**DESCRIPTION**

The Biddle® 5- and 15-kV Megohmeters are high-voltage, line-operated instruments. They provide a continuously variable test voltage for highly sensitive insulation-resistance measurements of all types of electrical equipment and power cable.

The instruments are designed to withstand harsh field conditions, and feature tough, impact-resistance casing, removable lids and adjustable carrying straps. For complete portability, there is ample room in each case to store cables and the instruction manual.

**APPLICATIONS**

The units are suitable for dielectric absorption and step-voltage testing. Two models are available:

- **5-kV Megohmmeter:** measures up to 100,000 MΩ; provides output from 250 volts to 5 kV, with direct reading up to 50,000 MΩ at 2.5 kV

- **15-kV Megohmmeter:** provides direct reading measurements up to 100,000 MΩ at 5 kV and up to 200,000 MΩ at 10 kV, with a multiplying factor for all other voltages up to 15 kV

The 15-kV model also features an internal voltage stabilizer that may be activated for improved measurement under extreme field conditions. Separate on/off controls are provided for power and high voltage, and a red light indicates when high voltage is on.

**FEATURES AND BENEFITS**

- Provides 2% kV and MΩ accuracy
- Guard terminal to eliminate surface leakage current from the measurement
- Zero-start, high-voltage interlock
- Shielded, high-voltage output cable permanently connected to the instrument
- Circuit-breaker protection
- Redundant grounding connections
- Easy-to-follow, color-coded meter scales
- Analog metering for monitoring of variable measurements
- Rugged field construction
### SPECIFICATIONS

<table>
<thead>
<tr>
<th>CAT. NO.</th>
<th>Model</th>
<th>DC Test Voltage</th>
<th>Megohm Range Multiplier</th>
<th>Dimensions</th>
<th>Weight</th>
</tr>
</thead>
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<tr>
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<tr>
<td>210400</td>
<td>5-kV Model</td>
<td>2.5 kV DC</td>
<td>0.5 to 50</td>
<td>5 to 500</td>
<td>500 to 5000</td>
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<td></td>
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<td>5 kV DC</td>
<td>1 to 100</td>
<td>10 to 1000</td>
<td>1000 to 10,000</td>
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<td></td>
<td></td>
<td>250 V to 5 kV</td>
<td>Multiply MΩ by factor indicated in green</td>
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<tr>
<td>210415</td>
<td>15-kV Model</td>
<td>7.5 kV</td>
<td>1.5 to 150</td>
<td>15 to 1500</td>
<td>1500 to 15,000</td>
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<td>15 kV</td>
<td>3 to 300</td>
<td>30 to 3000</td>
<td>3000 to 30,000</td>
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<td>500 V to 15 kV</td>
<td>Actual kV 10 x Range at 10 kV</td>
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</table>

#### 5-kV Megohmmeter, Cat. No. 210400
- **Input Voltage:** 120 Vac, 60 Hz
- **Test Voltage:** 0 to 5 kVdc, negative with respect to ground
- **Output Current:** 5 mA continuous
- **Short-Circuit Current:** 12 mA max.

#### Instrumentation

**Kilovoltmeter**
- 4.5-in. (114-mm) taut band
- **Three Color-Coded Scales**
  - Red: 0 to 2.5 kV
  - Black: 0 to 5 kV
  - Green: 0 to 1 reference
- **Accuracy:** ±2% full scale

**Megohmmeter**
- 4.5-in. (114-mm) taut band
- **Two Scales**
  - Red: 0.5 to 50 MΩ
  - Black: 1 to 100 MΩ
- **Accuracy:** ±0.031 in. (0.08 cm) at any marking

#### Operating Temperature Range
- 0 to 122° F (−17.7 to +50° C)

#### 15-kV Megohmmeter, Cat. No. 210415
- **Input Voltage:** 120 Vac, 60 Hz
- **Test Voltage:** 0 to 15 kVdc, negative with respect to ground
- **Output Current:** 2 mA continuous (stabilizer out)
- **Short-Circuit Current:** 12 mA max.

**Megohmmeter**
- 4.5-in. (114-mm) taut band
- **Two Scales**
  - Red: 0.5 to 50 MΩ
  - Black: 1 to 100 MΩ
- **Accuracy:** ±0.031 in. (0.08 cm) at any marking

#### Operating Temperature Range
- 0 to 122° F (−17.7 to +50° C)

#### Instrumentation

**Kilovoltmeter**
- 4.5-in. (114-mm) taut band
- **Three Color-Coded Scales**
  - Red: 0 to 7.5 kV
  - Black: 0 to 15 kV
  - Green: 0 to 1.5 reference
- **Accuracy:** ±2% full scale

**Megohmmeter**
- 4.5-in. (114-mm) taut band
- **Two Scales**
  - Red: 1 to 100 MΩ
  - Black: 2 to 200 MΩ
- **Accuracy:** ±2% full scale

### ORDERING INFORMATION

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<th>Item</th>
<th>Cat. No.</th>
<th>Item</th>
<th>Cat. No.</th>
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<td>Test record card, 0 to 1000 GΩ</td>
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<td>15 kV</td>
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<td>Rotating equipment</td>
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<td>Power transformers</td>
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<td>Power cables</td>
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<td>Bushing guard spring</td>
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<td>“Lowdown on HV DC Testing” manual</td>
<td>AVTM22P-1</td>
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<td>Included Accessories</td>
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<td>Ground connection cable, 10 ft [3 m]</td>
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<td>Power cord, for Cat. No. 210415</td>
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<td>“A Stitch in Time” manual</td>
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<td>Instruction manuals</td>
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<td>For Cat. No. 210400</td>
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<tr>
<td>For Cat. No. 210415</td>
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