



LONG-PERIOD MAGNETOTELLURIC STATION (MTS) LEMI-420

Main features:

- High resolution and accuracy
- Low noise
- 4 electric + 3 magnetic channels
- Very low temporal and thermal drift
- Low power consumption
- 8 Gb SD card
- Satellite synchronization
- Graphical display
- USB outputs
- Magnetic sensor with leveling facilities
- Waterproof plastic case



LEMI-420 digital 7-component MTS (three magnetic + four electric channels) is intended for the measurement of natural magnetic and electric field components and their variations in laboratory and field conditions. Its major advantages are very low temporal drift and high accuracy of measurements, what makes it especially efficient for deep sounding application. The magnetometer is produced on the base of flux-gate sensor, all three components of which are implemented in the same housing. The electrometer has four channels with high input resistance, which can operate with any type of measuring electrodes. The electronic unit allows acquisition, processing and storage of data about magnetic and electric fields variations on the SD card and their transmission to the computer via USB interface. Built-in GPS receiver provides satellite synchronization of the internal clock and the coordinates of the MTS location. MTS operation algorithm allows organizing both autonomous and synchronous operation of a set of the MTS installed at the studied area. We are flexible to adopt every parameter to your needs.

MAIN TECHNICAL PARAMETERS

Magnetic variations measuring ranges along each component:	$\pm 70\,000$ nT
Resolution	2 pT
Long-term zero drift	$< \pm 5$ nT/year
Temperature drift	< 0.2 nT/°C
Transformation factor linearity error	$< 0.01\%$
Components orthogonality error	< 30 min of arc
Electric voltage total measurement range	± 2500 mV
Resolution	2 nV
Input resistance	10 GOhm
Time of samples	1 s
SD card	8 GB
Operating temperature range	minus 20 to +60 °C
Power supply source	(10-18) V
Power consumption	< 1.2 W
Weight of electronic unit with magnetic sensor	2,7 kg
Length of connecting cable between magnetic sensor and electronic unit up to	10 m
Optional: Cu-CuSO₄ electrodes (matched pairs).	