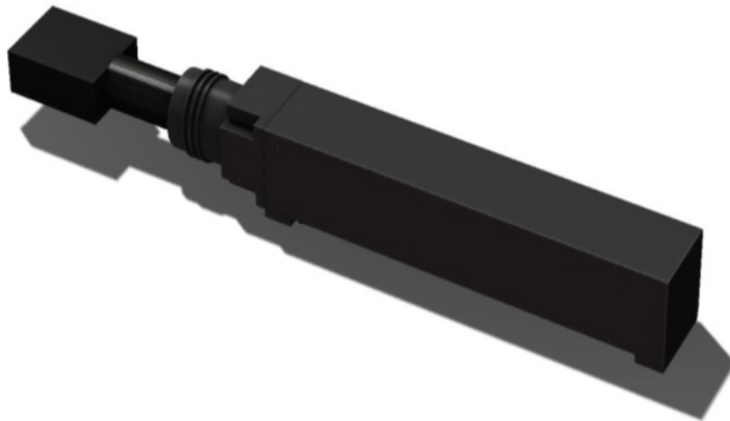


Product Data

Magnetic Sensors

Earth has a magnetic effect spread across the globe from North to South. Magnetic maps define the ambient magnetic flux distributed all across the sea bed. As any moving magnetic object such as a ship, a submarine or an AUV/UUV moves the ambient magnetic strength distribution is disturbed. Therefore this can also be used as an input or trigger signal in an influence mine and for positioning, target evaluating or for reconnaissance.

The high performance fluxgate sensors with integral electronics provide precision measurements of both AC and DC magnetic fields in all the 3 axes. The sensors have a very wide range of applications in physics, bioelectromagnetics and geophysical exploration but the one shown here is optimized for naval and hydrographic use.



Magnetometer SSMAG-0003



Power Supply SSPU1

Specifications - Tri-axial Fluxgate Magnetometer	
Model	SSMAG-0003-100-UW
Number of axes	Three
Polarity	+ve non-inverting output when pointing North
Bandwidth (-3dB)	3kHz
Frequency response, $\pm 5\%$	0 to 1kHz
Measurement noise floor:	6 to 20pTrms/ $\sqrt{\text{Hz}}$ at 1Hz
Measuring range (μT)*	± 100
Scaling (mV/ μT)	100
Scaling error	$< \pm 0.5\%$
Scaling temperature coefficient (ppm/ $^{\circ}\text{C}$)	± 20
Orthogonality error	$< 0.5^{\circ}$
Linearity error	$< 0.0015\%$
Offset in zero field (nT)	± 5
Supply voltage	$\pm 12\text{V}$ to $\pm 17\text{V}$ DC
Current consumption	+30mA, -10mA /axis Typical
Power supply rejection ratio	5 $\mu\text{V/V}$ (-106dB)
Analogue output	$\pm 10\text{V}$ with $\pm 12\text{V}$ supply
Output impedance	10 Ω
Offset in zero field (nT)	± 5
Operating temperature range	-10 $^{\circ}\text{C}$ to +50 $^{\circ}\text{C}$
Environmental protection	IP68 (submersible to 200m)
Accessories	
Power Supply	
Model	SPSU1
Frequency Response	DC- 9.5 kHz
Coupling	AC/DC
Filters	HP: 0.1Hz; LP:9.5KHz
Sensor Input Mode	Balanced/Unbalanced (Single-ended)
Number of Input Channels	Three
Voltage Input Range	$\pm 10\text{V}$
Power Output	$\pm 12\text{V}$, $\pm 90\text{mA}$
Output Impedance	50 k Ω per channel
Analog Output	3 x BNC, 1 each for Bx, By and Bz
Current Consumption	90 mA
Internal Noise Floor	500nV/ $\sqrt{\text{Hz}}$ @ 1Hz
Operating Temperature	Upto 50 $^{\circ}\text{C}$
Storage Temperature	Below 30 $^{\circ}\text{C}$
Relative Humidity	Upto 90%, non-condensing

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