

Fluke 1550B MegOhmMeter

Digital insulation testing
up to 5000 Volts

Technical Data

The Fluke 1550B is a digital megohmmeter capable of testing switchgear, motors, generators and cables at up to 5000 V dc. It can be used for a wide range of tests: from simple spot checks to timed tests and breakdown tests. Measurement storage and PC interface software make it ideal for preventive maintenance. Heavy-duty leads, probes and alligator clips fit in the custom carrying case, for a rugged field testing kit.

- Standard test voltages of 250 V, 500 V, 1000 V, 2500 V and 5000 V
- Additional test voltages available in 50 volt steps from 250 to 1000 volts, 100 volt steps from 1000 to 5000 volts
- Measures up to 1 Tera-Ohm
- Warning voltage function alerts the user that line voltage is present and gives the voltage reading up to 600 V ac or dc
- Automatic calculation of Dielectric Absorption and Polarization Index with no setup
- Guard system eliminates the effect of surface leakage current on high-resistance measurements
- Large digital/analog LCD delivers detailed measurement data
- Measures cable or insulation capacitance
- Measures leakage current
- Ramp function (0-5000 V dc) for breakdown testing
- 99 minute timer for timed tests
- Automatically stores test data in up to 99 locations that user can name for quick recall later
- High-capacity rechargeable batteries
- Includes FlukeView® Forms Basic 1550B Software and Optical Interface cable for downloading to a Windows® PC
- Custom soft case for tester and accessories
- Includes heavy-duty leads, probes and alligator clips
- Two-year warranty



Specifications

Electrical specifications

The meter's accuracy is specified for one year after calibration at operating temperatures of 0 °C to 35 °C. For operating temperatures outside the range (-20 °C to 0 °C and 35 °C to 50 °C), add +/- .25 % per °C, except on the 20 % bands add +/- 1 % per °C.

Insulation resistance measurement

Test Voltage (dc)	Range	Accuracy (± reading)
250 V	200 kΩ to 5 GΩ 5 GΩ to 50 GΩ	5 % 20 %
500 V	200 kΩ to 10 GΩ 10 GΩ to 100 GΩ	5 % 20 %
1000 V	200 kΩ to 20 GΩ 20 GΩ to 200 GΩ	5 % 20 %
2500 V	200 kΩ to 50 GΩ 50 GΩ to 500 GΩ	5 % 20 %
5000 V	200 kΩ to 100 GΩ 100 GΩ to 1 TΩ	5 % 20 %

Short circuit current	greater than 1 mA and less than 2 mA
Bar graph range	0 to 1 TΩ
Insulation test voltage accuracy	-0 % to +10 % at 1 mA load current
Induced ac mains current rejection	2 mA maximum
Charging rate for capacitive load	5 seconds per μF

	Range	Accuracy
Leakage current	1 nA to 2 mA	± (5 % + 2 nA)
Capacitance measurement	0.01 μF to 15.00 μF	± (15 % rdg + 0.03 μF)
Live circuit indicator	30 V to 600 V ac/dc, 50/60 Hz	± (5 % + 2 V)

Timer	0 to 99 minutes; settable in 1 minute increments; indicated to within 1 second
Ramp	0 % to 100 % of selected test voltage, or until breakdown

Mechanical specifications

Dimensions (L x W x H)	170 mm x 242 mm x 330 mm (6.7 in x 9.5 in x 13.0 in)
Weight (with battery)	4 kg (8.8 lbs)

Power

Battery type	12 volt, lead-acid, rechargeable	
Charger input (AC)	85 to 250 V ac 50/60 Hz 50 VA	
Battery life (typical) Note: At higher temperatures, the battery requires more frequent charging.	Test voltages	Number of tests
	250 V	4138
	500 V	3913
	1 kV	3462
	2.5 kV	2043
	5 kV	1000

Environmental specifications

Operating temperature	-20 °C to 50 °C (-4 °F to 122 °F)
Storage temperature	-20 °C to 65 °C (-4 °F to 149 °F)
Relative humidity	80 % at 31 °C decreasing linearly to 50 % at 50 °C
Operating altitude	0 to 2000 meters
Enclosure sealing	IP-40
Shock, vibration	MIL-PRF-28800F, CLASS II
EMI immunity	EN 61326
Safety	EN 61010-1, CAT III, 600 V, EN61557, PARTS 1 & 2
Input overload protection	600 V ac continuous

Software specifications

FlukeView® Forms Basic 1550B Software requires a PC running Windows® 95, 98, Me, 2000, NT4.0
Two-year warranty

Included accessories

Test leads and low leakage probes
Alligator clips
Interface adapter and cable
FlukeView® Forms Basic 1550B PC software
Line cord
Soft carrying case with waterproof bottom
User's manual CD with 12 languages
Getting Started Guide

Optional accessories

FVF-UG FlukeView® Forms Upgrade to Version 3.0
TL1550EXT 25 foot extension leads

Fluke. Keeping your world up and running.

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