




Earth Resistance and Resistivity Meter and Multifunctional suitcase

AMPI-520

amperis

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Possible measurements

Short-circuit loop measurement:

- impedance measurement with 23A current (44A phase-to-phase) - short-circuit resistor $R=10\Omega$,
- measurement range: 95...440V, frequency 45...65Hz,

Short-circuit loop measurement with resolution 0,01 Ω , in distribution network without triggering RCD ($I\Delta n \geq 30mA$):

- automatic calculation of short-circuit, detection of phase voltage and phase-to-phase voltage,
- additional UNI-Schuko plug for automatic measurement, AGT adapter for 3 phase network measurement.

Testing of general and selective RCD with the rated differential current of 10,30,100,300,500 and 1000mA. (Type AC, A and B).

Measurement of insulation resistance:

- with test voltage 250V, 500V, 1000V,
- measurement range up to 3G Ω ,
- UNI-Schuko plug for insulation measurement,
- automatic discharging after measurement,
- automatic measurement of all resistances in 3,4,5-wire cables using optional adapter AUTO-ISO,
- acoustic signals in 5sec intervals for insulation resistance characteristic,
- safety measurement - protection against overvoltage.

- Measurement of earthing resistance.
- Bi-directional testing of PE wire continuity using 200mA current.
- Autocalibration of test leads.
- Phase sequence testing.
- Memory is divided into 10 memory banks each of them containing 99 memory cells.
- Battery charge indicator.
- AUTO-OFF function.
- USB interface.



Short-circuit loop impedance measurement ZL-PE, ZL-N, ZL-L

Measurement using 23/40A current measurement range in accordance with IEC 61557: 0,13...1999,9Ω (for 1,2m lead):

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	±(5% m.v. + 3 dígitos)
20,0...199,9Ω	0,1Ω	
200...1999Ω	1Ω	

rated voltage: 95...270V (for ZL-PE i ZL-N) and 95...440V (for ZL-L)
frequency: 45...65Hz

Short-circuit loop impedance measurement ZL-PERCD

Measurement using 15mA current measurement range in accordance with IEC 61557: 0,50...1999,9Ω

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	±(6% m.v. + 10 dígitos)
20,0...199,9Ω	0,1Ω	±(6% m.v. + 5 dígitos)
200...1999Ω	1Ω	

rated voltage: 95...270V
frequency: 45...65Hz

Measurement of earthing RE Rated voltage in accordance with IEC 61557-5: 0,5Ω...1,99kΩ for 50V
0,56Ω...1,99kΩ for 25V

Range	Resolution	Accuracy
0,00...19,99Ω	0,01Ω	±(2% m.v. + 4 dígitos)
10,0...199,9Ω	0,1Ω	±(2% m.v. + 3 dígitos)
100...1999Ω	1Ω	
1,00...1,99kΩ	0,01kΩ	

Insulation resistance measurement

Measurement range in accordance with IEC 61557-2:

- for UN = 50V: 50kΩ...250MΩ
- for UN = 100V: 100kΩ...500MΩ
- for UN = 250V: 250kΩ...1GΩ
- for UN = 500V: 500kΩ...2GΩ
- for UN = 1000V: 1MΩ...3GΩ

Range	Resolution	Accuracy
0...1999kΩ	1kΩ	±(3% m.v. + 8 dígitos)
2,00...19,99MΩ	0,01MΩ	
20,0...199,9MΩ	0,1MΩ	
200...999MΩ	1MΩ	±(4% m.v. + 6 dígitos)
1,00...3,00GΩ	0,01GΩ	

*) limited to measurement range.

**) with UNI-Schuko additional error ±2%.



Phase sequence

- phase sequence indicator: forward, reverse
- mains voltage range UL-L: 100...440V (45...65Hz) UL-L: 100...440V (45...65Hz)
- display of phase-to-phase voltages

Measurement of the active P, passive Q and apparent S power and cos phi

- Range of voltages ULN: 0...440V
- Nominal frequency of the network: 45...65Hz
- frequency measurement for voltage 50...440V in range 45,0...65,0Hz (accuracy max. $\pm 0,1\%$ m.v. + 1 digit)
- measurement cos phi: 0,00...1,00 (resolution 0,01) (precisión máxima $\pm 0,1\%$ valor medido +1 dígito)
- Medida cos phi: 0,00...1,00 (resolución 0,01)

Low voltage test of the circuit and insulation continuity

Test of PE wire continuity using a $\pm 200\text{mA}$ current

Range	Resolution	Accuracy
0,00...19,99 Ω	0,01 Ω	$\pm(2\%$ m.v. + 3 dígitos)
20,0...199,9 Ω	0,1 Ω	
200...400 Ω	1 Ω	

Voltage on open terminals: 4...9V

Test current at $R < 2\Omega$: min. 200mA at rated battery voltage

Autocalibration of test leads

Measurements for both polarizations of the current

RCD trigger and response time test tA (for tA mode) Measurement ranges in accordance with IEC 61557: 0ms ... up to the upper bound of the displayed value

Breaker Type	Test Current Multiplier	Measurement Range	Resolution	Accuracy
Standard	0,5* $I_{\Delta n}$	0...300ms	1ms	$\pm(2\%$ m.v. + 2 dígitos)
	1* $I_{\Delta n}$			
	2* $I_{\Delta n}$	0...150ms		
	5* $I_{\Delta n}$	0...40ms		
Selective	0,5* $I_{\Delta n}$	0...500ms		
	1* $I_{\Delta n}$			
	2* $I_{\Delta n}$	0...200ms		
	5* $I_{\Delta n}$	0...150ms		

Precision of the differential current: for 0,5* $I_{\Delta n}$: -8...0% dla 1* $I_{\Delta n}$, 2* $I_{\Delta n}$, 5* $I_{\Delta n}$: 0...8%

Measurement of the RCD triggering current (I_A) for sine waveform testing current

Selected Current	Range	Resolution	Test Current	Accuracy
10mA	4,0...20,0mA	0,1mA	0,4 x I _{Δn} ...2,0 x I _{Δn}	±10% I _{Δn}
30mA	12,0...42,0mA			
100mA	40...140mA	1mA	0,4 x I _{Δn} ... 1,4 x I _{Δn}	
300mA	120...420mA			
500mA	200...700mA			

It is possible to start the measurement from the positive or negative half of the forced leaking current

Measurement of the RDC triggering current (I_A) for a unidirectional half period sine waveform test current with a 6mA direct current offset

Selected Current	Range	Resolution	Test Current	Accuracy
10mA	4,0...20,0mA	0,1mA	0,4 x I _{Δn} ... 2,0 x I _{Δn}	±10% I _{Δn}
30mA	12,0...60mA	1mA		
100mA	40...200mA			
300mA	120...600mA			
500mA	200...1000mA			



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