FLUKE®

Fluke 1555 and 1550C Insulation Resistance Testers

Technical Data

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 to up 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

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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 uF 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 1 (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 categroy II, pollution degree 2. IEC 61010-2-030: Measurement 600V CAT IIV / 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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