

Induction Magnetometer LEMI-121

Induction Coil Magnetometers

LEMI-118
LEMI-120
LEMI-121
LEMI-123
LEMI-134

Product description

The LEMI-121 induction coil magnetometer features high sensitivity and low noise combined with a very small form factor. The optimized feed-back design ensures excellent signal-to-noise ratio for exact measurements. Strengthened rugged housing and output connector prolong sensor active lifetime and increase overall reliability. Low power consumption and wide frequency range allow long term measurements at remote sites.

Fluxgate Magnetometers

LEMI-011
LEMI-018
LEMI-019
LEMI-022
LEMI-024
LEMI-025
LEMI-031

Application description

Its small dimensions and light weight makes the LEMI-121 induction coil magnetometer the ideal sensor for magnetotelluric studies in remote locations. Intended for the study of magnetic field fluctuations in the frequency band 0.0001-500 Hz it can be used in areas where the use of LEMI-120 induction coil magnetometers is not possible or in vertical deployments were deep holes are not an option. LEMI-121 induction coil magnetometer can be used autonomously with any state of the art analog registration unit or as a part of geophysical equipment, e.g., magnetotelluric stations.

Electrodes & E-field Measurements

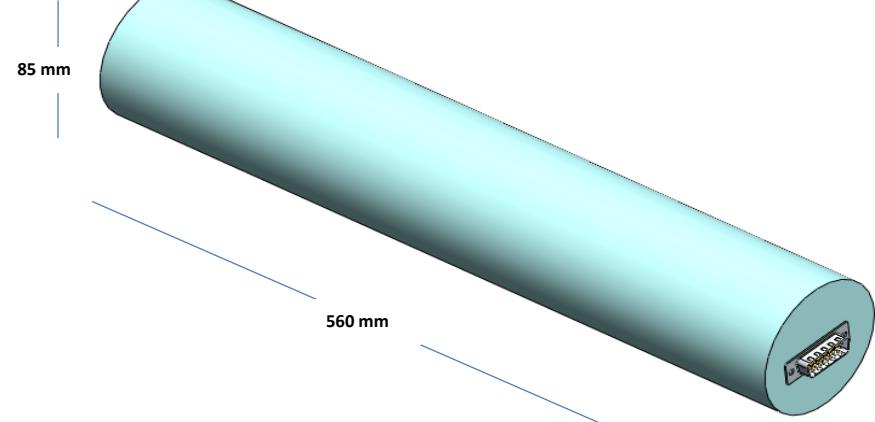
LEMI-701

Highlights

- Wide frequency range (0.0001 – 500 Hz)
- Only 540 mm long
- Low power consumption
- Weights only 4 kg
- Low noise

Magnetic and Magnetotelluric Stations

LEMI-030
LEMI-417
LEMI-418



Calibration Systems

LEMI-901
LEMI-931

Special Products

LEMI-017
LEMI-204
LEMI-301

LEMI-120 dimensional drawing

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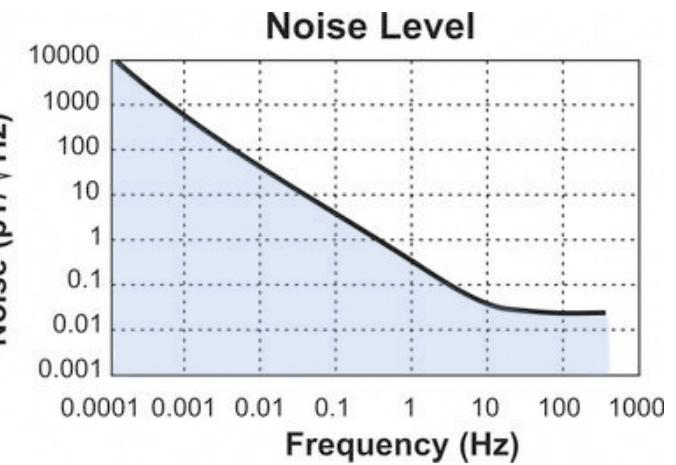
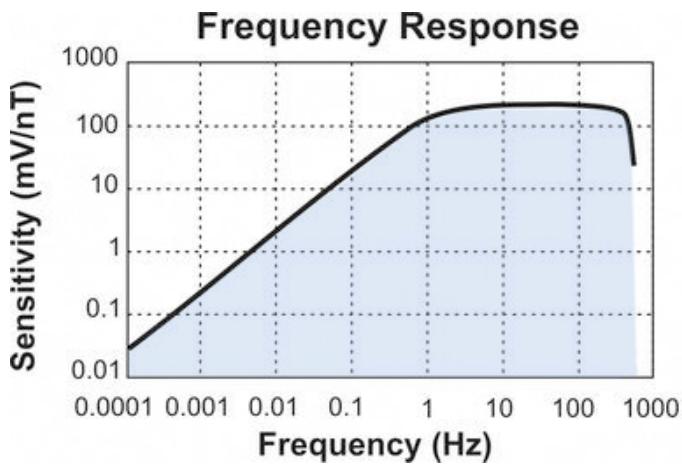
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LEMI-121 Induction Magnetometers

Specifications

Length	560 mm
Diameter	85 mm
Weight	4 kg
Frequency range	0.0001 Hz to 500 Hz
3 dB points of frequency band	1 Hz, 500 Hz
Shape of transfer function	Linear - flat
Transformation factor @ 0.0001 – 1 Hz	$f \cdot 200 \text{ mV/nT}$
Transformation factor @ 1 – 1000 Hz	200 mV/nT
Connector type	DB9
Temperature rating	-10°C to +50°C
Construction material	Waterproof fiberglass housing
Power consumption @ 9V	± 14 mA
Power supply voltage	± 5 V to ± 12 V
Noise level @ 0.001 Hz	≤ 600 pT/√Hz
@ 0.1 Hz	≤ 5 pT/√Hz
@ 100 Hz	≤ 0.05 pT/√Hz



Frequency response and noise level graphs for the LEMI-121 Induction Magnetometer

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