



1. ELECTRICAL SPECIFICATION

Uncertainty is indicated as \pm (% rdgs + no. of dgt) at 23°C \pm 5°C, con relative humidity <80%HR

DC/AC TRMS VOLTAGE

| Range | Resolution | Uncertainty | Overload protection |
|-----------|------------|--------------------|----------------------|
| 10 ÷ 660V | 1V | $\pm(2\%rdg+2dgt)$ | CAT IV 600 to ground |

INSULATION RESISTANCE

| Range | Test Voltage | Resolution | Uncertainty (*) |
|---------------------------------|---|---------------|---|
| 0.01M Ω ÷ 0.19M Ω | $\geq 100V$ DC | $\leq 1\%rdg$ | $\pm(5\%rdg + 7dgt)$ |
| 0.20M Ω ÷ 199G Ω | | | $\pm(5\%rdg.+3dgt)$ if $R_{mis} \leq \frac{Test\ Voltage}{5nA}$ |
| 0.20M Ω ÷ 499G Ω | $\pm(20\%rdg.+3dgt)$ if $R_{mis} > \frac{Test\ Voltage}{5nA}$ | | |
| 0.20M Ω ÷ 999G Ω | | | $\geq 250V$ DC |
| 0.20M Ω ÷ 1.99T Ω | $\geq 500V$ DC | | |
| 0.20M Ω ÷ 4.99T Ω | $\geq 1000V$ DC | | |
| 0.20M Ω ÷ 9.99T Ω | $\geq 2500V$ DC | | |
| 0.20M Ω ÷ 9.99T Ω | 5000V DC | | |

(*) Load Capacitance < 1nF

GENERATED TEST VOLTAGE (compliance to IEC/EN61557-2)

| Test mode | Nominal test voltage | Uncertainty |
|-----------|--------------------------------|----------------|
| FIX | 100V,250V,500V,1kV, 2.5kV, 5kV | -0%, +10% +15V |
| AJUSTABLE | 100 ÷ 1kV in steps of 25V | |
| | 1kV ÷ 5kV in steps of 50V | |
| RAMP | 100 ÷ 1kV in steps of 25V | |
| | 1kV ÷ 5kV in steps of 50V | |

TEST CURRENT

| Test Voltage | Test current |
|--------------|---|
| 100 ÷ 5000V | 1mA \leq Test Current \leq 3mA (**) |

(**) Test current automatically controlled.

TEST TIME

| Setting Range | Resolution |
|----------------|------------|
| 5s – 99min 59s | 1s |

CAPACITANCE

| Range | Resolution | Resistance Load | Test Voltage (Vn) | Uncertainty |
|-----------------------------|--------------|-----------------|-------------------|---------------------|
| 1nF ÷ 999nF | 1nF | $\geq 5M\Omega$ | Vn \leq 5kV | $\pm(10\%rdg+5dgt)$ |
| 1.00 μ F ÷ 5.00 μ F | 0.01 μ F | | Vn \leq 2.5kV | |
| 1nF ÷ 999nF | 1nF | | | |
| 1.00 μ F ÷ 9.99 μ F | 0.01 μ F | | Vn \leq 1kV | |
| 10.0 μ F ÷ 19.9 μ F | 0.1 μ F | | | |
| 1nF ÷ 999nF | 1nF | | | |
| 1.00 μ F ÷ 9.99 μ F | 0.01 μ F | | | |
| 10.0 μ F ÷ 49.9 μ F | 0.1 μ F | | | |

Capacitor charge time (OV \rightarrow 5000V): < 3s x 1 μ F

Capacitor discharge time (5000V \rightarrow 25V): < 5s x 1 μ F

**LEAKAGE CURRENT**

| Range | Resolution | Uncertainty |
|-----------------------------|--------------|--|
| 1nA ÷ 99.9nA | 0.1nA | $\pm(7\%rdg+3dgt)$ if $R_{mis} \leq \frac{Test\ Voltage}{5nA}$ |
| 100nA ÷ 999nA | 1nA | |
| 1.00 μ A ÷ 9.99 μ A | 0.01 μ A | $\pm(22\%rdg+3dgt)$ if $R_{mis} > \frac{Test\ Voltage}{5nA}$ |
| 10.0 μ A ÷ 9.99 μ A | 0.1 μ A | |
| 100 μ A ÷ 999 μ A | 1 μ A | |
| 1.00mA ÷ 2.5mA | 0.01mA | |

P.I (Polarization Index) – D.A.R (Dielectric Absorption Ratio)

| Range | Resolution | Uncertainty |
|-------------|------------|--|
| 0.01 ÷ 9.99 | 0.01 | $\pm(5\%rdg+3dgt)$ if $R_{mis} \leq \frac{Test\ Voltage}{5nA}$ |
| | | $\pm(20\%rdg+3dgt)$ if $R_{mis} > \frac{Test\ Voltage}{5nA}$ |

(*) Load Capacitance < 1nF




2. GENERAL CHARACTERISTICS

DISPLAY, MEMORY, SERIAL INTERFACE

- Backlight LCD with three simultaneous readings:
Group 1 (main) → Insulation Resistance, Leakage Current, PI, DAR, Capacitance
Group 2 → Test voltage (nominal and generated)
Group 3 → Test Time
- Bargraph: 32 segments
- Low battery indications
- Memory: 700 test
- Communication interface: RS232 optoinsulated

POWER SUPPLY:

- Internal battery charger, power supply: 220-240V 50/60Hz, 20VA
- Internal NiMH rechargeable battery
- Protection fuse on power supply: T 200mA/250V, Ir: 1.5kA
- Low battery indication:  symbol at display
- Battery life: >1000 Test @ 5kV on 5MΩ (test time: 5s, delay between two test: 25s)
according to IEC/EN61557-2. (par. 6.7)
- AutoPowerOFF: after 5min since last operation

ENVIRONMENT:

- Ref. Temperature: 23°C ± 5°C
- Working temperature: 0° ÷ 40°C
- Maximum relative humidity: < 80%UR
- Storage temperature: -10 ÷ 60°C
- Storage humidity: < 80%UR

MECHANICAL DATA:

- Dimensions: 360(L) x 310(W) x 195(H) mm
14.2" (L) x 12.2" (W) x 7.7" (H)
- Weight: about 3.5kg
about 7.8lv

GUIDELINES

| | |
|----------------------------|--|
| Instrument's safety | IEC/EN61010-1, IEC/EN61557-1, IEC/EN61557-2 |
| Technical documentatiion : | IEC/EN61187 |
| Accessories safety : | IEC/EN61010-031 |
| Insulation: | Double insulation |
| Type of Protection: | 2 |
| Mechanical protection: | IP40 (open case), IP53 (closed case) |
| Over voltage category: | CAT IV 600V to ground, max 600V between inputs |
| Maximum altitude | max altitude 2000m |
| Patented certification: | TUV protocol conformity |

This instrument complies with the requirements of the European Low Voltage Directives 2006/95/EEC (LVD) and EMC 2004/108/EEC