Eurotest XE

MI 3102

Lightweight and Compact Electrical Installation Tester

Innovative Instruments Designed with You in Mind

Continuity

Insulation

IMD & ISFL

Earth

RCD

Functionality: EN 61557
Mesurements: EN/IEC 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 - 31

Effective clearly visible information. Back-lit display.

Evaluation of the results. PASS or FAIL.

Jogger interface with TOUCH electrode.

Help menu with connection diagrams.

Memory. USB and RS 232 support.

PC Software Eurolink XE

- *Clear, fast and easy access - user-friendly interface.*
- *Small, compact, robust and highly protected.*
- *Checking, testing and evaluating safety conditions with PASS/FAIL ON-LINE evaluation.*
- *Maintenance and troubleshooting.*
- *Building and constructing.*

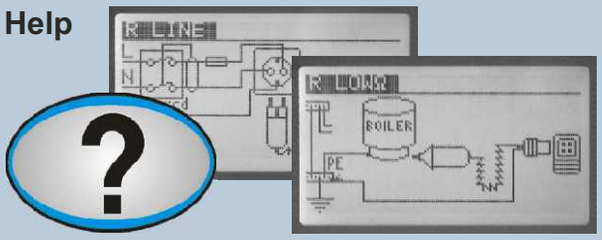
Line/Fault Loop

Leakage

Sensor

Main Features

Help

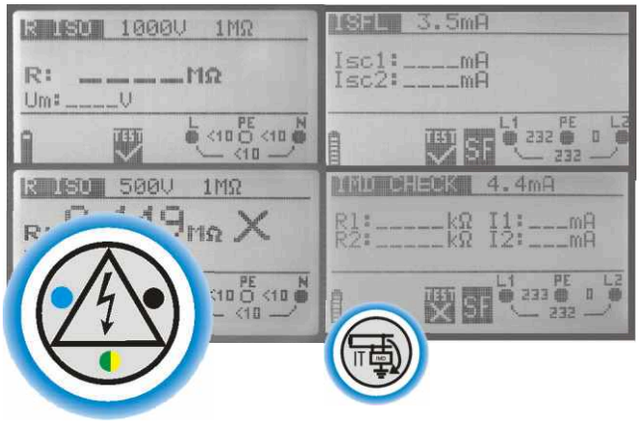


Help menus with short guide and graphical circuits are included in all the instrument's functions. Just press the HELP button for complete information needed.

Continuity test

Continuity testing - Carried out with standardized 200 m A test in both polarities. Allows automatic nulling of test leads. Electronically protected against incorrect connection.

Insulation test

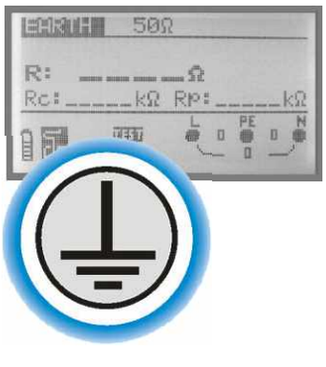


Insulation test - 100 V, 250 V, 500 V and 1000 V DC. Reads up to 1000 MOhm to provide early fault indication. Electronically protected against incorrect connection.

IMD check & ISFL first fault leakage current

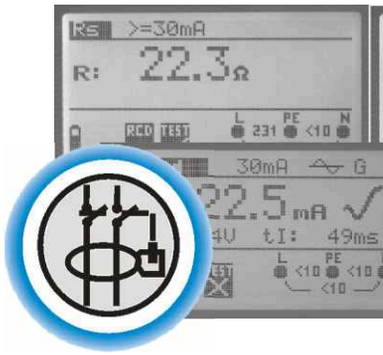
IMD- (Insulation Monitor Device) function check of the ISFL (First Fault Leakage Current) through simulated resistance and leakage current test at threshold insulation resistance.

Earth resistance measurement



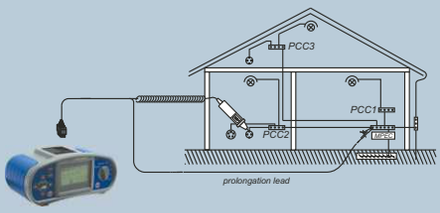
Two and three lead method supported. Test with two additional rods connected in a straight line or triangle (recommended).

Complete RCD analysis

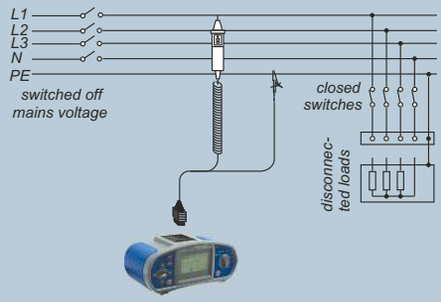


Complete RCD analysis - RCD's trip out time and trip out current as single or automatic 6-step test: 0°x1/2, 180° x1/2, 0°x1, 180°x1, 0°x 5, 180°x 5 for type A and AC. Built-in PASS bands for fast evaluation of results.

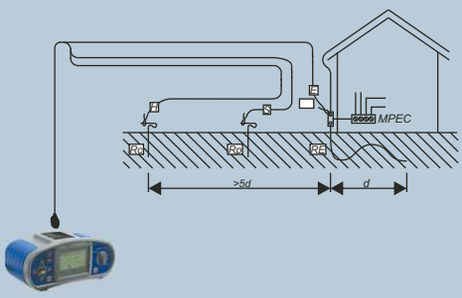
- Continuity test



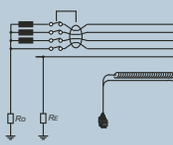
- Insulation test
  100 V, 250 V, 500 V and 1000 V



- Earth resistance measurement



- RCD test/Earth
  Rs Loop Test and voltage drop calculation



Phase Rotation - Phase sequence testing with voltage monitor between phases.

PE Test Probe - Tests for the presence of voltage on PE conductors (faults, L and PE reversed, ...).

Multi language
Onscreen information with help menus as well as front panel labels are available in many languages.

Automatic switch off - The tester helps saving the batteries.

Rechargeable NiMH accus 6 x 1.2 V, or standard 1.5 V alkaline batteries can be used.

Multi Voltage System Support - The instrument is designed to fully support TT/TN and IT systems for standard low voltage and reduced low voltage systems.

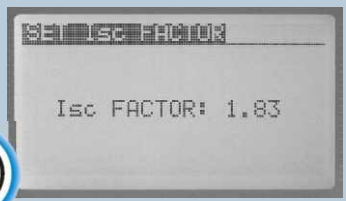
Cross-matrix testing - Simultaneous testing of all possible values of Fault Loops, Isc and Rs loop test on both polarities - enabled on IT system as well as on 55 V / 65 V reduced low voltage systems.

Multi Voltage Monitor - ON-LINE - Three voltmeters on a display for permanent monitoring of present voltages between line, neutral and PE conductors. For Single and Three phase systems.

RCD - TRIP LOCK Rs Loop Test - Allows fast and accurate non trip loop testing in the presence of any type RCD. Also allows a readout of touch voltage levels.

Line/Fault Loop resistance and Isc

LINE LOOP L-N and Fault loop L-PE accurate readings of resistances on tested L-N-PE conductors, connectors and transformer.



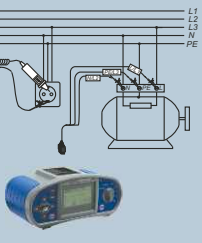
Automatically calculating Ipsc with custom adjusted safety factor. A built-in table of Fuse characteristics allows the instrument to indicate a Pass or Fail! **Another World's first in instrument testing!**

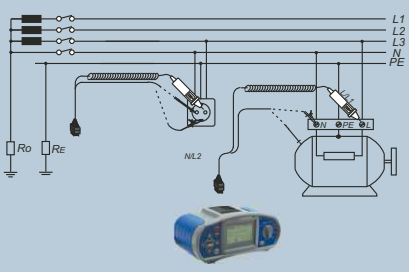
Evaluation of the results with safety **Isc factor**. Custom selectable.

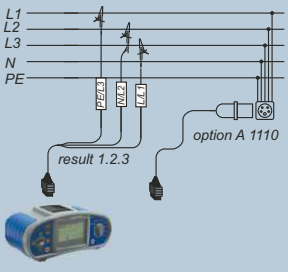
	A	B	C	D	E	F
1	FUSE	B type limit		C type limit		gG
2	I nominal (A)	Isc (A)	Zs (Ω)	Isc (A)	Zs (Ω)	Isc (A)
3	2	10	22	20	11	30
4	4	20	11	40	5,5	60
5	6	30	7,3	60	3,65	90
6	10	50	4,4	100	2,2	150
7	16	80	2,8	160	1,4	240
8	20	100	2,2	200	1,1	300
9	25	125	1,8	250	0,9	375
10	32	160	1,4	320	0,7	480
11	35	175	1,3	350	0,65	525
12	40	200	1,1	400	0,55	600
13	50	250	0,9	500	0,45	750
14	63	315	0,7	630	0,35	945

Fuse table with characteristics incorporated into the instrument.

resistance • Line/Loop test • Phase rotation / Voltage

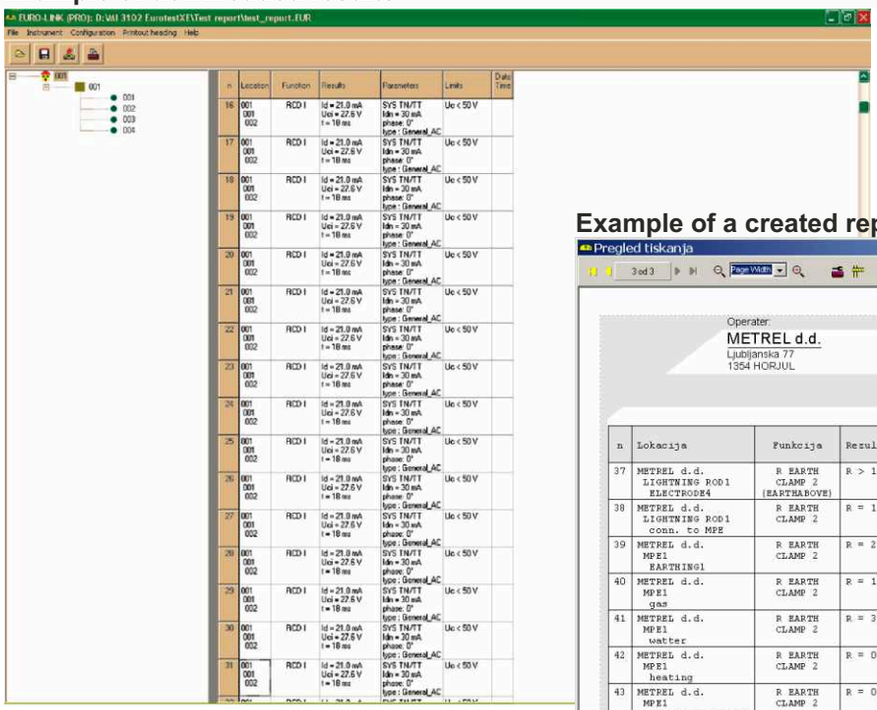






EuroLink XE PC software

Example of downloaded results

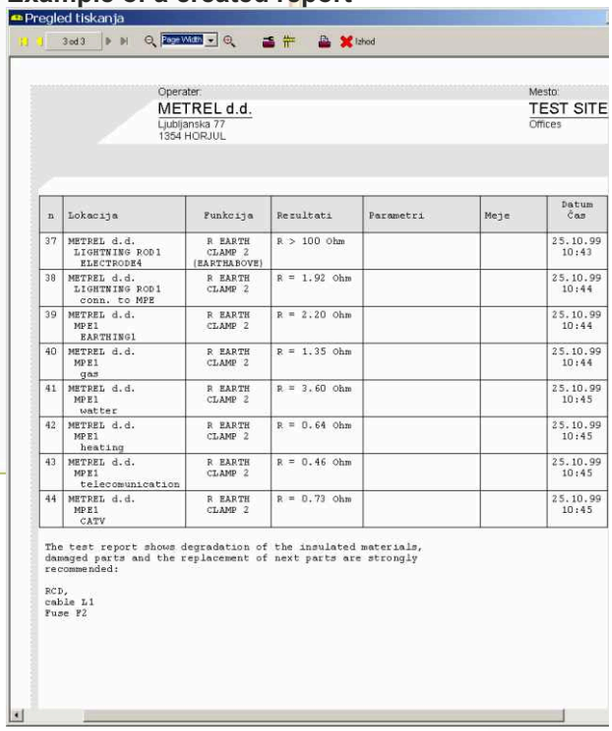


EuroLink XE PC software

EuroLink XE enables the following acivities:

- Data downloading,
- Simple report creation,
- Export of measured data to a spreadsheet.

Example of a created report



Pregled tiskanja

Operater:
METREL d.d.
Ljubljanska 77
1354 HORJUL

Mesto:
TEST SITE
Offices

n	Lokacija	Funkcija	Rezultati	Parametri	Meje	Datum Čas
37	METREL d.d. LIGHTNING ROD1 ELECTRODE4	R EARTH CLAMP 2 (EARTHABOVE)	R > 100 Ohm			25.10.99 10:43
38	METREL d.d. LIGHTNING ROD1 conn. to MPE	R EARTH CLAMP 2	R = 1.92 Ohm			25.10.99 10:44
39	METREL d.d. MPE1 EARTHING1	R EARTH CLAMP 2	R = 2.20 Ohm			25.10.99 10:44
40	METREL d.d. MPE1 gas	R EARTH CLAMP 2	R = 1.35 Ohm			25.10.99 10:44
41	METREL d.d. MPE1 watter	R EARTH CLAMP 2	R = 3.60 Ohm			25.10.99 10:45
42	METREL d.d. MPE1 heating	R EARTH CLAMP 2	R = 0.64 Ohm			25.10.99 10:45
43	METREL d.d. MPE1 telecomunication	R EARTH CLAMP 2	R = 0.46 Ohm			25.10.99 10:45
44	METREL d.d. MPE1 CATV	R EARTH CLAMP 2	R = 0.73 Ohm			25.10.99 10:45

The test report shows degradation of the insulated materials, damaged parts and the replacement of next parts are strongly recommended:

RCD,
cable L1
Fuse F2

USB & Rs232 SUPPORT

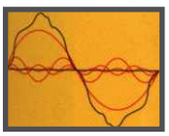
EurotestXE includes both RS232 and USB communication ports. Stored results can be sent to a PC for further use.

Connector type

Within the manipulation of the individual results Saving, Recalling or Deleting are available.

Leakage TRMS

No need to take care of current shape. As low as 0,2 mA current tracing support.



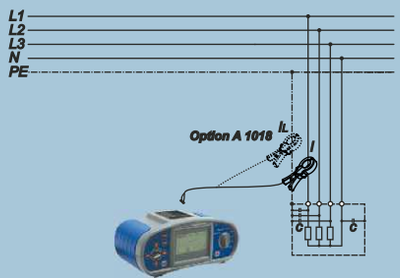
Sensor LUX

Sensor input for illumination measurement . Both type B and type C sensor supported. Range from 0.1 lux to 20 000 lux.

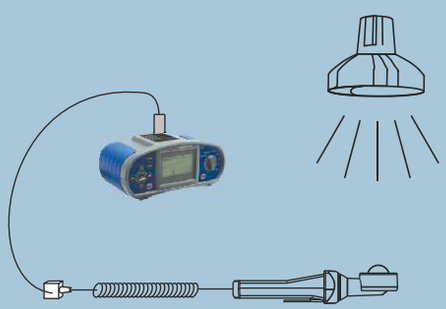
Memory

After the measurement is completed, the results can be stored to the flash memory of the instrument. Over 500 measurements together with the sub-results and function parameters can be organized and stored in a three-level structure: - OBJECT 001
- BLOCK 001
- FUSE 001
- FUSE 002
- ...

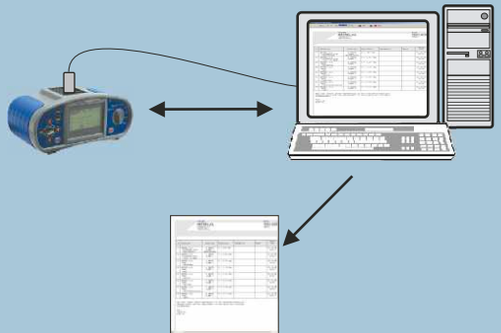
- Leakage TRMS



- Sensor LUX



- Memory



Technical specification

Insulation resistance (EN 61557-2)

Meas. ranges (MΩ):	R: 0.017MΩ ÷ 199.9MΩ, UN=100V⎓, 250V⎓ R: 0.015MΩ ÷ 999MΩ, UN= 500V⎓, 1kV⎓ U: 0V⎓ ÷ 1200V⎓
Nominal voltages:	100 V, 250 V, 500 V, 1 kV (⎓)
Measuring current:	min.1 mA⎓ at RN=UN ×1 kΩ/V
Short-circuit current:	<3 mA⎓

Continuity

R Low Ω (EN 61557-4)

Meas. ranges (Ω):	R: 0.16Ω ÷ 1999Ω
Test current:	min. ±200 mA⎓ at 2 Ω
Open-circuit voltage:	6.5 V⎓ ÷ 9.0 V⎓

Continuity 7mA

Meas. ranges (Ω):	R: 0.0Ω ÷ 1999Ω
Test current:	max. 8.5 mA⎓
Open-circuit voltage:	6.5 V⎓ ÷ 9.0 V⎓

Line resistance RL-N(L) (EN 61557-3)

Meas. ranges (Ω):	RL-N(L): 0.25Ω ÷ 1999Ω
IPSC:	0.00 A ÷ 24.4 kA
Nominal voltage:	100 V ÷ 440 V / 45 Hz ÷ 65 Hz

Fault loop resistance RL-PE (EN 61557-3)

Meas. ranges (Ω):	RL-PE : 0.25Ω ÷ 1999Ω
IPFC:	calculated value
Nominal voltage:	100 V ÷ 264 V / 45 Hz ÷ 65 Hz

Voltage, frequency

U: 0V ÷ 440V / f: 45Hz ÷ 65Hz

Phase rotation (EN 61557-7)

Nominal voltage:	100V ÷ 440V / 45Hz ÷ 65Hz
Results:	1.2.3 or 2.1.3

RCD (EN 61557-6)

Meas. range *(IΔN):*	10 mA, 30 mA, 100 mA, 300 mA, 500 mA, 1000 mA
Nominal voltage:	100 V ÷ 264 V / 45 Hz ÷ 65 Hz

Contact voltage Uc

Uc :	3.4V〜 ÷ 42.7V〜 (88.1V〜)
for Uclim :	25V (50V)
Rs :	0.00Ω ÷ 9.99kΩ, (Rs=Uc / IΔN)

Tripping time

non-delayed
(time-delayed) RCDs

×1: 0ms ÷ 300ms (500ms)
×2 : 0ms ÷ 150ms (200ms)
×5 : 0ms ÷ 40ms (150ms), Uc: 0.0V ÷ 99.9V

Tripping current

IΔ: 0.2 × IΔN ÷ 1.1 × IΔN Ac (÷1.5 × IΔN A)
tΔ: 0 ms ÷ 300 ms, Uc: 0.0 V: ÷ 100.0 V:

Multiplier: ×0.5, ×1, ×2, ×5

Resistance to earth (EN 61557-5)

R :	2.00Ω ÷ 1999Ω
Open-circuit voltage :	< 45V
Short-circuit current :	< 20mA
TRMS current:	I : 0.0mA ÷ 19.99A
Illumination:	E : 0.1lux ÷ 19.99klux

General

Power supply voltage	9 VDC (6 x 1.5 V battery cells or accus, size AA)
Charger supply unit	12 V ÷ 15 V
Overvoltage category	CAT III / 600 V
Plug commander - overvoltage category (optional)	CAT III / 300 V
Protection classification	double insulation
Pollution degree	2
Protection degree	IP 42
Display	128 x 64 dots matrix display with backlight
Dimensions (w x h x d)	(230 x 103 x 115) mm
Weight (with batteries)	1,32 kg
Working temperature range	0 °C ÷ 40 °C

Order Information

Standard set

Part No. **MI 3102**

- Instrument Eurotest XE
- Tip commander with two function key
- Schuko-plug test cable
- Test cable Universal connection 3 x 1.5 m
- Earth test set (test lead 4 m +2 x 20 m, x test rods)
- PC SW Eurolink XE on CD
- RS 232/PS cable
- USB cable
- Handbook “Measurements on electric installations”on CD
- Power supply adapter + 6 NiMh AA accus
- Test tip: blue, black, green
- Alligator clip, 3 pcs
- Soft carrying neck belt
- Soft carrying bag
- Instruction manual - short
- Instruction manual on CD
- Declaration of conformity
- Product verification data

Optional Accessories

A 1170	Plug commander
S 2025	Connection leads for mini clamp
A 1074	Mini current clamp
A 1018	Measurement clamp, professional
A 1160	Fast 6 cells AA charger
A 1169	Fast 12 cells C, AA charger + battery pack
A 1172	Lux meter probe, type B
A 1173	Lux meter probe, type C
A 1110	Three phase cable
A 1111	Three phase adapter

Distributor:

METREL®

Measurement and Regulation Equipment Manufacturers, Ljubljanska 77, SI-1354 Horjul
Tel.: +386 1 75 58 200; Fax: +386 1 75 49 226
http://www.metrel.si; E-mail: metrel@metrel.si