
8532 Series Handheld AC Magnetometers

Portable Battery Powered Magnetometer

The **8532** series of AC handheld magnetometers provide precision measurements of the magnetic fields produced by alternating currents. The innovative design of the **8532** series resulted in a magnetometer with a field magnitude response that is insensitive to frequency over a broad frequency range. This feature allows accurate measurements of field magnitude for signals with frequencies from 12 Hz to 50 kHz.

The 8532 series magnetometers display the RMS field magnitude of one of three operator select-able frequency bands. Both magnetometers have two analog outputs. One output represents the basic magnetic field signal; the other is the DC voltage that corresponds to the displayed RMS measurement. The basic magnetic field signal has a bandwidth of 12 Hz to 50 kHz making it suitable for observation on an oscilloscope or connection to a spectrum analyzer.



Common Features

- 1 nanotesla (0.01 milligauss) Resolution.
- 1% Basic Accuracy at 60 Hz (50 Hz optional). Traceable to NIST.
- Three Full Scale Ranges: ± 2000 , ± 200 , ± 20 milligauss.
- 3 ½ Digit LCD Display.
- RMS and Wideband Analog Outputs Available for Data Recording and Spectrum Analysis.
- 12 Hz to 50 kHz Bandwidth.
- True RMS Magnitude Measurement.

Applications

- Power Line Field Surveys
- VDT Field Measurements
- Power Line Field Monitoring
- Power Line Harmonic Analysis
- General Purpose Low Frequency EMI Measurements

For more information

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The Most Accurate AC Magnetometer Available

The 8532 series magnetometers are wideband instruments for the measurement of very low-level AC magnetic fields. They are suitable for the precision measurements of fields from power lines, substations, transformers, motors, industrial equipment and any electronic appliance.

The 8532 series includes an electronics unit and induction coil probe with a 24" coiled cord that connects the probe to the electronics unit.

The electronics unit processes the probe's output signal. It also includes a switch for turning the unit on and setting its range, a 3 1/2 digit LCD that displays the value of the measured field and two connectors on the top end panel for accessing the two analog outputs.

Rugged Portability

Weighing less than a pound and powered by a long life 9 Volt battery, the 8532 series

magnetometers are ideally suited for both indoor and outdoor use. The sensor is housed in a weather-sealed probe to protect against the elements and a handsome case for the instrument is included.

Accurate Measurements

The PLM-100 series unique sensor signal conditioning minimizes errors caused by sensor movement within the earth's magnetic field. This quality instrument provides a reading accuracy of $\pm 1\%$ traceable to NIST and precision to 0.01 milligauss.

Frequency Band Selection Capability

The operator can choose to measure the power line frequency component, the wideband (12 Hz to 50 kHz) RMS value or the VLF (2 kHz to 50 kHz) RMS value.

The superior sensitivity, accuracy, wideband performance and convenience make the 8532 series the instruments of choice for professional engineers, health officials and discerning consumers.

Specifications

Ranges	$\pm 2000, \pm 200, \pm 20$ milligauss
Resolution	1 part in 2000 (0.05% FS)
Reading Accuracy	
<i>PL position</i> (power line frequency)	$\pm(1\%$ of reading + 1 count)
<i>Video position</i>	
12 Hz	-3dB nominal
50 Hz	$-2\% \pm(0.5\% + 1 \text{ count})$
60 Hz	$-1.2\% \pm(0.5\% + 1 \text{ count})$
100 Hz to 10 kHz	$\pm(2\% + 1 \text{ count})$
10 kHz to 50 kHz	$\pm(5\% + 1 \text{ count})$
<i>VLF position</i>	
2 kHz	-3db nominal
20 kHz to 50 kHz	$\pm(5\% + 1 \text{ count})$
Power	22.5 milliwatts maximum at 9 Volts
Power Source	9 Volt Alkaline Battery
Analog Output	
<i>RMS output</i>	200 millivolts FS
<i>Wideband output</i>	3 Volts peak-to-peak full scale, 12 Hz to > 50 kHz
Weight	15 oz. (0.425 Kg) including probe
Temperature Range	0° C to 50° C
Display	3 1/2 Digit LCD with battery low indicator