



Features

- ✓ Available IR Testing with Diagnostic Modes PI, DAR, DD, Step Voltage, BDV & Burn Test
- ✓ Programmable Test Voltage from 500V-10KV
- ✓ Insulation Resistance Range from 1KΩ to 50TΩ
- ✓ Three Programmable Timers
- ✓ Programmable Break Down Current Settings
- ✓ Mains & Battery operation
- ✓ Internal Data Storage up to 1000 tests*
- ✓ Galvanic Isolated RS 232 & USB Port
- ✓ Application Software for Data Trending Analysis
- ✓ AC/DC voltage measurement up to 600V
- ✓ Auto Calibration at every start up
- ✓ Burn Mode for uninterrupted Insulation Resistance Testing
- ✓ Alarm Mode with Min-Max Settings & Pass Fail Indication
- ✓ CAT IV 600V, IP 65, Complies with latest IEC/IS Standards
- ✓ Hand Interlock Switch
- ✓ Operates on Battery & Mains (with or without battery)

10K PI

Diagnostic Insulation Tester

CAT IV	IP	CE	USB
600V	65		

10K PI is an Insulation Diagnostic Tester having test voltage range up to 10KV, designed & developed indigenously at the state of the art R&D laboratory to conduct automatic insulation tests on high voltage equipment's like Transformers, Cables, Bushings, Switchgears & Rotating Machines 10K PI is a microprocessor based instrument deploying the latest technology & very high speed data sampling to give correct, repetitive readings & quality performance under harsh electrical conditions. It has a wide insulation resistance range up to 50TΩ.

Model 10K PI is mains and battery operated portable & compact insulation tester for outdoor applications. The battery backup of 6 Hours makes it suitable for field operations. IP 65 rating keeps 10K PI safe from water & dust ingress. It complies with CAT IV 600V for safe operation. The instruments & its accessories are certified as per relevant IS/IEC standard.

The Information displayed on the large backlit LCD includes insulation resistance, leakage current, capacitance, battery status & timer. Three programmable timers are provided to conduct various tests like Polarization Index (PI), Dielectric Absorption Ratio (DAR), Dielectric Discharge (DD), Step Voltage (SV), & Breakdown Voltage (BDV) Test. 10K PI can store up to 1000 test results*. PC interface via USB & RS-232 for data transfer. The PC software for report generation & data trending analysis helps to keep records of capital equipment. Instrument has automatic discharge facility for capacitive loads discharging The instrument has the automatic discharge facility for capacitive load discharge at the end of the test.

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 insulation resistance testing and diagnostic testing like PI, DD, DAR & SV of high voltage electric apparatus like transformers, generators, motors, cables, bushings, LAs, switchgear, etc. and is temperature independent. Trending of data can reveal vital information about insulation quality and enables the user to take informed decision.





Technical Details

10K PI

Test Specifications

Diagnostic Modes IR, DAR, PI, DD, SV, BDV, Burn Test

Test Voltage

Voltage Selectable 500V, 1KV, 2.5KV, 5KV, 7.5KV, 10KV

Programmable 50V to 1KV in 10 V steps

1 KV to 10 KV in 25 V steps

Voltage Accuracy $\pm 5\%$ of reading + 5 digit

Short Circuit Current 6mA

Resistance Range

Analog Display 1 K Ω to 10 T Ω

Digital Display 1 K Ω to 50 T Ω

Accuracy $\pm 5\%$ (Upto 999G Ω)

$\pm 10\%$ (1T Ω to 10T Ω)

$\pm 20\%$ (10T Ω to 50T Ω)

Programmable Timer T1, T2 & T3 (0-99Min 59sec)

Current Measurement

Range 0-6mA

Accuracy $\pm 5\%$ of reading + 5 digits

Voltage Measurement

Range 0-600V AC / DC

Accuracy $\pm 8\%$ of reading + 5 digits

Capacitance Measurement

Range 1nF to 50 μ F

Accuracy $\pm 5\%$ of reading + 5 nF

Interference Rejection Not exceeding 8mA

Guard 2% error guarding

Memory

Internal data storage up to 1000 tests*

PC Interface

Galvanic isolated USB & RS-232

Display

Large LCD display with backlit

Filter

The digital filter is designed with three different levels F-1, F-2, F-3

Power Supply

Mains 115/230V, Frequency 50/60 Hz

Battery Type Li-ion Rechargeable Battery

Battery Backup 7 Hours of continuous testing at 10KV on load of 100M Ω (approx.)

Battery Charge Time 8 hours approx. (95% Charged)

Environmental Condition

Operating Temperature -20 $^{\circ}$ C to 50 $^{\circ}$ C

Storage Temperature -20 $^{\circ}$ C to 70 $^{\circ}$ C

Humidity <95% RH, non-condensing

Safety Standards

Safety in accordance with EN61010-1

EMC in accordance with EN61326-1

Type test in accordance with IEC 60068

Test leads in accordance with IEC61010-31,

CE & CAT IV600V, IP 65, IP 54

Mechanical

Dimension 360mm(L) X 290mm(W) X 195 mm(H)

Weight 5Kg without accessories (Approx)

Gross weight 9.3Kg with accessories (Approx)

Data Handling & Analysis Software

Operated on XP/Windows7/Windows8/Windows10

Two way communication for remote operation

Report generation along with the graphical representation for Data Trending Analysis.

Accessories

Standard

- 3m Test lead set
- Mains Power Cord
- Instruction Manual
- Calibration Certificate
- Carry Case

Optional

- 15m Test lead Set
- Software CD
- RS232 communication cable
- USB Cable
- Interlock Cable

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 includes continuous improvement of its product. 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 $^{\circ}$ C \pm 5 $^{\circ}$ C & 55% RH \pm 10%.