AMIC-10

Up to 1000 V, 5 test voltages

Insulation resistance, continuity, capacitance and voltage measurement in a single pocket-sized meter

AMIC-10

Insulation resistance meter up to 1000 V

amperis

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Digital insulation resistance meter for low-voltage electrical installations and equipment up to 1000 V.

Overview

Five test voltages

The AMIC-10 measures insulation resistance at 50, 100, 250, 500 or 1000 V, with continuous display of the resistance or the leakage current and automatic discharge of the capacitance of the tested object once the measurement ends.

More functions in the same meter

Besides insulation resistance, it measures the continuity of protective and equipotential conductors according to EN 61557-4, the resistance of low-voltage circuits, capacitance during the insulation test itself, and DC and AC voltage between 0 and 600 V.

Readings during the test

- Acoustic signal every five seconds, to follow the time elapsed during the test.
- Display of the actual test voltage throughout the measurement.
- Protection against accidentally measuring live objects.

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Measurement method

Three-wire measurement

Insulation resistance is measured using three wires, with compensation of the resistance of the test leads, and the voltage on open terminals stays below 8 V in every test.

Low-voltage continuity

Continuity is measured with a short-circuit current between 5 mA and 15 mA, and an acoustic signal with a green LED warns when the detected resistance is below 30 Ω. When checking protective conductors according to EN 61557-4 the short-circuit current is above 200 mA.

Applications

- Insulation testing of cables, motors and other low-voltage equipment.
- Checking the protective and equipotential conductors of an installation.
- Periodic maintenance of low-voltage electrical installations.

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Pocket-sized portable meter, battery-powered, with IP67 protection for field work.

Power supply and protection

Battery power

It runs on four AA alkaline batteries or on a set of Ni-MH rechargeable batteries, with a low-battery indicator on the display.

Protection for field use

Double insulation according to EN 61010-1 and IEC 61557 and CAT IV 600 V measurement category allow it to be used at the origin of an installation, and IP67 protection guards it against dust and temporary immersion in water.

Dimensions and weight

- 220 × 100 × 60 mm and 1 kg, with an M6 carrying case.
- Straps and a handle to hold the meter during the measurement.
- Calibration certificate included as standard.

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Insulation resistance by test voltage (50, 100, 250, 500 and 1000 V)

Measuring ranges according to EN 61557-2, for each test voltage.

Test voltage	Range	Resolution	Accuracy
50 V	0.0…999.9 kΩ	0.1 kΩ	±3% m.v. +8 digits
	1.000…9.999 MΩ	0.001 MΩ	
	10.0…99.99 MΩ	0.01 MΩ	
	100.0…250.0 MΩ	0.1 MΩ	
100 V	0.0…999.9 kΩ	0.1 kΩ	±3% m.v. +8 digits
	1.000…9.999 MΩ	0.001 MΩ	
	10.0…99.99 MΩ	0.01 MΩ	
	100.0…500.0 MΩ	0.1 MΩ	
250 V	0.0…999.9 kΩ	0.1 kΩ	±3% m.v. +8 digits
	1.000…9.999 MΩ	0.001 MΩ	
	10.0…99.99 MΩ	0.01 MΩ	
	100.0…999.9 MΩ	0.1 MΩ	
	1000.0…2000.0 MΩ	1 MΩ	
500 V	0.0…999.9 kΩ	0.1 kΩ	±3% m.v. +8 digits
	1.000…9.999 MΩ	0.001 MΩ	
	10.0…99.99 MΩ	0.01 MΩ	
	100.0…999.9 MΩ	0.1 MΩ	
	1000.0…5000.0 MΩ	1 MΩ	±4% m.v. +6 digits
1000 V	0.0…999.9 kΩ	0.1 kΩ	±3% m.v. +8 digits
	1.000…9.999 MΩ	0.001 MΩ	
	10.0…99.99 MΩ	0.01 MΩ	
	100.0…999.9 MΩ	0.1 MΩ	
	1000.0…5000.0 MΩ	1 MΩ	±4% m.v. +6 digits
	5.0…10.0 GΩ	0.01 GΩ	

"m.v." = measured value.

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Continuity of protective and equipotential conductors

Measuring range according to EN 61557-4: 0.10…1999 Ω, with current >200 mA.

Range	Resolution	Accuracy
0.00…19.99 Ω	0.01 Ω	±2% m.v. +3 digits
20.0…199.9 Ω	0.1 Ω	
200…1999 Ω	1 Ω	±4% m.v. +3 digits

Low-voltage circuit continuity and resistance — current <15 mA

Range	Resolution	Accuracy
00.0…199.9 Ω	0.1 Ω	±3% m.v. +3 digits
200…1999 Ω	1 Ω	

Voltage on open terminals below 8 V in both tests. Acoustic signal and green LED when the resistance detected in the low-voltage test is below 30 Ω ± 50%.
"m.v." = measured value.

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Capacitance measurement

Capacitance value shown during the insulation resistance (RISO) measurement.

Range	Resolution	Accuracy
1...999 nF	1 nF	±5% m.v. +5 digits
1.00...9.99 µF	0.01 µF	

DC and AC voltage measurement

Range	Resolution	Accuracy
0.0...299.9 V	0.1 V	±2% m.v. +6 digits
300...600 V	1 V	±2% m.v. +2 digits

For test voltages below 100 V and measured resistances below 10 MΩ, the error of the measured capacitance is not specified.
Frequency range: 45...65 Hz.
"m.v." = measured value.

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Electrical safety and general specifications

Type of insulation	Double, according to EN 61010-1 and IEC 61557
Measurement category	CAT IV 600 V according to EN 61010-1
Protection class	IP67 according to EN 60529
Power supply	4 alkaline batteries or Ni-MH battery set
Weight	1 kg
Dimensions	220 × 100 × 60 mm

Standard accessories: black K01 crocodile clip; 1.2 m red test lead; 1.2 m blue test lead; black pin probe with banana connector; red pin probe with banana connector; M6 carrying case; straps; handle to suspend the meter; calibration certificate; battery set.
Optional accessories: 5 m red test lead; 5 m blue test lead; 5 m shielded black test lead; 1.2 m blue test lead; red K02 crocodile clip; black K01 crocodile clip; blue K02 crocodile clip; blue pin probe with banana connector; WS-04 adapter with universal Schuko.

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