



POWER ELECTRONICAL

High Voltage Dielectric Diagnostics

PE-ORDF-2

Oil Resistivity & Dissipation Factor 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-ORDF-2 Oil Resistivity & Dissipation Factor Test set is a combination of 3 instruments, which can be applied to measure Resistance & Dissipation Factor of the Oil under test. The Volume Resistivity of insulating oil is derived from the measured value of Resistance. It is 3-piece set, consisting of the Heater unit (and Stainless Steel oil cell), Million-mega-ohm meter, and the Dissipation Factor bridge to derive the readings.

The Insulation resistance testing instrument is available in max test voltages of 500V DC and 1000V DC, and can be ordered accordingly. Voltages lower than them are available to be set from the front panel via the selector switch

Features

- Wide measurement range
- Completely solid state circuitry, hence drift-free operations
- Completely protected against all overloads and short-circuits
- Suitable for testing "Earthed" samples
- High power coil heating, precision point control implemented
- Adjustable temperature from ambient to 150 deg C
- Separate visual push buttons for "Charge" & "Discharge" for rapid and safe testing
- Can implement testing as per ASTM D924, IEC60247, IS6262/6103 test methods
- Rugged, reliable, and inexpensive instrument set to measure critical oil parameters

Specifications

Input/Output

- Power Supply – Single Phase AC 180V-250V, 50 Hz (110V 60Hz model available on request)
- Voltage output (IRT) – DC 500V, 250V & 100V selectable
- Voltage output (DFM) – Variable 0-500V AC
- Output Voltage accuracy – 1%
- Output Current (IRT) – 5mA max

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

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Heater

- Coil heater – 500W max
- Temperature Range – ambient to 150 deg C
- Temperature error – 2%
- Sensing element – PT-100 probe
- Display – 3 ½ digital read-out
- Time to 90 deg C < 20 mins

Measured Parameters

- Resistance Range – 10MΩ to 10TΩ
- Resistance Accuracy – 2% of reading from 10MΩ to 10GΩ
– 5% of reading from 10GΩ to 10TΩ
- Volume Resistivity – 0.00621 x 10¹² Ω/cm to 621 x 10¹² Ω/cm (calculation formulas given in operation manual)
- Tan Delta (DF) range – In two ranges 19.99% & 199.9%
- DF Resolution – 3 ½ digital display

3-terminal Oil Cell 2kV specifications

- Material – Stainless Steel
- Insulation Material – Teflon
- Max test voltage – 2500V AC / 1500V DC
- Cell Capacitance – 55pF ± 5%
- Cell Volume – 50ml (approx)
- Max Operating Temp – 150 deg C



Heater & 3-terminal Oil Cell

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

- Set of – 4 pieces (Heater, IR tester, DF meter & SS Oil Cell 2kV)
- Gross Weight – 40kgs (incl accessories), except packing

Standard Accessories

Test equipment – 1 no (Heater, IR tester, DF meter)

Stainless Steel Oil cell – 1 no

Calibrator box PE-CCD-3 – 1 no

Connecting AC mains cable – 3 nos

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@powerelectronical.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
- Automatic Oil Resistivity & DF test system
- Insulation Testers (10M to 15T, 2% accuracy)
- High Voltage Breakdown testers (10kV-50kV)
- SF6 Gas filled Standard Capacitors (upto 1000kV)

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