

# FLUKE®

# Fluke 1555 and 1550C Insulation Resistance Testers

## Technical Data

### Now compatible with Fluke Connect™ Mobile App

#### 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.

The Fluke Connect mobile app is an easy to use, advanced wireless system for capturing and trending anomalies for troubleshooting, commissioning and preventative maintenance of insulation resistance applications.

#### Features include:

- Test voltages to up to 10 kV and save time by trending on the spot only with Fluke Connect
- 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 2TΩ
- Timer settings up to 99 minutes for timed tests
- 3-year warranty



Built with  
**FLUKE  
CONNECT™**

**See it. Save it. Share it.  
All the facts, right in the field.**

Fluke Connect with ShareLive™ video call is the only wireless measurement system that lets you stay in contact with your entire team without leaving the field. The Fluke Connect mobile app is available for Android™ and iOS and works with over 20 different Fluke products—the largest suite of connected test tools in the world. And more is on the way. Go to the Fluke website to find out more.

Make the best decisions faster than ever before by viewing all temperature, mechanical, electrical and vibration measurements for each equipment asset in one place. Get started saving time and increasing your productivity.

Download the app at:



Smart phone not included with purchase.

## 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  $\pm .25\%$  per °C, except on the 20 % bands add  $\pm 1\%$  per °C.

### Insulation resistance measurement

Test voltage (dc)	Range	Accuracy ( $\pm$ reading)
250 V	< 200 k $\Omega$ 200 k $\Omega$ to 5 G $\Omega$ 5 G $\Omega$ to 50 G $\Omega$ > 50 G $\Omega$	unspecified 5 % 20 % unspecified
500 V	< 500 k $\Omega$ 500 k $\Omega$ to 10 G $\Omega$ 10 G $\Omega$ to 100 G $\Omega$ > 100 G $\Omega$	unspecified 5 % 20 % unspecified
1000 V	< 200 k $\Omega$ 200 k $\Omega$ to 20 G $\Omega$ 20 G $\Omega$ to 200 G $\Omega$ > 200 G $\Omega$	unspecified 5 % 20 % unspecified
2500 V	< 200 k $\Omega$ 200 k $\Omega$ to 50 G $\Omega$ 50 G $\Omega$ to 500 G $\Omega$ > 500 G $\Omega$	unspecified 5 % 20 % unspecified
5000 V	< 200 k $\Omega$ 200 k $\Omega$ to 100 G $\Omega$ 100 G $\Omega$ to 1 T $\Omega$ > 1 T $\Omega$	unspecified 5 % 20 % unspecified
10000 V (1555 Only)	< 200 k $\Omega$ 200 k $\Omega$ to 200 G $\Omega$ 200 G $\Omega$ to 2 T $\Omega$ > 2 T $\Omega$	unspecified 5 % 20 % unspecified


Bar graph range	0 to 1 T $\Omega$ (1550C) - 0 to 2 T $\Omega$ (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 $\mu$ F
Discharge rate for capacitive load	1.5 s/ $\mu$ F

	Range	Accuracy
Leakage current measurement	1 nA to 2 mA	$\pm$ (5 % + 2 nA)
Capacitance measurement	0.01 $\mu$ F to 15.00 $\mu$ F	$\pm$ (15 % rdg + 0.03 $\mu$ F)

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	$\pm$ (15 % + 2 V)

## General specifications

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
Fluke Connect Compatible	Yes

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## Software specifications

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

## Ordering information

**1550C** 5 kV Insulation Tester  
**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  
**FLUKE-IR3000FC1550** Fluke Connect IR to Wireless Connector

### 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)  
 Fluke Connect IR to Wireless Connector (kit only)

**Fluke. The Most Trusted Tools in the World.**

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