

Lightweight and Compact Electrical Installation Tester

Innovative Instruments Designed with You in Mind



**Measuring
Troubleshooting
Testing**

Functional conformity: EN/IEC 60364; EN 61557;
BS 7671; CEI 64.8; HD 384; VDE 0413
CE conformity: EN 61010-1; EN 61326



Effective clearly visible information. Back-lit display.



Evaluation of the results. PASS or FAIL.

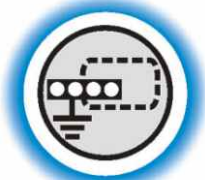


Jogger interface with TOUCH electrode.



Help menu with connection diagrams.

Continuity



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

Insulation



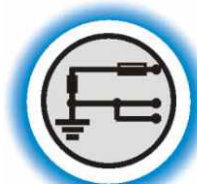
RCD



RCD TRIP LOCK



Line/Fault Loop



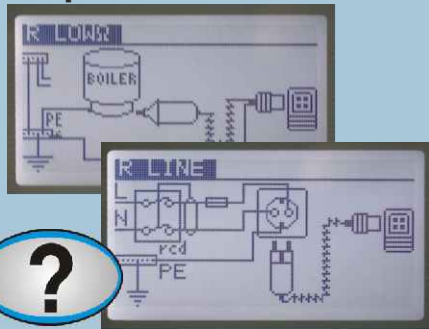
Ipsc FUSE evaluation



Earth resistance Rs Loop Test and voltage drop calculation

Main Features

Help



Help menus with short guide and graphical circuits are enclosed to all the instrument's functions. Complete needed information is just one press on HELP button away.



Continuity test



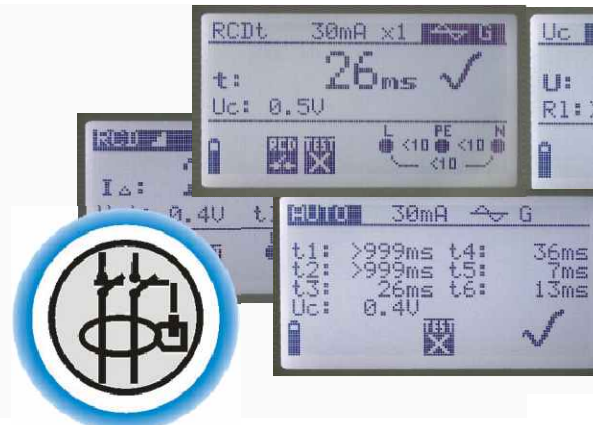
Continuity testing - Carried out at standardized both polarities 200 mA test and allows automatic nulling of test leads. Electronically protected against in-correct connection.

Insulation test



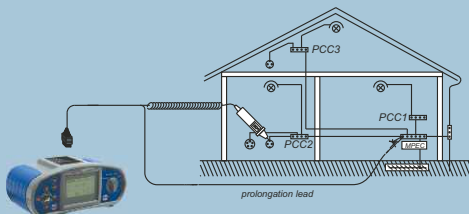
Insulation test - 100 V 250 V, 500 V and 1000 V DC. Reads up to 1000 MOhm to provide early indication of faults. Electronically protected against in-correct connection.

Complete RCD analysis

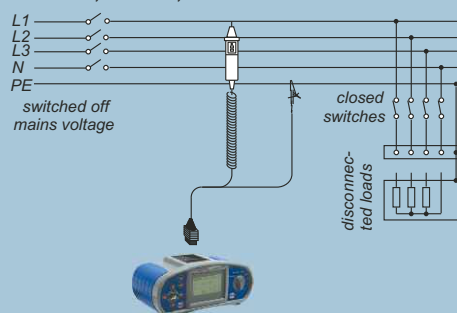


Complete RCD analysis RCD's trip out time and trip out current as single or automatic 6-step test: 0°x1/2, 180°x1/2, 0°x1, 180°x1, 0°x 5, 180°x 5 for type A and AC. Built in PASS bands for fast evaluation of results.

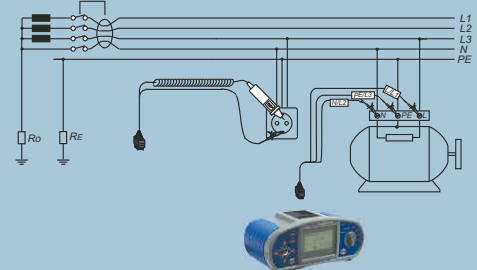
• Continuity test



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



• RCD test /Earth resistance 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.

Line/Fault Loop impedance and Isc



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

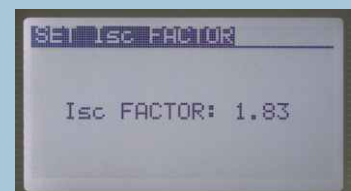
Automatically calculating I_{psc} with custom adjusted safety factor. A built in table of Fuse characteristics allows the instrument to indicate a Pass or Fail! **Another Worlds first in instrument testing!**



Fuse table with characteristics built inside the instrument.

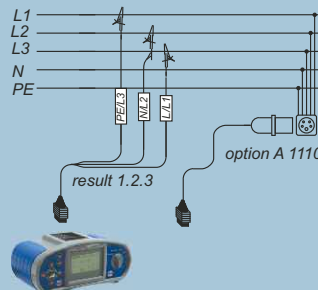
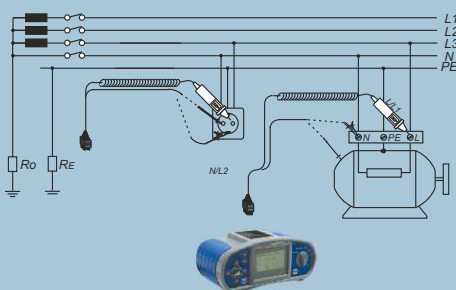
	A	B	C	D	E	F
1	FUSE	B type limit	C type limit			
	nominal (A)	Isc (A)	Zs (Ω)	Isc (A)	Zs (Ω)	Isc (A)
2	2	10	22	20	11	30
4	4	20	11	40	5,5	60
5	6	30	7,3	60	3,65	90
6	10	50	4,4	100	2,2	150
7	16	80	2,8	160	1,4	240
8	20	100	2,2	200	1,1	300
9	25	125	1,8	250	0,9	375
10	32	160	1,4	320	0,7	480
11	35	175	1,3	350	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

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



Line/Loop test

Phase rotation / Voltage



Technical specification

Insulation resistance (EN 61557-2)

Meas. ranges (MΩ): 0.000 ÷ 199.9; **Acc.** ±(5 % of r. + 3 dig.), U_N=100 V ✓, 250 V ✓
0.000 ÷ 199.9; **Acc.** ±(2 % of r. + 3 dig.), U_N= 500 V ✓, 1000 V ✓
200 ÷ 999; **Acc.** ±(10 % of r.), U_N= 500 V ✓, 1000 V ✓

Nominal voltages: 100 V, 250 V, 500 V, 1 kV (✓)
Measuring current: min. 1 mA ✓ at R_N=U_N × 1 kΩ/V
Short-circuit current: <3 mA ✓

Continuity

R Low Ω (EN 61557-4)

Meas. ranges (Ω): 0.00 ÷ 19.99; **Acc.** ±(3% of r. + 3 dig.)
20.0 ÷ 99.9, 100 ÷ 1999; **Acc.** ±(5% of r.)

Test current: min. ±200 mA ✓ at 2 Ω
Open-circuit voltage: 6.5 V ✓ □ ± 9.0 V ✓

Continuity 7mA

Meas. ranges (Ω): 0.0 Ω ÷ 99.9, 100 ÷ 1999; **Acc.** ±(5% of r. + 3 dig.)

Test current: max. 8.5 mA ✓
Open-circuit voltage: 6.5 V ✓ □ ± 9.0 V ✓

Line resistance R_{L-N(L)} (EN 61557-3)

Meas. ranges (Ω): 0.00 ÷ 19.99, 20 ÷ 99.9, 100 ÷ 1999; **Acc.** ±(5% of r. + 5 dig.)

I_{PSC}: 0.00 A ÷ 24.4 kA
Nominal voltage: 100 V ÷ 440 V / 45 Hz ÷ 65 Hz

Fault loop resistance R_{L-PE} (EN 61557-3)

Meas. ranges (Ω): 0.00 ÷ 19.99, 20 ÷ 99.9, 100 ÷ 1999; **Acc.** ±(5% of r. + 5 dig.)

I_{PFC}: 0.00 A ÷ 24.4 kA
Nominal voltage: 100 V ÷ 264 V / 45 Hz ÷ 65 Hz

Voltage, frequency

Meas. range (V): 0 ÷ 440 V; **Acc.** ±(2 % of r. + 2 dig.)
On-line voltage monitor in all measurement functions

Meas. range (f): 45 Hz ÷ 65 Hz; **Acc.** ±(0.1 % of r. + 1 dig.)

Phase rotation (EN 61557-7)

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

RCD (EN 61557-6)

Meas. range (I_{ΔN}): 10 mA, 30 mA, 100 mA, 300 mA, 500 mA, 1000 mA

Nominal voltage: 100 V ÷ 264 V / 45 Hz ÷ 65 Hz

Contact voltage U_c

Meas. ranges (V_i): 0.0 ÷ 9.9, **Acc.** (-0 % / +10 % of r. + 2 dig.)
10 ÷ 99.9, **Acc.** (-0 % / +10 % of r.)

R_s: 0.00 Ω ÷ 10.00 kΩ, (R_S=U_c / I_{ΔN})

Fault loop resistance

R_L: 0.00 Ω ÷ 1999 kΩ

Tripping time

Non-delayed
(time-delayed) RCDs
×1: 0 ms ÷ 300 ms (500 ms)
×2: 0 ms ÷ 150 ms (200 ms)
×5: 0 ms ÷ 40 ms (150 ms), U_c: 0.0 V ÷ 100.0 V

Tripping current

I_Δ: 0.2 × I_{ΔN} ÷ 1.1 × I_{ΔN} AC (±1.5 × I_{ΔN} A)
t_Δ: 0 ms ÷ 300 ms, U_c: 0.0 V ÷ 100.0 V;

Multiplier: ×0.5, ×1, ×2, ×5

General

Power supply voltage: 9 V_{DC} (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 3100



- Instrument EurotestEASI
- Tip commander with two function key
- Schuko-plug test cable
- Test cable Universal connection 3 x 1.5 m
- 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 1168** Plug commander
- A 1169** Fast 12 cells C, AA charger
- A 1110** Three phase cable
- A 1111** Three phase adapter
- A 1160** Fast 6 cells AA charger
- A 1154** Test lead, black, 4 m
- A 1153** Test lead, black, 20 m