MI 3122 SMARTEC® Z Line-Loop / RCD

The MI 3122 SMARTEC Z Line-Loop / RCD is designed specifically for live circuit testing. The instrument contains integrated characteristics of fuses and RCDs for the evaluation of test results. The online voltage monitoring system allows the operator to control what is happening on three simultaneous voltages in real-time. The bright red and green PASS / FAIL lights and help screens for each measurement make the handling of the instrument easy and clear. All the results can be quickly saved on the instrument and then downloaded via the optional A 1291 EuroLink PRO or A 1290 EuroLink PRO Plus software for evaluation and professional report generation after testing. The MI 3122 SMARTEC Z Line-Loop / RCD performs RCD, loop, line, AC voltage, frequency and phase sequence tests required by the EN 61557 standard.

MEASURING FUNCTIONS:

- Line impedance;
- Loop impedance;
- Loop impedance with Trip Lock RCD function;
- TRMS voltage and frequency;
- Phase sequence;
- RCD testing (general and selective, type AC and A).

KEY FEATURES:

- **Help screens:** instrument comes complete with built-in help screens for referencing on site.
- **LED Pass/Fail indicators:** two LED indicators for PASS / FAIL evaluation of test results are placed on both sides of the LCD.
- **Built-in fuse tables:** this unique feature allows automatic evaluation of the line / loop impedance compared to the regulations.
- **Online voltage monitoring:** monitors all 3 voltages in real-time.
- **Downloadable:** downloads via RS232 or USB cable directly to the PC with the help of the optional software.
- **Upgradeable:** if changes occur to the regulations upgrades can be made to the firmware to keep the instrument up to date.
- **Trip Lock function:** Zs (RCD) function performs a loop impedance test without tripping the RCD.
- **Built-in charger & rechargeable batteries:** instrument has a built-in charging circuit and comes complete with a set of rechargeable NiMH batteries.
- **RCD auto:** automated RCD testing procedure significantly reduces test time.
- **Easy to use:** large bright LCD display and large buttons enable easy handling of the instrument (even while wearing gloves).
- **Magnetic holder:** magnet for fixing instrument on metal surfaces enables hands-free operation.

APPLICATION:

- Domestic and Industrial live circuit testing;
- Testing of single phase and 3-phase, TT and TN systems.

STANDARDS:

Functionality:
IEC/EN 61557
Other reference standards for testing:
IEC/EN/HD 60364; IEC/EN 61008; IEC/EN 61009; IEC/EN/TR 60755; AS/NZ 3760; AS/NZ 3018; CEI 64.8; HD 384; BS 7671; VDE 0413
Electromagnetic compatibility:
IEC/EN 61326-1;
IEC/EN 61326-2-2
Safety:
IEC/EN 61010-1; IEC/EN 61010-031

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TECHNICAL DATA:

Function	Measuring range	Resolution	Accuracy
RCD testing (EN 61557-6)	$I_{\Delta N}$: 10 mA, 30 mA, 100 mA, 300 mA, 500 mA, 1 A		
- Scaling factor for $I_{\Delta N}$	x 0.5; x 1; x 2; x 5		
- Contact voltage U_C	0.0 V … 19.9 V 20.0 V … 99.9 V	0.1 V 0.1 V	(-0%/+15%) of reading ± 10 digits (-0%/+15%) of reading
- Trip-out current	(0.2 … 1.1) x $I_{\Delta N}$ (AC type) (0.2 … 1.5) x $I_{\Delta N}$ (A type, $I_{\Delta N} \geq 30$ mA) (0.2 … 2.2) x $I_{\Delta N}$ (A type, $I_{\Delta N} < 30$ mA)	0.05 x $I_{\Delta N}$ 0.05 x $I_{\Delta N}$ 0.05 x $I_{\Delta N}$	± 0.1x $I_{\Delta N}$ ± 0.1x $I_{\Delta N}$ ± 0.1x $I_{\Delta N}$
- Trip-out time	0.0 ms … 40.0 ms 0.0 ms … max. time	0.1 ms 0.1 ms	± 1 ms ± 3 ms
Loop impedance (EN 61557-3)	0.00 Ω … 9.99 Ω 10.0 Ω … 99.9 Ω 100 Ω … 999 Ω 1.00 kΩ … 9.99 kΩ	0.01 Ω 0.1 Ω 1 Ω 10 Ω	±(5 % of reading + 5 digits) ±(5 % of reading + 5 digits) ±10 % of reading ±10 % of reading
Line impedance (EN 61557-3)	0.00 Ω … 9.99 Ω 10.0 Ω … 99.9 Ω 100 Ω … 999 Ω 1.00 kΩ … 9.99 kΩ	0.01 Ω 0.1 Ω 1 Ω 10 Ω	±(5 % of reading + 5 digits) ±(5 % of reading + 5 digits) ±10 % of reading ±10 % of reading
Voltage	0 V … 550 V	1 V	±(2 % of reading + 2 digits)
Frequency	15.0 Hz … 499.9 Hz	0.1 Hz	±(0.2 % of reading + 1 digit)
Phase sequence (EN 61557-7)	1.2.3 or 3.2.1		
Power supply	6 x 1.2 V rechargeable batteries, type AA		
Overvoltage category	CAT III / 600 V; CAT IV / 300 V		
Protection class	Double insulation		
COM port	RS232 and USB		
Dimensions	140 x 230 x 80 mm		
Weight	0.93 kg		

KEY FEATURES

Large LCD screen with backlight and PASS / FAIL indicators.

Simple and fast manipulation.

USB and RS232 communication ports.

STANDARD SET:

- Instrument Smartec Z Line - Loop / RCD
- Soft hand strap
- Schuko-plug test cable
- Test lead, 3 x 1.5 m
- Test probe, 3 pcs (blue, black, green)
- Crocodile clip, 3 pcs (blue, black, green)
- Power supply adapter + 6 NiMH recharge-able batteries, type AA
- Instruction manual on CD
- Short instruction manual
- Handbook on CD
- Calibration certificate

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