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### Victron Energy PMP122305102

# Victron Energy MultiPlus-II Inverter Charger User Manual

Comprehensive guide for the MultiPlus-II 2X Pure Sine Wave Inverter Charger, 120V, 3000VA 12-Volt.

## PRODUCT OVERVIEW

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The Victron Energy MultiPlus-II is an advanced inverter charger that integrates the functionalities of both the MultiPlus and MultiGrid series. It is designed to provide reliable power conversion and battery charging for various applications, including marine, vehicle, and off-grid systems. Key features include PowerControl, PowerAssist, and seamless UPS functionality.





Figure 1: Front view of the Victron Energy MultiPlus-II Inverter Charger.

## SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your MultiPlus-II unit. This section provides general guidance; always refer to the official PDF user manual for detailed wiring diagrams and safety instructions.

### Physical Placement and Dimensions

Ensure the unit is mounted in a location that allows for adequate ventilation and access for connections. Consider the compact size for optimal placement.

## DIMENSIONS

# Compact size



Figure 2: Dimensions of the MultiPlus-II unit, showing its compact size for installation.

## Electrical Connections

The MultiPlus-II requires both DC (battery) and AC (input/output) connections. It is designed to accept and passthrough both lines of a 120/240V supply, or combine L1 and L2 outputs for single-phase 120V on each line when connected to a single-phase 120V supply.

- **DC Connections:** Connect to your 12V battery bank. Ensure correct polarity and secure connections.
- **AC Input:** Connect to shore power or a generator.
- **AC Output:** Connect to your loads.

For detailed wiring diagrams and safety precautions, please consult the official user manual linked in the Warranty and Support section.

## OPERATION

The MultiPlus-II offers a range of operational modes to optimize your power system.

### Inverter and Charger Functions

The unit functions as both a pure sine wave inverter, converting DC battery power to AC, and a sophisticated battery charger, ensuring optimal battery health.

### PowerAssist Feature

The unique PowerAssist feature prevents overload of a limited AC source, such as a generator or shore power connection. It achieves this by automatically reducing battery charging and, if necessary, boosting the output from the generator or shore side supply with power taken from the battery.

IN ONE VIEW

## Freedom. Powered by know-how.



MultiPlus-II: Combines MultiPlus, MultiGrid functions.



External current transformer for advanced control.



PowerAssist: Prevents overload, boosts AC source output.



Remote monitoring and control via GX device and VRM app/portal.



Figure 3: Overview of MultiPlus-II features including PowerAssist and remote monitoring capabilities.

### Uninterrupted AC Power (UPS Function)

In the event of a grid failure or disconnection of shore/generator power, the MultiPlus-II activates rapidly (within 20ms) to take over the supply to connected loads, ensuring continuous operation of sensitive electronics.

# Uninterrupted AC power

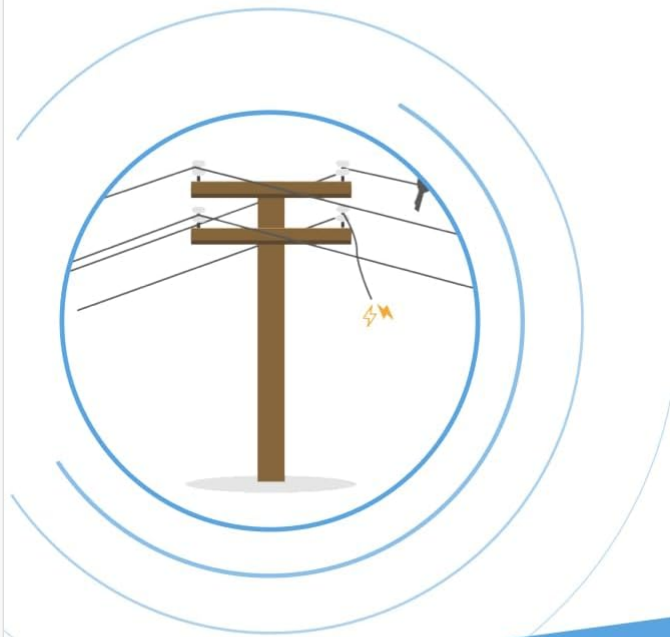


Figure 4: Illustration of the MultiPlus-II providing uninterrupted AC power during a grid outage.

## Parallel and Three-Phase Operation

For higher power output, up to six MultiPlus-II units can be operated in parallel. Additionally, three units can be configured to provide a three-phase output.

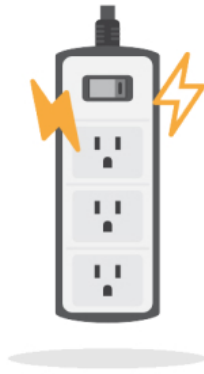
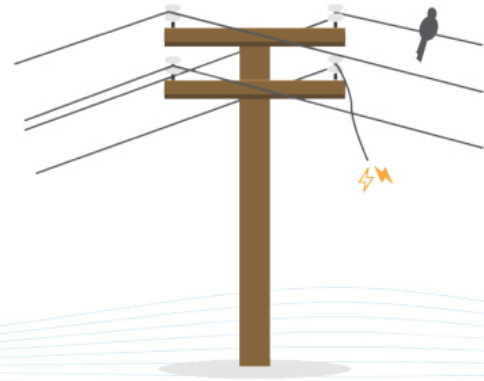
## Remote Monitoring and Control

The MultiPlus-II can be monitored and controlled remotely by connecting a Cerbo GX or other GX product to the internet. Operational data can be stored and displayed on the Victron Remote Management (VRM) platform, allowing for remote access and setting changes.

## UPS FUNCTION

# Uninterrupted AC power

In the event of a grid failure, or when shore or generator power is disconnected, the inverter within the Multi is automatically activated and takes over the supply to the connected loads. This happens so fast (less than 20 milliseconds) that computers and other electronic equipment will continue to operate without disruption.



## FEATURE

# Unique PowerAssist

The MultiPlus will prevent overload of a limited AC source, such as a generator or shore power connection. First, battery charging will automatically be reduced when otherwise an overload would occur. The second level will boost the output of a generator or shore side supply with power taken from the battery.

Figure 5: The MultiPlus-II as a key component in an Energy Storage System (ESS).

## MAINTENANCE

Regular maintenance helps ensure the longevity and optimal performance of your MultiPlus-II inverter charger.

- **Keep Clean:** Periodically clean the exterior of the unit to prevent dust and debris buildup, which can impede ventilation.
- **Check Connections:** Regularly inspect all electrical connections (DC and AC) for tightness and signs of corrosion or overheating. Loose connections can lead to poor performance or safety hazards.
- **Ventilation:** Ensure that the installation area remains clear and that the unit's ventilation openings are not obstructed.
- **Software Updates:** Keep the firmware updated as recommended by Victron Energy to benefit from performance improvements and new features.

## TROUBLESHOOTING

This section addresses common issues you might encounter. For more detailed troubleshooting, refer to the comprehensive official user manual.

Problem	Possible Cause	Solution
Unit not providing AC output.	No DC input, low battery voltage, overload, or internal fault.	Check battery connections and voltage. Reduce AC load. Consult manual for error codes.
Battery not charging.	No AC input, charger disabled, or battery fault.	Verify AC input connection. Check charger settings. Inspect battery condition.
Overload warning/shutdown.	Connected loads exceed unit's capacity.	Reduce the total AC load. Utilize PowerAssist if available.

Problem	Possible Cause	Solution
Unit gets hot.	Insufficient ventilation or high ambient temperature.	Ensure clear airflow around the unit. Relocate if necessary to a cooler environment.

If issues persist, refer to the detailed troubleshooting section in the official user manual or contact Victron Energy support.

## TECHNICAL SPECIFICATIONS

Specification	Detail
Model Number	PMP122305102
Product Dimensions	11 x 6 x 23 inches
Item Weight	53 pounds
Wattage	3000 watts
Battery Capacity (Charger)	120 amp
Power Source	Battery Powered
Recommended Uses	Home, Marine, Yachting, Vehicle, Off-grid applications

## WARRANTY AND SUPPORT

Victron Energy stands behind its products. The MultiPlus-II inverter charger typically comes with a 5-year warranty, covering defects in materials and workmanship under normal use.

For detailed warranty terms, technical support, or to download the complete user manual, please visit the official Victron Energy website or refer to the PDF document below:

[Download Official User Manual \(PDF\)](#)

For further assistance, contact Victron Energy customer support through their official channels.