

# INSULATION RESISTANCE METER MIC-5001

INSULATION RESISTANCE  
MEASUREMENT UP TO  
**5TΩ**  
IN ACCORDANCE  
WITH IEC 61557-2



- **Insulation resistance measurement:**

- measuring voltage selectable in the 50 ... 500 V range with 50 V step, and in the 500 V to 5000 range with 100 V step,
- continuous indication of insulation resistance or leakage current,
- automatic discharge of capacitance of tested object after the insulation resistance measurement,
- acoustic signalling of five-second periods to facilitate obtaining time characteristics,
- measured test times of T1, T2 and T3 for measuring the absorption coefficient DAR and polarization index PI,
- indication of actual test voltage during the measurement,
- protection against measuring live objects.

- **Two and three-lead measurement method.**

- **RampTest Insulation resistance measurement and measurement of breakdown voltage with increments up to ~ 1 kV / s.**

- **Measurement of alternating and direct voltages in the 0...750 V range.**

- **990 cells of memory (11880 records), data transmission to a PC through a USB cable.**

- **Built-in rechargeable battery pack.**

- **The instruments meet the requirements of the EN 61557 standard.**

- **The ability to charge from car lighter (12 V) socket (additional accessories).**

Sonel S.A.  
Wokulskiego 11  
58-100 Świdnica  
tel. +48 74 85 83 860  
fax +48 74 85 83 809

[export@sonel.pl](mailto:export@sonel.pl)  
[www.sonel.pl](http://www.sonel.pl)

# MIC-5001

## Insulation resistance measurement (two-lead)

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

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	
1,000...5,000 TΩ	1 GΩ	±(4% m.v. + 50 digits)

## 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
5000 V	5 TΩ

## RampTest Insulation resistance measurement

Range	Resolution	Accuracy
0,0...999,9 kΩ	0,1 kΩ	±(5% m.v. + 40 digits)
1,000...9,999 M.Ω	0,001 MΩ	
10,00...99,99 M.Ω	0,01 MΩ	
100,0...999,9 M.Ω	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	
1,000...4,999 TΩ	0,001 TΩ	

## The measurement of breakdown voltage in RampTest mode

Range	Resolution	Chosen $U_{ISO}$	Accuracy
25,0 V ... 99,0 V	0,1 V	<600 V	(± 5% m.v. ± 10 digits)
100 V ... 600 V	1 V	<600 V	(± 5% m.v. ± 4 digits)
25 V ... 999 V	1 V	>600 V	(± 5% m.v. ± 5 digits)
1.00 kV ... 5.00 kV	10V	>600 V	(± 5% m.v. ± 4 digits)

## 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	±(3% m.v. + 2 digits)

• frequency range: 45...65 Hz

\*The acronym „m.v.” stands for a „measured reference value”

## 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. EN 61010-1
- case protection rating in acc. EN 60529 IP65

## Other technical specifications::

- power supply of the meter NIMH 9.6 V - 2 Ah battery pack and power supply 12 V
- weight of the meter approx. 0,9 kg
- dimensions 200 x 180 x 77 mm
- display LCD segment display
- measurement results memory 990 cells, 11880 records
- transmission of measurement results USB

## Standard accessories of the meter:

- test lead with banana plug; 1.8 m; 5 kV; red
- test lead with banana plug; 1.8 m; 5 kV; blue
- test lead with banana plug; 1.8 m; 5 kV; black
- USB transmission cable
- crocodile clip K09; black; 11 kV
- crocodile clip K09; red; 11 kV
- crocodile clip K09; blue; 11 kV
- pin probe 5kV red
- pin probe 5kV black
- carrying case M8
- power supply adaptor Z7
- battery pack
- SONEI Reader software
- calibration certificate
- warranty card

WAPRZ1X8REBB  
WAPRZ1X8BUBB  
WAPRZ1X8BLBB  
WAPRZUSB  
WAKROBL32K09  
WAKRORE32K09  
WAKROBU32K09  
WASONRE0GB2  
WASONBLOGB2  
WAFUTM8  
WAZASZ7

## Additional accessories of the meter:

- shielded test lead with banana plug; 5 m; black 5kV
- shielded test lead with banana plug; 5 m; red 5kV
- shielded test lead with banana plug; 5 m; blue 5kV
- probe insulation resistance of floors and walls
- test lead with banana plug; 10 m; 5 kV; black
- test lead with banana plug; 10 m; 5 kV; red
- test lead with banana plug; 10 m; 5 kV; blue
- lead for battery loading from the socket of car lighter (12V)
- SoneI PE 5 software
- 5 kV Calibration Box

WAPRZ0058LBBE5K  
WAPRZ005REBB5K  
WAPRZ005BUBB5K  
WAPRZ005BUBB5K  
WASONPRS1GB  
WAPRZ0108LBBE5K  
WAPRZ010REBB5K  
WAPRZ010BUBB5K  
WAPRZLAD12SAM  
WAPROSONPE5  
WAADACS5KV

