LMYYDES asdfwe-896365

LMYYDES 5500W 48V Hybrid Solar Inverter Instruction Manual

Model: asdfwe-896365

1. Introduction

This manual provides essential information for the safe and efficient operation of your LMYYDES 5500W 48V Hybrid Solar Inverter. This all-in-one unit integrates a 120A MPPT solar charge controller, a pure sine wave inverter, and an AC battery charger, designed for reliable power conversion and energy management in various applications, including home energy storage and off-grid systems. Please read this manual thoroughly before installation and use.

Image 1.1: The LMYYDES 5500W 48V Hybrid Solar Inverter. This image displays the main unit of the inverter, showcasing its compact design and the integrated LCD display on the top surface. The unit is white with ventilation grilles on the sides.

2. Safety Instructions

Adherence to these safety guidelines is crucial to prevent injury and damage to the equipment. Only qualified personnel should perform installation and maintenance.

- **Electrical Hazard:** This device operates with high voltages. Do not open the inverter casing unless specifically instructed by the manufacturer.
- **Professional Installation:** Installation, wiring, and maintenance must be performed by a certified electrician or trained professional.
- **Proper Grounding:** Ensure the inverter is properly grounded according to local electrical codes.
- **Ventilation:** Install the inverter in a well-ventilated area to prevent overheating. Maintain adequate clearance around the unit.
- **Battery Safety:** Always connect batteries with correct polarity. Use appropriate battery protection devices.
- **Emergency Shutdown:** Familiarize yourself with the emergency shutdown procedures for your entire solar

power system.

3. Product Overview and Features

The LMYYDES Hybrid Solar Inverter is designed for comprehensive energy management. Key features include:

- **Pure Sine Wave Output:** Provides clean power suitable for sensitive electronics.
- **Integrated MPPT Charge Controller:** Maximizes solar power harvesting efficiency.
- **Multiple Charging and Output Modes:** Adaptable to various power requirements and scenarios.
- **LCD Display:** Real-time monitoring of system status and data.
- **WiFi Monitoring:** Remote access via mobile app or web for convenient system management.
- **Compact Design:** Optimized dimensions for easy installation.

Image 3.1: Key features of the LMYYDES 5500W Off-Grid Solar Inverter. This graphic highlights the inverter's capabilities, including 5.5KW Max PV Input Power, 40A Max AC Charging, 80A Max Hybrid Charging Current, and 500V Max PV Input VOC Volt. It also notes the pure sine wave output, 80A MPPT controller, 5500W Max PV Array Input, 500VDC, 22A, compatibility with lead-acid and lithium batteries, and support for solar, utility, or generator power to charge the battery.

4. Setup and Installation

Careful planning and execution are essential for the safe and effective installation of the inverter. Consult a professional for installation.

4.1. Mounting the Inverter

Mount the inverter vertically on a sturdy wall in a dry, well-ventilated area, away from direct sunlight, heat sources, and flammable materials. Ensure sufficient clearance around the unit for proper airflow.

4.2. Wiring Connections

All wiring must comply with local electrical codes and standards. Use appropriately sized cables for all connections.

1. **Battery Connection:** Connect the battery bank to the inverter's battery terminals. Ensure correct polarity (positive to positive, negative to negative). The battery must be connected for the inverter to operate.
2. **PV Input Connection:** Connect the solar panel array to the PV input terminals. Observe the maximum PV input voltage and current specifications.
3. **AC Input Connection:** Connect the utility grid or generator AC input to the inverter's AC input terminals.
4. **AC Output Connection:** Connect your loads (appliances) to the inverter's AC output terminals.
5. **Grounding:** Connect the inverter's ground terminal to a reliable earth ground.

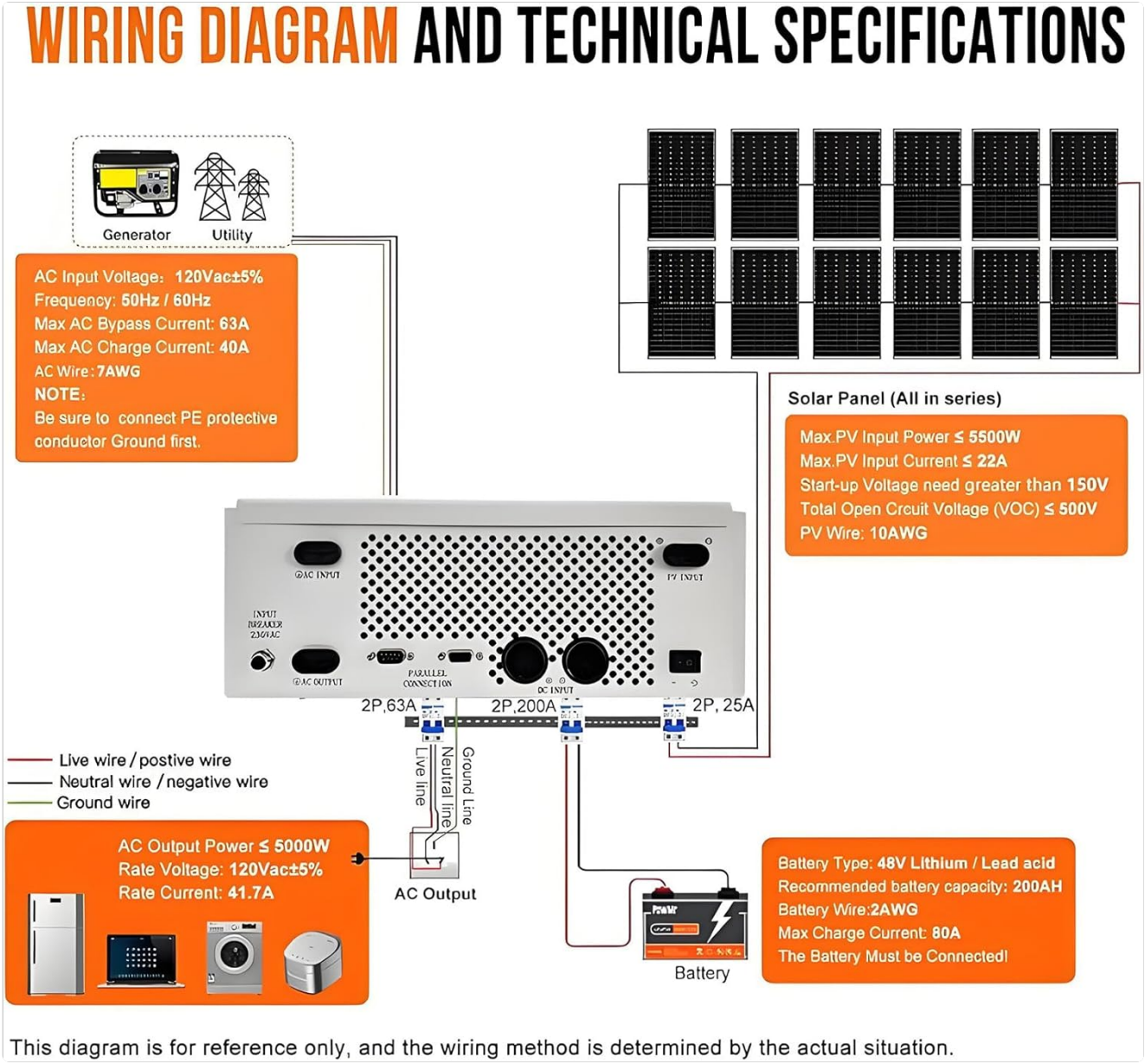

Image 4.1: Wiring Diagram and Technical Specifications. This diagram illustrates the connections for the LMYYDES hybrid inverter, showing inputs from solar panels, generator, and utility, and outputs to various AC loads. It details AC input voltage, frequency, bypass current, charge current, and wire gauge. It also specifies solar panel input power, current, start-up voltage, and wire gauge, along with battery type, capacity, wire gauge, and maximum charge current. A note emphasizes connecting the PE protective conductor first.

4.3. Parallel Function

The inverter supports parallel operation for increased power capacity or three-phase systems. Up to 6 units can be connected in parallel. Refer to the specific wiring diagrams for parallel configurations.

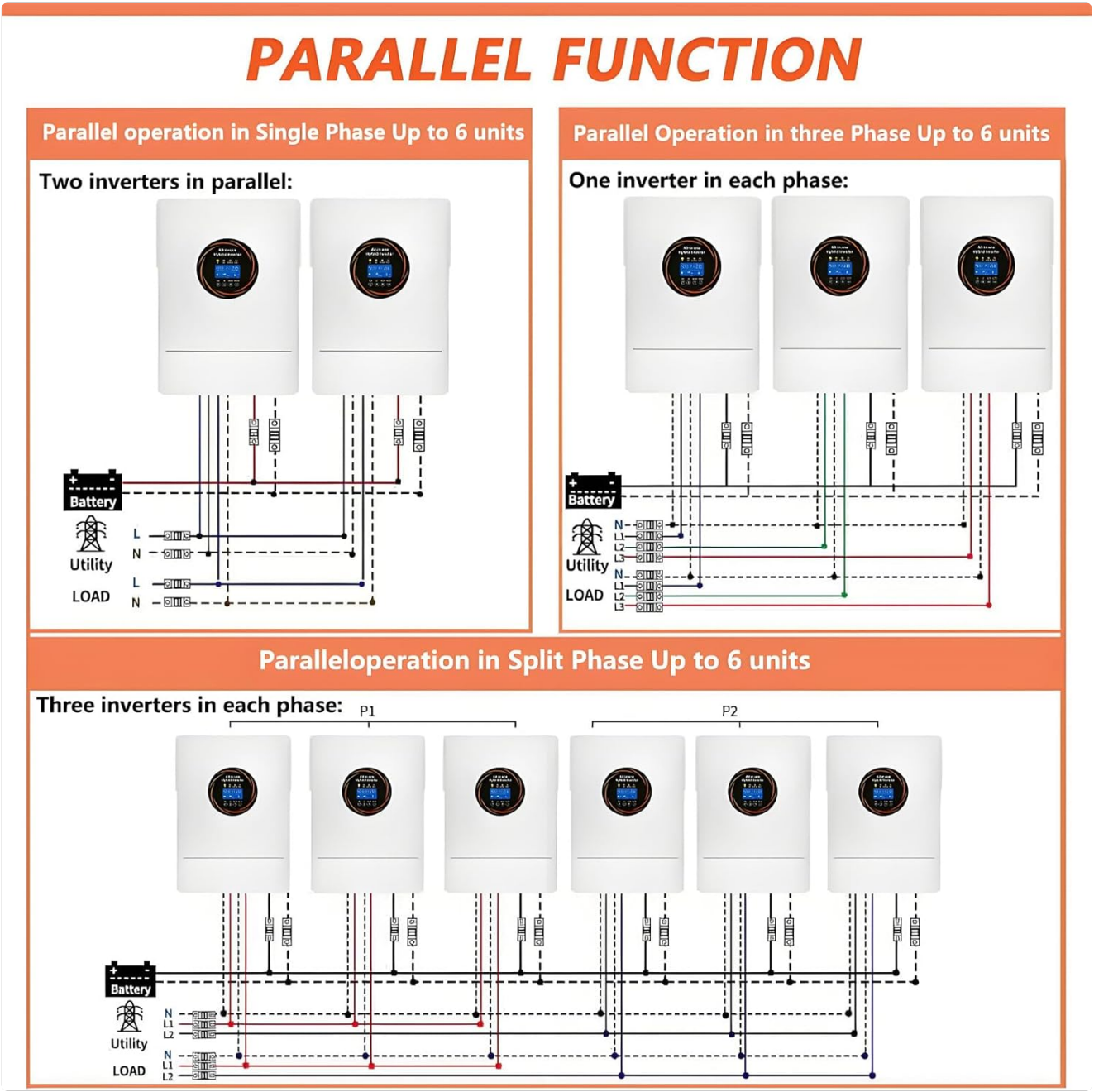

Image 4.2: Parallel Function diagrams for the LMYYDES 5500W Hybrid Solar Inverter. This image presents three different parallel configurations: parallel operation in single phase (up to 6 units) with two inverters shown, parallel operation in three phase (up to 6 units) with one inverter per phase, and parallel operation in split phase (up to 6 units) with three inverters per phase. Each diagram illustrates the wiring connections between multiple inverters, batteries, utility, and loads.

5. Operating Instructions

Once installed, the inverter can be configured and monitored through its LCD display and WiFi connectivity.

5.1. Initial Power-Up

After all connections are secure, switch on the battery breaker, then the AC input breaker (if applicable), and finally the inverter's power switch. The LCD display will illuminate, showing system status.

5.2. Charging Modes

The inverter offers four selectable charging modes:

- **Solar Priority:** Solar power is the primary source for charging batteries and powering loads. Utility/generator is

used only when solar is insufficient.

- **Utility Priority:** Utility/generator power is the primary source. Solar power is used when utility/generator is unavailable.
- **Solar Only:** Only solar power is used for charging.
- **Utility Hybrid Charging:** A combination of utility and solar charging.

5.3. Output Modes

Three output modes are available to manage power distribution to your loads:

- **PV Priority:** Loads are primarily powered by solar, then battery, then utility/generator.
- **Utility Priority:** Loads are primarily powered by utility/generator, then battery, then solar.
- **Inverter Priority:** Loads are primarily powered by battery, then solar, then utility/generator.

5.4. Monitoring and Communication

The built-in LCD screen provides real-time data on input, output, load, and battery status. For remote monitoring, connect the inverter to your WiFi network and use the dedicated mobile app or web interface to track performance and adjust settings.

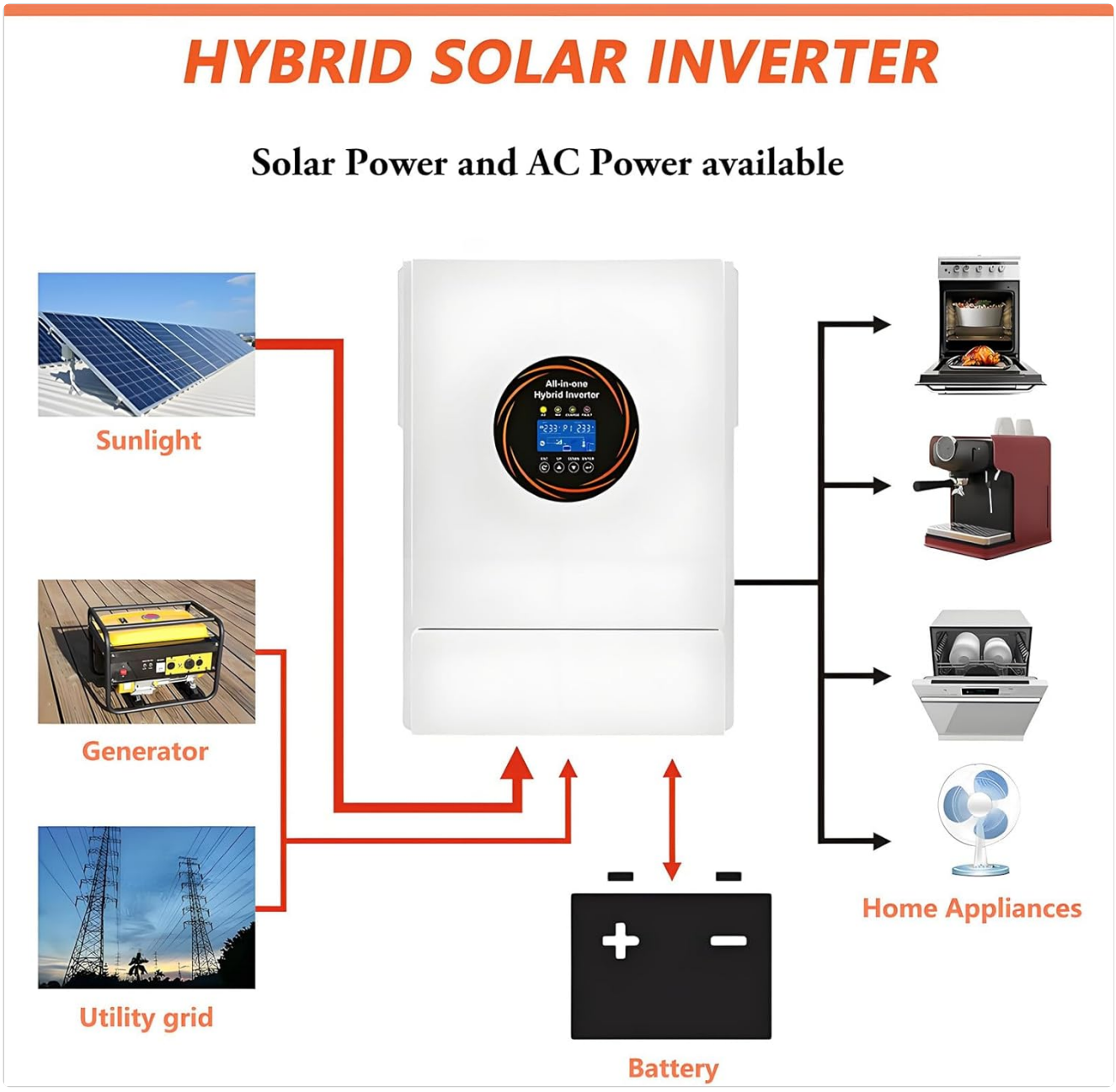

Image 5.1: Hybrid Solar Inverter system diagram. This illustration shows how the inverter integrates various power sources (sunlight/solar panels, generator, utility grid) and a battery to power home appliances. It visually represents the flow of energy within a hybrid solar power system.

6. Battery Compatibility

The LMYYDES Hybrid Solar Inverter is compatible with a 48V battery system and supports various battery types, including:

- Sealed Lead-Acid (SLD)
- Flooded Lead-Acid (FLD)
- Absorbed Glass Mat (AGM)
- Gel
- Lithium (LI)
- User-defined (SUER)

It also features a batteryless mode and an activation function for dormant batteries, triggered by utility or photovoltaic access.

Image 6.1: Compatibility with multiple battery types. This graphic shows the inverter alongside various battery type labels (SLD, FLD, AGM, GEL, LI, SUER), indicating its support for a wide range of 48V battery systems. It also highlights features like batteryless mode and battery activation.

7. Maintenance

Regular maintenance ensures optimal performance and longevity of your inverter.

- **Cleaning:** Periodically clean the inverter's exterior and ventilation openings to prevent dust accumulation. Use a dry, soft cloth.
- **Connections Check:** Annually inspect all electrical connections for tightness and signs of corrosion.
- **Environmental Check:** Ensure the installation environment remains within specified temperature and humidity ranges.
- **Battery Inspection:** Follow the manufacturer's maintenance guidelines for your specific battery type.

8. Troubleshooting

This section provides general guidance for common issues. For complex problems, contact technical support.

- **No Power Output:** Check battery connections, AC input breaker, and inverter power switch. Verify battery voltage is within operating range.
- **No Solar Charging:** Ensure solar panels are clean and unobstructed. Check PV input connections and voltage. Verify MPPT settings.
- **Overload Warning:** Reduce the connected load. Ensure the total load does not exceed the inverter's rated output power.
- **System Error Codes:** Refer to the LCD display for specific error codes and consult the full product manual or manufacturer's support for detailed explanations and solutions.

9. Specifications

Detailed technical specifications for the LMYYDES 5500W 48V Hybrid Solar Inverter.

Category	Parameter	Value
Input	Phase	Single-phase: L+N+PE
	Rated Input Voltage	220/230/240VAC
	Voltage Range	90-280VAC ±3V (normal mode), 170-280VAC ±3V
Battery	Rated Voltage	48Vdc
	Constant Voltage Charging Voltage	56.4Vdc
	Float Charge Voltage	54Vdc
Output	Rated Output Power	5500W
	Output Voltage	220/230/240VAC ±5%
	Output Frequency	50/60Hz ±0.1%
	Waveform	Pure Sine Wave
	Switching Time	10ms (typical)
	Peak Power	11000VA
Charger	PV Charging Method	MPPT
	PV Maximum Input Power	5500W
	MPPT Input Voltage Range	120-500Vdc
	Optimal Operating Voltage Range	300-400Vdc
	Maximum PV Input Voltage	500Vdc
	Maximum PV Input Current	20A
	Maximum AC Charging Current	100A
	Maximum Charging Current (AC + Solar)	100A

Category	Parameter	Value
General	Dimensions (L x W x H)	536 x 352 x 135mm
	Item Weight	10.5kg (23.1 pounds)
Communication	Interfaces	BMS/RS232/RS485/CAN/USB/Dry Contact, WiFi

10. Warranty and Support

For warranty information, please refer to the documentation provided with your purchase or contact the seller directly. Technical support can be obtained through the manufacturer's official channels, typically found on their website or product packaging.

Image 10.1: Product packaging displaying manufacturer and compliance information. This image shows the cardboard box the inverter comes in, with labels indicating manufacturer details, EC REP, batch number, serial number, and various compliance marks (CE, UKCA, FCC). Users should consult this label for specific contact and product identification details.