

MIC-10k1

Indeks: WMGBMIC10K1

Insulation Resistance Meter

BLUETOOTH | IP 40 | CAT IV 600V | CAT III 1000V | IEC 61557

Description

Insulation resistance measurement:up to 40 TΩ

- measurement voltage any in the range of: 50...10000 V (50...1000 V at 10 V and 1...10 kV at 25 V),
- continuous indication of measured insulation resistance or leakage current,
- automatic discharge of measured object capacitance voltage after the end of insulation resistance measurement,
- acoustic signaling of 5 seconds intervals to facilitate capturing time characteristics,
- adjustable measuring time to 99'59'',
- metered T_1, T_2 and T_3 test times for measuring one or two absorption coefficients from the range of 1...600 s,
- polarization index (PI), absorption coefficients Ab1, Ab2 and dielectric absorption ratio (DAR) measurement,
- indication of actual test voltage during measurement,
- 1.2 mA, 3 mA and 6 mA test current,
- insulation resistance measurement using two- or three-wire method,
- measurements with test leads up to 20 m...

- protection against measuring live objects,
- automatic measurement of multiple core cables with the additional AutoISO-5000 adapter (for MIC-10k1 max. voltage 5 kV)
- measurement of capacitance during the measurement of R_{ISO}.
- measurement of temperature (with additional probe - WASONT1),
- step voltage insulation resistance measurement (SV),
- Dielectric Discharge calculation (DD),
- location of damage (burnout),

Digital filters function for measurements in high noise environment.
Measurement of leakage current during insulation resistance testing.
DC and AC voltage measurement in the range of 0...750 V.
Drawing graphs on the display during measurement.
Innovative memory with possibility of description of: measurement points, facilities, names of customers.
Operating with mini Bluetooth keyboard (option).
MIC-10s1 - Stable measurements in noisy environments such as 765 kV substations.
Graphic LCD 5,6'' backlit.
Keyboard backlit.
Power supply from battery packs.
Built-in fast charger.
The instruments meet the requirements of the EN 61557 standard.

Virtual instrument application of Sonel MIC-10k1

Technical Specification

Insulation resistance measurement
easurement range acc. to IEC 61557-2: U_N = 10000V: 10,0MΩ... 40,0TΩ

Range	Resolution	Accuracy
0,0...999 kΩ	1 kΩ	

1,00...9,99 MΩ	0,01 MΩ	±(3% m.v. + 10 digits)
10,0...99,9 MΩ	0,1 MΩ	
100...999 MΩ	1 MΩ	
1,00...9,99 GΩ	0,01 GΩ	
10,0...99,9 GΩ	0,1 GΩ	
100...999 GΩ	1 GΩ	±(3,5% m.v. + 10 digits)
1,00...9,99 TΩ	0,01 TΩ	±(7,5% m.v. + 10 digits)
10,0...20,0 TΩ	0,1 TΩ	±(12,5% m.v. + 10 digits)
10,0...40,0 TΩ		

Values of measured resistance depending on measurement voltage

Voltage U_{ISO}	Measurement range	AutoISO-5000 measurement range
50 V	200 GΩ	20,0 GΩ
100 V	400 GΩ	40,0 GΩ
250 V	1,00 TΩ	100 GΩ
500 V	2,00 TΩ	200 GΩ
1000 V	4,00 TΩ	400 GΩ
2500 V	10,00 TΩ	400 GΩ
5000 V	20,0 TΩ	400 GΩ

10 000 V	40,0 TΩ	-

Step voltage insulation resistance measurement

Voltage U_{ISO}	MIC-10k1
50...1000 V	10 V
1000...5000 V	25 V
5000...10000 V	25 V

DC and AC voltage measurement

Range	Resolution	Accuracy
0.0...29,9 V	0,1 V	±(2% m.v. + 20 digits)
30,0...299,9 V	0,1 V	±(2%m.v. + 6 digits)
300...750 V	1 V	±(2% m.v. + 2 digits)

- Frequency range: 45...65Hz

Measurement of capacitance

Display range	Resolution	Accuracy
1...999 nF	1 nF	±(5%m.v. + 5 digits)
1,00...49,99 µF	0,01 µF	

- capacity measurement result is displayed after the R_{ISO}

measurement
- for measuring voltages under 100 V capacitance measurement accuracy not specified.

Measurement of temperature

Display range	Resolution	Accuracy
-40,0...99,9 °C	1 °C	±(3%m.v. + 8 digits)
-40,0...211,8 °F	1 °F	±(3%m.v. + 16 digits)

Electrical safety:

- type of insulation: double, in acc. with EN 61010-1 and IEC 61557
- measurement category: IV 600 V (III 1000 V) in acc. with EN 61010-1
- case protection rating in acc. with EN 60529: IP40 (IP67 - with lid closed)

Other technical specifications:

- power supply of the meter: built-in battery pack,
- weight of the meter: approx. 5,6 kg,
- dimensions: 390 x 310 x 180 mm,
- display: graphic LCD 5,6',
- transmission of measurement results USB or Bluetooth®.

The acronym “m.v.” stands for a “measured reference value”.