

**FLUKE®**



## Technical Data

# Fluke 1555 and 1550C Insulation Resistance Testers

Digital insulation testing up to 10 kV, ideal for wide range of high voltage applications

### Evaluate the trends, eliminate the doubt

The Fluke 1555 and Fluke 1550C insulation resistance testers, offer digital insulation testing up to 10 kV, making them ideal for testing a wide range of high voltage equipment including switchgear, motors, generators and cables.

Fluke insulation testers can now conduct the entire range of test voltages specified in IEEE 43-2000 with a best in class, 3 year warranty and CAT IV 600 V safety rating. With measurement storage and PC interface, the 1555 and 1550C are perfect tools for preventative or predictive maintenance programs designed to identify potential equipment failures before they occur.

### Features include:

- Test voltages up to 10 kV provides solutions for all applications
- CAT III 1000 V, CAT IV 600 V safety rating
- Warning function alerts the user that line voltage is present and gives the voltage reading up to 600 V ac or dc for increased user safety
- Selectable test voltages in 50 V steps from 250 V to 1000 V, and 100 V steps above 1000 V
- Measurements can be stored in up to 99 memory locations, with each location assigned a unique, user defined, label for easy recall
- Long battery life gives the user over 750 tests between charges
- Automatic calculation of Dielectric Absorption (DAR) and Polarization Index (PI) with no additional setup
- Guard system eliminates the effect of surface leakage current on high-resistance measurements
- Large digital/analog LCD for easy viewing
- Capacitance and leakage current measurement
- Ramp function for breakdown testing
- Resistance measurements up to 2 TΩ
- Timer settings up to 99 minutes for timed tests
- 3-year warranty



## Electrical specifications

The tester's accuracy is specified for one year after calibration at operating temperatures of 0 °C to 35 °C. For operating temperatures outside the range (-20 °C to 0 °C and 35 °C to 50 °C), add ± .25 % per °C, except on the 20 % bands add ± 1 % per °C.

### Insulation resistance measurement

Test voltage (dc)	Range	Accuracy (± reading)
250 V	< 250 kΩ 250 kΩ to 5 GΩ 5 GΩ to 50 GΩ > 50 GΩ	unspecified 5 % 20 % unspecified
500 V	< 500 kΩ 500 kΩ to 10 GΩ 10 GΩ to 100 GΩ > 100 GΩ	unspecified 5 % 20 % unspecified
1000 V	< 1 MΩ 1 MΩ to 20 GΩ 20 GΩ to 200 GΩ > 200 GΩ	unspecified 5 % 20 % unspecified
2500 V	< 2.5 MΩ 2.5 MΩ to 50 GΩ 50 GΩ to 500 GΩ > 500 GΩ	unspecified 5 % 20 % unspecified
5000 V	< 5 MΩ 5 MΩ to 100 GΩ 100 GΩ to 1 TΩ > 1 TΩ	unspecified 5 % 20 % unspecified
10000 V (1555 Only)	< 10 MΩ 10 MΩ to 200 GΩ 200 GΩ to 2 TΩ > 2 TΩ	unspecified 5 % 20 % unspecified

Bar graph range	0 to 1 TΩ (1550C) - 0 to 2 TΩ (1555)
Insulation test voltage accuracy	-0 %, +10 % at 1 mA load current
Induced ac mains current rejection	2 mA maximum
Charging rate for capacitive load	5 seconds per μF
Discharge rate for capacitive load	1.5 s/μF


	Range	Accuracy
Leakage current measurement	1 nA to 2 mA	± (5 % + 2 nA)
Capacitance measurement	0.01 μF to 15.00 μF	± (15 % rdg + 0.03 μF)

Timer	Range	Resolution
	0 to 99 minutes	Setting: 1 minute Indication: 1 second

Live circuit warning	Warning range	Voltage accuracy
	30 V to 660 V ac/dc, 50/60 Hz	± (15 % + 2 V)

## General specifications

(RF connection time (binding time) can take up to 1 minute.)

Display	75 mm x 105 mm
Power	12 V lead-acid rechargeable battery, Yuasa NP2.8-12
Charger Input (AC)	85 V to 250 V ac 50/60 Hz 20 VA
This Class II (double insulated) instrument is supplied with a Class I (grounded) power cord. The protective earth terminal (ground pin) is not connected internally. The extra pin is for added plug retention only.	
Dimensions	269 mm x 277 mm x 160 mm (10.6 in x 10.9 in x 6.3 in)
Weight	3.7 kg (8.2 lb)
Temperature (operating)	-20 °C to 50 °C (-4 °F to 122 °F)
Temperature (storage)	-20 °C to 65 °C (-4 °F to 149 °F)
Humidity	80 % to 31 °C decreasing linearly to 50 % at 50 °C
Altitude	2000 m
Enclosure sealing	IP40
Input overload protection	1000 V ac
Electromagnetic compatibility	EN 61326
Certifications	
Safety compliance	IEC 61010-1: Overvoltage category II, pollution degree 2. IEC 61010-2-030: Measurement 600V CAT IV / 1000V CAT III IEC 61557-1, IEC 61557-2

## Software specifications

Fluke ViewForms basic software requires a PC running Windows XP, Windows Vista, Windows 7 and Windows 8.

## Ordering information

1555 10 kV Insulation Tester  
**1550C/Kit** 5 kV Insulation Tester Kit  
**1555/Kit** 10 kV Insulation Tester Kit

### Optional accessories

**TL1550EXT** 25 foot extended test lead set  
**TLK1550-RTLCT** Heavy Duty Alligator Clip leads

### Included accessories

Test Cables with Alligator Clips (red, black, green)  
 Infrared adapter with interface cable  
 FlukeView Forms Basic CD-ROM  
 AC Power Cord  
 Soft Carrying Case (base models only)  
 English Manual  
 Users Manual on CD-ROM  
 Quick Reference Card  
 Software License Agreement  
 Registration Card  
 FlukeView Forms Installation Guide  
 USB-IR Cable Installation Guide  
 IP67 Hard Case (kit only)  
 Certificate of Calibration (kit only)  
 Heavy Duty Alligator Clip Leads (kit and 1555 only)

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