MI 3105 EurotestXA

The top model of Metrel's installation testers is MI 3105 EurotestXA. Features including "All-in-one" insulation testing, *AUTO SEQUENCE* ® testing, integrated characteristics of fuses and RCDs (including B type), PASS / FAIL evaluation of test results, 10-level memory structure and built-in battery charger make the EurotestXA an exemplary instrument. Additional features include TRMS current measurement, 3-wire / one clamp / two clamps earth resistance and 4-wire specific earth resistance measurements, illumination measurement and fuse / fault locator function. All the results can be quickly saved and then downloaded via the EuroLink PRO software to the computer for evaluation and professional report generation after testing. The MI 3105 EurotestXA performs continuity, insulation, RCD, loop, line, voltage, frequency, earth resistance and phase sequence testing required by the EN 61557 standard.

MEASURING FUNCTIONS:

- Insulation resistance with DC voltage;
- Continuity of PE conductors with 200 mA test current with polarity change;
- Continuity of PE conductors with 7 mA test current (continuous measurement) without RCD tripping;
- Line impedance;
- Loop impedance;
- Loop impedance with Trip Lock RCD function;
- TRMS voltage and frequency;
- Phase sequence;
- RCD testing (general and selective, type AC, A and B);
- Earth resistance (3-wire method, one clamp method, two clamps method);
- Specific earth resistance (option);
- TRMS leakage and load currents;
- Overvoltage protection devices testing;
- Illumination (option);
- Tracing the installations (option);
- Testing of Insulation Monitoring Devices (IMDs);
- First fault leakage current in IT systems;
- High resolution loop impedance (mΩ).

KEY FEATURES:

- **Autosequences:** Testing of electrical installation safety with *AUTO SEQUENCE*® is up to 5 times faster compared to traditional installation tester.
- **All-in-one insulation:** insualation tests between L-N, L-PE and N-PE can be performed simultaneously in less than 10 seconds.
- **Medical site testing:** measurement of First fault leakage current (ISFL) and insulation monitoring device (IMD) checking.
- **Structure building:** a structure of the installation (up to 10 levels) can be built either using the software (which can then be sent to the instrument) or directly on the tester so that test results are always saved on the correct circuit.
- **Fuse location:** function enables the locating of fuses / wires / faults with the help of the optional A 1191 Fuse locator.
- **Earth resistance measurement:** Tester can perform 3-wire earth resistance testing, one clamp and two clamps earth resistance and specific earth resistance measurement.
- **Downloadable:** downloads via RS232 or USB cable directly to the PC with the help of the software included in the standard set.
- **Help screens:** instrument comes complete with built-in help screens for referencing on site.
- **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.
- **Upgradeable:** if changes occur to the regulations upgrades can be made to the firmware to keep the instrument up to date.
- **Polarity swap:** automatic polarity reversal on continuity test.
- **Insulation range:** wide range of insulation test voltages from 50 V to 1000 V, reading up to 1000 MΩ.
- **Trip Lock function:** Zs (RCD) function performs a loop impedance test without tripping the RCD.
- **Multi-system testing:** tests on TT, TN, IT and reduced low voltage systems.
- **Wide frequency range:** 14 ... 500 Hz.
- **Built-in charger & rechargeable batteries:** unit 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.
- **B type RCD testing** is supported.
- **PC SW EuroLink PRO** included in the the standard set enables downloading of test results and parameters and creation of test reports.

APPLICATION:

- Initial and periodic testing of domestic and industrial installations;
- Testing on high and low frequency installations e.g. testing in aviation, railway networks etc.;
- Testing of single and multiphase systems;
- Testing of TT, TN, IT and 115 V systems;
- High volume testing (industrial, aircraft, railway, mining, chemistry, fery boat);
- Medical installation testing.

STANDARDS:

Functionality: IEC/EN 61557
Other reference standards for testing: IEC/EN/HD 60364; IEC/EN 61008; IEC/EN 61009; IEC/EN/TR 60755; BS 7671; AS/NZ 3760; AS/NZ 3018; AS/NZ 3017; CEI 64.8; HD 384; 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
Insulation resistance (EN 61557-2)	U=50, 100, 250 V_{DC}: R: 0.00 MΩ … 19.99 MΩ 20.0 MΩ … 99.9 MΩ 100.0 MΩ … 199.9 MΩ U= 500 V_{DC}, 1 kV_{DC}: R: 0.00 MΩ … 19.99 MΩ 20.0 MΩ … 199.9 MΩ 200 MΩ … 299 MΩ 300 MΩ … 1000 MΩ	 0.01 MΩ 0.1 MΩ 0.1 MΩ 0.01 MΩ 0.1 MΩ 1 MΩ 1 MΩ	 ±(5 % of reading + 5 digits) ±10 % of reading ±20 % of reading ±(5 % of reading + 3 digits) ±10 % of reading ±10 % of reading ±20 % of reading
Continuity 200mA of PE conductor with polarity change (EN 61557-4)	0.00 Ω … 19.99 Ω 20.0 Ω … 199.9 Ω 200 Ω … 1999 Ω 2000 Ω … 9999 Ω	0.01 Ω 0.1 Ω 1 Ω 1 Ω	±(3 % of reading + 3 digits) ±5 % of reading ±5 % of reading Indicator only
Low resistance continuity measurement, test current 7 mA (Continuous measurement)	0.0 Ω … 19.9 Ω 20 Ω … 1999 Ω 2000 Ω … 9999 Ω	0.1 Ω 1 Ω 1 Ω	±(5 % of reading + 3 digits) ±(5 % of reading + 3 digits) Indicator only
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 10.0 kΩ … 19.9 kΩ	0.01 Ω 0.1 Ω 1 Ω 10 Ω 100 Ω	±(5 % of reading + 5 digits)
Voltage drop	0.0 % … 99.9 %	0.1 &	Consider accuracy of line impedance
Loop impedance (EN 61557-3)	0.00 Ω … 9.99 Ω 10.0 Ω … 99.9 Ω 100 Ω … 19999 Ω	0.01 Ω 0.1 Ω 1 Ω	±(5 % of reading + 5 digits)
Voltage	0 V … 550 V	1 V	±(2 % of reading + 2 digits)
Frequency	0.00 Hz … 999.99 Hz	0.01 Hz	±(0.2 % of reading + 1 digit)
Phase sequence (EN 61557-7)	1.2.3 or 3.2.1		
RCD testing (EN 61557-6)	$I_{\Delta N}$: 10 mA, 30 mA, 100 mA, 300 mA, 500 mA, 1 A		
- 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 time	0.0 ms … 40.0 ms 0.0 ms … max. time	0.1 ms 0.1 ms	±1 ms ±3 ms
- Trip-out current	0.2 x $I_{\Delta N}$ … 1.1 x $I_{\Delta N}$ (AC type) 0.2 x $I_{\Delta N}$ … 1.5 x $I_{\Delta N}$ (A type, $I_{\Delta N} \geq 30$ mA) 0.2 x $I_{\Delta N}$ … 2.2 x $I_{\Delta N}$ (A type, $I_{\Delta N} < 30$ mA) 0.2 x $I_{\Delta N}$ … 2.2 x $I_{\Delta N}$ (B type)	0.05 x $I_{\Delta N}$ 0.05 x $I_{\Delta N}$ 0.05 x $I_{\Delta N}$ 0.05 x $I_{\Delta N}$	±0.1 x $I_{\Delta N}$ ±0.1 x $I_{\Delta N}$ ±0.1 x $I_{\Delta N}$ ±0.1 x $I_{\Delta N}$
Earth resistance (EN 61557-5) (three-wire method; one clamp method)	0.00 Ω … 19.99 Ω 20.0 Ω … 199.9 Ω 200 Ω … 1999 Ω 2000 Ω … 9999 Ω	0.01 Ω 0.1 Ω 1 Ω 1 Ω	±(3 % of reading + 3 digits) ±(3 % of reading + 3 digits) ±5 % of reading ±10 % of reading
Earth resistance (two clamps method)	0.00 Ω … 19.99 Ω 20.0 Ω … 30.0 Ω 30.1 Ω … 39.9 Ω	0.01 Ω 0.1 Ω 0.1 Ω	±(10 % of reading + 10 digits) ±20 % of reading ±30 % of reading
Specific earth resistance	0.0 Ωm … 99.9 Ωm 100 Ωm … 999 Ωm 1.00 kΩm … 9.99 kΩm 10.0 kΩm … 99.9 kΩm > 100 kΩm	0.1 Ωm 1 Ωm 0.01 kΩm 0.1 kΩm 1 kΩm	±5 % of reading ±5 % of reading ±5 % of reading; ±10 % of reading ±10 % of reading; ±20 % of reading ±20 % of reading
TRMS Current	0.0 mA … 99.9 mA 100 mA … 999 mA 1.00 A … 19.99 A	0.1 mA 1 mA 0.01 A	±(3 % of reading + 3 digits)
Illuminance (Type B)	0.00 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 reading + 2 digits)
Varistor Test	0 … 625 V_{AC}; 0 … 1000 V_{DC}	1 V	±(3 % of reading + 3 digits)
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	230 x 103 x 115 mm		
Weight	1.3 kg		

STANDARD SET:

MI 3105 ST
- Instrument EurotestXA
- Plug commander, 1.5 m
- Test lead, 3 x 1.5 m
- Power supply adapter + 6 NiMH recharge-able batteries, type AA
- Test probe, 3 pcs (blue, black, green)
- Crocodile clip, 3 pcs (blue, black, green)
- RS232 - PS/2 cable
- USB cable
- Soft carrying bag
- Soft carrying neck belt
- PC Software EuroLink PRO
- Short instruction manual
- Instruction manual on CD
- Handbook on CD
- Calibration certificate

MI 3105 EU
- MI 3105 ST
- Current clamp A 1018 (low range, leakage)
- PC Software EuroLink PRO Plus

MI 3105 EU

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