



MEGGER® BM11

- **Multiple test voltages**
- **Automatic discharge of equipment under test**
- **Lock-down TEST pushbutton for extended tests**
- **Large direct-reading analog scale**
- **Robust construction for field use**

5 kV Insulation Resistance Tester

DESCRIPTION

The Megger® BM11 5 kV Insulation Resistance Tester is a battery-powered, portable, high-voltage insulation tester. Test voltages of 500, 1000, 2500 and 5000 volts dc are selected by a rotary switch, and resistance measurements up to 100 GΩ can be made on each voltage range.

Readings are shown directly on an analog meter with a large, clear white-on-black scale.

As a safety feature, the BM11 will automatically act as an ac/dc voltmeter reading up to 1000 volts when connected for a test. A warning indication is given before the TEST pushbutton is pressed if the circuit under test has not been de-energized.

Additional safety features include automatic capacitive circuit discharge after test, with the discharging voltage shown on the meter, and additional “back-up” safety components.

A guard terminal is provided to allow the effects of surface leakage in the item under test to be removed.

A built-in battery check is provided and an indication of a low-power supply voltage condition is given by oscillations of the meter pointer. The BM11 also features a built-in battery charger and a lock-down TEST pushbutton for extended test periods.

The inverter circuit makes efficient use of the available battery power while rapidly charging the capacitive circuits under test. These circuits are automatically discharged after testing when the TEST pushbutton is released.

APPLICATIONS

The BM11 provides high-sensitivity measurements at higher voltages to handle a wide variety of applications, including testing of high-voltage power cables, large motor/generator windings, line and substation transformers and high-voltage buses.

Offering multiple test voltages, the BM11 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 BM11 insulation tester can be used for detecting high-resistance or low-resistance grounds. It can also detect short-circuits in apparatus,

cables, wiring, etc., whether caused by moisture, oil, dirt, corrosion, damage to insulation or natural deterioration.

The BM11 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 BM11 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.

The BM11 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
- Robust construction for field use
- Light in weight and easy to carry.

SPECIFICATIONS**Power Source**

Rechargeable NiCad cells with internal charger

Voltage Range

50 to 1000 Vac or Vdc

Test Voltage	Insulation Resistance Range (M Ω)
500	0 to 100,000
1000	0 to 100,000
2500	0 to 100,000
5000	0 to 100,000

Insulation Ranges

Accuracy: $\pm 1.5\%$ of scale length at 68°F (20°C)

Test Voltage: $\pm 5\%$ open circuit

Short-Circuit Current

1 mA nominal, 2 mA maximum

General

Scale Length: 4.84 in. (123 mm)

Operating Temperature Range
5 to 131°F (-15 to +55°C)

Storage Temperature Range
-40 to +149°F (-40 to +65°C)

Battery Life: 8 h typical, depending on load

Charging Time: 16 h

Power Requirements

100 to 250 Vac 50/60 Hz

Dimensions

13.5 H x 9.6 W x 6.25 D in.
344 H x 245 W x 158 D mm

Weight

10.5 lb (4.8 kg)

ORDERING INFORMATION

Item	Cat. No.	Item	Cat. No.
BM11 5 kV Insulation Resistance Tester	218650CL		
Included Accessories			
Three test leads, 10 ft [3 m]	210962		
Test record cards, universal	210954		
Charging cord	17032		
“A Stitch In Time” manual	AVTM21-P8B		
Instruction manual	AVTMBM11		
Optional Accessories			
Test record cards, 0 to 1000 G Ω	210959		
Test report sheets			
Rotating equipment	210951-1		
Power transformers	210951-2		
Power cable	210951-3		
Bushing guard spring	217003		
“Lowdown on HV DC Testing” manual	AVTM22P-1		
Carrying case	218748		
“A Stitch In Time” manual	AVTM21-P8B		