

Keysight Technologies

Insulation Resistance

Retool Your Expectations



Compare and see
how our Insulation
Resistance Tester
outperform
Fluke and Megger

The U1450A/60A Series Insulation Resistance Testers

- Remote testing coupled with report generation capability (Windows PC, iOS/Android)
- 50 V/100 V/250 V/500 V/1000 V test voltages
- Adjustable test voltages from 10 V up to 1.1 kV range **
- Up to 260 GΩ insulation resistance range
- Full-featured 4.5 digit OLED DMM (66,000 counts) *
- Timed/PI/DAR test
- IP 67 certified and drop proof up to 3 meters (10 feet)
- (–40 to +55 °C) operating temperature range **
- CAT III 1000 V/CAT IV 600 V safety ratings

* U1461A only

** U1453A and U1461A only

Industry		Industrial and Power								Telecommunication	
Model	Fluke 1503	Megger MIT400	Keysight U1451A	Fluke 1507	Megger MIT430	Keysight U1452A	Keysight U1453A	Fluke 1587	Keysight U1461A	Megger MIT480	Keysight U1452AT
Display type	LCD	LCD	LCD	LCD	LCD	LCD	OLED	LCD	OLED	LCD	LCD
Insulation resistance tester features											
Insulation test voltage range	500 V, 1000 V	250 V, 500 V, 1000 V	250 V, 500 V, 1000 V	50 V, 100 V, 250 V, 500 V, 1000 V	50 V, 100 V, 250 V, 500 V, 1000 V	50 V, 100 V, 250 V, 500 V, 1000 V	50 V, 100 V, 250 V, 500 V, 1000 V	50 V, 100 V, 250 V, 500 V, 1,000 V	50 V, 100 V, 250 V, 500 V, 1,000 V	50 V, 100 V	50 V, 100 V
Test voltage accuracy	0 to +20%	0 to +20%	0 to +20%	0 to +20%	0 to +20%	0 to +20%	±2%	0 to +20%	±2%	0 to +20%	0 to +20%
Insulation resistance tester features											
Insulation resistance range	2 GΩ	20 GΩ	66 GΩ	10 GΩ	200 GΩ	260 GΩ	260 GΩ	2 GΩ	260 GΩ	100 GΩ	66 GΩ
Earth bond resistance measurement	Yes	No	Yes	Yes	No	Yes	Yes	Yes	Yes	No	Yes
Timed, PI, DAR	No	No	Timed only	PI, DAR only	Yes	Yes	Yes	Yes	Yes	No	Yes
Adjustable insulation test voltages	No	No	No	No	No	No	10 V to 1.1 kV	No	10 V to 1.1 kV	No	No
Live circuit test inhibit	30 V	50 V	30 V, 50 V, 75 V	30 V	50 V	30 V, 50 V, 75 V	30 V, 50 V, 75 V	30 V	30 V, 50 V, 75 V	75 V	30 V, 50 V, 75 V
Data management											
Remote testing and report generation ¹	No	No	Yes	No	No	Yes	Yes	No	Yes	No	Yes
Bluetooth® downloading	No	No	Yes ²	No	Yes	Yes ²	Yes ²	No	Yes ²	No	Yes ²
Multimeter features											
DMM measurements	AC/DC voltage	AC/DC voltage, resistance, continuity	AC/DC voltage, resistance, continuity, capacitance	AC/DC voltage	AC/DC voltage, resistance, continuity, capacitance	AC/DC voltage, resistance, continuity, capacitance	AC/DC voltage, resistance, continuity, capacitance, diode test	AC/DC voltage (V, mV), AC/DC current (mA) resistance, continuity, capacitance, diode test, temperature	AC/DC voltage (V, mV), AC/DC current (μA, mA), resistance, continuity, capacitance, diode test, temperature, low pass filter (LPF), non-contact AC voltage detection (Vsense)	AC/DC voltage, resistance, continuity	AC/DC voltage, resistance, continuity, capacitance

Industry	Industrial and Power									Telecommunication	
Model	Fluke 1503	Megger MIT400	Keysight U1451A	Fluke 1507	Megger MIT430	Keysight U1452A	Keysight U1453A	Fluke 1587	Keysight U1461A	Megger MIT480	Keysight U1452AT
General specifications											
IP rating, drop test	IP 40, 3 ft (1 m)	IP 54, 3 ft (1 m)	IP 67, 10 ft (3 m)	IP 40, 3 ft (1 m)	IP 54, 3 ft (1 m)	IP 67, 10 ft (3 m)	IP 67, 10 ft (3 m)	IP 40, 3 ft (1 m)	IP 67, 10 ft (3 m)	IP 54, 3 ft (1 m)	IP 67, 10 ft (3 m)
Safety protection	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V	CAT III 1000 V/CAT IV 600 V
Operating temperature	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-20 to +55 °C	-40 to +55 °C	-20 to +55 °C	-40 to +55 °C	-20 to +55 °C	-20 to +55 °C
Battery	4x AA	5x AA	4x AA	4x AA	5x AA	4x AA	4x AA	4x AA	4x AA	5x AA	4x AA

Note:* Fluke 1503/1507 and Fluke 1587 specifications were downloaded from www.fluke.com on April 24, 2014

* Megger MIT400, MIT430, MIT480 specifications were downloaded from www.megger.com on April 24, 2014

** Keysight U1451A, U1452A, U1452AT, U1453A and U1461A Insulation Resistance Testers Data Sheet, publication number: 5991-4290EN

1. Requires Keysight Handheld Meter Logger Software for Windows PC or Keysight Insulation Tester App for iOS/Android based devices
2. U1117A IR-to-Bluetooth adapter is required

Selection Summary

Features	Benefits	Models
Wireless remote testing and report generation on Window PC or iOS/Android based devices	Generate test report to provide analysis of the insulation resistance data and eliminate manual data entry errors. For electrical service contractors in routine preventive maintenance work.	U1451A, U1452A, U1452AT, U1453A, U1461A
Up to 260 GΩ insulation resistance range	Service/maintenance technicians or engineers can perform periodic check and track insulation resistance of equipment under test. Useful to capture new and long term maintenance results.	U1452A, U1453A, U1461A
IP 67 certified and withstand three meters, (10 ft) drop	Suitable to withstand harsh conditions (industrial settings)	U1451A, U1452A, U1452AT, U1453A, U1461A
Adjustable test output voltages 10 V to 1.1 kV in 1 V step	Suitable for engineers and technicians testing requiring unique test voltage in commercial avionic testing, military, land and air communication system testing	U1453A, U1461A
Insulation tester with 4.5 digit full-featured multimeter	Service/maintenance technicians or engineers can use one tool for all trouble-shooting and preventive maintenance tasks.	U1461A
Generate precise test output voltage (accuracy +2%)	Generate precise test voltages needed by engineers and technicians in Aero-space and Defense applications.	U1453A, U1461A
Organic LED display	Engineer can see the readings clear in dark environment with clear 160° viewing angle	U1453A, U1461A
Additional accessory worth USD100 used for both wired or wireless remote testing and reporting purposes	Flexibility to select either wired or wireless connection to establish communication for remote testing and report generation purposes.	U1451A*, U1452A, U1452AT*, U1453A, U1461A

1. U1117A IR-to-Bluetooth Adapter is not shipped as standard accessory



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