



# POWER ELECTRONICAL

Insulation Quality Testing Experts

<http://powerelectronical.com/>



## PE-AORDF-3

### Precision Automatic Oil Resistivity & Dielectric Loss Tester

Oil suffers from electrical and mechanical stresses while a transformer is in operation. In addition there are contaminations caused due to chemical interactions with windings and other solid insulations, catalyzed by high operating temperature. As a result the original chemical properties of Transformer Oil changes gradually, rendering it ineffective for its intended purpose after many years. Hence this oil has to be periodically tested to ascertain its basic electrical properties, and make sure it is suitable for further use, or necessary filtration/regeneration has to be done.

PE-AORDF Precision Automatic Oil Resistivity & Dielectric Loss Tester is a highly precise instrument, which can be applied to measure Resistance, Dissipation Factor, and Capacitance of the oil under test. The Volume Resistivity of insulating oil is derived from the other measured values. It is an integrated unit, consisting of Stainless Steel oil cell, controlled temperature heating, AC/DC high voltage supply, Tera-ohm meter, and precision electronic bridges to derive the readings.

## Features

- Accurate and repetitive readings, complete automatic process of test
- High precision ADCs and automatic measurement processes
- Noise interference filters makes it possible for use in high magnetic field areas
- Advanced HF Induction heating, less power consumption
- AC-DC-AC power conversion, output is independent of input
- 3-terminal SF6 Gas filled Standard Capacitor used for internal reference.
- Big-screen (240mm×128mm) pixel display with user-friendly GUI
- Integrated thermal Printer for immediate result printing
- Internal memory for data storage and recall

## Specifications

### Input/Output

- Power Supply – Single Phase AC 180V-250V 50 Hz  $\pm$  10% (110V 60Hz available on request)
- Voltage output – variable from 1000V to 2200V (in steps of 200V)
- Output Voltage accuracy – 2%
- Output Current – 25mA max

### Heater

- HF Induction heater – 500W max (auto-controlled)
- Temperature Range – ambient to 100 deg C
- Temperature error – 1%
- Time to 90 deg C < 20 mins

*PREVENTION is better and cheaper than CURE*  
*Trust the experts!!*

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## Measured Parameters

- Tan Delta range – 0.000% to 100.0%
- Tan Delta Accuracy – 1% of reading + 20 digits
- Capacitance range – 15.0pF to 300pF
- Capacitance Accuracy – 1% of reading + 1pF
- Resistance Range – 10MΩ to 10TΩ
- Resistance Accuracy – 10% of reading
- Volume Resistivity – calculated automatically

## Atmospheric

- Storage Temp – minus 20 deg C to +60 deg C
- Operating Temp – minus 10 deg C to +50 deg C
- Humidity < 90% non-condensing

## Physical

- Size – 450mm(W) × 310mm(D) × 360mm(H)
- Gross Weight – 20kgs (incl accessories), except packing

## Standard Accessories

- Test equipment – 1 no
- Stainless Steel Oil cell – 1 no
- Connecting AC mains cable – 1 no
- Printer roll – 1 no (already loaded)
- User manual – 1 no
- Test certificate – 1 no
- Warranty Certificate – 1no (Standard warranty 1 yr)

Note – Power Electronical reserves the right to change product specifications for continual improvement. Please order a fresh copy of specs from [contact@powerelectrical.com](mailto:contact@powerelectrical.com), before placing new orders. Jurisdiction limits within territory of Republic of India only.

### Our other Products are –

- Automatic Cap & Tan Delta test system 10kV / 12kV
- Manual C&DF test system 12kV
- Auto Oil Breakdown Voltage Tester 80kV / 100kV
- Motorised Oil BDV set 0-100kV
- 3-pc Oil Resistivity & DF test kit
- Insulation Testers (10M to 15T, 2% accuracy)
- High Voltage Breakdown testers (10kV-50kV)
- SF6 Gas filled Standard Capacitors (upto 1000kV)

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