage inputs and/or outputs, calibration and remote (electronics separated from sensor).

Watson Industries, Inc.
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Phone: +1 (715) 839-0628 Fax: +1 (715) 839-8248
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**FGM-301 Specifications**

**Magnetic**
- Range: X, Y, Z ±700 mGauss ±70,000 nTesla
- Analog Scale Factor: ±200 mGauss/V ±3.5V Output
- Scale Factor Accuracy: 2%
- Scale Factor Matching Between Axes: < 0.2%
- Scale Factor Temp Coefficient: ±100 ppm per °C Typical
- Bias: X, Y, Z < 5 mGauss
- Non-Linearity: < 0.01%
- Bandwidth: 30 Hz
- Noise: < 0.3 mGauss rms (Typical) <10 uGauss in 1 Hz bandwidth
- Output Ripple: < 0.2 mGauss P-P

**Environmental**
- Temperature: Operating -50°C to +85°C
- Temperature: Storage -50°C to +85°C
- Vibration: Operating 3g rms 100 Hz to 1 KHz
- Vibration: Survival 4g rms 100 Hz to 1 KHz
- Shock: Survival 200g 10mS ½ sine wave

**Electrical**
- Input Power: 6 to 16VDC < 1W
- Input Current: 55mA
- Analog Output: ±3.5VDC
- Analog Output Impedance: 1000 Ohm

**Physical**
- Axis Alignment: < 0.3°
- Size: Including Mounting Flanges 1.0W x 4.18"L x 1.0"H 2.5 x 10.6 x 2.5 (cm)
- Weight: 3.1 oz 88 grams
- Connection: 9 pin male "D" subminiature
- Life: > 50,000 Hrs MTBF

- Specifications are subject to change without notice.
- This product may be subject to export restrictions. Export Classification ECCN EAR99.

**Dimensions:**

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