

# Fluke 1507 1000V Insulation Resistance Tester

## Tech Specs

|                                                       |                                                                                         |                                                                             |
|-------------------------------------------------------|-----------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| AC/DC Voltage Measurement                             |                                                                                         |                                                                             |
| Accuracy                                              | Range                                                                                   | 600.0 V                                                                     |
|                                                       | Resolution                                                                              | 0.1 V                                                                       |
|                                                       | 50 Hz to 400 Hz $\pm$ (% of R <sub>dg</sub> + 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                                      | 20.00 $\Omega$                                                                          | 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                               | 1600 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                                                              |                                                                                                                                                                                                                     |
| Batteries             | Four AA batteries (NEDA 15A or IEC LR6)                                                                                                                 |                                                                                                                                                                                                                     |
| Battery Life          | Insulation test use:                                                                                                                                    | Tester can perform at least 1000 insulation tests with fresh alkaline batteries at room temperature. These are standard tests of 1000 V into 1 M $\Omega$ 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 batteries at room temperature. These are standard tests of 1 $\Omega$ 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              | Operating                                                                                                                                               | 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                                             |                                                                                                                                                                                                                     |

