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ENERGY METER  
 three phase type

LE-03d  
 CT400

**WARRANTY.** The F&F products are covered by a warranty of the 24 months from the date of purchase. Effective only with proof of purchase. Contact your dealer or directly with us. More information how to make a complaint can be found on the website: [www.fff.com.pl/reklamacja](http://www.fff.com.pl/reklamacja)



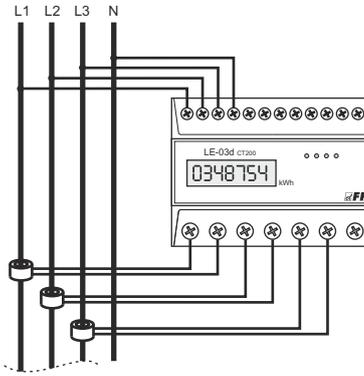
Do not dispose of this device to a garbage bin with other unsorted waste! In accordance with the Waste Electrical and Electronic Equipment Act any household electro-waste can be turned in free of charge and in any quantity to a collection point established for this purpose, as well as to the store in the event of purchasing new equipment (as per the old for new rule, regardless of brand). Electro-waste thrown in the garbage bin or abandoned in the bosom of nature pose a threat to the environment and human health.

**Purpose**

LE-03d CT400 is a static (electronic) rated energy which is to serve as an auxiliary meters to measure energy consumption in a three phase direct system. These meters is intended for current transformers with a secondary current of 5A. Maximum measured current of the system is specified by the value of the primary current while using the current transformer. In the case of transformers with dedicated operating parameters, the meters display the actual value of the power consumed by the system.

**Functioning**

The meter is equipped with a special electronic circuit which generates pulses proportionally to electric energy consumption in a given phase by means of the current flow and voltage applied. Consumption of energy in the phase is indicated by shining the corresponding LED (L1, L2, L3). The sum of the three phases of pulses indicated by shining LED is converted to energy, taken in the entire three-phase system and its value is determined by the segment LCD display.



**Pulse output**

The counter has a pulse output SO+ - SO-. This allows you to connect another read device pulse generated by the pulse by meter. For the correct operation of the meter isn't required to connect additional devices.

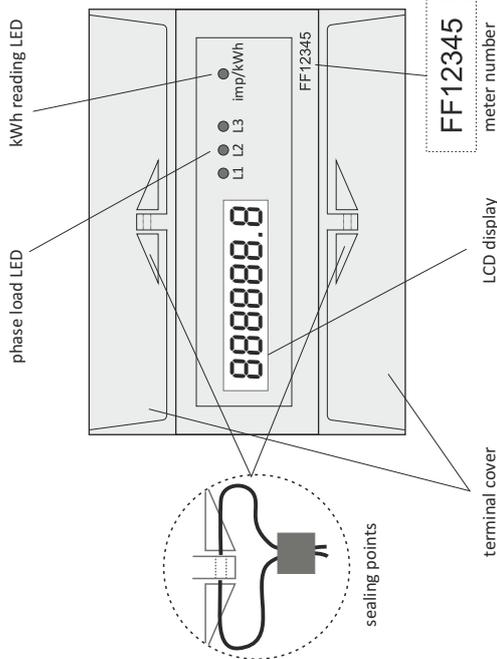
**Sealing**

The meter has the possibility of sealing guards input and output terminals to prevent the circumvention of making counter.

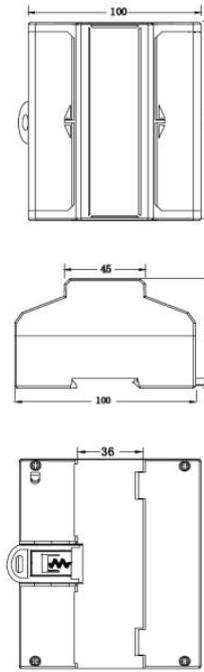
**Meter number**

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

**Meter front description**



**Dimensions**

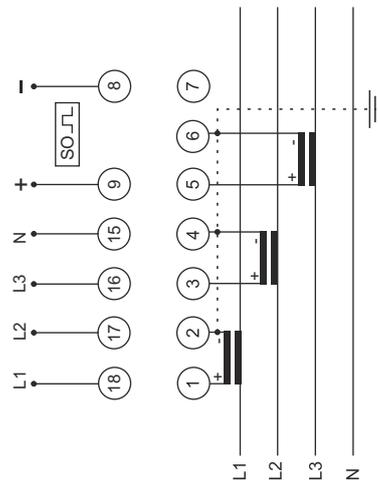


#### Technical data

type of transformer	400/5A
reference voltage	3× 230/400V+N
basic current	3× 1.5A
maximum current	3× 5A
minimum current	0.04A
measure precision (with IEC61036)	1 <sup>st</sup> class
meter's own power consumption	<10VA; <2W
load current inputs	0.4VA
indication range	9999999kWh
constant of the meter	(3.33Wh/pulse) 300pulses/kWh
current consumption signal	3× red LED
read signal	red LED
impulse output SO+ SO-	open collector
connection voltage SO+ SO-	<30V DC
connection current SO+ SO-	<27mA
constant SO+ SO-	(3.33Wh/pulse) 300pulses/kWh
pulse time SO+ SO-	35msec
working temperature	-20÷50°C
terminal	25mm <sup>2</sup> screw terminals
dimensions	7 modules (122mm)
mounting	on the rail TH-35
protection level	IP20

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#### Wiring diagram

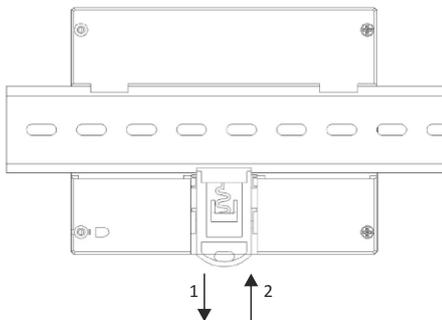


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#### Assembly

1. Take OFF the power.
2. Energy meter put on the rail, in the switchgearbox.
3. Voltages of controlled phase connect with marks to contacts 18 (L1), 17 (L2), 16 (L3).
4. Transformers fasten to the operating phase, a secondary output connect in accordance with indications to the contacts 1-2 (L1), 3-4 (L2), 5-6 (L3).
5. Cable N connect to contact 15.
6. In order to increase the security of the system and the accuracy of the measurement it is recommended to ground the "-" terminals of the current transformers secondary side.
7. Additional pulse receiver connect to contact 9(+)- 8(-).

**ATTENTION!** It is not required for the correct operation of the meter.



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#### General safety conditions

- \* Please read the manual carefully prior to installing the meter.
- \* The meter should be installed and operated by qualified personnel familiar with the construction, operation and any hazards involved.
- \* Do not install the meter if it is damaged or incomplete.
- \* The user is responsible for proper grounding, selection, installation and functionality of any other devices connected to the meter, including security devices such as overcurrent protection breakers, differential switches and surge protectors.
- \* Before connecting the power supply make sure that all cables are connected properly.
- \* Always follow the operational conditions of the meter (voltage, humidity, temperature).
- \* In order to avoid electric shock or damage to the meter, disconnect the power before each change in connection configuration.
- \* Do not modify the device on your own, as this may cause damage or improper operation of the meter and consequently expose the users to risk. In these cases the manufacturer is not liable for ensuing events and reserves the right to refuse the warranty claims on the counter.



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