

3-COMPONENT PRECISION MAGNETOMETER LEMI-018

Main features:

- High resolution and precision
- Low noise
- Low temperature offset
- Convenience of installation and service
- Low power consumption
- Automatic operation control
- Graphic display
- 64 MB - 4 GB internal memory (CF FAT 16)
- Internal real time clock
- Satellite synchronization
- Analog and RS - 232 outputs available
- 3 years operational guarantee
- Waterproof housing

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LEMI-018 vector magnetometer for the precise measurement of Earth's magnetic field and its variations at laboratory and land conditions as well as in geomagnetic observatory 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 with adjustable or suspended support and electronic unit both connected by long cable. The electronic unit allows automated operation - acquisition, processing and storage of data about magnetic field and its variations and their transmission at request to the external user via RS232 interface or by FLASH card replacing. Built-in GPS receiver provides satellite synchronization of the internal clock and the coordinates of magnetometer location. It allows to organize the synchronous operation of a set of the magnetometers installed at the studied area. The considerable volume of internal non-volatile memory for data recording and small power consumption permits to use the magnetometer for long-term autonomous measurements in land conditions. Other options, e.g., tilt compensated sensor version (on the figure), for observatory and laboratory use, hermetic version etc. exist too.

TECHNICAL SPECIFICATIONS

Measuring ranges of total magnetic field at the display	±65 000 nT
Resolution along each component at the display, digital output and FLASH card data	0.01 nT
Measured range at analog output without additional compensation	±1000nT
Transformation factor of analog output	2.4 mV/nT
Noise level at (0.01 - 1) Hz frequency band	< 10 pT rms
Temperature drift	<0.1 nT/°C
Components orthogonality error	< 30 min of arc
Automated offset compensation band along each component	±65 000 nT
Time of samples averaging at magnetic field values registration into FLASH memory	1...255 s
Volume of internal memory	64 MB internal or 64 MB-2 GB Flash card
Operating temperature range	minus 10 to +50° C
Power supply, battery	12 ⁺⁶ ₋₃ V
Power consumption	<0.6 W
Weight: sensor with support electronic unit	1.2 kg 1.8 kg
Length of connecting cable	5 m