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LE-01MQ

Electric energy meter,
1-phase

5 908312 599852

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.

Compliance

MID Directive	2014/32/EU
Certificate number	0120/SGS0214

Purpose

The LE-01MB is a static (electronic) calibrated electricity meter of single-phase alternating current in a direct system.

Functioning

It is used for reading and recording of imported electricity and parameters of the power supply with the ability of remote reading through a wired RS-485 network.
Configuration of the meter is done through the configuration menu accessible from the front panel and through the communication port according to the software features of the Modbus RTU.

Measured values

Active energy consumed	AE+	[kWh]
Active energy released	AE-	[kWh]
Inductive reactive energy		[kvarh]
Capacitive reactive energy		[kvarh]
Active power	P	[W]
Reactive power	Q	[var]
Apparent power	S	[VA]
Power demand	kW	
Voltage	U	[V]
Current	I	[A]
Rated frequency	f	[Hz]
Power factor	cos φ	

Pulse output

The meter is equipped with 2 pulse output open collectors (OC type). This allows you to connect another pulse device (SO) that reads pulses generated by the meter.
No additional connected equipment is required for proper operation of the meter.

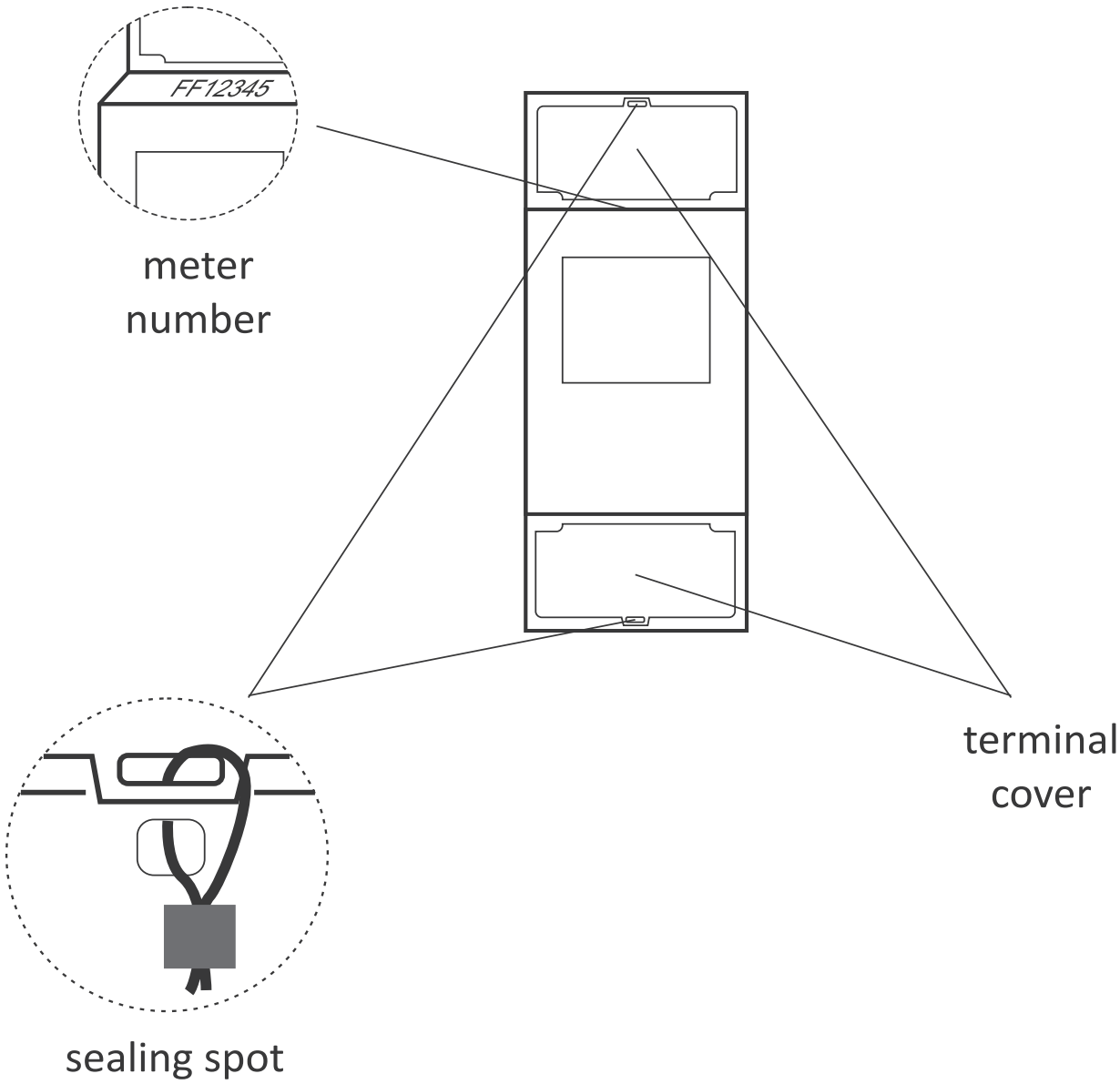
Meter number

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

Sealing

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

Front description

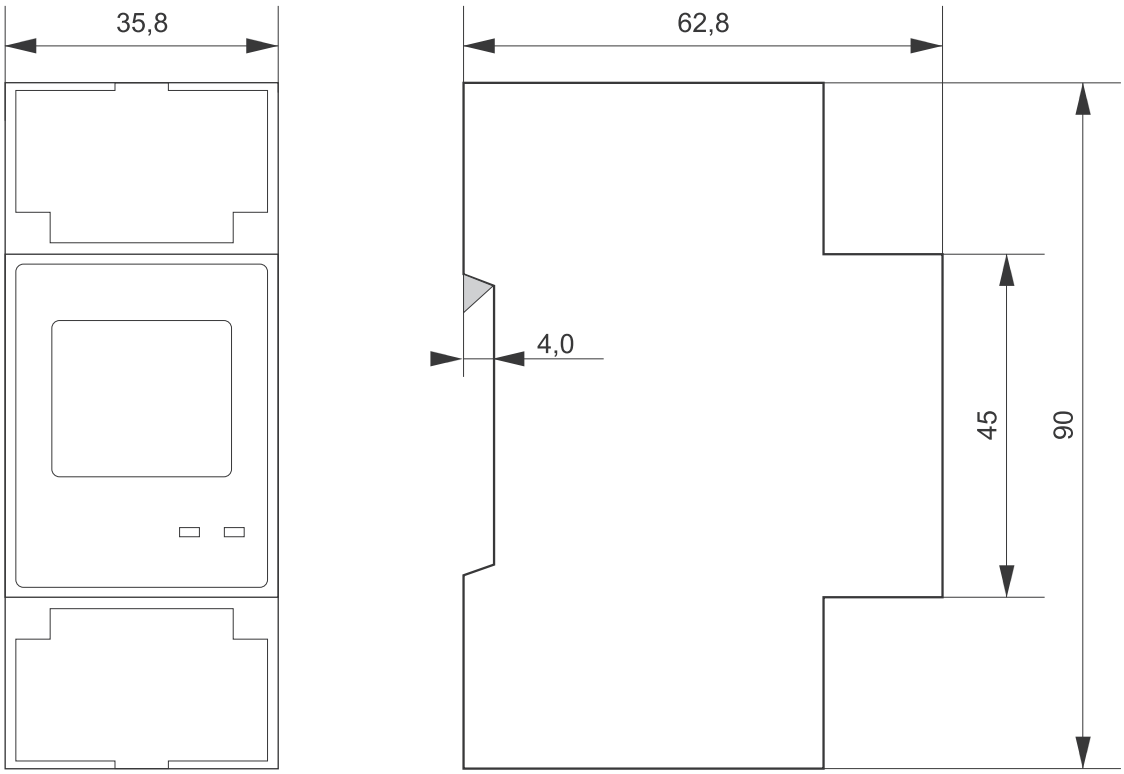


Display description

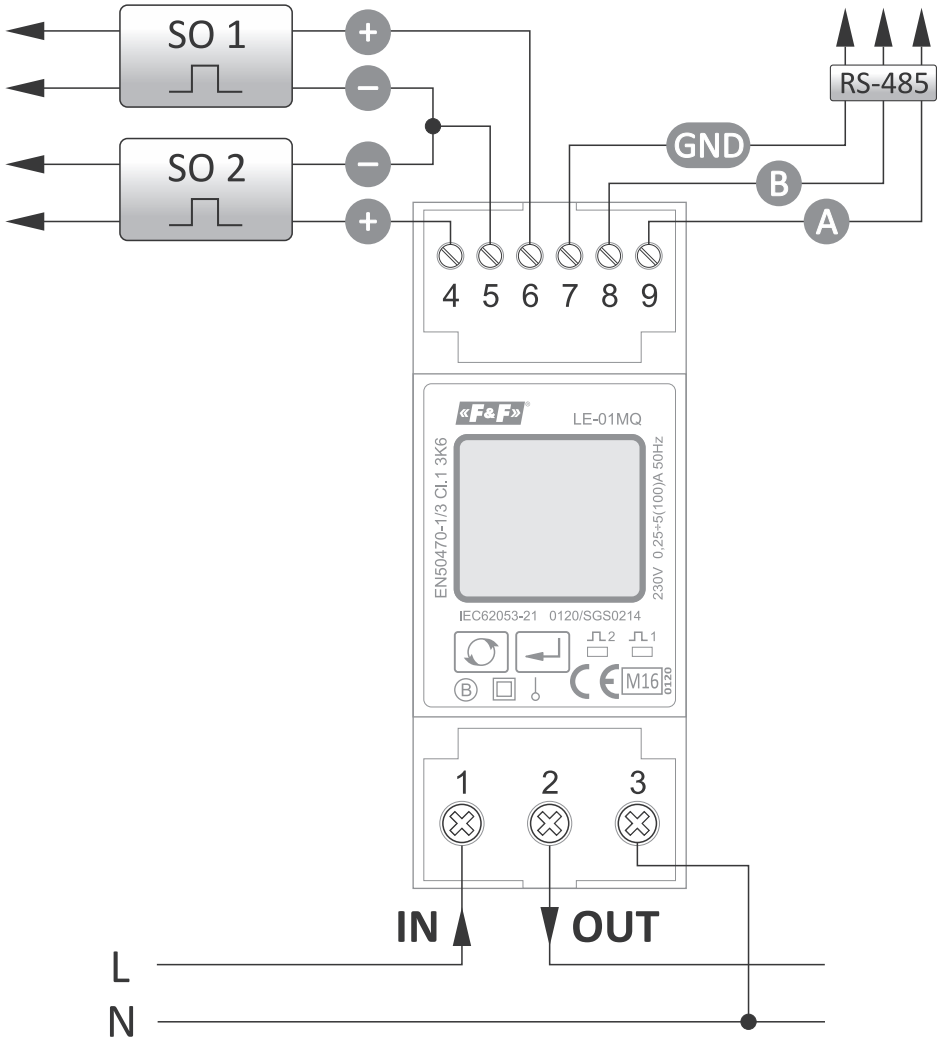
No.	Description
1	7 digits for displaying measured values
2	Active energy – total value)
3	Tariff (inactive)
4	Energy: imported/exported
5	Maximum power or current demand
6	Pulse output 1 and 2
7	Parameter units
8	PF – power factor

No.	Description
9	Power indicator
10	Communication indicator
11	Battery status
12	Modbus communication lock symbol for configuration parameters

Dimensions



Wiring diagram



1 – LIN power input

2 – LOUT power output

3 – N-wire neutral

4 – pulse output 2 (+)

5 – pulse output 1+2 (–)

6 – pulse output 1 (+)

7 – RS-485 output (GND)

8 – RS-485 output (B)

9 – RS-485 output (A)

Technical data

installation	2-wire
rated voltage	230 V AC
minimum measured current	0.02 A
base current	5 A
maximum current	100 A
voltage measuring range	176÷276 V
measurement accuracy (EN50470-1/3)	class B
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
read-out signalling	2× red LED
communication	
port	RS-485
communication protocol	Modbus RTU
baud rate	300, 600, 1200, 2400*, 4800, 9600 bps
parity	NONE*, ODD, EVEN
stop bits	1*, 2
pulse outputs	
type	2× open collector
maximum voltage	27 V DC
maximum current	27 mA
output 1	
constant	1, 10, 100, 1000 pulses/kWh or 1, 10, 100, 1000 pulses/kvarh
pulse time	60, 100, 200 ms
output 2	
constant	3200 pulses/kWh
pulse time	200 ms

working temperature	-25÷55°C
terminals	
pulse and communication	1.5 mm² screw terminals
voltage and current	16 mm² screw terminals
dimensions	2 modules (35 mm)
mounting	on TH-35 rail
ingress protection	IP51

** factory settings*

LE Config service program

Program for test reading of the counted energy value and for basic settings of the meter parameters.
Available at www.fif.com.pl (on the device's subpage).
For communication of the meter with the computer, the USB CN-USB-485 converter or any RS-485/USB standard is required.

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 sp. j. 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 on the product subpage.