

# 5- and 15-kV Megohmmeters



- Continuously variable test voltage
- Rugged field construction
- Circuit-breaker protection

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## 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 M $\Omega$ ; provides output from 250 volts to 5 kV, with direct reading up to 50,000 M $\Omega$  at 2.5 kV.

The 15-kV Megohmmeter provides direct reading measurements up to 100,000 M $\Omega$  at 5 kV and up to 200,000 M $\Omega$  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 M $\Omega$  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**

Cat. No.	Model	DC Test Voltage	Megohm Range Multiplier				Dimensions	Weight
			x1	x10	x100	x1000		
210400	5-kV	2.5 kV dc	0.5 to 50	5 to 500	50 to 5000	500 to 50,000	10 H x 10.2 W x 14 D in. 254 H x 260 W x 355 D mm	20.5 lb 9.3 kg
		5 kV dc	1 to 100	10 to 1000	100 to 10,000	1000 to 100,000		
		250 V to 5 kV	Multiply MΩ by factor indicated in green					
210415	15-kV	7.5 kV dc	1.5 to 150	15 to 1500	150 to 15,000	1500 to 150,000	12.5 H x 11.5 W x 20.2 D in. 317 H x 292 W x 514 D mm	35 lb 15.9 kg
		15 kV dc	3 to 300	30 to 3000	300 to 30,000	3000 to 300,000		
		500 V to 15 kV	$\frac{\text{Actual kV}}{10} \times \text{Range at 10 kV}$					

**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 122° F (-17.7 to +50° 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 122° F (-17.7 to +50° C)

**ORDERING INFORMATION**

Item (Qty)	Cat. No.	Item (Qty)	Cat. No.
5 kV Megohmmeter	210400	<b>Optional Accessories</b>	
15 kV Megohmmeter	210415	Test record card, 0 to 1000 GΩ	210959
<b>Included Accessories</b>		Test report sheet for rotating equipment	210951-1
Ground connection cable, 10 ft [3 m]	4702	Test report sheet for power transformers	210951-2
Test record card, universal	210954	Test report sheet for power cables	210951-3
Power cord, for Cat. No. 210415	17032	Bushing guard spring	217003
Instruction manual for 5-kV model	AVTM21-40JA	"Lowdown on HV DC Testing" manual	AVTM22P-1
Instruction manual for 15-kV model	AVTM21-415JA	"A Stitch in Time" manual	AVTM21-P8B