

Earth Resistance and Resistivity Meters AMRU 120




AMRU-120

Earthing resistance (meeting the requirements of IEC 60364-6-61:2000 section 6.12.2) with auto-zero function – with current 200mA.

amperis

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Additionally:

measurement of resistance of auxiliary electrodes RS and RH,
measurement of interference voltage,
measurement of interference frequency,
measurement in the presence of interference voltage in the power network with frequency 50Hz, 60Hz
selection of maximum measuring voltage (25V and 50V)
introducing the distance between the electrodes for the resistivity in metres (m),
memory of 990 measurements (10 banks of 99 cells each),
calibration of clamp used,
real time clock (RTC),
data transmission to the computer (USB, wireless),
indication of battery state.



Electric security:

- type of insulation: double, according to EN 61010-1 and IEC 61557
- measurement category: CAT IV 300V acc. to EN 61010-1
- protection class acc. to EN 60529: IP54


Rated operational conditions:

- operation temperature: -10...+50°C
- storage temperature: -20...+70°C
- humidity: 20...80%

Other technical data:

- LCD display: graphic, backlit
- interface: USB, wireless
- number of measurements carried out of set of batteries: > 500
- warranty: 36 months

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Measurement of interference voltage

Range	Resolution	Accuracy
0...100V	1V	$\pm(2\% \text{ m.v.} + 3 \text{ digits})$

- *signalling overvoltage 24V or 40V rms*
- *measurement for DC and AC 45...65 Hz,*

**Measurement of earthing resistance (method 3- and 4-pole)
measurement range to IEC61557-5: 0,30Ω...19,9kΩ**

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	$\pm(2\% \text{ m.v.} + 2 \text{ digits})$
20,0...199,9Ω	0,1Ω	
200...1999Ω	1Ω	
2,0k...9,99kΩ	0,01kΩ	$\pm(5\% \text{ m.v.} + 2 \text{ digits})$
10,0k...19,9kΩ	0,1kΩ	

- *measurement current: under short circuit >200mA,*
- *voltage on open terminals: selectable <25V AC or <50V AC,*
- *frequency of measurement current: 125 (for networks 50Hz) or 150Hz (for 60Hz),*

Measurement of resistance of auxiliary electrodes RH and RS

Range	Resolution	Accuracy
0...999Ω	1Ω	$\pm(5\% (\text{RS}+\text{RE}+\text{RH}) + 8 \text{ digits})$
1,00k...9,99kΩ	0,01kΩ	
10,0k...19,9kΩ	0,1kΩ	

**Measurement of continuity of equipotential bondings and protective conductors (Rcont)
measurement range to IEC61557-5: 0,24Ω...19,9kΩ**

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	$\pm(2\% \text{ m.v.} + 2 \text{ digits})$
20,0...199,9Ω	0,1Ω	
200...1999Ω	1Ω	
2,0k...9,99kΩ	0,01kΩ	$\pm(5\% \text{ m.v.} + 4 \text{ digits})$
10,0k...19,9kΩ	0,1kΩ	

- *voltage on open terminals: <24Vrms but >4Vrms,*
- *measurement current: under short circuit >200mA,*
- *frequency of measurement current: 125 (for networks 50Hz) or 150Hz (for networks 60Hz), possible choice of measurement frequency in menu,*
- *auto-zero function measurement leads*

Measurement of multiple earthing resistance with using the clamp and auxiliary electrodes (3p + clamp) measurement range to IEC61557-5: 0,44Ω...1999Ω

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	$\pm(8\% \text{ w.m.} + 3 \text{ digits})$
20,0...199,9Ω	0,1Ω	
200...1999Ω	1Ω	

- *voltage on open terminals: selectable <25V AC or <50V AC,*
- *measurement current: under short circuit > 200mA,*
- *frequency of measurement current: 125 (for networks 50Hz) or 150Hz (for 60Hz),*

Measurement of multiple earthing resistance with using double clamps

Range	Resolution	Accuracy
0,00..19,99Ω	0,01Ω	±(10% m.v. + 3 digits)
20,0...149,9Ω	0,1Ω	±(20% m.v. + 3 digits)

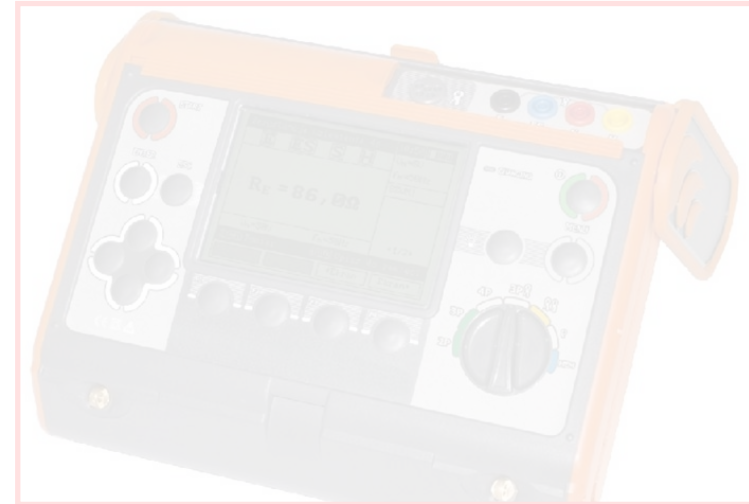
- frequency of measurement current 125 (for networks 50Hz) or 150Hz (for networks 60Hz)

Measurement of ground resistivity

Measurement method: Wennera, $\rho=2\pi LRE$

Range	Resolution	Accuracy
0,0...199,9Ωm	0,1Ωm	Depending on measurement accuracy R_E with 4p method, but not less than ±1 digit
200...1999Ωm	1Ωm	
2,00k...19,99kΩm	0,01kΩm	
20,0k...99,9kΩm	0,1kΩm	
100k...999kΩm	1kΩm	

L – distance between probes: 1...50m



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