

MDM175T-XE-HR: MicroTesla High-Resolution Digitized Module

The improved electronics and firmware designed and tested in the HDD/Utility Boring HR wireline steering tool application has been revised and improved, and incorporated into the standard MicroTesla Digitized Module (MDM) for use in MWD applications. This enhanced magnetic sensing capability will provide customers with the ability to develop new algorithms for improved survey accuracy, passive magnetic ranging for trajectory control and early intersection, and near well bore magnetic proximity detection. The customer's imagination is the only limitation to the possible uses of this exciting new technology when deployed in an MWD system.

Physical

Length: 21.75"

Diameter: 1.37"

- Compatible with gamma modules
- Proprietary MFE fluxgate magnetometer
- Quartz flexure accelerometers
- Universal chassis, all boards fully covered

Electrical

- Surfacemount electronics with Ulti-Pak board encapsulation
- Operating voltage range: 12V to 36V
- Power usage: 1.7W peak, 0.6W idle
- Digital interfaces: serial RS-232, serial logic level or SPI
- Dedicated microprocessor and power supply built-in
- Calibration coefficients downloaded directly into module memory
- Sensor power management through firmware

Environmental

- All boards qualified for high-temp applications, 175°C
- Q-Flex accelerometers, 175°C
- Magnetometers, 200°C
- Ulti-Pak board mounting for improved shock and vibration isolation

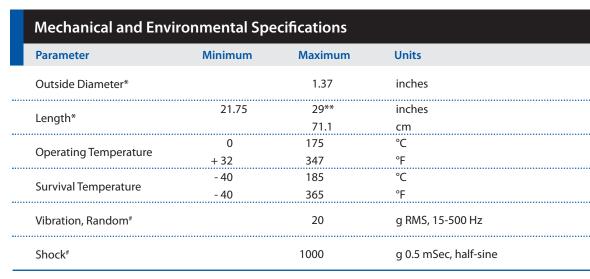








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^{*} Dimensions do not include running gear, centralizers, or axial shock absorbers

^{*} Limited by accelerometers

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, 10° through 90°	± 0.50	degrees
 Azimuth spread axial rotation, 10° through 90° Inc	< 1.0	degrees
 Tool face accuracy, axial rotation 10° through 90° Inc	± 1.0	degrees
Total g field accuracy	± 3.0	mG
 Total H field accuracy, sensitivity	± 1.5	nT

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



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^{**} Customer adapters add length