



CAT IV

600 V

CAT III

1000 V

IP65



For measurement of wiring in houses



For measurement of wires and cables



For measurement of pole transformer substations



For measurement of street lighting power cables



For measurement of telephone wiring



For measurements of pre-insulated pipes

## Measure insulation resistance up to 1 TΩ

### Product features

- measurement voltage within the range of 100...2500 V, selected in steps of 100 V
- continuous reading of measured insulation resistance or leakage current
- 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
- timed measurement times  $T_1$ ,  $T_2$  and  $T_3$  for measurement of absorption coefficients (Ab/PI/DAR) at 15, 60 and 600 s and polarization index
- reading of actual measurement voltage during measurement
- protection against measurement of live objects



## Application

This insulation resistance meter is a device with a wide range of applications. It may be successfully operated both in residential construction industry and for inspecting industrial systems or traction networks. Due to its characteristics - excellent performance, low power consumption from batteries, the option of charging them during measurements, convenience of use and a high ingress protection level - it is often used by electricians working in maintenance teams, testing motors, cables, street lighting or at the construction and maintenance of photovoltaic systems. The device perfectly matches the needs of installers of telecommunications networks and operators of district heating networks, where the inspection of alarm system on insulated pipes is necessary.

## Features

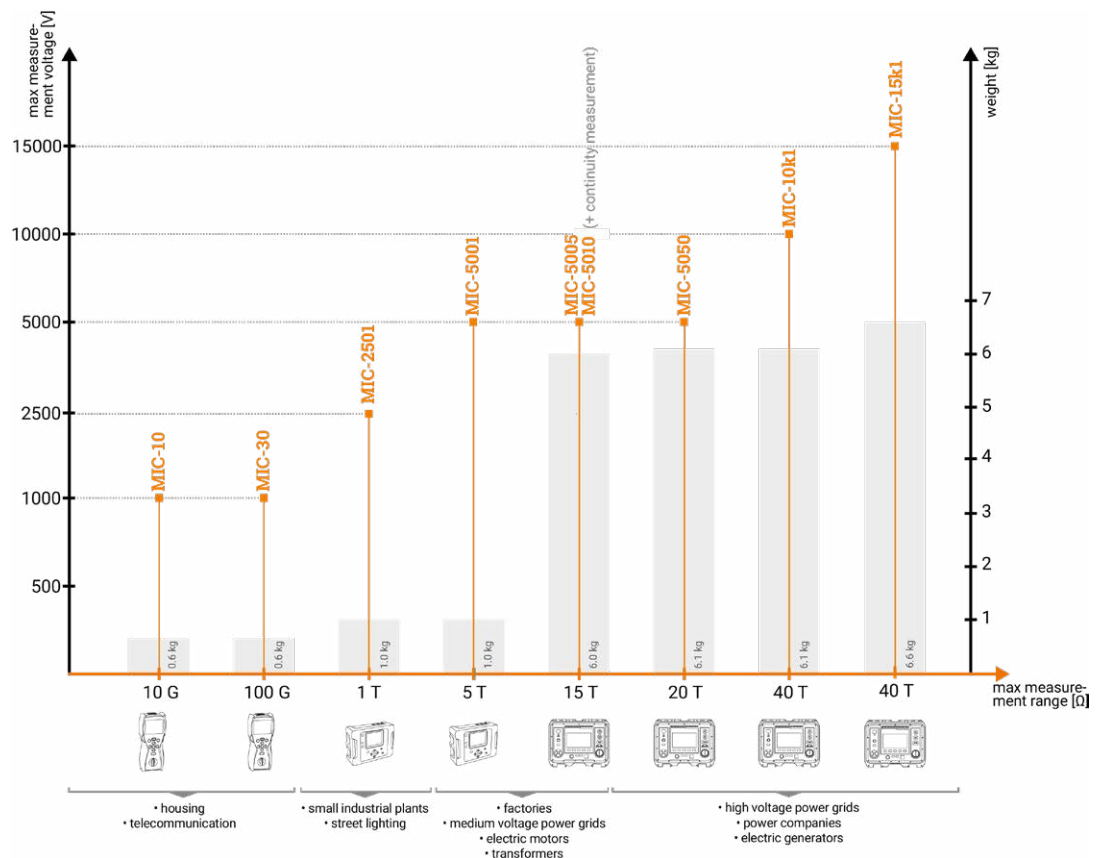
The meter may be used to measure the insulation resistance using the test voltage up to 2500 V. When testing the cables, it automatically discharges their load at the moment of completing the measurement. MIC-2501 allows user to measure the continuity of protective conductors and equipotential bondings with current exceeding 200 mA in both directions. The meter has a built-in voltmeter of AC and DC voltages in the range of up to 750 V. Extensive memory allows the device to record and send to a computer nearly 12,000 measurement results.



## Capabilities

An important advantage of the device is its ability to a sufficiently long operation after one recharging of batteries. Electricians performing tests on repetitive objects or at short intervals do not have to worry about batteries discharging before completing the task. In addition, during the measurement work, the user may recharge device from an external power source, e.g. a powerbank of 12 V/2 Ah.

Choose  
the  $R_{ISO}$  meter  
that fits your  
needs



## Insulation resistance measurement

Measurement range acc. to IEC 61557-2  
for  $R_{ISOmin} = U_{ISOnom} / I_{ISOnom} \dots 1 \text{ T}\Omega$  ( $I_{ISOnom} = 1 \text{ mA}$ )

Range	Resolution	Accuracy
0.0...999.9 kΩ	0.1 kΩ	±(3% m.v. + 20 digits)
1.000...9.999 MΩ	0.001 MΩ	
10.00...99.99 MΩ	0.01 MΩ	
100.0...999.9 MΩ	0.1 MΩ	
1.000...9.999 GΩ	0.001 GΩ	
10.00...99.99 GΩ	0.01 GΩ	
100.0...999.9 GΩ	0.1 GΩ	
1000 GΩ	1 GΩ	

## DC and AC voltage measurement

Range	Resolution	Accuracy
0...299.9 V	0.1 V	±(3% m.v. + 2 digits)
300...750 V	1 V	

• frequency range: 45...65 Hz

## Values of measured resistance depending on measurement voltage

Voltage $U_{ISO}$	Measurement range
up to 100 V	50 GΩ
200 V...400 V	100 GΩ
500 V...900 V	250 GΩ
1000 V...2400 V	500 GΩ
2500 V	1000 GΩ

## Low-voltage measurement of resistance and circuit continuity

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...999 Ω	1 Ω	±(2% m.v. + 3 digits)

## Technical specification

type of insulation acc. to EN 61010-1 and EN 61557	double
measurement category acc. to EN 61010-1	CAT IV 600 V (CAT III 1000 V)
degree of housing protection acc. to EN 60529	IP65
power supply of the meter	NiMH 9.6 V 2 Ah rechargeable battery
battery charging time	usually 4 h max. 10 h
parameters of the external power supply adapter	90...264 V 50...60 Hz
dimensions	200 x 150 x 75 mm 7.9" x 5.9" x 3.0"
meter weight	ca. 1.0 kg ca. 2.2 lbs
operating temperature	-15°C...+40°C 5°F...104°F
number of $R_{ISO}$ measurements acc. to EN 61557-2	approx. 800
display	segment LCD
memory of measurement results	990 cells
data transmission	USB
quality standard for design, construction and manufacturing compliant with	ISO 9001 ISO 14001 PN-N 18001
the device meets the requirements of	EN 61557
the product meets EMC requirements (immunity for industrial environment) according to the following standards	EN 61326-1 EN 61326-2-2





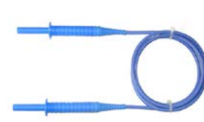
## Standard accessories



shielded test lead with banana plugs; 5 kV; 5.9 ft (1.8 m); black  
WAPRZ1X8BLBB



test lead with banana plugs; 5 kV; 5.9 ft (1.8 m); red  
WAPRZ1X8REBB



test lead with banana plugs; 5 kV; 5.9 ft (1.8 m); blue  
WAPRZ1X8BUBB



black "crocodile" clip 11 kV 32 A  
WAKROBL32K09



red "crocodile" clip 11 kV 32 A  
WAKRORE32K09



blue "crocodile" clip 11 kV 32 A  
WAKROBU32K09



test probe with banana socket; 5 kV; black  
WASONBLOGB2



test probe with banana socket; 5 kV; red  
WASONREOGB2



USB cable  
WAPRZUSB



meter power adapter (type Z7)  
WAZASZ7



230 V power cord (IEC C7 plug)  
WAPRZLAD230



M-8 carrying case  
WAFUTM8



Factory calibration certificate

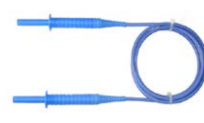
## Optional accessories



test lead 16 ft / 32 ft (5 m / 10 m), black, 5 kV (banana plugs, shielded)  
WAPRZ005BLBBE5K  
WAPRZ010BLBBE5K



test lead 16 ft / 32 ft (5 m / 10 m), red, 5 kV (banana plugs, shielded)  
WAPRZ005REBB5K  
WAPRZ010REBB5K



test lead 16 ft / 32 ft (5 m / 10 m), blue, 5 kV (banana plugs, shielded)  
WAPRZ005BUBB5K  
WAPRZ010BUBB5K



cable for battery charging from car cigarette lighter socket (12 V)  
WAPRZLAD12SAM



PRS-1 resistance test probe  
WASONPRS1GB



pin probe, blue 1 kV (banana socket)  
WASONBU0GB1



CS-1 cable simulator  
WAADACS1



Sonel Reader PC software  
WAPRORREADER



Calibration certificate with accreditation