

MI 3122 Z Line-Loop / RCD

SMART^{TEC}®



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 measurement 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
- Basic downloading with EuroLink PRO PC SW package
- Compatible with EuroLink PRO Plus PC SW package
- **USB and RS232** ports
- Robust and ergonomic design

Suitable for:

- Verification, maintenance and periodic testing of electrical installations
- Evaluation of protective measures in LV-installations (fuse size, RCD operation)
- Troubleshooting on live installations
- 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

Applications:

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 1198	Magnetic contact probe
	A 1244	Tip commander 1,5 m (straight cable)
	A 1256	Plug commander 1,5 m (straight cable)
	A 1270	Tip commander 1,5 m (spiral cable)
	A 1272	Plug commander 1,5 m (spiral cable)
	A 1271	Small soft carrying bag
	A 1289	Soft carrying bag
	A 1290	PC SW EuroLink PRO Plus with USB and RS232/PS2 cable
	A 1291	PC SW EuroLink PRO with USB and RS232/PS2 cable

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



Measuring and Regulation Equipment Manufacturer

METREL d.d.
Ljubljanska 77
SI-1354 Horjul
Tel: + 386 (0)1 75 58 200
Fax: + 386 (0)1 75 49 226
E-mail: metrel@metrel.si
http://www.metrel.si