



## Great little multitasker

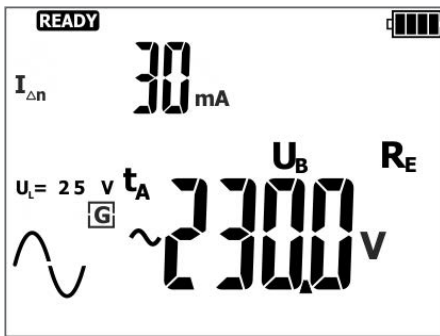
### Features

- **Measurement of short circuit loop parameters**
  - Measurement of short circuit loop impedance in networks with rated voltage: 220/380 V, 230 V/400 V, 240/415 V and frequency 45...65 Hz, operating voltage range: 180...460 V
  - Indication of short circuit loop resistance R and short circuit loop reactance X
  - Measurements of short circuit loop impedance with 15 mA current, without tripping the RCD circuit breaker
  - Maximum test current: 7.6 A (at 230 V), 13.3 A (at 400 V)
- **Testing RCD breakers of AC, A types**
  - Testing of prompt, short-delay and selective RCDs with rated current values 10, 15, 30, 100, 300, 500 mA
  - Measurement of  $I_A$  trip current and tripping time  $t_A$  for currents  $0.5 I_{\Delta n}$ ,  $1 I_{\Delta n}$ ,  $2 I_{\Delta n}$ ,  $5 I_{\Delta n}$
  - $R_E$  and  $U_B$  measurement without RCD tripping
  - Extended AUTO function of RCD measurement, with the possibility of measuring  $Z_{L-PE}$  with low current
  - Measurement of  $I_A$  and  $t_A$  during one RCD tripping
- **MPI-507 | Earth resistance measurement**
  - Measurement with 3-pole method
- **MPI-506 • MPI-507 | Insulation resistance measurement**
  - Test voltage 100 V, 250 V, 500 V
- **Measurement of resistance of protective conductors and equipotential bondings**
  - Measurement of protective connections continuity with a  $\pm 200$  mA current in accordance with EN 61557-4
  - Autocalibration of test leads - any leads can be used
  - Low current resistance measurement with sound signaling
- **MPI-506 • MPI-507 | Phase sequence indication**

### Additional functions

- Checking the correctness of PE connection using a contact electrode
- Measurement of voltage (0 ... 500 V) and network frequency
- Memory of 990 results
- Wireless data transmission to a computer
- Backlit keypad





## Simplicity and cutting edge technologies

Probably the **world's smallest meter** with such a large number of measurement functions. The functions are selected with a rotary switch. Additional parameters are set with buttons located on the housing face. The settings are saved by the device even when the battery is completely discharged.

All buttons and the modular display have backlight, which significantly improves operation in low light. Large memory eliminates the need for taking notes during the measurements.

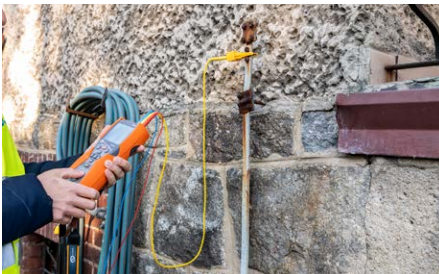


## Inspection of electrical safety

This device may be used to inspect safety of electrical systems in households and industrial facilities. Its main advantage is **quick measurement (just a few seconds!) of fault loop impedance** in circuits with RCD.

Measurements can be easily automated with:

- auto mode of residual current devices (RCD) tests,
- the WS adapter that can be used for testing systems via standard 230 V sockets.



## MPI-507 | Earth resistance measurement

The device is ideal for measurements of earthing installations in residential buildings. It allows you to check the quality of the earthing system using the 3-pole method. Together with earth resistance result, the meter shows the interference voltage and the resistance of the auxiliary  $R_s$  and  $R_H$  probes.

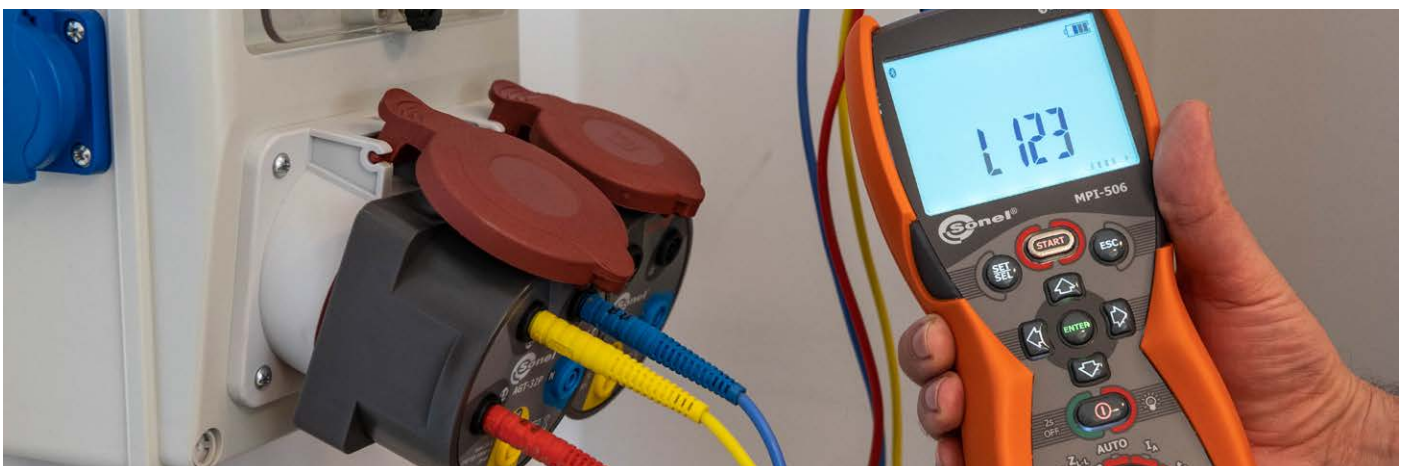


## Increased resistance to environmental conditions

The meter will cope well in difficult environmental conditions. Protection against penetration of dust and water is ensured by a unique housing with a level of protection IP67.

## Communication and software

You can easily transfer measurement data to your computer via Bluetooth wireless communication. In order to generate a report on measurements for electric shock protection, use **Sonel Reports PLUS** software. Saving the downloaded data to the simplest formats and printing is provided by free **Sonel Reader** software.



# Specifications

Measurement functions	Measurement range	Display range	Resolution	Accuracy ±(% m.v. + digits)
<b>Fault loop impedance</b>				
Fault loop $Z_{L-PE}$ , $Z_{L-N}$ , $Z_{L-L}$	0.13 Ω...1999 Ω acc. to IEC 61557	0.00 Ω...1999 Ω	from 0.01 Ω	±(5% m.v. + 3 digits)
Fault loop $Z_{L-PE}$ in RCD mode	from 0.5 Ω...1999 Ω acc. to IEC 61557	0.00 Ω...1999 Ω	from 0.01 Ω	from ±(6% m.v. + 5 digits)
<b>Measurements of RCD parameters</b>				
RCD tripping test and measurement of tripping time $t_A$ measuring current $0.5 I_{\Delta n}$ , $1 I_{\Delta n}$ , $2 I_{\Delta n}$ , $5 I_{\Delta n}$				
general and short-time delay RCD	0 ms...300 ms	0 ms...300 ms	1 ms	±(2% m.v. + 2 digits)
selective RCD	0 ms...500 ms	0 ms...500 ms	1 ms	±(2% m.v. + 2 digits)
Measurement of RCD tripping current $I_A$ measuring current $0.3 I_{\Delta n}$ ... $2.0 I_{\Delta n}$				
for sinusoidal residual current (AC type)	3.0 mA...500 mA	3.0 mA...500 mA	from 0.1 mA	±5% $I_{\Delta n}$
for unidirectional residual current and unidirectional with the 6 mA DC bias (type A)	3.5 mA...420 mA	3.5 mA...420 mA	from 0.1 mA	±10% $I_{\Delta n}$
<b>MPI-507   Earth resistance</b>				
3-pole method	0.68 Ω...1999 Ω acc. to IEC 61557-5	0.00 Ω...1999 Ω	from 0.01 Ω	from ±(3% m.v. + 5 digits)
<b>MPI-506 • MPI-507   Insulation resistance</b>				
Measuring voltage 100 V	100 kΩ...99.9 MΩ acc. to IEC 61557-2	0 kΩ...99.9 MΩ	from 1 kΩ	±(5% m.v. + 8 digits)
Measuring voltage 250 V	250 kΩ...199.9 MΩ acc. to IEC 61557-2	0 kΩ...199.9 MΩ	from 1 kΩ	±(5% m.v. + 8 digits)
Measuring voltage 500 V	500 kΩ...599.9 MΩ acc. to IEC 61557-2	0 kΩ...599.9 MΩ	from 1 kΩ	±(5% m.v. + 8 digits)
<b>Resistance of protective conductors and equipotential bondings</b>				
Measurement of resistance of protective conductors and equipotential bondings with ±200 mA current	0.12 Ω...400 Ω acc. to IEC 61557-4	0.00 Ω...400 Ω	from 0.01 Ω	±(2% m.v. + 3 digits)
Measurement of resistance with low current	0.0 Ω...1999 Ω	0.0 Ω...1999 Ω	from 0.1 Ω	±(3% m.v. + 3 digits)
<b>MPI-506 • MPI-507   Phase sequence indication</b>	in the same direction (correct), opposite direction (incorrect), $U_{L-L}$ voltage: 100 V...440 V (45 Hz...65 Hz)			

# Technical data

## Safety and operating conditions

Measuring category acc. to EN 61010	IV 300 V (III 600 V)
Ingress protection	IP67
Type of insulation acc. to EN 61010-1 and IEC 61557	double
Dimensions	220 x 102 x 60 mm
Weight	ca. 0.8 kg

## Memory and communication

Memory	990 cells, 10 000 records
Data transmission	Bluetooth

## Other data

The product meets the EMC (emission for industrial environment) requirements according to standards	EN 61326-1 EN 61326-2-2
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"m.v." - measured value

## Standard accessories



**WS-03 adapter  
with START button  
(UNI-Schuko plug)**

WAADAWS03



**Crocodile clip  
1 kV 20 A red  
only for:**  
• MPI-506  
• MPI-507

WAKRORE20K02



**Crocodile clip  
1 kV 20 A yellow**

WAKROYE20K02



**Test lead 1.2 m  
(banana plugs)  
red / blue / yellow**

WAPRZ1X2REBB  
WAPRZ1X2BUBB  
WAPRZ1X2YEBB



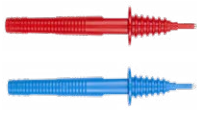
**Test lead 30 m,  
red (banana plugs,  
on H-frame reel)  
only for MPI-507**

WAPRZ030REBBN



**Test lead 15 m,  
blue (banana plugs,  
on H-frame reel)  
only for MPI-507**

WAPRZ015BUBBN



**Pin probe 1 kV  
(banana socket)  
red / blue**

WASONREOGB1  
WASONBUOGB1



**Pin probe 1 kV  
(banana socket)  
yellow  
only for:**  
• MPI-506  
• MPI-507

WASONYE0GB1



**2 x earth con-  
tact test probe  
(rod), 25 cm  
only for MPI-507**

WASONG25



**M1 hanging straps**  
WAPOZSZE4

**M1 hanging  
hook straps**  
WAPOZUCH1



**M6 carrying case**

WAFUTM6



**4 x LR6 1.5 V battery**



**Factory calibra-  
tion certificate**

## Optional accessories



**EVSE-01 adapter  
for testing vehicle  
charging stations**

WAADAEVSE01



**TWR-1J  
RCD breaker  
testing adapter**

WAADATWR1J



**WS-04 adapter  
(UNI-SCHUKO  
angular plug)**

WAADAWS04



**Test lead for fault  
loop measurement  
(banana plugs)  
5 m / 10 m / 20 m**

WAPRZ005REBB  
WAPRZ010REBB  
WAPRZ020REBB



**Foldable pin  
probe, 1 kV, 2 m  
(banana socket)**

WASONSP2M



**Crocodile clip  
1 kV 20 A blue**

WAKROBU20K02



**Industrial socket  
adapter 16 A / 32 A**

WAADAAGT16T  
WAADAAGT32T



**Three-phase socket  
adapter 16 A / 32 A**

WAADAAGT16C  
WAADAAGT32C



**Three-phase socket  
adapter 16 A / 32 A**

WAADAAGT16P  
WAADAAGT32P



**Three-phase socket  
adapter 63 A**

WAADAAGT63P



**Sonel Reports  
PLUS software**



**Calibration certificate  
with accreditation**