

MDME175T-XE: MicroTesla Digitized Module with Expansion Slot

The MicroTesla Digitized Module with Expansion Slot is specifically designed for MWD applications. It combines MicroTesla's newest MDM instrument with customer-provided MWD controller boards. The MDME uses the XE chassis and has pass-through wires. The environmental board includes a 3-axis shock and vibration sensor, and dedicated memory for use by the customer.

Physical

- MDM directional sensor and customer MWD controller board in the same chassis
- Length: 21.75"
- Diameter: 1.37"
- Compatible with gamma modules
- Proprietary MFE fluxgate magnetometer
- Quartz flexure
- XE chassis, with a one-piece sleeve
- Environmental board available for 4th board pocket

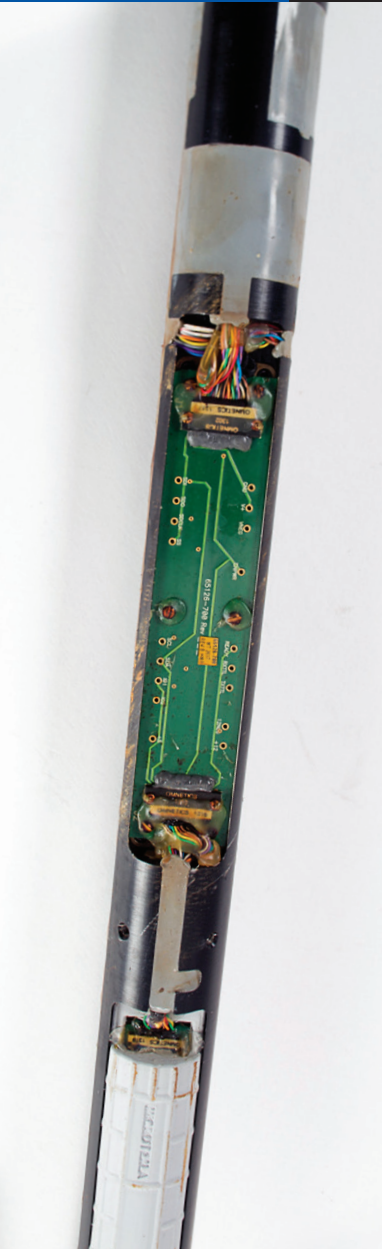
Electrical

- Surfacemount electronics
- Operating voltage range: 12V to 36V
- Estimated power usage: 3.0W peak, 0.6W idle*
- Digital interfaces: serial RS-232, serial logic level or SPI
- Dedicated microprocessor and power supply built in
- Calibration coefficient downloaded directly into module memory
- Sensor power management through firmware
- (11) Pass through wires available
- 0.5W available for expansion board (+5V and 100 MA max)

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

**Subject to testing of expansion board and its power consumption.*



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Mechanical and Environmental Specifications

Parameter	Minimum	Maximum	Units
Outside Diameter*		1.37	inches cm
Length*	21.75	29.0** 71.1	inches cm
Operating Temperature	0 + 32	175 347	°C °F
Survival Temperature	- 40 - 40	185 365	°C °F
Vibration, Random (Limited to accelerometers)		20	g RMS, 15-500 Hz
Shock (Limited to accelerometers)		1000	g .05 mSec, half-sine

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

** Custom adapters add length.

Instrument Accuracy Specifications

Parameter	Minimum	Units
Inclination accuracy, absolute*	± 0.10	degrees
Inclination spread on axial rotation at 90° Inc	< 0.20	degrees
Inclination while rotating**	± 0.50	degrees
Azimuth accuracy, absolute, 90° Inc	± 0.5	degrees
Azimuth spread axial rotation, 10° through 90°	< 1.0	degrees
Total face accuracy, axial rotation 10° through 90° Inc	± 1.0	degrees
Total g field accuracy	± 3.0	mG
Total H field accuracy, absolute	± 300	nT
RPM Measurement, 2 - 200 RPM	± 2.0	% of value

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

** When rotated from 2-200 RPM.

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