F&F Filipowski L.P.
Konstantynowska 79/81, 95-200 Pabianice, POLAND
phone/fax (+48 42) 215 23 83 / (+48 42) 227 09 71
www.fif.com.pl; e-mail: biuro@fif.com.pl

LE-03MB CT

Electric energy meter,
3-phase

5 908312 599814

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

Directive MID	2014/32/EU
Certificate number	0120/SGS0671

Purpose

The LE-03MB CT is a static (electronic) calibrated electricity meter for single-phase or three-phase AC in a semi-direct system.
It is used for indication and registration of consumed electricity and mains parameters with the possibility of remote reading of indications via a wired network of the M-Bus standard.
The meter works with current transformers (CT) with a secondary current of 1 A or 5 A.
The meter is configured via the configuration menu accessible from the front panel and via the communication port in accordance with the software functions of the M-Bus.

Operation and programming manual

Detailed PDF instructions can be downloaded from the website: www.fif.com.pl from the product subpage.

Functions

» 1-phase or 3-phase system (3- and 4-wire);
» 2-way (4-quadrant) measurement;
» Transformers 1 A or 5 A;
» Current transformer 1÷9999;
» Display of kWh/kvar (consumed/generated);
» Network parameter indications;
» MID compliance;
» M-Bus protocol;
» SO pulse output (×2);
» Backlit, 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 voltages	U1, U2, U3	[V]
Phase currents	I1, I2, I3	[A]
Frequency	f	[Hz]
Active power	P	[W]
Reactive power	Q	[var]
Apparent power	S	[VA]
Power factor	cosφ	

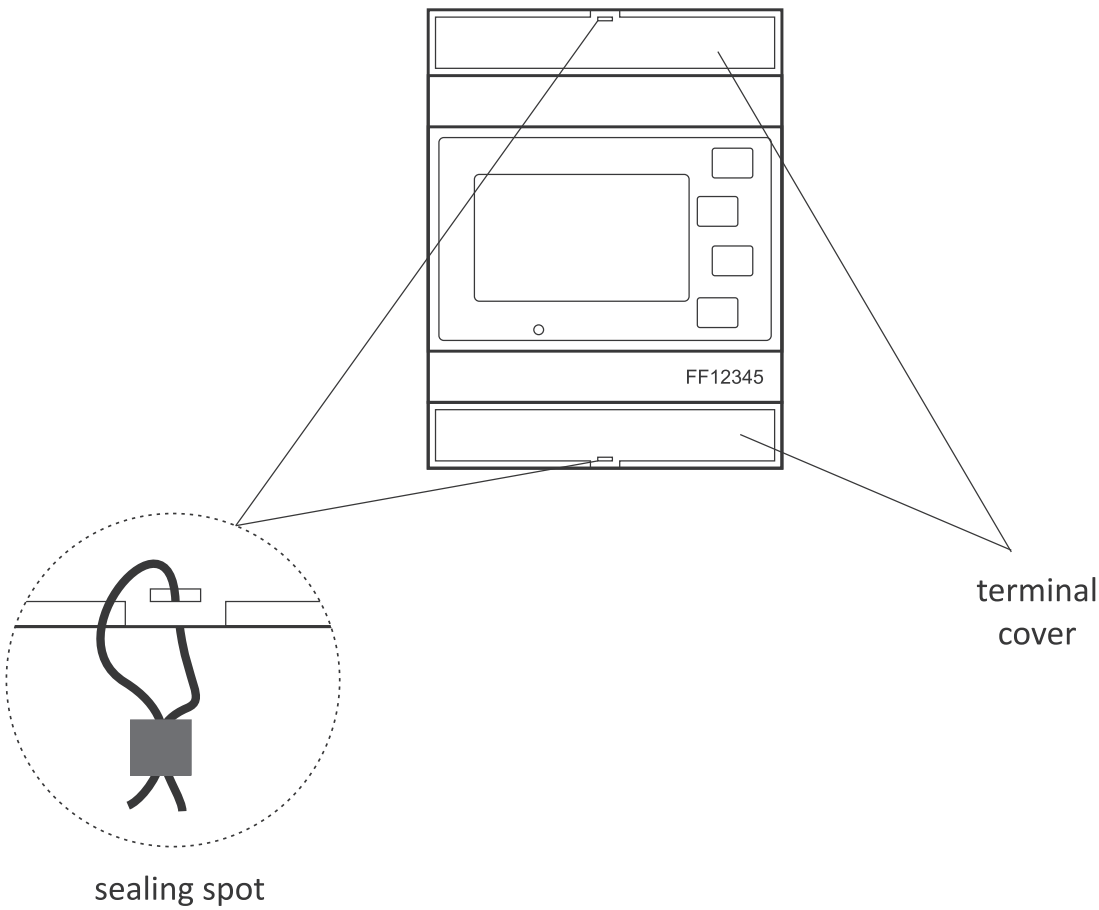
THD harmonic	%
Demand for power and electricity	kW, kvar, kVA, I

Pulse output

The indicator has a 2 SO+/SO- pulse outputs. This allows you to connect a pulse meter-reading pulses generated by the counter. For proper operation of the indicator is not required to connect additional devices.

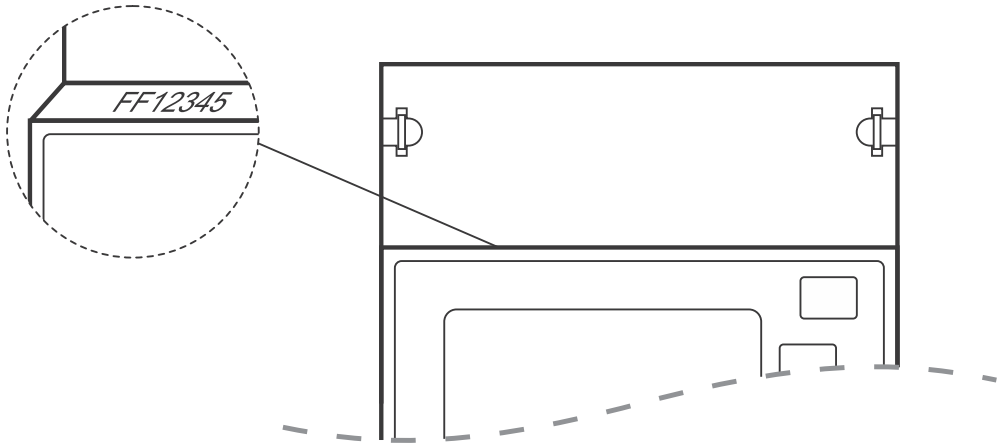
Sealing

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

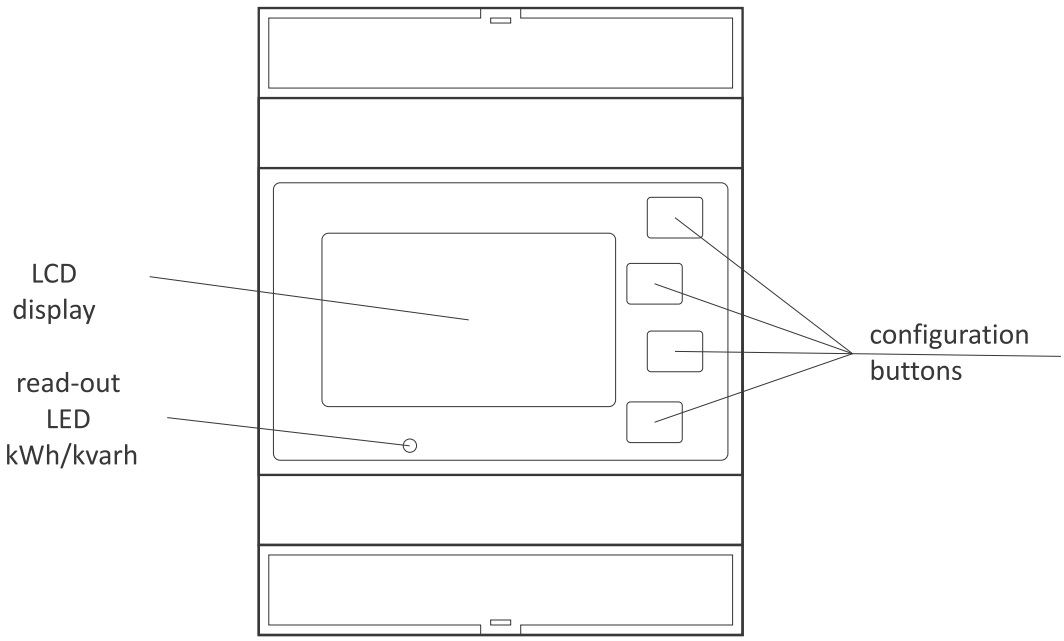


Meter number

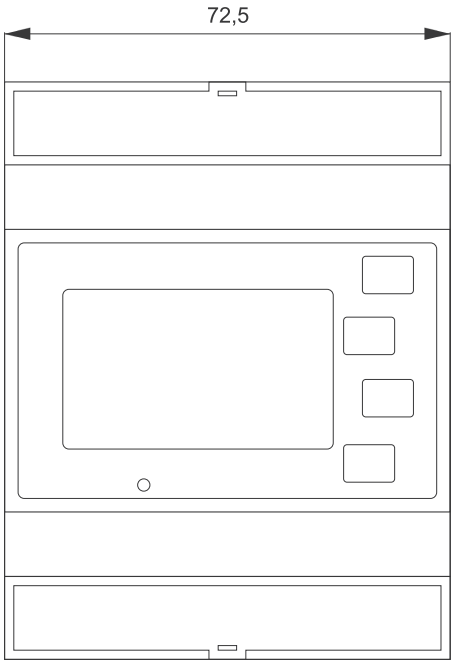
The meter is marked with individual serial number allowing its unambiguous identification. The marking is laser engraved and cannot be removed).

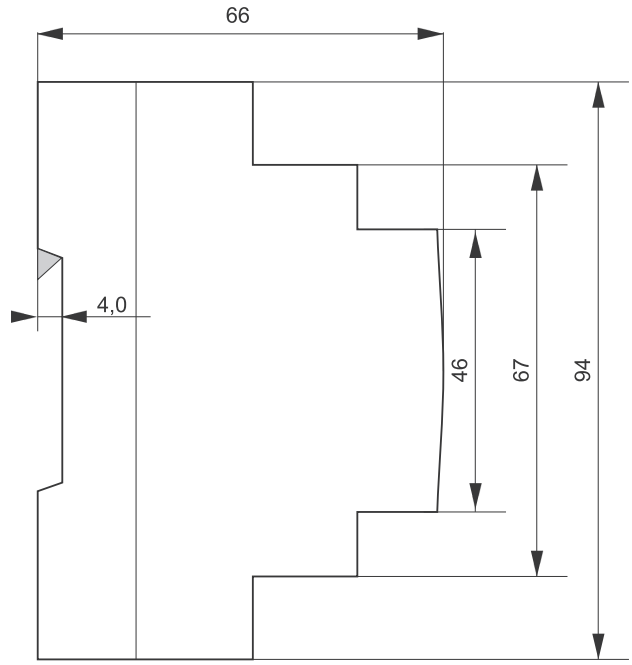


Front description



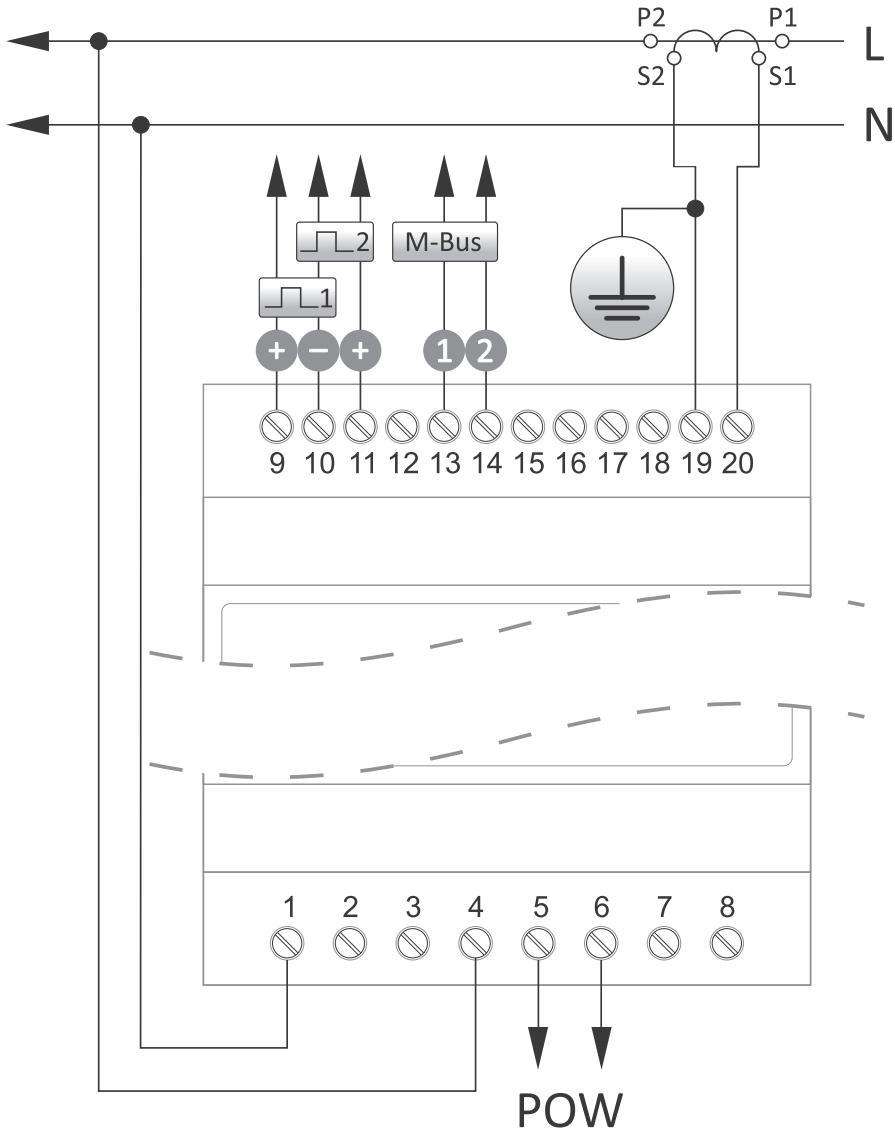
Dimensions





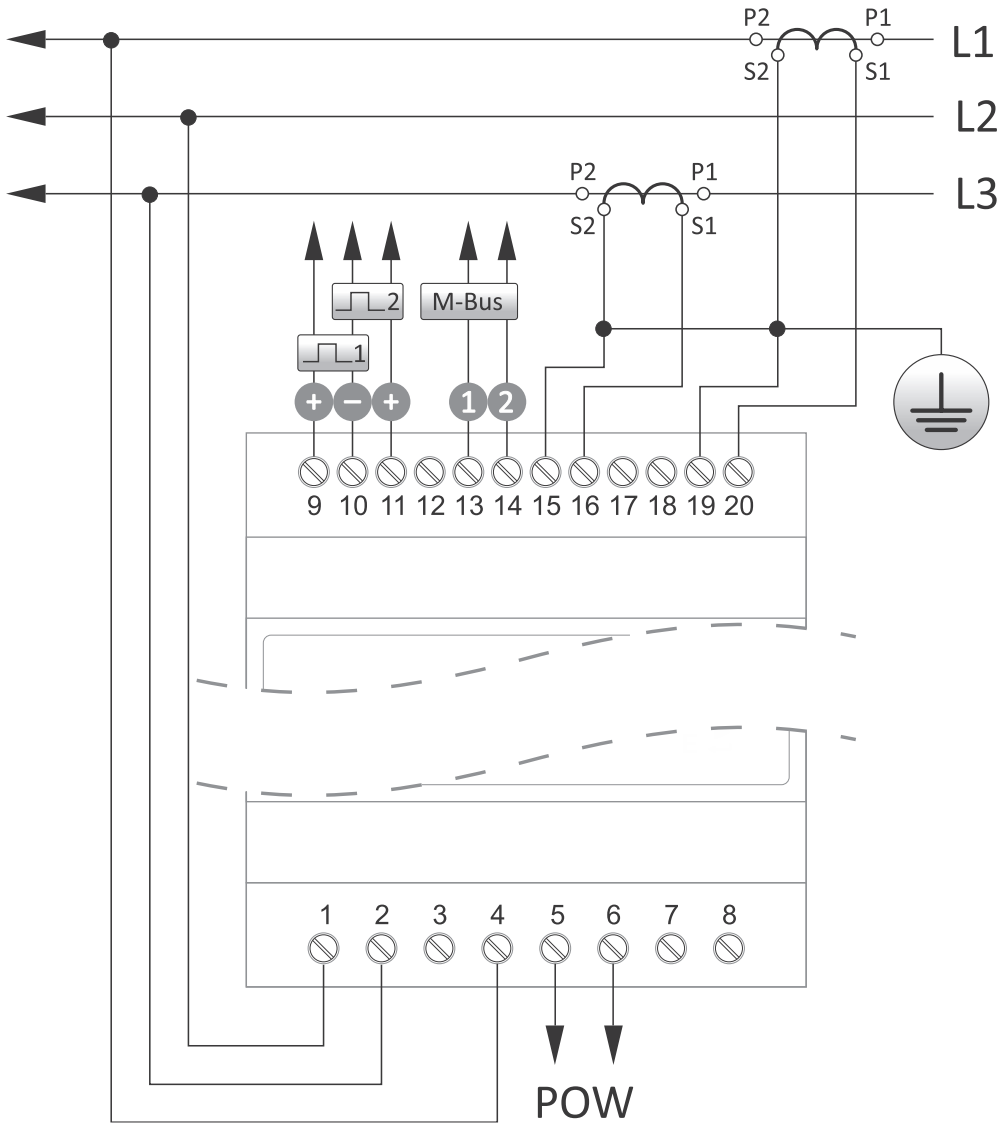
Wiring diagram

1-phase 2-wire system



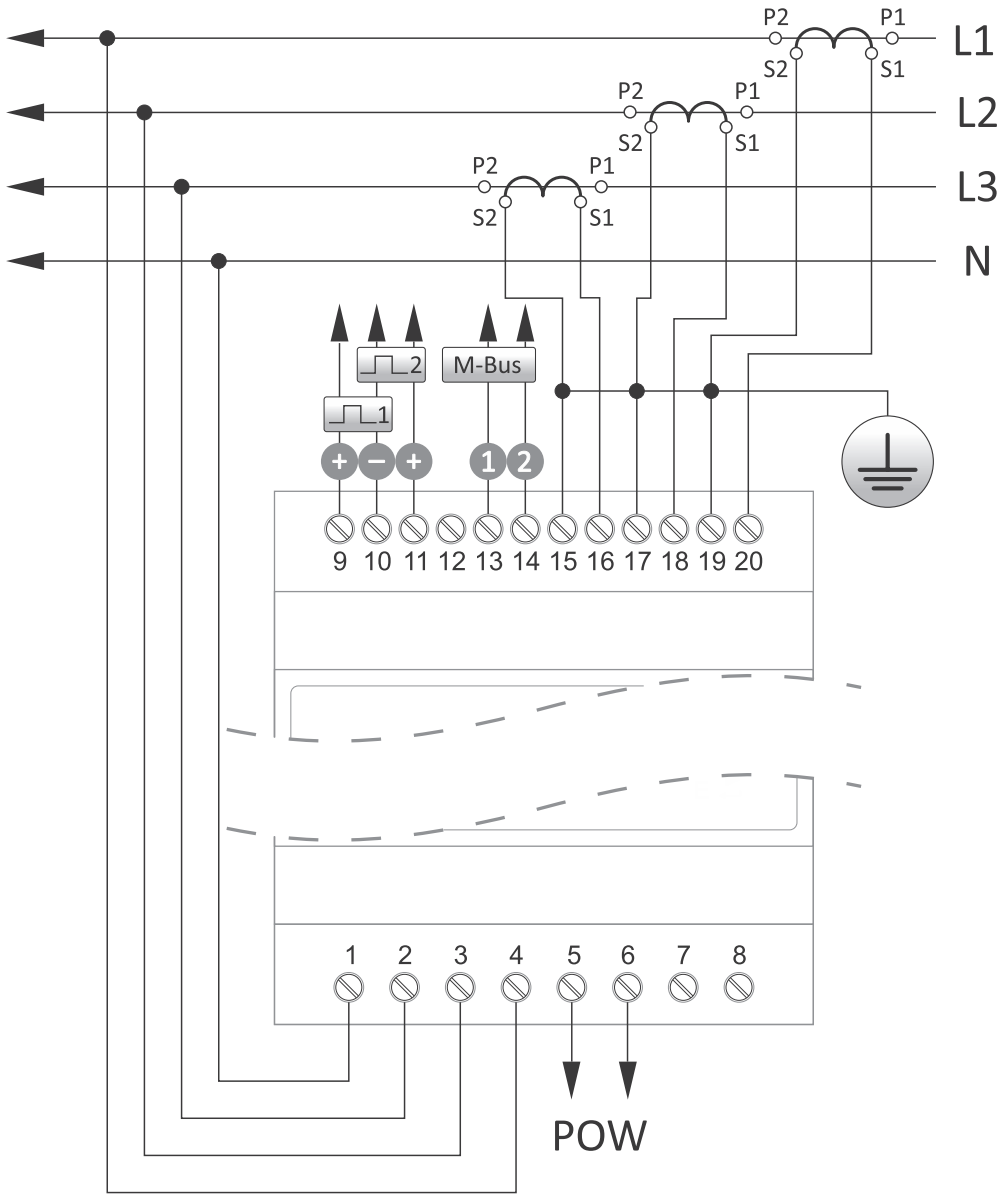
1÷4	voltage inputs
5, 6	meter supply (POW)
9, 10, 11	pulse outputs 1 and 2
13, 14	M-Bus (1, 2)
15÷20	current inputs

3-phase 3-wire system (without netral wire)



1÷4	voltage inputs
5, 6	meter supply (POW)
9, 10, 11	pulse outputs 1 and 2
13, 14	M-Bus (1, 2)
15÷20	current inputs

3-phase 4-wire system



1÷4	voltage inputs
5, 6	meter supply (POW)
9, 10, 11	pulse outputs 1 and 2
13, 14	M-Bus (1, 2)
15÷20	current inputs

Technical data

rated voltage	3×230/400 V
minimum measured current	0.02 A
base current	3×5 A
maximum current	3×6 A
measurement accuracy (EN50470-1/3)	B class
voltage measurement range	
phase (1p2w and 3p4w)	100÷289 V AC
phase-to-phase (3p3w)	173÷500 V AC
overload	30×Imax/10 ms
insulation	4 kV/1 min.; 6 kV/1.2 µs
rated frequency	50 Hz
own power consumption	<10 VA; <2 W
current input power	<1 VA
meter supply voltage	85÷275 V AC
	120÷380 V DC
indication range	0÷9999999.9 kWh
meter constant [kWh]	3200/CT* pulses/kWh
meter constant [kvarh]	0.01; 0.1; 1; 10; 100 pulses/kvarh
read-out signalling	red LED
communication protocole	M-Bus
pulse outputs	2
type	open collector
maximum voltage	27 V DC
maximum current	27 mA
output 1	
meter constant	0.01, 0.1, 1, 10, 100, 1000 pulses/kWh or 0.01, 0.1, 1, 10, 100, 1000 pulses//kVarh]
pulse time	60, 100, 200 ms

* CT – meter current ratio

output 2	
meter constant	3200/CT* imp/kWh
pulse time	200 ms
working temperature	-25÷55°C
terminal	2.5 mm² screw terminals
dimensions	4 modules (72 mm)
mounting	on TH-35 rail
ingress protection	IP51

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* CT – meter current ratio

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 L.P. 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.

General work safety conditions

» Please read the instructions carefully before installation.
» The device should be installed and operated by qualified personnel who are familiar with its design, operation, and associated risks.
» Do not install a meter that is damaged or incomplete.
» The user is responsible for proper grounding of the system, proper selection, installation, and efficiency of other devices connected to the meter, including safety devices such as overcurrent, residual current and overvoltage circuit breakers.
» Before connecting the power supply, make sure that all cables are connected correctly.
» It is essential to observe the operating conditions of the meter (supply voltage, humidity, temperature).
» To avoid electric shock or damage to the meter, turn off the power supply whenever the connection is changed.
» Do not make any changes to the unit yourself. Doing so can result in damage to or improper operation of the device, which in turn can pose a threat to people operating it. In such cases, the manufacturer is not responsible for the resulting events and may refuse the provided warranty in the event of a complaint.


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