

TCIL ELECTRONIC ENERGY METER INDIRECT CONNECTION LCD DISPLAY

The TCIL 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.

◆ 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.

◆ TRANSFORMER RATIOS.

The following primary currents can be selected:

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

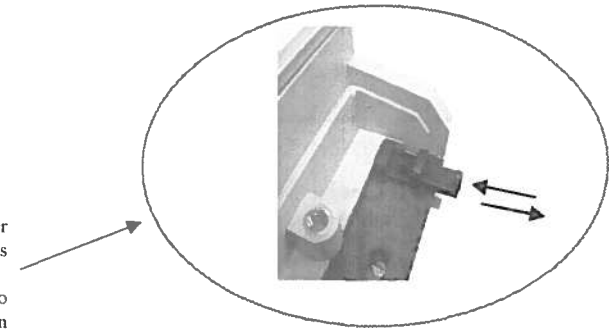
100, 120, 150, 200, 250, 300, 400, 500, 600, 750,

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.



◆ PRIMARY CURRENT SELECTION.

To change the transformer primary current, the terminal cover must be opened. A small screwdriver or pin must be used to press on the change switch, which is under a sliding small cover.

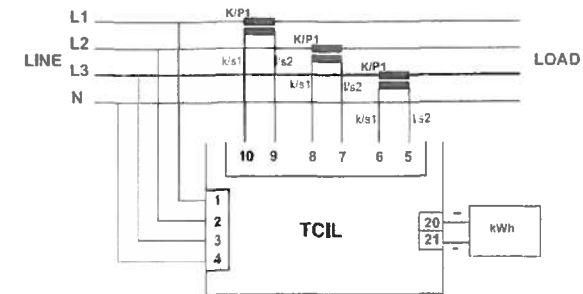
Pressing the switch changes sequentially the value, from 5 to 6000. To store the value selected, press the switch longer than ten seconds, and after that the meter will use it to make the measurement.

The counter 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.

To change the stored current value, press the switch during more than forty seconds. The instrument goes back to unprogrammed status, and the programming process can be repeated.

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.

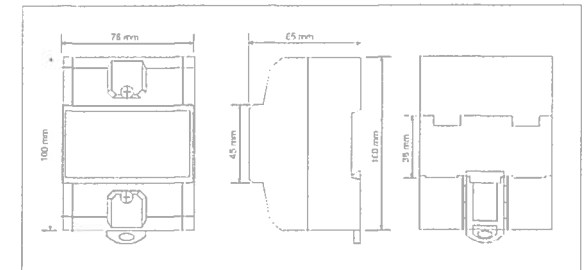
Operation: -20/55°C, 85% RH.

◆ 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.



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Specifications subject to change without prior notice

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