

AMZC-304

Ohmmeters and loop impedance meters



Loop measurements with 0.01 Ω resolution in a sealed IP67 housing

AMZC-304

Fault loop impedance meter

amperis

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One of the smallest loop impedance meters on the market, with Bluetooth and a 990-result memory.

Product overview



Loop measurement at an industrial board with the AMZC-304

Small meter, firm readings

The AMZC-304 measures short-circuit loop impedance in 230/400 V networks with 0.01 Ω resolution, driving up to 13.3 A at 400 V (7.6 A at 230 V) during three 10 ms periods. The range covers 0.13 to 1999 Ω per EN 61557 with $\pm(5\% \text{ m.v.} + 3 \text{ digits})$, and the prospective fault current — up to 9999 A — is calculated with its R_s and X_s components.

In service, without trips

The low-current mode measures Z_{L-PE} from 0.5 Ω in circuits protected by RCDs of 30 mA or more without tripping them; the contact electrode checks the PE connection, measurement works with swapped L and N conductors, and continuity of protective and equipotential bonding is verified with $\pm 200 \text{ mA}$ per EN 61557-4. Voltage up to 500 V and frequency complete the functions.

Main features

- Operating networks 220/380 V to 240/415 V (180...460 V).
- Memory of 990 results with Bluetooth transfer to the PC.
- Backlit keyboard and display for poor light.
- Voltage measurement 0...500 V; frequency 45.0...65.0 Hz.
- Powered by four AA batteries or NiMH accumulators.
- Sealed IP67 housing; CAT IV 300 V (CAT III 600 V).



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Applications and delivery

Applications

- Buildings, offices and plants with fault currents up to 4.4 kA.
- RCD-protected circuits measured without outages.
- Continuity of protective and equipotential conductors.
- Fast socket testing with the WS-05 UNI-Schuko adapter.

Everything in the case

The standard set includes the WS-05 adapter with angular UNI-Schuko plug, three 1.2 m leads, pin probes, a crocodile clip, batteries, straps, carrying case and a factory calibration certificate. At $220 \times 102 \times 61$ mm and about 0.8 kg, the AMZC-304 works from 0 to +50 °C and complies with the EN 61557 series.



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The 990 results reach the PC over Bluetooth for archiving and documentation.

Software & applications

From the board to the report

The AMZC-304 stores 990 measurements and sends them to the computer over Bluetooth — no cables in the site bag. The free PC reader software downloads loop impedances, fault currents and continuity results and keeps them organised by installation.

Traceable verifications

Every reading is identified by measuring point and date, so the periodic verification of a building can be compared against the previous one, exported to popular formats and printed as part of the protection documentation.

	The documentation software manages reports, inspectors, test points	What the software provides
1	1.1	1.1
2	2.1	2.1
3	3.1	3.1
4	4.1	4.1
5	5.1	5.1
6	6.1	6.1
7	7.1	7.1
8	8.1	8.1
9	9.1	9.1
10	10.1	10.1
11	11.1	11.1
12	12.1	12.1
13	13.1	13.1
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95	95.1	95.1
96	96.1	96.1
97	97.1	97.1
98	98.1	98.1
99	99.1	99.1
100	100.1	100.1

- Bluetooth download of the 990 stored results.
- Organisation by clients, sites and measuring points.
- Export to popular formats and printing.
- Comparison of periodic verifications.



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

[illegible]

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

AMZC-304 – MEASUREMENT DATA

Voltage and frequency

Function	Measurement range	Display range	Resolution	Accuracy
Voltage	0 V...500 V	0 V...500 V	0.1 V	from $\pm(2\% \text{ m.v.} + 2 \text{ digits})$
Frequency	45.0 Hz...65.0 Hz	45.0 Hz...65.0 Hz	0.1 Hz	$\pm(0.1\% \text{ m.v.} + 1 \text{ digits})$

Loop parameters and short-circuit current

Function	Measurement range	Display range	Resolution	Accuracy
2p loop, standard current (max. 13.3 A)	0.13 Ω ...1999 Ω per EN 61557	0.00 Ω ...1999 Ω	0.01 Ω	$\pm(5\% \text{ m.v.} + 3 \text{ digits})$
2p loop, no RCD tripping	0.5 Ω ...1999 Ω per EN 61557	0.00 Ω ...1999 Ω	0.01 Ω	from $\pm(6\% \text{ m.v.} + 5 \text{ digits})$
Short-circuit current I_k (standard)	Calculated from the Z_s ranges and rated voltages	0.110 A...9999 A	0.001 A	From the fault loop error
Short-circuit current I_k (RCD mode)	Calculated from the Z_s ranges and rated voltages	0.110 A...9999 A	0.001 A	From the fault loop error

Continuity of protective conductors and bonding

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

"m.v." = measured value



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AMZC-304 – 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	IP67
Power supply	4 × AA alkaline batteries or NiMH accumulators
Memory of results	990 results
Data transmission	Bluetooth
Operating temperature	0...+50 °C
Storage temperature	-20...+70 °C
Humidity	20...90 %
Dimensions	220 × 102 × 61 mm
Weight	approx. 0.8 kg
Standards	EN 61557, EN 61010-1
EMC requirements	EN 61326-1, EN 61326-2-2
Quality standard	ISO 9001



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