5- and 15-kV Megohmmeters

DESCRIPTION
The 5- and 15-kV Megohm-meters 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:

The 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.

The 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
- Continuously variable test voltage
- Rugged field construction
- Circuit-breaker protection
- 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>
<tbody>
<tr>
<td>210400</td>
<td>5-kV</td>
<td>2.5 kV dc 0.5 to 50</td>
<td>x 1</td>
<td>10</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5 kV dc 1 to 100</td>
<td>x 5</td>
<td>50</td>
<td>500</td>
</tr>
<tr>
<td>210415</td>
<td>15-kV</td>
<td>7.5 kV dc 1.5 to 150</td>
<td>x 10</td>
<td>150</td>
<td>1500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>15 kV dc 3 to 300</td>
<td>x 100</td>
<td>300</td>
<td>3000</td>
</tr>
<tr>
<td></td>
<td></td>
<td>500 V to 15 kV</td>
<td>Actual kV x 10^4</td>
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</tbody>
</table>

**5-kV Model, 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 Color-Coded 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 122º F (-17.7 to +50º C)

**15-kV Model, 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)
- 50 µA continuous (at 15 kV, stabilizer in)

**Short-Circuit Current**
12 mA max.

**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 Color-Coded Scales**
  - **Red**: 1 to 100 MΩ
  - **Black**: 2 to 200 MΩ
- **Accuracy**: ±0.031 in. (0.08 cm) at any marking

**Operating Temperature Range**
0 to 122º F (-17.7 to +50º C)

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**ORDERING INFORMATION**

<table>
<thead>
<tr>
<th>Item (Qty)</th>
<th>Cat. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>5 kV Megohmometer</td>
<td>210400</td>
</tr>
<tr>
<td>15 kV Megohmometer</td>
<td>210415</td>
</tr>
<tr>
<td>Included Accessories</td>
<td></td>
</tr>
<tr>
<td>Ground connection cable, 10 ft [3 m]</td>
<td>4702</td>
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<tr>
<td>Test record card, universal</td>
<td>210954</td>
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<tr>
<td>Power cord, for Cat. No. 210415</td>
<td>17032</td>
</tr>
<tr>
<td>Instruction manual for 5-kV model</td>
<td>AVTM21-40JA</td>
</tr>
<tr>
<td>Instruction manual for 15-kV model</td>
<td>AVTM21-415JA</td>
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</table>

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<th>Item (Qty)</th>
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<tbody>
<tr>
<td>Optional Accessories</td>
<td></td>
</tr>
<tr>
<td>Test record card, 0 to 1000 GΩ</td>
<td>210959</td>
</tr>
<tr>
<td>Test report sheet for rotating equipment</td>
<td>210951-1</td>
</tr>
<tr>
<td>Test report sheet for power transformers</td>
<td>210951-2</td>
</tr>
<tr>
<td>Test report sheet for power cables</td>
<td>210951-3</td>
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<tr>
<td>Bushing guard spring</td>
<td>217003</td>
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<tr>
<td>“Lowdown on HV DC Testing” manual</td>
<td>AVTM22P-1</td>
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<tr>
<td>“A Stitch in Time” manual</td>
<td>AVTM21-P8B</td>
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