



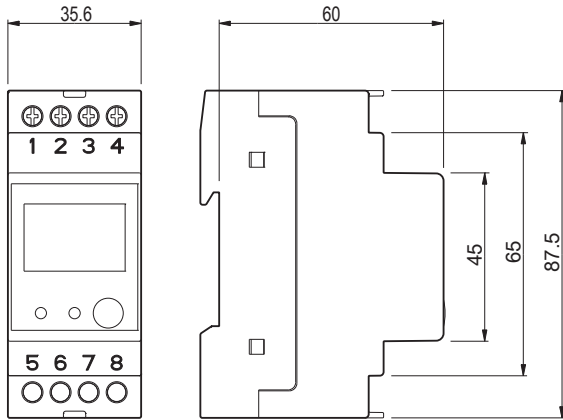
**Mod. Energy-230 D22  
Energy-230 D22 PULSE**

Vemer S.p.A.

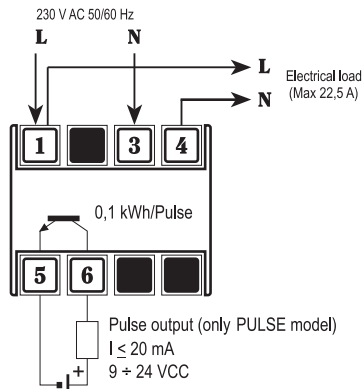
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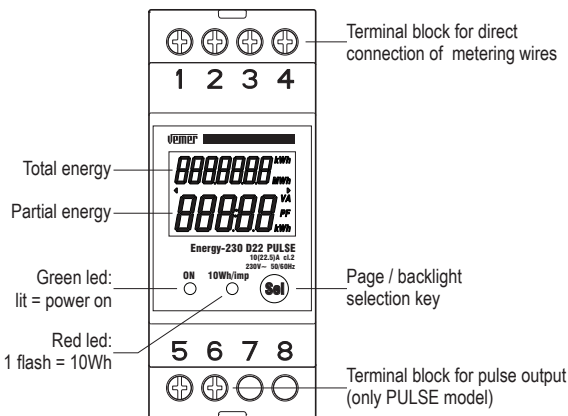
**DIMENSIONS**



**CONNECTION DIAGRAM**



**DESCRIPTION**



**REFERENCE STANDARDS**

Conformity to European Community directives:  
2006/95/EC (Low Voltage Electrical Equipment)  
2004/108/EC (E.M.C.)  
is declared according to the following standards:  
**EN 61010-1, EN 61000-6-2 and EN 61000-6-3**  
**EN 62053-21 and EN 62052-11**

**User Manual**

**SINGLE-PHASE ACTIVE ENERGY METER**  
Read all the instructions carefully

- The **Energy-230 D22** static energy meter is an appliance to read active energy in single-phase 230V systems. It is designed to operate in environments with category of measurement III and pollution level 2 according to EN 61010-1 standard.

**SAFETY WARNINGS**

To guarantee correct installation, proceed as follows:

- The appliance should be installed by a qualified operator
- The appliance should be installed in a panel in such a way as to guarantee that the terminals are inaccessible after fitting
- A protection device against over-currents should be installed in the electrical system, upstream of the energy meter
- Connect the instrument as shown in the alongside diagrams
- Before touching the connector terminals make sure that the wires to be connected or already connected to the instrument are not live
- Do not power or connect the instrument if any part of it is damaged
- The instrument must be installed and activated in compliance with current electric systems standards.

Code	Model	Description
VE044400	Energy-230 D22	Single-phase active energy meter
VE055000	Energy-230 D22 PULSE	Single-phase active energy meter with pulse output

**TECHNICAL SPECIFICATIONS**

- Power supply: 230 V CA (-15%/+10%), 50/60 Hz
- Maximum power consumption: 4VA
- Basic current:  $I_b = 10A$
- Maximum current:  $I_{max} = 22.5 A$
- Starting current:  $\leq 25 mA$
- Current circuit consumption:  $< 2.5 VA$
- Connection type: direct for current conductors
- Signaling leds: green = power on  
red = flashing at 10Wh
- Accuracy: class 2 (EN 62053-21)
- Display: LCD, 7 + 5 digit
- Partial reading resolution: 0.01kWh (full scale: 999.99 kWh) or  
0.1kWh (full scale: 9999.9 kWh)
- Total reading resolution: 1 kWh (full scale: 9999999 kWh)
- Housing: 2 DIN
- Protection degree: IP20/IP51 on the front
- Optoisolated pulse output (only PULSE model) for energy consumption remote-monitoring (0.1 kWh/pulse)
- Pulse specifications: duration = 100 ms  $\pm$  15%  
voltage = 9  $\div$  24 V CC ( $\pm$  10%)  
switchable output current = 20 mA max
- Operating temperature: -10  $\div$  +45 °C
- Storage temperature: -20  $\div$  +60 °C
- Relative humidity: 10%  $\div$  90% non-condensing

**OPERATION**

- When the energy meter is turned on the main page is displayed, representing the total energy count on the 7-digit upper block and the partial energy count on the 5-digit lower block. The resolution of partial counter is automatically updated as soon as the full scale is reached.



- To display the **total** energy reading only, press the "Sel" key: this meter **cannot** be set to zero



- To display the **partial** energy reading, press the "Sel" key again: this meter is zeroed automatically as soon as the full scale is reached (9999.9 kWh); it can also be set to zero manually anytime by holding the "Sel" key pressed for more than 4 seconds



- Pressing again the key "Sel" you move to the display of the **instantaneous power**. The resolution is fixed at 0.01 kW. For values higher than 6kW "----" is showed.



- To return to the main page reading both meters (total and partial), press the "Sel" key again

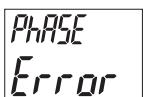
**BACKLIGHTING**

- Backlighting is enabled by default: it is switched on each time a key is pressed and stays on for 30 seconds after the last key was pressed. In order to enable/disable backlight while on the **main** page, hold "Sel" key pressed for at least 4 seconds: ON/OFF backlight status will be displayed for a couple of seconds, after which the main page will return.



**PHASE ERROR**

- When the energy meter is turned on, a connection check-up is automatically carried out to detect any connection errors: in case of improper connection the red led remains lit and the meter is locked. The message "Phase Error" is displayed.



**Warning: to restore correct meter operation after an error reading has been displayed, switch the meter off, invert connections of voltage or current and turn on again.**