EPEVER IP 3000-22-PLUS

EPEVER IP3000-22 Plus 3000W 24VDC to 230VAC Pure Sine Wave Inverter User Manual

Model: IP 3000-22-PLUS

Brand: EPEVER

1. Introduction

This manual provides essential information for the safe and efficient operation of your EPEVER IP3000-22 Plus Pure Sine Wave Inverter. The IPower-Plus series is designed to convert 24V DC battery power to 230V AC pure sine wave power, making it ideal for off-grid home emergency lighting, vehicle-mounted systems, and other applications requiring stable AC power. It features an LCD display, USB output, and advanced protection functions.

2. Safety Information

- Read all instructions carefully before installation and operation.
- Ensure proper ventilation around the inverter to prevent overheating.
- Do not expose the inverter to water, rain, or excessive moisture.
- Connect the inverter only to a 24V DC battery system. Incorrect voltage can cause damage.
- Always observe correct polarity when connecting battery cables (positive to positive, negative to negative).
- Avoid short-circuiting the output terminals.
- Do not attempt to open or repair the inverter yourself. Refer to qualified service personnel.
- Keep children away from the inverter and its connections.

3. Product Overview

The EPEVER IP3000-22 Plus Inverter is part of the IPower-Plus series, featuring a 180-degree rotatable LCD display for easy monitoring and compatibility with lithium batteries. It includes a USB port and surge current suppression on the input side (for 48V models without USB), protecting lithium battery cells and BMS from damage. The inverter is designed for low no-load or standby losses.

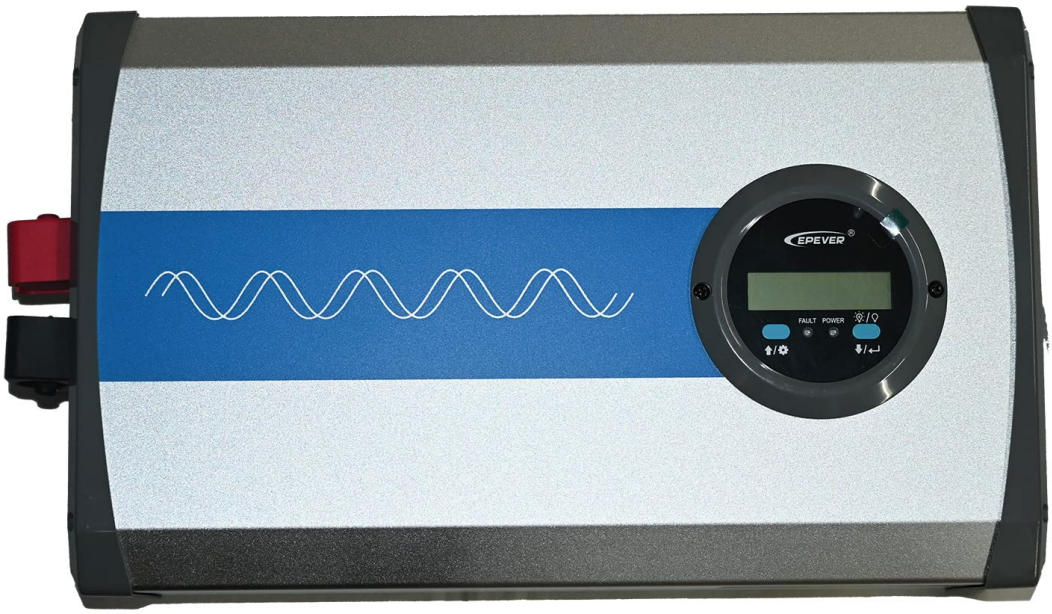

Figure 3.1: EPEVER IP3000-22 Plus Pure Sine Wave Inverter, main view.

Figure 3.2: Side view of the inverter, highlighting the dual cooling fans for efficient heat dissipation.

Figure 3.3: Front panel of the inverter, featuring the DC input terminals for battery connection.

Figure 3.4: Rear panel of the inverter, showing the AC output socket, ON/OFF switch, RS-485 communication port, and USB output.

4. Setup

4.1 Initial Connection

1. Ensure the inverter's ON/OFF switch is in the 'OFF' position.
2. Connect the DC input cables to your 24V DC battery system. Ensure correct polarity: red cable to positive (+), black cable to negative (-). Secure connections tightly.
3. Connect your AC loads to the AC output socket on the inverter.
4. If using the RS485 communication interface for remote monitoring, connect the appropriate cable to the RS485 port.

4.2 Remote Control Pairing

The inverter supports remote control for convenient operation. Follow these steps to pair your remote control:

1. Remove the plastic separator from the remote control's battery compartment.
2. Press and hold the inverter's power button for three seconds until the red indicator light illuminates. Release the button.
3. Immediately press the 'ON' button on the remote control to complete the pairing process. If the red light flashes, pairing was unsuccessful; repeat the steps.

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Video 4.1: This video demonstrates the pairing process for the inverter's remote control, showing how to activate the inverter's pairing mode and then use the remote to establish a connection.

5. Operating Instructions

5.1 Powering On/Off

- To power on the inverter, switch the ON/OFF button to the 'ON' position. The LCD display will illuminate, showing system status.
- To power off the inverter, switch the ON/OFF button to the 'OFF' position.
- Alternatively, use the paired remote control to switch the inverter ON or OFF.

5.2 Using the LCD Display

The LCD display provides real-time information about the inverter's operation, including battery voltage, output voltage, power consumption, and error codes. The display can be rotated 180 degrees for optimal viewing.

5.3 USB Output

The inverter features a 5VDC/Max.1A USB output, suitable for charging small electronic devices such as smartphones and tablets.

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Video 5.1: This video demonstrates the EPEVER Pure Sine Wave Inverter in operation, showcasing its ability to power various household appliances and electronic devices, including a fan, TV, hairbrush, blender, and charging a smartphone.

6. Maintenance

- Regularly inspect all cable connections to ensure they are secure and free from corrosion.
- Keep the inverter's cooling vents clear of dust and debris to maintain proper airflow.
- Clean the exterior of the inverter with a dry, soft cloth. Do not use liquid cleaners.
- Periodically check the battery voltage to ensure it remains within the recommended operating range.

7. Troubleshooting

The EPEVER IP3000-22 Plus Inverter is equipped with comprehensive protection features to ensure safe operation. If the inverter is not functioning as expected, check the following:

- **No Output Power:** Check if the inverter is switched ON. Verify battery connections and ensure the battery voltage is within the operating range (24V DC system).
- **Overload Protection:** If the inverter shuts down due to an overload, reduce the connected load and restart the inverter. The continuous power is 3000W, with a surge power of 6000W (for 5 seconds).
- **Short Circuit Protection:** Disconnect all loads and check for any short circuits in the wiring or connected appliances.
- **Overvoltage/Low Voltage Protection:** Ensure the battery voltage is stable and within the specified range for a 24V system.
- **Overheating Protection:** Ensure adequate ventilation around the inverter. Clear any obstructions from the cooling fans.
- **Reverse Polarity Protection:** Double-check battery connections for correct polarity.

If the issue persists after checking these points, contact customer support.

8. Specifications

Feature	Specification

Feature	Specification
System Battery Voltage	24V DC
Continuous Power	3000W
Surge Power (5s)	6000W
Output Frequency	50/60Hz ±0.2%
Max. Efficiency	>94% (30% load)
No-load Current	<1.0A
USB Output	5VDC/Max.1A
RS485 Interface	5VDC/200mA
Protection Degree	IP20
Unit Dimensions	521 × 274 × 148mm
Net Weight	8kg
Input Voltage	230 Volts
Output Voltage	230 Voltage (AC)
Electrical Wave Shape	Pure Sine Wave
Display Type	LCD
Certifications	CE, RoHS

9. Warranty and Support

The EPEVER IP3000-22 Plus Inverter comes with a 2-year manufacturer's limited warranty. For technical support, troubleshooting assistance, or warranty claims, please contact your retailer or the manufacturer directly. The isolated RS485 communication interface allows for easy remote monitoring, management, and adjustment via PC software or a mobile phone application, providing additional support capabilities.