

## 3-components analog/digital Magnetometer LEMI-022

### Main features:

- High resolution and precision
- Low noise
- Low temperature offset
- Convenience of installation and service
- Low power consumption
- Automatic operation control
- Graphic display
- Internal real time clock
- Analog and RS - 232 outputs available
- 3 years operational guarantee
- Waterproof housing



LEMI-022 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 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. Built-in GPS receiver can be added which provides satellite synchronization of the internal clock and the coordinates of magnetometer location. The internal non-volatile memory for data recording can be optionally installed too. Small power consumption permits to use the magnetometer for long-term autonomous measurements in land conditions.

### MAIN TECHNICAL PARAMETERS

Measuring ranges of total magnetic field at the display	$\pm 65\ 000\ \text{nT}$
Resolution along each component at the display and at the output	$0.01\ \text{nT}$
Measured range at analog output	$\pm 1000\ \text{nT}$
Transformation factor of analog output	$2.4\ \text{mV/nT}$
Noise level at (0.01 – 1) Hz frequency band	$< 10\ \text{pT rms}$
Temperature drift	$< 0.2\ \text{nT/}^\circ\text{C}$
Components initial orthogonality error	$< 30\ \text{min of arc}$
Automated offset compensation band along each component	$\pm 65\ 000\ \text{nT}$
Operating temperature range	minus 10 to $+50^\circ\ \text{C}$
Power supply, battery	$12^{+6}_{-3}\ \text{V}$
Power consumption	$< 0.6\ \text{W}$
Weight: sensor with support	2.7 kg
electronic unit	1.8 kg
Length of connecting cable	5m