

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.

Fluke Corporation
PO Box 9090, Everett, WA USA 98206

Fluke Europe B.V.
PO Box 1186, 5602 BD Eindhoven, The Netherlands

For more information call:
In the U.S.A. (800) 443-5853 or Fax (425) 446-5116
In Europe/M-East/Africa (31 40) 2 675 200 or Fax (31 40) 2 675 222
In Canada (800)-36-FLUKE or Fax (905) 890-6866
From other countries +1 (425) 446-5500 or Fax +1 (425) 446-5116
Web access: <http://www.fluke.com/>