Green Cell INV07

Green Cell INV07 300W/600W DC 12V to AC 230V Pure Sine Wave Inverter with UPS User Manual

1. Introduction

This manual provides essential information for the safe and efficient operation of your Green Cell INV07 Pure Sine Wave Inverter with UPS function. This device converts 12V DC power from a battery into 230V AC power, suitable for a wide range of electronic devices. It also features an Uninterruptible Power Supply (UPS) function, ensuring continuous power for critical applications like central heating pumps during outages.
The inverter delivers a continuous output of 300W and a peak power of up to 600W. It is designed for devices requiring a stable, pure sine wave power supply, similar to standard wall outlets.

2. Safety Instructions

- **Read all instructions:** Before operating the inverter, read and understand all safety and operating instructions.
- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block ventilation openings.
- **Avoid moisture:** Do not expose the inverter to rain, water, or excessive humidity.
- **Proper grounding:** Always connect the inverter to a properly grounded 12V DC power source.
- **Overload protection:** Do not exceed the inverter's rated continuous power output (300W) or peak power (600W). Overloading can damage the inverter and connected devices.
- **Battery connection:** Connect the inverter directly to a 12V battery using the provided cables. The nominal line for cigarette lighter connection is limited to a maximum of 150W.
- **High voltage:** The inverter produces high AC voltage. Treat it with the same caution as a standard wall outlet.
- **Children and pets:** Keep the inverter out of reach of children and pets.
- **Maintenance:** Only qualified personnel should perform maintenance or repairs.

3. Package Contents

Verify that all items are present in the package:

- Green Cell INV07 Pure Sine Wave Inverter with UPS
- Battery connection cables (red for positive, black for negative)
- Spare fuses
- User Manual

Image: Green Cell INV07 Inverter and its included accessories: battery cables, spare fuses, and the user manual.

4. Product Overview

Familiarize yourself with the inverter's components and ports.

Front Panel

Image: Front panel with AC output, USB port, power switch, and status indicators.

- **AC Output Socket:** For connecting 230V AC devices.
- **USB Port:** For charging smaller devices like smartphones and tablets.
- **Power Switch (ON/OFF):** To turn the inverter on or off.
- **Power Indicator (Green LED):** Illuminates when the inverter is operating normally.
- **Fault Indicator (Red LED):** Illuminates to indicate an error or fault condition.
- **AC Input:** For connecting to a 230V AC mains supply when using the UPS function.

Rear Panel

Image: Rear panel with DC input terminals and cooling fan.

- **DC Input Terminals (+ and -):** For connecting to a 12V DC battery. Ensure correct polarity (red for +, black for -).
- **Cooling Fan:** Automatically activates to dissipate heat during operation.

5. Setup

Follow these steps to set up your Green Cell INV07 inverter:

1. **Placement:** Choose a dry, well-ventilated location for the inverter, away from direct sunlight, heat sources, and flammable materials. Ensure sufficient space for airflow around the cooling fan.
2. **Battery Connection:**
    - Connect the red cable to the positive (+) terminal of your 12V battery and the positive (+) DC input terminal on the inverter.
    - Connect the black cable to the negative (-) terminal of your 12V battery and the negative (-) DC input terminal on the inverter.
    - Ensure connections are tight and secure to prevent arcing or overheating.
3. **AC Mains Connection (for UPS function):** If you intend to use the UPS function, connect the inverter's AC input to a standard 230V AC wall outlet using a suitable power cord.
4. **Device Connection:** Ensure the inverter's power switch is in the OFF position before connecting any devices. Plug your 230V AC devices into the AC output socket and/or USB devices into the USB port.

Image: Top view of the inverter, illustrating its compact design and connection points.

6. Operating Instructions

1. **Power On:** After all connections are secure, switch the inverter's power switch to the ON position. The green Power LED should illuminate, indicating normal operation.
2. **Connecting Devices:** You can now power your 230V AC devices (up to 300W continuous, 600W peak) and charge USB devices.
3. **UPS Function:** If the inverter is connected to both a 12V battery and a 230V AC mains supply, it will automatically switch to battery power in case of a mains power outage, providing an uninterrupted power supply to connected devices. When mains power is restored, it will switch back and recharge the battery.
4. **Power Off:** Before disconnecting any devices or the inverter from the battery, switch the inverter's power switch to the OFF position.

7. Maintenance

- **Cleaning:** Regularly clean the inverter's exterior with a dry, soft cloth. Ensure ventilation openings are free from dust and debris. Do not use liquid cleaners.
- **Connection Check:** Periodically check all electrical connections (battery terminals, AC input/output) to ensure they are tight and free from corrosion.
- **Fuse Replacement:** If the inverter stops working due to an internal fault, check the fuses. Replace blown fuses only with fuses of the same type and rating (e.g., 30A). Refer to the manual or product

labeling for specific fuse ratings.

- **Battery Health:** Ensure the connected 12V battery is in good condition and adequately charged for optimal inverter performance.

8. Troubleshooting

Problem	Possible Cause	Solution
No power output / Inverter does not turn on	Loose battery connection, discharged battery, blown fuse, inverter fault.	Check battery connections. Recharge or replace battery. Check and replace fuses if necessary. If problem persists, contact support.
Red Fault LED illuminates / Inverter beeps	Overload, short circuit, over-temperature, low battery voltage, high battery voltage.	Reduce connected load. Check for short circuits in connected devices. Ensure proper ventilation. Check battery voltage. Allow inverter to cool down.
Fan is noisy or constantly running	High internal temperature due to heavy load or insufficient ventilation.	This is normal operation under load. Ensure adequate ventilation. Reduce load if fan runs excessively.
Devices not working correctly (e.g., mini-fridge beeping)	Device power requirement exceeds inverter capacity, or device is sensitive to power fluctuations.	Verify the power consumption of your device. Ensure it does not exceed 300W continuous. Some devices have high startup (surge) power requirements.

9. Specifications

Feature	Specification
Brand	Green Cell
Model	INV07 (Green Cell PRO)
Continuous Power	300W
Surge Power (Peak)	600W
DC Input Voltage	12V
AC Output Voltage	230V
Output Waveform	Pure Sine Wave
Frequency	50 Hz
UPS Function	Yes, with Power Bypass
USB Output	Yes
Dimensions (L x W x H)	31 x 18 x 7.5 cm

Feature	Specification
Weight	2 kg
Recommended Battery Capacity (for UPS)	30 Amp-hours (minimum, larger for longer runtime)
Compatible Devices	Car, Laptop, devices requiring pure sine wave power

10. Warranty and Support

Green Cell products are designed for reliability and performance. For warranty information, please refer to the documentation provided with your purchase or visit the official Green Cell website. If you encounter any issues or require technical assistance, please contact Green Cell customer support through their official channels. Ensure you have your product model (INV07) and purchase details available when contacting support.