

# Measure insulation resistance up to 10 GΩ with the MIC-10 Insulation Resistance Meter

### 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





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

#### 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		
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	$I(E^{0}, m_{1}) + 10 digita)$	
1.009.99 µF	0.01 µF	±(5% m.v. + 10 digits)	

- Capacitance measurement result displayed after measurement of  $\mathrm{R}_{_{\rm ISO}}$ 

· 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

DC and AC voltage measurement			Low-current resistance measurement		
Range	Resolution	Accuracy	Range	Resolution	Accuracy
0299.9 V	0.1 V	±(2% m.v. + 6 digits)	0.00199.9 Ω	0.1 Ω	(2% my + 2 digita)
300600 V	1 V	±(2% m.v. + 2 digits)	2001999 Ω	1Ω	±(3% m.v. + 3 digits)
C 45 C					

• frequency range: 45...65 Hz

## **Technical specification**

<b>▲</b>	
type of insulation	double, according to EN 61010-1 and EN 61557
measurement category	IV 600 V (III 1000 V) according to EN 61010-1
degree of housing protection acc. to EN 60529	IP67
power supply of the meter	4 x AA alkaline batteries or rechargeable batteries
dimensions	200 x 100 x 60 mm
meter weight	approx. 0.6 kg
operating temperature	-10°C+50°C
display	LCD segment
quality standard for design, construction and manufacturing compliant with	ISO 9001
the device meets the requirements of	EN 61557 standard
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



test lead with banana plugs; 1 kV; 1.2 m; black WAPRZ1X2BLBB



test lead with banana plugs; 1 kV; 1.2 m; red WAPRZ1X2REBB

M-1 housing holder - hanger WAPOZUCH1



M-6 carrying case WAFUTM6

black "crocodile"

clip 1 kV 20 A

WAKROBL20K01



meter strap (type M-1) WAPOZSZE4



### **Additional 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 5 m, black, 1 kV (banana plugs, shielded) WAPRZ005BLBBE



test lead 5 m, red, 1 kV (banana plugs) WAPRZ005REBB

3)

test lead 5 m, blue, 1 kV (banana plugs) WAPRZ005BUBB



shielded test lead with banana plugs; 1 kV; 1.2 m; black WAPRZ1X2BLBBE



CS-1 cable simulator WAADACS1



test lead with banana plugs; 1 kV; 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)



PRS-1 resistance test probe

WASONPRS1GB



AGT-16T industrial socket adapter 16 A WAADAAGT16T



AGT-32T industrial socket adapter 32 A WAADAAGT32T



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