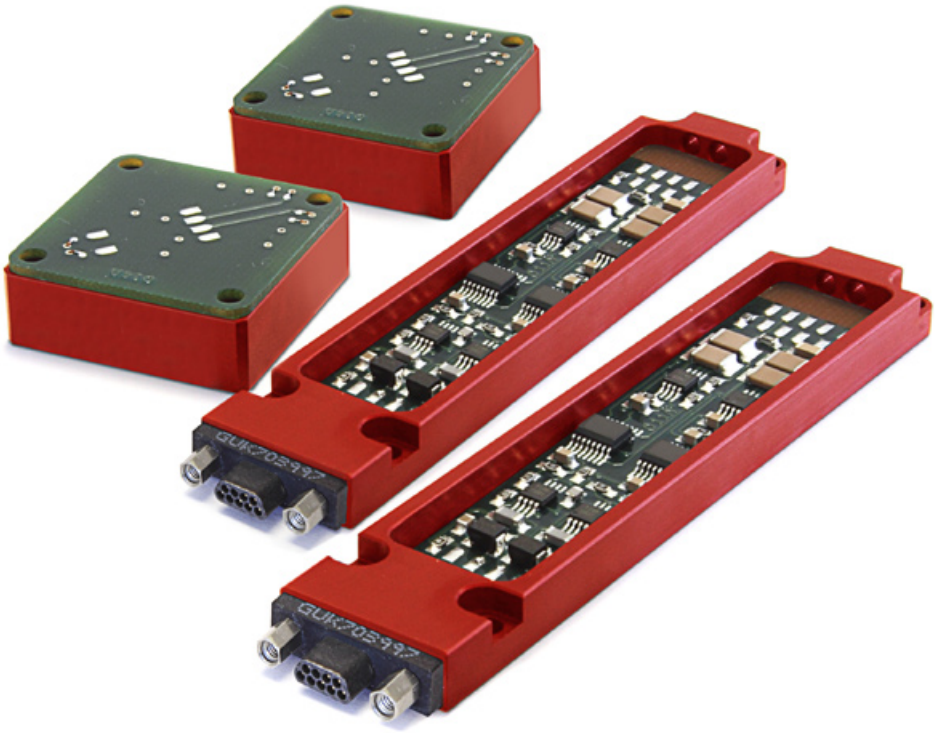

MAG-031A/023A

Precision 2-Axis Magnetometer Systems

The Mag-031A/Mag-023A are precision 2-Axis Flux-Gate Magnetometer Systems designed for use in high temperature and high shock and vibration environments for Dynamic Azimuthal scanning applications. When combined with MWD Survey information, the Magnetometer System can be used to accurately log sensor data Azimuthally whilst drilling. The 2-Axis system consists of two single-axis Magnetometers, a Dual Channel Processing Board and a single Dual Channel Excitation Board. Specified for operation at a continuous temperature of 175°C, and a survival temperature of 185°C, the System operates from single +5V power supply with power consumption of less than 250mW.

Key features include:

- Easy implementation for Azimuthal scanning
- Simple +5V power supply
- Low power consumption
- Robust sensor and electronics design
- High Temperature qualified
- Full calibration record provided
- Small footprint

Description	Min	Typ	Max	Units	Comments
Sensor Performance					
Measurement Range		+/- 0.7 (+/-70,000)		Gauss (nT)	
Nominal Scale		1.9		V/Gauss	
Scale Thermal Stability		+/-18	+/-30	ppm/°C	See Note 1
Initial Bias		+/-0.5 (+/-50)	+/-1.0 (+/-100)	mGauss (nT)	Ambient Temperature – see Note 1
Bias Thermal Stability		0.001 (0.1)	0.003 (0.3)	mGauss/°C nT/°C	See Note 1
Frequency Range	0		275	Hz	See Note 4
Electrical					
Power Supply		+5.0		Volts	
Power Consumption			250	mWatts	See Note 2
Mechanical	**Length**	**Width**	**Height**		
Magnetometer Mag-031A	1.22 (31.0)	1.22 (31.0)	0.394 (10.0)	Inches (mm)	
Magnetometer Mag-023A	0.91 (23.0)	0.91 (23.0)	0.327 (8.3)	Inches (mm)	
Dual Ch Processing Board Assy	3.75 (95.25)	0.785 (19.94)	0.25 (6.35)	Inches (mm)	Nominal – see Note 3
Dual Ch Excitation Board Assy	3.75 (95.25)	0.785 (19.94)	0.25 (6.35)	Inches (mm)	Nominal – see Note 3
Environmental					
Operating Temperature	-25 -13		175 302	°C °F	
Survival Temperature	-25 -13		185 347	°C °F	
Vibration			30 20	g pk g rms	Sine Random
Shock			1000	g	0.5mS Half Sine

Notes

1. Specifications shown uncorrected.
2. All axis fully functional.
3. Electronics boards available with or without frames - dimensions shown include frame and connector. Nominal dimensions for boards without frame and connector: 3.0”(L) x 0.6”(W) x (0.23”).
4. Frequency response: -3dB point

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.