

MOTR

Oil Tan Delta & Resistivity Kit



Features :

- Dissipation factor , Volume Resistivity, Dielectric constant (Permittivity), Watt loss
- Oil test heating chamber with precise temperature control
- Test cell according to IEC 60247
- Preprogrammed & customized Test sequences
- Inbuilt Thermal Printer
- Internal Memory for 250 Test
- USB Interface
- Portable calibrator
- Oil Auto drain facility

Description :

Motwane's MOTR is micro processor based compact kit for precise measurement of the Tan Delta & resistivity of insulating oils. It is single unit design loaded with International test standards for automatic measurement of all parameters as per the standard. The customized test sequences available as per user's requirement. Test cell is designed as per IEC 60247 with precise control for measuring tan delta and resistivity at 27° C & 90° C .MOTR has auto oil drain facility after test. It is provided with internal memory & printer. USB interface available for data transfer & report generation facility. The calibrator with standard Tan delta & Resistivity ranges available for validating performance of the kit.

Application :

The dissipation factor test is widely used as an acceptance and preventive maintenance test for insulating oil. Oil dissipation factor testing in the field is usually done with the Oil Tan delta & Resistivity Test Kit . The dissipation factor of new oil should not exceed 0.05 percent at 25° C. A high Tangent Delta in used oil indicates deterioration, contamination, or both with moisture, carbon, varnish, Glyptal, sodium soaps, or deterioration products. Used oil with a Tangent Delta in excess of 0.5 percent should be further analysed in a laboratory to determine the cause of the high dissipation factor. Oil with a Tangent Delta in excess of 2.0 percent may be an operational hazard. It should be investigated and either reconditioned or replaced.

Measuring oil quality in oil filled electrical equipment :

- Transformers
- HV Cables
- Oil filled circuit breaker
- Capacitor
- Bushing

Technical Specification

AC Voltage	: 0-2400 V
Resolution	: 1V
Accuracy	: $\pm 1\%$ of Reading
DC Voltage	: 100 – 1000V
Resolution	: 1V
Accuracy	: $\pm 1\%$ of Reading
Dissipation Factor	: 0 – 4.0
Resolution	: 1×10^{-5}
Accuracy	: $\pm 1\%$ of rdg ± 0.0001 (1×10^{-4})
Capacitance	: 0 -1600 pF
Resolution	: 0.01 pF
Accuracy	: 0.1% of Reading + 0.1pF
Dielectric Loss	: 0 -10.0 watts
Resolution	: 0.001 mili Watts
Accuracy	: $\pm 1\%$ of Reading $\pm 10^{-5}$ Watts
Dielectric Constant	: 1-20
Resolution	: 0.001
Accuracy	: 0.1%
Resistivity	: $10^9 \Omega \text{ cm}$ to $10^{15} \Omega \text{ cm}$
Resolution	: 3 Digits
Accuracy	: $\pm 2\%$ of rdg at $10^9 - 10^{13} \Omega \text{ cm}$ $\pm 5\%$ of rdg at $10^{13} - 10^{14} \Omega \text{ cm}$ $\pm 10\%$ of rdg above $10^{14} \Omega \text{ cm}$

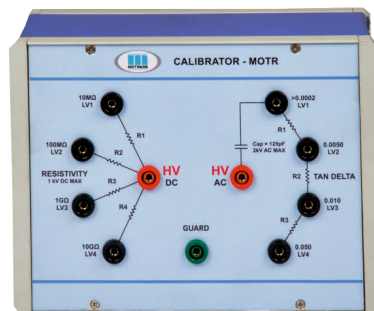
Test Cell

Constant	: 620 Nominal
Capacitance	: $55 \text{ pF} \pm 1 \text{ pF}$
Insulation	: Teflon (PTFE)
Electrode spacing	: 2mm
Volume of Oil	: 60ml

Heater

Temperature Range	: $20^\circ \text{C} - 150^\circ \text{C}$
Temperature Control	: One set point ($\text{max } 110^\circ \text{C}$)
Heating Element	: Induction Type
Sensor	: solid state (PT100)

Test Standards	: IEC 60247, VDE 0380, BS 5737, ASTM D924, ASTM D1169, JISC2101:2010, IS602 .
Display	: Alphanumeric LCD Display
Printer	: Inbuilt Thermal Printer
PC Interface	: USB
Memory	: 250 Test
Power Supply	: 110V / 230V, 50/60Hz $\pm 15\%$
Operating Temperature:	-10 to 50 Deg C, 90% non condensing
Safety Standards	: IEC61010-1, IEC61326-1
Dimension	: 510mm X 320mm X 380mm
Weight	: 24kg
Standard Accessories	: Test Lead sets Oil Test cell with 3 terminals Standard Calibrator with Tan Delta, Capacitance Resistivity values Transportation case



Calibrator



Test Cell

Designed and Manufactured by:

The Motwane Manufacturing Company Pvt. Ltd.

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