

MIC-10



# Measure insulation resistance up to 10 G $\Omega$

### Main features

- measurement of insulation resistance up to 10 GΩ thanks to max 1000 V measurement voltage
- designed for harsh environmental conditions IP67 ingress protection
- allows for testing electrical continuity R<sub>CONT</sub> 200 mA function
- checking start capacitors in motors thanks to capacity measurement function

### ...and much more

- measurement voltage selected from: 50, 100, 250, 500, 1000 V
- continuous reading of measured insulation resistance
- automatic discharge of the measured object's capacitance upon completion of insulation resistance measurement
- sound signalling of five-second time intervals, facilitating capture of time characteristics
- readings of actual measurement voltage during measurement
- protection against measurement of live objects
- three-lead measurement
- capacitance measurement during measurement of R<sub>Iso</sub>
- low-voltage measurement of circuit continuity and resistance
- continuity test of protective conductors and equipotential bonding with current ≥200 mA flowing in two directions in compliance with EN 61557-4
- measurement of direct and alternating voltages within the range of 0...600 V

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## **Application**

MIC-10 is an insulation resistance meter, which may be very useful for various electrical works (even the simplest), in locations with Low Voltage power supply, including: electrical systems in single- and multi-family buildings as well as in public buildings and in small workshops or factories. With its test voltage settings of 50 V, 100 V or 250 V the device is perfect for quick checking of the insulation condition in telecommunications systems and control cables.



## Features

Test voltage settings of 500 V or 1000 V perfectly match the requirements for assessing the protection of power supply lines but also of floors and walls - PRS-1 probe (optional accessory) is very useful for this purpose.

With MIC-10 meter you can check whether an object is under voltage (measuring range up to 600 V), both in overhead and cable networks (measuring category of the device: CAT IV 600 V). You can verify the continuity of cables, e.g. PE connections and equipotential bonding - using the current of at least 200 mA, according to EN 61557-4. You can check the capacity of the start-up capacitors in household appliances and drives of any type (measuring range up to  $10~\mu F$ ).

This makes MIC-10 meter an essential tool for every service technician.



## Durable housing

Handy and ergonomic housing provides protection of IP67, ensuring reliability of the meter even in the harshest environmental conditions (moisture, dust, high temperature, etc.).

### Insulation resistance measurement

Range	Resolution	Accuracy	$V_n$	Measuring range
0.0999.9 kΩ	0.1 kΩ		50 V	50 kΩ250.0 MΩ
1.0009.999 ΜΩ	0.001 ΜΩ		100 V	100 kΩ500.0 MΩ
10.0099.99 ΜΩ	0.01 ΜΩ		250 V	250 kΩ2.000 GΩ
100.0250.0 MΩ (for V <sub>n</sub> = 50 V)		± (3% m.v. + 8 digits)	500 V	500 kΩ5.000 GΩ
100.0500.0 M $\Omega$ (for $V_n = 100 \text{ V}$ )	0.1 ΜΩ		1000 V	1000 kΩ10.00 GΩ
100.0999.9 M $\Omega$ (for V <sub>n</sub> ≥ 250 V)				
$1.0002.000 \text{ G}\Omega \text{ (for V}_n = 250 \text{ V)}$	0.001 GΩ			
$1.0005.000  G\Omega  (for  V_n = 500  V)$	0.001.00	±(4% m.v. + 6 digits)		
1.0009.999 GΩ (for V <sub>n</sub> = 1000 V)	0.001 GΩ			
10.00 GΩ (for $V_n = 1000 \text{ V}$ )	0.01 GΩ			

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# **Low-voltage measurement of continuity of circuit and resistance** — Measuring range according to EN 61557-4: $0.10...1999~\Omega$

Range	Resolution	Accuracy
0.0019.99 Ω	0.01 Ω	1 (20) 2 dinita)
20.0199.9 Ω	0.1 Ω	±(2% m.v. + 3 digits)
2001999 Ω	1 Ω	±(4% m.v. + 3 digits)

#### Capacitance measurement

Range	Resolution	Accuracy	
1999 nF	1 nF	1/F0/ 1 10 dinital	
1.009.99 µF	0.01 µF	±(5% m.v. + 10 digits)	

- $\bullet$  Capacitance measurement result displayed after measurement of  ${\rm R}_{\rm ISO}$
- For measurement voltages below 100 V and measured resistance of less than 10 M $\Omega$ , the error of capacitance measurement is unspecified

#### DC and AC voltage measurement

Range	Resolution	Accuracy
0299.9 V	0.1 V	±(2% m.v. + 6 digits)
300600 V	1 V	±(2% m.v. + 2 digits)

<sup>•</sup> frequency range: 45...65 Hz

## Low-current resistance measurement

Range	Resolution	Accuracy
0.00199.9 Ω	0.1 Ω	±(3% m.v. + 3 digits)
2001999 Ω	1 Ω	

## **Technical specification**

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type of insulation according to EN 61010-1 and EN 61557	double
measurement category according to EN 61010-1	IV 600 V (III 1000 V)
degree of housing protection acc. to EN 60529	IP67
power supply of the meter	4 x AA alkaline battery or 4x AA rechargeable battery
dimensions	200 x 100 x 60 mm
aimensions	7.9" x 3.9" x 2.4"
meter weight	ca. 0.6 kg
meter weight	ca. 1.3 lbs
anarating temperature	-10°C+50°C
operating temperature	14°F122°F
display	segment LCD
quality standard for design, construction and manufacturing compliant with	ISO 9001
the device meets the requirements of	EN 61557
the product meets EMC requirements (immunity for industrial environment)	EN 61326-1
according to the following standards	EN 61326-2-2

## Standard accessories



Test probe with banana socket; 1 kV; black

WASONBLOGB1



Test probe with banana socket; 1 kV; red

WASONREOGB1



Black "crocodile" clip 1 kV 20 A

WAKROBL20K01



Test lead with banana plugs; 1 kV; 4 ft (1.2 m); black

WAPRZ1X2BLBB



Test lead with banana plugs; 1 kV; 4 ft (1.2 m); red

WAPRZ1X2REBB



M-6 carrying case

WAFUTM6



Meter strap (type M-1)

WAPOZSZE4



M-1 housing holder - hanger

WAPOZUCH1



Factory calibration certificate

Abbreviation "m.v." used in the specification of measurement means a measured value.

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# **Optional accessories**



Pin probe, blue 1 kV (banana socket)

WASONBUOGB1



Red "crocodile" clip 1 kV 20 A

WAKRORE20K02



Blue "crocodile" clip 1 kV 20 A

WAKROBU20K02



Test lead 16.4 ft (5 m), black, 1 kV (banana plugs, shielded)

WAPRZ005BLBBE



Test lead 16.4 ft (5 m), red, 1 kV (banana plugs)

WAPRZ005REBB



Test lead 16.4 ft (5 m), blue, 1 kV (banana plugs)

WAPRZ005BUBB



Shielded test lead with banana plugs; 1 kV; 4 ft (1.2 m); black

WAPRZ1X2BLBBE



CS-1 cable simulator

WAADACS1



Test lead with banana plugs; 1 kV; 4 ft (1.2 m); blue

WAPRZ1X2BUBB



AGT-16P threephase socket adapter 16 A

WAADAAGT16P



AGT-32P threephase socket adapter 32 A

WAADAAGT32P



AGT-63P threephase socket adapter 63 A

WAADAAGT63P





AGT-16C threephase socket adapter 16 A (PEN)

WAADAAGT16C





AGT-32C threephase socket adapter 32 A (PEN)

WAADAAGT32C



PRS-1 resistance test probe

WASONPRS1GB





AGT-16T industrial socket adapter 16 A

WAADAAGT16T





AGT-32T industrial socket adapter 32 A

WAADAAGT32T



Calibration certificate with accreditation

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