SUPER-LOW POWER THREE-COMPONENTS FLUX-GATE MAGNETOMETER LEMI-011

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INTENDED FOR:

- **Magnetic field components measurements**
- **Fluxgate compass systems (orientation)**
- **Navigation**
- **Magnetic signatures study**
- **Simultaneous magnetic/thermal survey**
- **Traffic control**
- **Residual field measurements**

The model LEMI-011 is a complete 3 axes flux-gate magnetometer manufactured in two versions: monoblock ("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. Also the temperature channel is available, what allows to use this data for both outside temperature measurements and magnetometer thermal drift correction.

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

TECHNICAL SPECIFICATIONS

Measurement range along each axis, nT	**± 50000(or other)**
Operation mode	**continuous**
Sensitivity, mV/nT	**45 ± 0.5**
Bandwidth	**0 … 20 Hz (-3 dB)**
Output voltage relative to "REF" bus, V, max	**± 2.25**
Reference output "REF" voltage to supply ground, V	**~ 2.5 (half of supply voltage)**
Noise level at frequency 5 Hz, nT/ЦHz	**0.1 ё 0.2**
Orthogonality error of sensor axes, max	**± 2°**
Error of orthogonality determination (calibrated, optional)	**± 20 min of arc**
Transfer factor error, %	**< 0,5**
Zero offset at t=20° C, nT	**< 750**
Zero drift over temperature, nT/°C	**< 5**
Power supply voltage, V	**5 ± 0.25**
Maximal consumed current, mA	**2.5 ё 5.5 (in dependence on noise level**
Guaranteed operation temperature range, °C	**-40 ...+80**
Overall dimensions and weight, max	
Sensor	**50x16x16 mm, 20 g**
Electronic unit	**55 x 50 x 7 mm, 45 g**
Monoblock of "tube" form	**Ш27 x 241mm, 120 g**
Monoblock of "box" form	**115 x 60 x 27mm, 120 g**