

DOM-35A

DIGITAL ORIENTATION MODULE

The DOM-35A is a precision Digital Orientation Module, designed for direct compatibility with existing Tensor MWD systems and after-market replacement modules. The sensor is available in 150 and 175°C options and is designed to meet the most demanding and extreme conditions downhole. You can rely on Azimuth's consistent high quality sensor performance when you need it most.

The sensor is based around high-grade quartz-hinge Accelerometers and an ultra-stable proprietary Magnetometer design, known as TruMag™ - the performance of which is unmatched in stability over temperature, shock and vibration. Coupled with high-temperature electronics and highly robust packaging, Azimuth delivers a premium Orientation Module, thoroughly tested and with industry leading performance – ready to improve your reliability in hole.

Features

- Rugged chassis design
- Reliable 175°C operation
- Ultra-stable proprietary Magnetometers
- High-temperature surface mount electronics
- On-board Analog to Digital Converter
- On-board EEPROM K-Factor storage
- Low power consumption
- Independent Mag and Accel switching

Applications

- Drop-in Tensor replacement
- MWD/LWD Borehole Surveying
- OEM implementation in new MWD systems

Benefits

- Increased MTBF
- Reliable operation in 'hothole' environment
- Experienced and dedicated support team
- Industry leading accuracy and stability
- Improved asset utilization and less 'down-time'

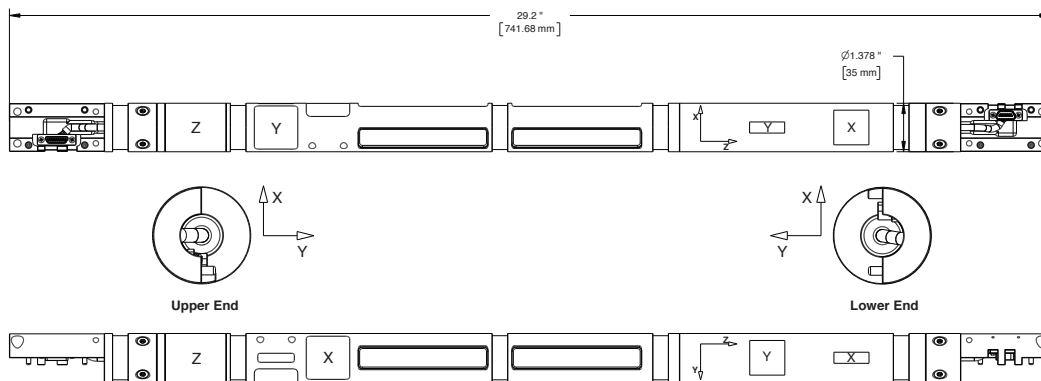
Specifications

A full set of Physical, Electrical and Environmental specifications are shown overleaf. In summary:

- Dimensions 29.2" Length x 1.378" Dia.
- +/-13V (Nominal) Input voltage
- Connectors – 21-pin MDM (Plug) Top and 15-pin MDM (Socket) Bottom
- 10 Bypass wires
- 12-Bit Analog to Digital Converter on-board
- 175°C operation and 185°C Survival
- Tested in excess of 20grms Random vibration



Description	Value	Units	Comments
Sensor Performance			
Inclination Accuracy	+/-0.1	Deg	
Inclination Repeatability	+/-0.05	Deg	
TF/Rotation at >5° Inc - Accuracy	+/-0.5	Deg	
TF/Rotation at >5° Inc - Repeatability	+/-0.05	Deg	
Azimuth at >5° Inc - Accuracy	+/-1.0	Deg	
Azimuth at >5° Inc - Repeatability	+/-0.5	Deg	
Dynamic Magnetic TF	+/-5.0	Deg	
Electrical			
Operating Voltage	+/-12.5 to +/-15.5	Volts	(+/-13V nominal)
Active Power Consumption	0.95	Watts	Maximum
Quiescent Power Consumption	75	mWatts	Mag/Accel Disabled
Interface	SPI I ² C TTL/CMOS		ADC EEPROM ² Mag/Accel Enable ¹
Accelerometer Scale	2.0	V/G	Nominal
Magnetometer Scale	1.5	V/Gauss	Nominal
ADC Resolution	12	Bit	
EEPROM Capacity	16	Kbit	
Mechanical			
Length	29.2 741.7	Inches mm	
Diameter ³	1.378 35.0	Inches mm	
Environmental			
Operating Temperature:	DOM-35A-150 DOM-35A-175	-25 to 150 -13 to 302 -25 to 175 -13 to 347	DegC DegF DegC DegF
Survival Temperature:	DOM-35A-150 DOM-35A-175	-40 to 165 -40 to 329 -40 to 185 -40 to 365	DegC DegF DegC DegF
Vibration	30 20	g pk g rms	50 – 1000Hz 50 – 1000Hz
Shock	1000	g	0.5mS Half Sine
Notes: 1. Independent Magnetometer/Accelerometer power switching 2. K-Factor storage and download 3. Excludes lateral shock absorbers			



Contact us

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Product Support

Azimuth Oilfield Systems Ltd. provides a responsive repair, calibration and product support service. Experienced personnel are available to troubleshoot or repair equipment, and provide general product technical assistance. If you need effective sensor support for your business, then contact support@azimuthmwd.com for more information.

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