

# Fluke 1503 Insulation Resistance Meter



## Key features

- A rugged, compact insulation resistance tester for residential and commercial electricians
- Performs insulation tests from 0.01 MΩ to 2000 MΩ
- Offers two insulation test voltages: 500 V and 1000 V
- Includes live circuit detection to prevent insulation test if voltage >30 V is detected
- Measures resistance from 0.01 Ω to 20.00 kΩ

## Product overview: Fluke 1503 Insulation Resistance Meter

Fluke 1503 Insulation Resistance Tester handles all the basic insulation testing needs

The Fluke 1503 is a great choice for basic residential and commercial electrical insulation testing. This rugged, compact tool fits in the palm of your hand. The 1503 is the same form factor as the Fluke 1507 but with a few less features. You can count on it to handle the most common tests at a most affordable price. Additional features, like the remote probe, reduce the time needed to perform repetitive testing.

### Other useful capabilities:

- Measures AC/DC voltage from 0.1 V to 600 V
- Includes auto-discharge of capacitive voltage for added user protection

- Provides lo-ohms earth-bond continuity (200 mA)
- Simplifies repetitive or hard-to-reach testing with the remote test probe
- Saves battery power with auto power off
- Presents results on a large, backlit display
- Features CAT IV 600 V overvoltage category rating
- Comes with remote probe, test leads, test probes, alligator clips, and one-year warranty
- Accepts optional Fluke TPAK magnetic hanging system to free your hands for other work
- Runs on four AA alkaline batteries (NEDA 15 A or IEC LR6) for at least 1000 insulation tests

## Specifications: Fluke 1503 Insulation Resistance Meter

| AC/DC Voltage Measurement                             |   |   |
|---|---|---|
| Accuracy  | <b>Range</b>  | 600.0 V   |
|   | Resolution  | 0.1 V   |
|   | 50 Hz to 400 Hz $\pm$ (% of Rdg + Digits)                               | $\pm$ (2% + 3)  |
| Input impedance                                       | 3 M $\Omega$ (nominal), < 100 pF  |   |
| Common mode rejection ratio (1 k $\Omega$ unbalanced) | > 60 dB at DC, 50 or 60 Hz  |   |
| Overload protection                                   | 600 V rms or DC   |   |
| Earth Bond Resistance Measurement                     |   |   |
| Range/Resolution                                      | <b>20.00 <math>\Omega</math></b>  | 0.01 $\Omega$   |
|   | 200.0 $\Omega$  | 0.1 $\Omega$  |
|   | 2000 $\Omega$   | 1.0 $\Omega$  |
|   | 20.00 k $\Omega$  | 0.01 k $\Omega$   |
| Accuracy  | $\pm$ (1.5% + 3)  |   |
| Overload protection                                   | 2 V rms or DC   |   |
| Open circuit test voltage                             | > 4.0 V, < 8 V  |   |
| Short circuit current                                 | > 200.0 mA  |   |
| Insulation Specifications                             |   |   |
| Measurement range                                     | 0.01 M $\Omega$ to 2000 M $\Omega$                                      |   |
| Test voltage  | 500 V, 1000 V   |   |
| Test voltage accuracy                                 | + 20%, - 0%   |   |
| Short circuit current                                 | 1 mA nominal  |   |
| Auto discharge  | Discharge time < 0.5 second for C = 1 $\mu$ F or less                   |   |
| Live circuit indicator                                | Inhibit test if terminal voltage > 30 V prior to initialization of test |   |
| Maximum capacitive load                               | Operable with up to 1 $\mu$ F load                                      |   |
| Measure accuracy                                      | 500 V   | $\pm$ (1.5% + 5)  |
|   | 1000 V  | $\pm$ (1.5% + 5) to 2000 M $\Omega$ , $\pm$ (10% + 3) above 2000 M $\Omega$ |

| General Specifications                   |   |  |
|--|---|--|
| Maximum voltage applied to any terminal: | 600 V AC rms or DC  |  |
| Storage temperature                      | -40°C to 60°C (-40°F to 140°F)  |  |
| Operating temperature                    | -20°C to 55°C (-4°F to 131°F)   |  |
| Temperature coefficient                  | 0.05 x (specified accuracy) per °C for temperatures < 18°C or > 28°C (< 64°F or > 82°F)   |  |
| Relative humidity                        | 0% to 95% @ 10°C to 30°C (50°F to 86°F)   |  |
|  | 0% to 75% @ 30°C to 40°C (86°F to 104°F)  |  |
|  | 0% to 40% @ 40°C to 55°C (104°F to 131°F)   |  |
| Vibration                                | Random, 2 g, 5-500 Hz per MIL-PRF-28800F, Class 2 instrument  |  |
| Shock                                    | 1 meter drop per IEC 61010-1 2nd Edition (1 meter drop test, six sides, oak floor)  |  |
| Electromagnetic compatibility            | In an RF field of 3 V/M, accuracy = specified accuracy (EN 61326-1:1997)  |  |
| Safety                                   | Complies with ANSI/ISA 82.02.01 (61010-1) 2004, CAN/CSA-C22.2 NO. 61010-1-04, and IEC/EN 61010-1 2nd Edition for measurement category IV 600 V (CAT IV) |  |
| Certifications                           | CSA per standard CSA/CAN C22.2 No. 61010.1-04; TUV per standard IEC/EN 61010-1 2nd Edition  |  |
| Baeries                                  | Four AA baeries (NEDA 15A or IEC LR6)   |  |
| Baery llife                              | <b>Insulation test use:</b>   | Tester can perform at least 1000 insulation tests with fresh alkaline baeries at room temperature. These are standard tests of 1000 V into 1 MΩ with a duty cycle of 5 seconds on and 25 seconds off.      |
|  | Resistance measurements:  | Tester can perform at least 2500 earth bond resistance measurements with fresh alkaline baeries at room temperature. These are standard tests of 1 Ω with a duty cycle of 5 seconds on and 25 seconds off. |
| Size (H x W x L)                         | 5.0 x 10.0 x 20.3 cm (1.97 x 3.94 x 8.00 in)  |  |
| Weight                                   | 550 g (1.2 lb)  |  |
| IP rating                                | IP40  |  |
| Altitude                                 | <b>Operating</b>  | 2000 m CAT IV 600 V, 3000 m CAT III 600 V  |
|  | Non-operating (storage)   | 12,000 m   |
| Over-range capability                    | 110% of range   |  |
| Included accessories                     | TL224 Test Leads, TP74 Test Probes, clips PN 1958654 (red) and PN 1958646 (black), holster and remote probe   |  |

## Ordering information



### **FLUKE- 1503**

Fluke 1503 Insulation Resistance Tester

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Includes:

- Remote probe
  - Test leads
  - Test probes
  - Alligator clips
  - User documentation
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