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tel/fax (+48 42) 215 23 83; 227 09 71 POLAND
http:/www.fif.com.pl e-mail: biuro@fif.com.pl

ELECTRICITY ENERGY METER
3-phase

LE-03MQ

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 908312 599128

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: 2004/22/EC
Certificate number: 0120/SG S0215

Purpose

The LE-03MQ is a static (electronic) calibrated electricity meter of single-phase or threee-phase alternating current in a direct system.
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.

Manual and programming instructions

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

Features

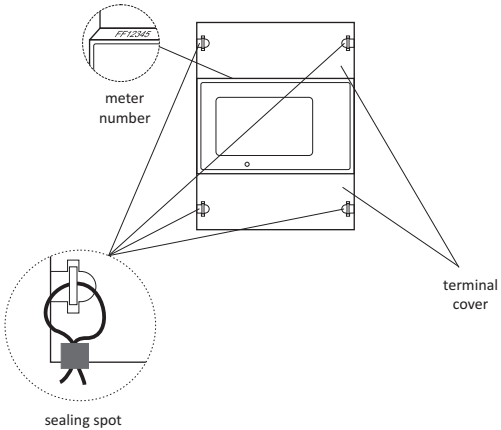
* 1- or 3-phase system (3- and 4-wire)
* bidirectional measurement (4-quadrant)
* kWh/kvar indication (consumed/supplied)
* indication of network parameters
* compliance with MID
* RS-485 port
* Modbus RTU protocol
* SO pulse output (×2)
* multifunction LCD display
* password protection for the meter configuration

Measured values

Consumed and supplied active energy	AE+/AE-	[kWh]
Inductive and capacitive reactive energy	RE+/RE-	[kvarh]
Phase voltage	U1, U2, U3	[V]
Phase current	I1, I2, I3	[A]
Frequency	f	[Hz]
Active power	P	[W]
Reactive power	Q	[var]
Apparent power	S	[VA]
Power factor	cosφ	
THD harmonic	%	
Demand for power and electricity	kW, kvar, kVA, I	

Meter number

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

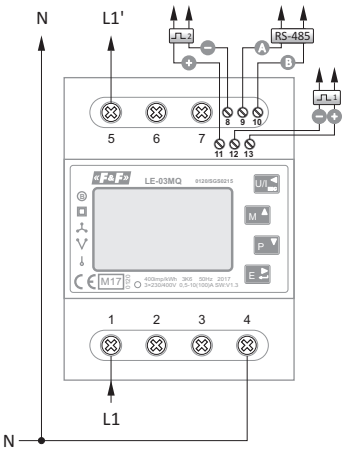


Sealing

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

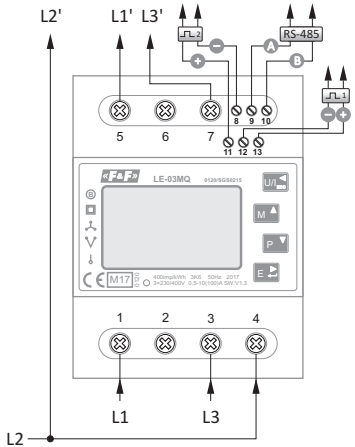
Wiring diagram

1-phase 2-wire system



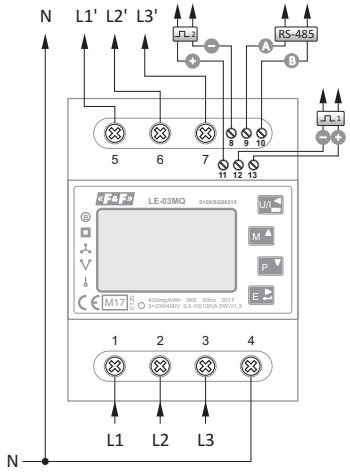
8, 11 – pulse output 2
9, 10 – RS-485 (A, B)
12, 13 – pulse output 1

3-phase 3-wire system



8, 11 – pulse output 2
9, 10 – RS-485 (A, B)
12, 13 – pulse output 1

3-phase 4-wire system



8, 11 – pulse output 2
9, 10 – RS-485 (A, B)
12, 13 – pulse output 1

Technical data

reference voltage	3×230/400 V
base current	5 A
maximum current	100 A
minimum detection current	0.02 A
voltage measuring current	
L-N	100÷289 V AC
L-L	173÷500 V AC
measurement accuracy	1st class
overloading	30×Imax/10 ms
insulation	4 kV/1 min; 6 kV/1,2 µs
own meter consumption	10 VA; 2 W
indication range	0÷9999999.9 kWh
meter constant kWh	400 pulses/kWh
meter constant kvarh/kWh	0.01, 0.1, 10, 100 pulses/kvar
read-out signalling	1×LED
pulse output kWh/kvarh	
OC (open collector)	27 V DC/27 mA
pulse time kWh/kvarh	60, 100, 200 ms
port	RS-485
communication protocol	Modbus RTU
working temperature	-25÷55°C
terminal	
high current	25mm² screw terminals
low current	2.5 mm² screw terminals
dimensions	4 module (72 mm)
mounting	on TH-35 rail
ingress protection	IP51

Service program

On the fif.com.pl website (on the subpage of the LE-03MQ 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.