

S453

220A Micro-ohmmeter

UP TO 220 A OUTPUT · 0.01 $\mu\Omega$ RESOLUTION



Find Weak Connections Before They Heat Up

High-current testing for circuit breakers, busbars and cable joints

The S453 combines up to 220 A DC output with true four-wire Kelvin measurement, flexible current control and automatic data capture for reliable low-resistance diagnostics in the field.

Key Diagnostic Highlights



Up to 220 A

Apply realistic test current to expose high-resistance contacts and weak joints.



Kelvin Accuracy

Four-wire measurement removes lead resistance from the result.



Fine Current Control

Eight preset levels plus 2.5 A adjustment across up to 87 steps.



Connected Reporting

Store 999 records and export through the Android APP or PC software.

Where It Works

HV Circuit Breakers

Contact and loop resistance verification

MV Switchgear

Compact breaker and mechanism connections

Busbars & Conductors

Bolted joints and distribution connections

Cable Joints & Terminations

Cable lug and termination resistance checks

Four-Wire Kelvin Measurement Principle



Separate current and voltage paths remove test-lead resistance from the measurement.

I+ / I-

Inject the DC test current through the outer current leads.

U+ / U-

Sense the voltage drop directly across the test object.

Result

The S453 calculates the true contact resistance without including lead resistance.

$$R = V / I$$

How To Test

1

Isolate

De-energize, discharge and verify the DUT is safe.

2

Connect

Attach I+/U+ and I-/U- using the Kelvin lead set.

3

Configure

Select current, duration and object ID.

4

Measure

Run the test; the result is automatically stored.

Technical Specifications

MEASUREMENT

Test method	Four-wire Kelvin
Current output	≤5 A to 220 A
Fine adjustment	2.5 A steps; 87 levels
Measurement range	0.01 μΩ to 3.5 Ω, current-dependent
Minimum resolution	0.01 μΩ
Accuracy, 30–220 A	0.1% rdg + 0.2% range + 1 μΩ
Test duration	Quick or 10–60 s (≤100 A)
Test lead length	3 m standard; 5 m optional

SYSTEM

Display	5.6-inch color LCD
Data storage	999 groups; auto-save
Connectivity	Bluetooth APP + USB PC
Battery	12.6 V, 9000 mAh Li-ion
Protection	Open-circuit + overheat
Dimensions	188 × 85 × 312 mm
Weight	Approx. 2.2 kg
Operating environment	–10 to 50 °C; <90% RH

Safety & Compliance



Designed to IEC 61010-1

What's in the Box



S453 + Tool Box



3 m Test Leads



USB Cable



Self-Check Resistor



12.6 V Charger



Manual & QA Documents