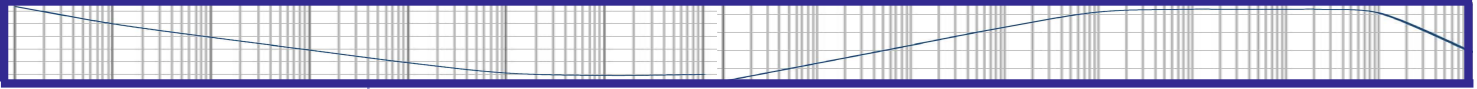


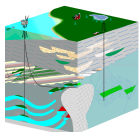
LEMI Sensors:

Fluxgate magnetometer LEMI-018



Product description

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 the cable. The electronic unit allows automated operation - acquisition, processing and storage in the embedded FLASH card of data about magnetic field and its variations and/or their transmission to the external user via RS232 (RS-422) interface. Built-in GPS receiver provides satellite synchronization of the internal clock and the coordinates of magnetometer location. It allows organizing the synchronous operation of a set of the magnetometers installed at the studied area. The big 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. Several sensor options, e.g., tilt compensated sensor, for observatory and laboratory use, hermetically sealed sensor etc. may be selected (in the figure). The program to transfer data into INTERMAGNET format and installation/training service may be offered (optional).



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Figure 1: LEMI-018 system with various sensors magnetometer.

Product applications

Highlights:

- High resolution and precision
- Low noise
- Low temperature offset
- Convenience of installation and service
- Low power consumption
- 3 modes of autonomous operation
- Automated offset compensation
- 4-lines display
- 2 GB internal memory (CF FAT16)
- Internal real time clock
- Satellite synchronization
- RS – 232 (RS-422) output
- 3 years' operational guarantee

Product specifications

Measuring ranges of total magnetic field:	±68 000 nT
Resolution along each component at the display, digital output and FLASH card data	0.01 nT
Noise level at (0.03 – 0,3) Hz frequency band	< 15 pT rms
Thermal drift	< 0.2 nT/°C
Components orthogonality error	< 30 min of arc
Automated offset compensation band along each component	±68 000 nT
Sample rate	1 per s
Time of samples averaging by PC software	1...60 s
Volume of compact flash	2 GB Flash card
Operating temperature range	- 20 to +60° C
Power supply, battery	12 ⁺⁶ ₋₃ V
Power consumption	< 0.8 W
Weight: observatory sensor with support electronic unit	1.2 kg 1.8 kg
Length of connecting cable,	10 m
Length of GPS antenna cable	3 m

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