



- Static meter in standard dimensions 72x72 mm to read active energy consumption in single-phase 230V systems.

**SAFETY WARNINGS**

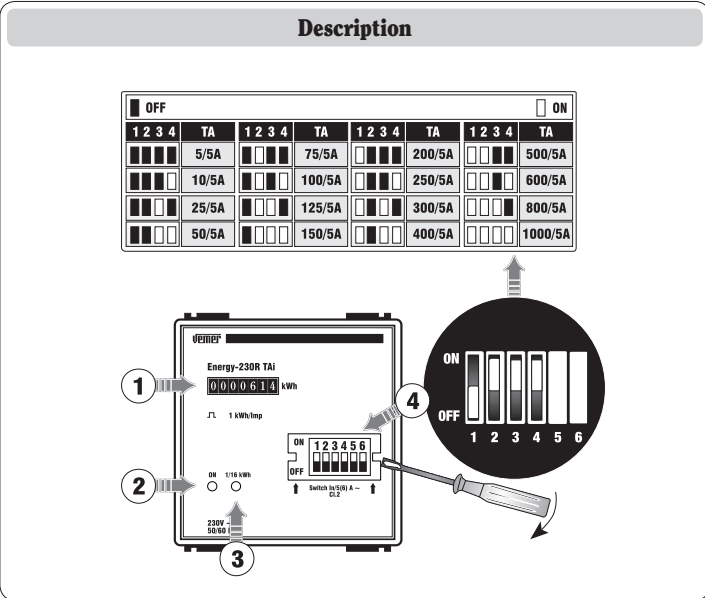
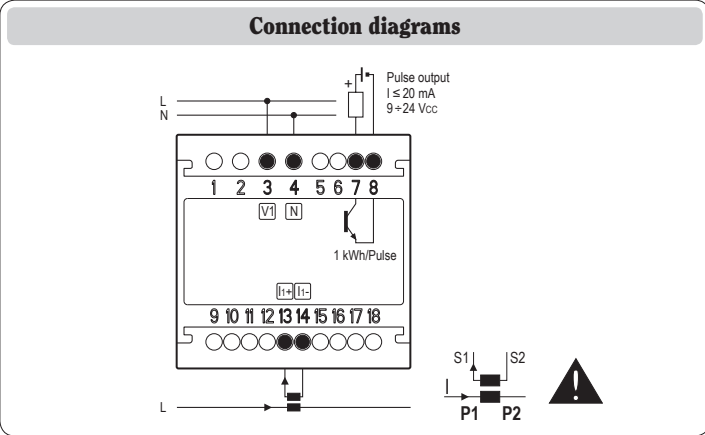
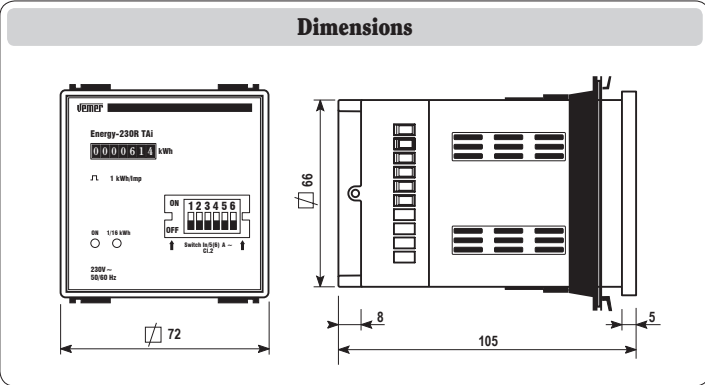
*To guarantee correct installation, proceed as follows:*

- 1) *The appliance should be installed by a competent operator*
- 2) *The appliance should be installed in a panel in such a way as to guarantee that the terminals are inaccessible after fitting*
- 3) *A protection device against over-currents should be installed in the electrical system, upstream of the energy meter*
- 4) *Connect the instrument as shown in the alongside diagrams*
- 5) *Before touching the connector terminals make sure that the wires to be connected or already connected to the instrument are not live*
- 6) *Touch the dip-switches only when the instrument is not powered*
- 7) *Do not power or connect the instrument if any part of it is damaged*

Code	Model	Description
VE012100	ENERGY-230R TAI	Single-phase energy meter

**TECHNICAL SPECIFICATIONS**

- Power supply voltage: 230V CA (-15%/+10%) 50/60Hz
- Input current:  $I_n = 5A$ ;  $I_{MAX} = 6A$
- Minimum start-up current: 15mA
- Accuracy: class 2 to standards EN 62053-21
- Maximum power consumption: voltage circuits < 2,5VA  
 current circuits < 2,5VA
- Galvanically isolated amperometric input
- Amperometric connection by AT x/5A
- Selectable transformation ratios (for AT x/5 A): 5-10-25-50-75-100-125-150-200-250-300-400-500-600-800-1000/5
- Operating temperature:  $-10 \div +45 \text{ }^\circ\text{C}$
- Relative humidity: 10% ÷ 90% non condensing
- Storage temperature:  $-20 \div +60 \text{ }^\circ\text{C}$
- Signaling leds: green = power on  
 red = flashing at 1/16kWh
- Optoinsulated pulse output for energy consumption remote-monitoring (1 kWh/pulse)
- Pulse specifications: duration = 100 ms ± 15%  
 voltage = 9 ÷ 24V CC (± 10%)  
 switchable output current 20mA max
- Protection degree: IP20
- Enclosure: standard dimensions 72x72mm



**INSTRUMENT DESCRIPTION**

- ① 7-digit mechanical counter: resolution 1 kWh
- ② Green warning light: lights up to indicate power on
- ③ Red warning light: every flash corresponds to an energy count of 1/16 kWh
- ④ Dip-switch 1-2-3-4 for AT setting. Dip-switch 5-6 not used

**GUIDE TO INSTALLATION**

- 1) Before installing the instrument, select the transformation ratio required. Use an x/5A outer AT with a transformation ratio from among those set out in the description box. The AT secondaries may be connected to earth.
- 2) The instrument should be connected as shown in the connection diagrams, in accordance with the AT energy directions.
- 3) If the error is to fall within the class limits of the instrument, it is necessary to use the current transformer in its linear operating field. See the precision box:
  - Maximum measurement error in accordance with EN 62053-21 for class 2 meters with  $\cos \phi = 0,5$  inductive (**A**);
  - Maximum measurement error in accordance with EN 62053-21 for class 2 meters with  $\cos \phi = 1$  and voltage and frequency reference conditions (**B**).
- 4) If the instrument is active, the power should be switched off to change the AT ratio.

**REFERENCE STANDARDS**

Conformity to the EU directives:  
**73/23/CEE** modified by **93/68/CEE** (Low Voltage)  
**89/336/CEE** modified by **92/31/CEE** and **93/68/CEE** (E.M.C.)  
 is declared with reference to the following harmonised standard:  
 EN 61010-1, EN 61000-6-2, EN 61000-6-3, EN 62053-21 and EN 62052-11

