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TECHNICAL DATA

Fluke 1555 and 1550C Insulation Resistance Testers

Evaluate the trends, eliminate the doubt

The Fluke 1555 and Fluke 1550C, combined with the ir3000 FC Connector and Fluke Connect App, are designed to improve worker safety and save time while conducting insulation on 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, a PC interface and the ability to store, share and analyze measurements through Fluke Connect, 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.*

INCREASE YOUR CONFIDENCE AND SAFETY LEVEL

Wireless start/stop capability keeps you out of harm's way during actual tests*

KNOW IF LINE VOLTAGE IS PRESENT BEFORE STARTING A TEST

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

TURN CHANGING DIGITAL READOUTS INTO MEANINGFUL VISUAL OUTPUT

PI/DAR timed ratio tests with TrendIt™ graphs help identify moisture and contaminated insulation problems faster*

IMPROVE THE ACCURACY OF YOUR DATA FOR PREVENTIVE MAINTENANCE PROGRAMS

Temperature Compensation through Fluke Connect app for establishing accurate baselines and relevant historical comparisons*

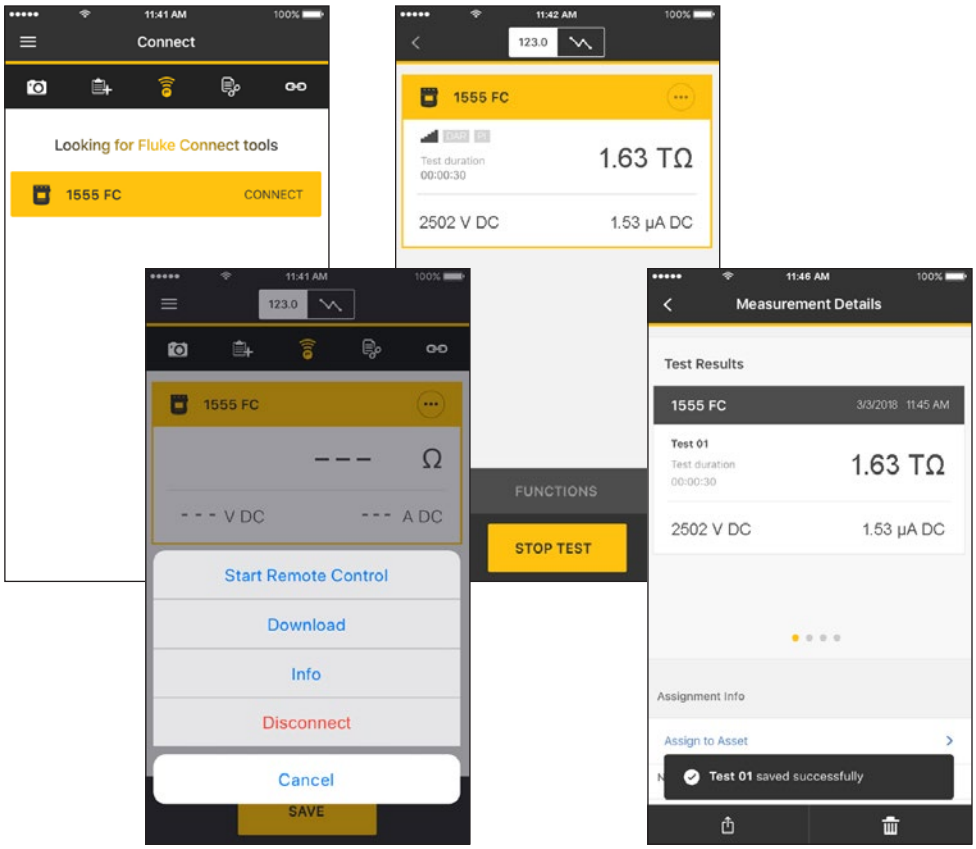
Features include:

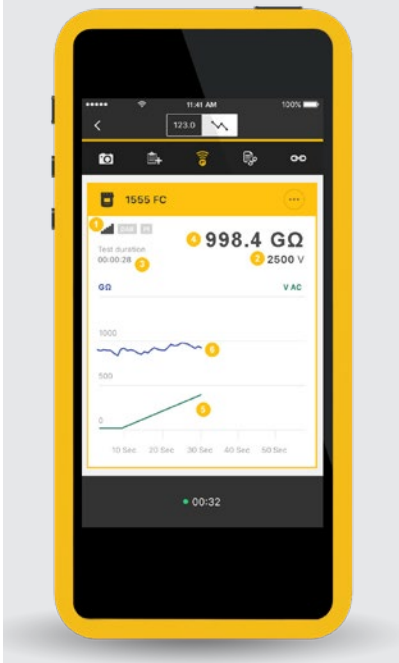
- Select test voltages up to 5 kV (1550C) and 10 kV (1555) and save time by trending on the spot using Fluke Connect*
- CAT III 1000 V, CAT IV 600 V safety rating
- Selectable test voltages in 50 V steps from 250 V to 1000 V, and 100 V steps above 1000 V
- Reduce paperwork while creating an auditable data trail by wirelessly storing results in Fluke Connect*
- Long battery life gives the user over 750 tests between charges
- Guard system eliminates the effect of surface leakage current on high-resistance measurements
- Historical tracking and trending of assets identifies degradation over time, allows real-time decisions to be made in the field with Fluke Connect Assets (sold separately)*
- Large digital/analog LCD for easy viewing
- Capacitance and leakage current measurement
- Ramp function for breakdown testing
- Resistance measurements up to 1TΩ/2TΩ
- Timer settings up to 99 minutes for timed tests
- 3-year warranty

*Fluke Connect functionality will be added throughout this and coming years. Not all functions may be available at time of purchase.

Take control with Fluke Connect

With Fluke Connect, you can take control of the insulation tester and perform tests remotely. Enter test parameters, start and stop the test remotely, and upload the test results to your smart phone or tablet using the no-cost Fluke Connect app.





Insulation testing with Fluke Connect

The 1550C and 1555 Insulation Testers use the ir3000 FC Connector to transmit results to Fluke Connect software. With Fluke Connect, real time trending gives you easy-to-see visual cues, rather than rapidly changing, hard-to-read values.

The ramp test shown would be difficult to interpret if you were only looking at the display on the tester. But by using Fluke Connect, you can easily see:

1. A ramp test has been chosen during setup.
2. An ending test voltage of 2500 V was chosen.
3. The test has run for 28 seconds so far.
4. The instantaneous resistance measurement is 998.4 GΩ.
5. The test voltage has been ramping upwards.
6. During that time, the measured resistance has been increasing slowly. If the resistance drops off, this would suggest poor insulation health or moisture content. With a sudden drop in resistance the 155x will cut the voltage and display the ramped voltage and resistance.

This single display on your smart phone or tablet gives you more information, in less time, than was previously available with just the instrument display.

Smart phone or tablet not included with Fluke Connect software.

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	± (20% + 2 nA)
Capacitance measurement	0.01 uF to 20.00 µF	± (15% rdg + 0.03 µF)

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

	Warning range	Voltage accuracy
Live circuit warning	30 V to 1100 V ac/dc, 50/60 Hz	± (15% + 2 V)

General specifications

(RF connection time (binding time) can take up to 1 minute.)	
Display	475 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	170 mm x 242 mm x 330 mm (6.7 in. x 9.5 in. x 13.0 in.)
Weight	3.6 kg (7.94 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 IIV/1000V CAT III IEC 61557–1, IEC 61557–2
Fluke Connect Compatible	Yes

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

1550C – ir3000 FC 5 kV Insulation Tester with ir3000 FC Connector

1555 – ir3000 FC 10 kV Insulation Tester with ir3000 FC Connector

1550C/Kit – ir3000 FC 5 kV Insulation Tester Kit with ir3000 FC Connector

1555/Kit – ir3000 FC 10 kV Insulation Tester Kit with ir3000 FC Connector

Included accessories

Test Cables with Alligator Clips (red, black, green)
Infrared adapter with interface cable

AC Power Cord

Soft Carrying Case (base models only)

Quick Reference Card

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 (ir3000 FC kit only)

Optional accessories

TL1550EXT 25 foot extended test lead set

TLK1550-RTLCT Heavy Duty Alligator Clip leads

FLUKE-IR3000FC1550 Fluke Connect IR to Wireless Connector

FLUKE CONNECT®

Simplify preventive and predictive maintenance tasks:

Fluke Connect improves maintenance productivity and safety by wirelessly collecting measurement data from over 30 test tools and condition monitoring sensors. The Fluke Connect Mobile App for Android™(4.4 and up) and iOS (4s and later) saves equipment measurements to the cloud where they can be referenced at any time and accessed by the entire team.

- **Make confident decisions**—Create before and after comparisons with data you can trace. No more searching through records. All measurements are automatically saved in a single location.
- **Troubleshoot faster**—Correlate results with infrared, vibration, and other measurement data to confirm findings (requires Fluke Connect Assets™ software, sold separately).
- **Quickly read asset status**—Get data at your fingertips. The software creates trend graphs of measurements you can analyze to determine if equipment is degrading over time.
- **Start sharing**—Share your measurement data with team members with ShareLive™ video calls and emails.
- **Save time, save money**—Eliminate transcription errors, clipboards, notebooks, and multiple spreadsheets.
- **Create reports**—Generate useful reports and provide status of next-step recommendations.
- **Correlate results**—Combine test data infrared, vibration, and other measurement data to confirm findings (requires Fluke Connect Assets software, sold separately).

Find out more at **flukeconnect.com**

Download on the App Store

ANDROID APP ON Google Play

All trademarks are the property of their respective owners. 3500 Series Sensors are designed to communicate only with the Fluke Connect Gateway and Fluke Connect Condition Monitoring software. WiFi or cellular service required to share data. Smartphone, wireless service and data plan not included with purchase. First 5 GB of storage is free. Phone support details can be viewed at **fluke.com/phones**.

Smart phone wireless service and data plan not included with purchase. Fluke Connect is not available in all countries.

Fluke. *Keeping your world up and running.®*

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