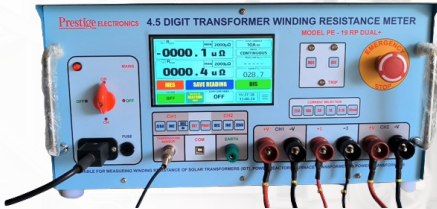


4½ - DIGIT WINDING RESISTANCE METER

PE-19RP DUAL+ (25A.DC)



Industrial Grade ABS Carrying case variant available (PE-19RP DUAL+ -A)

KEY FEATURES

- ▶ Large Touch based Graphic Display
- ▶ 0.1 $\mu\Omega$ to 2 k Ω measuring range with 0.07% basic accuracy
- ▶ Dual Channel Model with simultaneous display of both channel readings. (3 measurement channels shall be provided on request)
- ▶ %I indication and Absolute Current Display
- ▶ Auto Ranging Resistance Measurement
- ▶ Auto Discharge and Auto Hold Feature
- ▶ Test Current :25A,10A,5A, 1A, 0.1A, 0.01A.DC
- ▶ 10A Test Current upto 3.5 ohms and 5A test current upto 6.5 ohms
- ▶ Emergency Stop Switch
- ▶ Discharging indication on LED and Display
- ▶ PC Interface with Heat Run Testing & Data Analysis Software PE-WRM 2.0
- ▶ Heat Run Automation Mode (Temperature Rise Test) with no manual intervention
- ▶ Very Fast Response
- ▶ Ultra Stable Current Source
- ▶ High Open Circuit Voltage (45V \pm 3V.DC)
- ▶ OLTC Measurements
- ▶ Temperature Sensor
- ▶ Temperature Corrected Readings at 75° C
- ▶ Memory Storage upto 2500 readings
- ▶ Audio Visual alarms for user safety

APPLICATIONS

- ▶ Power Transformers 500MVA / 765KV
- ▶ Solar Transformers (IDT)
- ▶ Shunt Reactors/Power Reactors
- ▶ Distribution Transformer
- ▶ Live Switchyard upto 765KV

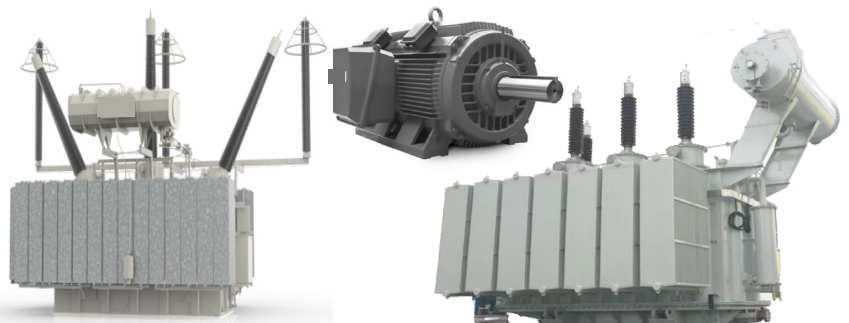
INTRODUCTION

Digital Winding Resistance Meter MODEL PE - 19RP DUAL + (25A DC test current) manufactured by Prestige Electronics is ideally suited for measuring winding resistances of high inductive loads like Power & Distribution transformers, Solar Transformers (Inverter duty transformers, Shunt Reactors etc. Use of four wire system eliminates lead resistance errors. The PE-19RP DUAL+ has 4½ digit large touch graphics display with resistance measurement range from 2 m Ω to 2 k Ω with minimum resolution of 0.1 $\mu\Omega$. This mains-operated meter is very rugged & field proven from last 2 decades with high degree of accuracy, stability and repeatability. **The equipment has a unique Heat Run automation feature and is considered to be the most successful by the industry experts as the equipment has very fast and stable response.** The equipment comes with an ambient temperature sensor useful during heat-run test. The equipment is designed to provide stable performances even in Live Switchyards.

The equipment is accompanied with high insulation grade wires and heavy duty crocodile clips and C Clamps for durable connections for all types of device under test. The equipment is transported in Trolley carrying case for ease of handling.

OPTIONAL FEATURES

- ▶ 50A test current variant
- ▶ Inbuilt Demagnetization Feature
- ▶ Tap Changer Discontinuity
- ▶ Standard Modbus Interface
- ▶ Panel Mount Printer



SPECIFICATIONS

Technical Specifications

TEST CURRENT	RANGE	RESOLUTION	ACCURACY
I1 25 A	0-1999.9 $\mu\Omega$	0.1 $\mu\Omega$	$\pm 0.07\%$ of reading $\pm 0.05\%$ of range
	0-19.999 m Ω	1 $\mu\Omega$	
	0-199.99 m Ω	10 $\mu\Omega$	
	0-999.9 m Ω	100 $\mu\Omega$	
I2 10 A	0-1999.9 $\mu\Omega$	0.1 $\mu\Omega$	
	0-19.999 m Ω	1 $\mu\Omega$	
	0-199.99 m Ω	10 $\mu\Omega$	
	0-3500 m Ω	100 $\mu\Omega$	
I3 5 A	0-1999.9 $\mu\Omega$	0.1 $\mu\Omega$	
	0-19.999 m Ω	1 $\mu\Omega$	
	0-199.99 m Ω	10 $\mu\Omega$	
	0-6500 m Ω	100 $\mu\Omega$	
I4 1 A	0-19.999 m Ω	1 $\mu\Omega$	
	0-199.99 m Ω	10 $\mu\Omega$	
	0-1999.9 m Ω	100 $\mu\Omega$	
	0-19.999 Ω	1 m Ω	
I5 0.1 A	0-199.99 m Ω	10 $\mu\Omega$	
	0-1999.9 m Ω	100 $\mu\Omega$	
	0-19.999 Ω	1 m Ω	
	0-199.99 Ω	10 m Ω	
I6 0.01 A	0-1999.9 m Ω	100 $\mu\Omega$	
	0-19.999 Ω	1 m Ω	
	0-199.99 Ω	10 m Ω	
	0-1.9999 k Ω	100 m Ω	

Temperature coefficient: 50 PPM/°C

ACCESSORIES

Standard accessories

NAME	QUANTITY
12m long Probe Set (+I, -I, +V1, -V1, +V2, -V2)	1
4 inch 'C' Clamp Set	2
5m long Earthing Probe	1
5m jumper cable (extension cable)	1
Shorting link	1
Crocodile Clip Set	4
Temperature Sensor	1
USB Communication Cable	1
3m long Mains Cord	1
WRM 2.0 Software CD	1
Instruction Manual	1
Trolley carrying case	1

General Specifications

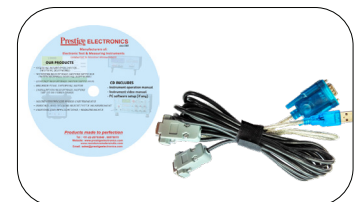
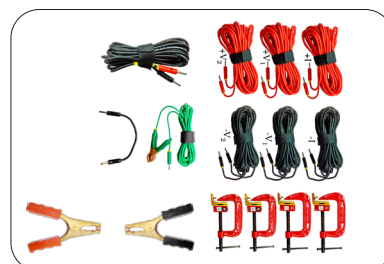
DISPLAY	7 Inch Touch Graphic Display
POWER	230V \pm 15% 50/60 Hz
OPERATING TEMPERATURE	5° to 55° C
TEMPERATURE COEFFICIENT	50 PPM/°C
RELATIVE HUMIDITY	<95% RH, non condensing
OPEN CIRCUIT VOLTAGE	45V \pm 3V.DC
PROTECTION	1. Against Inductive Kick Back / Surges 2. Over Temperature 3. Power Failure 4. Accidental Disconnection of leads.
TEST ON INDICATION	Current ON led & Buzzer
DISCHARGE INDICATION	Discharge led

HEAT RUN AUTOMATION TEST MODE

Heat Run Test (Temperature Rise Test) is known to be a very critical parameter for any Power & Distribution transformer/Reactors/Motors. Model PE-19RP Dual+ has a unique feature of Automizing the entire process and removing all operational and human overheads. Heat Run test can be performed in Dual channel Mode as well with HV and LV winding temperature rise performed simultaneously. The Equipment automatically logs the readings at set time interval and then transferred to Windows based Software for Graph plotting and report generation.

Optional accessories

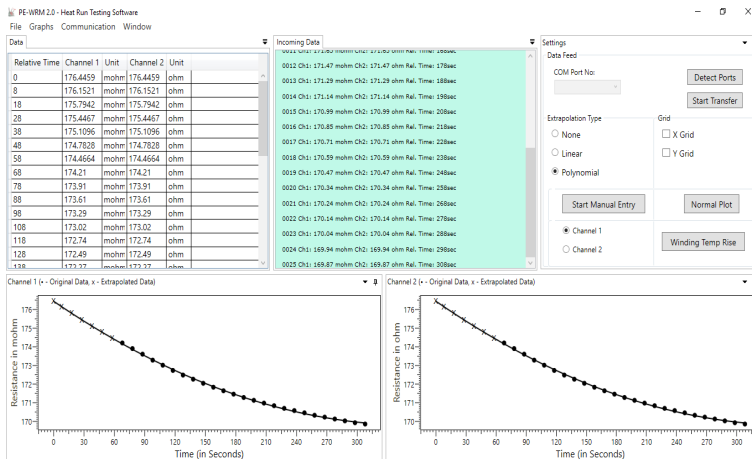
- Test leads with gold-plated Kelvin clips
- Test leads upto 25-meter long
- Oil Immersed Standard Resistance



SOFTWARE PE-WRM 2.0

Introduction

The PE WRM 2.0 is an indigenous Windows based PC software designed & developed by Prestige Electronics to carry automated Heat run Testing of Transformer under test using Winding Resistance meters manufactured by Prestige Electronics. The software also provides cold resistance data management, equivalent resistance calculations and intertap readings comparison feature. The report for the same is generated in Excel format.



Heat Run Mode

In Heat run mode the software automatically fetches data from instrument at predetermined regular intervals and plots the graphs and extrapolates the reading to zero time (time of shutdown), thereby avoiding tedious, strenuous & ambiguous process of noting stopwatch timing & channel 1 channel 2 readings at regular intervals and plotting of graph. Winding temperature rise values value is also calculated using PE WRM 2.0.

Cold Resistance (Rc): Ohms Cold Temp (in C) Tc:

Hot Resistance (Rh): Ohms Hot Ambient Temp: (In C) Ta:

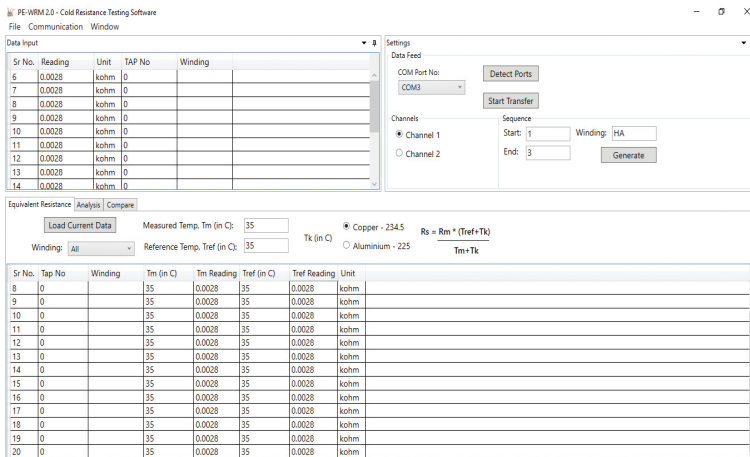
Hot Temp (Th): (In C)

Constant (Tk): Copper (234.5) Aluminium (225)

$$Th = \frac{Rh(Tc + Tk)}{Rc} - Tk - Ta$$

Cold Resistance Mode

In Cold resistance mode the software fetches cold resistance data from instrument and provides option to calculate the equivalent resistance value at any temperature (eg: 75 °C). Comparison with other tap readings and comparing with previous set of readings features are also available.



NOTES: 1. The Instrument is accompanied with test and calibration certificate. 2. All measurement standards are traceable to NABL accredited labs. 3. NABL calibration optional. 4. Specifications are subject to change without notice. 5. Prompt services

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