



i-12

1KV Battery Operated Digital Insulation Resistance

CAT III	CAT IV	IP	CE
1000V	600V	54	

The Motwane's Digital Insulation Tester model i-12 is a compact, light-weight, hand held, battery and mains operated (with the help of mains eliminator) best suited for industrial use. i-12 is a 1kV insulation tester with maximum range of 2GΩ for Insulation Resistance Measurement and 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 insulation tester is provided with additional low resistance measurement and AC/DC voltage measurements to. It is designed to suit the extreme environment conditions

Features

Smart

- ✓ Go-No-Go Test Facility.
- ✓ Pre selectable Timer Facility.
- ✓ Mains Eliminator.
- ✓ Selectable Voltage Facility 50, 100, 250, 500 & 1000V.
- ✓ Auto Ranging Measurement from 10KΩ to 2GΩ - wide range
- ✓ Live Circuit Detection up to 600V AC/DC.
- ✓ Low Resistance Measurement up to 100Ω with continuity testing.
- ✓ Temporary Storage of 10 readings.
- ✓ User Selectable Backlit to measurement in dark environment.
- ✓ Low Battery Indication.
- ✓ 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.

Applications

The Insulation Resistance Test is an essential test that helps to verify the condition of electrical insulation. Insulation resistance quality of an electrical system degrades with time, environment condition i.e. temperature, humidity, moisture and dust particles. The instrument is designed for routine and diagnostic testing like IR of high voltage electric apparatuses and useful to the following segments:

- Electrical Equipment
- (Motors, Transformers, Machines, etc.)
- Industrial, Commercial & Residential Installations.
Cables for Distribution or Communication Networks.
- House Hold Appliances
(Washing Machines, Mixer, Toaster, etc.)
- Control Panels.
- Railway and Metal Industry Applications.

Technical Details

i-12

General

Display	3 ½ digit LCD with backlit
Analog Display	Logarithmic Scale
Display	7 segment digits
Enclosure Material	Polycarbonate
Dimensions	102 mm(W) x 209 mm(H) x 44mm(D)
Net Weight (Instrument)	Approx. 60g (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

Technical

Measurement Function	Range	Resolution	Accuracy ± (% reading+dgt)	Overload Protection
Insulation Resistance MΩ*1 (50V,100V)	0.01 MΩ to 0.99 MΩ	10 KΩ(0.01 MΩ)	± (3% ± 2)	1200 V rms (10 sec)
	≥1.0 MΩ to 99.9 MΩ	100 KΩ(0.1 MΩ)	± (5% ± 2)	
	≥100 MΩ to 999 MΩ	1MΩ	±(10%± 5)	
Insulation Resistance MΩ/GΩ*1 (250V,500 V,1000V)	0.01 MΩ to 9.99 MΩ	10 K Ω(0.01 MΩ)	± (5% ± 2)	
	≥10 MΩ to 99.9 MΩ	100 KΩ(0.01 MΩ)	± (5% ± 2)	
	≥100 MΩ to 999 MΩ	1 MΩ	±(10%± 5)	
	1GΩ to 2GΩ	10MΩ	±(10%± 5)	
Low Ohms (Ω) *2	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% ± 2)	
	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

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
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

Accessories

Standard

- 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)

Optional

- Mains eliminator (12 VDC, 1000mA output)
- Test lead set