Model 6010 Hall Effect Gaussmeter

Description

The Model 6010 Hall-effect gaussmeter represents the latest innovations and state-of-the-art designs from the world leader in magnetic measuring equipment. F.W. Bell’s exclusive Dynamic Probe Correction feature, along with temperature compensation, allows measurements up to 300 kG with a basic accuracy of 0.25%.

Key features include Peak Hold, Max/Min Hold, Auto Zero, Auto Range, Relative Mode and Temperature measurement. The Model 6010 allows the user to select Gauss, Tesla or Ampere/Meter readings. The Model 6010 also features a corrected analog output (± 3 V Full Scale for each range), an RS-232 communications port, a rechargeable battery and probe temperature compensation. The Temperature measurement feature, used with the new 6000 Series 5th Generation Hall-effect gaussmeter probes, allow the user to take temperature readings (-40 °C to +85 °C) while monitoring the magnetic field. The easy-to-read large format alpha-numeric LCD, with dual 3 3/4 digit read outs, gives the user magnetic field flux density readings while also displaying temperature (or Peak Hold, or Max/Min Hold).

User prompts on the custom formatted LCD allow fast, simple push button operation. All models come equipped with a zero gauss chamber, accessory hard case, built-in rechargeable battery, quick reference card and instruction manual. A wide range of axial and transverse probes are available as options.

Applications for the Model 6010 range from the most sensitive laboratory environments to rugged industrial settings. All instruments are fully CE compliant.

Features

- Large Format LCD
- Dual 3¾ digital readouts
- Temperature Measurement
- Displays in Gauss, Tesla or Ampere/Meters
- Peak Hold
- Max/Min Hold
- Corrected Analog Output
- Auto Range
- Temperature Compensated Probes
- Auto zero/Auto Calibration
- RS-232 Interface
- Rechargeable Battery
- Compatible with Model 9200 Probes
- CE Compliant
Model 6010 Specifications

Specifications

Measuring Range* 1 mG (0.1 µT) to 300 kG (30T)

Ranges

| 3G (300 µT)* | 3 kg (300 mT) |
| 30 G (3 mT)* | 30 kg (3 T) |
| 300 G (30 mT) | 300 kg (30 T)† |

* Low field probe
† High field probe

Resolution 1 mG (0.1 µT) to 100G (10mT) Depending on probe selected

Accuracy (displayed reading)

| ±% of Reading | ±Number of Counts |
| 0.25          | 3                   |
| 1.0           | 3                   |

Frequency Response dc – 20 kHz

Display Large alpha-numeric LCD with Dual 3 ½ digit read out

Measuring Units Gauss, Tesla, Ampere/Meters

Analog Output (Corrected) Output Voltage ±3.0 V FS (for each range)
Accuracy
DC 1% of reading
AC 2% of reading
Noise 4 mVrms

Temperature Measurement -40 °C to +85 °C

Note. *= available ranges and resolution depend on probe type.

General Information

Specifications

Temperature Range

| Operating | Storage |
| 0°C to +50°C | -20°C to +70°C |

Front Panel Display Dual 3 ½ - digit, alphanumeric LCD

Viewing area 4.1” (10.4 cm) x 2.5” (6.35 cm)

Communication Ports RS-232, Full Duplex

Power

Input Voltage 90 Vac to 240 Vac
Frequency 50/60 Hz

Internal Battery Rechargeable, Sealed Lead Acid
Life (time between charges) 8 Hours (typical)

Connectors

Probe Circular (Front Panel)

Analog Output BNC (Rear Panel)

RS-232 DB-9 (Rear Panel)

Probes

Types Standard and temperature compensated
Compatibility Adapters to be available for Model 9200 gaussmeter probes

Size 10" (25.4 cm) W, 4.5" (11.43 cm) H (w feet), 12.5" (31.75 cm) D

Weight (maximum)

Net 8.8 lb. (4.0 kg)
Shipping 13.7 lb. (6.2 kg)

Software LabView Driver

Note: Due to continuous process improvement, specifications subject to change without notice.