4½ - DIGIT WINDING RESISTANCE METER
PE-17RA-P+

KEY FEATURES

- 4½ digit Large LCD display with backlit
- 0.1 µΩ to 2 kΩ measuring range with 0.15% basic accuracy
- Test Current :10A,5A, 1A, 0.1A, 0.01A.DC
- Auto Ranging Resistance Measurement
- Auto Discharge and Auto Hold Feature
- Enclosed in Industrial Grade ABS Carrying Case (IP67)
- PC Interface with Heat Run Testing & Data Analysis Software PE-WRM 2.0
- Heat Run Automation Mode (Temperature Rise Test) with no manual intervention
- Temperature Corrected Readings at 75 °C
- Very Fast Response
- Ultra Stable Current Source
- High Open Circuit Voltage (38V ± 3V.DC)
- OLTC Measurements and Intertap Comparison feature
- Panel Mount Printer
- Memory Storage upto 2500 readings with date and time stamp
- Audio Visual alarms for user safety

OPTIONAL FEATURES

- 25A and 50A test current variant
- Standard Modbus Interface
- Temperature Sensor

APPLICATIONS

- Power Transformers 200MVA / 220KV
- Distribution Transformers
- Motors & Generators
- Reactors
- Live Switchyard measurements

INTRODUCTION

Digital Winding Resistance Meter MODEL PE - 17RA - P+ (10A DC test current) manufactured by Prestige Electronics is ideally suited for measuring winding resistances of high inductive loads like Power & Distribution transfomers, Genrators, Motors etc. Use of four wire system eliminates lead resistance errors. The PE-17RA-P+ has 4½ digit LCD display with resistance measurement range from 2 mΩ to 2 kΩ with minimum resolution of 0.1µΩ. 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 succesful by the industry experts as the equipment has very fast and stable resposne. The equipment is designed to provide stable performances even in Live Switchyards.

The equipment is accompnied with high insulation grade cables, heavy duty crocodile clips and C Clamps for durable connections for all types of device under test. The equipment is transported in Roboust carrying case

WE ARE CONDUCTIVE TO RESISTIVE MEASUREMENTS

Prestige ELECTRONICS
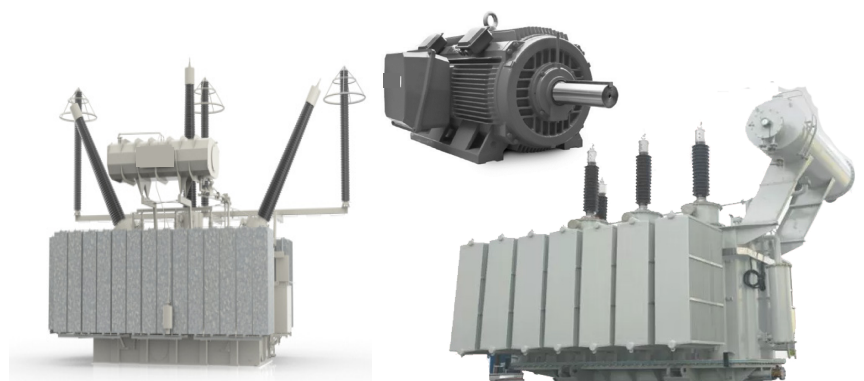
SPECIFICATIONS
Technical Specifications

TEST CURRENT*		RANGE		RESOLUTION		ACCURACY
I1	10 A	0-1999.9	μΩ	0.1	μΩ	
		0-19.999	mΩ	1	μΩ	
		0-199.99	mΩ	10	μΩ	
		0-1999.9	mΩ	100	μΩ	
I2	5 A	0-1999.9	μΩ	0.1	μΩ	
		0-19.999	mΩ	1	μΩ	
		0-199.99	mΩ	10	μΩ	
		0-3.999*	Ω	100	μΩ	
I2	1 A	0-19.999	mΩ	1	μΩ	0.15%
		0-199.99	mΩ	10	μΩ	
		0-1999.9	mΩ	100	μΩ	
		0-19.999	Ω	1	mΩ	
I3	0.1 A	0-199.99	mΩ	10	μΩ	
		0-1999.9	mΩ	100	μΩ	
		0-19.999	Ω	1	mΩ	
		0-199.99	Ω	10	mΩ	
I4	0.01 A	0-1999.9	mΩ	100	μΩ	
		0-19.999	Ω	1	mΩ	
		0-199.99	Ω	10	mΩ	
		0-1.9999	kΩ	100	mΩ	

Temperature coefficient: 80 PPM/°C   * shall be provided on request

ACCESSORIES
Standard accessories

NAME	QUANTITY
12m Probe Set (+I, -I, +V, -V)	1
4 inch 'C' Clamp Set	1
5m long Earthing Probe	1
Gold Plated Kelvin Clips (35mm jaw opening)	2
3m long Mains Cord	1
WRM 2.0 Software CD With USB Communication Cable	2
Shorting Link	1
Instruction Manual	1
Panel Mount Printer	1
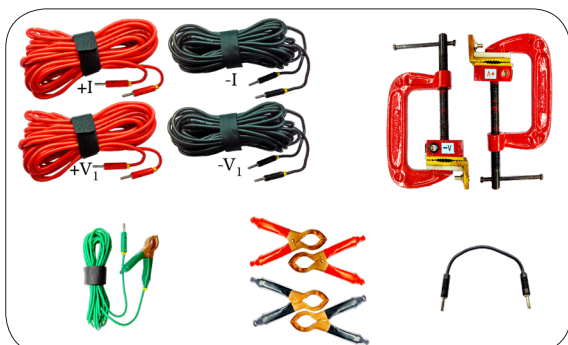
General Specifications

DISPLAY	2 Line Backlit LCD Display
POWER	230V ± 15% 50/60 Hz
OPERATING TEMPERATURE	5° to 55° C
TEMPERATURE COEFFICIENT	80 PPM/°C
RELATIVE HUMIDITY	<95% RH, non condensing
OPEN CIRCUIT VOLTAGE	38V ± 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 crtitical parameter for any Power & Distribution transformer/Reactors/Motors. Model PE-17RA-P+ has a unique feature of Automizing the entire process and removing all operational and human overheads. Heat Run test can be perfromed 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 transfered to Windows based Software for Graph plotting and report generation.

Optional accessories

- Test leads upto 25-meter long
- Oil Immersed Standard Resistance

Oil Immersed Standard Resistance

(Optional)

SOFTWARE PE-WRM 2.0

3

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.
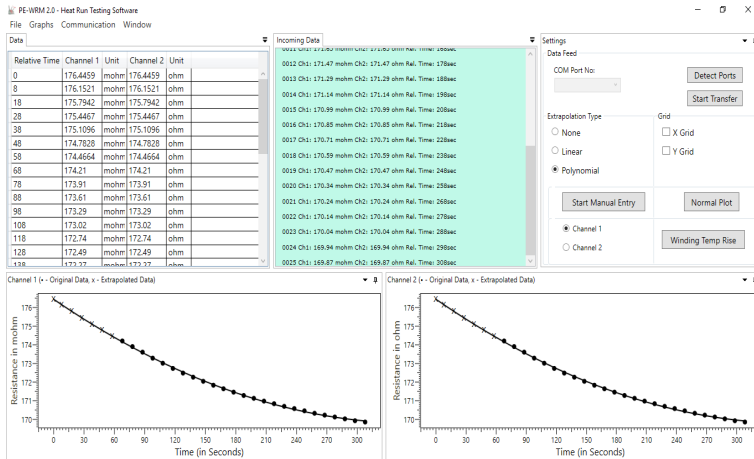
Heat Run Mode

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): 4.714   Ohms
Hot Resistance (Rh): 5.8908   Ohms
Cold Temp (in C) Tc: 27.4
Hot Ambient Temp: (In C) Ta: 30.2

Hot Temp (Th): (In C)   **62.581**

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

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

Save   Close

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.
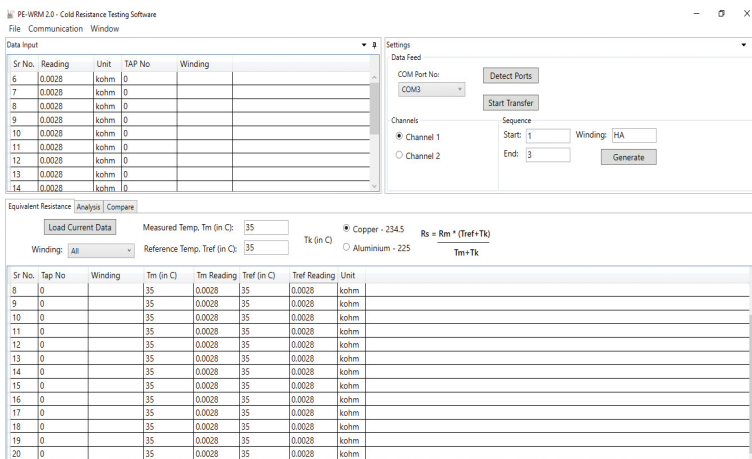
FOR FREE SOFTWARE DEMO KINDLY CONTACT THE MANUFACTURER

NOTES: 1. The Instrument is accompanied with 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