



**Demonstration board**  
**MI 3099**  
**Instruction manual**  
*Version 1.0, Code No. 20 750 997*

*Distributor:*

*Manufacturer:*

METREL d.d.  
Ljubljanska cesta 77  
1354 Horjul  
Slovenia

web site: <http://www.metrel.si>  
e-mail: [metrel@metrel.si](mailto:metrel@metrel.si)

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# 1 Introduction

## 1.1 General Description

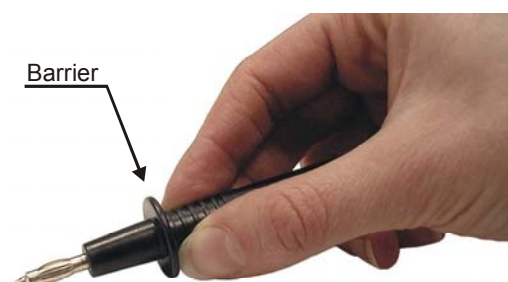
**Demonstration board** simulates typical electrical installation usually met in individual houses or apartments. This board is to be used preferably by sales personnel when demonstrating operation of electrical installation test equipment, especially the new Metrel's electrically installations safety testers with built in Autosequencer.

The board is placed into plastic carrying case. The board contains real elements of electrical installation like RCD, mains switch, automatic fuses, switches, lamps, 1-phase and 3-phase mains test outlet, N and PE collector. TN or TT system can be simulated.

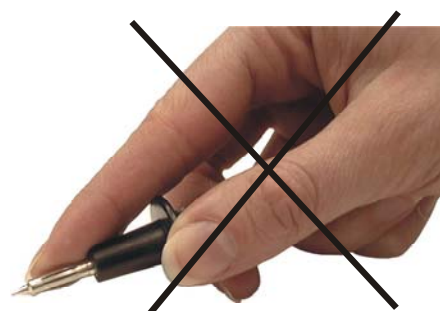
Demonstration board is constructed according to European safety standard EN 61010-1.

## 1.2 General warnings

- **Connect Demonstration board to outlets with well grounded protection terminal only! Line impedance ( $Z_{LN}$ ) of outlet must be less than  $1 \Omega$ !**
- **If Demonstration board is not used in a manner specified by manufacturer, the protection provided by the equipment may be impaired.**
- **Only qualified personnel who are familiar with the board and related installation testers can work with the Demonstration board!**
- **Do not use Demonstration board in case of any damage noticed!**
- **Only an authorised person may carry out servicing of Demonstration board!**
- **Use carefully the Demonstration board to avoid electric shock. Mains voltage is present on it in the same manner as in the real switchboards.**
- **1- and 3-phase outlets are intended for demonstration purposes only. Never use other equipment than installation testers.**
- **Never touch metal tip of test probes or put fingers over protection barrier. See the figure below**

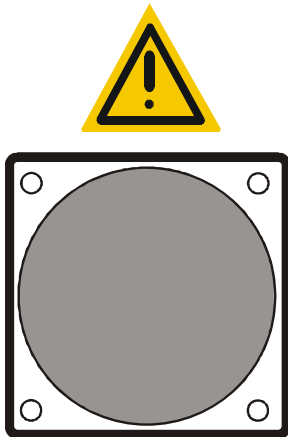


Correct and safety



Wrong and *Hazardous live*

### 1.3 Meaning of front panel warnings



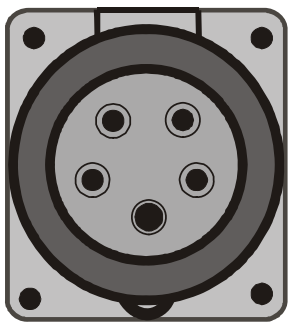
**230 V / 400 V**  
**50 Hz / 7 W**

Take care. Demonstration board operates only at declared mains voltages (according to the description under the mains socket) and right connected mains terminals!

Use only outlets with grounded protection terminal!

There is a protection circuit inside the board. The board will not turn on:

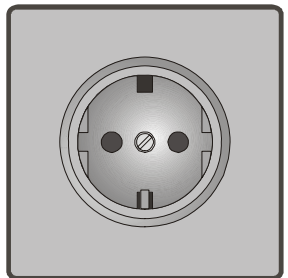
- if PE terminal is not grounded
- if N terminal is not connected
- if phase voltage is not applied to the boards L terminal. Swap the mains plug in this case.
- if there is a voltage difference higher than 30V between N and PE terminals.



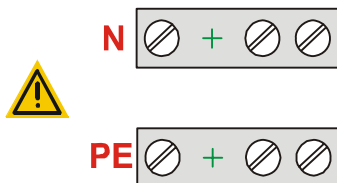
1-phase connection: The board will turn on if mains plug is inserted correctly. Otherwise swap L and N terminals!

Use the test outlets on front panel only for demonstration purposes!

Do not connect any other equipment/loads, otherwise the board may be damaged and the operator exposed to hazardous voltage!



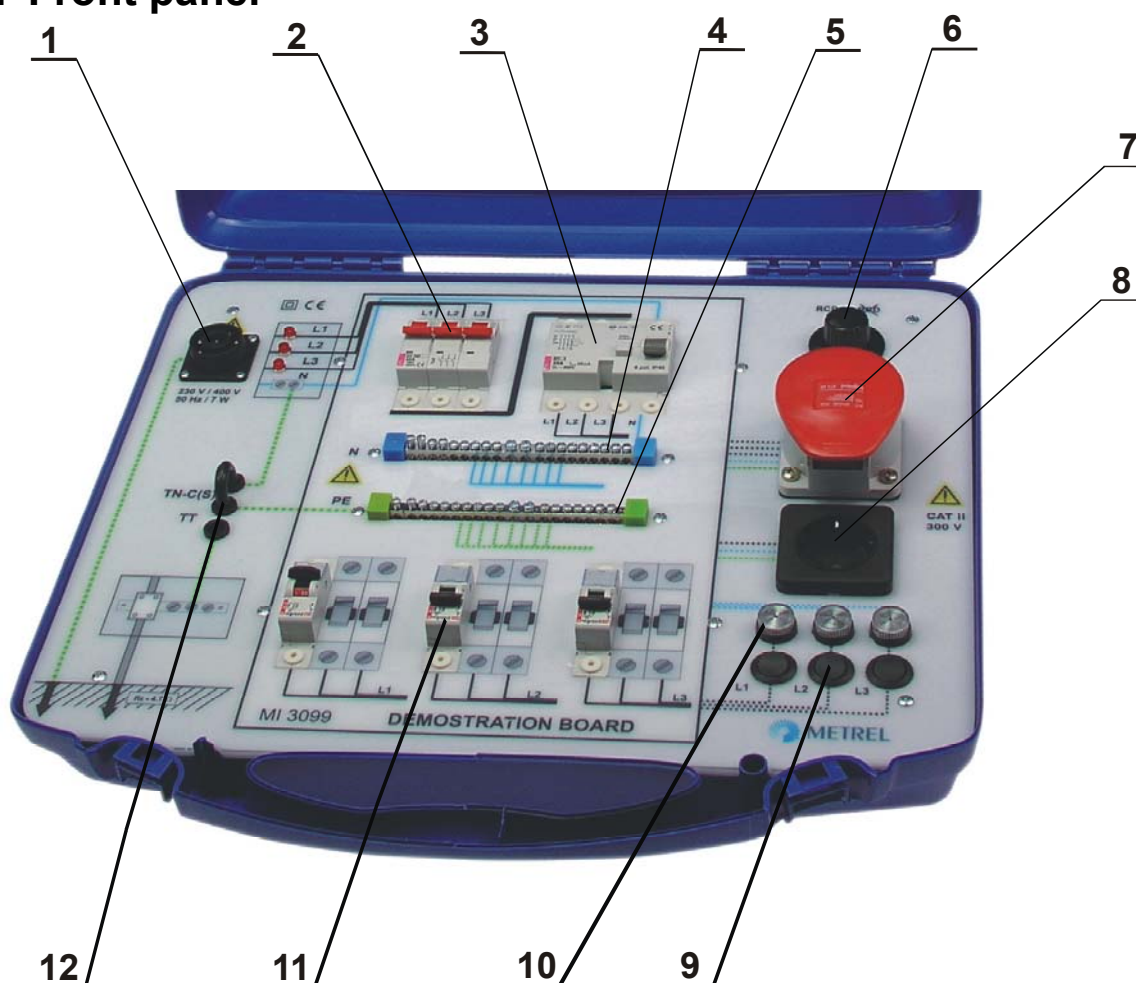
Do not connect any external voltage except voltages generated by measuring instruments – possible hazardous voltage on accessible parts of board.



PE terminals collectors and N terminals collectors are NOT connected to mains PE terminal but to neutral line.

## 2 Front panel and mains cable description

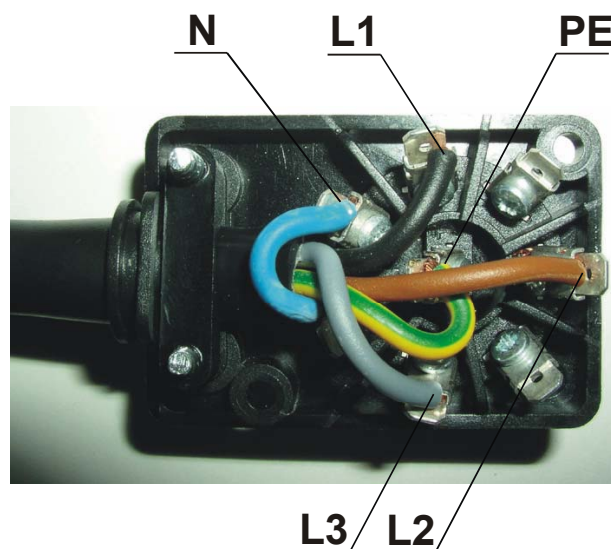
### 2.1 Front panel



#### Legend:

- 1 ..... Mains connector. For connection to mains voltage via belonging mains cable.  
For connection to 1-phase system use the 1-phase to 3-phase adapter
- 2 ..... Main switch.
- 3 ..... RCD protection device. It can be by passed with rotary switch (position 6)
- 4 ..... N - collector.
- 5 ..... PE - collector.
- 6 ..... Rotary switch for by-passing of the RCD.  
**RCD** ⇒ RCD is included  
~~**RCD**~~ ⇒ RCD is by-passed
- 7 ..... 3-phase socket.
- 8 ..... 1-phase socket
- 9 ..... Switches for loads (lamps)
- 10 ..... Loads (lamps)
- 11 ..... Automatic fuses
- 12 ..... Jumper for selection of TN-C(S) or TT system

## 2.2 Mains cable 3-phase



## 3 Technical data

Nominal mains voltage .....	230 V / 400 V (STAR connection) / 50 Hz
Power consumption .....	7 W
Mains cord .....	1-phase, 3-phase
Dimensions (W × L × H) .....	480 mm × 387 mm × 136 mm
Weight .....	5 kg
Protection classification .....	Class II
Over current category .....	CAT II 300 V
Pollution degree.....	2

### Reference conditions

Reference temperature range .....	10 °C ÷ 30 °C
Reference humidity range .....	40 %RH ÷ 70 %RH

### Operation conditions

Working temperature range .....	5 °C ÷ 40 °C
Maximum relative humidity.....	95 %RH (5 °C ÷ 40 °C), non-condensing

## 4 Maintenance

### 4.1 Cleaning

Use a soft cloth slightly moistened with soapy water or alcohol to clean the surface of the board and then leave the board to dry totally before use.

**Do not use liquids based on petrol!**  
**Do not spill liquids over the board!**

## 4.2 Service

In case of improper operation of Demonstration board or if there is any damage noticed, the product has to be taken to an authorised service. Consult the producer or your dealer for further information.

**The product has no internal user serviceable parts (fuses, etc).**

## 5 Standard set

Upon receipt of Demonstration board it is advisable to check the content of the delivery. The following items have to be included:

- Demonstration board
- Jumper
- Tip probe (3 pcs)
- Mains cable (3-phase)
- Adapter 1-phase to 3-phase
- Instruction manual