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ELECTRICITY ENERGY METER
3-phase, 2-wire, tariff

LE-03MW

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 compliant can be found on the website:
www.fif.com.pl/reklamacje

5 9 0 2 4 3 1 6 7 1 8 6 4

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 to 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.

Conformity

Directive	MID 2014/32/EC, 0120/SGS0306
Norm	EN50470-1/3

Purpose

LE-03MW is an electronic, compliant with the MID Directive, 2-way electricity meter for three-phase electricity, designed for measurement in a direct system.
The built-in real-time clock allows energy consumption to be measured with different tariff zones.
The device is equipped with communication interfaces: RS-485 with Modbus RTU protocol and optical port compliant with EN62056 (IEC1107) standard for remote reading and configuration of the meter.

Manual and programming instructions

Full technical documentation of the device for download from thewebsite:
www.le.fif.com.pl

Functions

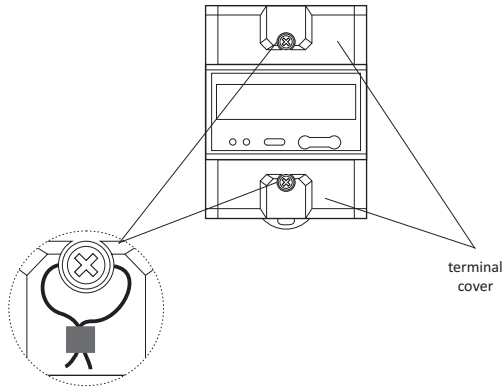
* 3-phase, 2-way energy meter;
* direct measurement up to 80 A;
* energy measurement in 4 tariff zones;
* built-in real time clock with battery backup to switch tariff zones;
* registration of total and divided into consumption tariffs:
  – total active and reactive energy;
  – active and reactive energy divided into individual quadrants;
* 8 time schedules dividing the day into tariff zones;
* it can settle energy according to schedules specific for business days and weekends;
* it can divide year into 8 time intervals; in each interval the energy (for weekdays) can be settled according to a different schedule;
* indication of network parameters (voltages, currents, active power, reactive power, apparent power, power factor, frequency);
* calculation of power demand for individual tariffs;
* an additional, resettable energy consumption meter;
* compliance with MID;
* RS-485 port, Modbus RTU protocol;
* optical communication port compliant with EN62056 (IEC1107) standard;
* 2× SO pulse outputs with a programmable number of pulses per kWh / kvarh.
* multifunction LCD display.

Measured values

Consumed and supplied active energy	AE+/AE-	[kWh]
Inductive and capacitive reactive energy	RE+/RE-	[kvarh]
Phase voltages	U1, U2, U3	[V]
Phase currents	I1, I2, I3	[A]
Frequency	F	[Hz]
Consumed and supplied active power	P	[W]
Inductive and capacitive reactive power	Q	[var]
Apparent power	S	[VA]
Power factor	cosφ	

Meter number

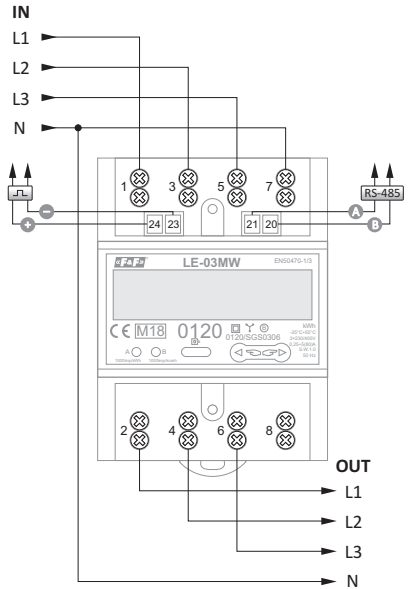
The meter is marked with individual serial number allowing its unambiguous identification.
The marking is laser engraved and cannot be removed.



Sealing

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

Wiring diagram



20, 21 – RS-485 (A, B)
23, 24 – pulse output

Technical data

reference voltage	3×230/400 V
minimum current/base current	0.25/5 A
maximum current	80 A
minimum detection current	0.04 A
voltage measuring current	
L-N	100÷289 V AC
L-L	173÷500 V AC
rated frequency	50 Hz
measurement accuracy	B class
instalation	3-phase, 4-wire
overloading	30×Imax/10 ms
insulation	4 kV/1 min.; 6 kV/1 µs
own meter consumption	<10 VA; <2 W
measured values	
indication range of the meter	8 digits
pulse outputs	
number of pulse outputs	2
type of pulse outputs	OC (open collector)
maximum voltage	30 V DC
maximum current	27 mA
pulse constant for output 1	1; 10; 100; 1000 pulse/kWh
pulse constant for output 2	1000 pulse/kvar
communication	
port	RS-485
communication protocol	Modbus RTU
transmission speed	1200, 2400, 4800, 9600 bps
parity	EVEN
parity bits	2

(continued on the next page)

Technical data (continued from the previous pag)

reading indication	2×LED
working temperature	-25÷55°C
terminal	25 mm² screw terminals
dimensions	76×100×65 mm (4,5 modules DIN)
mounting	on the TH-35 mm rail
protection level	IP51
insulation protection class	class II
housing	UI94 V-0 self-extinguishing material

Service program

On the fif.com.pl website (on the subpage of the LE-03MW meter) a program is available for PCs with Windows that allows checking the readings of the meter and making all its settings.

CE declaration

A copy of the CE declaration is available for download from the website: www.fif.com.pl from the product subpage.

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