

# Winding Resistance Meter

## Model SG50WRM



Real Time Systems introduces advanced Model Real Time Systems SG50WRM high current, digital, direct reading, microprocessor based Automatic Transformer Winding Resistance Meter to measure the D.C. resistance of power transformers and other high inductive electrical devices. With a fast initial settling time this ohmmeter provides the best overall solution to DC resistance testing of transformers. Two / Three channel measurement of primary or primary and secondary transformer winding resistance is displayed on a large Graphic LCD screen to 4½ digit resolution.

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 765kV for testing up to 800MVA transformers. 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 plant measurement and performance testing applications including.

- Transformer DC winding resistance
- Generator stator/rotor resistance
- Large motors
- Power utility sub-stations
- Transformer tap-changer operation and contact tests
- Factory testing to international standards.
- Transformer *Heat-Run Test*
- Power connections and circuit breaker testing

#### **Technical Data:**

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. Features and Benefits: The use of special current control circuits enables large transformers to be quickly saturated. This is important when making *Heat-Run Test* 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 of the SG50WRM, ( $4\frac{1}{2}$  digit resolution), provides an accurate means to detect potential problems.

#### **Specification:**

Range:  $1\text{m}\Omega$  to  $200\Omega$  (Auto range)

Resolution:  $4\frac{1}{2}$  digits

Best Resolution:  $0.1\mu\Omega$  at  $1\text{m}\Omega$  range

D.C. Current: Up to 50A (Auto)

Accuracy:  $\pm 0.1\%$  of rdg  $\pm 2$  digits

No. of Channels: 1 ch / 2 ch / 3 ch

Power supply unit: SMPS supply

Input voltage:  $230\text{VAC}\pm 10\%$

Frequency:  $50\text{Hz} \pm 5\%$

PC Interface: RS232

Environmental parameters

Temperature range: 0 to  $50^\circ\text{C}$

Humidity: Up to 95% RH non-condensing

Protection: Over temperature

Thermal management: By cooling fans.

#### **Accessories:**

Test leads- 1Set

Power Cord- 1No.

Operational manual- 1No.

Test certificate- 1No.

#### **Optional Accessories:**

Data Transfer Software

Heat Run Test Software



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