



# HT7052

Rel.1.00 of 03/03/2011

Professional insulation meter up to 10kVDC

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## 1. ELECTRICAL SPECIFICATION

Uncertainty is indicated as  $\pm$  [% rdg + (number of dgt) \* resolution] at -10°C ÷ 30°C, 40% ÷ 60%HR

### INSULATION RESISTANCE

Measurement range	Resolution	Accuracy
120kΩ ÷ 999kΩ	1kΩ	±(5.0%rdg + 3dgt)
1.00MΩ ÷ 9.99MΩ	0.01MΩ	
10.0MΩ ÷ 99.9MΩ	0.1MΩ	
100MΩ ÷ 999MΩ	1MΩ	
1.00GΩ ÷ 9.99GΩ	0.01GΩ	
10.0GΩ ÷ 99.9GΩ	0.1GΩ	
100GΩ ÷ 999GΩ	1GΩ	±(15.0%rdg + 3dgt)
1.00TΩ ÷ 10.00TΩ	0.01TΩ	

The value of insulation resistance FS is defined as:  $RFS = 1G\Omega * U_{test} [V]$

Nominal test voltage: 500 ÷ 10kV DC  
 Nominal test current: > 1mA  
 Short circuit current: 5mA ± 10%  
 Automatic discharge object on test: Yes

Range of test voltage	Resolution	Accuracy
0 ÷ 9999V	1V	±(3.0%rdg + 3V)
≥ 10kV	0.1kV	±3.0%rdg

Nominal test voltage: 500 ÷ 10kV DC programmable in steps of 25V  
 Output power consumption: 10W max

Range of test current	Resolution	Accuracy
0.00 ÷ 9.99nA	0.01nA	±(5.0%rdg + 0.05nA)
10.0 ÷ 99.9nA	0.1nA	
100 ÷ 999nA	1nA	
1.00 ÷ 9.99μA	0.01μA	
10.0 ÷ 9.99μA	0.1μA	
100 ÷ 999μA	1μA	
1.00 ÷ 5.50mA	0.01mA	

Filter option	Maximum current @ 50Hz (mA rms)
Fil0	1.5
Fil1	2.5
Fil2	4.5
Fil3	5

### MEASUREMENT OF DAR, PI, DD PARAMETERS

Measurement range	Resolution	Accuracy
0.01 ÷ 9.99	0.01	±(5.0%rdg + 2dgt)
10.0 ÷ 100.0	0.1	±5.0%rdg

Measurement range capacitance for DD test: 5nF ÷ 50μF

### INSULATION MEASUREMENT WITH RAMP TEST VOLTAGE

Measurement range	Resolution	Accuracy
2000 ÷ 9999V	1V	±(3.0% rdg + 3V)
≥ 10kV	0.1kV	±3.0% rdg

Nominal test voltage: 2000 ÷ 10kV DC programmable in steps of 125V



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## DC WITHSTANDING TEST

Measurement range	Resolution	Accuracy
500 ÷ 9999V	1V	±(3.0% rdg + 3V)
≥ 10kV	0.1kV	±3.0% rdg

Range of discharging current	Resolution	Accuracy
0.000 ÷ 0.009mA	0.001mA	±(3.0% rdg + 3 dgt)
0.01 ÷ 5.50mA	0.01mA	±3.0% rdg

Nominal test voltage: 500 ÷ 10kV DC programmable in steps of 25V  
 Accuracy of test voltage: -0 / +10% + 20V

## AC/DC VOLTAGE

Measurement range	Resolution	Accuracy
0 ÷ 600V	1V	±(3.0% rdg + 4V)

Output impedance: 3MΩ ±10%

Voltage frequency	Resolution	Accuracy
0 e 45.0 ÷ 65.0Hz	0.1Hz	±0.2Hz

Frequency between 0 and 45Hz: visualization < 45Hz  
 Frequency > 65Hz: visualization > 65Hz

## CAPACITANCE

Measurement range	Resolution	Accuracy
0.0 ÷ 99.9nF	0.1nF	±(5.0%rdg + 2dgt)
100 ÷ 999nF	1nF	
1.00 ÷ 50.0μF	0.01μF	

The value of FS capacitance is defined as: CFS = 10μF \* Utest [kV]



## 2. GENERAL SPECIFICATIONS

### DISPLAY, MEMORY, SERIAL INTERFACE

- LCD, dot matrix with backlight (160x116pxl):
- Low battery indications
- Memory: 1000 locations
- Serial interface: RS232 optoinsulated (2400,4800,9600,19200 baud, 1, N)
- USB interface: type B standard, 115000 baud

### POWER SUPPLY:

- External main supply: 90-260V AC, 45-65Hz, 60VA
- Internal supply: 6 x 1.2V type IEC LR20 NiMH rechargeable battery
- Low battery indication: " " symbol at display
- Battery life: approx.. 4 hours (continuous test at 10kV)
- Automatic discharging of object on test, resistance  $425\Omega \pm 10\%$

### ENVIRONMENT:

- Ref. Temperature:  $10^{\circ}\text{C} \div 30^{\circ}\text{C}$  ;  $40 \div 60\%HR$
- Working temperature:  $10^{\circ} \div 50^{\circ}\text{C}$
- Maximum relative humidity:  $<90\%HR$
- Storage temperature:  $-20 \div 70^{\circ}\text{C}$
- Storage humidity:  $<00\%HR$

### MECHANICAL DATA:

- Dimensions: 360(L) x 330(W) x 160(H) mm
- Weight: 5.5kg

### GUIDELINES

Instrument's safety	IEC/EN61010-1, IEC/EN61557-2
Accessories safety :	IEC/EN61010-031
Insulation:	Double insulation
Type of Protection:	2
Mechanical protection:	IP44 (closed case)
Over voltage category:	CAT IV 600V to ground, max 600V between inputs
Maximum altitude of use:	2000m

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