

S451

WINDING RESISTANCE TESTER

10 A OUTPUT · 0.1 $\mu\Omega$ RESOLUTION

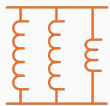


CHECK EVERY WINDING. TRUST EVERY CONNECTION.

Fast, stable DC resistance testing for inductive equipment.

S451 combines four-wire measurement, multiple current ranges and temperature conversion for transformer manufacturing, commissioning and maintenance. Automatic discharge and protection functions keep the inductive test sequence controlled from connection to completion.

What S451 Helps You Find



WINDING IMBALANCE

Compare phases and parallel windings.



CONNECTION DEFECTS

Find loose joints, poor welds and broken conductors.



TAP-CHANGER IRREGULARITIES

Compare resistance across tap positions.



TEMPERATURE-CORRECTED TRENDS

Compare results at a reference temperature.

Where It Works



POWER TRANSFORMERS

Winding, phase and tap-position resistance checks.



CT / PT & REACTORS

Inductive windings from micro-ohms up to 1 M Ω .



MOTOR WINDINGS

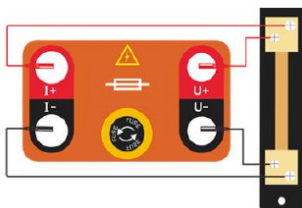
Three-phase stator winding resistance and phase comparison.

Kelvin Connection for Reliable Results

Connect current and voltage leads at both terminals.
Ground the tester before measurement.

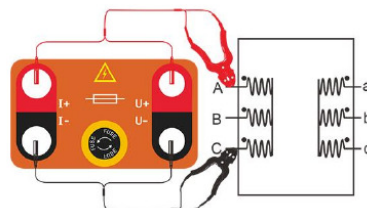
SELF-CHECK

Reference resistor verification



TRANSFORMER WINDING

Normal four-wire connection



How to Test

1

ISOLATE & GROUND

De-energize the DUT, leave untested windings open and connect tester earth.

2

CONNECT KELVIN LEADS

Clean terminals and secure I+/I- and U+/U- clamps.

3

SET THE TEST

Choose current, Cu/Al, winding, phase, tap and temperature.

4

TEST & DISCHARGE

Wait for a stable result; stop and wait for discharge completion before moving leads.

Technical Specifications

MEASUREMENT

Test Method	Four-wire Kelvin
Output Current	10 A · 5 A · 1 A · 400/200/40 mA · <5 mA
Resistance Range	500 $\mu\Omega$ to 1 M Ω
Max Resolution	0.1 $\mu\Omega$
Accuracy	500 $\mu\Omega$ –500 Ω : $\pm 0.2\%$ rdg ± 5 dgt 1 Ω –1 M Ω : $\pm 2\%$ rdg ± 5 dgt
Open-Circuit Voltage	24 V
Max Output Power	150 W
Temp. Conversion	Cu / Al to 75 °C or 115 °C

SYSTEM & DATA

Display	5.6-inch color LCD · 640 × 480
Data Storage	Up to 9,999 sets
Data Transfer	USB flash drive · RS232 · Bluetooth
Printer	Built-in result printer
Power	22.2 V, 5.2 Ah battery AC 220 V, 50/60 Hz
Instrument Size	320 × 275 × 145 mm
Operating Range	–20 °C to 40 °C · <80% RH
Test Metadata	Cu/Al · winding · phase · tap 00–99

Safety & Compliance



Designed in accordance with IEC 61010-1

What's in the Box

						
S451 Tester	10 m Test Leads (red + black)	Reference Resistor	Power Cord & Charger	Print Paper & RS232 Cable	Ground Wire & Fuses	Tool Kit & Documents