

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-123 induction coil magnetometer has been optimized for packaging into size limited acquisition arrangements. Like all other LEMI induction coil magnetometers the LEMI-123 is based on a feedback design and features a state of the art built-in modulator-demodulator pre-amplifier with low power consumption and differential output. This ensures optimum performance in terms of noise and cross coupling when the sensor is integrated into a measurement system.

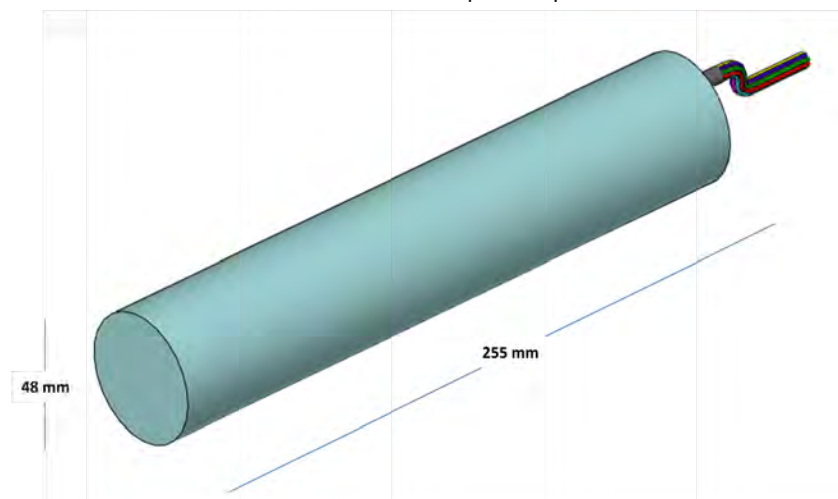
LEMI-123 sensors are intended for the study of magnetic field fluctuation in the frequency range from 1 Hz up to 1,000 Hz. They can be used stand alone or together with other magnetometers to cover a wider frequency range.

Application description

The LEMI-123 induction coil magnetometer have been designed to measure magnetic field variations in the frequency band from 1 Hz to 1000 Hz. LEMI-123 magnetometers are intended to be integrated into an acquisition system or measurement network. The analog output features standard output voltages that allow combining LEMI-123 magnetometers with every state of the art recording unit.

Highlights

- Only 255 mm long
- Very low noise
- Light weight
- Linear response up to 100 Hz



LEMI-123 dimensional drawing




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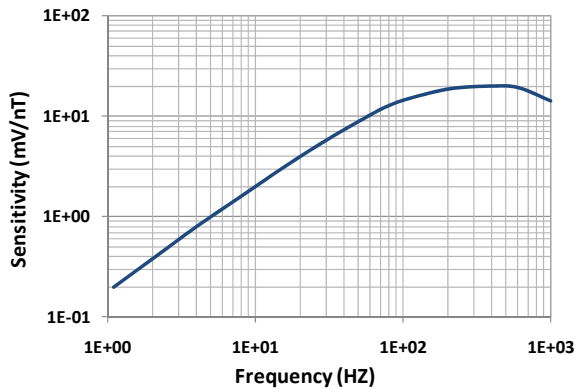


LEMI-123 Induction Magnetometers

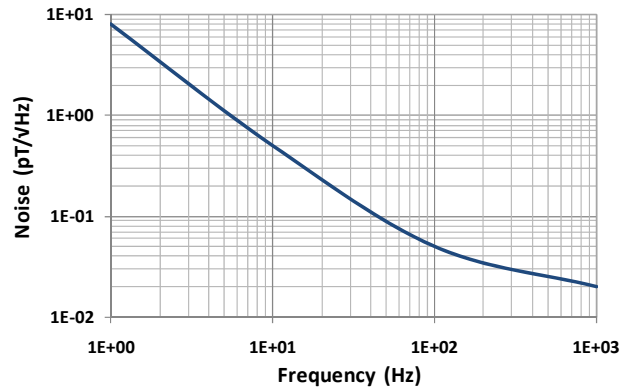
Specifications

Length	255 mm
Diameter	48 mm
Weight	0.70 kg
Frequency range	1 Hz to 1,000 Hz
3 dB points of frequency band	100 Hz, 1,000 Hz
Shape of transfer function	Linear - Flat
Transformation factor @ 1 – 100 Hz	0.2*f mV/nT
Transformation factor @ 100 – 1000 Hz	20 mV/nT
Connector type	Color coded wires
Temperature rating	± 0°C to 40°C
Construction material	Fiberglass housing
Current consumption	± 13 mA
Power supply voltage	± 5 V
Noise level @ 1 HZ	≤ 8 pT/√ Hz
@ 10 HZ	≤ 0.5 pT/√ Hz
@ 100 Hz	≤ 0.05 pT/√ Hz
@ 1000 HZ	≤ 0.02 pT/√ Hz

Frequency Response



Noise Level



Frequency response and noise level graphs for the LEMI-123 Induction Magnetometer




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