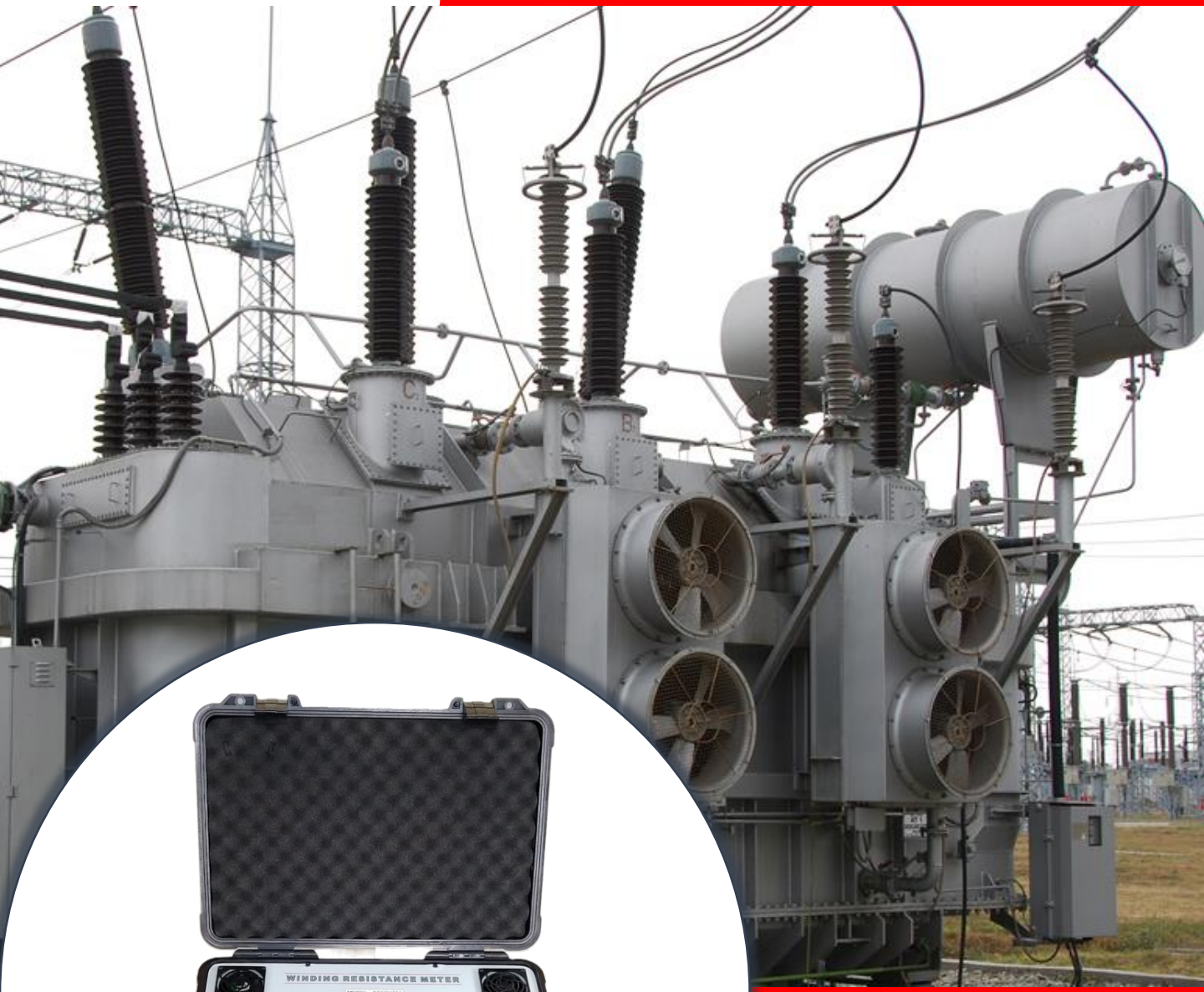
SG50WRM
Winding Resistance Meter



MAKE IN INDIA

REAL TIME SYSTEMS

S-99, Site-2, Industrial area, Loni Road

Mohan Nagar, Ghaziabad - 201007

Uttar Pradesh, India

T: +91 98912 66550

E: info@realtimesystems.in

W: www.realtimesystems.in

Introduction

SG50WRM is a high current microprocessor based Automatic Transformer Winding Resistance Meter to measure the D.C. resistance of power transformers and other high inductive electrical devices. With fast initial settling time this ohmmeter provides the best overall solution to DC resistance testing of transformers. Single or dual channel measurement of primary or primary and secondary transformer winding resistance is displayed on a large Graphic LCD screen. The measurement is based on four wire ratio method which eliminates the requirement of lead compensation. The meter is equipped with correct polarity check and indication of charging and discharging of transformer winding.

SG50WRM is suitable for use in the charged switchyard up to 765 kV. In addition the special circuits employed limit the L di/dt effects that can give rise to noise and unstable readings. The built-in data storage, interfacing to PC, thermal printer & discharge circuit features makes it suitable for a wide range of factory, on-site measurement and performance testing applications including:

- Transformer DC winding resistance
- Generator stator/rotor resistance
- Large motors
- Transformer tap-changer operation and contact tests
- Transformer "Heat-run" tests
- Power connections and circuit breaker testing

Features and Benefits

The use of special current control circuits enables large transformers to be quickly saturated. This is important when making "heat run" tests to comply with various international standards. In addition the real time clock function and special Heat Run Test software (optional) helps calculating the DC resistance at t=0. The instrument has fully automatic range selection helps when accurate measurement of contact resistance of the taps is important the high resolution, provides an accurate means to detect potential problems.

OLTC Test Feature (Optional)

SG50WRM is capable of checking the current Vs time characteristics during the tap change. It is able to display magnitude of current variation during tap change operation in percentage and provide current Vs time plot of OLTC from one tap to another. Instrument automatically perform the test from first tap to last tap and store the results of each tap.

Technical Specifications

The SG50WRM is microprocessor based with menu driven options selected via front panel controls. With electronic calibration, the instrument can be easily recalibrated against known external standards. User controlled internal software allows data logging and storage of measurements in the instruments internal memory. The RS232 interface enables stored data to be downloaded to a computer.

Range	:	Up to 2000 Ω (Auto range)
Resolution	:	4½ digit (Best Resolution: 0.1 µΩ at 1mΩ range)
DC Test Current	:	30A, 25A, 10A, 5A & 1A (user selectable up to 0.01A)
Open Ckt Voltage:		≥ Up to 100Vdc
Accuracy	:	Up to ± 0.1% of rdg
Input Supply	:	230 Vac ± 10%, 50 Hz ± 5%,
PC Interface	:	RS232/USB
Temp. Correction:		For Copper and Aluminium
Memory	:	Internal non-volatile memory for minimum 2000 test results
Display	:	In-built sunlight visible LCD display
Printer	:	In-built Thermal Printer
OLTC Module		: Built-in
Temp. Range:		-10 to 50^{o}C
Storage Temp.:		-20 to 70^{o}C
Humidity	:	0 to 90% RH non condensing
Dimensions	:	419 x 339 x 196 mm
Weight	:	12 kg. approx.
Protection.	:	Short Circuit, Overload, Transient Surges, Over temperature, Induction.

Accessories

Current and potential lead set, Interconnecting Cable, Earthing Cable, Power Cord, RS232 Communication Cable, PC software for data exchange and analysis, Operational manual, Test certificate, Carrying case for Cables.

Optional Accessories

Heat Run Test, De-magnetization, External Temperature input with RTD sensor. Instrument also available in rackmount version.