



3-COMPONENT FLUX-GATE MAGNETOMETER LEMI-046

Main features:

- High resolution and precision
- Low noise
- Low temperature offset
- Convenience of installation and service
- Low power
- OLED display
- 8 GB SD card
- Internal real time clock
- Satellite synchronization
- RS-232 output
- 3 years operational guarantee
- Waterproof housing



LEMI-046 vector magnetometer is intended for the precise measurement of Earth's magnetic field and its variations at laboratory and land conditions as well as in geomagnetic observatory in Antarctic Region. It means that it is adapted to function in low temperatures. It is produced on the base of flux-gate sensor, all three components of which are implemented in the same body. It consists of two units - sensor unit in waterproof housing and electronic unit mounted in PELI case, both connected by the cable. The electronic unit provides automated operation - acquisition, processing and storage in the embedded SD card of data about magnetic field and its variations and/or their transmission to the external user via RS-232 interface. Built-in GPS receiver assures satellite synchronization of the internal clock and the coordinates of magnetometer location are also registered. It allows organizing the synchronous operation of a set of the magnetometers installed at the studied area. The big enough volume of internal non-volatile memory for data recording and small power consumption allow using this magnetometer for long-term autonomous operation in land conditions.

MAIN TECHNICAL PARAMETERS

Measurement range	± 70000 nT
Magnetic field compensation range	± 70000 nT
Magnetic field variation range (automatic compensation after switching power on)	± 2000 nT
Frequency band	DC-0.5 Hz
Sample rate	1 per s
Magnetometer noise density at frequency 0.1 Hz	< 20 pT
Magnetic sensor components orthogonality error	< 30 min of arc
Temperature drift	< 0.3 nT/°C
Operating temperature range for the electronic unit	minus 40°C - +50°C
Operating temperature range for the sensor	minus 65°C - +50°C
Power supply (external battery voltage)	9...18 V
Power consumption	< 1.2 W
Flux-gate sensor cable length	10 m
Dimensions	
Electronic unit	250x200x110 mm
Flux-gate sensor	106x106x118 mm
Weight	
Electronic unit	2.0 kg
Flux-gate sensor (without a cable)	1.45 kg