

Annexure-1

Technical Specifications of Digital Insulation Tester -5 kv

Digital insulation tester should have following main features

Operate in battery and in AC mains supply (The equipment can be operated in AC mains supply even during low battery condition). It should have diagnostic modes for Polarization Index, Dielectric Absorption Ratio, Dielectric Discharge, Step Voltage and Ramp Voltage tests, Auto Discharge Facility. It should be auto ranging, 1000 test result storage and advanced Software for data management with communication cable USB type B device. It should be with compact design with rugged case suitable for field operation.

Technical Specifications

Test Voltage

Programmable test voltage: 250 V, 500 V, 1000 V, 2500 V, 5000 V.

Lock Test Voltage: 100 V TO 1 KV in 10V steps

1KV TO 5 KV IN 25 V steps.

Test voltage accuracy: +4%, -0%, ± 10 V nominal test voltage at 1 G Ω load (0°C to 30°C).

Resistance range : 10 k Ω to 10 T Ω @ 5 kV,

Accuracy of IR measurement $\pm 5\%$ from 1M Ω to 1T Ω & $\pm 20\%$ from 1T Ω to 10T Ω

Guard terminal performance: Guards out parallel leakage resistance down to 250 k Ω with a maximum additional resistance error of 1% with a 100 M Ω load

Display

Both Digital and Analogue Display.

Analogue: 100 k Ω to 10 T Ω

Digital: 10 k Ω to max a above.

Short circuit/charge current 3 mA @ 5 kV,

Capacitance Range: 10 nF to 25 microF

Accuracy (23 degreeC) : $\pm 10\%$ of rdg ± 5 nF

Charge Time : < 3 s/microF at 3mA to 5 KV

Discharge Time: < 120 ms/microF to discharge from 5000 V to 50 V

Voltage Measurement Range: 30 V to 660 V AC/DC

Accuracy: $\pm 3\%$ of rdg, ± 3 V

noise immunity – 3 mA

Power Supply

AC Mains: Voltage: 230V AC $\pm 10\%$, Frequency: 50Hz $\pm 10\%$

Battery: Internal Rechargeable Li-Ion Battery Backup

Approx. 6 hours of continuous testing at 5 KVat100M load, battery should meet IEC 62133.
The Insulation tester shall work directly from the mains even if the battery is fully drained.

Interface : USB type B (device)

Real time output :- 1 Hz output readings (V, I, R)

Data Storage & Download and Analysis Software to be supplied along with

Standards & Approvals

Safety in accordance with EN61010-1:2001

EMC in accordance with IEC61326-1:2006

Ingress Protection IP 65(lid closed),IP 40 (lid open).

CE & CATIV 600V Rating.

Environmental Specifications

Operating Temperature: - 20 degree centigrade to 50 degree centigrade.

Storage Temperature: - 25 degree centigrade to 65degree centigrade.

Relative Humidity :< 95%RH Non condensing at 40 degree centigrade.

Accessories to be included

User guide CD

Power lead

USB Cable

Power DB Lite Software

3 metre lead set with 3 medium insulated clips

15 Meter HV test leads set

Calibration Certificate and Certificate of Test

Make & Model: Megger MIT525 or Equivalent.