

General Description

The MicroTesla Analog Sensor provides a basic analog directional sensor. Magnetometer and accelerometer electronics are mounted on a short, rigid one-piece chassis.

Physical

- Length: Min 19"
- Diameter: 1.375"
- Proprietary MFE fluxgate magnetometer
- Quartz flexure accelerometers
- RTV encapsulation of boards

Electrical

- Through-hole bonds
- Voltage requirement: ± 12 to ± 15 V
- Power usage nominal: 0.6W

Environmental

- All boards qualified for high-temp applications, 175°C*
- Q-Flex accelerometers, 175°C
- Magnetometers, 175°C

* Note: 150°C accelerometers can be used at the customer's request.



Mechanical and Environmental Specifications

Parameter	Minimum	Maximum	Units
Outside Diameter*		1.375 3.5	inches cm
Length*		19 38.1	inches cm
Operating Temperature	0 +32	150, 175 302, 347	°C °F
Survival Temperature	-40 -40	160, 185 320, 365	°C °F
Vibration, Random (Limited by accelerometers)		20	g RMS, 15-500 Hz
Shock (Limited by accelerometers)		1000	g, 0.5 mSec, half-sine

*Dimensions do not include running gear, centralizers, or axial shock absorbers

Instrument Accuracy Specifications

Parameter	Minimum	Units
Inclination accuracy, absolute*	±0.10	degrees
Inclination spread on axial rotation at 90° Inc	<0.20	degrees
Azimuth accuracy, absolute, 90° Inc	±0.5	degrees
Azimuth spread axial rotation, 10° through 90°	<1.0	degrees
Tool face accuracy, axial rotation at 90° Inc	±1.0	degrees
Total g field accuracy	±3.0	mG
Total H field accuracy, absolute	±3.0	nT

* Absolute accuracy is achieved when the instrument is tested in a controlled environment using a calibrated and certified reference position

