

**LEMI**

A KMS Technologies company

**Laboratory for ElectroMagnetic Innovation**



# LEMI-022 Three component analog/digital magnetometer

Used for precise measurement of Earth's magnetic field and its variations both in and out of laboratories. All three components are implemented in the same body. LEMI-022 consists of two units, the sensor unit with adjustable support and the electronic unit both connected by long cable. The electronics is implemented as a "black box" unit with both analog output which may be connected to any analog registration unit and digital output. The LEMI-022 automatically acquires magnetic field data and its variations and transmits this data via RS232 or RS422 interface to the user.



## Product Applications

LEMI-022 three component magnetometers are used for measurements of magnetic field variations in the frequency range from 0 to 0.3 Hz. Their low frequency bandwidth and low noise make them the ideal fluxgate sensor for magnetotelluric measurements.

### Highlights

- High resolution and precision
- Low noise
- Low temperature offset
- Convenience of installation and service
- Low power consumption

## Product Specifications

<b>Measurement range</b>	+/-68000 nT
<b>Magnetic field variation range (w/o additional compensation)</b>	+/- 2000 nT
<b>Resolution at digital output</b> <b>Analog output sensitivity</b>	0.06 nT 1.3 mV/nt
<b>Temperature drift</b>	<0.5nT/°C
<b>Frequency band</b>	0..0.3 Hz
<b>Magnetometer own noise density at frequency 1 Hz</b>	< 10 pT
<b>Magnetic sensor components orthogonality error</b>	< 30 min of arc
<b>Thermometer measurement range</b> <b>Thermometer resolution</b> <b>Thermometer basic measurement error</b>	-40 to +60°C 0.037°C 0.5%
<b>Operating temperature range</b>	-20 to +50°C
<b>Power supply</b>	10-18 V
<b>Power consumption</b>	<0.7 W
<b>Weight</b> <b>Electronics unit</b> <b>Sensor with supports</b>	1.8 kg 2.7 kg

**Power spectrum**

