AMPI-525

HIGHEST ACCURACY & LOWEST COST

Multifunction Electrical Installations Meter

AMPI-525

Short-circuit loop measurement.

Testing of general and selective RCD with the rated differential current.

Measurement of insulation resistance: Up to 10GΩ.

Voltages: 250 V, 500 V, 1000 V, 2500 V.

Measurement of earthing resistance.

Bi-directional testing of PE wire continuity.

Phase sequence testing.

amperis

www.amperis.com

AMPERIS PRODUCTS S.L
Agricultura,34
27003, Lugo, Spain

Contact

+T [+34] 982 20 99 20 | F [+34] 982 20 99 11
info@amperis.com | www.amperis.com

Possible measurements:

Short-circuit loop measurement:
-Impedance measurement with 23A (44A phase-to-phase) short-circuit resistor R_{ZW} =10Ω.
-Measurement range: 95...440V, frequency 45...65Hz.

Short - circuit loop measurement with resolution 0,01Ω, in distribution network without triggering RCD ($I_{\Delta n}$ ≥30mA):
-Automatic calculation of short-circuit, detection of phase 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, 2500V.
-Measurement range up to 10GΩ.
-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

Phase sequence
-Phase sequence indicator: forward, reverse.
-Mains voltage range U_{L-L} : 100...440V (45…65Hz).
-Display of pase-to-phase voltages.

Low voltage test of the circuit and insulation continuity
Test of PE wire continuity using a ±200mA current.

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

Voltage on open terminals: 4...9V.
Test current at R<2Ω: min. 200mA at rated battery voltage.
Autocalibration of test leads.
Measurements for both polarizations of the current.

"m.v." – measured value

RCD trigger and response time test t_A (for t_A mode)
Measurement ranges in acc. with IEC61557: 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	±(2% m.v. + 2 digits)
	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%; para 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	3,3...10,0mA	0,1mA	0,3*$I_{\Delta n}$...1*$I_{\Delta n}$	±5% $I_{\Delta n}$
30mA	9,0...30,0mA			
100mA	33...100mA	1mA		
300mA	90...300mA			
500mA	150...500mA			
1000mA	330...1000mA			

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*$I_{\Delta n}$...2*$I_{\Delta n}$	±10% $I_{\Delta n}$
30mA	12,0...42,0mA			
100mA	40...140mA	1mA	0,4*$I_{\Delta n}$...1,4*$I_{\Delta n}$	
300mA	120...420mA			
500mA	200...700mA			

A measurement is possible for a positive or negative forced leakage current.

Measurement of the RCD triggering current (I_A) for direct testing current

Selected Current	Range	Resolution	Test Current	Accuracy
10mA	4,0...20,0mA	0,1mA	0,4*$I_{\Delta n}$...2*$I_{\Delta n}$	±10% $I_{\Delta n}$
30mA	12,0...60,0mA	1mA		
100mA	40...200mA			
300mA	120...600mA			
500mA	200...1000mA			

A measurement is possible for a positive or negative forced leakage current.

AMPERIS PRODUCTS S.L
Agricultura,34
27003, Lugo, Spain

Contact

+T [+34] 982 20 99 20 | F [+34] 982 20 99 11
info@amperis.com | www.amperis.com

AMPI-525 Specifications

Electric security:

Type of insulation	Double, according to EN 61010-1 and IEC 61557, EMC
Measurement category	CAT IV 300V acc. to EN 61010-1
Protection class acc. to EN 60529	IP54

Other technical data:

Power supply	Alkaline batteries LR14 (4 szt.) or battery package Ni-MH (additional option)

Rated operational conditions:

Operation temperature	0...+50°C

Standard accesories:

Probe with START button with UNI-SCHUKO (WS-03)
Test lead with banana plug; 1,2m; yellow
Test lead with banana plug; 1,2m; blue
Test lead with banana plug; 1,2m; red
Test lead on a reel with banana plugs; 30m; red
Test lead on a reel with banana plugs; 15m; blue
USB transmission cable
Pin probe with banana connector; yellow
Pin probe with banana connector; red
Pin probe with banana connector; blue
Crocodile clip K02; yellow
Crocodile clip K02; red
Earth contact test probe (rod); 0,3m
Carrying case L2
Test lead with banana plug; 1,8m; 5kV; red
Test shield lead with banana plug; 1,8m; 5kV; black
Pin probe 5kV with banana connector; red
Crocodile clip K04; 5kV; black
Hanging straps
Battery case LR14 (size C)
Batteries
Calibration certificate issued by calibration laboratory

Optional accesories:

Interface for radio transmission OR-1 - receiver
Test lead on a reel with banana plugs; 50m; yellow
Test lead on a reel with banana plugs; 25m; blue
Triple phase socket adapter AGT-16P
Triple phase socket adapter AGT-32P
Triple phase socket adapter AGT-63P
Adapter AUTO-ISO-2500
RCD breaker testing adapter TWR-1 universal pin
Probe with UNI-SCHUKO (WS-04)
Earth contact test probe (rod); 0,8m
Software for creation of documentation from electrical measurements
Software for creation drawings and diagrams

Short-circuit loop impedance measurement Z_{L-PE} , Z_{L-N} , Z_{L-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 digits)
20,0...199,9Ω	0,1Ω	
200...1999Ω	1Ω	

Rated voltage: 95...270V (for Z_{L-PE} y Z_{L-N}) and 95...440V (for Z_{L-L}).
Frequency:: 45...65Hz.

Short-circuit loop impedance measurement Z_{L-PE} RCD

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 digits)
20,0...199,9Ω	0,1Ω	±(6% m.v. + 5 digits)
200...1999Ω	1Ω	

Rated voltage: 95...270V.
Frequency:: 45...65Hz.

Measurement of earthing R_E

Rated voltage in accordance with IEC 61557-5: 0,5...1999Ω.

Range	Resolution	Accuracy
0,00...9,99Ω	0,01Ω	±(2% m.v. + 4 digits)
10,0...99,9Ω	0,1Ω	±(2% m.v. + 3 digits)
100...999Ω	1Ω	
1,00...1,99kΩ	10Ω	

Insulation resistance measurement

Measurement range in accordance with IEC 61557-2:

-U_N=50V: 50kΩ...250MΩ
-U_N=100V: 100kΩ...500MΩ
-U_N=250V: 250kΩ...1GΩ
-U_N=500V: 500kΩ...2GΩ
-U_N=1000V: 1MΩ...3GΩ
-U_N=2500V: 2,5MΩ...9,99GΩ

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

With UNI-Schuko additional error ±2%.

AMPERIS PRODUCTS S.L
Agricultura,34
27003, Lugo, Spain

Contact

+T [+34] 982 20 99 20 | F [+34] 982 20 99 11
info@amperis.com | www.amperis.com