

i-12

1KV Digital Insulation Tester

Smart Safe Strong



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THE MOTWANE's Insutester Model i-12 is a Compact, Light weight, Hand held, Battery & Mains operated (with the help of Mains eliminator) Digital insulation tester best suited for Industrial use. It is a 1kV insulation tester with maximum range of 2GΩ for Insulation Resistance Measurement. It is designed predominantly for low voltage insulation resistance testing in maintenance and services, which involves the applications like Cables, Rotating Machines, LT transformers, Switchgears and Industrial installations. It has selectable test voltages of 50V, 100V, 250V, 500V and 1000V. The Insutester is provided with additional low resistance measurement and AC/DC voltage measurements also. It is designed to suit the extreme environment conditions.

APPLICATIONS

Ideal for Insulation Resistance Measurement of

- Electrical Equipment (Motors, Transformers, Machines, etc.)
- Cables for Communication Networks.
- Industrial, Commercial & Residential Installations.
- Electrical Cables for Distribution Networks.
- House Hold Appliances (Washing Machines, Mixer, Toaster, etc.)
- Control Panels.
- Railways applications & Telecom applications.
- Metal Industries applications.

SMART features

- GO-NO-GO Test Facility.
- Pre selectable Timer facility.
- Mains Eliminator.
- Selectable voltage facility 50,100,250,500 &1000V.
- Auto Ranging of Insulation Resistance Measurements up to 2000MΩ.
- Auto AC/DC 600V measurement.
- Live circuit detection up to 600V AC/DC.
- Low resistance measurement up to 100Ω with continuity testing.
- Temporary storage of 10 readings.
- Auto power off facility.
- Blown Fuse Indication.

SAFE

- CE mark conforming to latest EN 61010-1:2010.
- EN 61326-1:2005, CAT IV 600V, IP54 protection.
- Overload protection 1200V for all ranges.
- Guard Terminal to minimize surface leakage.

STRONG

- Robust and Rugged Polycarbonate casing.



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GENERAL FEATURES

- 3½ digits LCD along with analog pointer scale for insulation measurement.
- Insulation Resistance Measurement from 10KΩ to 2GΩ- Wide Range.
- User Selectable Backlit display to facilitate measurement in dark environment.
- Hands free continuity testing.
- Low resistance measurement.
- Checking of MIN/MAX values.
- Low Battery indication.
- Lead resistance nullification for low resistance measurement.

GENERAL SPECIFICATIONS

- Display : 3 ½ digit LCD with backlit
- Analog Display : Logarithmic Scale
- Display : 7 segment digits
- Enclosure Material : Polycarbonate
- Dimensions (W x H x D) : Approx.102 mm x 209 mm x 44mm
- Net Weight (Instrument) : Approx.600gm. (With battery excluding accessories)
- Gross Weight (with Accessories) : Approx. 1 Kg.

ENVIRONMENTAL

- Nominal Temp. Range : 0°C to 35°C
- Operating Temp. : -20°C to 40°C (Full Range), 20°C to 60°C (Up to 100MΩ)
- Storage Temp. : -25°C to 65°C
- Relative Humidity : 90% RH at 40°C max.

POWER

- Battery : 6 X 1.5V cells IEC LR6 Alkaline
(Nickel cadmium rechargeable cells may also used)
(Battery symbol appears on the LCD screen, battery replacement is necessary.)
- Mains Eliminator
Input : 230VAC, 50/60Hz
Output : 12 VDC, 1000mA

SAFETY

- CE Mark
- Directives for CE : LVD:2006/95/EC., EMC: 2004/104/EC Certification
- Measurement Category : CAT III 1000V/CAT IV 600V Reinforced insulation
- Relevant Standard Specifications : EN61010-1:2010,EN61326-1:2005
- IP Rating (Dust & Water Protection) : IP 54
- Type tested as per : IS 10656

TECHNICAL SPECIFICATION

| Measurement Function | Range | Resolution | Accuracy ±(% reading+dgt) | Overload Protection |
|--|---------------------|--------------------|------------------------------|---------------------|
| Insulation | 0.01 MΩ to 0.99 MΩ | 10 KΩ (0.01 MΩ) | ±(3% ± 2) | 1200 V rms |
| Resistance MΩ ¹ . (50 V, 100V) | ≥ 1.0 MΩ to 99.9 MΩ | 100 KΩ to (0.1 MΩ) | ±(5% ± 2) | |
| | ≥100 MΩ to 999 MΩ | 1MΩ | ±(10% ± 5) | |
| Insulation | 0.01 MΩ to 9.99 MΩ | 10 KΩ (0.01 MΩ) | ±(5% ± 2) | |
| Resistance | ≥10 MΩ to 99.9 MΩ | 100KΩ (0.1 MΩ) | ±(5% ± 2) | |
| MΩ/GΩ ¹ (250 V, 500V,1000V) | ≥100 MΩ to 999 MΩ | 1 MΩ | ±(10% ± 5) | |
| | 1GΩ to 2GΩ | 10MΩ | ±(10% ± 5) | |
| Low Ohms ² (Ω) | 0 - 9.99Ω | 0.01Ω at 100 mA | ±(3% ± 2) | |
| | ≥10Ω to 99.9Ω | 0. 1Ω at 10 mA | ±(5% ± 2) | |
| Continuity ())) Test Current 100mA | 0 - 9.99Ω | 0.01Ω | ±(3% ± 2) | |
| V AC/DC | 25V - 450V | 1V | ±(2% ± 3) | |
| | 450V - 600V | 1V | ±3% | |

¹ For Insulation resistance range,
Terminal voltage on open circuit (DC) : - 0% to + 30% of rated voltage
Short Circuit current : < 2 mA

² For low Ohms/Continuity Ranges
*Open circuit voltage : 5V ± 2V d.c.
*Lead Resistance compensation : 0 - 9.99Ω

Standard Accessories

- Set of test leads of 1m length with Crocodile clips
- Instruction Manual
- Warranty card
- Batteries 6 X 1.5V AA, Alkaline (IEC LR6)
- Fuse (800mA/600V)
- Mains Eliminator (12 VDC, 1000mA output)
- Test lead set.



DBS/PC/IR-11/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 25°C ± 5°C & 55% RH ±10%.