

FLUKE®

Fluke 1550 MegOhmMeter

**Digital insulation testing
up to 5000 Volts**

Technical Data

The Fluke 1550 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.

- Test voltages of 500 V, 1000 V, 2500 V, 5000 V
- 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
- Guard system eliminates the effect of surface leakage current on high-resistance measurements
- Large digital/analog LCD delivers detailed measurement data
- Cable or insulation capacitance
- Leakage current
- Ramp function (0-5000 V DC) for breakdown testing
- Timer for dielectric absorption and polarization index tests
- 99 memory locations store all measurements parameters



- High capacity rechargeable batteries
- Mobile charging adapter for dc charging
- Includes Quicklink 1550 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
- 2-year warranty

Specifications

Electrical Specifications

All stated accuracy tolerances apply to the temperature range 0 °C to 35 °C (32 °F to 95 °F). For operating temperatures between -20 °C to 0 °C (-4 °F to 32 °F) and 35 °C to 40 °C (95 °F to 104 °F), these tolerances double.

Insulation Resistance Measurement

| Test Voltage (dc) | Range | Accuracy (± reading) |
|-------------------|------------------------------------|----------------------|
| 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 | |
| Charger input (DC car adapter) | 10 to 15 V dc, 30 VA | |
| Battery life (typical) Note: At higher temperatures, the battery requires more frequent charging. | Test voltage | Number of tests |
| | 500 V | 3600 |
| | 1 kV | 3200 |
| | 2.5 kV | 2500 |
| | 5 kV | 1500 |

Environmental Specifications

| | |
|---------------------------|--|
| Operating temperature | -20 °C to 40 °C (-4 °F to 104 °F) |
| Storage temperature | -20 °C to 65 °C (-4 °F to 149 °F) |
| Relative humidity | 80 % at 31 °C decreasing linearly to 50 % at 40 °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

Quicklink 1550 Software requires a PC running Windows® 95, 98, Me, 2000, NT4.0
2-year warranty

Included Accessories

Test leads, 5000 V-rated probes
Alligator clips
Interface adapter and cable
Quicklink 1550 PC software
DC (Car) charging adapter
Line cord
Soft carrying case with water-proof bottom
User's manual



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