



MEGGER® BM10

- High sensitivity to 100 GΩ
- Five test voltages from 50 to 1000 volts dc
- Automatic discharge of equipment under test

D 1 kV Insulation Resistance Tester

DESCRIPTION

The Megger® BM10 1 kV Insulation Resistance Tester is multivoltage and battery powered. It is a continuity tester which has a high sensitivity and is simple to use. Insulation may be tested up to 100 GΩ at 100, 250, 500 and 1000 volts dc. A 50-volt dc range is provided for insulation tests up to 10 GΩ. The instrument is equipped with a 0 to 200 ohms continuity range and a 0 to 500 volt ac or dc voltage measuring range.

Safety in use is of vital importance and if the instrument is connected to a circuit which has not been de-energized and remains "live," the voltage (ac or dc) will be automatically indicated on the meter as a warning not to operate the instrument. On any range automatic capacitive circuit discharge takes place when the test button is released and the discharging voltage is monitored by the voltage range. Less than 1 second is required to discharge to 50 volts a 2-μF capacitor charged to 1 kV.

All ranges are selected by a single click-stop rotary switch. To prevent accidental damage, a safety interlock must be released to select the 1000-volt range. A guard terminal is also provided and can be connected to eliminate surface leakage current from the measurement.

The BM10 is housed in a strong ABS plastic case and has a built-in carrying handle and a clip-on protective cover.

APPLICATIONS

Offering multiple test voltages, the BM10 is suitable for performing spot, step-voltage and dielectric absorption tests for applications including:

- Acceptance testing at time of installation to check conformance to specifications
- Routine preventative maintenance testing after installation
- Quality assurance testing as part of the manufacturing process
- Diagnostic testing to isolate faulty components for repair

The Megger BM10 insulation tester can be used for detecting high-resistance or low-resistance grounds as well as short circuits in apparatus, cables, wiring, etc., whether caused by moisture, oil, dirt, corrosion, damage to insulation or natural deterioration. It can also be used to determine the presence of moisture, solvents and semiconducting foreign materials in wires, cables and other conductors, and in built-up insulation systems such as those found in motor windings. Typically, the BM10

is used to take a series of measurements over a period of time which will show the gradual decline that takes place in the insulation during its operational life. Such monitoring enables the maintenance engineer or technician to anticipate future performance and to plan ahead for repairs. It is also used to show improvements in the insulation of motor, transformer and generator windings that result from drying-out procedures used after exposure to excessive humidity or water.

FEATURES AND BENEFITS

- Simple, pushbutton operation
- Large, easy-to-read analog scale
- Battery powered
- Guard terminal to eliminate surface-leakage current from the measurement
- Automatic discharge of capacitive test sample charge
- Voltage range indicates when test leads are connected to an energized circuit.

SPECIFICATIONS

Power Source

Four 1.5-volt replaceable alkaline C cells

Voltage

0 to 500 Vac or Vdc

Resistance Range

0 to 200 Ω

Test Voltage (Vdc)	Insulation Resistance Range (MΩ)
50	0 to 10,000
100	0 to 100,000
250	0 to 100,000
500	0 to 100,000
1000	0 to 100,000

Insulation Ranges

Accuracy: ±2% of scale length at 68° F (20° C)

Test Voltage: ±5%

Short-Circuit Current: 4 mA ±1 mA

Continuity Range

Accuracy: ±2.5% of scale length at 68° F (20° C)

Terminal Voltage: 300 mV

Short-Circuit Current: 60 mA

Voltage Range

Accuracy: ±2.5% of scale length at 68° F (20° C)

General

Storage Temperature: -67 to +158° F (-50 to +70° C)

Scale Length: 5 in. (127 mm)

Battery Life: 20 hours typical

Dimensions

7.25 H x 5.9 W x 4.25 D in.
185 H x 147 W x 57 D mm

Weight

3.25 lb (1.5 kg)

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ORDERING INFORMATION

Item	Cat. No.	Item	Cat. No.
BM10 Insulation Resistance Tester	21810	Optional Accessories	
Included Accessories		Carrying case	210834
Test lead set	210960	Test record cards, 0 to 1,000 GΩ	210959
"A Stitch In Time" manual	AVTM21-P8B	Test report sheet	
Test record cards, universal	210954	Rotating equipment	210951-1
Instruction manual	AVTMBM10	Power transformers	210951-2
		Power cables	210951-3
		Bushing guard spring	217003
		Thermometer	210485
		Sling psychrometer	210430
		"Lowdown on HV DC Testing" manual	AVTM22P-1
		Electrodes, 5 lb [2.25 kg] each (1 pr)	260565

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