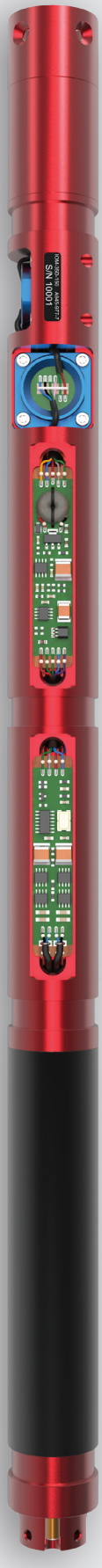
IOM-35D

µG MEMS ACCELEROMETER
INTEGRATED ORIENTATION MODULE



The µG MEMS Integrated Orientation Module is the latest in a range of Azimuth sensors specifically aimed at advancing the technology of downhole directional measurements for the MWD market.

This sensor provides accurate and repeatable directional measurements using the latest in proprietary Azimuth MEMS Accelerometer technology, but partnered with our industry leading flux-gate Magnetometers. This hybrid of technologies means cost savings can be achieved for the end-user, but also improvements are delivered with increased robustness against high shock and vibration.

The µG MEMS sensor is qualified to 150DegC (302F), and tested under the same rigorous conditions expected of all Azimuth sensors. The µG IOM is a fully integrated package with computed and raw outputs available on a number of interface types.

Features

- Low power consumption
- High-shock and vibe specification
- Robust MEMS Accelerometers
- Accurate, repeatable Inclination measurements
- Calculated/Cont INC output
- Serial Communication
- Programmable filters
- 3-Axis MEMS Accelerometers
- 24-Bit Resolution
- Constant data 'Streaming' option
- RPM Output

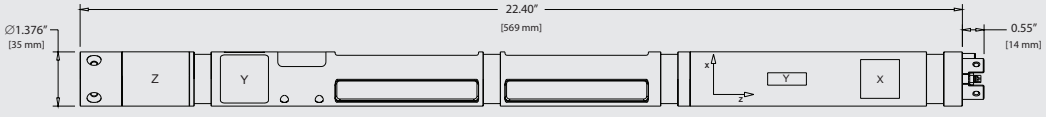
Applications

- MWD/LWD Borehole Survey
- OEM implementation in MWD Systems

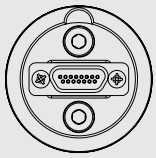
Benefits

- Increased robustness
- Reduced cost
- Reduced 'downtime'
- Reduced LIH costs

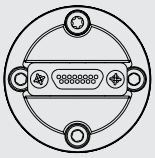
Description	Value	Units	Comments
Sensor Performance			
Inclination Accuracy 125ºC 150ºC	+/-0.15º +/-0.2º	Deg	
Inclination Repeatability	+/-0.05	Deg	
TF/Rotation at >5º Inc - Accuracy	+/-0.5	Deg	
TF/Rotation at >5º Inc - Repeatability	+/-0.05	Deg	
Azimuth at >5º Inc - Accuracy	+/-1.0	Deg	
Azimuth at >5º Inc - Repeatability	+/-0.5	Deg	
Electrical			
Operating Voltage	+12 to +40	Volts	
Active Power Consumption	<0.75	Watt	Accel & Mags powered
Quiescent Power Consumption	0.4	Watt	
Interface	Serial TTL/RS485/ CanBus		
Baud Rate	1200 – 153600	Baud	9600 Baud - default
Protocol	Proprietary		
ADC Resolution	24	Bit	
Output	Computed/Raw	KBit	
Operating Modes	Master/Slave, Streaming Express Survey		
Mechanical			
Length	22.4 (569.0mm)	Inches(mm)	
Diameter	1.376 (35.0mm)	Inches(mm)	Excludes lateral o-rings
Environmental			
Operating Temperature	-25 to 150	ºC	
Survival Temperature	-40 to 175	ºC	
Vibration	30 20	g pk g rms	50 – 1000Hz 50 – 1000Hz
Shock	1000	g	0.5mS Half Sine



Uphole
MDM Orientation



Downhole
MDM Orientation



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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.