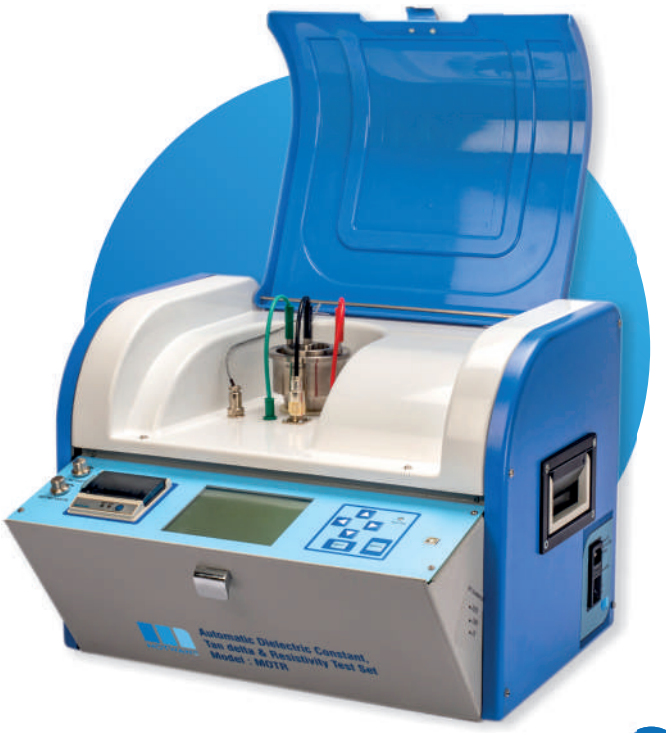


Features

- Dissipation Factor , Volume Resistivity, Dielectric Constant (Permittivity), Watt Loss
- Inbuilt Oil 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
- Auto Sequence Test
- Bluetooth enabled for Motware Mobile App

MOTR

Connected to Cloud

Oil Tan Delta & Resistivity Tester

CAT III	IP
600V	54

Motwane's MOTR is a microprocessor-based compact designed for precise measurement of the dissipation factor and volume resistivity of insulating oils. MOTR is built in a single unit and on boarded with international test standards for automatic measurement of all parameters and also available with customized test sequences to conduct tests as per the user's requirement. The test cell is designed as per IEC 60247 with precise control for measuring dissipation factor and resistivity at 27°C & 90°C. MOTR also has an auto drain facility. It is provided with internal memory & printer for on-field reports and also has a USB interface available for data transfer. The calibrator with standard dissipation factor & resistivity ranges are available for validating the performance of MOTR.

Applications

The dissipation factor indicates the dielectric loss of the liquid and thus it's dielectric heating. The dissipation factor test is widely used as an acceptance and preventive maintenance test for insulating oil. The dissipation factor of new oil should not exceed 0.05 % and the dissipation factor can gradually increase in service to a value as high as 0.5%, in most cases, indicating deterioration and/or contamination with moisture, carbon, varnish, glyptal, sodium soaps, or deterioration products.

Used Oil having a dissipation factor of less than 0.5% is usually considered satisfactory for service and with dissipation factor between 0.5% and 2% should be considered as being in doubtful and further investigation recommended and in excess of 2.0 % may be an operational hazard. It should be reconditioned or replaced.

Useful for measuring the quality of insulating oil, used in electrical apparatuses like:

- Power & Distribution Transformers
- OLTC
- HV Cables
- Switchgear
- Capacitor
- Bushing
- Instrument Transformer

MOTWANE

Technical Details	MOTR

Technical Specification

AC Voltage	200-2400 V
Resolution	1V
Accuracy	±1%
DC Voltage	100 – 1000V
Resolution	1V
Accuracy	±1%
Dissipation Factor	10^{-6} to 4.0
Resolution	1 X 10^{-6}
Accuracy	±1% of rdg ± 0.0001 (1x10^{-4})
Capacitance	0 -1600 pF
Resolution	0.01 pF
Accuracy	±0.1% ±1pF
Dielectric Loss	0 - 10 watts
Resolution	0.001 mili Watts
Accuracy	±1% of Reading ± 10^{-5} Watts
Dielectric Constant	1-30
Resolution	0.001
Accuracy	±0.1% ± 10 digits
Resistivity	10^{6} to 10^{15} Ωcm
Accuracy	± 2% at 10^{9} - 10^{13} Ωcm
	± 5% at 10^{13} - 10^{14} Ωcm
	± 10% above 10^{14} Ωcm
Resolution	0.001

Test Cell

Cell Constant	620 Nominal
Capacitance	55.5pF ± 1pF
Insulation	Teflon (PTFE)
Electrode Spacing	2mm
Volume of Oil	60ml

Heater

Temperature Range	20°C - 150°C
Accuracy	±0.5°C
Resolution	0.1°C
Temperature Control	One set point (max110°C)
Heating Element	Induction Type
Sensor	Solid state (PT100)

Test Standards	IEC 60247, VDE 0380, BS 5737, ASTM D924, ASTM D1169, JISC2101:2010
Enclosure Material	Metallic and ABS
Display	Alphanumeric LCD Display
Printer	Inbuilt Thermal Printer
Memory	250 Test
Power Supply	110V / 230V, 50/60Hz ±15%
Power Consumption	< 250VA @ 230V / 50Hz

Operating Temperature	-10°C to 50°C, 90% non condensing
Safety Standards	IEC61010-1, IEC61326-1
Dimension	510mm(L) X 320mm(W) X 380mm(H)
Weight	24 Kg (Approx)

Accessories

Standard

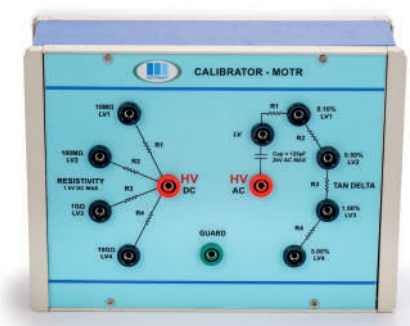
- Test Lead : 1 SET
- Oil Test Cell with 3 terminals : 1 No.
- Standard Calibrator : 1 No.
- Pen Drve with PC Communication software : 1 No.
- USB Cord : 1 No.
- Test & Calibration Certificate : 1 No.
- Instruction Manual : 1 No.

Optional

- Oil Auto Drain Facility : 1 No.

Note:

- Bluetooth Software (Optional)
- Motware Desktop Application (Optional)



Calibrator

Test Cell