



IT-51

5KV Digital Insulation Tester
with PI



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The Motwane IT-51 is a Semi-diagnostic Digital Insulation tester designed for testing of all types of electrical installation like transformers, switchgear, motors, generators and utility substation equipments. The instrument performs basic DC insulation and Polarization Index Test with a direct read out of PI values. The results that are displayed are Insulation value, Leakage current value and PI value in scrolling mode depending on mode selected. The instrument also has a AC/DC voltage measurement mode. IT-51 has a large LCD backlit display. It is rechargeable battery operated with a provision for battery charging.

APPLICATIONS

Insulation testing of

- All electrical rotating machines & Equipment
- HV & LV Transformers
- HV & LV Switchgears
- Cables & Insulators
- All types of Electrical Installations



FEATURES & BENEFITS

- Selectable test voltage from 250V, 500V, 1000V, 2500V, 5000V DC.
- Insulation Resistance measurement up to $1T\Omega$ with optional timer.
- Polarization Index measurement facility with selectable timers.
- Short circuit current < 1.4 mA. approx.
- AC/DC voltage measurement up to 600V.
- Two Programmable timers from 0 Sec to 99 minutes.
- Liquid Crystal Display with pleasant backlit.
- Internal rechargeable Battery.
- Safety - IP 54, CAT IV 600V and CE conformity.
- Robust ABS body with self-carrying handle for easy portability.
- Automatic discharge for capacitive circuits.
- Guard terminal to minimize the surface leakage.



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SPECIFICATIONS

Terminal Voltage

- Test Voltage : 250V, 500V, 1000V, 2500V, 5000V
- Test Voltage Accuracy : $\pm 5\%$ of rdg
- Short circuit current : 1.4 mA \pm 0.5 mA
- Programmable Timers : T1 and T2

Insulation Resistance

- Analog Display : 1 K Ω to 1 T Ω
- Digital Display : (3 Digit Display) 1 K Ω to 1 T Ω

Insulation Accuracy

- Up to 1G Ω : All Ranges \pm (5 % + 2 digits)
- Over 1 G Ω : 5000V \pm (5 % + 0.04% per G Ω)
: 2500V \pm (5 % + 0.08% per G Ω)
: 1000V \pm (5 % + 0.2% per G Ω)
: 500V \pm (5 % + 0.4% per G Ω)
: 250V \pm (5 % + 0.8% per G Ω)

Insulation Resistance Measurement Range

Test Volt	As Per Tolerance Specified in Insulation Resistance
250V	1K Ω to 50G Ω
500V	1K Ω to 100G Ω
1000V	1K Ω to 200G Ω
2500V	1K Ω to 500G Ω
5000V	1K Ω to 1T Ω

Guard resistance : 300 k Ω \pm 10%

AC/DC Voltage Measurement

- Range : 0V to 600V
- Accuracy : \pm (5 % of rdg + 5 digits)

Polarization index (PI)

- Display range : 0 - 99.9
- Accuracy : \pm (5 % of reading + 5 digits)
- Resolution : 0.01

Power Supply Specifications

- Battery : Internal Rechargeable
- Display : Custom Built LCD Display with Backlit.

General

- Net Weight : 5.0 Kg Approx. (Instrument)
- Gross Weight : 9.2 Kg Approx. (with Accessories)
- Dimensions (H X W X L) : 195 mm X 290 mm X 360 mm Approx.

Environmental

- Operating Temperature : -10 $^{\circ}$ C to 55 $^{\circ}$ C
- Storage Temp : -20 $^{\circ}$ C to 70 $^{\circ}$ C
- Humidity : < 95% RH, non condensing max at 40 $^{\circ}$ C

Safety and Standards

- CE & CAT IV 600V
- Ingress Protection IP 54
- Type Test in accordance with IS 9223 : 1989
- Safety of test lead in accordance with EN61010-031 : 2002 + A1 : 2008



STANDARD ACCESSORIES

Included Accessories

- Test leads 3 meter : 1 Set
- User Manual : 1 No
- Calibration Sheet : 1 No

Optional Accessories

- Test leads 10 meter : 1 Set



DSS/PI/R-13/Rev-01

Notes

1.The Instrument is accompanied with Test & calibration sheet. 2.Test Facilities can be provided at the factory with the available test set-ups only. 3. The Company's policy is continuous improvement of its products. We therefore reserve the Right of any deviation from illustration or specifications without notice. 4.Stated accuracies are valid from 10% of the range to 95% of the range. 5. Accuracy Specified for temperature range of 250C ± 50C & 55% RH ±10%.



Designed and Manufactured by:

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