

# MI 3122 Z Line-Loop/RCD

SMART<sup>TEC</sup>®



Professional  
solution for  
smart  
operator



## Main Features:

- **Supports all live tests** on LV electrical circuits:
  - Loop impedance / prospective fault current
  - Line impedance / prospective short-circuit current
- **Built-in fuse characteristics** for quick evaluation of measuring results
- **RCD tests** (trip out time, contact voltage, ramp test, Autotest)
- Testing on 1- and 3-phase systems
- Phase sequence test
- Metal test button for touch voltage detection
- **High accuracy non tripping loop test** for RCD protected circuits
- **Pre-programmed limits**
- PASS/FAIL evaluation of result
- **Bright GREEN/RED indicators** provides visual evaluation of results
- Suited for testing on **CAT IV** installations
- **Magnetic holder** allows hands-free operation
- **Built-in battery charger**
- Two level memory structure for saving of test results and parameters
- Compatible with EuroLink PRO PCSW package
- **USB and RS232** ports
- Robust and ergonomic design

## Suitable for:

- Verification, maintenance and periodic testing of electrical installations
- Evaluation of protective measures in installation (fuse size, RCD operation)
- Troubleshooting on live installation
- Testing on CAT IV installations (distribution side of installations, LV substations, industrial plants etc).

## Standards:

Instrument:  
IEC/EN 60364  
VDE 100  
BS 7671 17th edition  
CEI 64.8

## Product:

IEC/EN 61557 Parts 1,3,6,7,10  
IEC/EN 61010-1  
IEC/EN 61326



Magnetic holder for hands free operation



Large LCD screen with backlight and PASS/FAIL indicators.

## Technical specifications

### RCD testing

Nominal residual current (A, AC)	10 mA, 30 mA, 100 mA, 300 mA, 500 mA, 1000 mA
Test current shape	Sine-wave (AC), pulsed (A)
RCD type	G (non-delayed), S (time-delayed)
Test current starting polarity	0° or 180°
Voltage range	50 V ÷ 264 V (45 Hz ÷ 65 Hz)
Complete measuring range corresponds to EN 61557 requirements.	

### Contact voltage

Measuring range (V)	Resolution (V)	Accuracy
0.0 ÷ 19.9	0.1	(-0 % / +15 %) of reading ± 10 digits
20.0 ÷ 99.9	0.1	(-0 % / +15 %) of reading

Test current: max. 0.5xIΔN Limit contact voltage: 25 V, 50 V

### Trip-out time

Measuring range (ms)	Resolution (ms)	Accuracy
0 ÷ 300	1	±3 ms

Test current ½xIΔN, IΔN, 2xIΔN, 5xIΔN

### Trip-out current

Measuring range (IΔ)	Resolution (IΔ)	Accuracy
0.2xIΔN ÷ 1.1xIΔN (AC type)	0.05xIΔN	±0.1xIΔN
0.2xIΔN ÷ 1.5xIΔN (A type, IDN >30 mA)	0.05xIΔN	±0.1xIΔN
0.2xIΔN ÷ 2.2xIΔN (A type, IDN <30 mA)	0.05xIΔN	±0.1xIΔN

### Fault loop impedance (no disconnecting device or FUSE selected)

Measuring range according to EN61557 is 0.25 Ω ÷ 9.99 kΩ.

Measuring range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 9.99	0.01	±(5 % of reading + 5 digits)
10.0 ÷ 99.9	0.1	±(5 % of reading + 5 digits)
100 ÷ 999	1	± 10 % of reading
1.00 k ÷ 9.99 k	10	± 10 % of reading

Test current (at 230 V): 6.5 A (10 ms) Nominal voltage range: 30 V ÷ 500 V (45 Hz ÷ 65 Hz)

### Fault loop impedance (RCD selected - no trip out of RCD)

Measuring range according to EN61557 is 0.46 Ω ÷ 9.99 kΩ.

Measuring range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 9.99	0.01	±(5 % of reading + 10 digits)
10.0 ÷ 99.9	0.1	±(5 % of reading + 10 digits)
100 ÷ 999	1	± 10 % of reading
1.00 k ÷ 9.99 k	10	± 10 % of reading

Nominal voltage range: 30 V ÷ 500 V (45 Hz ÷ 65 Hz)

### Line impedance

Measuring range according to EN61557 is 0.25 Ω ÷ 9.99 kΩ.

Measuring range (Ω)	Resolution (Ω)	Accuracy
0.00 ÷ 9.99	0.01	±(5 % of reading + 5 digits)
10.0 ÷ 99.9	0.1	±(5 % of reading + 5 digits)
100 ÷ 999	1	± 10 % of reading
1.00 k ÷ 9.99 k	10	± 10 % of reading

Test current (at 230 V): 6.5 A (10 ms) Nominal voltage range: 30 V ÷ 500 V (45 Hz ÷ 65 Hz)

### Phase rotation

Nominal system voltage range	100 VAC ÷ 550 VAC
Nominal frequency range	14 Hz ÷ 500 Hz
Result displayed	1.2.3 or 3.2.1

### TRMS voltage monitor, Frequency

Measuring range	Resolution	Accuracy
0 V ÷ 550 V	1	±(2 % of reading + 2 digits)
10.0 Hz ÷ 499.9 Hz	0.1	±(0.2 % of reading + 1 digit)

### General data

Power supply:	6x1.5 V batteries or rechargeable batteries, size AA
Operation:	typical 20 h
Overvoltage category:	600 V CAT III, 300 V CAT IV
Protection classification:	double insulation
Pollution degree:	2
Protection degree:	IP 40
Display:	128x64 dots matrix display with backlight
Communication transfer speed:	115200 baud (RS 232) / 256000 baud (USB)
Memory:	1900 measurements
Dimensions (w x h x d):	14 cm x 8 cm x 23 cm
Weight (without batteries):	0,93 kg

## Ordering information

MI 3122

Standard set



Instrument MI 3122 Z Line-Loop/RCD tester

Soft hand strap

Schuko test cable

Universal test cable 3 x 1.5 m

Test tips, 3 pcs (blue, black, green)

Alligator clips, 3 pcs (blue, black, green)

Power supply adapter + 6 NiMH AA rechargeable batteries

Instruction manual on CD

Short instruction manual

Product verification data

Handbook "Guide for testing and verification of low voltage installations" on CD

## Optional Accessories

Photo	Order No.	Description
	A 1110	Three phase cable-adaptor
	A 1111	Three phase adapter
	A 1160	Fast battery charger with a set of 6 pcs NiMH rechargeable AA batteries
	A 1290	PC SW EuroLink PRO with USB and RS232/PS cable
	A 1198	Magnetic contact probe
	A 1272	Plug commander 1,5 m (spiral cable)
	A 1256	Plug commander 1,5 m (straight cable)
	A 1270	Tip commander 1,5 m (spiral cable)
	A 1244	Tip commander 1,5 m (straight cable)
	A 1271	Small soft carrying bag
	A 1289	Soft carrying bag

Note! Photographs in this catalogue may slightly differ from the instruments at the time of delivery. Subject to technical change without notice.



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