



IOM-35A

INTEGRATED ORIENTATION MODULE

The sensor utilises a proprietary flux-gate magnetometer design and high grade quartz-hinge accelerometers for excellent precision and stability. High reliability electronics packaging and printed circuit board mounting, provide an extremely robust instrumentation assembly with industry leading performance.

The unit communicates through a simple serial TTL/CMOS interface using a proprietary protocol, which can be easily configured to provide the appropriate data as required by the customer. A single polarity power supply, operating across a wide voltage range, further simplifies the integration of this module into the customer's MWD/LWD system.

The Orientation Module is designed for extreme downhole oilfield environments, qualified for high temperature and drilling shock and vibration levels - designed for reliability under the most demanding of environments.

Features

- Integrated microprocessor and fully computed angles
- Low power consumption
- Proprietary serial communications protocol
- Robust and reliable assembly
- Programmable communications protocol
- Mechanical and electrical interfaces engineered to suit application
- INC, AZI, TF, MTF, Temp, Gt, Ht, RPM and Rotation detection

Applications

- MWD/LWD Borehole Surveying
- Direct replacement of existing sensors
- OEM implementation in LWD systems
- Wireline directional surveying

Benefits

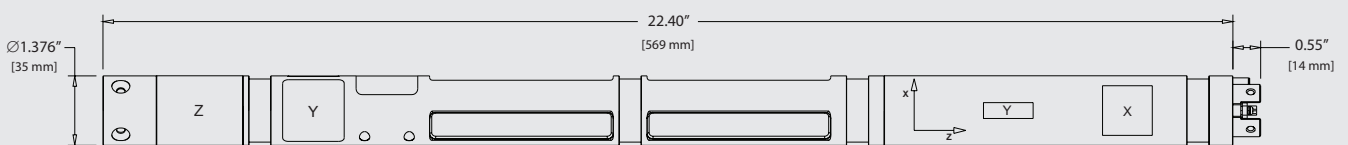
- Increased accuracy and stability
- Highly integrated and robust assembly
- Fully computed data
- Experienced and dedicated support team
- Simple interfacing for integration into MWD system
- Reliable 'hot-hole' performance (available in both 150°C and 175°C options)



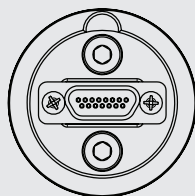
Quality, precision and reliability.

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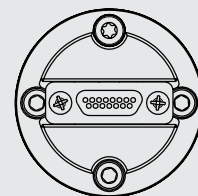
Description	Value	Units	Comments
Sensor Performance			
Inclination Accuracy	+/-0.1	Deg	
Inclination Repeatability	+/-0.05	Deg	
TF/Rotation at >5° Inc - Accuracy	+/-0.5	Deg	
TF/Rotation at >5° Inc - Repeatability	+/-0.05	Deg	
Azimuth at >5° Inc - Accuracy	+/-1.0	Deg	
Azimuth at >5° Inc - Repeatability	+/-0.5	Deg	
Dynamic Magnetic TF	+/-5.0	Deg	
Electrical			
Operating Voltage	+12 to +40	Volts	Nominal
Active Power Consumption	<2.0	Watts	(See note 1)
Accelerometer Scale	3.0	V/g	Nominal
Magnetometer Scale	2.5	V/Gauss	Nominal
ADC Resolution	24	Bit	
Interface	Serial TTL/CMOS/RS485		
Baud Rate	9600	Baud	(See note 2)
Protocol	Proprietary – Master/Slave		
Output	Computed or Raw		
Environmental			
Operating Temperature	IOM-35A-150	-25 to 150	DegC
	IOM-35A-175	-13 to 302	DegF
Survival Temperature	IOM-35A-150	-25 to 175	DegC
	IOM-35A-175	-13 to 347	DegF
Vibration		30	g pk
		20	g rms
Shock		50 – 1000Hz	
		50 – 1000Hz	
Notes:		1000	g
1. Independent Magnetometer/Accelerometer power control 2. 9600 Baud default, programmable to other rates			



Uphole
MDM Orientation



Downhole
MDM Orientation



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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