



BIDDLE® **5- and 15-kV** **Megohmmeters**

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

5- and 15-kV Megohmmeters

DESCRIPTION

The Biddle® 5- and 15-kV Megohmmeters 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

CAT. NO.	Model	DC Test Voltage	Megohm Range Multiplier				Dimensions	Weight
			x1	x10	x100	x1000		
210400	5-kV Model	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 Model	7.5 kV	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	3 to 300	30 to 3000	300 to 30,000	3000 to 300,000		
		500 V to 15 kV	$\frac{\text{Actual kV}}{10}$ x Range at 10 kV					

**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)

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 Scales

Red: 1 to 100 MΩ

Black: 2 to 200 MΩ

Accuracy: ±2% full scale**Operating Temperature Range**

0 to 122° F (–17.7 to +50° C)

ORDERING INFORMATION

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