

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_{Δ} and disconnection time t_{Δ} , 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 cells of measurement results.**
- **Wireless radio communication interface.**
- **Professional software for reading data and creating reports.**

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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	$\pm 2\%$ 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 $I_{\Delta n} = 10\text{mA}$ and 0,5 $I_{\Delta n}$ accuracy is $\pm 2\%$ 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 $I_{\Delta n}$	$\pm 5\%$ $I_{\Delta n}$
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 $f=50,0\text{Hz}$.

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 $I_{\Delta n} \geq 30\text{mA}$ and (0,15...2) $I_{\Delta n}$ for $I_{\Delta n} = 10\text{mA}$

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 $I_{\Delta n}$	$\pm 10\%$ $I_{\Delta n}$
30mA	4,5...42,0mA			
100mA	15...140mA	1mA		
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 $f=50\text{Hz}$

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 $I_{\Delta n}$	$\pm 10\%$ $I_{\Delta n}$
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 $f=50\text{Hz}$

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

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	0,01k Ω ...5,00k Ω	0,01k Ω	4mA	0...+10% m.v. ± 8 digits
30mA	0,01k Ω ...1,66k Ω		12mA	0...+10% m.v. ± 5 digits
100mA	1 Ω ...500 Ω	1 Ω	40mA	0...+5% m.v. ± 5 digits
300mA	1 Ω ...166 Ω		120mA	
500mA	1 Ω ...100 Ω		200mA	

Voltage measurement

Range	Resolution	Accuracy
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	Accuracy
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)
- Test lead with banana plug; 1,2m; yellow
- Test lead with banana plug; 1,2m; red
- Test lead with banana plug; 1,2m; blue
- "Crocodile" clip K02; yellow
- Pin probe with banana connector; red
- Pin probe with banana connector; blue
- Carrying case M6
- hanging straps
- Receiver - interface for radio transmission OR-1 (USB)
- handle to suspend the meter
- R6 batteries - 4pcs.
- operation manual
- calibration certificate

Optional accessories of MRP-201 meter:

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

WAADAWS05
WAPRZ1X2YEBB
WAPRZ1X2REBB
WAPRZ1X2BUBB
WAKROYE20K02
WASONRE0GB1
WASONBU0GB1
WAFUTM6
WAP0ZSZE4
WAADAUS0R1
WAP0ZUCH1

WAPRZ005REBB
WAPRZ010REBB
WAPRZ020REBB
WAADAWS01
WAPROSONPE4