

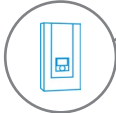
For measurement of wiring in flats, houses and public buildings



For measurement of low voltage motors



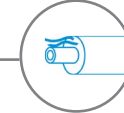
For measurement of home appliances



For measurement of telephone and IT wiring



For measurement of pre-insulated pipes



For measurements in anti-icing systems


CAT III
1000 V
CAT IV
600 V

IP67

BLUETOOTH

Measure insulation resistance up to 100 GΩ using the MIC-30 meter

Main features

- measurement of insulation resistance up to 100 GΩ thanks to max 1000 V measurement voltage
- designed for harsh environmental conditions conditions – IP67 ingress protection
- excellent for repeatable measurements – memory of 12,000 records and UNI-Schuko adapter for sockets
- allows for testing electrical continuity – R_{CONT} 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 or freely configurable within the range of 50...1000 V in steps of 10 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
- timing of measurement times T_1 , T_2 and T_3 for measurement of one or two absorption coefficients, within the range of 1... 600 seconds
- readings of actual measurement voltage during measurement
- protection against measurement of live objects
- three-lead measurement – additional lead GUARD
- capacitance measurement during measurement of R_{ISO}
- low-voltage measurement of circuit continuity and resistance
- continuity test of protective conductors and equipotential bonding with current $I_{ISO} \geq 200$ 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-30 insulation resistance meter is perfectly suited for the needs of all users, who often examine the condition of 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 from 50 V to 1000 V (in 10 V steps), the device is perfect for diagnosing the electrical, control, communication and telecommunications objects.



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 in places where the insulation of the stand was used as a means of protection against electric shock – PRS-1 probe (optional accessory) is very useful for this purpose.

The dedicated UNI-Schuko adapter enables user to configure the tested cable pairs – this ensures quick and efficient inspection of the insulation resistance from the side of sockets.



With MIC-30 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 μ F). With the third socket (GUARD), you can verify the amount of leakage current, which may “escape” through faulty or contaminated insulation.

Built-in memory and wireless transmission ensure gathering and transmission of data to software that provides archiving and analysis (Sonel Reader). All of this makes MIC-30 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_n | Measuring range |
|--|------------------|--|--------|--------------------------------------|
| 0.0...999.9 k Ω | 0.1 k Ω | \pm (3% m.v. + 8 digits) [\pm (5% m.v. + 8 digits)]* | 50 V | 50 k Ω ...250.0 M Ω |
| 1.000...9.999 M Ω | 0.001 M Ω | | 100 V | 100 k Ω ...500.0 M Ω |
| 10.00...99.99 M Ω | 0.01 M Ω | | 250 V | 250 k Ω ...2.000 G Ω |
| 100.0...250.0 M Ω (for $U_n = 50$ V) 100.0...500.0 M Ω (for $U_n = 100$ V) 100.0...999.9 M Ω (for $U_n \geq 250$ V) | 0.1 M Ω | | 500 V | 500 k Ω ...20.00 G Ω |
| 1.000...2.000 G Ω (for $U_n = 250$ V) | 0.001 G Ω | \pm (4% m.v. + 6 digits) [\pm (6% m.v. + 6 digits)]* | 1000 V | 1000 k Ω ...100.00 G Ω |
| 1.000...9.999 G Ω (for $U_n \geq 500$ V) | 0.001 G Ω | | | |
| 10.00...20.00 G Ω (for $U_n \geq 500$ V)** | 0.01 G Ω | | | |
| 10.00...99.99 G Ω (for $U_n = 1000$ V) | 0.01 G Ω | | | |
| 100.0 G Ω (for $U_n = 1000$ V) | 0.1 G Ω | | | |

* for WS-04 adapter

** for WS-04 adapter, range up to 10 G Ω

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

Low-voltage measurement of continuity of circuit and resistance

Measuring range according to EN 61557-4: 0.10...1999 Ω

| Range | Resolution | Accuracy |
|-----------------------|---------------|--|
| 0.00...19.99 Ω | 0.01 Ω | $\pm(2\% \text{ m.v.} + 3 \text{ digits})$ |
| 20.0...199.9 Ω | 0.1 Ω | |
| 200...1999 M Ω | 1 Ω | $\pm(4\% \text{ m.v.} + 3 \text{ digits})$ |

DC and AC voltage measurement

| Range | Resolution | Accuracy |
|-------------|------------|--|
| 0...299.9 V | 0.1 V | $\pm(2\% \text{ m.v.} + 6 \text{ digits})$ |
| 300...600 V | 1 V | $\pm(2\% \text{ m.v.} + 2 \text{ digits})$ |

• Frequency range: 45...65 Hz

Capacitance measurement

| Range | Resolution | Accuracy |
|---------------------------|--------------------|---|
| 1...999 nF | 1 nF | $\pm(5\% \text{ m.v.} + 10 \text{ digits})$ |
| 1.00...9.99 μF | 0.01 μF | |

- Capacitance measurement result displayed after measurement of R_{ISO}
- For measurement voltages below 100 V and measured resistance of less than 10 M Ω , the error of capacitance measurement is unspecified

Low-current resistance measurement

| Range | Resolution | Accuracy |
|-----------------------|--------------|--|
| 0.00...199.9 Ω | 0.1 Ω | $\pm(3\% \text{ m.v.} + 3 \text{ digits})$ |
| 200...1999 M Ω | 1 Ω | |

Technical specification

| | |
|---|---|
| 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 |
| memory of measurement results | 990 cells |
| data transmission | wireless link |
| quality standard for design, construction and manufacturing compliant with the device meets the requirements of | ISO 9001 EN 61557 standard |
| the product meets EMC requirements (immunity for industrial environment) according to the following standards | EN 61326-1:2006 EN 61326-2-2:2006 |

Standard accessories



test probe with banana socket; 1 kV; black

WASONBLOGB1



test probe with banana socket; 1 kV; red

WASONREOGB1



blue "crocodile" clip 1 kV 20 A

WAKROBU20K02



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

WAPRZ1X2BLBBE



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

WAPRZ1X2REBB



test lead with banana plugs; 1 kV; 1.2 m; blue

WAPRZ1X2BUBB



M-6 carrying case

WAFUTM6



meter strap (type M-1)

WAPZOZSZE4



M-1 housing holder – hanger

WAPZOZUCH1



Sonel Reader PC software

WAPROREADER

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

Additional accessories



black "crocodile" clip 1 kV 20 A
WAKROBL20K01



red "crocodile" clip 1 kV 20 A
WAKRORE20K02



pin probe, blue 1 kV (banana socket)
WASONBU0GB1



test lead 5 m, black, 1 kV (banana plugs, shielded)
WAPRZ005BLBBE



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



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



WS-04 adapter with UNI-SCHUKO angular plug
WAADAWS04



PRS-1 resistance test probe
WASONPRS1GB



CS-1 cable simulator
WAADACS1



AGT-16P three-phase socket adapter 16 A
WAADAAGT16P



AGT-32P three-phase socket adapter 32 A
WAADAAGT32P



AGT-63P three-phase socket adapter 63 A
WAADAAGT63P



AGT-16C three-phase socket adapter 16 A (PEN)
WAADAAGT16C



AGT-32C three-phase socket adapter 32 A (PEN)
WAADAAGT32C



AGT-16T industrial socket adapter 16 A
WAADAAGT16T



AGT-32T industrial socket adapter 32 A
WAADAAGT32T



Virtual instrument application gives you an unique real-like experience with the meter. The application of the virtual instrument is a real visualization of the meter e.g. its functions and display. The user has a possibility to make a setup of the instrument and all possible measurements like in the reality. Such opportunity gives the user a closer look and a feeling for the functioning of the instrument.