

TECHNICAL DATA

# Fluke 1535 and 1537 Insulation Resistance Testers



### ADJUSTABLE TEST VOLTAGES

Selectable test voltages from 250 V to 2500 V making them suitable for both industrial and solar applications

### UP TO 500 GΩ INSULATION RESISTANCE

Test applications from smaller circuits to high-voltage systems with resistance measurements up to 500 GΩ

### AUTOMATIC PI AND DAR CALCULATION

Exclude the influence of environmental factors on insulation performance without additional setup



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

The Fluke 1535 and 1537 2500 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 2500 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.

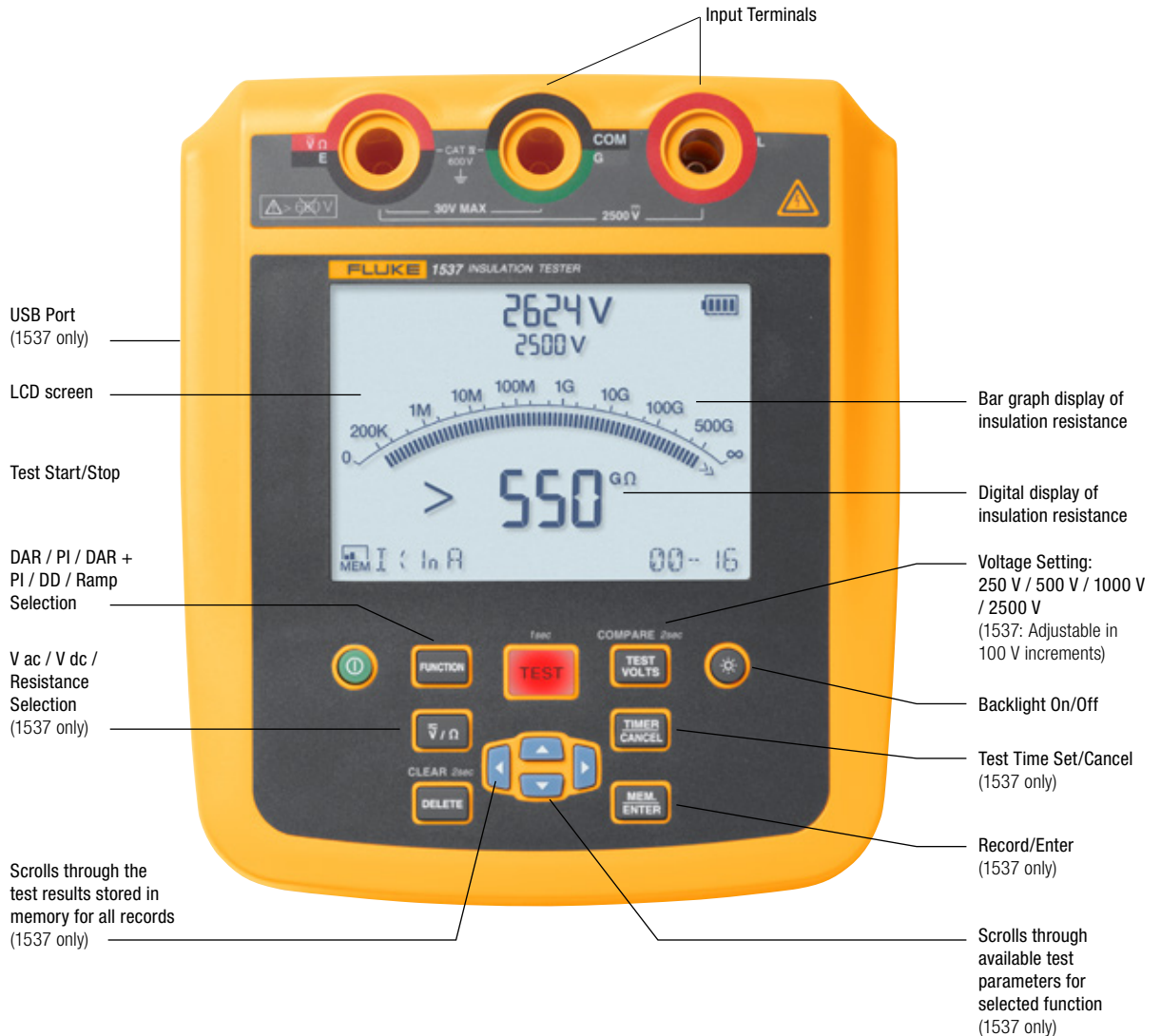
**Extended Insulation Resistance Measurement:** Reach up to 500 GΩ in insulation resistance measurement for a thorough analysis.

**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 2500 V or 6,500 measurements at 250 V 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 Testers

| <b>General specifications</b>              |   |
|--|---|
| 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  |
| <b>Temperature</b>                         |   |
| Operating temperature                      | -10 °C to +50 °C  |
| Storage temperature                        | -20 °C to +60 °C  |
| Operating humidity                         | Non-condensing (<10 °C)<br>≤80 % RH (10 °C to 30 °C)<br>≤50 % RH (30 °C to 50 °C)             |
| <b>Altitude</b>                            |   |
| Operating altitude                         | 2000 m  |
| Storage altitude                           | 12000 m   |
| <b>Overvoltage category</b>                | CAT IV 600 V  |
| <b>Safety</b>                              |   |
| General                                    | IEC 61010-1, Pollution Degree 2<br>IEC 61557-1  |
| Measurement                                | IEC 61010-2-030: CAT IV 600 V<br>IEC 61010-2-034: 2500 V dc                                   |
| Insulation resistance measurement          | IEC 61557-1, IEC 61557-2  |
| Ingress Protection (IP) Rating             | IEC 60529 IP40  |
| <b>Electromagnetic Compatibility (EMC)</b> |   |
| International                              | IEC 61326-1: Portable Electromagnetic Environment<br>IEC 61326-2-2 CISPR 11: Group 1, Class A |



## Specifications Fluke 1535 and 1537 Insulation Resistance Testers

| <b>Electrical Specifications</b>     |                    |                   |                 |
|--------------------------------------|--------------------|-------------------|-----------------|
| <b>Insulation resistance testing</b> |                    |                   |                 |
| <b>Function</b>                      | <b>Range</b>       | <b>Resolution</b> | <b>Accuracy</b> |
| <b>250 V</b>                         | <200 kΩ            | Unspecified       | Unspecified     |
|                                      | 200 kΩ to 500 kΩ   | 1 kΩ              | 5 %             |
|                                      | 0.50 MΩ to 5.00 MΩ | 0.01 MΩ           | 5 %             |
|                                      | 5.0 MΩ to 50.0 MΩ  | 0.1 MΩ            | 5 %             |
|                                      | 50 MΩ to 500 MΩ    | 1 MΩ              | 5 %             |
|                                      | 0.50 GΩ to 5.00 GΩ | 0.01 GΩ           | 5 %             |
|                                      | 5.0 GΩ to 50.0 GΩ  | 0.1 GΩ            | 20 %            |
|                                      | >50 GΩ             | Unspecified       | Unspecified     |
| <b>500 V</b>                         | <200 kΩ            | Unspecified       | Unspecified     |
|                                      | 200 kΩ to 500 kΩ   | 1 kΩ              | 5 %             |
|                                      | 0.50 MΩ to 5.00 MΩ | 0.01 MΩ           | 5 %             |
|                                      | 5.0 MΩ to 50.0 MΩ  | 0.1 MΩ            | 5 %             |
|                                      | 50 MΩ to 500 MΩ    | 1 MΩ              | 5 %             |
|                                      | 0.50 GΩ to 5.00 GΩ | 0.01 GΩ           | 5 %             |
|                                      | 5.0 GΩ to 10.0 GΩ  | 0.1 GΩ            | 5 %             |
|                                      | 10.0 GΩ to 50.0 GΩ | 0.5 GΩ            | 20 %            |
| 50 GΩ to 100 GΩ                      | 5 GΩ               | 20 %              |                 |
| >100 GΩ                              | Unspecified        | Unspecified       |                 |
| <b>1000 V</b>                        | <200 kΩ            | Unspecified       | Unspecified     |
|                                      | 200 kΩ to 500 kΩ   | 1 kΩ              | 5 %             |
|                                      | 0.50 MΩ to 5.00 MΩ | 0.01 MΩ           | 5 %             |
|                                      | 5.0 MΩ to 50.0 MΩ  | 0.1 MΩ            | 5 %             |
|                                      | 50 MΩ to 500 MΩ    | 1 MΩ              | 5 %             |
|                                      | 0.50 GΩ to 5.00 GΩ | 0.01 GΩ           | 5 %             |
|                                      | 5.0 GΩ to 20.0 GΩ  | 0.1 GΩ            | 5 %             |
|                                      | 20.0 GΩ to 50.0 GΩ | 0.5 GΩ            | 20 %            |
| 50 GΩ to 200 GΩ                      | 5 GΩ               | 20 %              |                 |
| >200 GΩ                              | Unspecified        | Unspecified       |                 |
| <b>2500 V</b>                        | <200 kΩ            | Unspecified       | Unspecified     |
|                                      | 200 kΩ to 500 kΩ   | 1 kΩ              | 5 %             |
|                                      | 0.50 MΩ to 5.00 MΩ | 0.01 MΩ           | 5 %             |
|                                      | 5.0 MΩ to 50.0 MΩ  | 0.1 MΩ            | 5 %             |
|                                      | 50 MΩ to 500 MΩ    | 1 MΩ              | 5 %             |
|                                      | 0.50 GΩ to 5.00 GΩ | 0.01 GΩ           | 5 %             |
|                                      | 5.0 GΩ to 50.0 GΩ  | 0.1 GΩ            | 5 %             |
|                                      | 50 GΩ to 500 GΩ    | 5 GΩ              | 20 %            |
| >500 GΩ                              | Unspecified        | Unspecified       |                 |

**Insulation test voltage accuracy:** -0 %, +10 % @ 1 mA load current

**Charging rate for capacitive load:** 5 s/μF

**Discharging rate for capacitive load:** 1.5 s/μF



# Specifications Fluke 1535 and 1537 Insulation Resistance Testers

| <b>Electrical Specifications</b>                  |                      |                   |                               |
|---|----------------------|-------------------|-------------------------------|
| <b>Insulation resistance testing</b>              |                      |                   |                               |
| <b>Function</b>                                   | <b>Range</b>         | <b>Resolution</b> | <b>Accuracy</b>               |
| <b>Leakage current measurement</b>                | 1 nA to 2 mA         | —                 | ±(20 % + 2 nA)                |
| <b>Capacitance measurement</b>                    | 0.01 µF to 2.00 µF   | —                 | ±(15 % rdg + 0.03 µF)         |
| <b>Test voltage for insulation resistance</b>     | 250 V to 2500 V      |                   | ±(3 % + 3 V)                  |
| <b>Warning for energized circuit</b>              | <b>Warning range</b> | —                 | —                             |
|   | >30 V                | —                 | —                             |
| <b>Timer (1537 only)</b>                          | 0 to 99 min          | 0 to 99 min       | —                             |
|   |                      | Indication: 1 s   | —                             |
| <b>Short circuit current</b>                      |                      |                   |                               |
| 1535  | >2 mA                | —                 | —                             |
| 1537  | >5 mA                | —                 | —                             |
| <b>ACV/DCV/resistance measurement (1537 only)</b> |                      |                   |                               |
| VAC   | 0 V to 600.0 V       | 0.1 V             | ±(2 % +10)<br>45 Hz to 500 Hz |
| VDC   | 0 V to 600.0 V       | 0.1 V             | ±(2 % +10)                    |
| Resistance  | 0 Ω to 600.0 Ω       | 0.1 Ω             | ±(2 % +10)                    |
|   | 600 Ω to 6000 Ω      | 1 Ω               |                               |
|   | 6.00 kΩ to 60.00 kΩ  | 0.01 kΩ           |                               |

## Ordering information

FLUKE-1535 2500V Insulation Tester  
 FLUKE-1537 2500V Advanced Insulation Tester

### Included accessories

**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)

Visit [www.fluke.com](http://www.fluke.com) to get complete details on these products or ask your local Fluke sales representative.



FLUKE-1535



FLUKE-1537

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