

EPEVER 3000W

EPEVER 3000W Pure Sine Wave Inverter Instruction Manual

Model: 3000W | Brand: EPEVER

1. INTRODUCTION

This manual provides essential information for the safe and efficient operation of your EPEVER 3000W Pure Sine Wave Inverter. This inverter converts 24V DC power to 110V AC power, suitable for various off-grid applications. It features a double closed-loop control algorithm for fast response and load impact resistance, ensuring stable and reliable power output.

Key features include:

- 3000W continuous power output, 6000W surge power for 5 seconds.
- Compatible with 24V lithium and lead-acid batteries.
- Rotatable LCD meter for monitoring and parameter configuration.
- Remote control capability via phone apps and PC software.
- Built-in electronic safeguards for comprehensive protection.



3000W 24V TO 110V —PURE SINE WAVE INVERTER

Compatible with 24V lithium and Lead-acid battery

Rotatable LCD meter, Surge power: 6000W@5S

Excellent EMC(Electro Magnetic Compatibility)

Remote control by the phone Apps and PC software

IEC62109, EN61000, RoHS approved



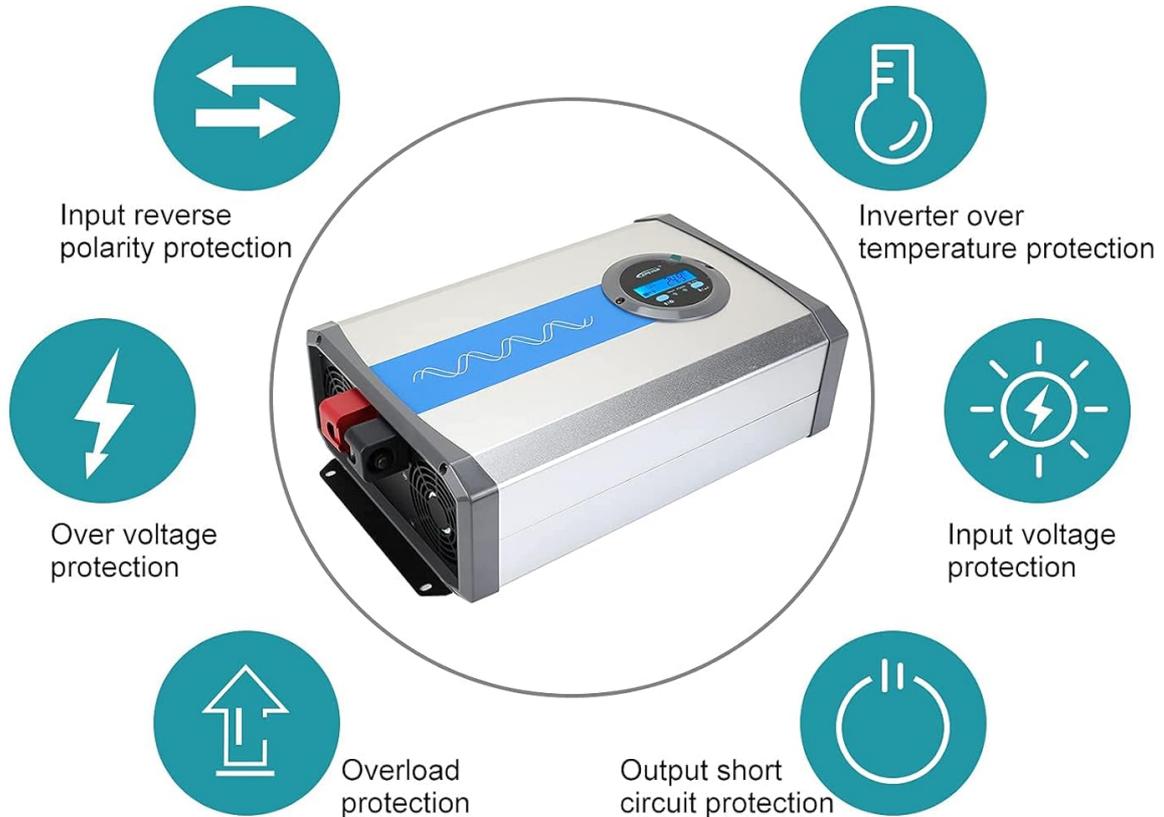
Figure 1: Overview of the EPEVER 3000W Pure Sine Wave Inverter, highlighting its compatibility with 24V lithium and lead-acid batteries, 6000W surge power, remote control, and compliance with IEC62109, EN61000, RoHS standards.

2. SAFETY INSTRUCTIONS

Read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure proper grounding of the inverter.
- Do not expose the inverter to rain, snow, spray, or excessive dust.
- Install the inverter in a well-ventilated area to prevent overheating.
- Do not open the inverter casing; there are no user-serviceable parts inside.
- Disconnect all power sources before performing any wiring or maintenance.
- Use appropriate wire gauges for all connections to prevent overheating and ensure efficient power transfer.
- Keep children away from the inverter and its connections.

BUILT-IN ELECTRONIC SAFEGUARDS

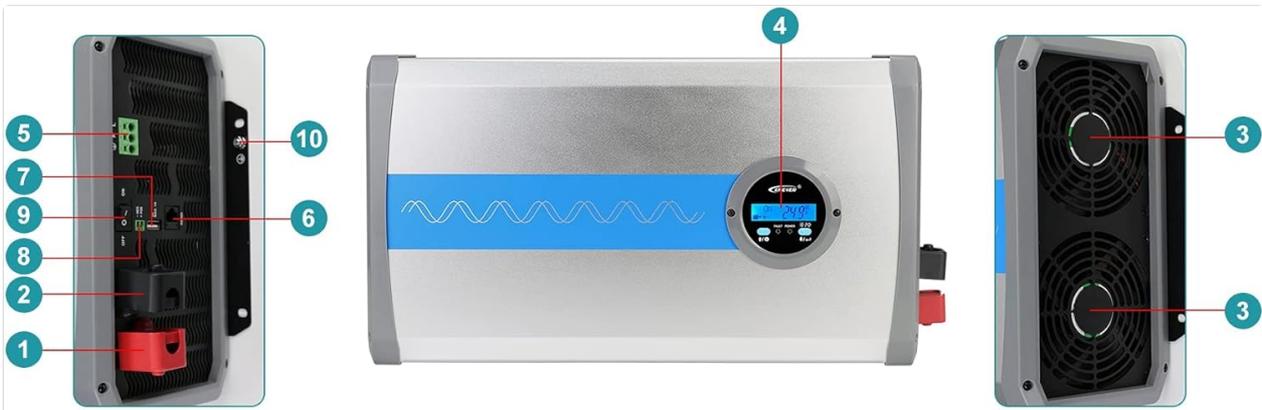


To prevent damage from instation errors or system failures

Figure 2: The inverter includes built-in electronic safeguards such as input reverse polarity protection, inverter over temperature protection, over voltage protection, input voltage protection, overload protection, and output short circuit protection to prevent damage from installation errors or system failures.

3. PRODUCT COMPONENTS

Familiarize yourself with the various parts of your EPEVER inverter:



1	DC input terminal positive	6	RS485 communication port
2	DC input terminal negative	7	USB output port 5VDC/Max.1A ^③
3	Cooling fan ^①	8	External switch port
4	LCD	9	Inverter switch
5	AC outlet ^②	10	Grounding terminal

Figure 3: Detailed diagram of the inverter's components. 1. DC input terminal positive, 2. DC input terminal negative, 3. Cooling fan, 4. LCD, 5. AC outlet, 6. RS485 communication port, 7. USB output port 5VDC/Max.1A, 8. External switch port, 9. Inverter switch, 10. Grounding terminal.

4. SETUP AND INSTALLATION

Follow these steps for proper installation of your inverter:

4.1 Mounting

- Choose a dry, well-ventilated location away from direct sunlight and heat sources.
- Ensure adequate clearance around the inverter for airflow (minimum 150mm on all sides for air intake and outlet).
- Mount the inverter securely to a stable surface using appropriate fasteners.

4.2 Wiring Connections

The inverter features a push-on terminal design for easy wire installation without a screwdriver for the AC output. For DC input, use the screw terminals.

NO SCREW INSTALLATION

Push-on Terminal Design

Easy to install and remove the wires without screwdriver



Add solder to the connection point when selecting the multi-stranded wire, and directly insert it into the corresponding port.

Figure 4: Wiring installation demonstrating the push-on terminal design for AC output. For multi-stranded wires, add solder to the connection point before inserting into the corresponding port. To remove, stop the inverter, insert a sharp tool into the small hole, and pull out the wiring.

1. **Grounding:** Connect the grounding terminal (10) to an earth ground.
2. **DC Input:** Connect the positive (1) and negative (2) DC input terminals to your 24V battery bank. Ensure correct polarity.
3. **AC Output:** Connect your AC loads to the AC outlet (5). The push-on terminals simplify this connection.
4. **Optional Connections:** Connect the RS485 communication port (6) or USB output port (7) for remote monitoring or charging devices.

4.3 Battery Compatibility

The inverter is compatible with both 24V lithium and lead-acid batteries (AGM/GEL/LFP).

COMPATIBLE WITH AGM/GEL/LFP

Compatible with 24V lithium and Lead-acid battery



Lead-Acid



Lithium



IPower-Plus Power Inverter a new generation of pure sine wave inverter compatible with the lithium battery system. This new inverter adopts surge current suppression technology to effectively prevent the surge current from damaging the lithium battery cells and BMS (Battery Management System)

Figure 5: The inverter is compatible with 24V lithium and lead-acid battery types, including AGM, GEL, and LFP. It incorporates surge current suppression technology to protect lithium batteries.

5. OPERATING INSTRUCTIONS

5.1 Powering On/Off

- To power on, ensure all connections are secure, then press the inverter switch (9). The LCD will illuminate.
- To power off, press the inverter switch (9) again.

5.2 LCD Display and Controls

The rotatable LCD meter (4) provides real-time status and allows parameter configuration.

Rotate the LCD



1.LCD

2.UP/Setting button

3.Fault indicator(red)

4.Working status indicator(Blue)

- Blue ON solid
- Blue slowly flashing(1/4Hz)
- Blue fast flashing (1Hz)
- Blue OFF

5.DOWN/Enter button
Output ON/OFF button

Figure 6: The LCD display (1) can be rotated 180 degrees for convenience. It features UP/Setting button (2), Fault indicator (red) (3), Working status indicator (Blue) (4), and DOWN/Enter button / Output ON/OFF button (5). The blue working status indicator shows solid for normal operation, slow flashing (1/4Hz) for standby, fast flashing (1Hz) for fault, and off when powered down.

5.3 Remote Monitoring

The inverter supports remote control and monitoring via phone applications and PC software using the RS485 communication port (6) or an optional eBox-WIFI-01 module.



Figure 7: The inverter can be remotely controlled and monitored via smartphone apps (available on App Store and Google Play) or PC software, typically requiring an eBox-WIFI-01 module connected to the RS485 port.

5.4 Load Compatibility

The inverter is suitable for a wide range of daily appliances. Ensure the total wattage of connected appliances does not exceed the inverter's rated power.

Compatible with a variety of daily appliances



⚠ Note: Different types of loads have different starting impulse currents. **The following values are for reference ONLY!** Customers need to select the appropriate inverter model according to the actual equipment power, current, and load characteristics.

The corresponding selection model of load power and inverter

S/N	Load Type	Load Rated Power	Start impact coefficient η	The minimum continuous output power of the inverter is recommended	For Example
1	Resistive load	P	1	$S=P \cdot \eta$	Electric Soldering iron, Resistance Stove, Oven, Water Heater, Disinfection Cabinet, Rice Cooker etc.
2	Inductive load		3-10		Electric motors, Refrigerators, Transformers, Air conditioners, Electric drills, Lawn mowers, Range hoods, Vacuum cleaners, Washing machines, etc.
3	Resistive load		3-5		TV, Computer host, Display projector, etc.
4	Mixed load		1.5-3		Induction cookers, Hair dryers, Microwave ovens, etc.

Figure 8: Examples of compatible appliances include washing machines, TVs, refrigerators, drills, air conditioners, water pumps, laptops, and kettles. Always avoid overloading the inverter. Different types of loads have varying starting impulse currents; select an inverter model appropriate for your equipment's power, current, and load characteristics.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry cloth. Ensure ventilation openings are free from dust and debris.
- **Connections:** Check all electrical connections regularly to ensure they are tight and free from corrosion.
- **Environment:** Maintain a suitable operating environment, avoiding extreme temperatures and humidity.

7. TROUBLESHOOTING

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

Problem	Possible Cause	Solution
---------	----------------	----------

Problem	Possible Cause	Solution
Inverter does not power on	No DC input power; Loose battery connections; Low battery voltage	Check battery connections and voltage; Ensure battery is charged; Verify inverter switch is ON.
No AC output	Overload; Short circuit; Over-temperature; Inverter fault	Reduce load; Check for short circuits in AC wiring; Allow inverter to cool; Check fault indicator on LCD.
Fault indicator (red) is on	Internal fault; Input/output protection triggered	Refer to the LCD display for specific error codes if available; Disconnect loads and restart inverter; If fault persists, contact support.
Low output power	Low battery voltage; Excessive load; Poor DC connections	Charge battery; Reduce load; Tighten DC connections.

8. TECHNICAL SPECIFICATIONS

Specification	Value
Brand	EPEVER
Model Name	3000W
Rated Input Voltage	24VDC
Output Voltage	110VAC ($\pm 3\%$); 120VAC ($-7\% \sim +3\%$)
Output Frequency	50/60Hz $\pm 0.2\%$
Continuous Output Power	3000 Watts
Peak Output Power (Surge)	6000 Watts (for 5 seconds)
Electrical Output Waveform	Pure Sine Wave
USB Output	5VDC/Max.1A
RS485 Communication Port	5VDC/200mA
Compatible Battery Types	24V Lithium and Lead-acid battery
Number of Outlets	1
Energy Specifications Met	IEC62109, EN61000, RoHS
Item Weight	23.2 Pounds

9. WARRANTY INFORMATION

This EPEVER inverter comes with a **1-year warranty** from the date of purchase. The warranty covers defects in materials and workmanship under normal use. It does not cover damage caused by improper installation, misuse, accidents, or unauthorized modifications. Please retain your proof of purchase for warranty claims.

10. CUSTOMER SUPPORT

For technical assistance, troubleshooting, or warranty inquiries, please contact EPEVER customer support through their official website or the contact information provided with your purchase. When contacting support, please have your product model number (3000W) and purchase details ready.

© 2023 EPEVER. All rights reserved.