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## LE-04d

Electric energy meter,  
3-phase, 2-tariff



**Do not dispose of this device in the trash along with other waste!** According to the Law on Waste, electro coming from households free of charge and can give any amount up to that end point of collection, as well as to store the occasion of the purchase of new equipment (in accordance with the principle of old-for-new, regardless of brand). Electro thrown in the trash or abandoned in nature, pose a threat to the environment and human health.



### Purpose

The LE-04d is a static (electronic) calibrated electricity meter of three-phase alternating current in a direct system.

The meter is adapted for cooperation with an external time clock and is designed for metering and billing in a 2-tariff system.

### Functioning

A special electronic system under the influence of current flow and applied voltage in each phase generates pulses in proportion to the electricity consumed in this phase.

Phase energy consumption is indicated by flashing the corresponding LED (L1, L2, L3). The sum of the three phases of pulses indicated by a flashing LED is converted to energy taken in the entire three-phase system, and its value is determined by the segment LCD display.

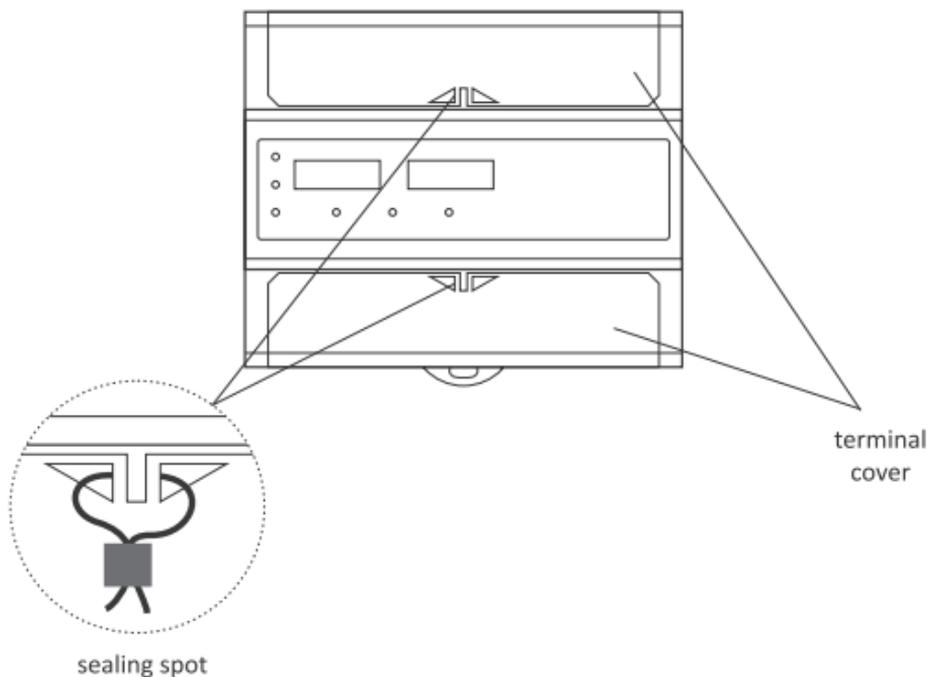
Numbers after the decimal point indicate (.11 kWh =110 Wh).

Separate displays T0 and T1 are used to indicate the energy consumption values of a tariff.



## Sealing

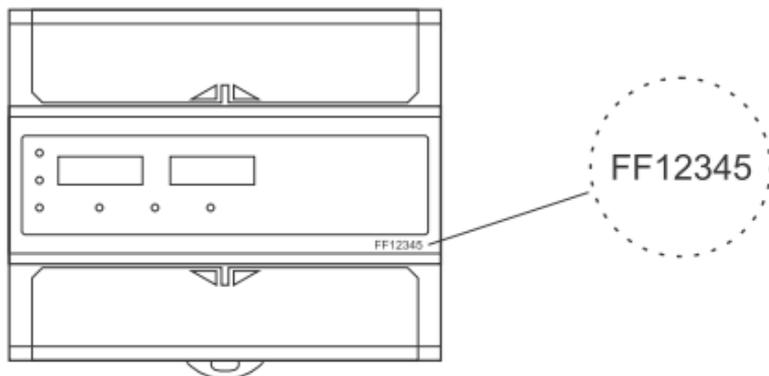
The meter has sealable input and output terminal covers to prevent any attempts to bypass the meter.



## Meter number

The meter is marked with individual serial number allowing its unambiguous identification. The marking is laser engraved and cannot be removed).

## Meter number cont.



## Mounting

1. Disconnect the power supply.
2. The indicator mounted on a rail in the distribution box.
3. Use a screwdriver to unscrew the screws and remove the front counter terminal covers.
4. Connect the voltages of the phases to be monitored as indicated to the terminals 1 (L1), 3 (L2), 5 (L3).
5. Connect the circuit to be measured or a single consumer to the terminals 2 (L1), 4 (L2), 6 (L3)
6. N-wire connect to terminal 7.
7. Additional pulse receiver connected (optional) to terminals 9(+) and 8(-).

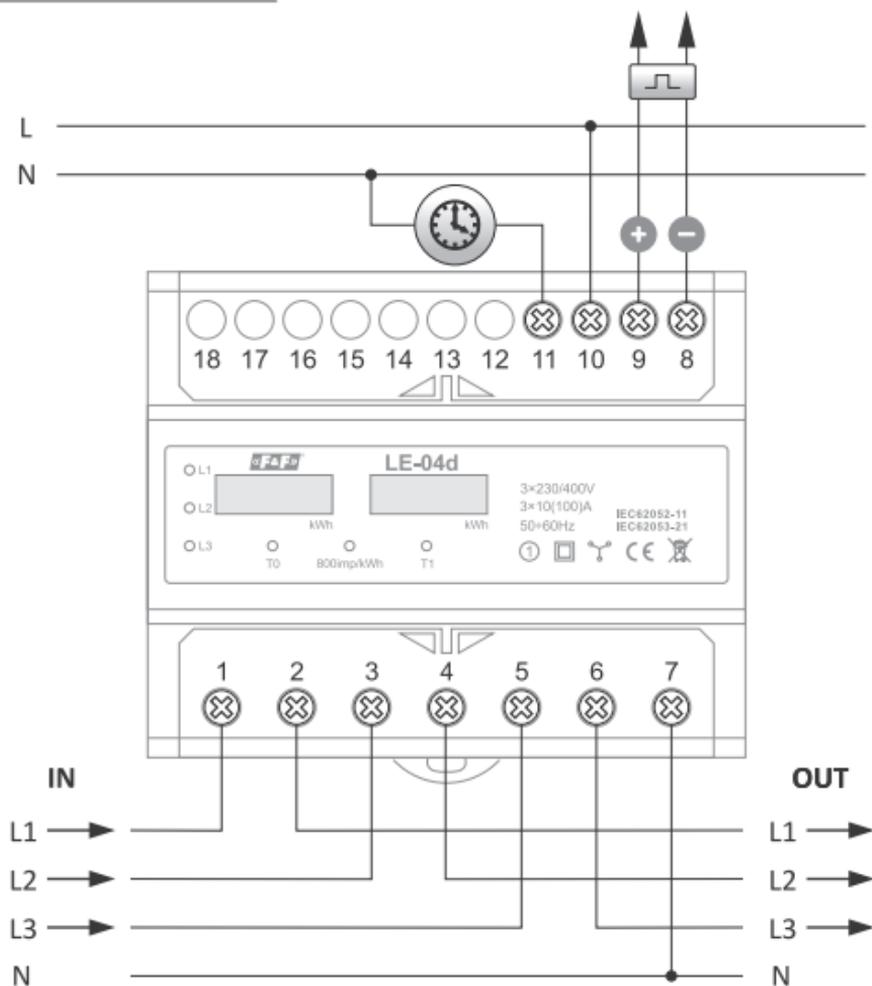


Additional pulse receiver is not required.

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8. Connect the external timer to terminals 10-11.
9. Fit the meter terminal covers.

## Wiring diagram

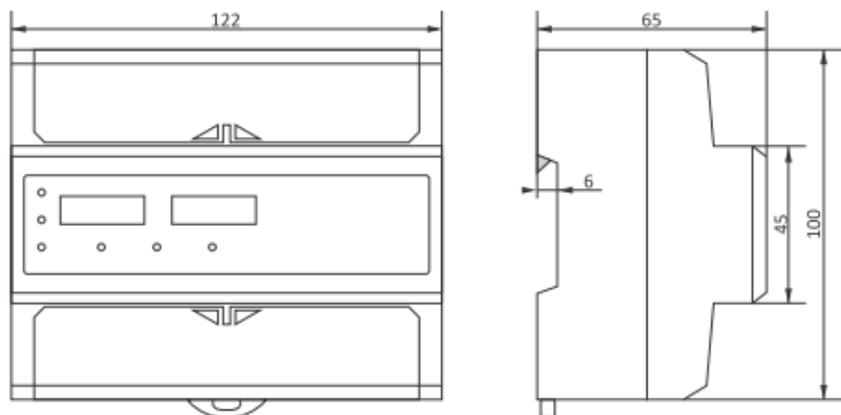


- |   |             |    |                   |
|---|-------------|----|-------------------|
| 1 | L1IN phase  | 7  | neutral N-wire    |
| 2 | L1OUT phase | 8  | pulse output (-)  |
| 3 | L2IN phase  | 9  | pulse output (+)  |
| 4 | L2OUT phase | 10 | control timer (L) |
| 5 | L3IN phase  | 11 | control timer (N) |
| 6 | L3OUT phase |    |                   |

## Technical data

installation	4-wire
rated voltage	3×230/400 V
minimum measured current	0.04 A
base current	10 A
maximum current	100 A
voltage measuring range	160÷265 V
measurement accuracy (IEC62052)	1st class
rated frequency	50 Hz
insulation protection class	II
housing	PC+ABS material
own power consumption	<10 VA; <2 W
indication range	0÷99999.99 kWh
constant	800 pulses/kWh
current consumption signalling L1, L2, L3 phases	3× red LED
T0 and T1 read-out signalling	2× red LED
pulse output	
type	open collector
maximum voltage	27 V DC
maximum current	27 mA
pulse constant	1000 pulses/kWh
pulse time	35 ms
working temperature	-20÷55°C
terminal	16 mm <sup>2</sup> screw terminals
dimensions	7 modules (122 mm)
mounting	on TH-35 rail
ingress protection	IP20

## Dimensions



## Warranty

F&F products are covered by a 24-month warranty from the date of purchase. The warranty is only valid with proof of purchase. Contact your dealer or contact us directly.

## CE declaration

F&F Filipowski L.P. declares that the device is in conformity with the essential requirements of the Low Voltage Directive (LVD) 2014/35/EU and the Electromagnetic Compatibility (EMC) Directive 2014/30/UE.

The CE and MID Declaration of Conformity, along with the references to the standards in relation to which conformity is declared, can be found [www.fif.com.pl](http://www.fif.com.pl) on the product subpage.

## General work safety conditions

- » Please read the instructions carefully before installation.
- » The device should be installed and operated by qualified personnel who are familiar with its design, operation, and associated risks.
- » Do not install a meter that is damaged or incomplete.
- » The user is responsible for proper grounding of the system, proper selection, installation, and efficiency of other devices connected to the meter, including safety devices such as over-current, residual current and overvoltage circuit breakers.
- » Before connecting the power supply, make sure that all cables are connected correctly.
- » It is essential to observe the operating conditions of the meter (supply voltage, humidity, temperature).
- » To avoid electric shock or damage to the meter, turn off the power supply whenever the connection is changed.
- » Do not make any changes to the unit yourself. Doing so can result in damage to or improper operation of the device, which in turn can pose a threat to people operating it. In such cases, the manufacturer is not responsible for the resulting events and may refuse the provided warranty in the event of a complaint.
- » Do not tighten the terminals without the wire inserted. This may damage the lift mechanism of the terminal or the plastic cover of this terminal.