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› DATOUBOSS 6200W Hybrid Solar Inverter 48V User Manual

## DATOUBOSS SP-7000W-New

# DATOUBOSS 6200W Hybrid Solar Inverter 48V User Manual

Model: SP-7000W-New

## 1. INTRODUCTION

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This user manual provides comprehensive instructions for the safe and efficient operation, installation, and maintenance of your DATOUBOSS 6200W Hybrid Solar Inverter. Please read this manual thoroughly before installation and use, and keep it for future reference.

The DATOUBOSS 6200W Hybrid Solar Inverter is a versatile power solution integrating a 6200W pure sine wave inverter, a 120A MPPT solar charge controller, and a 100A AC charger. It supports battery-less operation and includes a Battery Management System (BMS) for enhanced battery longevity. This inverter is suitable for various applications including RVs, camping, and home emergency power, providing reliable power from solar, battery, or grid sources.

## 2. SAFETY INSTRUCTIONS

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**WARNING: Failure to follow these safety instructions may result in electric shock, fire, serious injury, or death.**

- Ensure all electrical connections are secure and properly insulated to prevent short circuits.
- Only qualified personnel should perform installation and maintenance.
- Do not operate the inverter if it is damaged or appears to be malfunctioning.
- Keep the inverter away from water, moisture, and flammable materials.
- Ensure proper ventilation around the inverter to prevent overheating.
- The inverter features comprehensive protection mechanisms including:
  - Short-circuit protection
  - Overcurrent protection
  - Overvoltage protection
  - Undervoltage protection
  - Overload protection
  - Backfill protection
  - Over-temperature protection



Figure 2.1: Comprehensive 360° protection features of the DATOUBOSS Hybrid Solar Inverter.

This image illustrates the various safety protections integrated into the inverter, such as short circuit, overcurrent, overvoltage, undervoltage, overload, backfill, and over-temperature protection, ensuring safe and reliable operation.

## 3. PRODUCT OVERVIEW

### 3.1 Key Features

- 6200W Pure Sine Wave Output: Provides stable and clean power for sensitive electronics.
- 120A MPPT Solar Charge Controller: Maximizes solar power harvesting efficiency.
- Battery-less Operation: Can power loads directly from PV array or AC grid without a connected battery.
- BMS Protection System: Monitors battery status to prevent overcharge and deep discharge, extending battery lifespan.
- LCD Display and LED Indicators: Real-time system data and operational status display.
- Multiple Charging Modes: Solar priority, utility priority, solar and utility hybrid charging.

- Multiple Output Modes: PV priority, utility priority, inverter priority.
- Intelligent Heat Dissipation: Fans adjust speed based on device temperature.





Figure 3.1: Front view of the DATOUBOSS 6200W Hybrid Solar Inverter.

This image displays the main unit of the DATOUBOSS 6200W Hybrid Solar Inverter, highlighting its compact and robust design.

### 3.2 Component Description

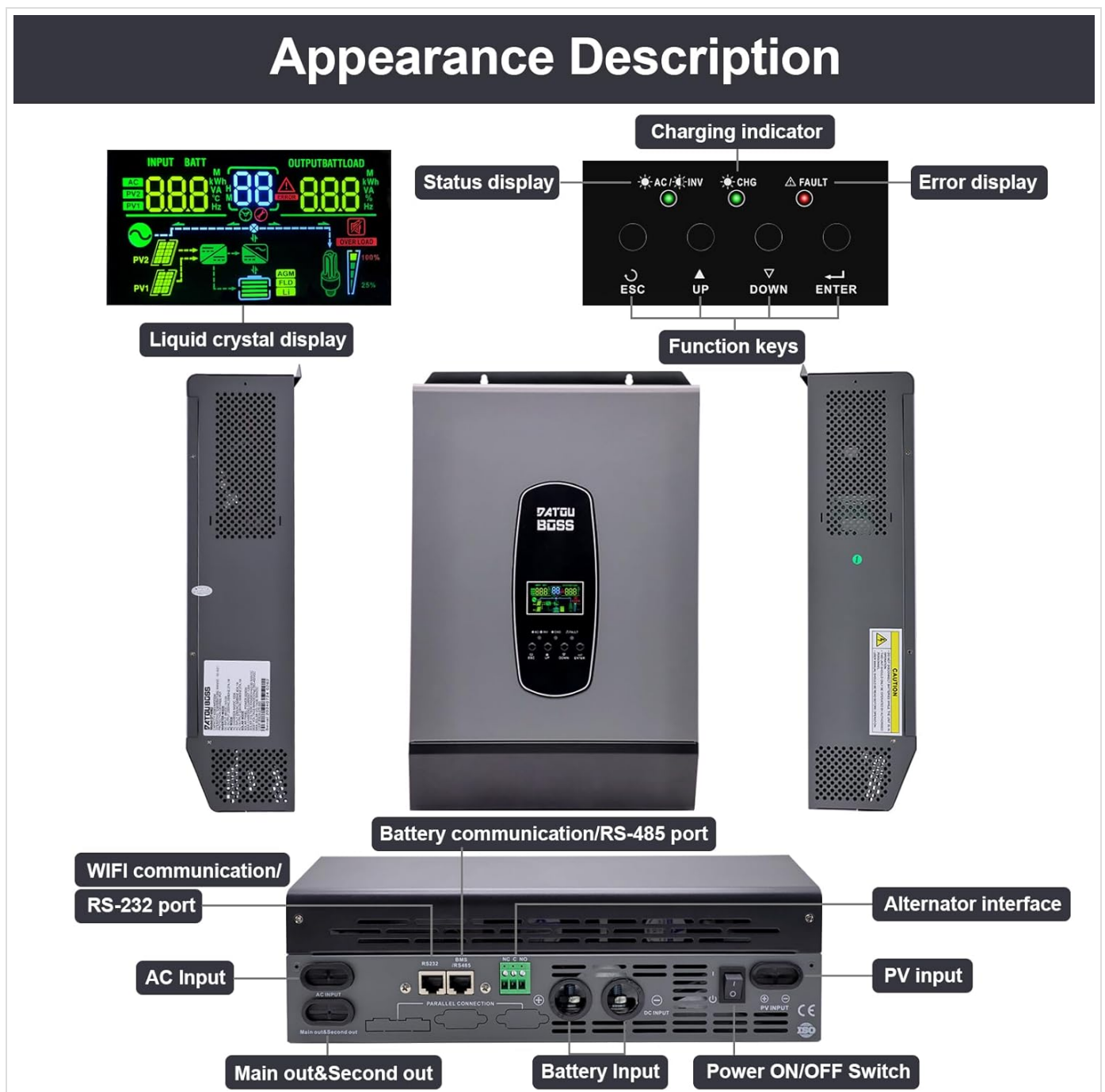


Figure 3.2: Detailed view of the inverter's display and connection ports.

This diagram provides a detailed overview of the inverter's components, including the Liquid Crystal Display (LCD), status and error indicators, function keys, and various connection ports such as AC Input, Main Out & Second Out, WiFi/RS-232,

## 4. SETUP AND INSTALLATION

Proper installation is crucial for the safe and efficient operation of your hybrid solar inverter. Follow these steps carefully.

### 4.1 Unboxing and Initial Inspection

Carefully remove the inverter from its packaging. Inspect the unit for any signs of damage during transit. Ensure all accessories listed in the packing list are present.

**6200W Hybrid Solar Inverter**  
**230VAC 48VDC** Output Voltage:230Vac±5%

**120A MPPT**  
Solar Charge Controller  
MAX.Charge Current: 120A

**6200W**  
MAX.PV Array Power

**500VDC**  
Max.PV Array Open  
Circuit Voltage

USER MANUAL  
Hybrid  
Solar Inverter  
DATOU  
BUSS

Pure Sine Wave 50/60Hz Auto Support lithiumbattery

Figure 4.1: Key specifications and components included with the inverter.

This image highlights the main features of the 6200W Hybrid Solar Inverter, including its 120A MPPT solar charge controller, 6200W maximum PV array power, and 500VDC maximum PV array open circuit voltage. It also shows the included user manual and mounting hardware.

### 4.2 Electrical Connections

All wiring should comply with local and national electrical codes. Use appropriate wire gauges for all connections.

- **Battery Connection:** Connect the 48V battery bank to the DC Input terminals. Ensure correct polarity (positive to positive, negative to negative). The inverter supports various battery types including lead-acid (AGM, GEL, FLD) and lithium (LI, SLD, USER).
- **Solar Panel Connection:** Connect your PV array to the PV Input terminals. The inverter supports a maximum PV array open circuit voltage of 500V DC and an MPPT voltage range of 60-500V DC.
- **AC Input Connection:** Connect the AC grid or generator to the AC Input terminals.
- **AC Output Connection:** Connect your loads (appliances) to the AC Output terminals.
- **Grounding:** Ensure the inverter is properly grounded to prevent electrical hazards.



Figure 4.2: Diagram illustrating the system connection of the inverter with solar, battery, grid, and loads.

This diagram provides a visual guide for connecting the solar panels, generator, power grid, 48V battery packs, and various home appliances to the DATOU BOSS Hybrid Solar Inverter.

# Four Safe Charging Modes. Three Output Modes.



Figure 4.3: Inverter compatibility with various 48V battery types and battery-less operation.

This image illustrates the inverter's compatibility with 48V lead-acid (AGM, GEL, FLD) and lithium (LI, SLD, USER) batteries. It also highlights the capability for battery-less operation, where the inverter can power loads directly from the PV array or AC grid, and the integrated BMS for battery management.

## 4.3 Installation Video Guide

For a detailed visual guide on the installation process, please refer to the official product videos below:

Your browser does not support the video tag.

Video 4.1: Overview and unboxing of the DATOUBOSS Hybrid Solar Inverter, demonstrating initial setup steps.

Your browser does not support the video tag.

Video 4.2: Detailed installation and connection guide for the DATOUBOSS 6200W Hybrid Inverter, including battery and solar panel wiring.

## 5. OPERATING INSTRUCTIONS

## 5.1 LCD Display and Indicators

The inverter features an LCD display that shows real-time system data and operational status. Three LED indicators dynamically show system data, providing a quick overview of the inverter's operation.

Refer to Figure 3.2 for the layout of the LCD display and function keys.

## 5.2 Charging and Output Modes

The inverter offers flexible charging and output modes to suit various energy management needs:

- **Four Charging Modes:**

1. Solar Priority (CSO)
2. Utility Priority
3. Solar and Utility Hybrid Charging (SNU - default)
4. Only Solar (OSO)

- **Three Output Modes:**

1. PV Priority (USB Utility First)
2. Utility Priority (SUB Solar First - default)
3. Inverter Priority (SBU Priority)

# Comprehensive 360° protection



Figure 5.1: Overview of the four safe charging modes and three output modes.

This image visually explains the different charging and output modes available, allowing users to configure the inverter based on their specific power requirements and energy sources.

## 6. MAINTENANCE

Regular maintenance ensures the longevity and optimal performance of your DATOU BOSS Hybrid Solar Inverter.

- **Cleaning:** Periodically clean the exterior of the inverter with a dry, soft cloth. Ensure ventilation openings are free from dust and debris.
- **Connection Checks:** Regularly inspect all electrical connections (battery, solar, AC input/output) for tightness and signs of corrosion. Loose connections can lead to overheating and poor performance.
- **Fan Inspection:** Check the cooling fans for any obstructions or unusual noises. The intelligent heat dissipation system relies on clear airflow.
- **Environmental Conditions:** Ensure the inverter is operating within its specified temperature range and in a dry environment.

## 7. TROUBLESHOOTING

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If you encounter issues with your inverter, refer to the following common problems and solutions. The LCD display will show corresponding error codes to assist in diagnosis.

Problem	Possible Cause	Solution
Inverter not turning on	No DC input from battery or solar; Power switch off; Loose connections.	Check battery voltage and connections; Ensure power switch is ON; Verify all wiring is secure.
Overload error	Connected load exceeds inverter's rated power.	Reduce the connected load; Check appliance wattage.
Over-temperature warning	Insufficient ventilation; High ambient temperature.	Ensure adequate airflow around the inverter; Clear any obstructions from fans; Relocate to a cooler environment if necessary.
Battery overcharge/deep discharge	Incorrect battery settings; BMS malfunction.	Verify battery type and charging parameters in settings; Contact support if BMS issue is suspected.
No AC output	AC input issue; Inverter fault; Output breaker tripped.	Check AC input source; Inspect output breaker; Refer to error code on LCD for specific fault.

For persistent issues or error codes not listed, please contact DATOUBOSS customer support.

## 8. SPECIFICATIONS

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Feature	Specification
Model Number	SP-7000W-New
Rated Power	6200W
DC Input Voltage	48V DC
AC Output Voltage	220V/230V AC
Max. PV Array Open Circuit Voltage	500V DC
PV Array MPPT Voltage Range	60~500V DC
Max. Charging Current (PV)	120A
Product Dimensions (L x W x H)	55.2 x 38.5 x 19.3 cm
Weight	10.12 Kilograms
Recommended Applications	Home, RVs, Camping, Emergency Power

## 9. WARRANTY AND SUPPORT

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- **Warranty:** The DATOUBOSS 6200W Hybrid Solar Inverter comes with a 24-month warranty from the date of

purchase.

- **Return Policy:** Enjoy a 30-day unconditional return guarantee.
- **Customer Support:** For any inquiries, technical assistance, or warranty claims, please contact our 7x24 customer support. You can find more information and contact details on the official DATOUBOSS store: [DATOUBOSS Store](#).