### MERATEST Meracie a testovacie prístroje

# Multifunctional installation testers MI 3125BT EurotestCOMBO



The MI 3125BT EurotestCOMBO performs all the necessary tests for installation safety testing on TT and TN systems. The large graphic display with backlight offers easy reading of results, indications, measurement parameters and messages. Two LED Pass/Fail indicators are placed on both sides of the LCD. MI 3125BT EurotestCOMBO contains integrated characteristics of fuses and RCDs (including B type) for the evaluation of test results. Each test has its own individual help screen describing how to connect the instrument into the installation and how to perform a measurement. 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. MI 3125BT EurotestCOMBO performs continuity, insulation, RCD, loop, line, voltage frequency, earth resistance testing and phase sequence tests 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, F, B, B+ and EV RCD);
- Earth resistance (3-wire method).

#### **KEY FEATURES**

- LED Pass/Fail indicators: two LED indicators for PASS / FAIL evaluation of test results are placed on both sides of the LCD
- **Help screens:** instrument comes complete with built-in help screens for referencing on site.
- Earth resistance measurement: instrument performs 3-wire earth resistance testing with two additional rods.
- 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  $M\Omega$ .
- **Trip Lock function:** Zs (RCD) function performs a loop impedance test without tripping the (EV) RCD.
- Multi-system testing: tests on single and multiphase TT and TN systems.
- 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 and EV RCD testing are supported.
- BT connectivity: it enables BT communication with Android tablets and smart phones via built-in BT.
- PC SW Eurolink PRO included in the standard set enables downloading of test results and parameters and creation of test reports.
- Compatible with PC SW MESM (Metrel ES Manager).

#### **APPLICATION**

- Initial and periodic testing of domestic and industrial installations:
- Testing of single and multiphase systems;
- Testing of TT and TN systems.

#### **STANDARDS**

#### Functionality:

• IEC/EN 61557

## Other reference standards for testing:

- VDE 0413;
- IEC/EN 61008;
- IEC/EN 61009;
- IEC/EN/HD 60364;
- HD 384; BS 7671;
- IEC/TR 60755;
- CEI 64.8;
- AS/NZ 3760;
- AS/NZ 3018

#### **Electromagnetic compatibility:**

- IEC/EN 61326-1;
- IEC/EN 61326-2-2

#### Safety:

- IEC/EN 61010-1;
- IEC/EN 61010-031



#### **TECHNICAL DATA**

| FUNCTION   | Measuring range   | Resolution  | Accuracy   |
|--|---|---|--|
| Insulation resistance (EN<br>61557-2)  | U = 50, 100, 250 VDC:<br>R: 0.00 MΩ 19.99 MΩ<br>20.0 MΩ 99.9 MΩ<br>100.0 MΩ 199.9 MΩ<br>U = 500 VDC, 1 kVDC:  | 0.01 MΩ<br>0.1 MΩ<br>0.1 MΩ   | ±(5 % of reading + 3 digits)<br>±10 % of reading<br>±20 % of reading                                 |
|  | R: 0.00 MΩ 19.99 MΩ<br>20.0 MΩ 99.9 MΩ<br>200 MΩ 999 MΩ   | 0.01 MΩ<br>0.1 MΩ<br>1 MΩ   | ±(5 % of reading + 3 digits)<br>±5 % of reading<br>±10 % of reading                                  |
| Continuity 200 mA of PE<br>conductor<br>with polarity change (EN<br>61557-4)               | 0.00 $\Omega$ 19.99 $\Omega$ 20.0 $\Omega$ 199.9 $\Omega$ 200 $\Omega$ 1999 $\Omega$  | 0.01 Ω<br>0.1 Ω<br>1 Ω  | ±(3 % of reading + 3 digits)<br>±5 % of reading<br>±5 % of reading                                   |
| Low resistance continuity<br>measurement, test current<br>7 mA<br>(Continuous measurement) | 0.0 Ω 19.9 Ω<br>20 Ω 1999 Ω   | 0.1 Ω<br>1 Ω  | ±(5 % of reading + 3 digits)<br>±(5 % of reading + 3 digits)   |
| Loop impedance (EN<br>61557-3)   | 0.00 Ω 9.99 Ω<br>10.0 Ω 99.9 Ω<br>100 Ω 999 Ω<br>1.00 kΩ 9.99 kΩ  | 0.01 Ω<br>0.1 Ω<br>1 Ω<br>10 Ω  | ±(5 % of reading + 5 digits)<br>±(5 % of reading + 5 digits)<br>±10 % of reading<br>±10 % of reading |
| Line impedance (EN 61557-3   | (0.00 Ω 9.99 Ω<br>10.0 Ω 99.9 Ω<br>100 Ω 999 Ω<br>1.00 kΩ 9.99 kΩ   | 0.01 Ω<br>0.1 Ω<br>1 Ω<br>10 Ω  | ±(5 % of reading + 5 digits)<br>±(5 % of reading + 5 digits)<br>±10 % of reading<br>±10 % of reading |
| Voltage drop   | 0.0 % 99.9 %  | 0.1%  | Consider accuracy of line impedance  |
| Voltage  | 0 V 550 V   | 1 V   | ±(2 % of reading + 2 digits)   |
| Frequency  | 0.00 Hz 9.99 Hz<br>10.0 Hz 499.9 Hz   | 0.01 Hz<br>0.1 Hz   | ±(0.2 % of reading + 1 digits)   |
| Phase sequence (EN 61557-7)  | 1.2.3 or 3.2.1  |   |  |
| RCD testing (EN 61557-6)   | IΔN: 10 mA, 30 mA, 100 mA, 300 mA, 500  | mA, 1 A   |  |
| - Contact voltage UC   | 0.0 V 19.9 V<br>20.0 V 99.9 V   | 0.1 V<br>0.1 V  | (-0 % / +15 %) of reading ±10 digits<br>(-0 % / +15 %) of reading                                    |
| - Trip-out time  | 0 ms 40.0 ms<br>0 ms max. time  | 0.1 ms<br>0.1 ms  | ±1 ms<br>±3 ms   |
| - Trip-out current   | $\begin{array}{l} 0.2 \times  \Delta N \dots 1.1 \times  \Delta N \text{ (AC type)} \\ 0.2 \times  \Delta N \dots 2.2 \times  \Delta N \text{ (A, F types, }  \Delta N < 30 \text{ mA)} \\ 0.2 \times  \Delta N \dots 1.5 \times  \Delta N \text{ (A, F types, }  \Delta N \ge 30 \text{ mA)} \\ 0.2 \times  \Delta N \dots 2.2 \times  \Delta N \text{ (B, B+ types)} \\ 0.2 \times  \Delta N \dots 1.0 \times  \Delta N \text{ (EV RCD a.c. part)} \\ 0.2 \times  \Delta N \dots 1.0 \times  \Delta N \text{ (EV RCD d.c. part)} \end{array}$ | $\begin{array}{c} 0.05 \times I \Delta N \\ 0.05 \times I \Delta N \end{array}$ | ±0.1 x I Δ N<br>±0.1 x I Δ N         |
| Earth resistance (EN 61557-5)  | 0.00 Ω 19.99 Ω<br>20.0 Ω 199.9 Ω<br>200 Ω 9999 Ω  | 0.01 Ω<br>0.1 Ω<br>1 Ω  | ±(5 % of reading + 5 digits)<br>±(5 % of reading + 5 digits)<br>±(5 % of reading + 5 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 80 x 230 mm   |   |  |
| Weight   | 1.0 kg  |   |  |

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#### ORDERING INFORMATION



#### Standard set (MI 3125BT)

- Instrument EurotestCOMBO
- Set of carrying straps
- Test lead, 3 x 1.5 m
- Schuko-plug test cable, 1.5 m
- Test probe, 3 pcs (blue, black, green)
- Test prove, a pcs (blue, black, green)
  Crocodile clip, 3 pcs (blue, black, green)
  Power supply adapter + 6 NiMH rechargeable batteries, type AA
  USB and RS232 PS/2 cable
  PC SW EuroLink PRO

- Short instruction manual
- Instruction manual and handbook on storage media
- Calibration certificate

#### **OPTIONAL ACCESSORIES**

| Photo                                     | Part No.   | Description  |
|---|------------|--|
|   | A 1110     | Three phase adapter                                  |
| <b>1 4 0</b>                              | A 1111     | Three phase adapter with switch                      |
|   | A 1153     | Test lead, black, 20 m                               |
| 1,  | A 1154     | Test lead, black, 4 m                                |
| J. S. | A 1314     | Plug commander                                       |
| 9   | A 1401     | Tip commander  |
| -   | A 1303     | Soft hand strap                                      |
| O MUHL                                    | A 1289     | Soft carrying bag                                    |
| 9 MIRI                                    | A 1271     | Small soft carrying bag                              |
| MIIII.                                    | A 1292     | Upgrade code<br>EuroLink PRO to<br>EuroLink PRO Plus |
|   | A 1431     | EuroLink Android APP                                 |
| (Z  | P 1102 AND | Metrel aMESM PRO<br>License Key Upgrade<br>(A 1522)  |
|   | P 1101     | Metrel MESM BASIC<br>to PRO licence key<br>Upgrade   |
|   | S 2026     | Earth test set,<br>3-wire, 20 m                      |
| PART                                      | 5 2027     | Earth test set,<br>3-wire, 50 m                      |

