

T2000 - T2100 EARTH GROUND CLAMP METERS

The T2000 and T2100 models are designed for the resistance measurement on earth probes with ground loop method without the disconnection of parts of plants under test. This type of measurement carried out by the instruments can be used for evaluation of single rods' resistances within an earth installation assuming they do not affect each other. The inner part of the instrument is made of 2 jaws one for current and one for voltage. The voltage toroid generates a potential (E) on the loop during resistance measurement. A current (I) is consequently generated on the loop and is measured by the current jaws. Based on the value of parameters E and I the instrument displays the resistance value R calculated as their ratio. The T2000 model also performs AC current up to 20A and leakage current with 0.05mA resolution and the setting of alarm thresholds on measurements is possible. The T2100 is equipped with a half-duplex RS-232 interface for connection with MACROTESTG3 instrument only and transfer the saved data on it. The instruments are compliance with IEC/EN61010-1, CAT III 150V and is ideal for simple measurements both in domestic and industrial environments.

FUNCTIONS

- Resistance measurement on earth probes with ground loop method
- Direct measurement on earth probes without any cable breaking
- Measurement of leakage current on earth installations (*only T2000*)
- RS-232 half-duplex interface (*only T2100*)
- Calculation of parallel of probe resistance (*only T2100*)
- Setting of alarm thresholds on measurements with buzzer
- Storage of measurement results
- Detection of current noise on measurement
- Data HOLD function
- Backlight
- Auto Power OFF

GENERAL SPECIFICATIONS

Power supply:	4x1.5V type AA LR6 alkaline batteries
Display:	4 LCD, sign, decimal point and backlight
Internal memory:	99 locations
RS-232 interface:	half duplex, 4800 baud (<i>only T2100</i>)
Safety:	IEC/EN61010-1
Insulation:	double insulation
Pollution degree:	2
Max cable diameter:	32mm
Measurement category:	CAT III 150V (to ground), max 20A
Auto Power OFF:	after 5 minutes of idleness
Dimensions (LxWxH):	293 x 90x 66mm
Weight (battery included):	approx. 1.3kg

ACCESSORIES

Standard
Resistive test loop
RS-232 connection cable, 1.5m length (<i>only T2100</i>)
Batteries
Carrying case
ISO9000 calibration certificate
User manual

NEW

T2000
HP002000



NEW

T2100
HP002100



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T2000

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Clamp meter for earth resistance measurements

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1. REFERENCE CONDITIONS

Parameter	Reference condition
Environment temperature	20°C ± 3°C
Relative humidity	50%RH ± 10%
Battery voltage	6V ± 0.5V
External magnetic field	<30A/m
External electrical field	<1V/m
Clamp positioning	Horizontal
Position of conductor inside the jaws	Centred
Proximity to metal masses	> 10cm

2. ELECTRICAL SPECIFICATIONS

Accuracy is indicated as [% rdg + values]. It is referred to reference conditions

Resistance

Range [Ω]	Resolution [Ω]	Accuracy
0.010 ÷ 0.099	0.001	±(1%rdg + 0.01Ω)
0.10 ÷ 0.99	0.01	
1.0 ÷ 49.9	0.1	±(1.5%rdg + 0.1Ω)
50.0 ÷ 99.5	0.5	±(2.0%rdg + 0.5Ω)
100 ÷ 199	1	±(3%rdg + 1Ω)
200 ÷ 395	5	±(6%rdg + 5Ω)
400 ÷ 590	10	±(10%rdg + 10Ω)
600 ÷ 1000	20	±(20%rdg + 20Ω)

Frequency range of resistance measurement: >1kHz ; Measuring range for setting resistance alarm: 1Ω ÷999Ω

Current (TRMS)

Range [A]	Resolution [A]	Accuracy
0.00mA ÷ 80.00mA	0.05mA	±(2.5%rdg + 1mA)
80.0mA ÷ 650.0mA	0.5mA	±(2.5%rdg + 2mA)
650.0mA ÷ 999.5mA	1.5mA	±(2.5%rdg + 10mA)
1.000A ÷ 3.995A	0.005A	±(2.5%rdg + 0.01A)
4.00A ÷ 20.00A	0.01A	±(2.5%rdg + 0.5A)

- Frequency range of current measurement: 50 ÷60Hz ; Measuring range for setting current alarm: 1mA ÷999mA

- For distorted waveform (CF <> 1.414 and CF < 1.9) add 1.5% to percentual error.



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3. GENERAL SPECIFICATIONS

Mechanical characteristics

Dimensions (L x W x H):	293 x 90 x 66mm
Weight (including battery):	1320g
Max conductor size:	32mm

Supply

Battery type:	4 x1.5V alkaline LR6 AA MN1500
Low battery indication:	"  +"
Auto power OFF:	about 5 minutes of idleness

Display

Characteristics:	4 LCD, sign and decimal point with backlight
Sample rate:	1 times/sec

Internal memory

Memory capacity:	99 locations
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Climatic conditions

Reference temperature:	20°C ± 3°C
Operating temperature:	0 ÷ 40°C
Operating humidity:	10%RH ÷ 90%RH

Reference standards

Comply with:	IEC/EN 61010-1, IEC/EN61010-2-032
Insulation:	double insulation
Pollution degree:	2
Max height of use:	2000m
Installation category:	CAT III 150V to ground, max 20A

This product conforms to the prescriptions of the European directive on low voltage 2006/95/EEC and to EMC directive 2004/108/EEC

