PRODUCT MANUAL

ver. 2025-03-26

ECO SOLAR BOOST
FOR HEATING WATER, BOILER

GREEN BOOST 3000 BYPASS

VOLT POLSKA

VOLT POLSKA Sp. z o.o.
ul. Swiemirowska 3
81-877 Sopot
www.voltpolska.pl

pomoc@voltpolska.pl | hurt@voltpolska.pl | (58) 500 85 62

Congratulations on choosing a VOLT product!

Important Safety Information:

Please read this entire manual carefully before using the device. This manual contains important safety and operating instructions. Keep this manual in a safe place for future reference. Only use the device as instructed in this manual and for the intended applications. If you give this device to someone else, make sure to include this manual. We are not responsible for accidents or damage resulting from using the device in a manner not conforming to the instructions. This manual may be subject to change.

Always refer to the latest version of the manual available at https://voltpolska.pl
Green Boost 3000 BYPASS (120-350VDC) for water heating, boilers, underfloor heating, and more.

Key Features:High Output Voltage:
Even at high input voltages from solar panels, the inverter maintains a stable output voltage of around 245V.

TECHNICAL DATA GREEN BOOST 3000 BYPASS	
Max constant power	3000W
Max power	6000W
Efficiency	> 95%
Output voltage	120 ~ 245VAC/ 50Hz
Output voltage Voc from panels PV	120VDC ~ 350VDC
Max Imp current from PV	14A DC
Max panels power	≤ 4500W
Output voltage waveform	Modified sine wave
Connection of PV panels	Series or series-parallel
Power connector (input)	MC4-2pcs
Output socket	2 PCS
Mode	MPPT/STABLE
Displayed	LED
Overload protection	Yes
Short circuit protection	Yes
Thermal protection	Yes100±10℃
Cooling	Built-in fan
Warning system	Sounds and light signals
Operating temperature	od -25～+55℃
Storage temperature	od -20～+55℃
Weight	3,9kg
Dimensions	311x232x140mm (with MC-4)

APPLICATION

The Green Boost 3000 BYPASS inverter is designed for the direct use of photovoltaic panels to power heating devices, such as electric heaters, boilers, heating mats, underfloor heating, and similar.

The direct current generated in the panels, which cannot directly power heating devices, is converted in the inverter to alternating current suitable for powering the aforementioned devices. A series connection of 4 to 9 standard PV panels (250W - 400W) is required, with a total voltage ranging from 120V to 350V.

Our inverter has an internal maximum power protection of 3kW, while the total power of the panels should not exceed 5kW.

The Green Boost allows for the connection of two heating devices, e.g., two boilers. One of them will be heated first. The second boiler will be heated when the thermostat of the first boiler interrupts power consumption.

In **STABLE** mode, the output voltage is 230V AC (50Hz) and is maintained when sufficient power is obtained from the solar panels. If the power from the panels is insufficient, the device will not supply power to the output sockets.

In **MPPT** mode, the output voltage can oscillate between 120-245V AC (50Hz), allowing for power to be supplied to the output sockets from 120V AC even with low power from the solar panels (low sunlight).

Bypass function: When the voltage from the panels (PV) is lower than 80V, the device does not generate any output current.
When the PV voltage drops below 60V, the inverter switches to AC bypass mode to supply electricity from the 230V mains.

When the PV voltage rises above 140V, the device returns to inverter mode to power the loads with solar energy.

INSTALLATION

To connect the panels to the inverter, use appropriate PV installation cables. Their cross-section should not be less than 4mm².

Too thin wires will cause heating and voltage drop at the inverter input. In extreme cases, this will lead to system losses or fire.

Proper operation of the inverter requires free air circulation. It is unacceptable to cover the ventilation holes in the housing. This can cause overheating and damage to the device. The suggested installation position for the inverter is vertical. The device should be attached to non-flammable surfaces such as concrete or metal.

SAFETY

The solar inverter produces dangerous output voltage. It can cause fire or electric shock. During use, it is recommended to follow safety rules generally accepted for 230V devices.

Remember that even after disconnecting the power supply, high voltage may remain on the power terminals and internal components for several seconds. All repairs should be carried out at an authorized manufacturer's service center. It is forbidden to use the inverter in places with high humidity and direct contact with fire or flammable substances. Do not expose the device to sunlight. In case of contact with water, turn off the device immediately.

It is forbidden to short-circuit the inverter output or connect an excessive load to it, greater than the permissible (continuous operation). Overloading the inverter can lead to its damage. In case of fire, remember to use a fire extinguisher designed for extinguishing live electrical equipment.

The AC outputs of the Green Boost 3000 inverter must not be connected to a new or existing power grid under any circumstances.

CONNECTION

IMPORTANT!

When connecting panels to the inverter, pay special attention to the polarity of the supply voltage. Incorrect wiring will damage the inverter and void the warranty.

The Green Boost inverter has cables terminated with MC4 connectors. The connectors should be connected to the existing PV installation. The connector type should be connected to the negative of the installation, and the connector to the positive of the PV installation.

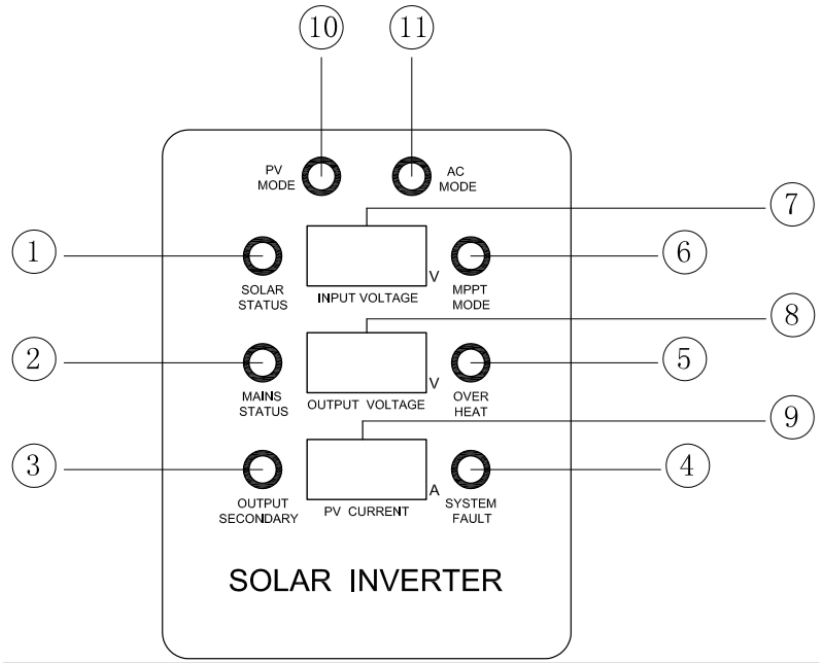
The power cable from the PV installation should have a direct current safety switch (designed for this type of installation).

Connect the appropriate heating device (e.g., boiler) to the inverter's output 1". After detecting voltage from the PV panels, the inverter will automatically turn on. This will be confirmed by the indicator LED.

Additionally, another energy receiver can be connected to output "2". It only works when socket "1" is not drawing power.

USAGE

The Green Boost 3000 inverter has 2 type E mains power sockets. Marked 1 and 2 respectively. After connecting the voltage from the PV installation (120V - 350V), the inverter will check for the presence of receivers. If two resistive receivers are connected, the device connected to socket "1" will be powered first. When it stops drawing power, the inverter will switch to powering socket "2". However, if a load appears again on socket "1", the device will automatically stop powering output "2" and start powering output "1".

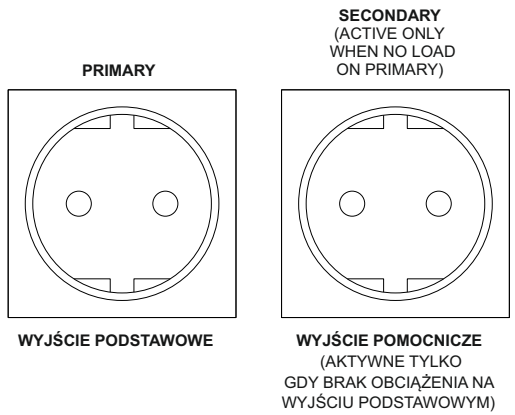


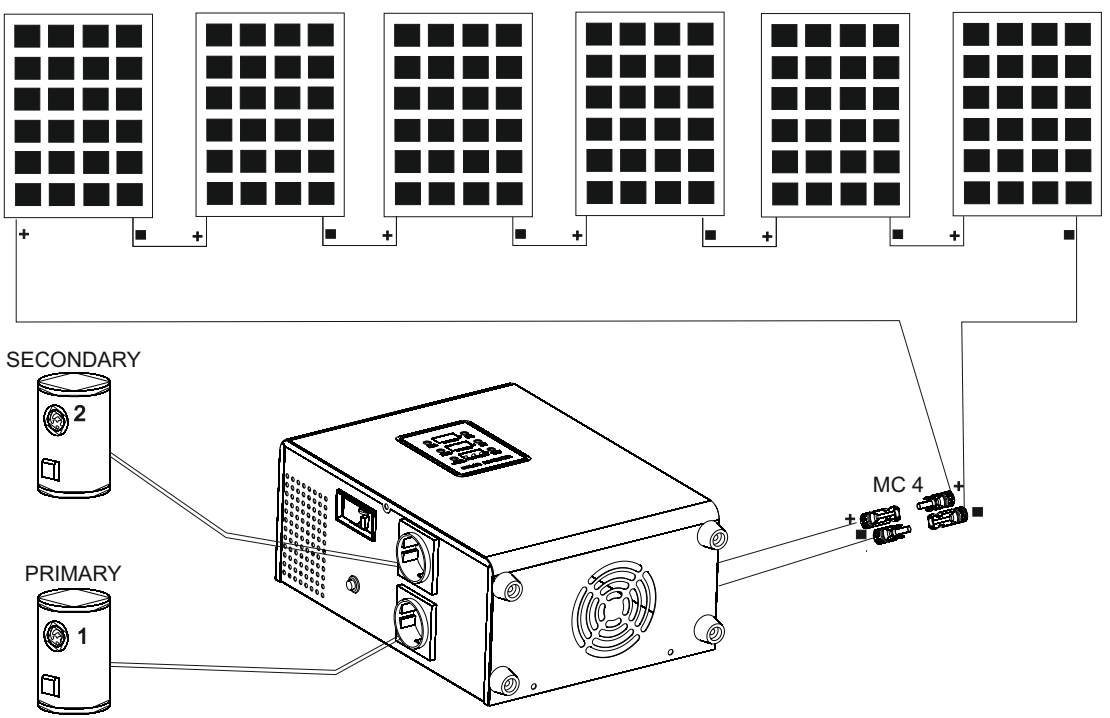
(1) SOLAR STATUS: When the SOLAR mode is selected with the button, the LED will light up, and screens (7), (8), and (9) will display PV information.
(2) MAINS STATUS: When the MAINS mode is selected with the button, the LED will light up, and screens (7) and (8) will display all AC mains data.
(3) OUTPUT SECONDARY: The LED will light up when the SECONDARY socket is active.
(4) SYSTEM FAULT: If the device malfunctions or a short circuit occurs, the LED will light up continuously; in case of overload or high PV voltage, the LED will flash. If the device is working correctly, the LED will not light up.
(5) OVER HEAT: If the temperature is too high, thermal protection will be activated, indicated by the LED lighting up.
(6) MPPT MODE: When the MPPT mode is selected with the MPPT/STABLE button, the LED will light up.
(7) INPUT VOLTAGE: If SOLAR mode is selected, the PV input voltage will be displayed. If MAINS mode is selected, the AC input voltage will be displayed.
(8) OUTPUT VOLTAGE: If SOLAR mode is selected, the inverter output voltage will be displayed. If MAINS mode is selected, the mains output voltage will be displayed.
(9) PV CURRENT: Displays the current PV input current. If the load in inverter mode is too high, this data will flash to warn of overload.
(10) PV mode: Lights up when the device output is in PV operating mode.
(11) AC mode: Lights up when the device output is in AC (bypass) operating mode.

CONNECTING DIAGRAM „1” i „2”

Connection Diagram for Terminals "1" and "2" (GREEN BOOST 3000 BYPASS)

GREEN BOOST 3000 BYPASS

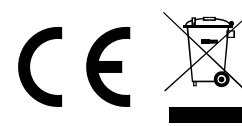




WARRANTY SERVICE COMMENTS

DATE OF PURSCHASE	
SHIPPING ADDRESS	
SIGNATURE / STAMP	
DAMAGE DESCRIPTION	
SERVICE COMMENTS	

Correct Disposal of This Product (Waste Electrical & Electronic Equipment)
The marking on the product or in related texts indicates that it is at the end of its useful life should not be disposed of with other household wastes. To avoid harmful effects on the environment and human health as a result of uncontrolled waste disposal, please separate the product from another type of waste and responsible recycling to promote the reuse of material resources as a permanent practice. Users in the households should contact the retailer where they purchased the product, or with a local authority. Business users should contact their supplier and check the terms of the contract purchase. The product should not be disposed of with other commercial waste.



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