



## WIDE BAND MAGNETOTELLURIC STATION FOR FIELD SURVEY LEMI-423

### Main features:

- 3 AC magnetic field sensors
- 2 telluric field channels
- Wide frequency range (0.0001...1000) Hz
- Satellite synchronization
- Excellent temperature stability
- Low noise level
- All sensors are calibrated
- Special software for real-time data acquisition and visualization
- Digital USB interface
- SD card 32GB
- Two types of lightning protection units to select

### Main applications:

- Exploration of gas, oil and other deposits
- Surveying deep Earth conductivity
- Basic regional survey
- Earthquakes monitoring

### Composition (left to right):

- 3 induction sensors
- Electronic unit
- Lightning protection units
- GPS antenna
- Non-polarizing electrodes



Wide band magnetotelluric station LEMI-423 is intended for the study of natural electromagnetic fluctuations in field conditions in wide temperature range. The station registers and digitizes automatically the data from 3 search-coil magnetometers and 2 electric channels. The electric channels include lightning protection unit, one of two

its constructions differing by the connectors type for electric lines connection (see photo) may be selected. The real time acquisition, recording and visualization of current and previously recorded data are executed in the external PC to which digital data are transferred through USB port. The station operation is GPS synchronized.

<b>1. Search-coil magnetometer</b>	
Frequency band	(0.0001-1000) Hz
Shape of transfer function	Linear-flat
Corner frequency	1 Hz
Transfer factor at flat part (differential)	200 mV/nT
Noise level: at 0.001 Hz at 0.01 Hz at 1 Hz at 300 Hz	< 100 pT/ $\sqrt{\text{Hz}}$ < 10 pT/ $\sqrt{\text{Hz}}$ < 0.1 pT/ $\sqrt{\text{Hz}}$ < 0.01 pT/ $\sqrt{\text{Hz}}$
Weight of one sensor	5,8 kg
<b>2. Electric field meter</b>	
Frequency band	(DC-1000) Hz
Measuring ranges (for measuring base 1 m): at gain=1	$\pm 600$ mV
Noise level in frequency band (0.01- 0.3) Hz	35 nV/ $\sqrt{\text{Hz}}$
Non-polarized electrodes (optional) own noise in frequency band (0.01...0.3) Hz	< 10nV/ $\sqrt{\text{Hz}}$
<b>3. Electronic unit</b>	
Sample rate per second	1, 250, 500, 1k, 2k, 4k
Power supply voltage	(9-18) V
Power consumption (with three sensors)	1.7 W
Weight	2 kg
Operation temperature range	minus 20° to +60°C
Waterproof housing	

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