

### MI 3121 **SMARTEC®** Insulation / Continuity

The MI 3121 **SMARTEC** Insulation / Continuity is a new generation tester for dead testing of electrical installations. With both an analogue and digital representation of the results, the instrument ensures accurate measurements up to 2000  $\Omega$  on continuity and up to 30 G $\Omega$  on insulation function. Configurable limits enable a PASS / FAIL evaluation of test results, which is accompanied with the bright red and green indicator lights for comfortable use even in the dark conditions. The MI 3121 is equipped with a built-in charger and has a magnetic holder in order to free up hands for testing. 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 3121 **SMARTEC** Insulation / Continuity performs continuity, insulation AC voltage and frequency measurement tests.

#### 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.
- TRMS voltage and frequency.

#### KEY FEATURES:

- **Analogue scale and digital LCD:** measuring results are displayed both in numeric and analogue representation.
- **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.
- **Polarity swap:** automatic polarity reversal on continuity test.
- **Insulation range:** wide range of insulation test voltages from 50 V to 1000 V, measuring range up to 30 G $\Omega$ .
- **Built-in charger & rechargeable batteries:** instrument has a built-in charging circuit and comes complete with a set of rechargeable NiMH batteries.
- **Custom limits:** if limits are set on insulation or continuity function then large green and red lights of the LEDs will indicate a PASS or FAIL evaluation of test result.
- **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 dead circuit testing.
- Industrial dead circuit testing.
- Telecommunication systems testing.
- Resistance measurements.

#### STANDARDS:

##### Functionality:

IEC/EN 61557

##### Other reference standards for testing:

IEC/EN/HD 60364;  
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;

## TECHNICAL DATA:

Function	Measuring range	Resolution	Accuracy
Insulation resistance (EN 61557-2)	U = 500, 1000 V <sub>DC</sub> : R: 0.00 MΩ ... 19.99 MΩ 20.0 MΩ ... 199.9 MΩ 200 MΩ ... 999 MΩ 1.00 GΩ ... 4.99 GΩ 5.00 GΩ ... 19.99 GΩ 20.0 GΩ ... 29.9 GΩ	0.01 MΩ 0.1 MΩ 1 MΩ 10 MΩ 10 MΩ 100 MΩ	±(5 % of reading + 3 digits) ±5 % of reading ±5 % of reading ±10 % of reading ±20 % of reading indicative
	U = 50, 100, 250 V <sub>DC</sub> : R: 0.00 MΩ ... 19.99 MΩ 20.0 MΩ ... 99.9 MΩ 100.0 MΩ ... 199.9 MΩ	0.01 MΩ 0.1 MΩ 0.1 MΩ	±(5 % of reading + 3 digits) ±10 % of reading ±20 % of reading
Continuity 200 mA 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	0.01 Ω 0.1 Ω 1 Ω	±(3 % of reading + 3 digits) ±5 % of reading ±5 % of reading
Low resistance measurement with 7 mA test current (continuous measurement)	0.0 Ω ... 19.9 Ω 20 Ω ... 1999 Ω	0.1 Ω 1 Ω	±(5 % of reading + 3 digits) ±(5 % of reading + 3 digits)
Voltage	0.00 V ... 9.99 V 10.0 V ... 99.9 V 100 V ... 550 V	0.01 V 0.1 V 1 V	±(3 % of reading + 3 digits)
Frequency	0.00 Hz ... 19.99 Hz 20.0 Hz ... 199.9 Hz 200 Hz ... 500 Hz	0.01 Hz 0.1 Hz 1 Hz	±(0.2 % of reading + 1 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	140 x 230 x 80 mm		
Weight	0.85 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 Insulation / Continuity
- Soft hand strap
- Test lead, 2 x 1.5 m
- Test probe, 2 pcs (black, red)
- Crocodile clip, 2 pcs (black, red)
- Power supply adapter + 6 NiMH rechargeable batteries, type AA
- Instruction manual on CD
- Short instruction manual
- Handbook on CD
- Calibration certificate

