SGPWATT LFP6K24V240VSPAMZSSUS

SUNGOLDPOWER 6000W Inverter Charger User Manual

Model: LFP6K24V240VSPAMZSSUS | Brand: SGPWATT

1. Product Overview

The SUNGOLDPOWER 6000W Inverter Charger is a robust power solution designed for off-grid applications, providing reliable pure sine wave AC output from a 24V DC source. It features a powerful 6000-watt continuous output with an 18000W peak surge capacity for 20 seconds, making it suitable for a wide range of sensitive loads. This unit integrates a 30A transfer switch and a 90A multi-stage battery charger, ensuring seamless power transition and efficient battery management. An included LCD remote panel offers convenient monitoring and control.



Figure 1.1: SUNGOLDPOWER 6000W Inverter Charger, showing its compact and durable design.

Key Features:

- **Powerful Output:** 6000W continuous, 18000W peak surge for 20 seconds.
- **Input/Output:** 24Vdc and 220-240Vac input, 110-120V/220-240V split phase AC output.
- **Integrated Charger:** 90A multi-stage battery charger with adjustable 0-100% charge current.
- **Transfer Switch:** Built-in 30A automatic transfer switch for seamless power switching.
- **Pure Sine Wave:** Suitable for sensitive electronics.
- **Remote Control:** LCD remote panel with 32 feet cable for convenient monitoring.
- **Battery Compatibility:** Supports AGM, Gel, Lead acid, Lithium-ion, and LiFePO4 batteries.

- **Safety Protections:** Over/low voltage, over temperature, overload, short circuit, back feeding protection.



Figure 1.2: Overview of the inverter charger highlighting its 6000W 24V pure sine wave capability, low frequency pure copper transformer, 90A battery charger, and 30A transfer switch.

2. Important Safety Instructions

Please read all instructions and cautionary markings on the inverter, the batteries, and all appropriate sections of this manual before installation or use. Failure to follow these instructions may result in electric shock, fire, or severe injury.

- **Qualified Personnel:** Installation and maintenance should only be performed by qualified personnel.
- **Ventilation:** Ensure adequate ventilation around the inverter. Do not block cooling vents.
- **Environment:** Install in a dry, cool, and well-ventilated area, away from flammable materials and direct sunlight.
- **Battery Safety:** Always wear eye protection and gloves when working with batteries. Ensure battery connections are secure and correct polarity is observed.
- **Grounding:** The inverter must be properly grounded.

- **Disconnect Power:** Always disconnect all power sources (AC and DC) before performing any wiring or maintenance.
- **Circuit Breakers:** Install appropriate DC and AC circuit breakers as required by local electrical codes.

3. Installation and Setup

3.1 Unpacking and Inspection

Upon receiving the inverter, carefully unpack it and inspect for any shipping damage. Ensure all components listed below are present:

- 1 x SUNGOLDPOWER 6000W 24V Inverter Charger
- 1 x LCD Remote Control with 32 feet cable
- 1 x Battery Temperature Sensor (BTS) cable with 32 feet cable
- 1 x User's Manual (this document)



Figure 3.1: Contents of the package, including the inverter, remote control, BTS cable, and user manual. The inverter dimensions are approximately 25.6 x 9.1 x 7.5 inches.

3.2 Mounting the Inverter

Mount the inverter on a sturdy, non-flammable surface in a vertical position to ensure proper airflow. Allow sufficient clearance around the unit for ventilation.

3.3 Wiring Connections

Refer to the connection diagram for proper wiring. All wiring must comply with local and national electrical codes.

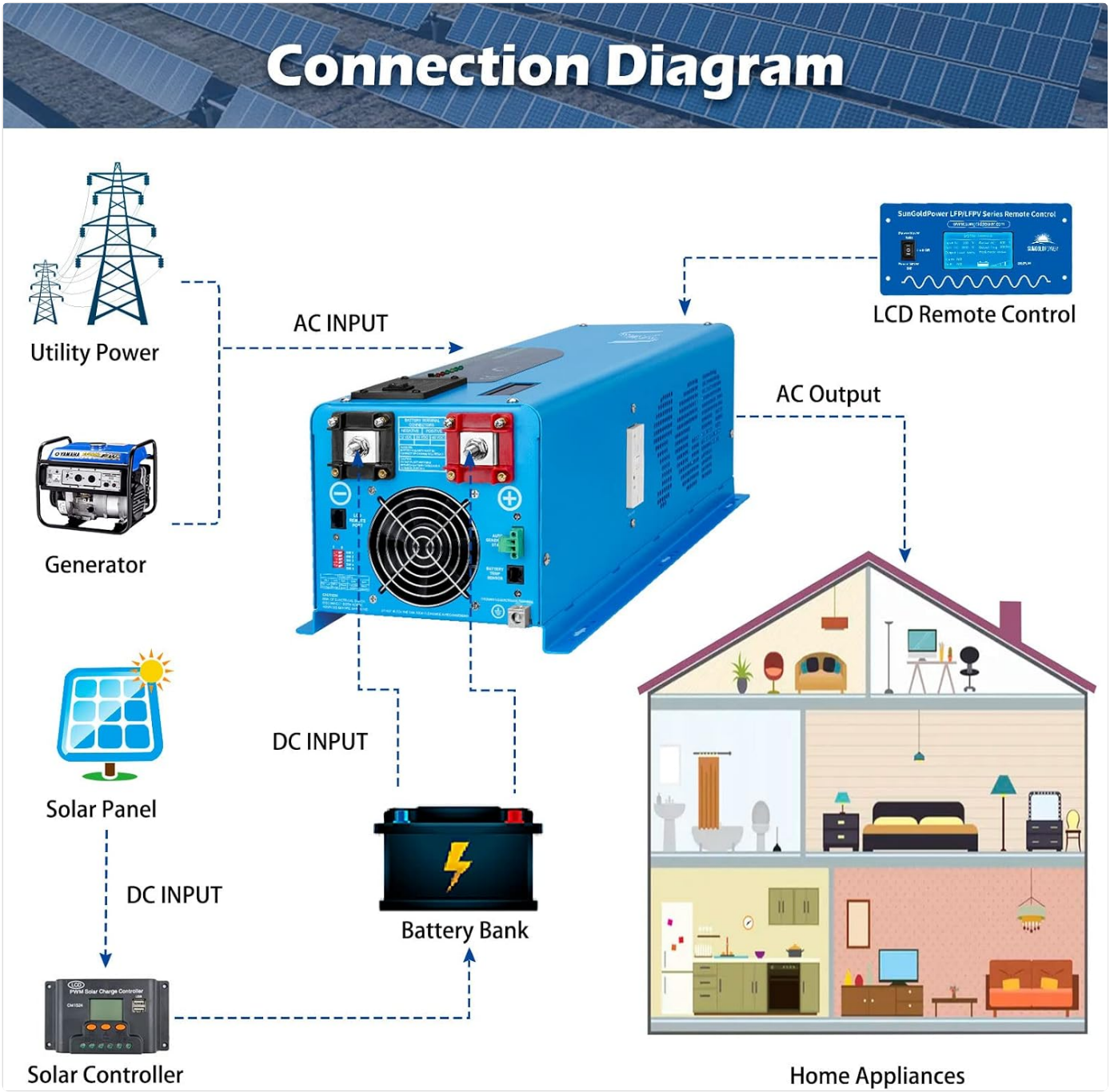


Figure 3.2: Detailed connection diagram showing how to connect the inverter to utility power, generator, solar panel (via solar controller), battery bank, and home appliances. The LCD remote control connection is also shown.

- **DC Input:** Connect the 24V battery bank to the DC terminals on the inverter. Ensure correct polarity (red for positive, black for negative).
- **AC Input:** Connect the 240Vac utility power or generator to the AC input terminals.

- **AC Output:** Connect your 120V/240V split phase loads to the AC output terminals.
- **Grounding:** Connect the grounding terminal to an earth ground.
- **Remote Panel:** Plug the LCD remote control cable into the designated port.
- **Battery Temperature Sensor:** Connect the BTS cable to the battery and the inverter to ensure accurate charging and protection.



Figure 3.3: Close-up of the inverter's rear panel, indicating the DC terminals, LED remote control port, fan, DIP switches, battery temperature sensor port, and grounding terminal.

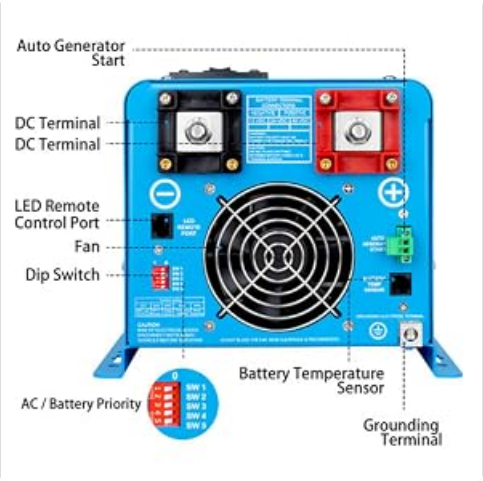


Figure 3.4: Side view of the inverter, detailing the AC terminal block, cooling fan, and output protection circuit breakers.

4. Operation

4.1 Initial Power-Up

After all connections are secure and verified, switch on the DC breaker from the battery bank first, then the AC input breaker (if applicable). Finally, turn on the inverter's power switch.

4.2 LCD Remote Panel

The LCD remote panel provides real-time information on the inverter's status, battery voltage, charge current, and output power. Use the buttons on the panel to navigate through menus and adjust settings.

4.3 DIP Switch Settings

The inverter features DIP switches to customize various parameters, including:

- **AC/Battery Priority:** Set whether the inverter prioritizes utility AC power or battery power.
- **Charge Current:** Adjust the battery charge current from 0-100%.
- **Low Voltage Cut-off:** Customize the battery low voltage trip point (SW1).
- **Battery Type:** Select the appropriate battery type (AGM, Gel, Lead acid, Lithium-ion, LiFePO4) for optimized charging.



Figure 4.1: The inverter's advanced features, including low frequency pure copper transformer, AC/Battery priority selector, 90A charge current, auto generator start, remote control with LCD display, battery temperature sensor, and dual AC output sockets.

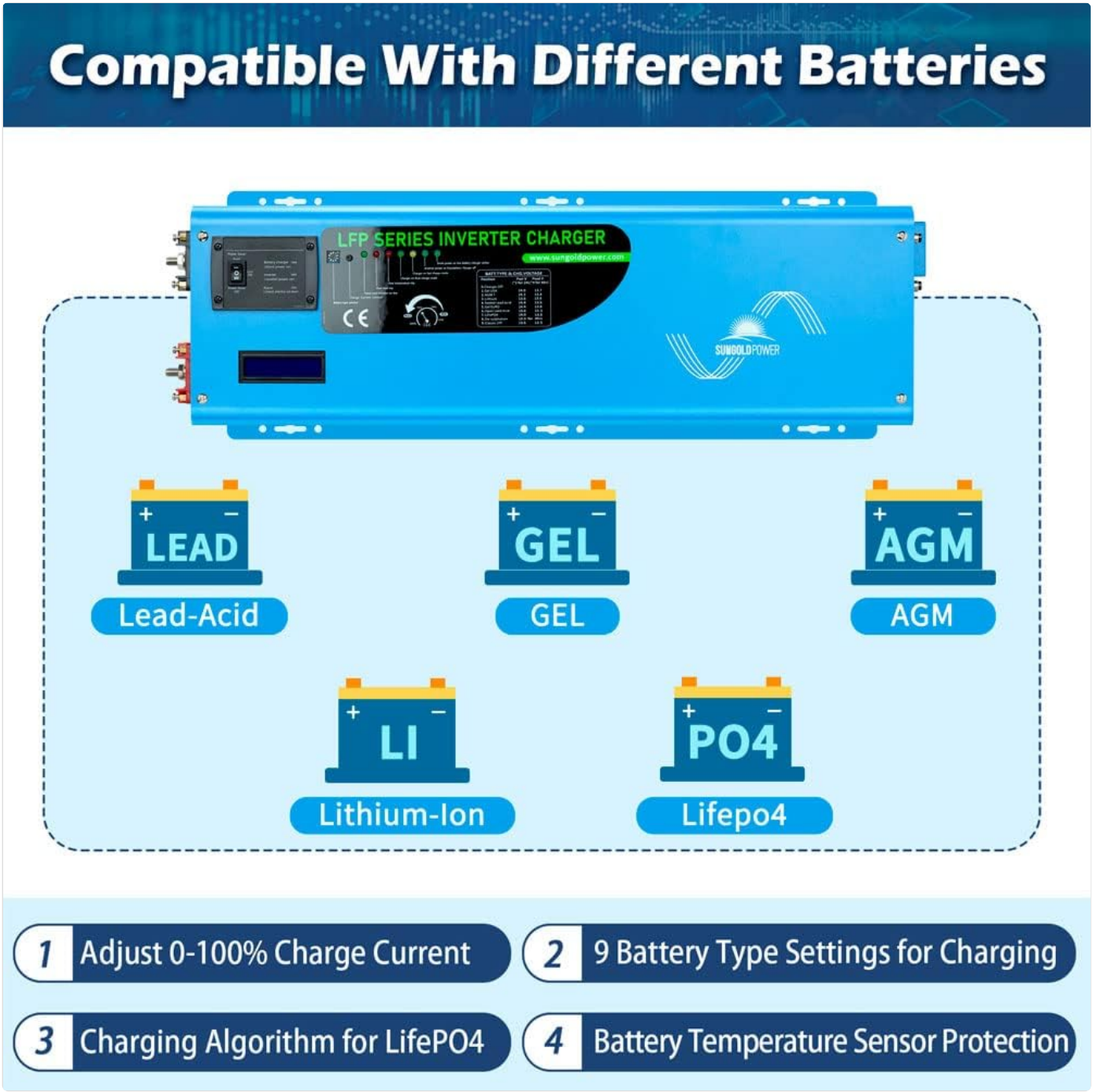


Figure 4.2: The inverter is compatible with various battery types, including Lead-Acid, Gel, AGM, Lithium-ion, and LiFePO4. It supports adjustable charge current, multiple battery type settings, and a charging algorithm specifically for LiFePO4, along with battery temperature sensor protection.

4.4 Automatic Generator Start (AGS)

The inverter supports AGS functionality, allowing it to automatically start a connected generator when battery voltage drops below a preset level, ensuring continuous power supply.

5. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter charger.

- **Cleaning:** Periodically clean the exterior of the inverter and ensure cooling vents are free from dust and debris. Use a dry cloth.
- **Connections:** Annually inspect all electrical connections (DC and AC) for tightness and corrosion. Tighten as necessary.

- **Battery Inspection:** Regularly check battery terminals for corrosion and ensure batteries are properly maintained according to their manufacturer's guidelines.
- **Environment:** Ensure the installation environment remains within specified temperature and humidity ranges.

6. Troubleshooting

If you encounter issues with your SUNGOLDPOWER Inverter Charger, refer to the following common troubleshooting steps. For more detailed guidance, please consult the official Troubleshooting Guide (PDF).

Problem	Possible Cause	Solution
Inverter not turning on	No DC input power; Blown fuse/breaker; Loose connections	Check battery voltage; Inspect DC fuses/breakers; Verify all DC connections are secure.
No AC output	Overload; Short circuit; Over-temperature; Low battery voltage	Reduce load; Check for short circuits in wiring/appliances; Allow inverter to cool; Charge batteries.
Battery not charging	AC input not present; Charger settings incorrect; Faulty battery	Verify AC input power; Check DIP switch settings for battery type and charge current; Test battery condition.
Remote panel not displaying	Loose cable connection; Faulty remote panel	Ensure remote cable is securely connected; Contact support if issue persists.

7. Technical Specifications

Specification	Value
Model Name	SUNGOLDPOWER 6000W INVERTER
Wattage	6000 Watt-hours (Continuous)
Peak Power	18000W (for 20 seconds)
DC Input Voltage	24 Vdc
AC Input Voltage	220-240 Vac
AC Output Voltage	110-120V/220-240V Split Phase
Output Waveform	Pure Sine Wave
Transfer Switch Current	30A
Battery Charger Current	90A (Adjustable 0-100%)
Transfer Efficiency	88%
Product Dimensions	25.6 x 9.1 x 7.5 inches
Item Weight	76.7 pounds
Manufacturer	SGPWATT

8. Warranty Information

The SUNGOLDPOWER 6000W Inverter Charger comes with a **12-month warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use. Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by improper installation, misuse, neglect, unauthorized modifications, or acts of nature.

9. Customer Support

SUNGOLDPOWER is committed to providing excellent customer service. We offer **lifetime technical service** for our products. If you have any questions, require assistance with installation, operation, or troubleshooting, please contact SUNGOLDPOWER customer support. For additional resources, you can refer to the comprehensive User Manual (PDF) available online.

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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.

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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.

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