RCD METER

MRP-201

CAT IV
300V

IP 67

Wireless data
transmission to a computer.
Radio USB interface included!

- **Testing RCD breakers of AC, A and B types.**
- testing of general, short delay and selective RCDs for the rated current values $I_{\Delta n}$ =10, 30, 100, 300 and 500 mA,
- simultaneous measurement of triggering current I_A and disconnection time t_A, for currents $0,5I_{\Delta n}$, $1I_{\Delta n}$, $2I_{\Delta n}$, $5I_{\Delta n}$,
- ability to measure touch voltage U_B and earth resistance R_E without triggering,
- AUTO RCD test function.
- **AC voltage and frequency measurement.**
- **PE lead connection check using a touch electrode.**
- **Built-in memory for up to 990 cels of measurement results.**
- **Wireless radio communication interface.**
- **Professional software for reading data and creating reports.**

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

export@sonel.pl
www.sonel.pl

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RCD trigger test and response time measurement t_A

Measurement range according to IEC 61557: 0ms...the upper limit of the displayed value

RCD type	Rated Current Multiplication Factor	Range	Resolution	Accuracy
General or short delay	$0,5* I_{\Delta n}$	0...300ms	1ms	$\pm2\%$ m.v. + 2 digits[1]
	$1* I_{\Delta n}$			
	$2* I_{\Delta n}$	0...150ms		
	$5* I_{\Delta n}$	0...40ms		
Selective	$0,5* I_{\Delta n}$	0...500ms		
	$1* I_{\Delta n}$			
	$2* I_{\Delta n}$	0...200ms		
	$5* I_{\Delta n}$	0...150ms		

[1] for $I_{\Delta n}$= 10mA and 0,5 $I_{\Delta n}$ accuracy is $\pm2\%$ m.v. + 3 digits
- residual current setting accuracy:
  - for $1*I_{\Delta n}$, $2*I_{\Delta n}$ and $5*I_{\Delta n}$: 0...8%,
  - for $0,5*I_{\Delta n}$: -8...0%,
- nominal voltage U_n: 220V, 230V, 240V,
- work voltage range: 180...270V,
- nominal frequency f_n:50Hz, 60Hz,
- work frequency range: 45Hz...65Hz.

RCD disconnecting current measurement for a sine AC test current (I_A)

Measurement range according to IEC 61557: (0,3...1,0)$I_{\Delta n}$

Selected rated RCD current	Range	Resolution	Measurement current	Accuracy
10mA	3,3...10,0mA	0,1mA	$0,3$ x $I_{\Delta n}$ ...$1,0$ x $I_{\Delta n}$	$\pm5\%$ $I_{\Delta n}$
30mA	9,0...30,0mA			
100mA	33...100mA	1mA		
300mA	90...300mA			
500mA	150...500mA			

- start of measurement from the positive or negative half sine period of the test current
- test current flow time - max. 7510ms at f=50,0Hz .

RCD disconnecting current measurement for unidirectional pulsed residual current and unidirectional pulsed current with a 6mA DC offset (I_A)

Measurement range according to IEC61557:
(0,15...1,4) $I_{\Delta n}$ for $I_{\Delta n} \geq$ 30mA and (0,15...2)$I_{\Delta n}$ for $I_{\Delta n}$=10mA

Selected rated RCD current	Range	Resolution	Measurement current	Accuracy
10mA	1,5...20,0mA	0,1mA	$0,15$ x $I_{\Delta n}$ ...$2,0$ x $I_{\Delta n}$	$\pm10\%$ $I_{\Delta n}$
30mA	4,5...42,0mA			
100mA	15...140mA	1mA	$0,15$ x $I_{\Delta n}$ ...$1,4$ x $I_{\Delta n}$	$\pm10\%$ $I_{\Delta n}$
300mA	45...420mA			

- start of the measurement from the positive or negative half sine period of the test current
- test current flow time - max. 14710ms at f=50Hz

RCD response time measurement for the residual DC current (I_A)

Measurement range according to IEC61557: (0,2...2)$I_{\Delta n}$

Selected rated RCD current	Range	Resolution	Measurement current	Accuracy
10mA	2,0...20,0mA	0,1mA	$0,2$ x $I_{\Delta n}$ ...$2,0$ x $I_{\Delta n}$	$\pm10\%$ $I_{\Delta n}$
30mA	6...60mA	1mA		
100mA	20...200mA			
300mA	60...600mA			

- measurement possible for positive or negative residual current
- test current flow time - max. 4500ms at f=50Hz

Touch voltage measurement referred to the rated residual current (U_B)

Measurement range according to IEC61557: 10,0...99,9V

Range	Resolution	Measurement current	Accuracy
0..9,9V	0,1	$0,4$ x $I_{\Delta n}$	0...10% $I_{\Delta n}$ m.v. ± 5 digits
10,0..99,9V			0...15% $I_{\Delta n}$ m.v.

Earthing resistance measurement (R_E)

Selected rated RCD current	Range	Resolution	Measurement current	Accuracy
10mA	0,01kΩ...5,00kΩ	0,01kΩ	4mA	0...+10% m.v. ± 8 digits
30mA	0,01kΩ...1,66kΩ		12mA	0...+10% m.v. ± 5 digits
100mA	1Ω...500Ω	1Ω	40mA	0...+5% m.v. ± 5 digits
300mA	1Ω...166Ω		120mA	
500mA	1Ω...100Ω		200mA	

Voltage measurement

Range	Resolution	Accurancy
0,0...299,9V	0,1V	$\pm(2\%$ m.v. + 6 digits)
300...500V	1V	$\pm(2\%$ m.v + 2 digits)

- frequency range: 45...65Hz

Frequency measurement

Range	Resolution	Accurancy
45,0...65,0 Hz	0,1Hz	$\pm(0,1\%$ m.v. + 1 digit)

- voltage range 50...500V

Electric security:
- type of insulation — double, according to EN 61010-1 and IEC 61557
- measurement category — CAT IV 300V (III 600V) acc. to EN 61010-1
- protection class — IP67

Other technical data:
- power supply — alkaline batteries LR6 (AA) (4 pcs.)

Rated operational conditions:
- operating temperature — -10...+50°C
- storing temp. — -20...70°C
- humidity — 20...80%

Standard accessories of MRP-201 meter:

- Adapter UNI-SCHUKO (WS-05) — **WAADAWS05**
- Test lead with banana plug; 1,2m; yellow — **WAPRZ1X2YEBB**
- Test lead with banana plug; 1,2m; red — **WAPRZ1X2REBB**
- Test lead with banana plug; 1,2m; blue — **WAPRZ1X2BUBB**
- "Crocodile" clip K02; yellow — **WAKROYE20K02**
- Pin probe with banana connector; red — **WASONREOGB1**
- Pin probe with banana connector; blue — **WASONBUOGB1**
- Carrying case M6 — **WAFUTM6**
- hanging straps — **WAPOZSZE4**
- Receiver - interface for radio transmission OR-1 (USB) — **WAADAUSBOR1**
- handle to suspend the meter — **WAPOZUCH1**
- R6 batteries - 4pcs.
- operation manual
- calibration certificate

Optional accessories of MRP-201 meter:

- Test lead with banana plug 5m; red — **WAPRZ005REBB**
- Test lead with banana plug 10m; red — **WAPRZ010REBB**
- Test lead with banana plug 20m; red — **WAPRZ020REBB**
- Probe with START button with UNI-SCHUKO (WS-01) — **WAADAWS01**
- Software for creation of documentation from electrical measurements "SONEL Reports" — **WAPROSONPE4**

„m.v" - measured value.