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Marstek MVE3

Marstek Venus E GEN 3.0 AC Storage System User Manual

Model: MVE3

Introduction	Safety Instructions	Package Contents	Setup	Operating Instructions
Maintenance	Troubleshooting	Specifications		Warranty & Support

1. INTRODUCTION

The Marstek Venus E GEN 3.0 is a powerful and flexible AC energy storage system designed for residential and small commercial applications. This manual provides essential information for the safe and efficient operation of your device. Please read it thoroughly before installation and use.

Key features include a compact design, integrated Plug & Play technology for quick setup, dedicated LAN port for stable communication, and expandability up to 7.5 kW power and 15.36 kWh storage capacity. It also offers an integrated backup power output of up to 2,500 W during outages and is 100% compatible with existing PV installations.

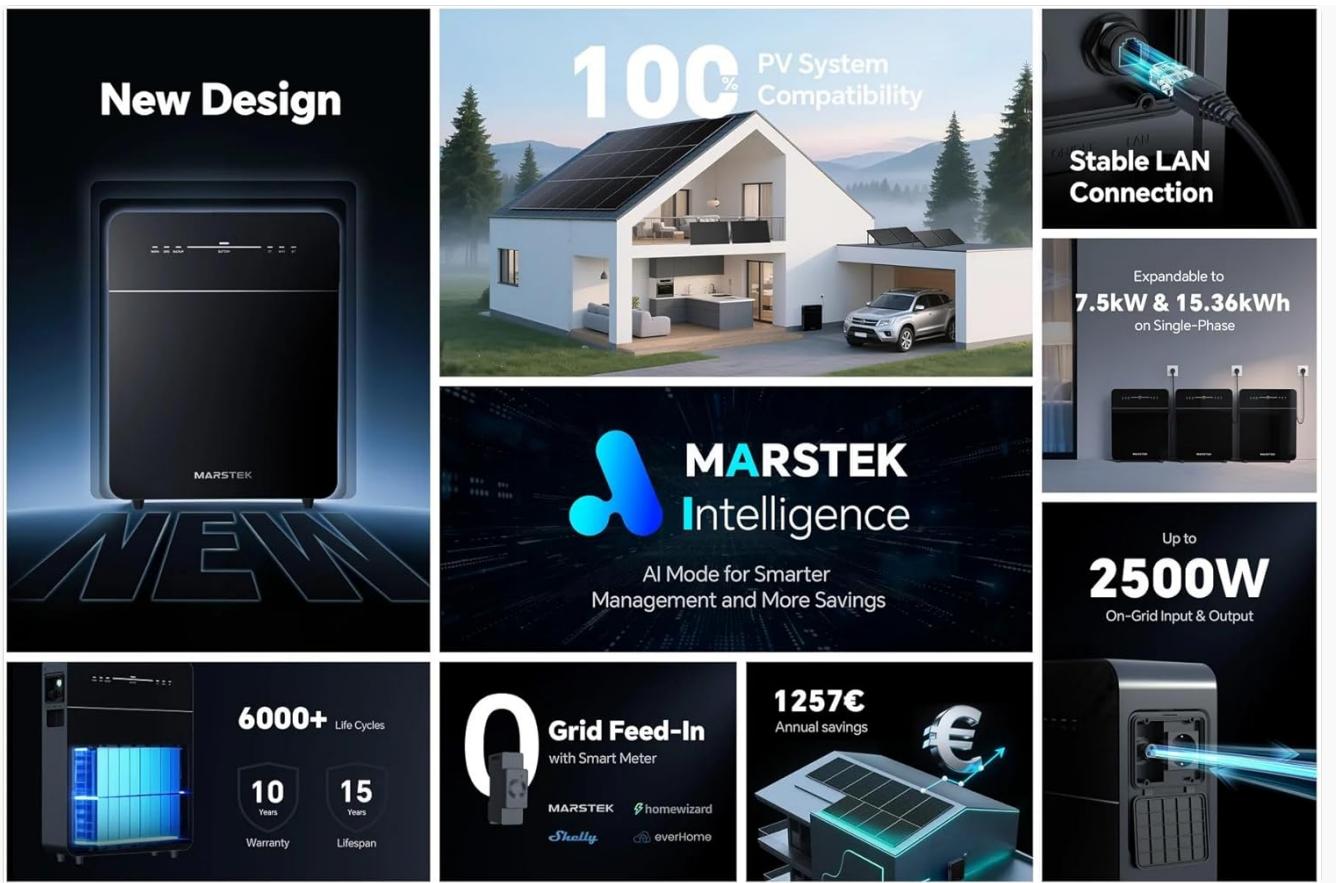


Figure 1: Overview of Marstek Venus E GEN 3.0 key features, including new design, PV system compatibility, stable LAN connection, expandability, MARSTEK Intelligence, 2500W on-grid input/output, 6000+ life cycles, 10-year warranty, grid feed-in with smart meter, and potential annual savings.

2. SAFETY INSTRUCTIONS

Always adhere to the following safety guidelines to prevent injury, damage to the device, or property damage:

- Read all instructions before operating the device.
- Do not attempt to disassemble, repair, or modify the unit. Refer all servicing to qualified personnel.
- Ensure proper ventilation around the unit. Do not block any ventilation openings.
- Keep the device away from water, moisture, and flammable materials.
- Use only the provided or approved accessories.
- Do not operate the device if it has been damaged in any way.
- Ensure the unit is installed on a stable, level surface.
- This device contains a LiFePO4 battery. Handle with care and dispose of according to local regulations.

3. PACKAGE CONTENTS

Verify that all items are present in the package:

- Marstek Venus-E GEN 3.0 Unit
- AC Power Cable
- Wi-Fi Antenna
- Mounting Accessories
- User Manual (this document)

4. SETUP

4.1 Unpacking and Placement

Carefully remove the Venus E GEN 3.0 from its packaging. Place the unit on a flat, stable surface in a well-ventilated area, away from direct sunlight, heat sources, and moisture. Ensure sufficient clearance for air circulation around the unit.



Figure 2: Rear view of the Marstek Venus E GEN 3.0, highlighting the ventilation fins for optimal heat dissipation.

4.2 Connecting to Power

1. Connect the provided AC power cable to the AC input port on the Venus E GEN 3.0.
2. Plug the other end of the AC power cable into a grounded wall outlet.
3. The unit will automatically begin charging or enter standby mode.



Figure 3: Side panel of the Marstek Venus E GEN 3.0, showing the protective cover open to reveal the AC input and output ports for connecting to the grid and appliances.

4.3 Network Connection (LAN/Wi-Fi)

For optimal performance and smart features, connect the device to your home network.

- **LAN Connection:** For a stable and faster connection, use an Ethernet cable to connect the dedicated LAN port on the Venus E GEN 3.0 to your router.
- **Wi-Fi Connection:** Attach the provided Wi-Fi antenna to the designated port. Follow the instructions in the MARSTEK app to configure the Wi-Fi connection.

4.4 Initial Power On

Press and hold the power button on the unit for a few seconds until the indicators light up. The unit will perform a self-check. Refer to the display indicators for status.



Figure 4: Front panel of the Marstek Venus E GEN 3.0, displaying LED indicators for WARN, GRID, BACKUP, BATTERY level, CT, WIFI, and BT status.

5. OPERATING INSTRUCTIONS

5.1 MARSTEK App Control

The Venus E GEN 3.0 is primarily controlled via the MARSTEK mobile application. Download the app from your device's app store.

1. Install the MARSTEK app on your smartphone.
2. Register an account and log in.
3. Follow the in-app instructions to add your Venus E GEN 3.0 device.
4. Through the app, you can monitor energy flow, battery status, and select operating modes.

5.2 Operating Modes

The MARSTEK app offers various operating modes to optimize energy usage:

- **Self-Consumption Mode:** Prioritizes using stored energy from the battery or solar panels before drawing from the grid.

- **Manual Control Mode:** Allows direct control over charging and discharging times.
- **AI Optimized Mode:** Utilizes dynamic electricity tariffs, consumption habits, and weather forecasts to automatically optimize charge/discharge cycles for maximum savings.

5.3 Backup Power Function

In the event of a power outage, the integrated backup output provides up to 2,500 W of power to essential appliances. For full home backup (single-phase or three-phase), additional equipment may be required.

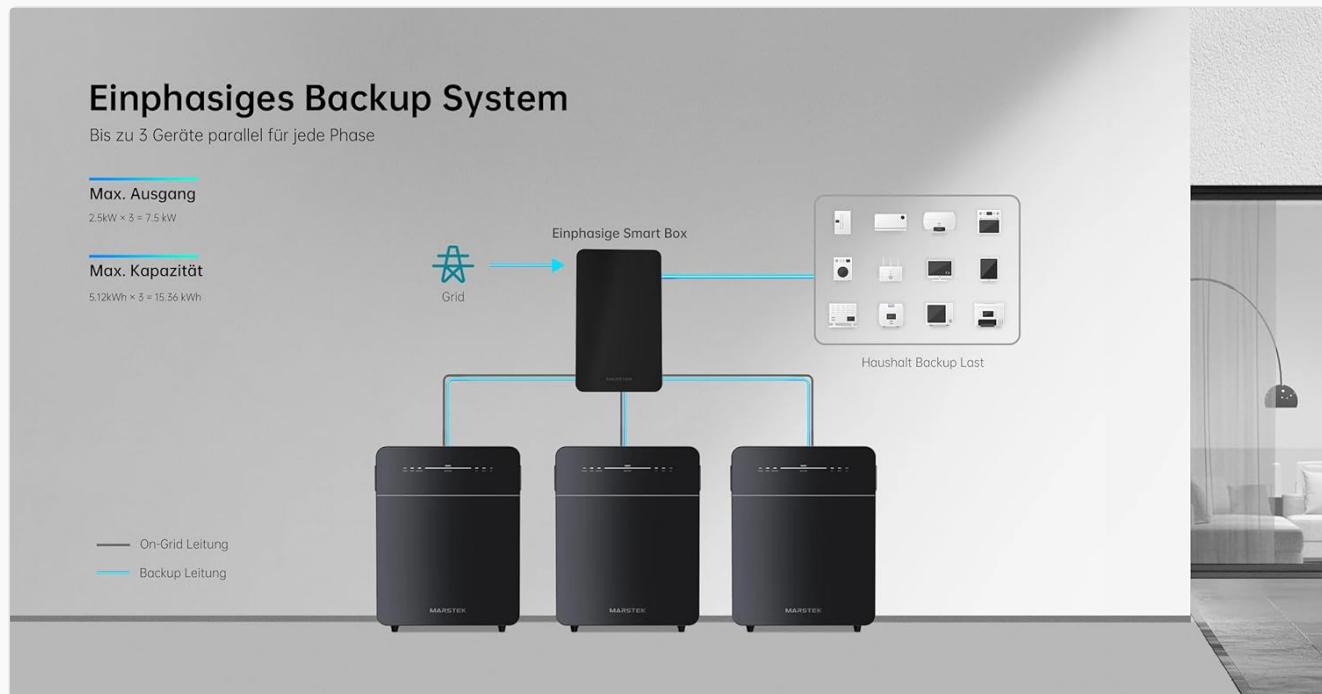


Figure 5: Schematic illustrating a single-phase backup system configuration, showing how multiple Marstek Venus E GEN 3.0 units can be integrated with a Smart Box and the grid to provide backup power to household loads.

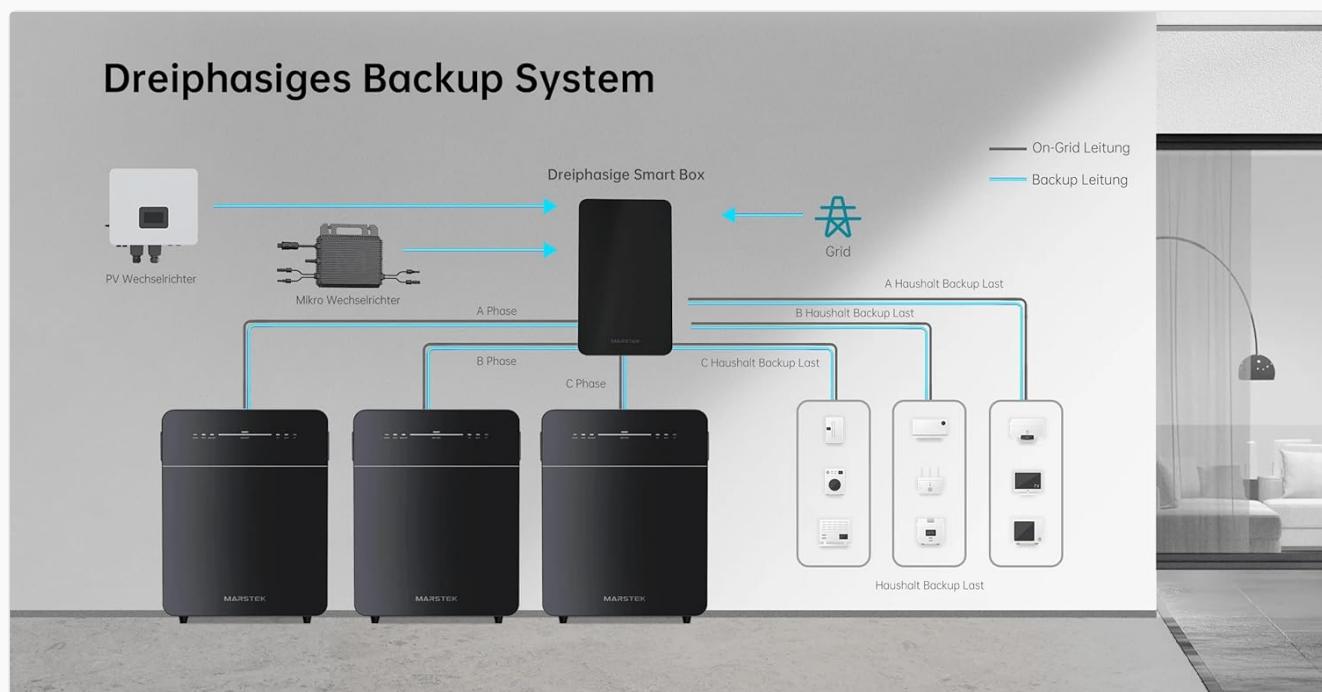


Figure 6: Schematic illustrating a three-phase backup system configuration, detailing the connection of multiple Marstek Venus E GEN 3.0 units, a Smart Box, PV inverters, and micro-inverters to the grid and household backup loads.

6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your Venus E GEN 3.0.

- **Cleaning:** Use a soft, dry cloth to clean the exterior of the unit. Do not use liquid cleaners or solvents.
- **Ventilation:** Periodically check that the ventilation openings are free from dust and debris.
- **Firmware Updates:** Ensure the MARSTEK app and device firmware are kept up-to-date for new features and performance improvements.
- **Battery Health:** The LiFePO4 battery is designed for over 6,000 charge cycles. Monitor its health via the MARSTEK app.



Figure 7: The Marstek Venus E GEN 3.0 demonstrating its robust design and IP65 protection, suitable for operation in various environmental conditions, including snow and rain.

7. TROUBLESHOOTING

If you encounter issues, refer to the following common problems and solutions:

Problem	Possible Cause	Solution
Unit does not power on.	No power from AC outlet; power cable not connected; unit fault.	Check AC power connection; ensure outlet is functional; contact support if problem persists.
No network connection.	Wi-Fi antenna not attached; incorrect Wi-Fi password; LAN cable disconnected; router issue.	Ensure Wi-Fi antenna is attached; re-enter Wi-Fi password in app; check LAN cable connection; restart router.
Battery not charging.	AC input issue; charging mode not active; temperature outside operating range.	Verify AC input; check app for charging mode; ensure ambient temperature is within -20°C to 50°C.
Backup power not activating.	Backup function not enabled; battery low; overload.	Ensure backup mode is enabled in app; check battery level; reduce load on backup output.

For issues not listed here, please contact Marstek customer support.

8. SPECIFICATIONS

Feature	Detail
Model	MVE3
Dimensions (L x W x H)	62.4 x 48 x 15.3 cm
Battery Type	LiFePO4
Capacity	5120 Wh (extensible up to 15.36 kWh)
AC Input/Output Power	Up to 2500 W (800 W default)
Backup Power Output	Up to 2500 W
Connectivity	LAN (RJ45), Wi-Fi
Operating Temperature	Up to -20 °C
Noise Level	Below 30 dB
Protection Rating	IP65
PV System Compatibility	100% compatible

9. WARRANTY & SUPPORT

9.1 Warranty Information

The Marstek Venus E GEN 3.0 comes with a **10-year warranty** on the integrated LiFePO4 battery, ensuring long-term reliability with over 6,000 charge cycles while maintaining 80% capacity. Please retain your proof of purchase for warranty claims.

9.2 Customer Support

For technical assistance, warranty claims, or further inquiries, please contact Marstek customer support through their official website or the MARSTEK app. Ensure you have your model number (MVE3) and purchase details ready.

Official Website: www.marstek.com (Note: This is a placeholder URL, please refer to your product documentation for the actual support website.)