## MEDA, Inc.

Data Sheet www.meda.com

Macintyre Electronic Design Associates, Inc. 43676 Trade Center Place, Suite 145, Dulles, VA 20166 Phone: (703) 996-8990 FAX: (703) 996-8990

# μMAG<sup>®</sup> Series Handheld Fluxgate Magnetometers



### **Portable Battery Powered Magnetometer**

The  $\mu$ MAG<sup>®</sup> series is the premiere, handheld instrument for the precision measurement of the vector components of weak static and low frequency magnetic fields. The superior stability, linearity and accuracy of the  $\mu$ MAG<sup>®</sup>, compared with Hall Effect or Magnetoresistance based instruments, make it the only choice for high quality low magnetic field measurements and the best choice for general purpose magnetometer applications.

#### Features

- □ 1 nanotesla (0.01 milligauss) Resolution
- □ 0.5% Basic Accuracy Traceable to NIST
- □ Three Full Scale Ranges: ±2000, ±200, ±20 milligauss
- □ 3 ½ Digit LCD Display
- Analog Output Available for Data Recording
- □ 400 Hz Bandwidth

#### **Applications**

- Package Inspection
- Materials Screening
- Shielding Effectiveness Measurements
- Field Mapping
- Magnetic Signature Determination
- Magnetic Environment Monitoring
- Magnetic Environment Control

## The Original Handheld Fluxgate Magnetometer

The  $\mu$ MAG<sup>®</sup> series includes an electronics unit and a fluxgate probe with a six-foot cable that connects the probe to the electronics unit.

The electronics unit provides the control signals for driving the probe and processing the probe's output. It also includes a switch for turning the unit on and setting its range, a 3 ½ digit LCD that displays the value of the measured field and a dual banana plug connector that outputs an analog representation of the measured field.

There are two types of probes. The longitudinal axis probe measures the vector component of the magnetic field along the length of the probe. The transverse axis probe measures the vector component across the width of the probe. Both probes can be used to measure the three vector components of the magnetic field by measuring the field along three mutually orthogonal axes.

#### **Four Different Models**

- □ The µMAG<sup>®</sup>-01 has a dedicated longitudinal probe.
- The μMAG<sup>®</sup>-02 has a dedicated transverse probe.
- The µMAG<sup>®</sup>-01N and µMAG<sup>®</sup>-02N include controls for canceling the ambient field so that small changes in the field can be detected and accurately measured.



ARROW INDICATES SENSITIVE AXIS

Specifications	μMAG <sup>®</sup> -01/02	μMAG <sup>®</sup> -01N/02N
Ranges	±2000, ±200, ±20 mG	*
Resolution	1 part in 2000 (0.05% FS)	*
Accuracy	$\pm 0.5\%$ of FS $\pm 1$ count	*
Power	150 mW nominal	200 mW
Power Source	9 Volt Alkaline Battery	*
Analog Output	±2 Volts FS	*
Bandwidth	DC to 400 Hz	*
Linearity	0.02% of FS	*
Weight	15 oz. (0.425 Kg) including probe	*
Temperature Range	0° C to 50° C	*
Display	3 1/2 Digit LCD	*
Neutralizing Range	N/A	±700 mG
Sensor Dimensions	1.2"Wx2.75"Lx0.6"H	*
Meter Dimensions	3.8"Wx7.5"Lx1.3"H	*

\* - Same as µMAG\*-01 FS - Full Scale

For more information		
Voice: (703) 996-8990	FAX: (703) 996-8990	e-mail: sales@meda.com