



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-03-FPV-RST**  
Electricity  
consumption meter,  
3-phase, resetable



**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	0120/SGS0670

## Purpose

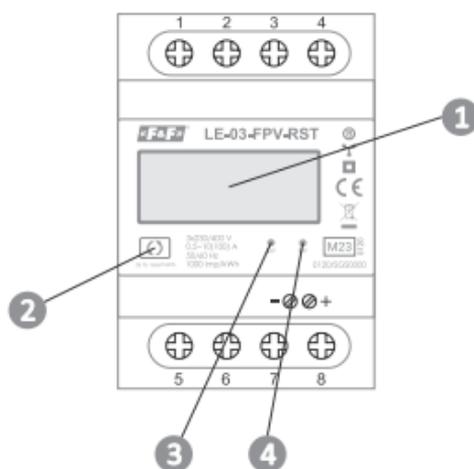
The LE-03-FPV-RST meter is an electronic, legalised (MID declaration), 3-phase, 4-wire electricity meter for direct metering. The meter is capable of measuring both active energy consumed and energy given up, making it ideal for monitoring energy production and consumption in photovoltaic installations. The LE-03-FPV-RST is also equipped with an additional erasable energy meter, facilitating direct observation of the increase in energy since the previous meter reset, and an illuminated reading field.

## Functioning

Under the influence of the flowing current and applied voltage, the meter precisely measures energy and active power. The current data is displayed on a 7-character LCD. Energy increments (separately for imported and exported energy) are additionally indicated by blinking LEDs on the front of the unit. The meter is also equipped with a pulse output to indicate a change in total energy (total energy = imported energy + exported energy).

## Front description

Direct reading of the measured values and resetting of the auxiliary energy meter are available via the elements on the front panel of the display.



- 1 Display
- 2 RESET button (for changing the displayed value and resetting the auxiliary counter)
- 3 Rate of increase of imported active energy
- 4 Rate of increase of exported active energy

## Measured values

Total active energy	[kWh]
Imported active energy	[kWh]
Exported active energy	[kWh]
Active power	[W]

The LE-03-FPV-RST meter can display values:

No	Function	Format	Unit	View
1	Total active energy (sum of energy exported and imported energy)	6+1	kWh	
2	Imported active energy	6+1	kWh	
3	Exported active energy	6+1	kWh	
4	Total active energy (sum of energy exported and imported energy) – erasable auxiliary meter	6+1	kWh	

## Measured values cont.

No	Function	Format	Unit	View
5	Imported active energy – erasable auxiliary meter	6+1	kWh	 <p>The display shows 'Total' at the top, 'Imp' (Imported) below it, and the value '0000390' in large digits. Below the digits is 'kWh'. At the bottom, it lists 'L1, L2, L3' and '0-99.999.99 kWh'.</p>
6	Exported active energy – erasable auxiliary meter	6+1	kWh	 <p>The display shows 'Total' at the top, 'Exp' (Exported) below it, and the value '0000263' in large digits. Below the digits is 'kWh'. At the bottom, it lists 'L1, L2, L3' and '0-99.999.99 kWh'.</p>
7	Total active power	6+0	W	 <p>The display shows 'Total' at the top and the value '0001260' in large digits. Below the digits is 'W'. At the bottom, it lists 'L1, L2, L3' and '0-99.999.99 W'.</p>
8	Active power - signalling import of power	6+0	W	 <p>The display shows 'Total' at the top, 'Imp' (Import) below it, and the value '0000241' in large digits. Below the digits is 'W'. At the bottom, it lists 'L1, L2, L3' and '0-99.999.99 W'.</p>
9	Active power - signalling export of power	6+0	W	 <p>The display shows 'Total' at the top, 'Exp' (Export) below it, and the value '0000208' in large digits. Below the digits is 'W'. At the bottom, it lists 'L1, L2, L3' and '0-99.999.99 W'.</p>



Switching between views is carried out by briefly pressing the RESET button on the front of the meter.

## Auxiliary meter reset

The LE-03-FPV-RST meter is equipped with auxiliary energy meters that count the energy flow in parallel with the main meter. The indications of the auxiliary meters can be cleared at any time.



Only the auxiliary meters (items 4-6 in the table above) are reset.



To reset the selected auxiliary meter to zero, select its value on the meter and then press and hold the RESET button for 3 sec.

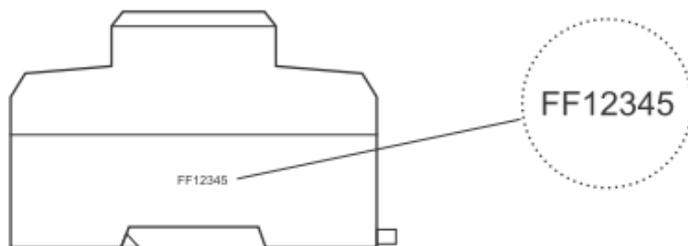
Selected parameter	Press button for 3 sec	Reset meter
		
		
		

## Pulse output

The indicator has a SO+ SO- pulse output. This allows you to connect another pulse device (SO) that reads impulses generated by the meter. The number of pulses depends on the total energy increment, with 1.000 pulses for each kWh of energy. No additional device is required for the correct operation of the meter.

## Number of the meter

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



## Sealing

The meter has the option of sealing the input and output terminals, preventing the meter from being bypassed.

## Mounting

1. Disconnect power supply.
2. Mount meter on a rail in distribution box.
3. Open terminal covers.
4. Connect the power supply to the terminals 1 (L1 IN), 2 (L2 IN), 3 (L3 IN), 4 (N IN).
5. Connect the circuit to be measured or a single consumer to the terminals 5 (L1 OUT), 6 (L2 OUT), 7 (L3 OUT), 8 (N OUT).
6. Additional pulse receiver connected to terminals (+) and (-).  
The terminals are located under the bottom cover of the meter.

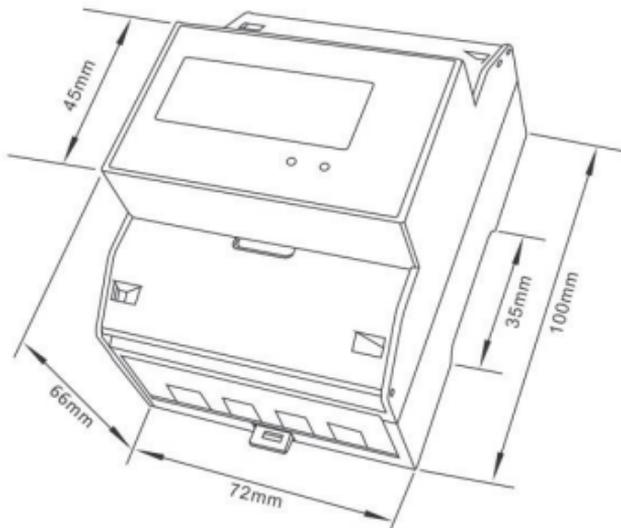


Additional pulse receiver is not required.

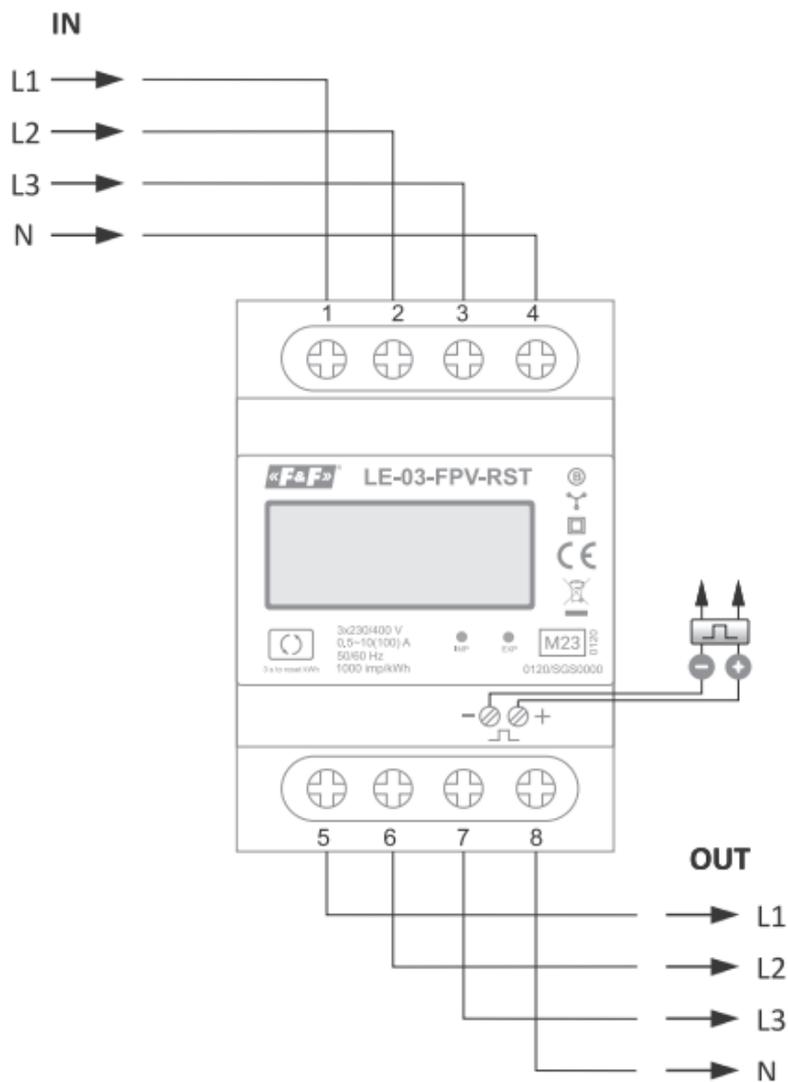
---

7. Put the meter terminals covers.

## Dimensions



## Wiring diagram



## Technical data

installation	3-phase, 4-wire
reference voltage	3×230/400 V AC
minimum current	0.5 A
base current	3×10 A
maximum current	3×100 A
minimum detection current	0.04 A
voltage measurement range	180÷276 V
measurement accuracy (EN50470-1/3)	B class
rated frequency	50 Hz
insulation protection class	II
housing	PC material (UL94V-0)
overload capacity	30×I <sub>max</sub> /10 ms
measurement category (CAT)	III
mechanical resistance	M1
electromagnetic resistance	E2
insulation	4 kV/1 min.; 6 kV/1.2 μs
energy consumption of the meter	10 VA; 2 W
indication range	0÷9999999.9 kWh
display	7-digit, LCD backlit (white)
meter constant	1000 imp/kWh
readout indication	2×red LED
pulse output	
type	open collector
voltage maximum	30 V DC
current maximum	20 mA
pulse constant	1000 pulses/kWh
working temperature	-25÷55°C
terminal	
power circuits	25 mm <sup>2</sup> screw terminals
pulse output	1 mm <sup>2</sup> screw terminals

## Technical data cont.

dimensions	4.5 modules (75 mm)
mounting	on TH-35 rail
ingress protection	(indoors) IP51

## 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 & MID 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 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](http://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 over-current, 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.

