



RCD/Loop/Line

Fast testing of all RCD's

(10, 30, 100, 300, 500, 1000 mA) both standard and selective types, AC and A types.

Test current multipliers of x0.5, x1, x5 for checking of the trip out time on limit current values.

Selectable phase angle 0° (positive), 180° (negative).

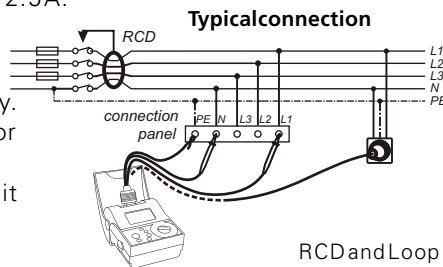
- **RCD trip-out current** (I_{Δ}) measurement with high resolution test ramp.
- **RCD trip-out time** (t_{Δ}) measurement at nominal differential current in accordance with the standards.
- **Contact voltage** (U_c) measurement for checking of Earthing System.
- **LOOP (EARTH) resistance** measurement without tripping the RCD.

Fast and accurate measurement of:

- **LINE (EARTH) resistance** with a test current of 2.5 A.
- **LOOP resistance** with a test current of 2.5 A.
- **LINE/LINE resistance** with a test current of 2.5 A.

Displayed sub-results:

- Prospective short circuit current (I_{psc}),
- Mains voltage (U_{L-N} , U_{L-L} , U_{L-PE}) at frequency.
- 1000 memory locations and PC Software for print-out of measurement protocol.
- Warning indication of incorrect or out of limit results.
- Socket for external battery charger.
- Auto power-off.



Measurements and testing in accordance with: EN/IEC 61557-3; EN/IEC 61557-6; DIN/VDE 0413-3; DIN/VDE 0413-6; DIN/VDE 0100; BS 7671, 16th Edition; CEI 64.8 EN/IEC 61010-1

SINGLE FUNCTION TESTS



Technical Specification

RCD Test

Test current:	AC, pulse
RCD type:	standard, selective
Nominal test currents (mA):	10, 30, 100, 300, 500, 1000
Multiplicator of I_{Δ} :	1/2, 1, 5
Trip out current I_{Δ} (standard RCDs)	
Measuring range I_{Δ} :	type AC (0.2 ÷ 1.1) $I_{\Delta N}$, type A (0.2 ÷ 1.5) $I_{\Delta N}$
Resolution:	0.05 $I_{\Delta N}$
Accuracy:	± 0.1 $I_{\Delta N}$
Trip out time (standard or selective RCDs)	
Measuring time (ms):	0 ÷ 300 (500 S), 0 ÷ 40 (150 S)
Resolution:	1
Accuracy:	± 3 ms
Contact voltage U_c	
Measuring range U_c (V):	0 ÷ 99.9
Resolution (V):	0.01, 0.1
Accuracy:	-0/+10 % of reading ± 0.2 V

Voltage U_{L-N} , U_{L-L} , U_{L-PE}

Measuring range (V):	0 ÷ 440	Frequency	45.0 ÷ 65.0 Hz
Resolution (V):	1		0.1
Accuracy:	± (3 % of reading + 3 V)		± 0.2 Hz
Nominal frequency range:	DC, 45 ÷ 65 Hz		

R Line / R Loop Resistance / I_{psc}

Nominal voltage:	100 ÷ 264 (R _{loop}), 100 ÷ 440 (R _{line})
Measuring range (Ω):	0 ÷ 2000
Accuracy:	± (5 % of reading + 0.05 Ω)
Display range I_{psc} :	0.06 A ÷ 42.4 kA / 24.4 kA
Loop Resistance R_L (no RCD trip out)	
Measuring range (Ω):	0 ÷ 19.99, 20.0 ÷ 199.9, 200 ÷ 1999
Resolution (Ω):	0.01, 0.1, 1
Accuracy:	Consider accuracy of U_c

Ordering information

Standard Set

Part No. **MI2120**



- Instrument SMARTEC RCD/Loop/Line
- Mains measuring cable, 1.5 m
- Universal test cable, 3 x 1.5 m
- Alligator clip (black), 2 pcs.
- Test tip (black)
- Test tip (blue)
- Instruction manual
- Declaration of conformity
- Product verification data

Optional accessories



- A1007** - Carrying strap
- A1020** - Small soft carrying bag
- A1045** - Battery charger with a set of 4 pcs NiMH batteries
- A1050** - PCSW® SmartLink® with interface cable
- A1171** - USB/RS 232 converter with 1 m fixed cable