

HIGH-REL FLUXGATE MAGNETOMETER



The Hi-Rel Magnetometer FGM-A-75 is an instrument for measuring three-dimensional magnetic fields. It is based on the fluxgate principle, using three independent ring-core sensor heads for each orthogonal axis. The technical performance data of the FGM-A-75 are based on an ESA qualified unit.

Parameter	FGM-A-75	Tolerance, remark
Supply Voltage	±15V	-1.5V +5.5V
Supply Current	+45.8mA/-24.8mA	Worst case @ EoL
Power Consumption	< 1W @ ±15V	EoL
Measurement Range	±75μT	
Scale Factor	66.67μV/nT	
Zero Field Bias	< 900nT	
Linearity	≤ 0.1% of full scale	
Accuracy ¹	0.5%	With temperature compensation EoL
Linearity	< 0.1%	
Offset Errors ²	≤ 0.3% of full scale	With temperature compensation EoL
Axial Alignment Error	< 1°	
Output Noise	< 5nT @ 2Hz	
Fault Voltage Emission/Tolerance	±8.75V/±16.5V	Single Failure
Frequency Response	> -3dB @ 11Hz	f _c ≥ 11Hz
Output Impedance	440nF/330Ω	+154/-198nF @ EoL/±1Ω @ EoL
Temperature Range Operating	-30°C to +60°C	
Temperature Range Non-Operating	-40°C to +70°C	
Length / Width / Height	100 / 82 / 34 mm	Without interface connector
Mass	< 0.3 kg	With 2.4 mm housing thickness
EEE-Parts	Hi-Rel	
Radiation Hardness	>30kRad	On Part Level