V3IS00379-010

Vemer

Mod. **ADR-D 230 D63**

CE

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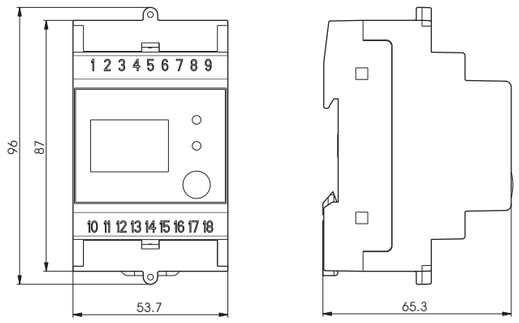
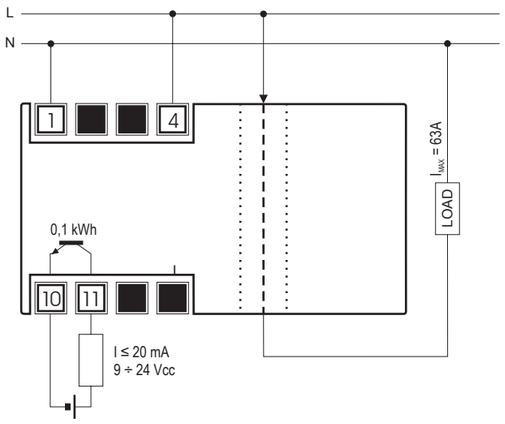
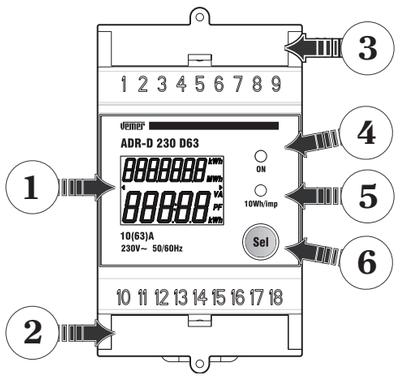
Dimensions



Connection diagrams



Description



User Manual

SINGLE-PHASE NETWORK ANALYSER

Read all instructions carefully

- Single-phase system analyser for TRMS (True Root Mean Squared) values. **Pulse output** for direct connection of a current lead with I_{MAX} = 63A. Connection is effected by directly inserting the power lead vertically into the housing.

SAFETY INSTRUCTIONS

To guarantee correct installation, observe the following instructions:

1) ***The instrument must be installed by a qualified person***
2) ***The instrument must be installed in an electrical panel which, after installation, leaves terminals inaccessible***
3) ***The building in which the instrument is installed must have an electrical system including a switch or a circuit breaker: this must be near the device and in a position that can be easily reached by operators***
4) ***A protection device against over-currents must be installed in the electrical system upstream of the instrument***
5) ***Connect the instrument as shown in the diagrams of this manual***
6) ***Before making contact with terminals, ensure that leads to be connected to the instrument are not live***
7) ***Do not power or connect the instrument if any part of it is damaged***

Note: The network analysers in the ADR-D 230 D63 series are aimed for use in places with overvoltage category III and pollution degree 2 to EN 61010-1.

Code	Model	Description
VE035200	ADR-D 230 D63	Single-phase network analyser

TECHNICAL SPECIFICATIONS

- Power supply/Input voltage: 230V AC (-15%/+10%) 50/60Hz
- Input Current: I_b = 10A; I_{MAX} = 63A by direct connection
- Galvanic insulation between voltage and current inputs
- Maximum cross-section of the current lead: 25 mm²
- Maximum diameter of the perforation for the current lead: 12,5 mm
- Maximum consumption (device only): voltage circuit <2.5 VA
  power circuit <2.5 VA
  power supply < 4 VA
- Quantities measured: Voltage *(Page 1)*
  Current *(Page 2)*
  Active power *(Page 3)*
  Power factor *(Page 4)*
  Frequency *(Page 5)*:
  Active power *(Pages 6-7-8)*
- Operating temperature: -10 ÷ +45 °C
- Relative humidity: 10% ÷ 90% non-condensing
- Storage temperature: -20 ÷ +60 °C
- Signalling leds: green = power on
  red = flashing at frequency 10Wh
- Optoinsulated pulse output: pulse duration = 100 ms ± 15%
  pulse voltage = 9 ÷ 24 V DC (± 10%)
  maximum output current = 20 mA
- Display: LCD display, 7 + 5-digits
- Enclosure: 3 DIN, RAL 7035 gray
- Protection rating: IP20/IP51 on the front

RESOLUTION AND ACCURACY

- Alternating voltage: Maximum reading: 265,0V
  Resolution: 0,1V
  Accuracy: ± 1V ± 1 digit
- Alternating current: Maximum reading: 67,00A
  Minimum reading: 0,10A
  Resolution: 0,01A
  Accuracy: ± 0,5% full scale ± 1 digit (full scale: 63A)
- Active power: Resolution: 0,01kW
  Accuracy: ± 1% full scale ± 1 digit (full scale: 100kW)
- Power factor: Resolution: 0,01
  Accuracy: ± 1% ± 1 digit
- Frequency: Resolution: 0,1Hz
  Accuracy: ± 0,1Hz (from 45Hz to 65Hz)
- Total active energy: Resolution: 0,1kWh (full scale: 999999,9 kWh)
  Resolution: 1kWh (full scale: 9999999 kWh)
  Accuracy: class 1 to EN 62053-21
- Partial active energy: Resolution: 0,01kWh (full scale: 999,99 kWh)
  Resolution: 0,1kWh (full scale: 9999,9 kWh)
  Accuracy: class 1 to EN 62053-21

DEVICE DESCRIPTION

① Backlit LCD display to read the values measured
② Open collector pulse output: 1 pulse every 0,1 kWh count
③ Perforation for direct connection of current leads
④ Green LED: ON when the instrument is powered
⑤ Red LED: every flash corresponds to an energy count of 10 Wh
⑥ Page scroll button, zeroing of partial meter, parameter set-up

OPERATION

The values measured are read over 6 pages to be scrolled using the SEL button.

Page 1

⇦ Total active energy meter
⇦ **Alternating voltage** value

Page 2

⇦ Total active energy meter
⇦ **Alternating current** value

Page 3

⇦ Total active energy meter
⇦ **Active power** value

Page 4

⇦ Total active energy meter
⇦ **Power factor** value

Page 5

⇦ **Frequency** value

Page 6

⇦ Total active energy meter
⇦ **Partial active energy** meter

To access the 2 pages reading only active energy counts, press the SEL button again.

Page 7

⇦ Non-zeroable **total active energy** meter

Page 8

⇦ Zeroable **partial active energy** meter

The partial meter is automatically zeroed when the scale range is overrun. To set the meter to zero manually, hold the "SEL" key down for more than 3 seconds
To view the first page again, press the SEL key once more.

BACKLIGHTING

The device's display backlights when the SEL key is pressed. it stays on for 30 seconds after the last key is pressed.
To change this setting, go to **page 1** and hold down the SEL key for at least 3 seconds

⇦ Backlighting status (ON / OFF)

OPERATING MESSAGES

PHASE ERROR

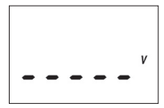
On startup the device checks the connection of voltage terminals and the direction of the current lead. In case of error the phase error page will be displayed for 3 minutes. The triangular LED on the left will flash and the red signaling LED will be ON.
To resume correct operation, turn the device off, invert voltage connections or current lead direction and turn it back on.
Error conditions occurring during normal operation are indicated by the flashing of the triangular LED on the left and the lighting up of the red signaling LED. Voltage, current and frequency values are nonetheless read correctly.
As for the remaining pages, energy counts will not increase, the power factor will be force-set to 1 and the active power value to 0.

⇦ Error reading on start-up

⇦ Voltage value with Phase error LED

OVERFLOW ERROR

When the voltage or current reading range is overrun, the relevant field will flash dots and the total energy count will be read.
Voltage or current overflow error is indicated on the other pages too. in this case the values measured will flash.



⇦ Voltage page for V > 265V

REFERENCE STANDARDS

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

Vemer SPA