KMS Technologies
Innovating Solutions

LEMI Sensors

LEMI-011 super low power fluxgate magnetometer

Product highlights

Applications

- Magnetic field components measurements
- Fluxgate compass system (orientation)
- Navigation
- Magnetic signatures study
- Traffic control
- Residual field measurements (shielding efficiency estimation)

The model LEMI-011 is a complete 3 axes flux-gate magnetometer manufactured in two versions: mono-block ("tube" and "box" shape, sensor included) and as a p.c. board and sensor with cable up to 3 m long. Its peculiarity is super-low power consumption – min about 5 mW.

The analog output voltages along each component (relative to "REF" output) are proportional to the measured magnetic field.

Connection to the registration system is realized through standard RC7 connector for the mono-block construction and through 7 long leads for p. c. board one.

Product specifications

Measurement range along each axis	± 50000 nT (or other by demand)
Operation mode	continuous
Sensitivity	45 ± 0.5μV/nT
Bandwidth	0 … 10 Hz (-3 dB)
Output voltage relative to "REF" bus, max	± 2.25 V
Reference "REF" voltage to supply ground	~ 2.5 (half of supply voltage) V
Noise level at frequency 5 Hz	0.1 ÷ 0.2 (on demand) nT/√ Hz
Orthogonality error of sensor axes, max	± 2°
Error of orthogonality (calibrated, optional)	± 20 min of arc
Transfer factor error	< 0,1 %
Zero offset at t=20° C, max	< 600 nT
Zero drift over temperature	< 5 nT/°C
Power supply voltage	5 ± 0.25 V
Maximal consumed current	2,5 ÷ 5.5 mA (noise dependent)
Guaranteed operation temperature range:	-40 ...+80 °C (operational to +105°C, experimental)
Overall dimensions and weight	
Sensor	50 x 16 x 16 mm, 20 g
Electronic unit	160 x 20 x 7 mm, 15 g
Mono-block of "tube" form	245 x ∅27 mm, 140 g
Mono-block of "box" form	115 x 60 x 27mm, 120 g

Name	Dimensions, mm	Mass, g
LEMI-011	PCB: 160x20x7 Sensor: 50x16x16	PCB: 15 Sensor: 20
LEMI-011B	115 x 60 x 27	120
LEMI-011T	Dia 27 x 245	140
LEMI-011S	Electronic unit: 83 x 58 x 22 Sensor: 45 x 19 x 20	Electronic unit: 110 Sensor (with 1.5 m cable): 20 (80)

KMS Technologies

KJT Enterprises Inc.
11999 Katy Freeway Suite 200
Houston, TX 77079
USA

Tel: +1.713.532.8144

Email: info@KMSTechnologies.com
www.KMSTechnologies.com
www.lemisensors.com