

## **Insulation Resistance Tester**

### ➤ **Fluke 1507 Insulation Resistance Tester**

The Fluke 1507 is a versatile, compact, handheld insulation tester for advanced industrial and electrical insulation testing. Its multiple test voltages make it the ideal tool for many troubleshooting, commissioning, and preventative maintenance applications.

## 1. Fluke 1507 Insulation Resistance Tester



### ➤ Key Features

- Rugged, compact advanced insulation resistance tester for electrical contractors and industrial and commercial electricians
- Automatically calculates Polarization Index and Dielectric Absorption Ratio
- Makes repetitive tests simple and easy with a Compare (Pass/Fail) function
- Offers multiple insulation test voltages: 50 V, 100 V, 250 V, 500 V, and 1000 V

### AC/DC Voltage Measurement

Accuracy	Range	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	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 10 G $\Omega$	
Test voltage	50 V, 100 V, 250 V, 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	50 V	$\pm(3\% + 5)$
	100 V	$\pm(3\% + 5)$
	250 V	$\pm(1.5\% + 5)$
	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	
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 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 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	