

AMPI-525

Multifunction installation meters



Loop, RCDs, earth, continuity and insulation up to 2500 V in one instrument

AMPI-525

Multifunction installation meter

amperis

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Every commissioning measurement of an electrical installation, with insulation testing up to 2.5 kV.

Product overview



Earth resistance measurement with the AMPI-525 in the field

One case for the whole verification

The AMPI-525 measures short-circuit loop impedance with 0.01 Ω resolution — also in RCD-protected circuits without tripping —, tests AC, A and B type RCDs, measures earth resistance by the 3-pole method, continuity of protective conductors with ± 200 mA and the phase sequence: everything required to commission an installation per the EN 61557 series.

Insulation up to 2500 V

Few multifunction meters test insulation at 2500 V: ranges follow IEC 61557-2 up to 9.99 G Ω , a built-in timer sets three periods from 1 to 600 s and two absorption coefficients are calculated automatically. With the optional AutoISO-2500 adapter, 3-, 4- and 5-core cables are tested automatically without switching connections, and the object is always discharged after the test.

Main features

- Automatic RCD mode: t_A and I_A from a single trip.
- Contact electrode for instant PE connection checking.
- Voltage (0...500 V) and mains frequency measurement.
- Memory of 990 cells (57 500 records); USB 2.0 and radio.
- Measurement with swapped L and N conductors.
- IP54 housing with screen-protecting cover.



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Applications and safety

Applications

- Commissioning of installations in housing and industry.
- Periodic electric-shock protection inspections.
- Automatic insulation testing of multicore cables.
- RCD verification in distribution boards.

Powered for the whole day

The 4.8 V 4.2 Ah NiMH battery with its Z-7 charger powers full working days; safety is rated CAT IV 300 V (CAT III 600 V) with double insulation. At 288 × 223 × 75 mm and about 2.2 kg, with reel leads of 15 and 30 m for earth testing and the WS-03 UNI-Schuko adapter in the standard set, the AMPI-525 is a complete site companion.



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Reader software for the data, reporting software for the electric-shock protection documentation.

Software & applications



The documentation software manages reports, inspectors, test points and downloaded data

The image shows a preview of a verification report titled 'Test of electrical installation'. It includes fields for 'Test report', 'No.', 'Date', and 'Location'. Below these are sections for 'Testing and', 'New installation', 'Development', 'Changes', 'Repair', and 'Re-test'. There are also fields for 'Start of test', 'End of test', 'Tested by', and 'Tested on'. The main body of the report is a table with columns for 'Visual check', 'Functional test', 'RCD', and 'Insulation test'. Each row represents a different test item, such as 'Isolation of equipment', 'Switching device and earthground', 'Fire protection', 'Building control', 'Cable, wires, power cable', 'Testing', 'Functional test', 'RCD', and 'Insulation test'. Each item has a 'Pass/Fail' column and a 'Remarks' column. The 'Pass/Fail' column has 'Pass' and 'Fail' options. The 'Remarks' column has a 'Remarks' field. The table is partially filled with data, showing various test results and remarks.

Preview of a verification report of the installation, ready to print or export

Two programs, one workflow

The 57 500 records of the AMPI-525 travel to the computer over USB 2.0 or the radio link. The free reader software downloads them, saves them in the simplest formats and prints them; the reporting software turns them into the full verification report of the installation.

Reports that write themselves

Loop, RCD, insulation, earth and continuity results are assigned to the points of the installation, and the reporting software composes the electric-shock protection document with inspectors, dates and conclusions — ready to deliver to the client.

What the software provides

- Download over USB 2.0 or the wireless link.
- Archive by clients, sites and measuring points.
- Full verification reports of the installation.
- Export to popular formats and printing.

AMPI-525 – MEASUREMENT DATA

Fault loop impedance Z_{L-PE} , Z_{L-N} , Z_{L-L}

Function	Measurement range	Display range	Resolution	Accuracy
Fault loop Z_{L-PE} , Z_{L-N} , Z_{L-L}	0.13...1999.9 Ω per IEC 61557	0.00...1999 Ω	0.01 Ω	$\pm(5\% \text{ m.v.} + 3 \text{ digits})$
Fault loop Z_{L-PE} in RCD mode	0.50...1999 Ω per IEC 61557	0.00...1999 Ω	0.01 Ω	from $\pm(6\% \text{ m.v.} + 5 \text{ digits})$

RCD parameters – t_A measurement (0.5, 1, 2, 5 $I_{\Delta n}$)

Function	Measurement range	Display range	Resolution	Accuracy
General/short-time delay RCD	0...300 ms	0...300 ms	1 ms	$\pm(2\% \text{ m.v.} + 2 \text{ digits})$
Selective RCD	0...500 ms	0...500 ms	1 ms	$\pm(2\% \text{ m.v.} + 2 \text{ digits})$
I_A sinusoidal (AC type), 0.2...2.0 $I_{\Delta n}$	3.0...1000 mA	3.0...1000 mA	0.1 mA	$\pm 5\% I_{\Delta n}$
I_A unidirectional (A type)	3.5...700 mA	3.5...700 mA	0.1 mA	$\pm 10\% I_{\Delta n}$
I_A direct (B type)	2.0...1000 mA	2.0...1000 mA	0.1 mA	$\pm 10\% I_{\Delta n}$

Insulation resistance (per measuring voltage)

Function	Measurement range	Display range	Resolution	Accuracy
Measuring voltage 50 V	50 k Ω ...250 M Ω per IEC 61557-2	0 k Ω ...250 M Ω	1 k Ω	$\pm(3\% \text{ m.v.} + 8 \text{ digits})$
Measuring voltage 100 V	100 k Ω ...500 M Ω per IEC 61557-2	0 k Ω ...500 M Ω	1 k Ω	$\pm(3\% \text{ m.v.} + 8 \text{ digits})$
Measuring voltage 250 V	250 k Ω ...999 M Ω per IEC 61557-2	0 k Ω ...999 M Ω	1 k Ω	$\pm(3\% \text{ m.v.} + 8 \text{ digits})$
Measuring voltage 500 V	500 k Ω ...2.00 G Ω per IEC 61557-2	0 k Ω ...2.00 G Ω	1 k Ω	from $\pm(3\% \text{ m.v.} + 8 \text{ digits})$
Measuring voltage 1000 V	1000 k Ω ...3.00 G Ω per IEC 61557-2	0 k Ω ...3.00 G Ω	1 k Ω	from $\pm(3\% \text{ m.v.} + 8 \text{ digits})$
Measuring voltage 2500 V	2.50 M Ω ...9.99 G Ω per IEC 61557-2	0 k Ω ...9.99 G Ω	1 k Ω	from $\pm(3\% \text{ m.v.} + 8 \text{ digits})$

Earth resistance and continuity

Function	Measurement range	Display range	Resolution	Accuracy
3-pole method	0.5 Ω ...1.99 k Ω per IEC 61557-5	0.00 Ω ...1.99 k Ω	0.01 Ω	from $\pm(2\% \text{ m.v.} + 3 \text{ digits})$
Continuity with ± 200 mA	0.12...400 Ω per IEC 61557-4	0.00...400 Ω	0.01 Ω	$\pm(2\% \text{ m.v.} + 3 \text{ digits})$
Low-current resistance	0.0...1999 Ω	0.0...1999 Ω	0.1 Ω	$\pm(3\% \text{ m.v.} + 3 \text{ digits})$

Phase sequence indication: same/opposite direction; U_{L-L} 95...500 V (45...65 Hz). Voltage measurement 0...500 V and mains frequency.

"m.v." = measured value



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AMPI-525 – TECHNICAL SPECIFICATIONS

Type of insulation	Double, per EN 61010-1 and IEC 61557
Measurement category	CAT IV 300 V (CAT III 600 V)
Ingress protection	IP54
Power supply	NiMH 4.8 V 4.2 Ah battery; Z-7 charger
Memory of results	990 cells, 57 500 records
Data transmission	USB 2.0 and radio link
Operating temperature	0...+50 °C
Storage temperature	-20...+70 °C
Humidity	20...90 %
Dimensions	288 × 223 × 75 mm
Weight	approx. 2.2 kg
EMC requirements	EN 61326-1, EN 61326-2-2
Quality standard	ISO 9001



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