

4½ - DIGIT WINDING RESISTANCE METER

PE-50R DUAL+



Industrial Grade ABS Carrying Case variant available (PE-50R DUAL+-A)

KEY FEATURES

- ▶ Large Touch Graphic LCD Display
- ▶ **0.01 μΩ to 5 kΩ** measuring range with 0.1% basic accuracy
- ▶ Dual Channel Model with simultaneous display of both channel readings.
- ▶ AutoRanging Resistance Measurement
- ▶ Autodischarge / Autohold Feature
- ▶ %I indication / Actual Current indication
- ▶ Test Current :50A, 40A, 25A, 10A, 5A, 1A, 0.1A, 0.01A DC.
- ▶ PC Interface with Heat Run Testing & Data Analysis Software PE-WRM 2.0
- ▶ Heat Run Automation Mode (Temperature Rise Test) with no manual intervention
- ▶ Inductive Load Back EMF Protection
- ▶ Short-Circuit and Overload protection
- ▶ Accidental Cable disconnection protection
- ▶ Very Fast Response & Fast Discharge Time
- ▶ Ultra Stable Current Source
- ▶ High Open Circuit Voltage (48V ± 3V.DC)
- ▶ OLTC Measurements
- ▶ Temperature Sensor & Corrected Readings
- ▶ Emergency Stop Switch
- ▶ Memory Storage
- ▶ Audio Visual alarms for user safety

OPTIONAL FEATURES

- ▶ Built in Transformer Demagnetisation

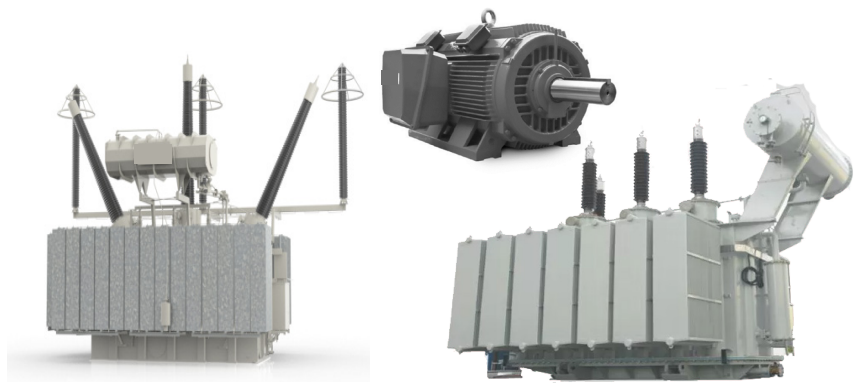
APPLICATIONS

- ▶ Power Transformers 500MVA / 765KV
- ▶ Inverter Duty Solar Transformers
- ▶ Shunt Reactors
- ▶ Furnace Transformers
- ▶ Live Switchyard upto 765KV

INTRODUCTION

Digital Winding Resistance Meter MODEL PE - 50R DUAL+ (50A DC test current) manufactured by Prestige Electronics is ideally suited for measuring winding resistances of very high inductive loads like Power transformers, Inverter duty Solar transformers, Shunt Reactors etc. Use of four wire system eliminates lead resistance errors. The PE-50R DUAL+ has 4½ digit LCD display with resistance measurement range from 0.01 μΩ to 5 kΩ with minimum resolution of 0.01μΩ. This mains-operated meter is very rugged & field proven and enclosed in industrial grade ABS carrying case for ease of use at manufacturing facility or site use. **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 a 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 cables, heavy duty crocodile clips and C Clamps where necessary for durable connections for all types of device under test.



SPECIFICATIONS

PE-50R DUAL+

Technical Specifications

TEST CURRENT	RANGE	ACCURACY
I1 50 A	0.01 $\mu\Omega$ to 0.8000 Ω	± 0.07% of reading ± 0.1% of range
I2 40 A	0.1 $\mu\Omega$ to 1.0000 Ω	
I3 25 A	0.1 $\mu\Omega$ to 1.8000 Ω	
I4 10 A	0.1 $\mu\Omega$ to 4.8000 Ω	
I5 5 A	0.1 $\mu\Omega$ to 10 Ω	
I6 1 A	1 $\mu\Omega$ to 50 Ω	
I7 0.1 A	10 $\mu\Omega$ to 500 Ω	
I8 0.01 A	100 $\mu\Omega$ to 5 k Ω	

Temperature coefficient: 50 PPM/°C

General Specifications

DISPLAY	Large Touch graphic LCD
POWER	230V ± 15% 50/60 Hz
OPERATING TEMPERATURE	5° to 50° C
TEMPERATURE COEFFICIENT	50 PPM/°C
RELATIVE HUMIDITY	<90% RH, non condensing
OPEN CIRCUIT VOLTAGE	48V ± 3V.DC
PROTECTION	<ol style="list-style-type: none"> 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

ACCESSORIES

Standard accessories

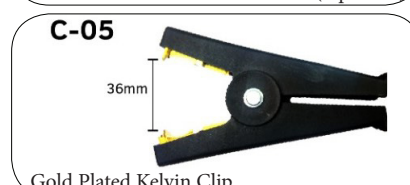
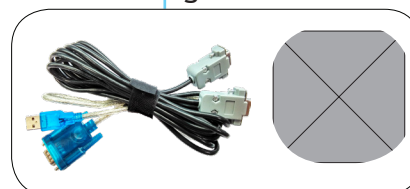
NAME	QUANTITY
15 m long Probe Set (+I, -I, +V1, -V1, +V2, -V2)	1
6 inch 'C' Clamp Set	2
5 m long Earthing Probe	1
10 m long jumper cable (extension cable)	1
Shorting link	1
Crocodile Clip Set	1
7 m long Temperature Sensor	1
USB Communication Cable	1
WRM 2.0 Software CD	1
Instruction Manual	1
Spanner	1
3m Long mains cord	1

Optional accessories

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

HEAT RUN AUTOMATION TEST MODE

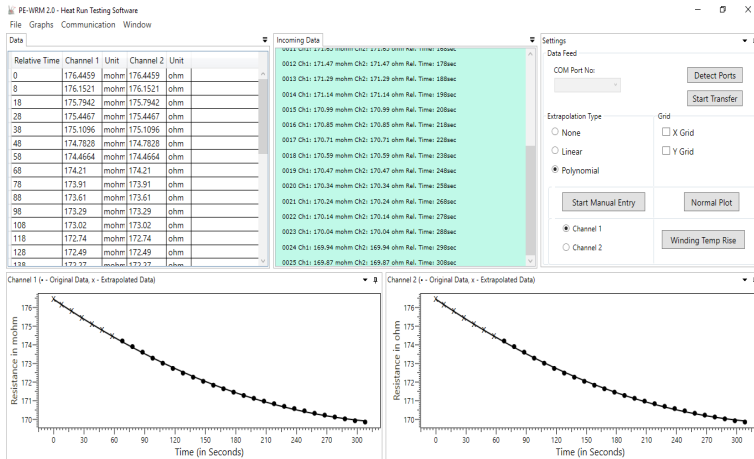
Heat Run Test (Temperature Rise Test) is known to be a very critical parameter for any Power & Distribution transformer/Reactors/Motors. Model PE-50R Dual+ has a unique feature of Automizing the entire process and removing all operational and human overheads. Heat Run test can be performed in Dual channel 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.



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)

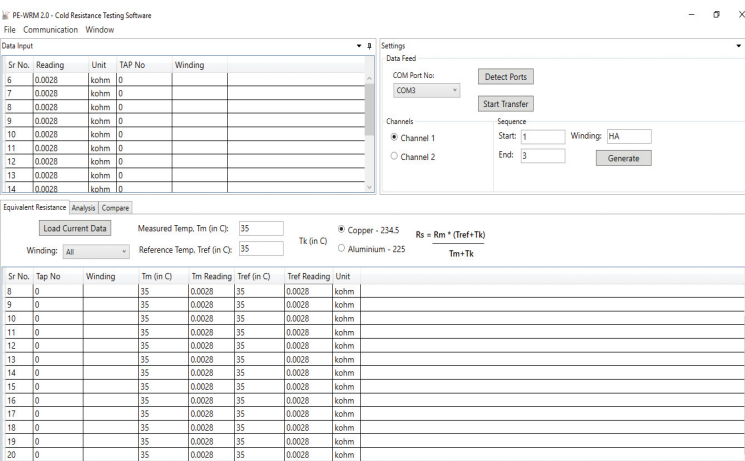
Aluminium (225)

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

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.

FOR FREE SOFTWARE DEMO KINDLY CONTACT THE MANUFACTURER.



NOTES: 1. The Instrument is accompanied with factory 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 prior notice. 5. Prompt services

Designed & Manufactured by

Prestige ELECTRONICS

5/265, Ashirwad Industrial Estate, Ram Mandir road, Goregaon (West), Mumbai - 400104, Maharashtra, India

+91-22-6697 8019 / 9004033520

sales@prestigeelectronics.com / operations@prestigeelectronics.com

www.prestigeelectronics.com

www.resistancemetersindia.com