

SMARTeC®

## RCD (Fi)

### Fast testing of RCD's

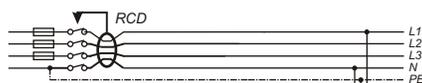
(10, 30, 100, 300, 500 mA) both standard and selective types, AC type. Test current multipliers of x 0.5, x 1, x 5 for checking of the trip out time on limit current values.

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

- **RCD trip-out current** ( $I_D$ ) measurement with high resolution test ramp.
- **RCD trip-out time** ( $t_D$ ) 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.  
Measurement of **VOLTAGE** between LINE and Neutral and frequency measurement.  
Measurement of **VOLTAGE** between LINE and PE conductor and frequency measurement.
- 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.

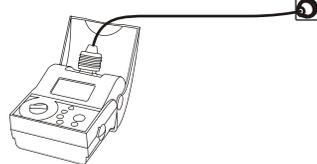
**Measurements and testing in accordance with:** EN / IEC 61557-6; DIN / VDE 0413-6; DIN / VDE 100; BS 7671, 16th Edition; CEI 64.8; EN / IEC 61010-1

### Typical connection



RCD test

Connection of the instrument to item under test



### SINGLE FUNCTION TESTS



### Technical Specification

#### RCD Test

Test current:	AC
RCD type:	standard, selective
Nominal test currents (mA):	10, 30, 100, 300, 500
Multiplicators of $I_{\Delta N}$ :	1/2, 1, 5
<b>Trip out time</b> (standard or selective RCDs)	
Measuring time (ms):	0 ÷ 300 (500 $\text{Ⓢ}$ ), 0 ÷ 40 (150 $\text{Ⓢ}$ )
Resolution (ms):	1
Accuracy:	± 3 ms

#### Trip out current $I_{\Delta}$ (standard RCDs)

Range $I_{\Delta}$ :	(0.2 ÷ 1.1) $I_{\Delta N}$
Resolution:	0.05 $I_{\Delta N}$
Accuracy:	± 0.1 $I_{\Delta N}$

#### 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
Accuracy:	± (3 % of reading + 3 V)
Nominal frequency range:	DC, 45 ÷ 65 Hz
<b>R LOOP (no RCD trip out):</b>	$R_{LOOP} = U_c / I_{\Delta N}$
Measuring range (W):	0 ÷ 2000
Accuracy:	(consider accuracy of $U_c$ )
Test current:	$I_{\Delta N}/2$

#### Frequency

Measuring range (Hz):	45.0 ÷ 65.0 Hz
Accuracy:	± 0.2 Hz

### Ordering information

#### Standard Set

Part No. MI 2121



- Instrument SMARTeC RCD (Fi)
- Mains measuring cable, 1.5 m
- Instruction manual
- Product verification data

#### Optional accessories



- A 1007** - Carrying strap
- A 1011** - Universal test cable, 3 x 1.5 m
- A 1013** - Alligator clip, black
- A 1014** - Test tip, black
- A 1015** - Test tip, blue
- A 1020** - Small soft carrying bag
- A 1045** - Battery charger with a set of 4 pcs NiMH batteries
- A 1050** - PC SW "Smart Link" with interface cable
- A 1171** - USB/RS 232 converter with 1 m fixed cable