DATOUBOSS 2412051554

DATOUBOSS 3600W 24V Hybrid Pure Sine Wave Inverter with MPPT Controller - User Manual

Model: 2412051554

1. Introduction

This manual provides essential information for the safe and efficient operation of your DATOUBOSS 3600W 24V Hybrid Pure Sine Wave Inverter. Please read this manual thoroughly before installation and use, and retain it for future reference. This inverter is designed to provide stable and high-quality AC power from a DC 24V source, supporting various modes for solar power generation systems.

2. Safety Information

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

- Ensure proper grounding of the inverter.
- Do not expose the inverter to rain, snow, spray, or any liquids.
- Do not disassemble the inverter. Refer all servicing to qualified personnel.
- Keep the inverter away from flammable materials and gases.
- Ensure adequate ventilation around the inverter to prevent overheating.
- Verify input and output voltages are within specified ranges before connecting any devices.

> **WARNING:** This unit contains high voltage. Do not open the casing unless you are a qualified electrician.

The inverter features multiple protection mechanisms including overcharge protection, over-discharge protection, high voltage protection, low voltage protection, and short circuit protection to ensure safe operation.

Image: Safety features of the DATOUBOSS Hybrid Inverter, including overcharge, over-discharge, high voltage, low voltage, and short circuit protection.

3. Product Overview

The DATOUBOSS Hybrid Inverter is a versatile power solution integrating a 120A MPPT solar charge controller, a 3600W pure sine wave inverter, and an Uninterruptible Power Supply (UPS) function. It efficiently converts DC 24V power to AC 100V-120V, suitable for various applications including solar power generation systems.

Key Features:

- **Multi-functional Modes:** Supports Off-grid, Grid-tied, and Hybrid modes for flexible power management.
- **High-Quality Output:** Produces pure sine wave AC output, safe for sensitive electronics and household appliances.
- **Adjustable AC Output:** Output voltage is adjustable between AC 100V-120V to match specific appliance requirements.
- **Powerful Conversion:** Efficiently converts DC 24V to AC 100V with a maximum output of 3600W.
- **Energy Efficient:** Features a 120A MPPT PV charge controller for fast and efficient solar charging, maximizing energy utilization (up to 99.9% efficiency).
- **Wide Battery Compatibility:** Compatible with various 24V battery systems, including FLD, GEL, LiFePO4, Li-ion, and SLD, with user-definable settings.
- **UPS Functionality:** Provides uninterrupted power supply during grid outages.

Image: Diagram illustrating the integrated features of the DATOUBOSS Hybrid Inverter: 120A MPPT controller, 3600W pure sine wave inverter, UPS function, and 120A maximum charging current.

Image: Visual representation of the inverter's energy utilization efficiency (99.9%), LCD display, 120A MPPT controller, ability to operate without a battery, 100V-120V adjustable output, UPS function, 3600W pure sine wave output, and app control capability.

4. Setup and Installation

Proper installation is crucial for the performance and safety of your inverter. It is recommended that installation be performed by a qualified electrician.

4.1 Component Identification

Familiarize yourself with the inverter's ports and controls:

Image: Detailed view of the inverter's connection ports and display. Includes LCD screen, touch buttons, primary output port, AC input port, secondary output port, PV port, battery communication (RS-485) port, earth terminal, cooling fan, WiFi/RS-232 port, and battery port.

- **LCD Screen:** Displays operational status and settings.
- **Touch Buttons:** For navigating menus and adjusting settings.
- **AC Input Port:** Connects to the utility grid or AC generator.
- **Primary Output Port:** Main AC output for loads.
- **Secondary Output Port:** Additional AC output.
- **PV Port:** Connects to solar panels.
- **Battery Port:** Connects to the 24V battery bank.
- **Battery Communication (RS-485) Port:** For communication with compatible battery management systems.

- **WiFi/RS-232 Port:** For remote monitoring and control (optional WiFi module may be required).
- **Earth Terminal:** For grounding the inverter.
- **Cooling Fan:** Ensures optimal operating temperature.

4.2 Wiring Diagram

The inverter can be integrated into a complete system as shown below:

Image: System application diagram showing connections between solar panels, the hybrid inverter, a battery bank, an AC power source or generator, and various household loads (lights, fan, computer, refrigerator, heater).

Ensure all connections are secure and correctly polarized. Refer to local electrical codes for wiring standards.

4.3 Battery Connection

The inverter supports various 24V battery types. Select the appropriate battery type in the inverter settings after connection.

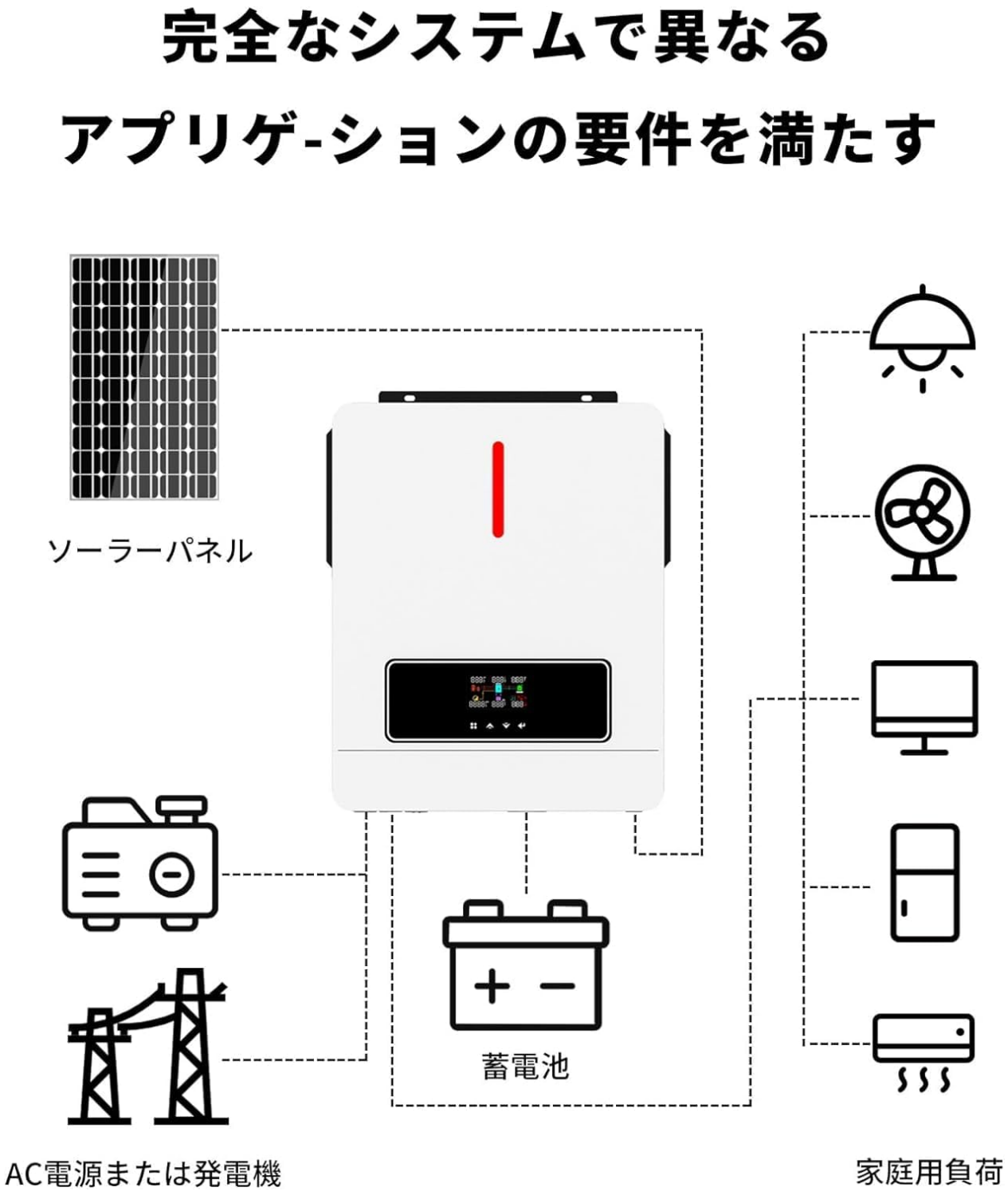

Image: Diagram showing the DATOUBOSS Hybrid Inverter's compatibility with various 24V battery types: FLD (Flooded), GEL (Gel), LiFePO4 (Lithium Iron Phosphate), Li-ion (Lithium-ion), SLD (Sealed Lead-Acid), and USER (User-defined) battery types.

- Connect the positive (+) terminal of the 24V battery bank to the positive (+) battery port on the inverter.
- Connect the negative (-) terminal of the 24V battery bank to the negative (-) battery port on the inverter.
- Ensure correct polarity to prevent damage.

5. Operating Modes

The DATOUBOSS Hybrid Inverter offers flexible operating modes to suit different energy management needs. These modes can be configured via the LCD display or a connected application.

5.1 Charging Modes

The inverter supports four distinct charging modes:

- **1. Solar Only:** Charges batteries exclusively from solar panels.
- **2. Utility Priority:** Charges batteries primarily from the utility grid, with solar as a secondary source if available.
- **3. Hybrid Charging:** Utilizes both solar and utility power for charging, prioritizing solar.
- **4. Solar Priority:** Prioritizes solar charging, using utility power only when solar is insufficient.

5.2 Output Modes

The inverter provides three output modes for power distribution:

- **1. PV Priority:** Prioritizes power from solar panels to supply loads.
- **2. Battery Priority:** Prioritizes power from batteries to supply loads.
- **3. Utility Priority:** Prioritizes power from the utility grid to supply loads.

汎用性、拡張性

特定の接続ポ-トを備えて接続は簡単に

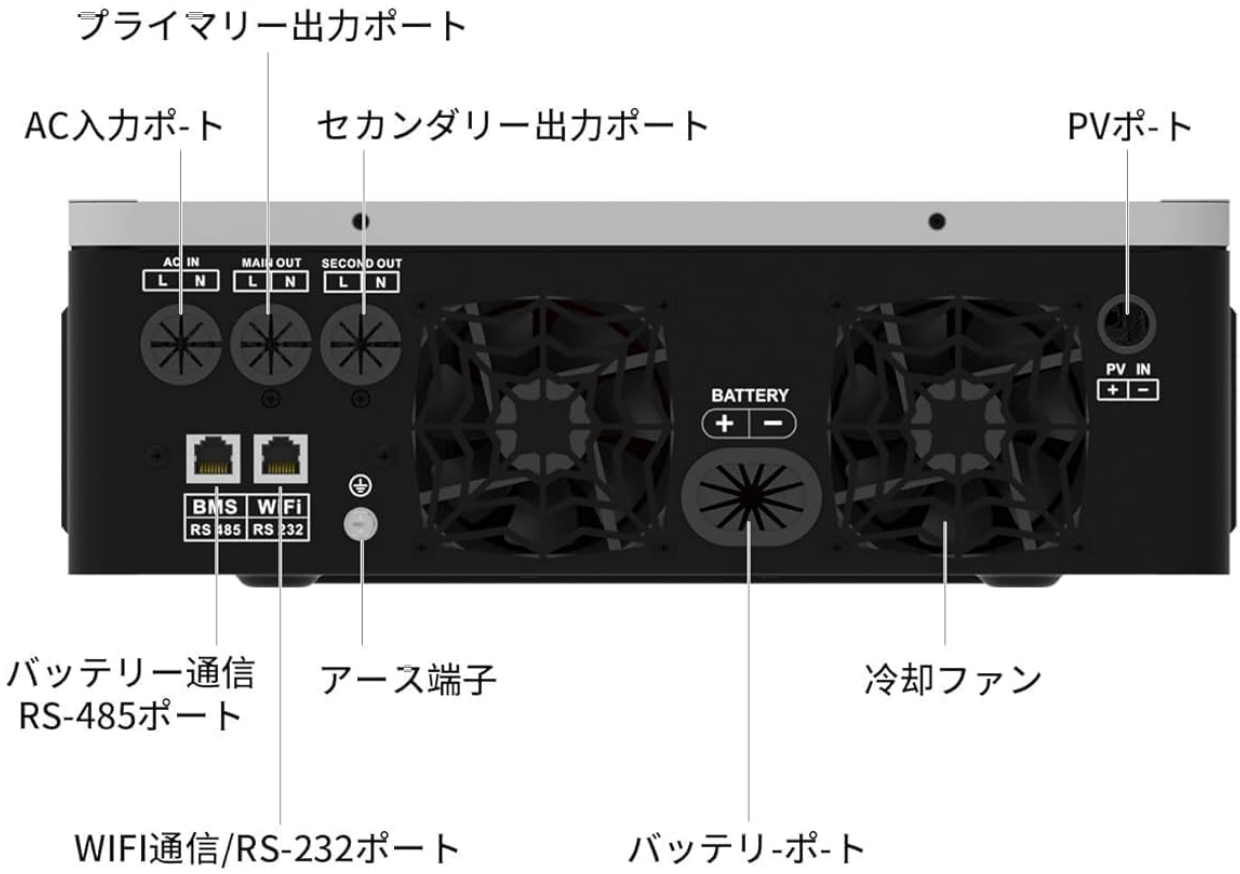

Image: Diagram illustrating the four charging modes (Solar Only, Utility Priority, Hybrid Charging, Solar Priority) and three output modes (PV Priority, Battery Priority, Utility Priority) of the DATOUBOSS Hybrid Inverter.

6. Maintenance

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

- **Cleaning:** Keep the inverter's exterior clean and free from dust. Ensure ventilation openings are not blocked. Use a dry cloth for cleaning.
- **Connections:** Periodically check all electrical connections for tightness and corrosion. Loose connections can cause overheating and damage.

- **Environment:** Ensure the inverter is operating within its specified temperature and humidity ranges. Avoid direct sunlight and excessive moisture.
- **Battery Health:** Monitor the health of your connected batteries according to their manufacturer's guidelines.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates to improve performance or add features.

7. Troubleshooting

This section provides solutions to common issues. For problems not listed here, contact customer support.

Problem	Possible Cause	Solution
No power output	Inverter off, battery low, input power issue, overload	Check power switch, charge battery, verify input connections, reduce load.
Inverter beeping/error code	Overload, over-temperature, battery fault, short circuit	Refer to LCD display for specific error code, reduce load, ensure ventilation, check battery connections, inspect wiring.
Low output voltage	Battery voltage too low, incorrect settings	Charge battery, adjust output voltage settings via LCD.
Solar charging not working	PV panels not connected, insufficient sunlight, MPPT controller fault	Check PV connections, ensure panels are clean and exposed to sun, contact support if MPPT fault persists.

8. Specifications

Feature	Specification
Brand	DATOUBOSS
Model Number	2412051554
Input DC Voltage	24V
Output AC Voltage	AC 100V-120V (Adjustable)
Rated Power	3600W
Output Waveform	Pure Sine Wave
Frequency	50Hz/60Hz
PV Charge Current (Max)	120A (MPPT)
Display Type	LED
Dimensions (Package)	50 x 42 x 18 cm
Weight (Package)	9 kg
Recommended Use	Solar Power Generation

Feature	Specification
Power Source	Solar Battery and Battery Powered

9. Warranty and Support

For warranty information and technical support, please refer to the official DATOUBOSS website or contact your authorized dealer. Keep your purchase receipt as proof of purchase for warranty claims.
For further assistance, you may contact the seller directly via the Amazon platform or visit the DATOUBOSS Store on Amazon.