



# SIVA INSTRUMENTS

## Transformer Winding Resistance Meter

Model : TWRM-10A uP



An ISO 9001:2000 COMPANY



## Introduction

Transformer Winding Resistance Meter is designed to measure the winding resistance of transformers, Inductors, generators and motor windings, Tap Changers Etc.

It is specially designed for Highly Inductive objects like 400KV/220KV.. This is only indigenous TWRM which gives very fast readings for 3Phase Star-Delta any combination Transformers. The built in open circuit Voltage of DC Supply ensures that core of the transformer is saturated for fast measurements to be taken. Care is taken to absorb the Back emf of such transformers. For user safety, Indication for discharges is provided on front panel , if the current through winding under measurement is disturbed/discontinued.

Instrument has built in 10A regulated and highly stable current source with current selection of 10Amp, 1Amp, 0.1Amp & 0.01Amp.

Instrument uses ratio-metric circuit where the resistance of specimen is compared with known internal standard and 4 ½ digit LED/LCD display is provided for resistance measurement in micro-ohm, milliohms and in ohms.

## Features

- Regulated and highly stable 30Volt 10 Amp, 1Amp, 0.1Amp & 0.01Amp current source.
- 4½ digit LED/LCD display .
- Simultaneous measurements of voltage & current.
- True four terminal measurement.
- Resolution of 0.1 micro ohm
- Protection against inductive kickback and discharge.
- Visual indication for discharge.
- Line voltage interference suppression , making instrument most suitable for field applications.
- Light weight with carrying case & with 10 meter leads.
- Inbuilt Printer, RS232 port , Data acquisition software Windows Based.
- Automatic Discharge.
- Thermally Protected Power Supply.

## Specifications

<b>POWER SUPPLY</b>	230V AC, 50Hz, single phase.
<b>RANGES</b>	1 $\mu\Omega$ to 1.9999 K $\Omega$
<b>INDICATION</b>	4 ½ Digital panel meter LCD ( 5 Decades i.e. 20000 count)
<b>RESOLUTION</b>	0.1 micro ohm on 2 milli ohm range
<b>ACCURACY</b>	1 $\mu\Omega$ to 20 $\mu\Omega$ $\pm$ 0.5% $\pm$ 1digit 20m $\Omega$ to 1000 m $\Omega$ $\pm$ 1.0% $\pm$ 1digit 1 $\Omega$ to 1999 $\Omega$ $\pm$ 2% $\pm$ 1digit
<b>DC POWER SUPPLY</b>	30Volt/10Amp
<b>TEST CURRENT RANGE</b>	10Amp ( auto range selection)
<b>PORTS</b>	RS232 Port, Inbuilt printer,
<b>DATA ACQUISITION SOFTWARE</b>	Windows Based.
<b>MEMORY</b>	45 Records ( 45 Readings per record )
<b>KEYPAD</b>	12 Keys Soft-touch.
<b>CABLES</b>	Test cables , Ground Cable, Power Chord & Cable Bag.
<b>DIMENSIONS</b>	L=530x B=450x H= 240mm $\pm$ 10mm
<b>WEIGHT</b>	Approx. 18Kg

## SIVANANDA ELECTRONICS

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