



The simplest method of professional measurements

Features

- **Measurement of short circuit loop parameters**
 - Measurement of short circuit loop impedance in networks with rated voltage: 220/380 V, 230/400 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
- **Measurement of resistance of protective conductors and equipotential bondings**
 - Measurement of protective connections continuity with a ± 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



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 included in the price

Features of MPI-502 are focused on ergonomics and maximally simplified user experience. 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**. 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.



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)
Fault loop impedance				
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)
Measurements of RCD parameters				
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)	4.0 mA...420 mA	4.0 mA...420 mA	from 0.1 mA	±10% $I_{\Delta n}$
Resistance of protective conductors and equipotential bondings				
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)

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 98 x 58 mm
Weight	ca. 0.6 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



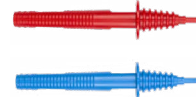
**WS-05 adapter
(UNI-SCHUKO
angular plug)**

WAADAWS05



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

WAPRZ1X2REBB
WAPRZ1X2BUBB
WAPRZ1X2YEBB



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

WASONREOGB1
WASONBUOGB1



**Crocodile clip
1 kV 20 A yellow**

WAKROYE20K02



M1 hanging straps

WAPOZSZE4



**M1 hanging
hook straps**

WAPOZUCH1



M6 carrying case

WAFUTM6



4x LR6 1.5 V battery



**Calibration
certificate**

Optional accessories



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

WAADAEVSE01



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

WAADATWR1J



**WS-01 adapter
with START button
(UNI-Schuko plug)**

WAADAWS01



**Pin probe 1 kV
(banana socket)
yellow**

WASONYE0GB1



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

WASONSP2M



**Crocodile clip 1 kV
20 A red / blue**

WAKRORE20K02
WAKROBU20K02



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

WAPRZ005REBB
WAPRZ010REBB
WAPRZ020REBB



**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



**Calibration certificate
with accreditation**