

Induction Coil Magnetometers

LEMI-118

LEMI-120

LEMI-121

LEMI-123

LEMI-134

Fluxgate Magnetometers

LEMI-011

LEMI-018

LEMI-019

LEMI-022

LEMI-024

LEMI-025

LEMI-031

Electrodes & E-field Measurements

LEMI-701

Magnetic and Magnetotelluric Stations

LEMI-030

LEMI-417

LEMI-418

Calibration Systems

LEMI-901

LEMI-931

Special Products

LEMI-017

LEMI-204

LEMI-301

Product description

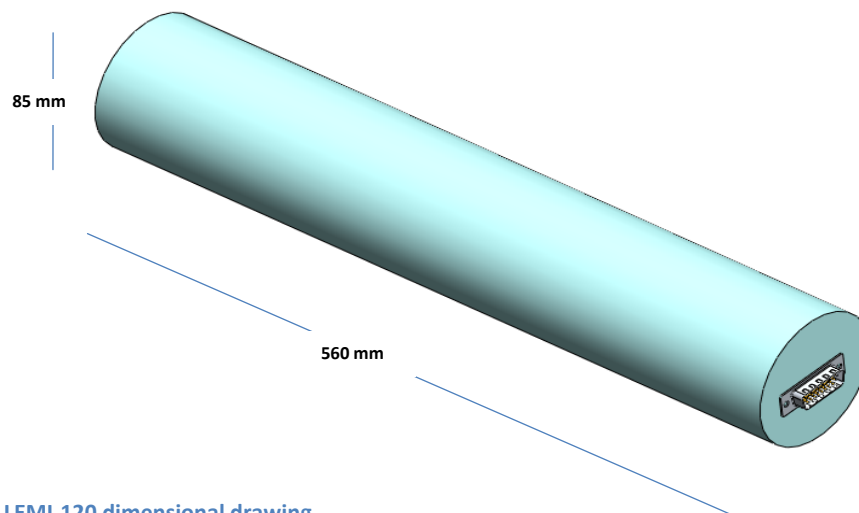
The LEMI-121 induction coil magnetometer features high sensitivity and low noise combined with a very small form factor. The optimized feed-back design ensures excellent signal-to-noise ratio for exact measurements. Strengthened rugged housing and output connector prolong sensor active lifetime and increase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

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 where 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.

Highlights

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



LEMI-120 dimensional drawing




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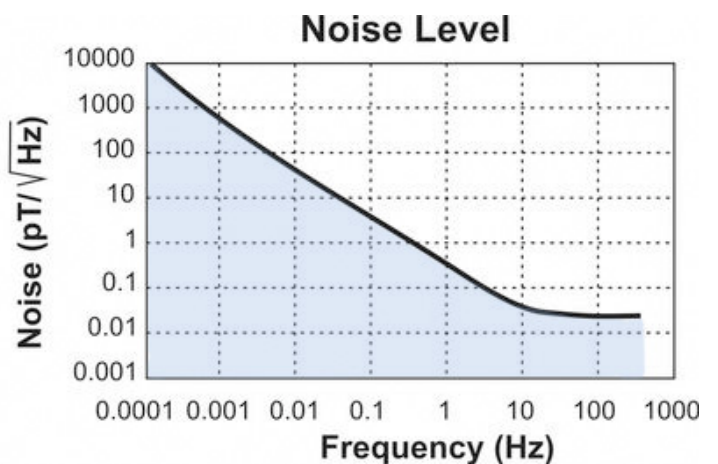
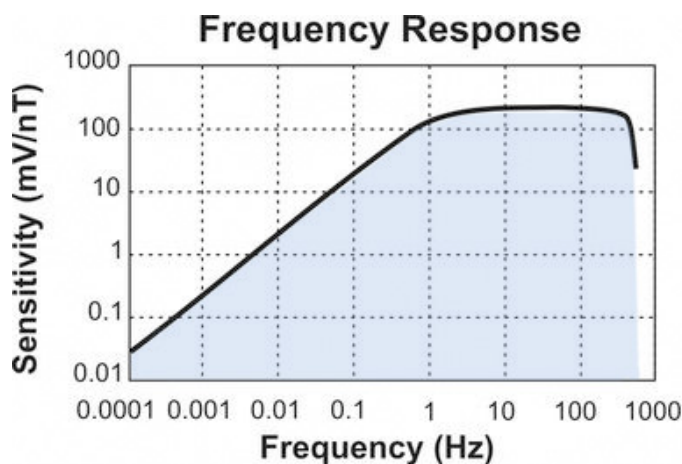
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LEMI-121 Induction Magnetometers

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	$\pm 14 \text{ mA}$
Power supply voltage	$\pm 5 \text{ V}$ to $\pm 12 \text{ V}$
Noise level @ 0.001 HZ	$\leq 600 \text{ pT}/\sqrt{\text{Hz}}$
@ 0.1 HZ	$\leq 5 \text{ pT}/\sqrt{\text{Hz}}$
@ 100 HZ	$\leq 0.05 \text{ pT}/\sqrt{\text{Hz}}$



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




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