

TECHNICAL DATA

Fluke 1535 and 1537 Insulation Resistance Tester and Megohmmeters



Key features

- User-selectable voltages of 250 V-2500 V
- Up to 500 GΩ insulation resistance measurement
- Short circuit current up to 5mA for fast, stable measurements
- Automatically calculate PI and DAR
- Perform 1,300+ insulation tests on a single charge

Product overview: Fluke 1535 and 1537 Insulation Resistance Tester and Megohmmeters

Fast, accurate, reliable insulation testing in a portable lightweight package

The Fluke 1535 and 1537 2,500 V Insulation Resistance Testers are engineered to simplify frontline troubleshooting whether you're on the factory floor or working in the field at a solar installation. With user selectable test voltages from 250 V to 2,500 V and resistance measurements up to 500 GΩ these testers allow you to cover more workload with a single tool. Equipped with an intuitive user interface, a short circuit current of up to 5 mA and a CAT IV 600 V rating these portable high-voltage insulation testers can deliver rapid and stable resistance measurements no matter where you take them. The 1537 Insulation Resistance Tester also allows you to store measurements for later review or PC transfer, using the provided software.

- **Selectable Voltage Tests:** Tailor your tests with user-selectable voltages of 250 V, 500 V, 1000 V, and 2500 V to cover both industrial and solar applications.
- **Extended Insulation Resistance Measurement:** Reach up to 500 GΩ in insulation resistance measurement for a thorough analysis.
- **Intelligent Calculations:** Automatically calculate Polarization Index (PI) and Dielectric Absorption Ratio (DAR), minimizing the influence of environmental factors.
- **High Measurement Capacity:** Execute up to 1,300 measurements at 2,500 V or 6,500 measurements at 250 V on a single charge, enhancing productivity.
- **Enhanced Safety Features:** Benefit from a CAT IV 600V rating and a built-in voltage alarm function for heightened safety during operations.

The Fluke 1537 has these additional features:

- **Extended Measurements:** The Fluke 1537 enhances your testing capabilities with AC/DC voltage and resistance measurements.
- **Stable Resistance Measurements:** Achieve faster, more stable insulation resistance measurements with a short circuit current up to 5mA.
- **Fine-tunable Test Voltage:** Adjust the test voltage from 250 V to 2500 V in 100 V increments to meet specific testing requirements.
- **Dielectric Discharge Rate Calculation:** Automatically calculate the dielectric discharge rate (DD) to aid in identifying elusive insulation issues.
- **Ramp Test Mode:** Linearly increase the applied test voltage 100 V/s to help identify potentially hard to identify fault conditions.
- **Visual and Audio Continuity Indicator:** Verify continuity visually on the screen display or with the audible indicator so you can focus on your testing procedure without looking at the display.
- **Customizable Testing Parameters:** Set user-defined labels, adjust test duration, and store measurement results for a tailored testing experience.
- **Effortless Data Management:** Download and manage data effortlessly with the provided PC software.
- **Extended Warranty:** Enjoy peace of mind with an extended 3-year warranty.

Specifications: Fluke 1535 and 1537 Insulation Resistance Tester and Megohmmeters

General Specifications	
Display	73.5 mm x 104 mm
Battery	8 AA alkaline cells, IEC LR6
Dimensions (H x W x L)	184 mm x 211 mm x 93 mm
Weight	1.3 kg
Temperature	
Operating temperature	-10 °C to +50 °C
Storage temperature	-20 °C to +60 °C
Operating humidity	Non-condensing (<10 °C) ≤80 % RH (10 °C to 30 °C) ≤50 % RH (30 °C to 50 °C)
Altitude	

Operating altitude	2000 m
Storage altitude	12000 m
Overvoltage category	CAT IV 600 V
Safety	
General	IEC 61010-1, Pollution Degree 2 IEC 61557-1
Measurement	IEC 61010-2-030: CAT IV 600 V IEC 61010-2-034: 2500 V dc
Insulation resistance measurement	IEC 61557-1, IEC 61557-2
IP Rating	IEC 60529 IP40
Electromagnetic Compatibility (EMC)	
International	IEC 61326-1: Electromagnetic environment for portable equipments IEC 61326-2-2 CISPR 11: Group 1, Class A

Electrical Specifications

The meter's accuracy is specified for one year after calibration at operating temperatures of 10°C to 30°C. For operating temperatures outside the range (-10°C to +10°C and +30°C to +50°C), add $\pm 0.25\%$ per °C, except on the 20% bands, add $\pm 1\%$ per °C.

Insulation resistance testing

Test voltage	Range	Resolution	Accuracy
250 V	<200 k Ω	Unspecified	Unspecified
	200 k Ω to 500 k Ω	1 k Ω	5 %
	0.50 M Ω to 5.00 M Ω	.01 M Ω	5 %
	5.0 M Ω to 50.0 M Ω	0.1 M Ω	5 %
	50 M Ω to 500 M Ω	1 M Ω	5 %
	0.50 G Ω to 5.00 G Ω	0.01 G Ω	5 %
	5.0 G Ω to 50.0 G Ω	0.1 G Ω	20 %
	>50 G Ω	Unspecified	Unspecified

500 V	<200 k Ω	Unspecified	Unspecified
	200 k Ω to 500 k Ω	1 k Ω	5 %
	0.50 M Ω to 5.00 M Ω	.01 M Ω	5 %
	5.0 M Ω to 50.0 M Ω	0.1 M Ω	5 %
	50 M Ω to 500 M Ω	1 M Ω	5 %
	0.50 G Ω to 5.00 G Ω	0.01 G Ω	5 %
	5.0 G Ω to 10.0 G Ω	0.1 G Ω	5 %
	10.0 G Ω to 50.0 G Ω	0.5 G Ω	20 %
	50 G Ω to 100 G Ω	5 G Ω	20 %
	>100 G Ω	Unspecified	Unspecified
1000 V	<200 k Ω	Unspecified	Unspecified
	200 k Ω to 500 k Ω	1 k Ω	5 %
	0.50 M Ω to 5.00 M Ω	.01 M Ω	5 %
	5.0 M Ω to 50.0 M Ω	0.1 M Ω	5 %
	50 M Ω to 500 M Ω	1 M Ω	5 %
	0.50 G Ω to 5.00 G Ω	0.01 G Ω	5 %
	5.0 G Ω to 20.0 G Ω	0.1 G Ω	5 %
	20.0 G Ω to 50.0 G Ω	0.5 G Ω	20 %
	50 G Ω to 200 G Ω	5 G Ω	20 %
	>200 G Ω	Unspecified	Unspecified
2500 V	<200 k Ω	Unspecified	Unspecified
	200 k Ω to 500 k Ω	1 k Ω	5 %
	0.50 M Ω to 5.00 M Ω	0.01 M Ω	5 %
	5.0 M Ω to 50.0 M Ω	0.1 M Ω	5 %
	50 M Ω to 500 M Ω	1 M Ω	5 %
	0.50 G Ω to 5.00 G Ω	0.01 G Ω	5 %
	5.0 G Ω to 50.0 G Ω	0.1 G Ω	5 %
	50 G Ω to 500 G Ω	5 G Ω	20 %
	>500 G Ω	Unspecified	Unspecified

Insulation test voltage accuracy: -0 %, +10 % @ 1 mA load current Charging rate for capacitive load: 5 s/ μ F Discharging rate for capacitive load: 1.5 s/ μ F

	Range	Accuracy
Leakage current measurement	1 nA to 2 mA	\pm (20 % + 2 nA)
Capacitance measurement	0.01 μ F to 2.00 μ F	\pm (15 % rdg + 0.03 μ F)

Test voltage for insulation resistance	250 V to 2500 V	$\pm(3 \% + 3 \text{ V})$
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Warning for energized circuit

Warning range	>30 V
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Timer (F1537 only)

Range	0 to 99 min	
Resolution	Setting: 1 min	Alert: 1 s

Short circuit current

F1535	>2 mA
F1537	>5 mA

ACV/DCV/resistance measurement (1537 only)

Function	Range	Resolution	Accuracy $\pm(\% \text{ rdg} + \text{dgt})$
VAC	0 V to 600.0 V	0.1 V	$\pm(2 \% + 10)$ (45 Hz to 500 Hz)
VDC	0 V to 600.0 V	0.1 V	$\pm(2 \% + 10)$
Resistance	0 Ω to 600.0 Ω	0.1 Ω	$\pm(2 \% + 10)$
	600 Ω to 6000 Ω	1 Ω	
	6.00 k Ω to 60.00k Ω	0.01 k Ω	

Ordering information



FLUKE-1537

Fluke 1537 2500V Advanced Insulation Tester

Includes:

- Fluke 1537 Insulation Resistance Tester
- Test leads with alligator clips (red, black, green)
- Probe (red, black)
- Soft carrying case
- USB cable (Fluke 1537 only)
- PC software (Fluke 1537 only - downloadable from the Fluke Website)

FLUKE-1535

Fluke 1535 2500V Insulation Tester

Includes:

- Fluke 1535 Insulation Resistance Tester
- Test leads with alligator clips (red, black, green)
- Probe (red, black)
- Soft carrying case

FLUKE-1537/APAC

- Fluke 1537 2500V Insulation Resistance Meter Test leads with alligator clip (red, black, green)

- Probe (red, black)
 - Soft carrying case
 - USB cable (Fluke 1537 only)
 - PC software (download from the Fluke Website) (Fluke 1537 only)
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