



HIGH FREQUENCY LOW NOISE SEARCH-COIL MAGNETOMETER LEMI-157

Main features

- **Wide frequency range:**
1 – 100 kHz
- **Very low noise**
- **Low power consumption**



Three-axis search-coil magnetometer (SCM) LEMI-157 is intended for the measurements of the three orthogonal components of magnetic field fluctuations in the frequency band 1 ... 100 kHz during high frequency geophysical studies. It can be used with any analogue measuring unit.

TECHNICAL SPECIFICATION

| | |
|---|---|
| Frequency band of received signals | 1 - 100 kHz |
| Shape of transfer function | flat |
| Transformation factor¹ | 25 mV/nT |
| Transformation factor error | < 6 dB |
| Crosstalk | < 10 % |
| Magnetic noise level at 1 kHz, at 10 kHz, at 20 kHz at 100 kHz | $\leq 0.1 \text{ pT}/\sqrt{\text{Hz}}$ $\leq 0.05 \text{ pT}/\sqrt{\text{Hz}}$ $\leq 0.03 \text{ pT}/\sqrt{\text{Hz}}$ $\leq 0.03 \text{ pT}/\sqrt{\text{Hz}}$ |
| Power supply voltage² | $\pm (7.5...12) \text{ V}$ |
| Maximum output voltage | $\pm 2 \text{ V}$ |
| Power consumption | <0.6 W |
| Temperature range of operation | minus 20 to+ 50⁰ C |
| Outer dimensions | 50x50x50 mm |
| Weight | < 0.3 kg |

Notes:

¹ The transfer function is experimentally derived and its values are given in the User Manual.

² Power supply voltage must not exceed $\pm 8 \text{ V}$ at the use of the 50 Ohm load in order to avoid preamplifier overheating.