Azimuthal Gamma Module

The Azimuthal Gamma Module delivers performance and results comparable to collar-based systems while realizing all the benefits in handling, set up, maintenance and cost-effectiveness of a probe based system. The result is a system which allows confident, high-accuracy geosteering and well positioning decision making, all achieved for a fraction of the cost of comparable systems.

Features and Benefits

Market Leading Azimuthal Gamma Resolution

By deploying a large crystal with the best-in-class sensor technology the Azimuthal Gamma module realizes accuracy and resolution that is normally the preserve of high-cost collar based systems. On-board, high definition, high sampling frequency directional sensors ensure true 16-sector image clarity under even the most severe rotary dysfunction.

Industry Defining Rock Strength Measurements

A complex suite of high frequency physical measurements is passed through a set of proprietary algorithms providing rock strength measurements which define true at-bit formation characteristics. The enhanced perception of at-bit formation, both up and down, provides unrivaled geosteering foresight.

Robust Architecture

Employing advanced mounting technology to protect the market leading electronics allows continuous operation in the harshest of drilling environments, with 347 °F/ 175 °C operating temperature as a non-price premium standard.

Tensor Elite Compatibility

The Azimuthal Gamma is the module is fully integrated with all offerings in the Tensor Elite platform allowing connectivity to Tensor Elite MWD and Centerfire LWD.

Easily Serviceable

The system has been designed to enable easy service, test and calibration. Service turnaround in less than a day drives effective fleet utilization and so maximizes return on investment.



severely compromise resolution to deliver a pseudo azimuthal response. The market leading sensor technology employed in the Azimuthal Gamma Module delivers resolution and accuracy directly comparable to collar based tools allowing the real application of geosteering and earlier, more reliable decisions to be made.



Azimuthal Gamma Module - Specifications

Specifications			Centerfire LWD		Tensor Elite MWD	
Natural Gamma Ray			Configuration		Configuration	
Parame	ter	Specification				
Range		0 - 900 API	Directional Surve	y		
Accuracy		2 % (0 - 150 °C)	28.78 ft/ 8.77 m			
		5 % (150 - 175 °C)				
Bed Resolution,		6 in. @ 180 ft/hr		-		
		amma Bay				
Imaging Sectors				_		2
		Memory [.] 16		0		
Bed Resolution, Lateral Hole		20 API		0		
Resolution of Dip Angle		0.01°		0 0		
Max. Stick-Slip Tolerance		3 SSI				
Max. Rotary Speed		360 RPM		0		
Max. Rate of Penetration		360 ft/hr				
Environn		mental		111		
Max. Operating Temperature		175 °C/ 347 °F		000		
Max. Operating Pressure		20,000 psi				Colla
Max. Sand Content		2%				
Max. Shock		500 g, 0.5 ms pulse width				Ei P
Max. Vibration		20 grms, 5-500 Hz	Resistivity	ollar		gnet
	Mecha	nical	12.80 ft/ 3.91 m I ⊤	Le O	15 54 ft/ 4 74 m	Ma
Bore ID	4.75 in/ 120 mm	3.25 in/ 82 mm		Iterfi	Т	Nor
	6.75 in/ 172 mm	3.75 in/ 92 mm		Cer		
	8.25 in/ 209 mm	4.00 in/ 102 mm				
Max. Flow Rate	4.75 in/ 120 mm	375 usgpm/ 1,420 lpm				a
	8.25 in/ 200 mm	1 200 usgpm/ 2,640 lpm				gam
	Floct			1	Azimuthal Gamma	thal c
Voltage Operating Pange					10.0 ft/ 3.05 m I T	iinut
Max Current		17 - 30 VDC 35 mA @ 175 ℃				¥
Max. Logging Memory		500 hours				
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			Azimuthal Gamma			
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