Saved from manuals.plus.
Open the live page for links to other documents and user manuals.

SGPWATT 8KW48VKIT SPH SG48100P

SUNGOLDPOWER 8KW 48V Solar Inverter Kit User Manual

Model: 8KW48VKIT (SPH Inverter, SG48100P Batteries) | Brand: SGPWATT

1. Introduction

This manual provides essential information for the safe and efficient operation of your SUNGOLDPOWER 8KW 48V Solar Inverter Kit. This kit includes an 8000W DC 48V Pure Sine Wave Solar Inverter and two 100Ah 48Vdc LiFePO4 Batteries, totaling 10.24KWH. Please read this manual thoroughly before installation and use, and retain it for future reference.

2. Safety Information

Always observe the following safety precautions to reduce the risk of electric shock, fire, or injury:

- Installation must be performed by qualified personnel in accordance with all local electrical codes and regulations.
- Do not attempt to disassemble or repair the inverter or batteries. Refer all servicing to qualified service personnel.
- Ensure proper grounding for all components.
- Keep the equipment away from flammable materials, moisture, and direct sunlight.
- Wear appropriate personal protective equipment (PPE), including insulated gloves and eye protection, during installation and maintenance.
- Disconnect all power sources (solar, battery, utility) before performing any maintenance or wiring.
- LiFePO4 batteries contain high energy. Handle with care and avoid short circuits.

3. Product Overview

3.1 Kit Components

The SUNGOLDPOWER 8KW 48V Solar Inverter Kit includes:

- 1x 8000W Solar Hybrid Inverter (SPH series)
- 2x 100Ah 48V Lithium Batteries (SG48100P series, total 10.24 kWh)

- User Manuals for Inverter and Batteries
- Warranty Card
- WiFi BOX
- Parallel COM cable
- Communication Cable
- Cable lugs & Screws
- Positive and negative output Cables (for battery)
- Battery-Inverter Cables
- RS485 cascade communication line (for battery)
- RS232 USB (for battery)
- Hanging ear screw (for battery)
- Dry contact terminal (for battery)

3.2 Key Features

- **All-in-one Solar Charge Inverter:** 8000W DC 48V Pure Sine Wave Solar Inverter with Max. 180A battery charging and two inbuilt MPPT Solar controllers.
- **Flexible Output:** Supports Split phase (120V/240V) or Single phase (120V) output.
- **Remote Monitoring:** Includes a WiFi module for viewing operating status and parameters via a mobile phone APP.
- **Stable AC Output and Smart Protection:**Rated Output Power: 8000W, Max Peak Power: 16,000W. Features PV input over-voltage/current protection, AC input over-voltage protection, Battery over-voltage protection, and Over-load protection.
- **Time-slot Charging/Discharging:** Allows users to set different charging and discharging periods based on local peak and valley tariffs for optimized energy usage.
- **High-Quality Batteries:** SUNGOLDPOWER 51.2V 100Ah LiFePO4 Batteries manufactured with automotive-grade battery cells, providing 7000+ deep cycles and up to a 15-year lifespan.
- **Communication Compatibility:** Inverter and batteries support CAN/RS485/RS232 Communication for easy integration.
- **Dormant Battery Activation:** Mains power and photovoltaics can activate dormant lithium batteries via the inverter.

3.3 Product Visuals



Figure 3.1: SUNGOLDPOWER 8KW Pure Sine Wave Solar Inverter. This image highlights the inverter's capabilities including 11000W Max PV Array Power, 500V Max Open Circuit Voltage, and 180A Max Charge Current.



Figure 3.2: SUNGOLDPOWER 48V 100AH Server Rack LiFePO4 Lithium Battery. This battery features a 100A BMS with equalization function, 5.12KWH energy, and over 7000 deep cycles.



Figure 3.3: Inverter Dimensions and Included Accessories. Shows the inverter's dimensions (25.6in x 17.7in x 5.1in) and accessories like user manual, warranty card, WiFi box, and various cables.



Figure 3.4: Battery Dimensions and Included Accessories. Displays the battery's dimensions (19.3in x 18.9in x 5.5in) and accessories such as output cables, communication lines, and mounting hardware.

4. Setup and Installation

Proper installation is crucial for the performance and safety of your solar inverter kit. Refer to the detailed Installation Manual (PDF) for comprehensive instructions. Below are general guidelines and important considerations.

4.1 System Connection Overview

The system can be connected to PV panels, a generator, mains utility, external battery packs, and home appliances. The inverter manages power flow to charge batteries and supply loads.

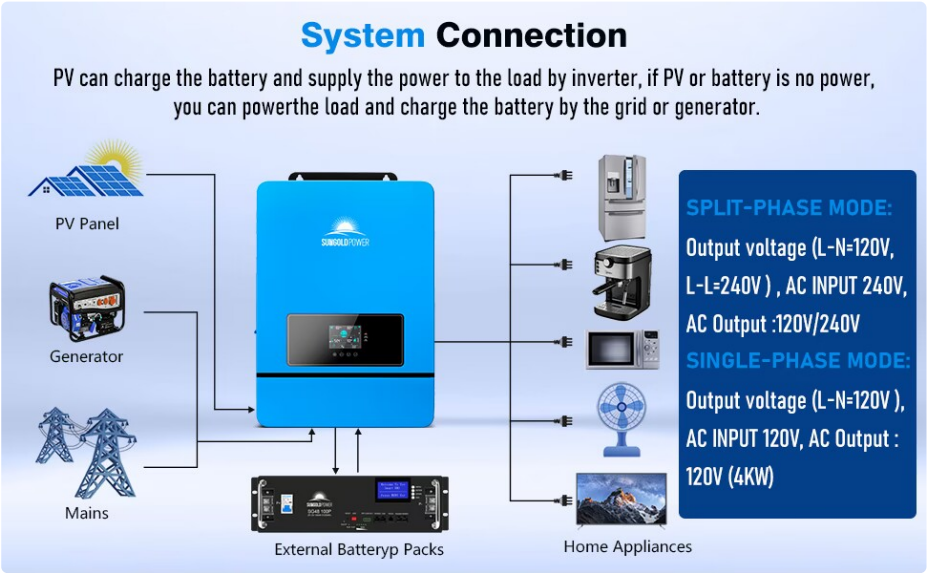


Figure 4.1: System Connection Diagram. Illustrates how PV panels, generator, mains, external batteries, and home appliances connect to the inverter for both split-phase and single-phase modes.

4.2 Parallel Function

The SPH series inverter supports parallel connection of up to 6 units for increased power output and system redundancy. Wiring diagrams are available for single-phase, split-phase, and three-phase parallel connections.

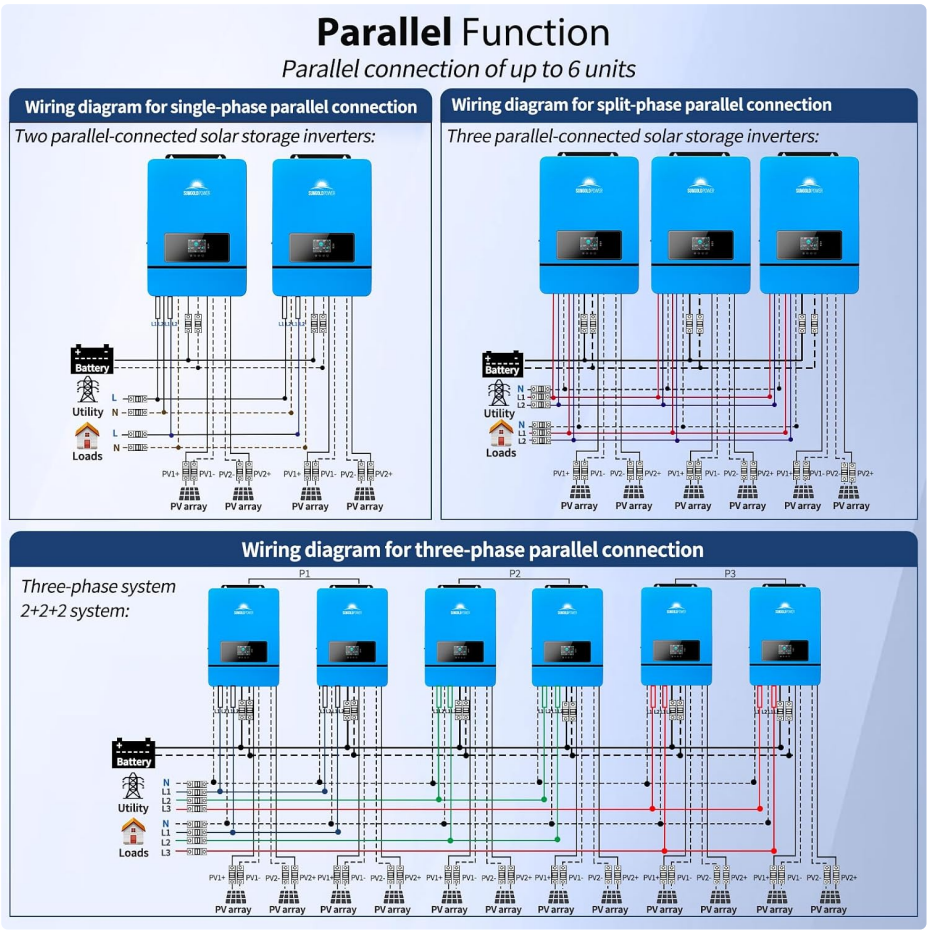


Figure 4.2: Parallel Function Wiring Diagrams. Shows configurations for single-phase, split-phase, and three-phase parallel connections of multiple inverters.

4.3 Communication Setup

The inverter and batteries are designed for seamless communication. The following video demonstrates the connection and communication process between the SPH inverter and SG48100P battery.

Video 4.1: Connecting and communicating of SPH8-10KW inverter and SG48100P battery. This video provides a visual guide on how to establish communication between the SUNGOLDPOWER inverter and the LiFePO4 battery, which is essential for integrated system operation.

5. Operating Instructions

5.1 LCD Display and Monitoring

The inverter features a live LCD display that allows you to view real-time data and set system parameters. The display provides information on PV input, battery status, AC output, and more.



Figure 5.1: Live LCD Display. Shows various screens of the inverter's display, providing real-time operational data and access to system settings.

Additionally, the included WiFi module enables remote monitoring and control via a dedicated mobile application. Refer to the WiFi module's separate instructions for setup and usage.

5.2 Time-slot Charge Control

The SPH series inverter is equipped with a time-slot charging and discharging function. This feature allows you to optimize energy usage by setting specific periods for charging from PV or utility, and discharging to loads, based on electricity tariffs.

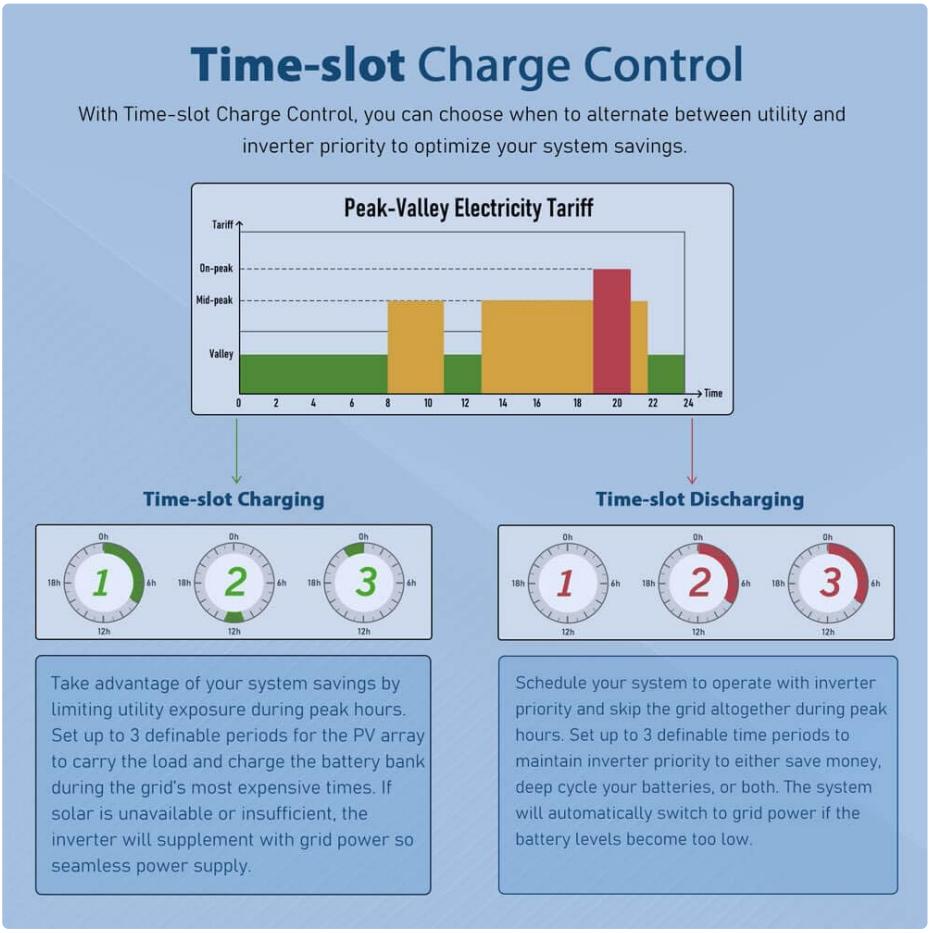


Figure 5.2: Time-slot Charge Control. Explains how to set up time-slots for charging and discharging to optimize system savings based on peak-valley electricity tariffs.

You can define up to three periods for PV array charging and battery discharging, allowing the system to prioritize inverter use during peak hours or supplement with grid power when solar is insufficient.

6. Maintenance

Regular maintenance ensures the longevity and optimal performance of your SUNGOLDPOWER Solar Inverter Kit.

- **Cleaning:** Keep the inverter and battery surfaces clean and free from dust. Use a dry, soft cloth. Do not use liquid cleaners.
- **Ventilation:** Ensure that the inverter's ventilation openings are clear and unobstructed to prevent overheating.
- **Connections:** Periodically check all electrical connections for tightness and signs of corrosion. Tighten as necessary.
- **Battery Inspection:** Inspect battery terminals for corrosion and ensure cables are securely connected. Monitor battery health via the LCD or APP.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates for the inverter or batteries to ensure optimal performance and compatibility.

7. Troubleshooting

This section provides basic troubleshooting steps for common issues. For more complex problems, consult the full user manual PDFs or contact customer support.

Problem	Possible Cause	Solution

Problem	Possible Cause	Solution
Inverter not turning on	No DC input from battery; Battery switch off; Loose connections.	Check battery voltage; Ensure battery switch is ON; Verify all DC connections are secure.
No AC output	Overload; Inverter fault; AC output breaker tripped.	Reduce load; Check inverter error codes on LCD; Reset AC output breaker.
Battery not charging	PV input too low; MPPT fault; Battery communication error.	Check PV panel connections and sunlight; Verify MPPT status on LCD; Ensure battery communication cable is connected.
WiFi monitoring not working	WiFi module not connected; Network issues; APP configuration error.	Ensure WiFi module is properly installed; Check home network connectivity; Reconfigure APP settings.

8. Specifications

8.1 SUNGOLDPOWER 8KW Solar Inverter (SPH Series)



Figure 8.1: SUNGOLDPOWER 8KW Solar Inverter Specifications. A visual summary of key technical data for the inverter.

Parameter	Value
Rated Output Power	8000W
Max. Peak Power	16000W
Output Waveform	Pure Sine Wave
AC Output	120/240V (split phase/single phase)
Efficiency	92%
Max Charging Current	200A
Maximum PV Array Power	11,000W

Parameter	Value
Voltage Range	40-60Vdc
MPPT Voltage Range	125-425Vdc
Bypass Overload Current	63A
Dimensions (L x W x H)	25.6 x 17.7 x 5.1 inches
Weight	53.5 LB
Energy Specifications Met	UL1741

8.2 SUNGOLDPOWER 48V 100Ah LiFePO4 Battery (SG48100P Series)



Figure 8.2: SUNGOLDPOWER 48V 100Ah LiFePO4 Battery Specifications. A visual summary of key technical data for the battery.

Parameter	Value
Nominal Voltage	51.2V
Nominal Capacity	100AH
Energy	5.12KWH
Charge Cut-off Current	5A
MAX Continuous Charge Current	100A
Discharge Cut-off Voltage	43.2V
Cycle Life	≥7000
Communication Protocol	RS232/RS485/CAN
Storage Temperature	14 to 113°F (-10 to +45°C)
Dimensions (L x W x H)	19.3 x 18.9 x 5.5 inches

Parameter	Value
Weight	93 LB
Energy Specifications Met	UL1973

9. Warranty and Support

9.1 Warranty Information

The SUNGOLDPOWER 8KW 48V Solar Inverter Kit comes with a**24-month warranty** from the manufacturer, SGPWATT. Please retain your proof of purchase for warranty claims. The warranty covers defects in materials and workmanship under normal use.

9.2 Customer Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact SGPWATT customer support. Refer to the contact information provided on your warranty card or the official SGPWATT website.
Additional resources, including detailed PDF manuals, are available:

- User Manual (PDF)
- Installation Manual (PDF)
- User Guide (PDF)

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

Anonymous

Email

you@example.com

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

Open the live page

https://manuals.plus/asin/B0CW5WRQZF

More documents and user manuals: **https://manuals.plus/**