SUNGOLDPOWER I12000S4812024060HCCAMSG2

SUNGOLDPOWER 12000W 48V Split Phase Pure Sine Wave Inverter Charger User Manual

Model: I12000S4812024060HCCAMSG2

1. Introduction

This manual provides essential information for the safe and efficient operation of your SUNGOLDPOWER 12000W 48V Split Phase Pure Sine Wave Inverter Charger. Please read this manual thoroughly before installation and use to ensure proper function and to prevent damage to the unit or connected equipment.

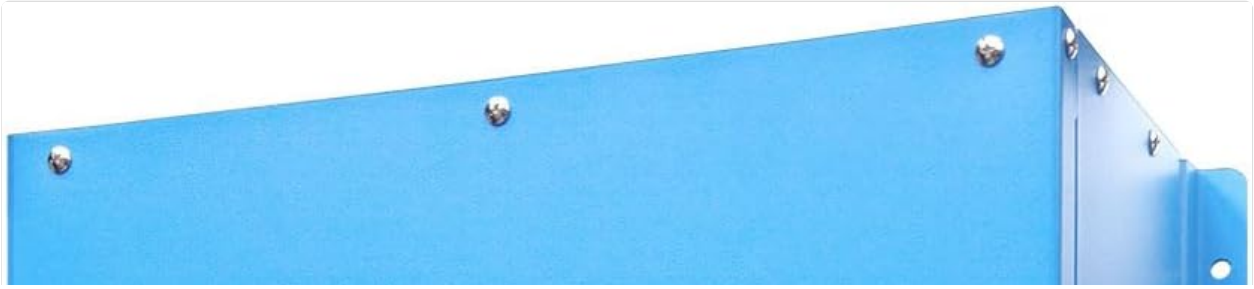
1.1 Safety Information

WARNING: This device operates with high voltages and currents. Improper installation or use can result in serious injury, death, or equipment damage. All electrical work should be performed by qualified personnel in accordance with local electrical codes.

- Ensure the inverter is installed in a well-ventilated area, away from flammable materials.
- Do not expose the inverter to water or excessive moisture.
- Always disconnect all power sources (AC and DC) before performing any maintenance or wiring.
- Ensure proper grounding of the inverter.
- Do not attempt to disassemble or repair the inverter yourself. Refer to qualified service personnel.

2. Product Overview and Features

The SUNGOLDPOWER 12000W 48V Inverter Charger is a robust, low-frequency pure sine wave inverter designed for off-grid power systems. It integrates an inverter, an AC battery charger, and an automatic transfer switch into a single unit.



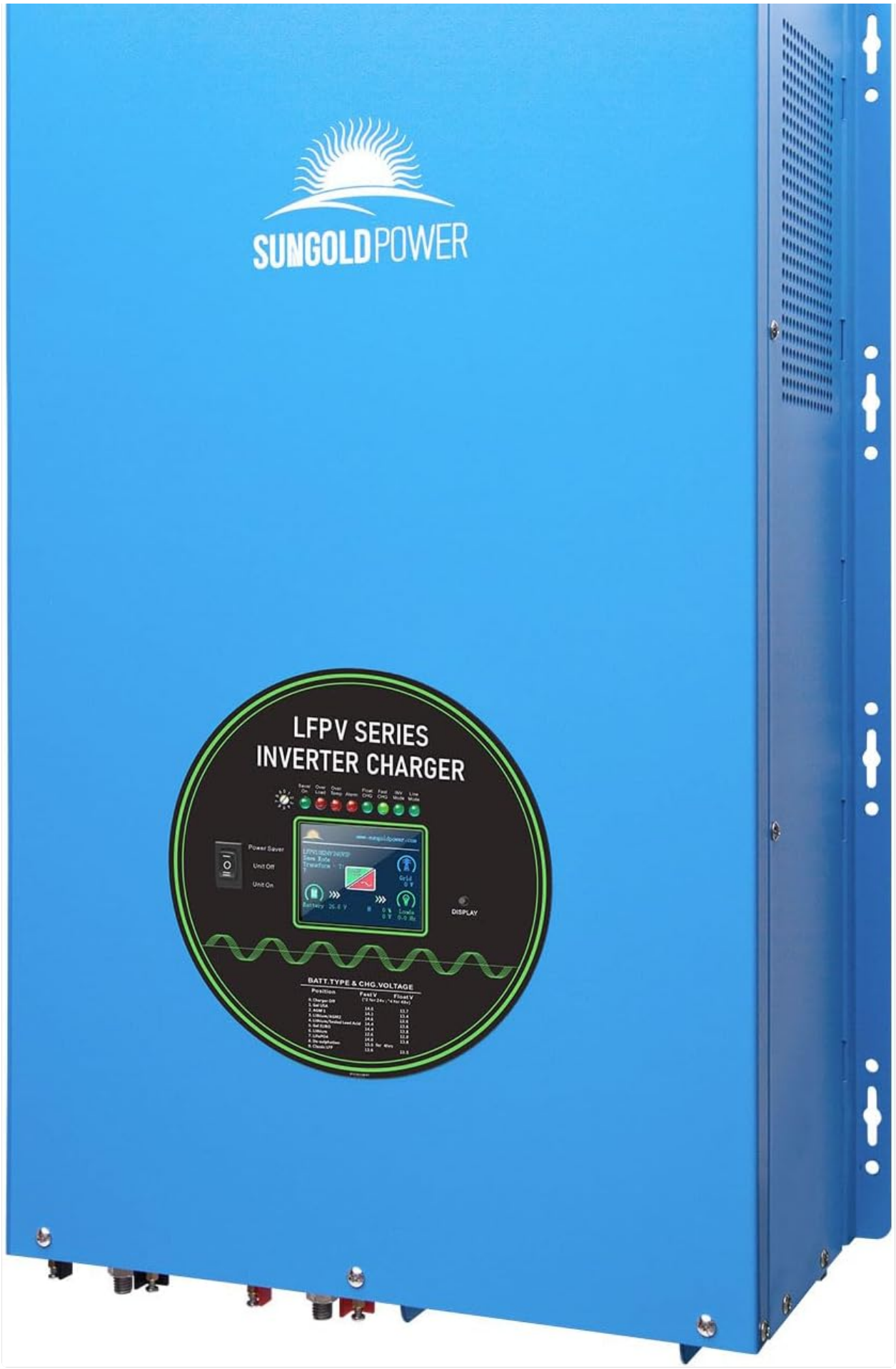


Figure 2.1: Front view of the SUNGOLDPOWER 12000W 48V Inverter Charger, showing the display panel.

2.1 Key Features

- **Power Output:** 12,000 Watts continuous, 36,000 Watts peak for 20 seconds.
- **Input/Output:** DC 48V input, AC 240V input, AC 120/240V split phase pure sine wave output.
- **Integrated Charger:** 80 Amp AC battery charger with multi-stage charging.
- **Transfer Switch:** Automatic transfer switch for seamless switching between AC sources (utility/generator) and battery power.
- **Battery Compatibility:** Supports AGM, Gel, Lead Acid, Lithium-ion, and LiFePO4 batteries.
- **Adjustable Settings:** User-adjustable charge current (0-100%) and DIP switch settings for utility/battery priority and low voltage cut-off.
- **Automatic Generator Start (AGS):** Feature for automatic generator activation.
- **Protection Features:** Over/low voltage protection, over temperature protection, and overload protection.
- **Remote Monitoring:** Includes a remote control with a 32-foot cable for convenient monitoring and control.
- **Temperature Sensor:** Battery temperature sensor with a 32-foot cable to protect batteries from overheating during charging.
- **Applications:** Suitable for various applications including homes, cabins, offices, RVs, trailers, and boats.

Figure 2.2: Visual representation of the inverter's key features, including 12KW split phase output, battery temperature sensor, remote control, auto generator start, low frequency industrial grade design, and broad compatibility with appliances and batteries.

3. Package Contents

Upon unpacking, verify that all items listed below are present and undamaged:

- SUNGOLDPOWER 12000W 48V Split Phase Inverter Charger (1 unit)
- Remote Control with 32-foot cable (1 set)
- Battery Temperature Sensor with 32-foot cable (1 set)
- User Manual (this document)

Figure 3.1: Included accessories with the SUNGOLDPOWER Inverter Charger.

4. Specifications

Specification	Value
Model Number	I12000S4812024060HCCAMSG2
Continuous Power	12000 Watts

Specification	Value
Peak Power (20s)	36000 Watts
DC Input Voltage	48V
AC Input Voltage	240V
AC Output Voltage	120V/240V Split Phase
Output Waveform	Pure Sine Wave
AC Battery Charger Current	80 Amps
Product Dimensions	27.6 x 16.5 x 7.9 inches
Item Weight	197.1 pounds
Manufacturer	SUNGOLDPOWER
Recommended Uses	Home, Office, RV, Trailer, Boat, Workshop
Power Source	Battery Powered

5. Installation and Setup

Proper installation is critical for the safety and performance of your inverter charger. Consult a qualified electrician if you are unsure about any steps.

5.1 Mounting Location

- Mount the inverter on a sturdy, non-flammable surface.
- Ensure adequate ventilation around the unit to prevent overheating. Maintain clear space around all vents.
- Avoid locations exposed to direct sunlight, high temperatures, dust, or moisture.

5.2 Wiring Connections

Refer to the wiring diagram below for proper connection of solar panels (if applicable), MPPT solar controller, battery bank, AC input (utility or generator), and AC output to loads.

Figure 5.1: Typical application wiring diagram.

5.2.1 DC Battery Connection

- Connect the 48V battery bank to the DC input terminals (positive and negative) on the inverter. Use appropriately sized cables and fuses.
- Ensure correct polarity. Reverse polarity can severely damage the unit.
- Connect the included battery temperature sensor to the battery and the designated port on the inverter.

5.2.2 AC Input Connection

- Connect the 240V AC input from your utility grid or generator to the AC input terminals.
- Ensure the AC input source is properly fused or circuit-breakered.

5.2.3 AC Output Connection

- Connect your 120V/240V split phase loads to the AC output terminals.
- Ensure all output circuits are protected by appropriate circuit breakers.

5.2.4 Grounding

- Connect the grounding terminal of the inverter to a reliable earth ground.

Figure 5.2: Rear panel connections and controls.

5.3 DIP Switch Settings

The inverter features DIP switches to configure various operational parameters, including:

- **Battery Type:** Select the appropriate battery chemistry (AGM, Gel, Lead Acid, LiFePO4, etc.) for optimized charging.
- **Charge Current:** Adjust the AC battery charger current from 0-100%.
- **Utility/Battery Priority:** Set whether the inverter prioritizes AC utility power or battery power.
- **Low Voltage Cut-off:** Configure the DC voltage level at which the inverter will shut down to protect batteries from over-discharge.

Refer to the detailed instructions in the full user manual for specific DIP switch configurations.

6. Operation

6.1 Powering On/Off

- Ensure all connections are secure before powering on.
- Turn on the DC breaker from the battery bank first.
- Then, turn on the AC input breaker (if connecting to utility/generator).
- Finally, switch the inverter's main power switch to the "ON" position.
- To power off, reverse the sequence: Inverter OFF, AC input OFF, DC input OFF.

6.2 Remote Control

The included remote control allows for convenient monitoring of system status and basic control functions from a distance. Connect the remote control to the RJ11 port on the inverter using the provided cable.

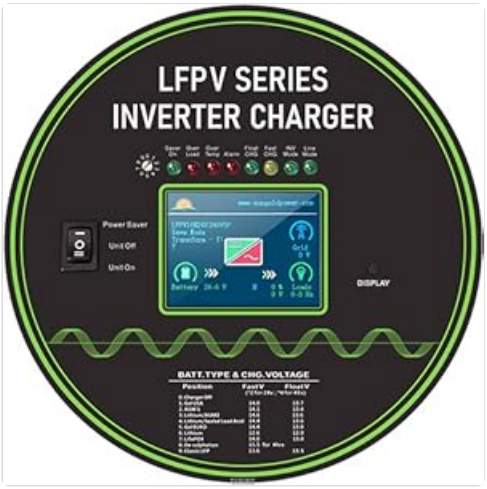


Figure 6.1: Inverter display panel showing operational data.

6.3 Automatic Generator Start (AGS)

If configured, the AGS feature will automatically start a connected generator when the battery voltage drops below a preset level, ensuring continuous power supply and battery charging.

7. Maintenance

Regular maintenance helps ensure the longevity and reliable operation of your inverter charger.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry cloth. Ensure vents are free from dust and debris. Do not use liquid cleaners.
- **Connection Checks:** Annually inspect all electrical connections (DC and AC) for tightness and corrosion. Loose connections can cause overheating and poor performance.
- **Battery Inspection:** Regularly check your battery bank for proper voltage, electrolyte levels (for flooded batteries), and terminal cleanliness.
- **Ventilation:** Ensure the installation area remains well-ventilated and free from obstructions.

8. Troubleshooting

This section provides general guidance for common issues. For detailed troubleshooting steps and error codes, refer to the comprehensive user manual.

8.1 Common Issues and Solutions

- **No Power Output:** Check DC battery connections, battery voltage, AC input connection, and inverter's power switch. Verify circuit breakers are not tripped.
- **Overload Alarm:** Reduce the connected load. The inverter will typically attempt to restart after an overload. If the issue persists, check for short circuits in the load wiring.
- **Over Temperature Alarm:** Ensure adequate ventilation around the inverter. Clear any obstructions from cooling vents. Reduce ambient temperature if possible.
- **Low Battery Voltage Alarm:** Check battery charge level. Ensure the AC charger is functioning or solar input is sufficient. Adjust low voltage cut-off settings if necessary (refer to DIP switch settings).
- **Inverter Not Charging Batteries:** Verify AC input is present and stable. Check AC input breaker. Ensure battery type and charge current settings are correct via DIP switches.

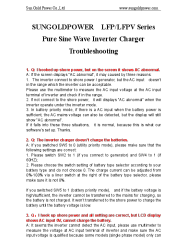
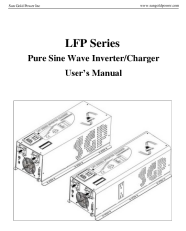
If you encounter persistent issues or error codes not covered here, contact SUNGOLDPOWER technical

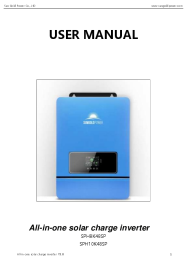
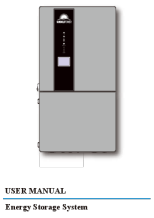
support.

9. Warranty and Support

SUNGOLDPOWER provides a **12-month warranty** for this inverter charger, covering defects in materials and workmanship under normal use.
Additionally, **lifetime technical service** is provided by SUNGOLDPOWER to assist with any operational or technical inquiries you may have.
For warranty claims or technical assistance, please contact SUNGOLDPOWER customer service with your product model number and purchase details.
For more information, visit the official SUNGOLDPOWER website or refer to the contact information provided in your purchase documentation.

Related Documents - I12000S4812024060HCCAMSG2

	SunGoldPower SPH Series All-in-One Solar Charge Inverter User Manual Comprehensive user manual for the SunGoldPower SPH series all-in-one solar charge inverters, covering installation, operation, maintenance, and technical specifications for models SPH8K48SP and SPH10K48SP.
	Sungoldpower Pure Sine Wave Inverter Charger Troubleshooting Guide A comprehensive troubleshooting guide for Sungoldpower Pure Sine Wave Inverter Chargers, covering common issues such as AC abnormal readings, battery charging problems, output failures, and fan operation.
	LFP Series Pure Sine Wave Inverter/Charger User Manual User manual for the LFP Series Pure Sine Wave Inverter/Charger, detailing safety information, introduction, installation, electrical performance, troubleshooting, and specifications.

	SunGoldPower SPH302480A All-in-One Solar Charge Inverter User Manual This user manual provides comprehensive instructions for the SunGoldPower SPH302480A all-in-one hybrid solar charge inverter, covering safety, installation, operation modes, LCD screen functions, other features, protection mechanisms, system maintenance, and detailed technical parameters.
	Sungoldpower SPH8K48SP / SPH10K48SP All-in-One Solar Charge Inverter User Manual Comprehensive user manual for the Sungoldpower SPH8K48SP and SPH10K48SP all-in-one solar charge inverters, covering safety, installation, operation, communication, troubleshooting, and technical specifications.
	SunGoldPower Energy Storage System User Manual User manual for the SunGoldPower Energy Storage System (ESS), covering installation, connection, operation, maintenance, and technical specifications for models SGN7.6K1HB-48 and SGN11.4KHB-48.