

## HT2055

## Step/Contact voltage meter with test current up to 50A

The HT2055 model is composed by a station unit and a meter unit in way to perform step/contact voltage measurements on electrical installations (typical HV power station) with nominal test current up to 50A according to the international guidelines. Both units, initially synchronized in time and current, can perform an exact calculation of step and contact voltage applying the real test current measured by the station unit. A internal DSP filtering also perform the automatically compensation of the noise voltage disturb on the earth system. The instrument permits also the earth resistance measurement with 3-wire method and the ground resistivity with 4-wire Wenner method. All results can be saved inside internal memory of the meter unit and download to PC with supplied Windows dedicated software



MEDIA CONTENT

## YOU CAN ALSO VIEW

## STANDARD

CE mark  
EN 61010-1  
LVD Directive 2006/95/EEC  
EMC Directive 2004/108/EEC

## FUNCTION

Step/Contact voltage with separated units  
Synchronization between units  
Test current up to 50A  
LCD dot matrix display on both units  
Earth resistance measurement  
Ground resistivity measurement  
Internal memory for saving results  
USB and RS-232 ports for communication between units and PC  
DSP filtering for compensation noise disturb  
Dedicated Windows software

## ACCESSORIES

## Included accessories:

Station unit HT2055S  
Meter unit HT2055M  
Power cord for HT2055S unit  
Metal current probe, 1m length  
Metal voltage probe, 60cm length  
Metal plate (200x100mm), 2 pcs  
Test cable black, 50m, 10mmq, with alligator clip, with industrial plug, on wheel  
Test cable black, 10m, 10mmq, with alligator clip, with industrial plug  
Test cable red, 50m, on wheel  
Test cable green, 10m, with alligator clip, on wheel  
Test cable red, 1m, with alligator clip  
Test cable black, 1.5m

Test cable black, with plug for HT2055M, 2x3m  
Alligator clip black, 4 pcs  
6 x 1.2V rechargeable batteries NiMH type AA, LR03  
External adapter 100-240V AC / 12V DC  
USB cable  
RS-232 - PS/2 cable  
"TeraView" software on CD-ROM  
Soft carrying bag, 2 pcs  
Belt for use of HT2055M unit on neck  
User manual  
ISO9000 calibration certificates  
Wood carrying case

**Optional accessories:**

Metal current probe, 1m length  
Metal voltage probe, 60cm length

Print





## 1. ELECTRICAL SPECIFICATIONS

Accuracy is given as  $\pm [\% \text{ readings} + (\text{number of dgt} * \text{resolution})]$  at reference conditions

### Step/Contact voltage measurements

Measure voltage range	Resolution	Accuracy
0.01 ÷ 19.99mV	0.01mV	$\pm(2.0\% \text{ rdg} + 2 \text{ dgt})$
20.0 ÷ 199.9mV	0.1mV	
200 ÷ 1999mV	1mV	
2.00 ÷ 19.99V	0.01V	
20.0 ÷ 59.9V	0.1V	

Calculated voltage range	Resolution	Accuracy
0.0 ÷ 199.9V	0.1V	Calculated value (*)
200 ÷ 999V	1V	

(\*) The calculated value of step/contact voltage is obtained by the relationship:  $U_S = U_{meas} \cdot I_{flt} / I_{gen}$ ;  $U_C = U_{meas} \cdot I_{flt} / I_{gen}$ .

Range of fault current (selectable):

10A ÷ 200kA

Input resistance(selectable):

1k $\Omega$ , 1M $\Omega$

Noise reducing/erasing:

DSP filtering 55Hz, 64dB rejection on noise at 50/60Hz

Generated current range	Resolution	Accuracy
0.00 ÷ 9.99A	0.01A	$\pm(3.0\% \text{ rdg} + 5 \text{ dgt})$
10.0 ÷ 99.9A	0.1A	$\pm(3.0\% \text{ rdg} + 3 \text{ dgt})$

Generated current:

55A max

Test voltage:

<55V

Test frequency:

55Hz

### Earth resistance measurement

Earth Resistance Measurement		
Measurement range	Resolution	Accuracy
0.001Ω ÷ 1.999Ω	0.001Ω	±(2.0% rdg + 5 dgt)
2.00Ω ÷ 19.99Ω	0.01Ω	
20.0Ω ÷ 99.9Ω	0.1Ω	
100.0Ω ÷ 199.9Ω		±(5.0% rdg)

Open voltage:

< 50V AC

Test current:

< 7.5A

Frequency of test signal:

55Hz

Influence of probe resistance:

$\leq \pm(10\% \text{ rdg} + 10 \text{ dgt})$

(R<sub>c</sub>, R<sub>p</sub>)max

(10 $\Omega$  + 100R) o 2k $\Omega$  considering the lower value

Automatic test on the probe resistance:

Yes

Automatic detection of voltage noise

### Earth resistivity measurement

Measurement range	Resolution	Accuracy
0.00 $\Omega$ m ÷ 9.99 $\Omega$ m	0.01 $\Omega$ m	Calculated value, consider accuracy of Resistance to earth function
10.0 $\Omega$ m ÷ 99.9 $\Omega$ m	0.1 $\Omega$ m	
100 $\Omega$ m ÷ 999 $\Omega$ m	1 $\Omega$ m	
1.00k $\Omega$ m ÷ 9.99k $\Omega$ m	0.01k $\Omega$ m	
10.0k $\Omega$ m ÷ 99.9k $\Omega$ m	0.1k $\Omega$ m	

Measurement principle:

Wenner method  $\rightarrow \rho = 2 * \pi * \text{distance} * R$



## 2. GENERAL SPECIFICATIONS

### Power unit

Power supply:	230V AC ( $\pm 10\%$ ), 50/60Hz
Max. power consumption:	750VA
Protection on power supply:	fuse T 5A / 250V (5mm x 20mm)
Safety condition on meter:	IEC/EN61010-1
Safety condition on test leads:	IEC/EN61010-031
Installation over 1kVAC:	HD 637 S1
Eart/resistivity measurements:	ANSI/IEEE Std 81
Italian guideline:	CEI 11-1
Spanish guideline:	RAT 2008
Insulation:	class I
Measurement category:	CAT II 300V, CAT IV 50V
Pollution degree:	3
Mechanical protection:	IP30
Display:	LCD dot matrix (128 x 64) with backlight
Internal memory:	1000 locations
Generated current:	values storage for min 24h
Communication interface:	RS-232 (with voltmetric unit)
Dimensions (LxWxH):	563 x 257 x 275mm
Weight (without accessories):	29.5kg

### Voltmetric unit

Power supply:	6x1.2V rechargeable batteries NiMH type AA LR03 6x1.5V alkaline batteries type AA LR03
Battery (chargeable) life:	12 hours (typical)
External power supply:	100-240V AC, 50-60Hz / 12V DC
Safety condition on meter:	IEC/EN61010-1
Safety condition on test leads:	IEC/EN61010-031
Insulation:	double insulation
Measurement category:	CAT IV 50V
Pollution degree:	2
Mechanical protection:	IP40
Display:	LCD dot matrix (128 x 64) with backlight
Auto Power OFF:	after 15 minutes of idleness (not disable)
Internal memory:	1500 locations
Communication interface:	RS-232 and USB (to PC)
Dimensions (LxLaxH):	230 x 115 x 103mm
Weight (with batteries):	1.3kg

### **ENVIRONMENTAL CONDITIONS:**

Reference temperature:	10°C ÷ 30°C
Reference humidity:	35% ÷ 65%RH
Working temperature:	0° ÷ 40°C
Working humidity:	<80%HR
Storage temperature:	-10 ÷ 60°C
Storage humidity:	< 80%HR

**This instrument complies to the prescriptions of the European directive on low voltage 2006/95/CE (LVD) and EMC 2004/108/CE**