



Connected to Cloud

## XWRM-10A

### Transformer Winding Resistance Meter

CAT III	IP	CE	USB	Bluetooth
600V	54			

XWRM-10A Transformer Winding Resistance Meter designed for accurate & fast measurement of highly inductive loads such as Transformers, Reactors & HT Motors etc. The selectable smooth DC test current is useful to test windings with different ratings. 48V open circuit voltage saturates the core in quick time in order to get stable readings. The three resistance measurement channels for simultaneous measurement of three windings reduces testing time. The heat run test feature is available with graphical representation through software and also has a demagnetization facility, which eliminates the magnetic remanence effects. XWRM-10A has a facility to test the make-before-break operation of on-load tap-changers which helps in the analysis of OLTC switch contacts. The Back EMF feature protects XWRM-10A from high inductive kickbacks. The large LCD display with keypad provides easy operation. Also have an internal memory to store 2000 test results and inbuilt thermal printer provided for onsite report.

XWRM10A has Bluetooth connectivity module with Motware mobile app for remote access of testing data & storage in the cloud for further analysis & record purpose

## Features

- ✓ Test Current : 10A, 5A, 1A, 100mA & 10mA
- ✓ Resolution of  $0.1\mu\Omega$  with  $\pm (0.25\% \text{ rdg} + 0.25\% \text{ F.S.D.})$
- ✓ 3 independent resistance measuring channels
- ✓ Auto Range Facility
- ✓ Heat Run Test Facility - Through unit and software
- ✓ 48V Open Circuit Voltage for stable readings
- ✓ Demagnetization Test Facility
- ✓ OLTC dynamic test with Graph : Time vs Current
- ✓ In-built Thermal Printer & Memory
- ✓ Bluetooth enabled for Motware Mobile App
- ✓ Temperature Measurement & Correction
- ✓ Emergency Stop Switch

## Applications

Winding Resistance Test is an essential test which enables to identify shorted turns, loose connections, or deteriorating contacts in tap changers and measurements on all tap changer positions in transformer (if present) and compared to previous or factory test values for evaluating the condition of the transformer windings and leads. The acceptance criteria for the field-measured values should be within 3% of the factory values. A change greater than the acceptance criteria is indicative of short-circuited turns, poor joints, or bad tap changer contacts. This test should be performed during acceptance testing and when other maintenance electrical tests are conducted.

- Power Distribution Transformer
- Motor and Generator
- Reactor
- Heat Run Test

## Technical Details

## XWRM-10A

### Technical Specifications

<b>Power Supply</b>	Mains 115/230V, 50/60HZ Single phase AC supply
<b>Test Current</b>	10A, 5A, 1A, 100mA, 10mA ( $\pm 10\%$ of range)
<b>Open Circuit Test Voltage</b>	48 V
<b>Burden</b>	500 W

### Resistance Measurement Range

<b>Accuracy</b>	$\pm (0.25\% \text{ rdg} + 0.25\% \text{ F.S.D.})$
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	Test Current					Range ( $\Omega$ )	Resolution ( $\Omega$ )	Maximum Display ( $\Omega$ )
	10A	5A	1A	100mA	10mA			
	✓					2m $\Omega$	0.1 $\mu\Omega$	2.0000m $\Omega$
	✓		✓			20m $\Omega$	1 $\mu\Omega$	20.000m $\Omega$
	✓		✓	✓		200m $\Omega$	10 $\mu\Omega$	200.00m $\Omega$
	✓		✓	✓	✓	2 $\Omega$	0.1m $\Omega$	2.0000 $\Omega$
			✓	✓	✓	20 $\Omega$	1m $\Omega$	20.000 $\Omega$
				✓	✓	200 $\Omega$	10m $\Omega$	200.00 $\Omega$
				✓		2K $\Omega$	0.1 $\Omega$	2.0000K $\Omega$
		✓				4m $\Omega$	0.1 $\mu\Omega$	4.0000m $\Omega$
		✓				40m $\Omega$	1 $\mu\Omega$	40.000m $\Omega$
		✓				400m $\Omega$	10 $\mu\Omega$	400.00m $\Omega$
		✓				4 $\Omega$	0.1m $\Omega$	4.0000m $\Omega$

### General

<b>Principle</b>	4 wire measurement
<b>Measurement Channel</b>	3 Resistance & 1 Current channels
<b>Temperature Channel</b>	2 Channel
<b>Temperature Range</b>	Range 0 to 100°C, Accuracy $\pm 1^\circ\text{C}$ , resolution 0.1deg.
<b>Display</b>	Custom Built 4 <sup>1/2</sup> LCD Display with Backlit
<b>Indication</b>	LED & Beep during test ON, & discharge.
<b>PC Connectivity</b>	USB & Bluetooth operation
<b>Internal Memory</b>	2000 test readings
<b>Printer</b>	Inbuilt thermal printer

**Note:** Photo & weight are subjected to change.

### Safety & Standards

Ingress Protection : IP54  
 CAT III 600V  
 CE Certification  
 Safety : Meets requirement of IEC 61010-1  
 EMC : Meets requirement of IEC 61326-1

### Environmental

<b>Operating Temperature</b>	0°C to 55°C
<b>Storage Temperature</b>	-10°C to 60°C
<b>Humidity</b>	95% RH, Non condensing
<b>Temp Co- efficient</b>	$\pm 0.05\%$ of the applicable accuracy Specification per °C of resistance range

### Physical Specifications

<b>Physical Specifications</b>	504 mm X 396 mm x 189 mm
<b>Weight</b>	
<b>Instrument (excluding accessories)</b>	13 Kg (Approx)
<b>Gross weight (including accessories)</b>	26 Kg (Approx)

### Analytic Software

<b>Type</b>	Windows based analytical software
<b>Data Transfer</b>	Real time data transfer
<b>Features</b>	Online data acquisition Graph plotting for heat run test & OLTC dynamic test Remote operation Test report generation

### Accessories

#### Standard

■ 15 Meter measuring test lead set	: 1 Set.
■ Short links - 5 Meter	: 2 Nos.
■ Earthing lead - 5 Meter	: 1 No.
■ Mains cord - 3 Meter	: 1 No.
■ User Manual	: 1 No.
■ Test & Calibration Certificate	: 1 No.
■ Carry Case for Test leads	: 1 No.
■ Thermal Printer Roll	: 1 No.
■ Spare Fuse	: 2 Nos.
■ OLTC Probe - 10 Meter	: 1 No.
■ USB 2.0 A/B Cables 1.5 Meter long	: 1 No.
■ Temperature Sensor - Probe 3 Meter	: 2 No.
■ Pen Drive	: 1 No.

#### Optional

■ Bluetooth	
■ Motware Desktop Application	

### ORDERING INFORMATION

Product	Order Code
<b>XWRM 10A with Standard Accessories</b>	<b>109227310</b>