

ELECTRICITY CONSUMPTION METER
 1-phase

LE-01MR

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.fif.com.pl/reklamacje



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.

Purpose

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

It is designed to indicate and register the consumed electricity and parameters of the power supply network with the option of remote reading of indications via RS-485 network.

Conformity

Directive MID 2014/32/EC, 0120/SGS0305
 Norm EN50470-1/3

Measured value

Active energy consumed/supplied	AE+ /AE- [kWh]
or	
Active energy consumed/reactive consumed	AE+ [kWh] / RE+ [kvarh]
Voltage	U [V]
Current	I [A]
Frequency	F [Hz]
Active power	P [W]

Reactive power
 Apparent power
 Power factor

Q [var]
 S [VA]
 cosφ

Functioning

The LE-01MR meter precisely measures the amount of consumed electricity under the influence of flowing current and applied voltage. Power consumption is indicated by the flashing LED (1000 i/kWh). In addition, the meter measures the parameters of the supply network and the temperature of its own system. The values are indicated cyclically on the LCD display. The parameter is changed by default every 5 seconds or at the frequency set by the user and manually, using the button on the front of the casing of the meter. The display is active when the indicator power is on.

The meter operate in the communication network as a slave device.

The communication takes place in accordance with the Modbus RTU standard via the RS-485 serial port. The read-out values of registers after conversion give results according to the indications on the indicator display. Each meter is identified by a unique address assigned by the user.

Modbus registers

Detailed PDF instruction with description of all measuring and configuration registers is available for download from the website:

www.le.fif.com.pl

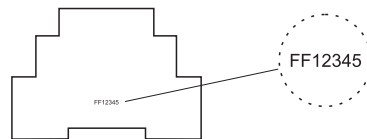
Meter address

The change of the address of the meter is made via the RS-485 port using the Modbus RTU protocol command, setting the desired value in the register of the meter.

Default address of the counter: 1.

Meter number

The meter is marked with an individual factory number enabling its unambiguous identification. The marking is indelible (laser engraving).



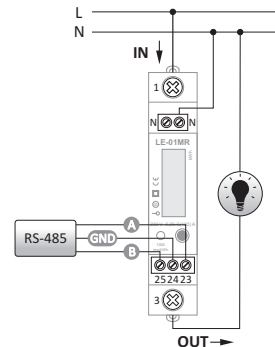
Sealing

The meter has the option of sealing the cover of the input and output terminals, making it impossible to bypass meter.

Technical data

reference voltage	230 V
base current	0.25÷5 A
maximum current	100 A
minimum detection current	0.02 A
measurement accuracy	class B
own meter consumption	<8 VA; <0,4 W
indication range of the meter	0÷999999 kWh
meter constant	(1,0 Wh/pulse) 1000 pulses/kWh
reading indication	red LED
port	RS-485
communication protocol	Modbus RTU
working temperature	-20÷55°C
terminal	
100 A	25 mm ² screw terminals
RS-485	1 mm ² screw terminals
tightening torque	0.4 Nm
dimensions	1 module(18 mm)
mounting	on the TH-35 rail
protection level	IP20

Connection diagram



Assembly

1. Disconnect the power supply.
2. Mount the indicator on the rail in the distribution box.
3. Connect the neutral wire to terminal N.
4. Connect the input phase to terminal 1.
5. Connect the measured circuit or single receiver to terminal 3 (output phase L) and to N.
6. Connect terminals 23, 24 and 25 to the RS-485 network.

Service program

On the www.fif.com.pl website (on the subpage of the LE-01MR meter) a program for PCs with Windows is available, which allows checking the status 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.