

TCIL1 ELECTRONIC ENERGY METER INDIRECT CONNECTION LCD DISPLAY

The TCIL1 model is an electronic energy meter according to EN 60253, for use in three phase unbalanced networks. Its small size allows its usage in small panel boards, for instance when there are several output lines to be metered. A LCD display provides the indication, even when the unit is switched off. Also are added:

- LED for current checking, one on each phase.
- LED for verification and calibration.
- Pulse output for remote metering.
- Sealable terminal cover.

TECHNICAL FEATURES.

Measuring ranges.

Voltage: 3x230 (400) V

Current: 1,5 (6) A. Transformer connected.

Display: Eight digits, 9mm high.

Class : 1.

Pulse output: Optoisolator, 24 VDC, 20 mA. Polarity sensitive.

Pulse constant: 1, 10, 100 pulses/kWh.

Verification LED: 12000 pulses per kWh.

Transformer ratio: from 5 to 6000/5.

Mounting: DIN rail.

TRANSFORMER RATIOS.

The following primary currents can be selected:

5, 10, 15, 25, 30, 40, 50, 60, 75, 80

100, 120, 150, 200, 250, 300, 400, 500, 600, 750, 800,

1000, 1200, 1500, 1600, 2000, 2500, 3000, 4000, 5000, 6000.

OPERATION.

When the meter is not connected or switched off, the display shows the energy value. A small battery maintains the indication, at least during 10000 hours without power.

When the meter is supplied, the current ratio is shown in the display during two seconds. After that, the indication is switched to energy consumption.

TCIL1 PRIMARY SETTING

When setting the transformation ratio to TCIL1, it saves the ratio and locks. For programming a new transformation ratio, it must be unlocked. When unlocked TCIL1 return to 5 / 5 A. For access

to programming remove the sliding cover under the lower terminal cover.

Setting:

Press sequentially until display shows the selected ratio.

Keep pressed between 30 and 60 seconds, recommendation 45.

Release and it's already recorded.

While keeping press, it does not change the screen.

When programming the meter is reset to zero.

Unlock:

Press and keep pressed between 60 and 90 seconds, recommendation 75.

Release and it's already unlocked.

While keeping press, it does not change the screen.

The meter indication also depends on the range selected in the following way:

Primary current

Indication

5 to 60 A Two decimals

000000.00 kWh.

75 to 600 A One decimal

0000000.0 kWh.

750 to 6000 A Integer

00000000 kWh.

The pulse output constant depends on the display indication, as corresponds to the last digit value. The pulse value is 10 Wh. when two decimals places are shown, 100 Wh when only one decimal place, and 1 kWh if the indication is an integer.

ENVIRONMENT CONDITIONS.

Storage : -25/70°C, 75% RH.

Operation: -20/55°C, 85% RH.

CONNECTIONS.

(See schematic diagram)

Current terminals: 10 mm².

Voltage terminals: 1,5 mm²

The transformers polarity must be carefully checked, as well as the correspondence between current and voltage for each phase.

DIMENSIONS. See attached drawing.

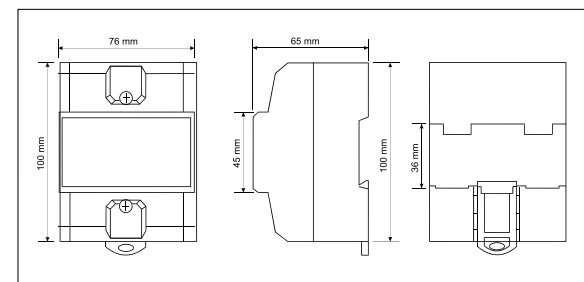
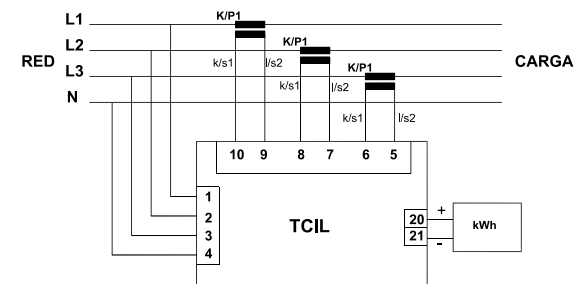
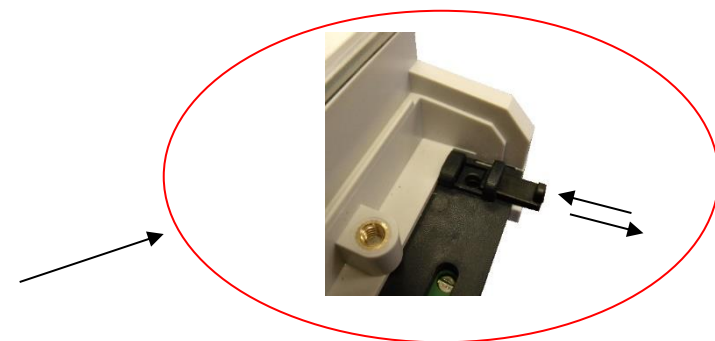
SAFETY.

- Do not open the equipment, nor handle it connected to the supply.

- A switch off device must be used in the voltage lines, with automatic disconnection capability. A range from 1 to 10 A could be adequate for this switch.

- Do not disconnect the current transformers without shorting the secondary wires. A relatively high voltage can be produced, and the

transformers can be heated up. It is advisable to provide some way to short circuit the transformers wires before they reach the meter.



EU Regulation 2023/1542 concerning batteries and waste batteries requires that, from 18 February 2027, all products placed on the market incorporating portable batteries shall ensure that those batteries are readily removable and replaceable by the end-user at any time during the lifetime of the product. This requirement does not apply to this equipment (TCIL1) as it falls within the exceptions set out in Article 11(3) of Regulation (EU) 2023/1542, as clarified in Commission Notice C/2025/214, since it is a product whose main function is to collect and supply data and the purpose of the battery is to maintain the integrity of that data.

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Specifications subject to change without prior notice