Green Cell GC48P5000LCD

Green Cell LCD Pure Sine Wave Power Inverter 48V 5000W/10000W User Manual

Model: GC48P5000LCD

1. Introduction and Overview

The Green Cell LCD Pure Sine Wave Power Inverter is designed to convert 48V DC battery power into a stable 230V AC pure sine wave output. This allows you to power a wide range of household appliances and sensitive electronic devices from a DC power source, such as a battery bank in a caravan, off-grid system, or vehicle. This manual provides essential information for the safe and efficient installation, operation, and maintenance of your inverter.



Figure 1: Green Cell Power Inverter LCD 48V 5000W/10000W. This image shows the overall design of the inverter, highlighting its compact and robust construction.

2. Safety Instructions

Please read and understand all safety instructions before installing or operating the inverter. Failure to follow these instructions may result in electric shock, fire, serious injury, or property damage.

- **Electrical Safety:** Always ensure proper grounding. Do not open the inverter casing; there are no user-serviceable parts inside. Only qualified personnel should perform repairs.
- **Ventilation:** Install the inverter in a well-ventilated area to prevent overheating. Do not block ventilation openings.
- **Environment:** Avoid exposure to water, moisture, direct sunlight, and extreme temperatures. Keep away from flammable materials.
- **Battery Connection:** Connect the inverter directly to a 48V DC battery bank. Ensure correct polarity (+ to + and - to -) to prevent damage. Use appropriate cable gauges for the power rating to avoid overheating.
- **Load Management:** Do not exceed the inverter's continuous power rating (5000W) or peak power rating (10000W).

Overloading can trigger protection mechanisms or damage the unit.

- **Protection Features:** The inverter is equipped with intelligent protection against short circuits, undervoltage, overvoltage, overload, overheating, and reverse polarity. While these features enhance safety, always operate the device within its specified limits.

3. Package Contents

Verify that all items are present in the package:

- Green Cell LCD Pure Sine Wave Power Inverter (48V 5000W/10000W)
- User Manual
- Battery Connection Cables
- Spare Fuses



Figure 2: Package contents. This image displays the Green Cell Power Inverter along with its included accessories: battery connection cables, spare fuses, and the user manual.

4. Product Features

The Green Cell Power Inverter offers advanced features for reliable power conversion:

- **Pure Sine Wave Output:** Delivers a stable 230V AC pure sine wave, identical to standard grid power. This ensures compatibility with all types of electronic devices, including sensitive equipment like refrigerators, microwaves, and pumps, without causing damage or interference.
- **Integrated LCD Display:** A clear LCD provides real-time monitoring of key operational parameters such as AC output voltage, DC input voltage, frequency, current power consumption, and battery level. This allows for intuitive control and status checks.
- **Advanced Protection Systems:** Equipped with multiple safety features including protection against short circuits,

undervoltage, overvoltage, overload, overheating, and reverse polarity. These mechanisms continuously monitor operation to ensure the safety of both the inverter and connected devices.

- **Efficient Cooling:** Features both effective passive cooling (heat sinks) and intelligent active cooling (fan) for sustained, interference-free operation, even under heavy loads.



Figure 3: Intelligent Protection Features. This diagram illustrates the various safety mechanisms integrated into the Green Cell Power Inverter, including protection against short circuits, undervoltage, overvoltage, overload, overheating, and reverse polarity.



Figure 4: Active Cooling System. The inverter incorporates both passive and active cooling systems, including a robust fan, to ensure stable operation and prevent overheating during prolonged use.

5. Setup and Installation

Follow these steps for proper installation:

1. **Mounting:** Choose a dry, well-ventilated location for the inverter, away from direct sunlight, heat sources, and moisture. Ensure sufficient space around the unit for airflow.
2. **DC Input Connection:** Connect the supplied DC cables to the inverter's DC input terminals. Ensure the red cable connects to the positive (+) terminal and the black cable to the negative (-) terminal. Then, connect the other ends of the cables to your 48V DC battery bank, observing correct polarity. It is recommended to use cables with a cross-section of at least 25mm² or 35mm² for optimal performance and safety, especially under high loads.
3. **Grounding:** Connect the inverter's grounding terminal to a reliable earth ground using a suitable grounding wire. This is crucial for safety.
4. **AC Output Connection:** Plug your 230V AC appliances into the AC output sockets on the inverter. Ensure the total power

consumption of connected devices does not exceed the inverter's continuous power rating.

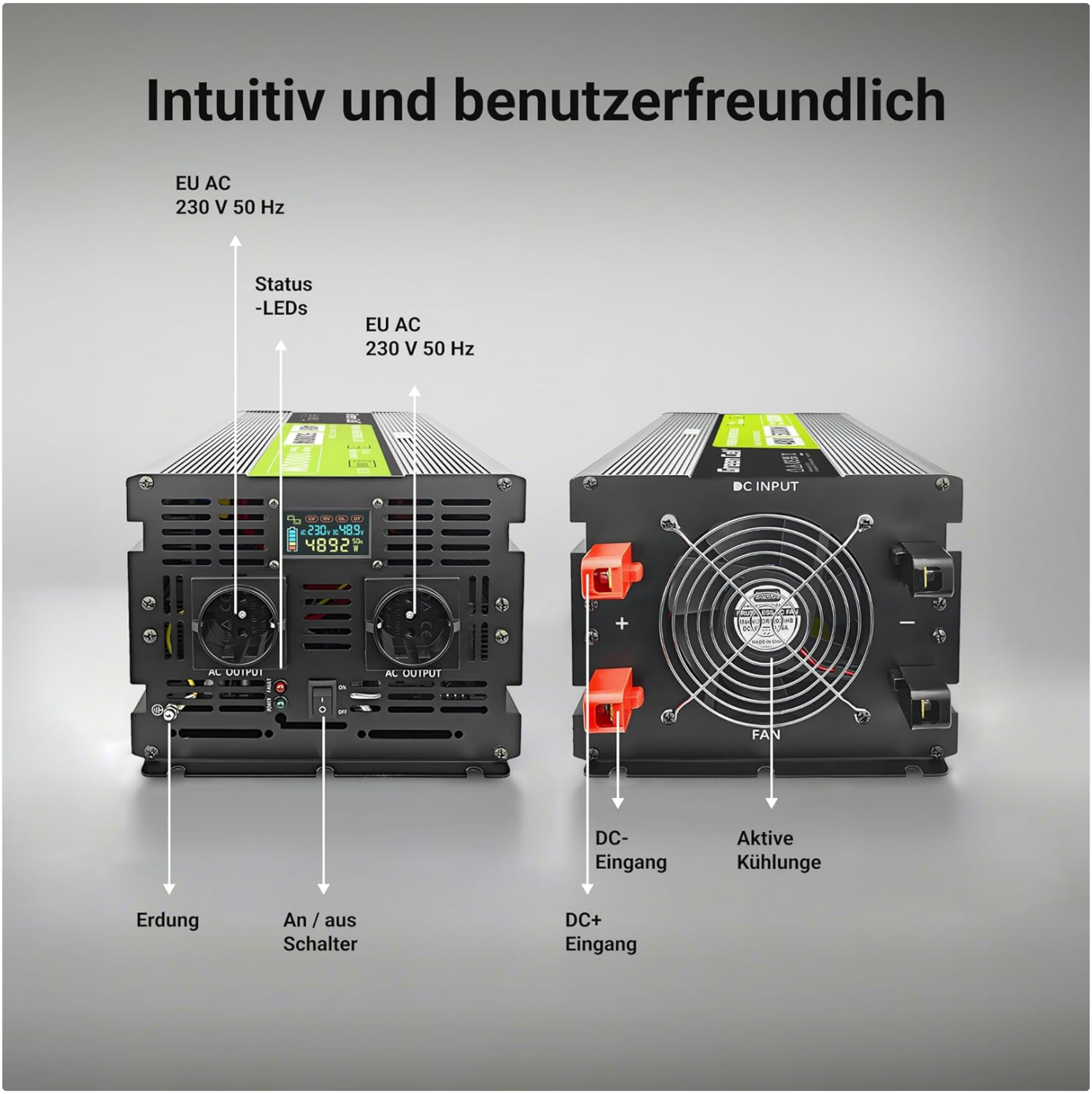


Figure 5: Inverter Connection Points. This diagram shows the front and rear panels of the inverter, highlighting the DC input terminals (positive and negative), AC output sockets, grounding point, and the main power switch. Always ensure correct polarity when connecting to the battery.

6. Operating Instructions

To operate your Green Cell Power Inverter:

1. **Power On:** After ensuring all connections are secure and correct, switch the inverter's main power switch to the 'ON' position. The LCD display will illuminate, showing current operational parameters.
2. **Monitor Display:** The LCD provides real-time information such as AC output voltage (230V), DC input voltage (from battery), output frequency (50Hz), and current power consumption (W). Monitor these values to ensure stable operation and prevent overloading.
3. **Connect Devices:** Once the inverter is powered on and displaying stable output, connect your 230V AC devices to the output sockets.

4. **Power Off:** Before disconnecting any devices or the inverter from the battery, switch the inverter's main power switch to the 'OFF' position.



Figure 6: LCD Display and AC Outlets. A close-up view of the inverter's front panel, showing the LCD screen displaying operational parameters like AC output voltage, DC input voltage, frequency, and power. The AC output sockets and power switch are also visible for connecting and controlling devices.

7. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter:

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris to maintain efficient cooling.
- **Connections:** Regularly check all electrical connections (DC input, AC output, grounding) to ensure they are tight and free from corrosion.
- **Fuse Replacement:** If a fuse blows, replace it with a fuse of the same type and rating as provided in the spare fuse kit. Refer to the inverter's specifications for correct fuse values. Always disconnect the inverter from the battery before replacing fuses.
- **Storage:** If storing the inverter for an extended period, ensure it is clean, dry, and stored in a cool, well-ventilated area.

Disconnect it completely from the battery.

8. Troubleshooting

Refer to the following table for common issues and their solutions:

Problem	Possible Cause	Solution
Inverter does not power on	No DC input power, loose battery connections, incorrect polarity, low battery voltage.	Check battery connections and voltage. Ensure correct polarity. Charge battery if voltage is too low.
No AC output	Overload, short circuit, overheating, internal fault.	Reduce connected load. Check for short circuits in connected devices. Allow inverter to cool down. If problem persists, contact support.
LCD displays error code	Specific protection triggered (e.g., OV for overvoltage, OL for overload, OT for over-temperature).	Refer to the LCD display for the specific error code. Address the underlying issue (e.g., reduce load for OL, ensure proper ventilation for OT).
Fan runs constantly or loudly	High internal temperature, heavy load.	Ensure adequate ventilation. Reduce load if possible. This is normal operation under high load or warm conditions.

If you encounter issues not listed here or if solutions do not resolve the problem, please contact Green Cell customer support.

9. Specifications

Brand	Green Cell
Model Name	LCD Power Inverter
Model Number	GC48P5000LCD
Input Voltage	48V DC
Output Voltage	230V AC
Continuous Output Power	5000 Watts
Peak Output Power	10000 Watts
Output Waveform	Pure Sine Wave
Total AC Outlets	1
Item Weight	9.8 Kilograms
Recommended Uses	For powering various devices, including sensitive equipment
Manufacturer	CSG S.A.

Country of Origin	China

10. Warranty and Support

Green Cell products are designed for reliability and performance. For warranty information, technical support, or service inquiries, please contact Green Cell customer support through their official website or the retailer from whom you purchased the product. Please have your model number (GC48P5000LCD) and purchase date available when contacting support.

Ask a question about this manual

Ask about setup, troubleshooting, compatibility, parts, safety, or missing instructions. Manuals+ will review the question and use this page's manual context to help answer it.

Name

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After a successful submission, we securely hash the supplied account or form email before sending it to Microsoft Advertising for conversion attribution. Privacy details.

Question

Example: How do I reset this device or fix this error?

Details

Model number, symptoms, what you tried, or the section of the manual you are using.

Submit question