

VA-1 red

Voltammeter for professionals

Voltammeter ZUBR VA-1 (hereinafter referred to as the device) is designed for measurement and control in a single-phase circuit of: voltage, current, power (active, reactive or full), $\cos \varphi$ (allows you to estimate the power coefficient in your electrical grid).

The log for 100 cells allows you to keep statistics and save the maximum / minimum effective voltage and maximum current in the non-volatile memory.

IN THE BOX

- Voltammeter ZUBR VA-1** 1 piece
- Technical data sheet, installation and operation manual and warranty card** 1 piece
- The packing box** 1 piece

TECHNICAL DATA

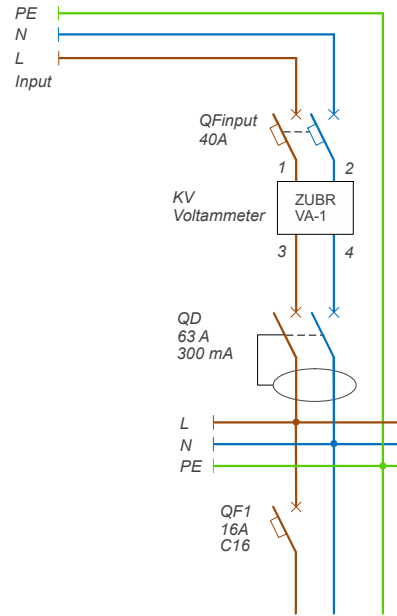
Voltage limit (if exceeded, a log entry will be made)	upper 242–280 V lower 120–197 V
Current limit (if exceeded, a log entry will be made)	0,1–63 A
Time of the log recording delay when current limit is exceeded	0–240 sec
Power Volt	not less than 100 V not more than 420 V
Power consumption	not more than 0,6 kWt*h / month
Current measurement accuracy	0,5–63 A \pm 0,2 A
Connection	not more than 16 mm ²
Device weight	0,144 kg \pm 10 %
Overall dimensions (w x h x d)	36 x 85 x 66 mm
Degree of protection GOST14254	IP20

CONNECTION SCHEMES

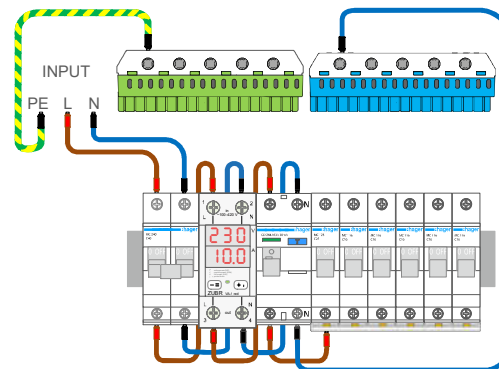
Supply voltage (100 – 420 V, 50 Hz) served on terminals 1 (L, phase) and 2 (N, neutral).

Load connecting wires are connected to terminals 3 (L, phase) and 4 (N, neutral).

Terminals 2 and 4 are structurally interconnected. Therefore, it is not necessary for zero to pass through the terminals.



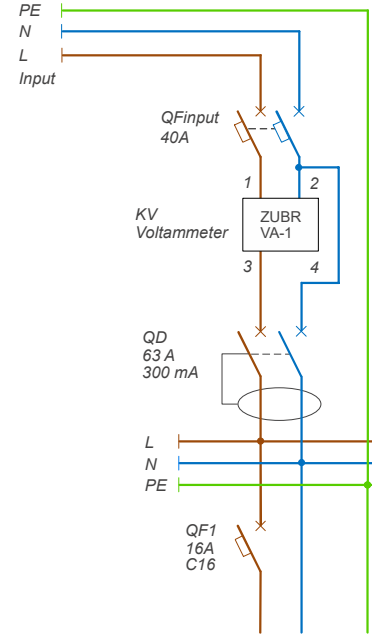
Scheme 1. Option of wiring diagram with a neutral bypass through VA-1



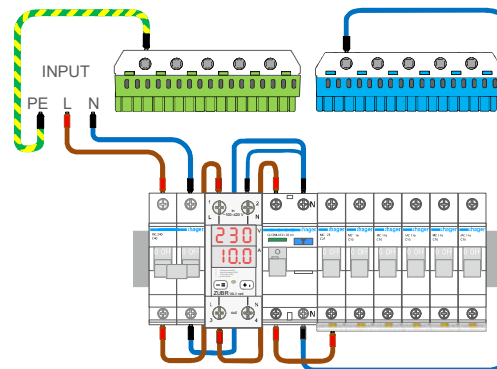
Scheme 2. Option of the connection diagram with a neutral bypass through VA-1

Before the installation and operation of the device, PLEASE READ BY THE END OF THIS DOCUMENT. This will help to avoid possible danger, mistakes and misunderstandings.

CURRENT AND POWER IS MEASURED at the phase input of the device.



Scheme 3. Option of wiring diagram without a neutral bypass through VA-1



Scheme 4. Option of the connection diagram without a neutral bypass through VA-1

INSTALLATION

The appliance is intended for installation inside residences. The risk of moisture or humidity in the installation site should be minimal. The ambient temperature during the installation should be within $-5...+45$ °C.

The appliance is installed in a special box, which allows to conduct the easy installation and operation. Cabinet should be equipped with standard mounting rail 35 mm width (DIN rail). The appliance takes in width of 3 standard module on 18 mm. The height of the appliance should be in the range 0,5...1,7 m from the floor.

For protection against short circuit and excess capacity in circuit load necessarily need to set in front of the appliance, the automatic circuit-breaker (QF), see schemes 1, 3. To protect person from electric shock leak is set safety shutdown device.

Terminals of the device designed for wire cross section up to 16 mm². Clean the end wires of 10 \pm 0,5 mm. It is advisable to use a soft wire, which is tightened in the terminals with a screwdriver with a tip width of no more than 6 mm with a torque of 2,4 N·m. A screwdriver with a blade more than 6 mm wide can cause mechanical damage to the terminals. Doing so will void your warranty claim.

WARRANTY TERMS

The warranty for ZUBR devices is valid for **60 months** from the date of sale, provided that the instructions are followed. The warranty period for products without a warranty certificate is counted from the date of production.

If your device is not working properly, we recommend that you first read the section «Possible problems». If you cannot find an answer, contact Service Center. In most cases, these actions resolve all issues.

If you continue to have issues with the device, please send it to a Service Center or to the store where you purchased the device. If your device is defective due to our fault, we will repair or replace it under warranty within 14 business days.

Please see the full text of the warranty and the data you need to send to your Service Center on the website <https://www.ds-electronics.com>. If you have a warranty case, please, contact the General distributor in your area.



SERVICE CENTER CONTACT
+38 (091) 481-91-81
Viber WhatsApp Telegram
support@dse.com.ua

WARRANTY CARD

serial №:	date of sale:
a seller, a seal:	place of a seal
an owner contact for a service center:	

EXPLOITATION

When turned on, the voltmeter displays the symbols of the displayed parameters for 2 sec, then measures and displays the values of the mains voltage and load current.

If the voltage or current goes beyond the set limits, the corresponding screen will flash 1 time per second as an overrun type:

- the upper limit is exceeded
- the lower limit is exceeded
- current limit exceeded

Blinking of the green LED 1 time per 2 sec indicates the appearance of a new, not viewed record in the log.

All settings are stored in NON-VOLATILE MEMORY

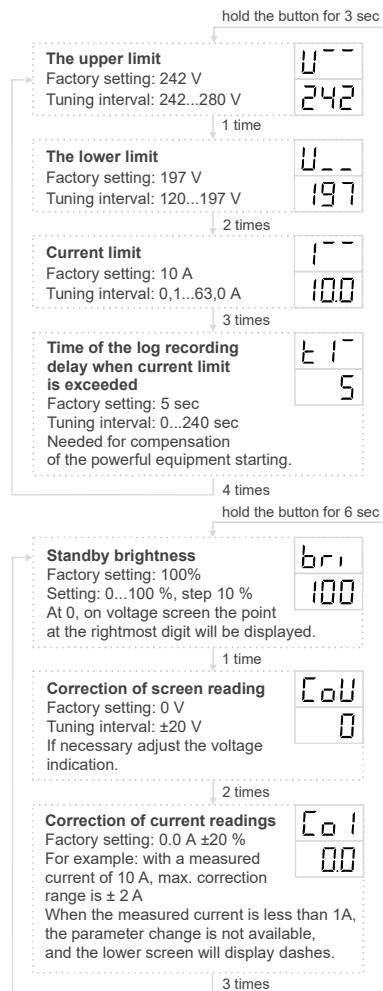
POSSIBLE PROBLEMS, CAUSES AND WAYS TO OVERCOME THEM

At turning on neither indicator nor screendo not shine

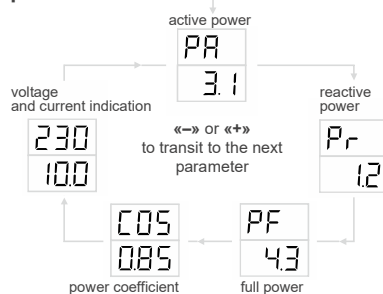
Possible cause: There is no power supply voltage.

It is necessary to: Ensure supply voltage presence.

Function menu

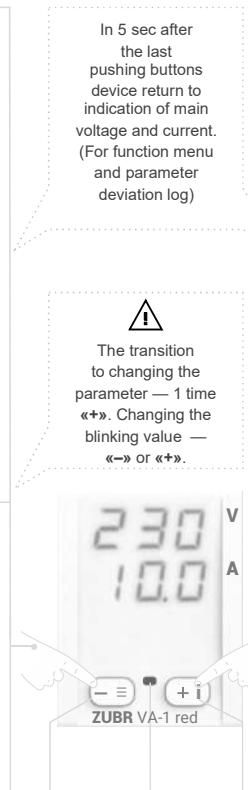
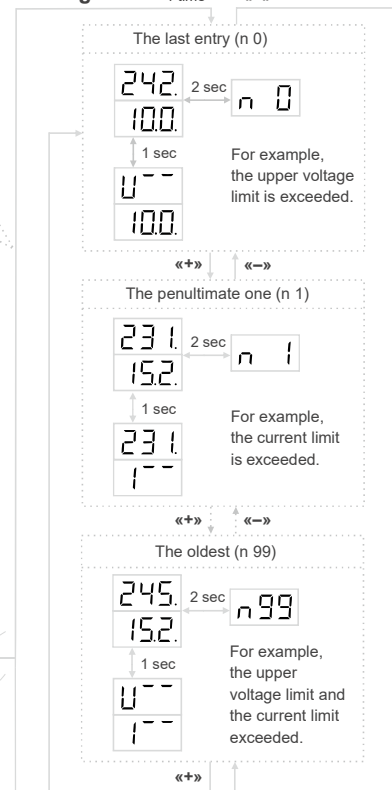


Reviewing additional network parameters



The selected parameter is displayed for 30 sec, then the voltmeter will automatically return to voltage and current indicating.

Log for 100 deviations of parameters in the grid



Blinks 1 time per 2 sec, if a new entry in the log has not been viewed.

hold the button for 12 sec

Resetting to the factory settings

After release, reset to factory settings and reboot will take place.

The log records the voltage or current values that are outside the set limits. Reviewing the log is accompanied by a glowing point in the rightmost digit, and the parameter exceeding the limits alternates with the type of excess.

RESET: while reviewing the log, hold down the «-» and «+» buttons for 6 sec until the «rSt». inscription appears. After releasing the buttons, the log will be cleared. In this case the screen will display the total number of stored cells in memory in 3 seconds.

If the screen displays dashes while viewing the log, there are no log entries.

hold the button for 6 sec

Firmware version

After releasing the button, the voltmeter will return to displaying the voltage and current in the grid.

Attention! The manufacturer reserves the right to modify the firmware to enhance the device technical characteristics.

SAFETY INSTRUCTIONS

Carefully read and become aware of yourself these instructions.

Connection of the device must be done by a qualified electrician.

Before the installation (dismantling) and connection (disconnection) of the device, turn off voltage supply and also act according to the «Rules of an arrangement of electric installations».

Turning on and off or and configure the device should be with dry hands.

Do not connect the device to the network disassembled.

Avoid hitting of water or moisture to the device.

Do not expose the device to extreme temperatures (higher than 40 °C or below -5 °C) and high humidity.

Never clean the device with the use of chemicals such as benzene, solvents.

Do not store the device and do not use it in areas with the dust.

Do not attempt to disassemble and repair the device.

Do not exceed the landmarks value adaptor and power.

To protect against overvoltage caused by lightning discharges, use a lightning protector.

Protect the children from games with the working device, it is dangerous.

ADDITIONAL INFORMATION

Do not fire and do not throw away the device with the household waste.

After the end of its service life, the product must be disposed of in accordance with applicable law.

Transportation of goods carried in the package, ensuring the safety of the product.

The device is transported by any kind of transport (rail, sea, motor, air transportation).

Date of manufacture is on the back side of device.

Application time is unlimited.

The device does not contain harmful substances.

If you have any questions or you something will not clear, call the Service centre the telephone number listed below.

vF97 230106



Low Voltage Directive 2014/35/EU
EMC Directive 2014/30/EU

Manufacturer and vendor: DS ELECTRONICS, LTD
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