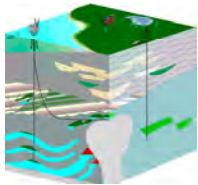


Wide-band Magnetotelluric Station (MTS) LEMI-423



KMS Technologies

KJT Enterprises Inc.
11999 Katy Freeway, Suite 160
Houston TX, 77079
USA
Tel.: +1.713.532.8144
Fax: +1.713.532.7776
More information at:
Info@KMSTechnologies.com
www.KMSTechnologies.com
www.LEMISensors.com

LEMI-423



LEMI-423 system full set layout

The 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 and monitors the temperature of electronic unit. The electric channels include lightning protection unit, one of two its constructions differing by the way to connect electric lines (see photo) may be selected. The real time acquisition, recording and visualization of current and previously recorded data are executed in the external PC or in the Data Registration Unit (optional), to which digital data are transferred through USB port. The station operation is GPS synchronized.

Product applications

- Geophysical exploration
 - Geothermal
 - Oil & gas
 - Ore deposits
- Surveying deep Earth conductivity
- Basic regional survey
- Volcanic eruption prediction research
- Earthquakes' monitoring

Product features

- High resolution and accuracy
- 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
- Real-time data acquisition and visualization software
- Graphic display with touch screen
- Digital USB interface
- 8 GB SD card
- Low power consumption
- Two models of lightning protection units to choose from
- Waterproof plastic case

Components

- 3 induction coil sensors
- Electronic unit
- Lightning protection units
- GPS antenna
- Cables
- Heavy-duty transportation cases
- Non-polarizing electrodes (add-on)



Product specifications

Frequency band: Magnetic Telluric (4k sampling rate)	0.0001 – 1,000 Hz DC – 1652 Hz
Number of channels: Magnetic Telluric	3 2
Electrode noise level at 1 Hz	< 10nV/√Hz
Telluric measuring ranges (for measuring base 1 m): at gain=4	± 500 mV
ADC	32-bit
Sample rate per second	250, 500, 1k, 2k, 4k
SD card volume	32 GB
Digital output & controls	USB or via Web access box (optional)
Operation temperature range	-20°to +60°C
Power supply	9-18 V
Power consumption (with three induction coils)	1.7 W
Weight: Electronic unit Induction coil (each)	2 kg 5.7 kg
Waterproof housing	

LEMI-120 induction coil (3 x included)



Features:

- Lowest noise in class
- Wide range of power supply voltage +/-6 V to +/-15 V
- Low power consumption. More than twice the battery life of other commercial coils.
- Wide bandwidth 0.0001 to 1000 Hz
- Lightweight 5.7 kg

LEMI-120 induction coil magnetometers, 3 coils are included in the LEMI-423 system

LEMI-423 Wide-band MT station includes 3 LEMI-120 induction coils. Extremely low noise and wide frequency range the LEMI-120 is the perfect choice for an assortment of geophysical applications. A state-of-the-art modulator-demodulator, a preamplifier with low power consumption, and differential output ensures that the sensor can be used with any acquisition station provided that the distance is less than 200 meters.

Product Specifications

Frequency band:	0.0001 – 1,000 Hz
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/ $\sqrt{\text{Hz}}$
Output sensitivity: Transformation factor @ 0.0001-1 Hz Transformation factor @ 1-1000 Hz	200*f mV/nT 200 mV/nT
3 dB points of frequency band	1 Hz, 1,000 Hz
Power consumption @ 9 V	225 mW
Supply voltage	+/- 6 V to +/-15 V
Operating temperature range	-10° to 50° C
Construction material	Waterproof fiberglass housing
Length	1340 mm
Diameter	85 mm
Weight	5.7 kg

LEMI-423 Optional Add-ons

LEMI-701 Electrode:

- Ultra-low noise
- Very low long-term drift
- Lead free & ecologically safe
- Maintenance free during its service life



KMS Web access box:

- NOISE FREE data transfer during MT acquisition
- Real-time remote acquisition control
- Real-time remote data processing
- Lower operational cost



KMS-115 E field extension cable:

- Ruggedized cable design following seismic industry field cable standard
- Reliable and steady, using twisted pair connection for fail proof performance. REDUNDANT wiring reduces breakage risk
- Flexible, anti-scraped and anti-cut, livestock deterrent polyurethane jacket
- Cable length is 50 m or 75 m, can be cut for shorter length by customer
- Optional KMS-155 cable reel for EASY field operation.



KMS-200 Software:

- Single site, remote reference & multi-remote reference robust processing
- Time & frequency domain display
- Real-time acquisition & monitoring software
- Export to numerous industry standard formats
- Different options for 1D, 2D & 3D inversion



LEMI-423 Order Information

1. **KMS-423 full system:** LEMI-423 system with all options: LEMI-701 electrode, Web access box, KMS-115 cable and KMS-200 software.
2. **LEMI-423 MT system only:** LEMI-423 system plus 4 LEMI-701 and 4 of KMS-115.
3. **LEMI-423 basic system:** LEMI-423 system alone.
4. **LEMI-423 customized options:** LEMI-423 basic system plus customized options.

Note: LEMI-423 basic system only comes with the data logger, 3 x induction coils, GPS antenna and basic accessories. LEMI-701 electrodes and KMS-115 E field cables are NOT included

Please contact info@KMSTechnologies.com or sales@LEMIensors.com for more information and get your customized quote today!