

AMZC-305

Ohmmeters and loop impedance meters



Loop measurements in networks from 100 to 750 V with up to 30 A

AMZC-305

Loop impedance meter up to 400/690 V

amperis

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Loop impedance in eight rated networks — up to 400/690 V — with high-current measurement and USB.

Product overview



Loop measurement at a 690 V industrial socket with the AMZC-305

From the workshop to heavy industry

The AMZC-305 measures short-circuit loop impedance with 0.01 Ω resolution in networks of 110/190, 115/200, 127/220, 220/380, 230/400, 240/415, 290/500 and 400/690 V — a 100 to 750 V working range. The high-current measurement of up to 30 A yields 0.13 to 1999 Ω per IEC 61557, with the R and X components and the calculated short-circuit current.

Every circuit, also behind RCDs

The Z_{L-PE} RCD mode measures from 0.43 Ω without tripping RCDs above 30 mA in 100...440 V networks; the device distinguishes phase from line voltage automatically, verifies the PE terminal with its contact electrode and measures with L and N swapped. The voltmeter reads up to 750 V — with 0.1 V resolution to 250 V — in every loop function, with an overvoltage alarm.

Main features

- Memory of 990 cells (3500 records) with USB interface.
- Test leads of 1.2, 5, 10 and 20 m or UNI-Schuko adapter.
- Short-circuit current calculated for the rated voltage.
- Operating frequency range 45...65 Hz.
- Powered by four AA batteries: over 3000 measurements.
- Auto-off after 120 seconds of inactivity.



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Applications and delivery

Applications

- Industrial networks of 290/500 and 400/690 V.
- Short-circuit protection verification in LV installations.
- Socket-outlet testing with the UNI-Schuko adapter.
- RCD-protected boards measured without interruptions.

Rugged and complete

With double insulation per IEC 61010-1, CAT IV 600 V (CAT III 1000 V) and an IP54 housing of 260 × 190 × 60 mm and 2.2 kg, the AMZC-305 is delivered with three 1.2 m leads, probes and crocodile clips, USB cable, batteries, straps, case and calibration certificate; leads up to 20 m and socket adapters are optional.



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990 memory cells and a USB port put every loop measurement on the computer.

Software & applications

Measurements that travel by USB

The AMZC-305 keeps 3500 records in its 990 memory cells and downloads them to the PC through the USB port. The free reader software receives loop impedances with their R and X components, calculated fault currents and voltages, organised by installation.

Data and software functions

Whether the readings come from a 230/400 V office or from a 690 V plant, the software identifies each result by point and date, compares periodic verifications and exports or prints the documentation.

The documentation software manages reports, inspectors, test points **What the software provides**

- USB download of the 990 cells (3500 records).
- Archive by clients, sites and measuring points.
- Export to popular formats and printing.
- History of verifications of each installation.



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

AMZC-305 – MEASUREMENT DATA

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

Display range	Resolution	Accuracy
0.00...19.99 Ω	0.01 Ω	$\pm(5\% \text{ m.v.} + 3 \text{ digits})$
20.0...199.9 Ω	0.1 Ω	$\pm(4\% \text{ m.v.} + 3 \text{ digits})$
200...1999 Ω	1 Ω	$\pm(4\% \text{ m.v.} + 3 \text{ digits})$

Range per IEC 61557: 0.13...1999 Ω (1.2 m leads); 0.25...1999 Ω (UNI-Schuko adapter). Networks 110/190...400/690 V; loop voltage range 100...440 V (Z_{L-PE} , Z_{L-N}) and 100...750 V (Z_{L-L}); high-current measurement up to 30 A; R and X components; I_k calculation; 45...65 Hz.

Loop impedance Z_{L-PE} RCD (no tripping)

Display range	Resolution	Accuracy
0.00...19.99 Ω	0.01 Ω	$\pm(6\% \text{ m.v.} + 10 \text{ digits})$
20.0...199.9 Ω	0.1 Ω	$\pm(6\% \text{ m.v.} + 5 \text{ digits})$
200...1999 Ω	1 Ω	$\pm(6\% \text{ m.v.} + 5 \text{ digits})$

Range per IEC 61557: 0.43...1999 Ω (1.2 m leads); 0.50...1999 Ω (UNI-Schuko). Operating range 100...440 V; no tripping of RCDs >30 mA; contact electrode for PE checking; measurement with L-N swapped.

Voltage measurement

Range	Resolution	Accuracy
0...249.9 V	0.1 V	$\pm(2\% \text{ m.v.} + 4 \text{ digits})$
250...750 V	1 V	$\pm(2\% \text{ m.v.} + 2 \text{ digits})$

Available in every loop function; 45...65 Hz; overvoltage alarm.

"m.v." = measured value



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AMZC-305 – TECHNICAL SPECIFICATIONS

Type of insulation	Double, per EN 61010-1
Measurement category	CAT IV 600 V (CAT III 1000 V)
Ingress protection	IP54, per EN 60529
Power supply	4 × AA alkaline batteries or NiMH accumulators
Battery performance	>3000 Z measurements (alkaline batteries)
Auto-off	After 120 seconds
Memory of results	990 cells, 3500 records
Data transmission	USB
Display	Segment LCD, LED backlight
Operating temperature	0...+45 °C
Storage temperature	-20...+60 °C
Humidity	20...80 %
Dimensions	260 × 190 × 60 mm
Weight	approx. 2.2 kg
Standards	IEC 61557, EN 61010-1



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