



QDT MODULE

XDM-35A

185°C

DIRECTIONAL MODULE

The XDM-35A is the latest Directional Module development from Azimuth, incorporating the entire MPU and TPS functionality for Tensor based MWD systems within a single integrated module. Qualification and calibration to 185°C ensures performance in the most demanding 'hot-hole' conditions. Proprietary 200°C 'Flux-Gate' Magnetometers and 190°C Accelerometers ensure the sensor is designed to operate reliably at 185°C, providing accurate and repeatable measurements - including Rotational and Continuous INC/AZI.

Combined with the latest features of a fully integrated MPU for QBus support and M-Ary telemetry, the unit delivers a highly integrated and cost-effective solution for the user. At a total length of 29.2", the unit integrates both the MPU and TPS, eliminating separate elements and their associated cost and interfacing. The XDM-35A sensor is qualified and tested under the same rigorous conditions expected of all Azimuth sensors and is fully compatible with existing Tensor based MWD systems.

The module is available with temperature ratings of 185, 175 or 150°C.

M-Ary Mud Pulse Encoding

Continuous Inc/Azi

High-Speed Telemetry

Azimuthal Gamma

MWD Features

- Single chassis design
- Low power consumption
- QBus compatible
- CANBus for fast download
- Flow/Rotary Downlink
- Dual Gamma supported
- 3-Axis Shock/Vibration
- RPM & Stick/Slip Detection
- Voltages/Currents/Events logging
- Gamma power switching
- Deep sleep mode for in-collar loadout with INC/RPM wake-up
- Generic variables for 3rd party connectivity
- Alternative communications: UART/RS-485
- 18-50VDC Input Voltage
- Customisation available

Sensor Features

- Low power consumption
- 24-Bit ADC for high quality surveys
- High shock and vibration specification
- 190°C/185°C Quartz-Flex accelerometers
- 200°C Precision Fluxgate Magnetometers
- Independent mag/accel switching for power saving
- On-board coefficients

Applications

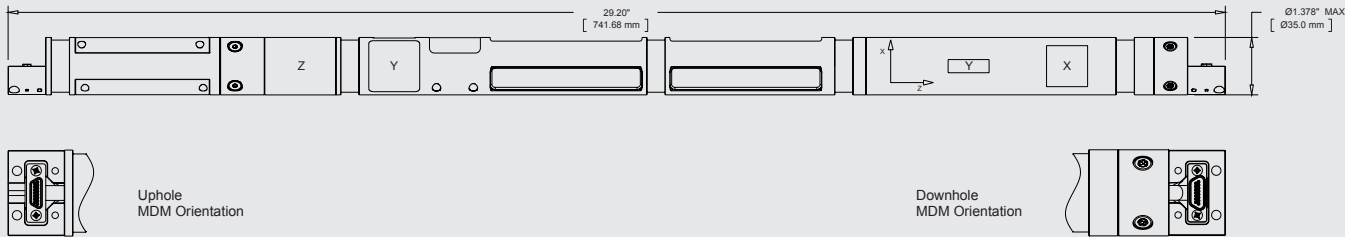
- MWD/LWD Borehole Survey



Quality, precision and reliability.

www.azimuthmwd.com

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	
Electrical			
Operating Voltage	+18 to 50	Volts	
Active Power Consumption	0.9	Watt	
Quiescent Power Consumption	0.3	Watt	
Deep Sleep Power Consumption	0.1	Watt	
Sensor ADC Resolution	24	bits	
Processor	32-Bit ARM		
Memory			
Size	256	MB	
Diagnostic Recording	Survey, Drilling Dynamics, Power and Gamma		
Interface			
Communication Bus	QBus, Proprietary CAN		UART, RS485 optional
Gamma	2 Inputs		Bulk or focused gamma
Mud Pulse	M-Ary Encoding		Fast pulse (0.125s PW) supported
Mechanical			
Length	29.2	Inches	
Diameter	1.378	Inches	Excludes lateral o-rings
Weight	2.65	lb	
Environmental			
Operating Temperature	-25 to 185	°C	
Survival Temperature	-40 to 200	°C	
Vibration	20 (Q-Flex) 50 (MEMS)	g rms	50 -1000Hz
Shock	1000 (Q-Flex) 2000 (MEMS)	g	50 -1000Hz
Note: 1. Options available for 175°C (QFlex) and 150°C (MEMS) modules.			



Contact Us

Azimuth Oilfield Systems Limited,
Unit 1 Kintore Business Park
Kintore, Aberdeenshire
AB51 0YQ, United Kingdom

T: +44 (0)1224 773635
E: info@azimuthmwd.com
www.azimuthmwd.com

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.

Copyright Azimuth Oilfield Systems Ltd 2022. Azimuth Oilfield Systems Ltd. will occasionally make changes and improvements to products, and reserves the right to alter the specification without prior notice.