

# MI 3102H BT EurotestXE 2,5 kV



**NEW**  
Multifunctional electrical  
installation tester

**AUTO SEQUENCE®**  
tester with  
insulation resistance  
up to 2,5 kV



MI 3102H BT EurotestXE 2,5 kV is a multifunctional measuring instrument which apart from all the necessary functions for complete installation safety testing according to IEC/EN 61557 performs insulation resistance measurement with the test voltage up to 2,5 kV (measuring range is up to 20 G $\Omega$ ) and enables diagnostic test by PI and DAR indexes calculation. Besides, the MI 3102H BT EurotestXE 2,5 kV enables on-line voltage monitoring, phase sequence testing, earth resistance measurement, illuminance measurement and TRMS current measurement. EurotestXE 2,5 kV is equipped with integrated characteristics of fuses and RCDs for PASS / FAIL evaluation of test results. All the results can be quickly saved and referenced on the instrument and then downloaded via the EuroLink PRO software (included in the standard set) to the computer for evaluation and report generation after testing.

#### Measuring functions:

- Insulation resistance with DC voltage 50 V to 2,5 kV and PI, DAR calculation;
- Continuity of PE conductors with 200 mA DC test current with polarity change;
- Continuity of PE conductors with 7 mA test current without RCD tripping;
- Continuity RPE with 200 mA AC on outlet;
- Line/Loop impedance;
- Loop impedance with Trip Lock RCD function;
- TRMS voltage and frequency;
- Phase sequence;
- Power and harmonics;
- RCD testing (general and selective, type AC, A, F);
- Earth resistance (3-wire and 2-clamps method);
- Specific earth resistance with Ro-adaptor (option);
- TRMS leakage and load currents (option);
- Illumination (option).

#### Key features:

- Predefined mini AUTOSEQUENCES:  
**Auto TT (U, Zln, Zs, Uc);**  
**Auto TN/RCD (U, Zln, Zs, Rpe);**  
**Auto TN (U, Zln, Zlpe, Rpe).**
- Wide range of insulation test voltages from 100 V to 2500 V, readings up to 20 G $\Omega$ .
- Insulation diagnostics: Polarisation Index (PI) and Dielectric Absorption Ratio (DAR) calculation.
- Power measurements and harmonics analysis.
- Built-in help screens for referencing on site.
- Built-in fuse tables for automatic evaluation of the line / loop impedance result.
- Monitoring of all 3 voltages in real-time.
- Automatic polarity reversal on continuity test.
- Loop impedance test without tripping the RCD.
- Built-in charger and rechargeable batteries as standard accessory.
- Automated RCD testing procedure.
- Bluetooth communication with PC, Android tablets and smart phones via built-in BT.
- PC SW EuroLink PRO for downloading of test results and report creation.
- EuroLink Android APP, data management tool (option).

#### APPLICATION

- Initial and periodic testing of domestic and industrial installations.
- Testing of Insulation resistance of transformers, motors, cables, machines, etc.
- Observation of insulation trends.
- Testing of single and multiphase systems.
- Testing of TT and TN supply systems.

#### STANDARDS

- Functionality:  
EN 61557
- Other reference standards for testing:  
IEC/EN 60364;  
EN 61008;  
EN 61009;  
EN 60755;  
BS 7671;  
AS/NZ 3760;  
CEI 64.8;  
HD 384;  
VDE 413
- Electromagnetic compatibility (EMC):  
EN 61326
- Safety (LVD):  
EN 61010-1;  
EN 61010-031  
EN 31010-2-030  
EN 31010-2-032

# Technical specification

Function	Measuring range	Resolution	Accuracy	
CONTINUITY	Test Current 7 mA 2-wire	0.00 Ω ... 19.99 Ω 20.0 Ω ... 199.9 Ω	0.1 Ω 1 Ω	±(5 % of r. + 5 digits)
	Test Current 200 mA 2-wire	0.00 Ω ... 19.99 Ω 20.0 Ω ... 199.9 Ω 200.0 Ω ... 1999 Ω	0.01 Ω 0.1 Ω 1 Ω	±(3 % of r. + 3 digits) ±(5 % of r.) ±(5 % of r.)
INSULATION RESISTANCE	Test Voltage 50/100/250 V	0.00 MΩ ... 19.99 MΩ 20.0 MΩ ... 99.9 MΩ 100.0 MΩ ... 999.9 MΩ	0.01 MΩ 0.1 MΩ 1 MΩ	±(5 % of r. + 3 digits) ±(5 % of r.) ±(20 % of r.)
	Test Voltage 500/1000 V	0.00 MΩ ... 19.99 MΩ 20.0 MΩ ... 99.9 MΩ 200 MΩ ... 999 MΩ	0.01 MΩ 0.1 MΩ 1 MΩ	±(5 % of r. + 3 digits) ±(5 % of r.) ±(10 % of r.)
	Test Voltage 2500 V	0.00 MΩ ... 19.99 MΩ 20.0 MΩ ... 199.9 MΩ 200 MΩ ... 999 MΩ 1.00 GΩ ... 19.99 GΩ	0.01 MΩ 0.1 MΩ 0.1 MΩ 0.01 GΩ	±(5 % of r. + 3 digits) ±(5 % of r.) ±(10 % of r.) ±(10 % of r.)
INSULATION ANALYSING	Calculation of PI, DAR, DD Only for test voltage 500/1000/2500 V	0.01 MΩ ... 9.99 MΩ 10.0 MΩ ... 100 MΩ	0.01 MΩ 0.1 MΩ	±(5 % of r. + 2 digits) ±(5 % of r.)
RCD	Contact voltage	0.00 V ... 19.99 V 20.0 V ... 99.9 V	0.1 V	(-0%/±15 %) of r. ± 10 digits (-0%/±15 %) of r.
	Trip out time	0.0 ms ... 40.0 ms 0.0 ms ... max.time	0.1 ms	±1 ms ±3 ms
	Trip out current	0.2xI <sub>AN</sub> ... 1.1xI <sub>AN</sub> (AC) 0.2xI <sub>AN</sub> ... 1.5xI <sub>AN</sub> (A) I <sub>AN</sub> ≥ 30 mA 0.2xI <sub>AN</sub> ... 2.2xI <sub>AN</sub> (A) I <sub>AN</sub> < 30 mA	0.05xI <sub>AN</sub>	±0.1xI <sub>AN</sub>
IMPEDANCE	Zline L-L, L-N Ipsc	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 r. + 5 digits) ±(10 % of r.)
	Zloop L-PE, IpfC	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 r. + 5 digits) ±(10 % of r.)
VOLTAGE	TRMS	0 ... 550 V	1 V	±(2 % of r. + 2 digits)
	Frequency	0.00 Hz ... 9.99 Hz 10.0 Hz ... 499.9 Hz	0.01 Hz 0.1 Hz	±(0.2 % of r. + 1 digit)
CURRENT	TRMS, AC with A 1018	0.0 mA ... 99.9 mA 100 mA ... 999 mA 1.00 A ... 19.99 A	0.1 mA 1 mA 0.01 A	±(5 % of r. + 5 digits) ±(3 % of r. + 3 digits) ±(3 % of r.)
	TRMS, AC with A 1019	0.0 mA ... 99.9 mA 100 mA ... 999 mA 1.00 A ... 19.99 A	0.1 mA 1 mA 0.01 A	indicative ±(5 % of r.) ±(3 % of r.)
	TRMS, AC/DC with A1391, range=40A	0.00 A ... 1.99 A 2.00 A ... 19.99 A 20.0 A ... 39.9 A	0.01 A 0.1 A 0.1 A	±(3 % of r. + 3 digits) ±(3 % of r.) ±(3 % of r.)
	TRMS, AC/DC with A1391, range = 300A	0.00 A ... 19.99 A 20.0 A ... 39.9 A 40.0 A ... 299.9 A	0.01 A 0.1 A 0.1 A	indicative ±(3 % of r. + 5 digits)
EARTH RESISTANCE	3 wire	0.00 Ω ... 19.99 Ω 20.0 Ω ... 199.9 Ω 200.0 Ω ... 9999 Ω	0.01 Ω 0.1 Ω 1 Ω	±(5 % of r. + 5 digits)
	2 clamp	0.00 Ω ... 19.99 Ω 20.0 Ω ... 30.0 Ω 30.1 Ω ... 99.9 Ω	0.01 Ω 0.1 Ω 0.1 Ω	±(10 % of r. + 10 digits) ±(20 % of r.) ±(30 % of r.)
	Specific earth resistance	0.0 Ωm ... 99.9 Ωm 100 Ωm ... 999 Ωm 1.00 Ωmk ... 9.99 kΩm 10.0 Ωmk ... 99.9 kΩm	0.1 Ωm 1 Ωm 0.01 kΩm 0.1 kΩm	±(5 % of r.) for Re 1 Ω ... 1999kΩ ±(10 % of r.) for Re 2 kΩ ... 19.99kΩ ±(20 % of r.) for Re > 20 kΩ
ILLUMINANCE	Type B	0.01 lux ... 19.99 lux 20.0 lux ... 199.9 lux 200 lux ... 1999 lux 2.00 klux ... 19.99 klux	0.01 lux 0.1 lux 1 lux 10 lux	±(5 % of r. + 2 digits) ±(5 % of r.)
	Type C	0.01 lux ... 19.99 lux 20.0 lux ... 199.9 lux 200 lux ... 1999 lux 2.00 klux ... 19.99 klux	0.01 lux 0.1 lux 1 lux 10 lux	±(10 % of r. + 3 digits) ±(10 % of r.)
GENERAL	Power supply	9 VDC (6x1.5 V battery or accu, size AA)		
	Overvoltage category	1000 V DC CAT II; 600 V CAT III; 300 V CAT IV		
	Protection class	Double insulation		
	COM port	BT, USB, RS232		
	Weight	1.3 kg		
	Size (l x h x w)	230 x 103 x 115 mm		

## Ordering information

Standard set

MI 3102H BT



- Instrument EurotestXE 2,5 kV
- Plug commander, 1.5 m
- 2.5 kV test lead, 2 x 1.5 m
- Test lead, 3 x 1.5 m
- Earth test set, 3-wire, 20 m (test lead, 4 m; 2 x test lead, 20 m; 2 x test rod)
- Power supply adapter + 6 NiMH rechargeable batteries, size AA
- PC Software EuroLink PRO
- Test probe, 3 pcs (blue, black, green)
- Crocodile clip, 3 pcs (blue, black, green)
- RS232 - PS/2 cable
- USB cable
- Soft carrying neck belt
- Soft carrying bag
- Short instruction manual
- Instruction manual on CD
- Handbook on CD
- Calibration certificate

## Optional accessories

Photo	Order No.	Description
	A 1401	Tip commander (3-wire)
	A 1018	Current clamp (low range, leakage)
	A 1019	Current clamp
	A 1391	AC/DC Current clamp
	A 1110	Three phase adapter
	A 1111	Three phase adapter with switch
	A 1201	Insulated rod for CONTINUITY measurement
	A 1202	Additional extension part for A 1201
	A 1172	Luxmeter sensor, type B (PS/2)
	A 1173	Luxmeter sensor, type C (PS/2)
	A 1153	Test lead, black, 20 m
	A 1431	EuroLink Android APP
	A 1292	Upgrade code EuroLink PRO to EuroLink PRO Plus
	A 1160	Fast charger for 8 AA batteries with a set of 6 NiMH bat., type AA
	S 2027	Earth test set, 3-wire, 50 m
	A 1199	Ro-adapter

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



**METREL®**

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