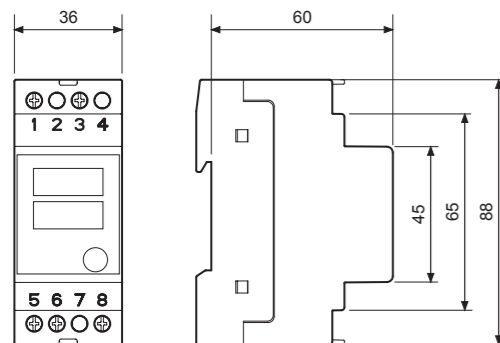




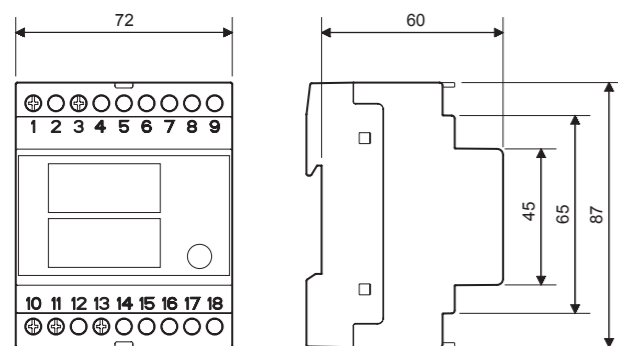
Dimensions

EV2M-2DIN



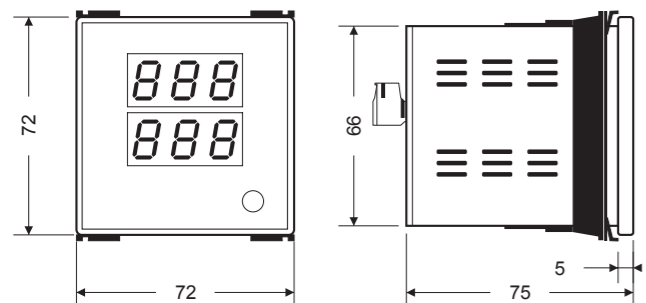
Dimensions

EV2M-4DIN



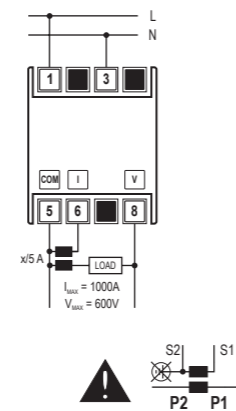
Dimensions

EV2M-R



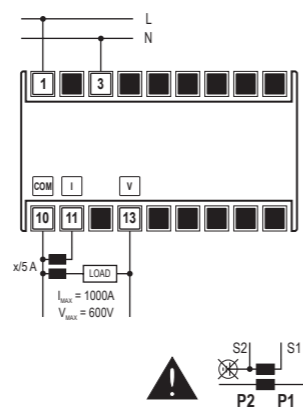
Connection

EV2M-2DIN



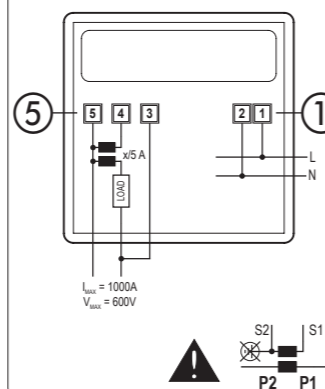
Connection

EV2M-4DIN



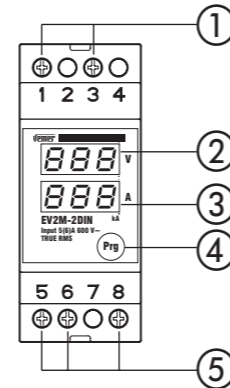
Connection

EV2M-R



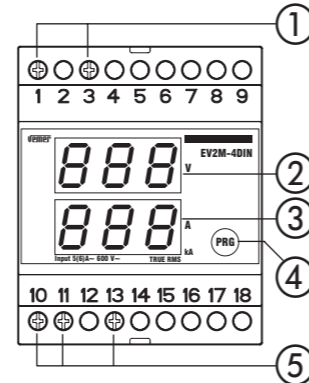
Description

EV2M-2DIN



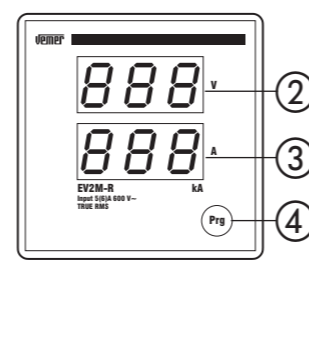
Description

EV2M-4DIN



Description

EV2M-R



- ① Power supply connection terminals
- ② Voltage reading window
- ③ Current reading window
- ④ Parameter setting key
- ⑤ Metering connection terminals

User Manual

DIGITAL VOLTMETER-AMMETER

Read all the instructions carefully

- The **EV2M** meters are digital multimeters to measure TRMS values (true root mean square values) for alternate voltage and current. It reads these two quantities simultaneously on two 3-digit LED displays.

SAFETY WARNINGS

During the installation and operation of the instrument, proceed in accordance with the instructions below:

- 1) *The instrument should be installed by a competent operator following the installation diagrams carefully*
- 2) *Before touching the connector terminals make sure that the wires to be connected or already connected to the instrument are not live*
- 3) *The instrument should be installed in a panel from which no access can be gained to the terminals after installation*
- 4) *Do not power or connect the instrument if any part of it is damaged*
- 5) *The electrical system of the building in which the instrument is to be installed should have a switch and a protective device against over-currents*
- 6) *The instrument is designed for installations with over-voltage category III and pollution level 2, in accordance with the EN 61010-1 standard.*

Code	Model	Description
VE149100	EV2M-2DIN	Voltage-current reading meter 2 DIN
VE196200	EV2M-4DIN	Voltage-current reading meter 4 DIN
VE195400	EV2M-R	Voltage-current reading meter 72 x 72

TECHNICAL SPECIFICATIONS

- Power supply: 230 V AC (-15%/+10%), 50/60 Hz
 - maximum consumption: 4 VA
- Measurement of true root mean square (TRMS) values for voltage and current
- Voltmeter connection:
 - connection type: direct
 - maximum voltage: $V_{max} = 600$ V
 - maximum consumption: 2,5 VA
- Ammeter connection:
 - connection type: by AT x/5 A
 - available scales: from 5/5 A to 1000/5 A
 - maximum and nominal current rating: $I_n = 5$ A; $I_{max} = 6$ A
 - maximum consumption: 2,5 VA
- Reading filter (update speed)
- Maximum section of wires:
 - 6 mm² for model EV2M-2DIN and EV2M-4DIN
 - 2,5 mm² for model EV2M-R
- Operating conditions:
 - operating temperature: $-10 \div +45$ °C
 - relative humidity: 10% ÷ 90% non-condensing
- Storage temperature: $-20 \div +60$ °C
- Display: 7-segment LED digit display
- Enclosure:
 - 2 module DIN, RAL 7035 gray for EV2M-2DIN
 - 4 module DIN, RAL 7035 gray for EV2M-4DIN
 - standardized dimensions 72 x 72 mm according to DIN 43700 for EV2M-R
- Protection rating: IP51 on the front

RESOLUTION AND ACCURACY

- Voltage (full scale $V_{max} = 600$ V):
 - Maximum reading: 615 V
 - Minimum reading: 10V
 - Resolution: 1V
 - Accuracy: $\pm 0,5\%$ full scale ± 1 digit (from 3% to 100% of full scale value)
- Current (full scale $I_n = 5$ A):
 - Maximum reading: 6 A
 - Minimum reading: 0,02 A
 - Resolution: 0,01 A
 - Accuracy: $\pm 0,5\%$ full scale ± 1 digit (from 3% to 100% of full scale value)

Note: current data refer to the values provided by the amperometric transformer; maximum and minimum readings directly depend on the AT ratio used, whereas resolution is dependent on the scale used, as described below.

OPERATION

During normal operation the device reads the Voltage value (Volts) in the top window and the current value (Amperes) in the bottom window.

The current value is automatically read in the most appropriate scale:

- 0,01 A resolution in the 0,02 A ÷ 10 A range (e.g.: 547)
- 0,1 A resolution in the 10 A ÷ 100 A range (e.g.: 39,1)
- 1 A resolution in the 100 A ÷ 1000 A range (e.g.: 528)
- 10A resolution for values above 1000 A (e.g.: 123)

In the latter case the value is expressed in kA with the decimal point lit after the first digit and the LED point lit to the right of the last digit above the kA symbol

SETTINGS

After switching the device on it is possible to check and/or change some of the factory settings by pressing or holding down the **Prg** key according to the procedure described below.

- Press the **Prg** key
The voltage and current reading displays will read a value referring to the transformer primary (factory setting: 5). To change this value, hold down the **Prg** key for at least 2 seconds until the digits flash. Then press and hold the key pressed until the desired value is reached (the reading will increase by 5-unit steps; 1000 is read as 000).
- After a few seconds from the moment the key is released, a value will indicate the reading filter (factory value: 10). The lower this value, the faster the readings will be updated, the higher the value, the more stable the reading will be. To change this value, hold down the **Prg** key for at least 2 seconds until the digits flash. Then press the key repeatedly until the desired value is set (the reading will increase by 1-unit steps; the value range is from 1 to 20).

After one of these parameters is set the device will go off and then on again using the new parameters. The device is reset automatically with no need to disconnect it from the power supply.

ERROR MESSAGES

- Memory error: **EEE**
The device has undergone damage that jeopardizes operation
- Overload error: **HHH**
The quantity measured (voltage and/or current) has exceeded the maximum admissible value: $V > 1,02 \times V_{max}$; $I > 1,2 \times I_n$. Reset is automatic.

REFERENCE STANDARDS

Conformity to the EU directives:

2006/95/CE (Low Voltage)

89/336/CEE mod. modified by 92/31/EEC and 93/68/EEC (EMC)

is declared with reference to the following harmonised standards:

EN 61010-1, EN 61000-6-2 and EN 61000-6-4

ct

005

n

010

EEE

HHH