Model 410 Gaussmeter

Model 410 features

- Ranges (Autoranging): ±20 G, ±2 kG, and ±20 kG ranges
- Frequency response: DC and 20 Hz to 10 kHz
- Resolution to 3½ digits (1 part out of ±2000)
- Custom liquid crystal display
- Accuracy: ±2% of reading
- Handheld
Introduction

This handheld gaussmeter is designed for accurate magnetic field measurements from 0.1 G to 20 kG (0.01 mT to 2 T). Most operating functions can be selected via the front-panel keypad with one or two keystrokes. The Model 410 displays in gauss or tesla, AC or DC values with resolution to 100 mG.

Operating functions include:

**Max hold**—The largest field magnitude measured (since the last reset) is displayed with the Max Hold function.

**Filter**—When the field being measured is noisy, using the Filter function will average readings to produce a more stable display.

**Alarm**—An audible alarm is sounded and the display indicator flashes when the measured field is higher than keypad-entered alarm point.

**Zero probe**—Used to eliminate probe offsets and small external fields.

**Relative reading**—Used to show small variations in large background fields. When activated, Relative function displays deviation from a specific setpoint.

**Autoranging**—Automatically selects the appropriate range.

**Memory hold**—On power down, the Model 410 stores the complete instrument configuration in nonvolatile memory, including the calibration number and probe offset, making it unnecessary in most cases to go through a setup procedure on power up.

Stock probes

The most commonly ordered probes for this gaussmeter.

<table>
<thead>
<tr>
<th>Orientation</th>
<th>Frequency range</th>
<th>Full-scale field range</th>
<th>Stem material</th>
<th>Stem length (in)</th>
<th>Probe part number</th>
</tr>
</thead>
<tbody>
<tr>
<td>Axial</td>
<td>DC</td>
<td>200 G, 2 kG, 20 kG</td>
<td>Brass</td>
<td>2</td>
<td>MSA-2202-410</td>
</tr>
<tr>
<td></td>
<td>DC to 10 kHz</td>
<td>200 G, 2 kG, 20 kG</td>
<td>Brass</td>
<td>4</td>
<td>MSA-2204-410</td>
</tr>
<tr>
<td>Transverse</td>
<td>DC</td>
<td>200 G, 2 kG, 20 kG</td>
<td>Brass</td>
<td>2</td>
<td>MST-9P02-410</td>
</tr>
<tr>
<td></td>
<td>DC to 10 kHz</td>
<td>200 G, 2 kG, 20 kG</td>
<td>Flexible plastic tubing</td>
<td>2.6</td>
<td>MST-9P04-410</td>
</tr>
</tbody>
</table>

Model 410 specifications

**Display:** Digital liquid crystal display (LCD), 3½ digits

**Resolution:** 0.1 G on the 200 G range

**DC accuracy:** 2% reading ±0.1% full scale (at 25 °C) includes instrument, probe, and a calibration transfer

**AC accuracy:** ±5% of reading

**Frequency response:** DC and 20 Hz to 10 kHz

**Ranges:** ±200.0 G (±20.00 mT); ±2.000 kG (±200.0 mT); ±20.00 kG (±2.000 T)

**Temperature range:** 0 °C to 50 °C (operating)

**Instrument temperature coefficient:** 0.05% rdg/°C

**Instrument and probe temperature coefficient:** 0.1% rdg/°C

**Size:** 193 mm H × 99 mm W × 43.2 mm D (7.6 in × 3.9 in × 1.7 in)

**Power:** 4 AA battery operated (battery life > 160 h)

Ordering information

<table>
<thead>
<tr>
<th>Part number</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>410-SCT</td>
<td>410 in soft case with transverse probe</td>
</tr>
<tr>
<td>410-SCA</td>
<td>410 in soft case with axial probe</td>
</tr>
<tr>
<td>410-SCAT</td>
<td>410 in soft case with transverse &amp; axial probe</td>
</tr>
<tr>
<td>410-HCAT</td>
<td>410 in a hard case with transverse &amp; axial probe</td>
</tr>
</tbody>
</table>

**Accessories included**

- MST-410/MSA-410 Transverse and/or axial probe
- MPEC-410-3 Extension cable
- 4106 Set of 4 AA batteries
- 119-002 Model 410 user manual

**Accessories available**

- 4060 Zero gauss chamber
- 4106 Set of 4 AA batteries
- 4107 Model 410 bench support
- 4141 Soft case
- 4142 Hard case
- CAL-410-CERT Instrument recalibration with certificate
- CAL-410-DATA Instrument recalibration with certificate & data
- CAL-N1-DATA Calibration data for a new Model 410
- MSA-410 Axial probe for Model 410
- MST-410 Transverse probe for Model 410
- MSA-2202-410 51 mm (2 in) brass axial probe for Model 410
- MSA-2204-410 102 mm (4 in) brass axial probe for Model 410
- MST-9P02-410 51 mm (2 in) brass transverse probe for Model 410
- MST-9P04-410 102 mm (4 in) brass transverse probe for Model 410
- MPEC-410-3 Probe extension cable, 1 m (3 ft)
- MPEC-410-10 Probe extension cable, 3 m (10 ft)

All specifications are subject to change without notice.