Sonel®
test & measurement

MIC-30 1kV Class Insulation Tester

Indeks: MIC-30

Insulation Resistance Meter

IP 67

CAT IV 600V

CAT III 1000V

Description

The MIC-30 is a hand-held, rugged, easy-to-use, 1 kV class insulation test meter. The MIC-30 has a wide measurement range, selectable test voltages, and excellent safety features.

- Insulation resistance measurement to 100 GΩ
- User selected test voltages: 50, 100, 250, 500, 1000 V in 10 V steps
- Displays continuous indication of insulation resistance or leakage current
- Audio beeps every five-second periods to indicate measurement progress
- Indication of actual test voltage during the measurement
- Three-lead measurement
- Continuity measurement of protective and equipotential conductors according to EN 61557-4
- Low-voltage circuit continuity and resistance measurement:
- Circuit resistance measurement (<1999 Ω)
- Audio alert signal if circuit resistance is below 30 Ω
- Capacitance measurement during measurement
- Measurement of alternating and direct voltages from 0 to 600 V

– Automatic measurement in sockets with the UNI-Schuko adapter with possibility of configuring pairs of measured cable
– Selectable test times (T1, T2 , T3 from 1 to 600 seconds) to measure one or two absorption coefficients
– Meter conforms to EN 61557

Safety First Features.

– Automatic discharge of tested object after the insulation resistance measurement completes to remove high voltage charge remaining due to cable capacitance
– Protection against measuring live objects, measurement will not proceed

Power Supply

– 4 AA disposable or rechargeable batteries
– Continuous indication of state of battery charge

Memory Features

– 990 memory cells to save test results
– Wireless data transmission to computer using the Bluetooth.

Test drive the MIC 30 with this Online Simulator:

There is also an offline simulator of **MIC 30** ready to download in the Files section.

Technical specification

Electric safety:

- type of insulation: double, according to EN 61010 - 1 and IEC 61557
- measurement category: IV 600 V (III 1000 V) according to EN 61010 - 1
- protection class acc. to EN 60529: IP67

Other technical specifications:

- power suply: 4 alkaline batteries or or battery package Ni-MH
- weight: ~2.20 lbs / ~1 kg
- dimensions: 8.66" x 3.94" x 2.36" / 220 x 100 x 60 mm

Insulation resistance measurement

Measuring range according to EN 61557 - 2 for **UN=50 V**: 50 kΩ to 250.0 MΩ

Range	Resolution	Accuracy
0.0 to 999.9 kΩ	0.1 kΩ	±(3% m.v. + 8 digits) [±(5% m.v. + 8 digits)]*
1.000 to 9.999 MΩ	0.001 MΩ	
10.0 to 99.99 MΩ	0.01 MΩ	
100.0 to 250.0 MΩ	0.1 MΩ	

*for the WS-04 lead

Measuring range according to EN 61557 - 2 for **UN=100 V**: 100 kΩ to 500.0 MΩ

Range	Resolution	Accuracy
0.0 to 999.9 kΩ	0.1 kΩ	±(3% m.v. + 8 digits) [±(5% m.v. + 8 digits)]*
1.000 to 9.999 MΩ	0.001 MΩ	
10.0 to 99.99 MΩ	0.01 MΩ	
100.0 to 500.0 MΩ	0.1 MΩ	

*for the WS-04 lead

Measuring range according to EN 61557 - 2 for **UN=250 V**: 250 kΩ. to 2.000 GΩ

Range	Resolution	Accuracy
0.0 to 999.9 kΩ	0.1 kΩ	±(3% m.v. + 8 digits) [±(5% m.v. + 8 digits)]*
1.000 to 9.999 MΩ	0.001 MΩ	
10.0 to 99.99 MΩ	0.01 MΩ	
100.0 to 999.0 MΩ	0.1 MΩ	
1.000 to 2.000 GΩ	0.001 GΩ	

*for the WS-04 lead

Measuring range according to PN-EN 61557 - 2 for **UN=500 V**: 500 kΩ to 20.00 GΩ

Range	Resolution	Accuracy
0.0 to 999.9 kΩ	0.1 kΩ	±(3% m.v. + 8 digits)
1.000 to 9.999 MΩ	0.001 MΩ	

10.00 to 99.99 MΩ	0.01 MΩ	[±(5% m.v. + 8 digits)]*
100.0 to 999.0 MΩ	0.1 MΩ	
1.000 to 9.999 GΩ	0.001 GΩ	±(4% m.v. + 6 digits) [±(6% m.v. + 6 digits)]*
10.00 to 20.00 GΩ**	0.01 GΩ	

*for the WS-04 lead
**for the WS-04 lead range to 10 GΩ

Measuring range according to EN 61557 - 2 for **UN=1000 V**: 1,000 kΩ to 10.00 GΩ

Range	Resolution	Accuracy
0.0 to 999.9 kΩ	0.1 kΩ	±(3% m.v. + 8 digits)
1.000 to 9.999 MΩ	0.001 MΩ	
10.00 to 99.99 MΩ	0.01 MΩ	
100.0 to 999.0 MΩ	0.1 MΩ	
1.000 to 9.999 GΩ	0.001 GΩ	±(4% m.v. + 6 digits)
10.00 to 99.99 GΩ	0.01 GΩ	
100.0 GΩ	0.1 GΩ	

Continuity measurement of protective and equipotential conductors with the 200 mA current

Measuring range according to EN 61557 - 4: 0.10 to 1,999 Ω

Range	Resolution	Accuracy
0.00 to 19.99 Ω	0.01 Ω	±(2% m.v. + 3 digits)
20.0 to 199.9 Ω	0.1 Ω	
200 to 1999 Ω	1 Ω	±(4% m.v. + 3 digits)

- Voltage on open terminals: <8 V
- Output current at R <2 Ω: ISC >200 mA: ISC >200 mA
- Compensation of test leads' resistance
- Unidirectional current flow

Low-voltage and resistance measurement

Range	Resolution	Accuracy
0.0 to 199.9 Ω	0.1 Ω	±(3% m.v. + 3 digits)
200 to 1,999 Ω	1 Ω	

- Voltage on open terminals: <8 V
- Current for closed terminals 5 mA < ISC < 15 mA
- Sound signal and green LED on when measured resistance < 30 Ω ± 50%
- Compensation of test leads' resistance,

Capacitance measurements

Range	Resolution	Accuracy
1 to 999 nF	1 nF	±(5% m.v. + 5 digits)
1.00 to 9.99μF	0.01μF	

- Capacitance value displayed during the RISO measurement
- For test voltages below 100 V and measured resistance below 10 MΩ, unspecified capacitance measurement error

Measurement of alternating and direct voltage

Range	Resolution	Accuracy
0.0 to 299.9 V	0.1 V	±(2% m.v. + 6 digits)
300 to 600 V	1 V	±(2% m.v. + 2 digits)

Frequency range: 45 to 65 Hz