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Anjfylque ANJ-12000W-48V-LVP-WIFI

Anjfylque 12000W Hybrid Solar Inverter

Model: ANJ-12000W-48V-LVP-WIFI

1. Introduction

This manual provides essential information for the safe and efficient operation of your Anjfylque 12000W Hybrid Solar Inverter. Please read this manual thoroughly before installation and use, and retain it for future reference. This inverter is designed to integrate solar power, battery storage, and grid power to provide a reliable and efficient energy solution for residential and light commercial applications.

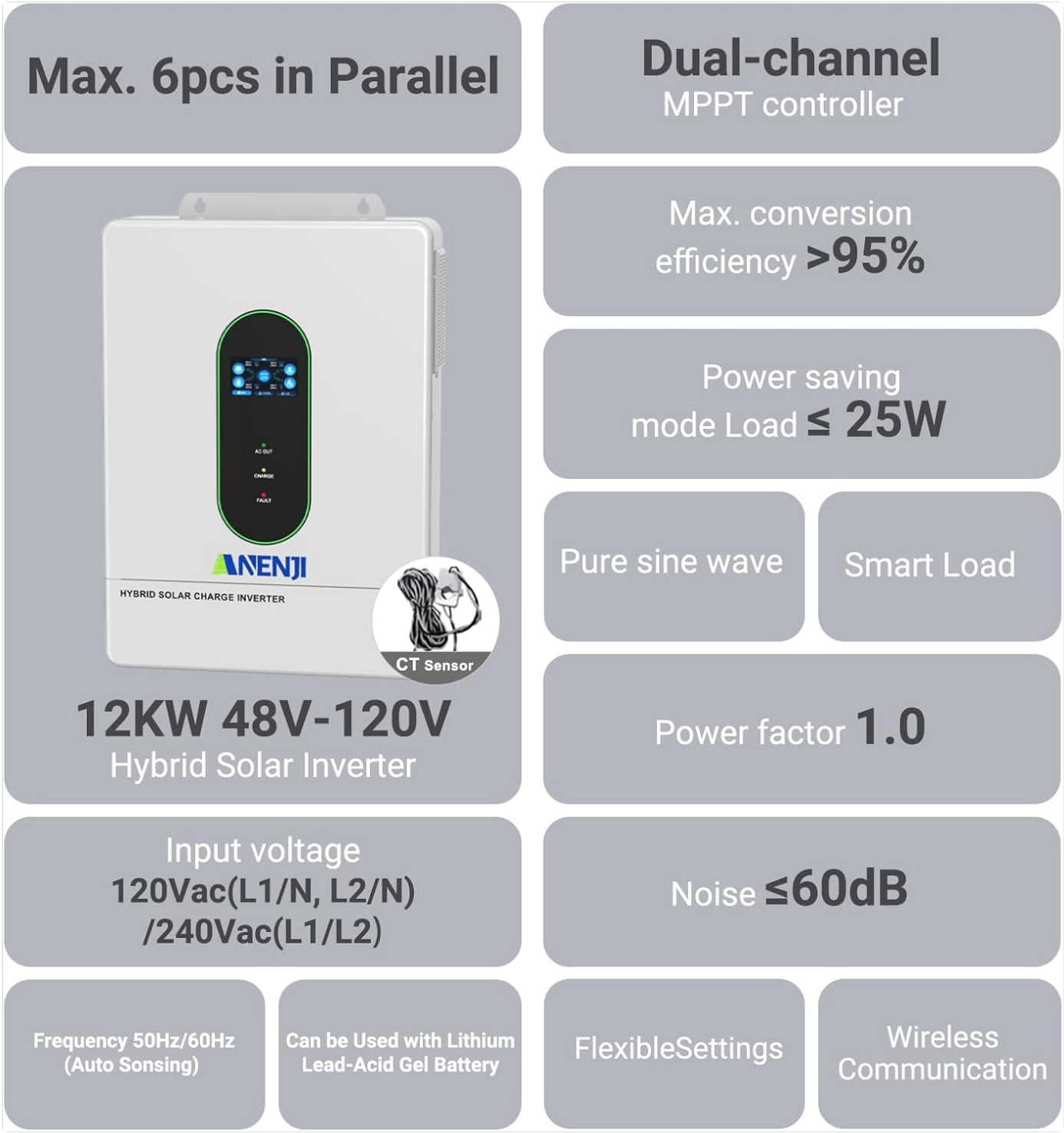


Figure 1: Front view of the Anjfylque 12000W Hybrid Solar Inverter, showcasing its display and indicators.

2. Safety Information

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

- Installation must be performed by qualified personnel in accordance with all local electrical codes and standards.
- Do not attempt to disassemble, repair, or modify the inverter. Refer all servicing to qualified service personnel.
- Ensure the inverter is properly grounded.
- Disconnect all power sources (solar, battery, and grid) before performing any maintenance or wiring.
- The inverter contains high voltage components. Avoid contact with internal parts when the unit is powered.
- Install the inverter in a well-ventilated area, away from flammable materials and direct sunlight.

- This inverter is UL1741 certified, meeting U.S. grid-tied standards for safety.



Figure 2: The inverter features an 8-way protection hub, including safeguards against short circuits, arc faults, overcurrent, thermal shutdown, backflow, overload, overvoltage, and overcharge.

3. Package Contents

Verify that all items are included in the package:

- Anjfylque 12000W Hybrid Solar Inverter
- WiFi module (optional, for remote monitoring)
- Parallel cable (for multi-unit installations)
- CT cable (for current sensing and anti-backflow)
- Anti-backflow cable
- Screws and accessories for mounting
- Instruction Manual (this document)



Figure 3: The inverter and its standard accessories, including cables and mounting hardware.

4. Product Features

- **Split-Phase Output:** Provides standard 120V and direct 240V output for various home appliances without external transformers.
- **Dual Independent MPPT Tracking:** Two Maximum Power Point Tracking controllers, each supporting up to 6000W PV input (12000W total), optimizing solar energy harvest even with varied panel orientations or shading. Supports up to 500V PV input.
- **Hybrid Modes & Remote Monitoring:** Supports Grid-Tied, Off-Grid, and Hybrid modes with UPS functionality. Optional WiFi/GPRS module for monitoring via the Smart Value mobile app.
- **UL1741 Certified & Scalable Parallel Expansion:** Meets U.S. grid-tied standards. Allows parallel operation of up to six units for increased power capacity.
- **IP65 Protection & Smart Cooling:** Industrial-grade IP65-rated enclosure for dust and splash resistance. Features a smart variable-speed cooling fan for efficient temperature management and extended lifespan.



Figure 4: Overview of the inverter's main features, including 12000W output, 48V system, dual MPPT, and parallel capability.

5. Setup & Installation

Proper installation is critical for the inverter's performance and safety. Refer to the detailed wiring diagrams and instructions provided in the full product manual for specific steps. Below is a general overview.

5.1 Mounting the Inverter

- Choose a suitable location: indoors or a semi-outdoor environment (e.g., under eaves, garage) protected from direct weather.
- Ensure adequate clearance around the inverter for proper ventilation.
- Mount the inverter securely using the provided screws and accessories.

5.2 Wiring Connections

The inverter requires connections for PV input, battery bank, AC input (grid/generator), and AC output (loads).

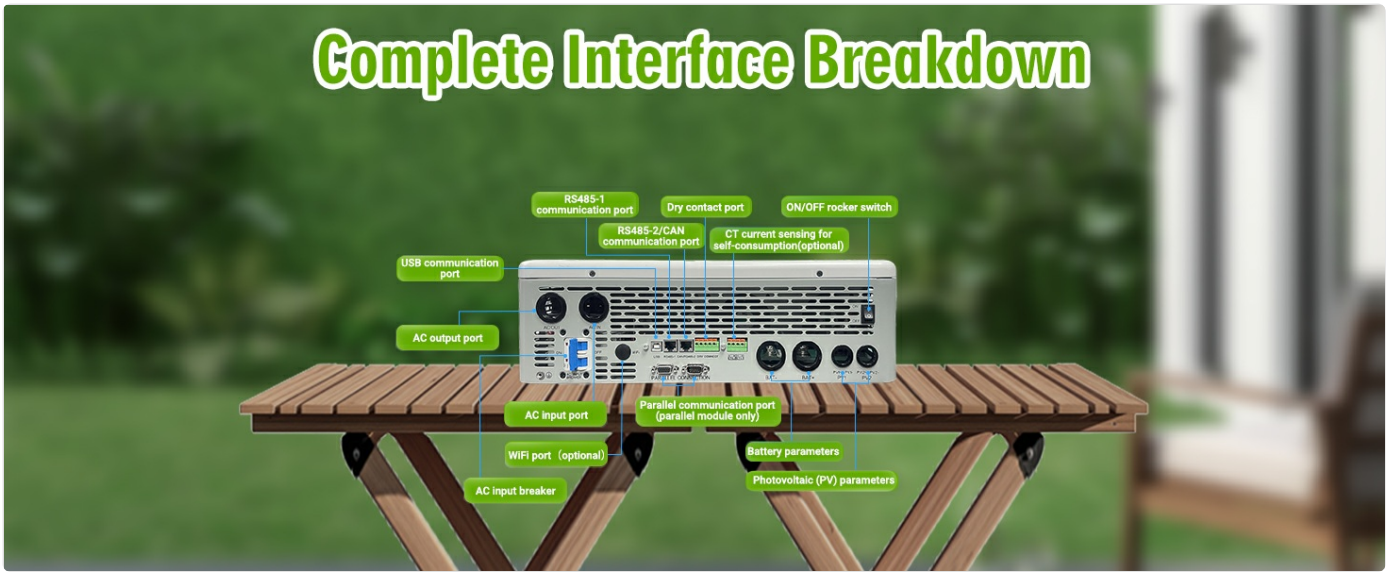


Figure 5: Detailed breakdown of the inverter's interface ports, including communication, AC input/output, PV, and battery connections.

- **PV Input:** Connect solar panels to the PV terminals. Ensure correct polarity and voltage within specified limits (Max. 500V DC).

- **Battery Connection:** Connect the 48V battery bank (lead-acid or lithium with BMS communication) to the battery terminals. Observe correct polarity.
- **AC Input:** Connect the utility grid or a generator to the AC input terminals.
- **AC Output:** Connect your home loads to the AC output terminals. The inverter provides 120V and 240V split-phase output.
- **Communication Ports:** Utilize RS485, CAN, and USB ports for monitoring and communication. The optional WiFi module connects here for remote access.
- **Grounding:** Connect the grounding screw hold to a reliable earth ground.

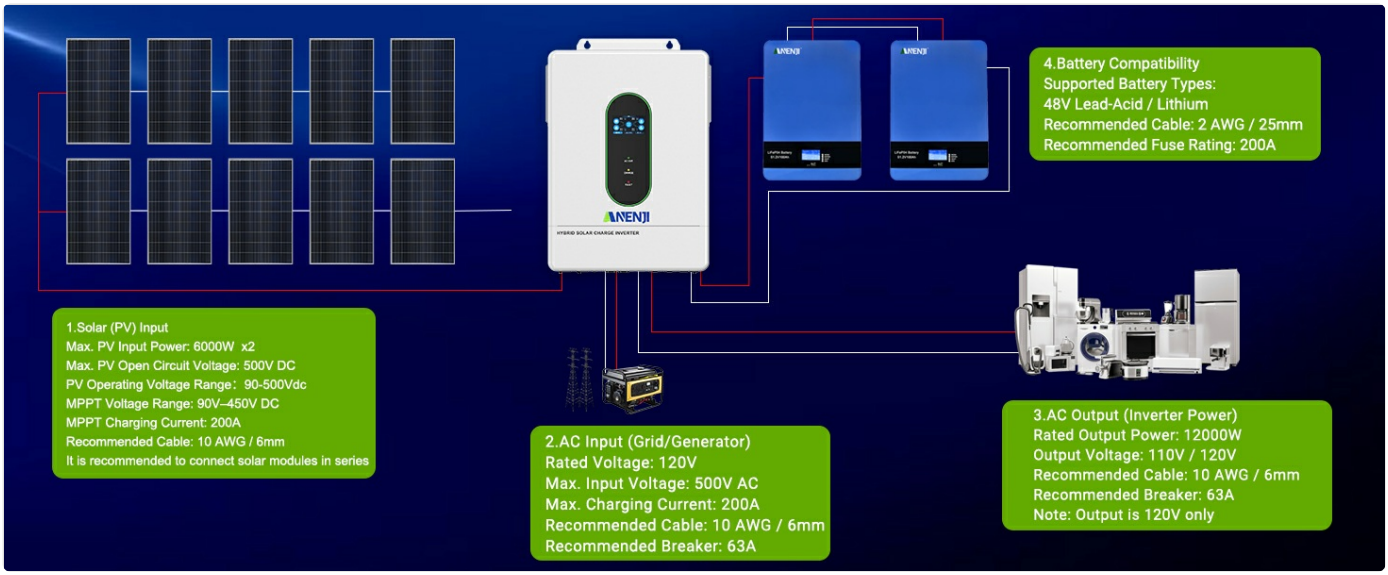


Figure 6: Example wiring diagram showing connections for solar PV input, battery, AC input (grid/generator), and AC output to home loads.

5.3 Parallel Operation

The inverter supports parallel operation of up to six units for increased power capacity in single-phase, split-phase, or three-phase configurations.

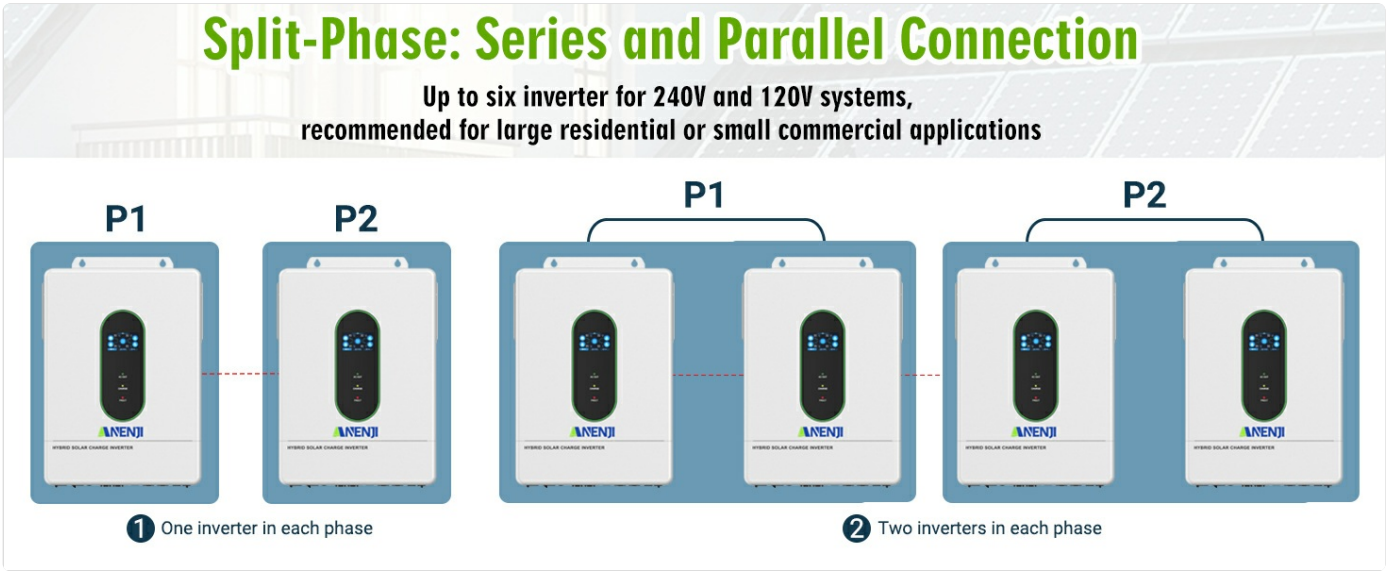


Figure 7: Split-phase parallel connection example, showing two inverters configured for 240V and 120V systems.

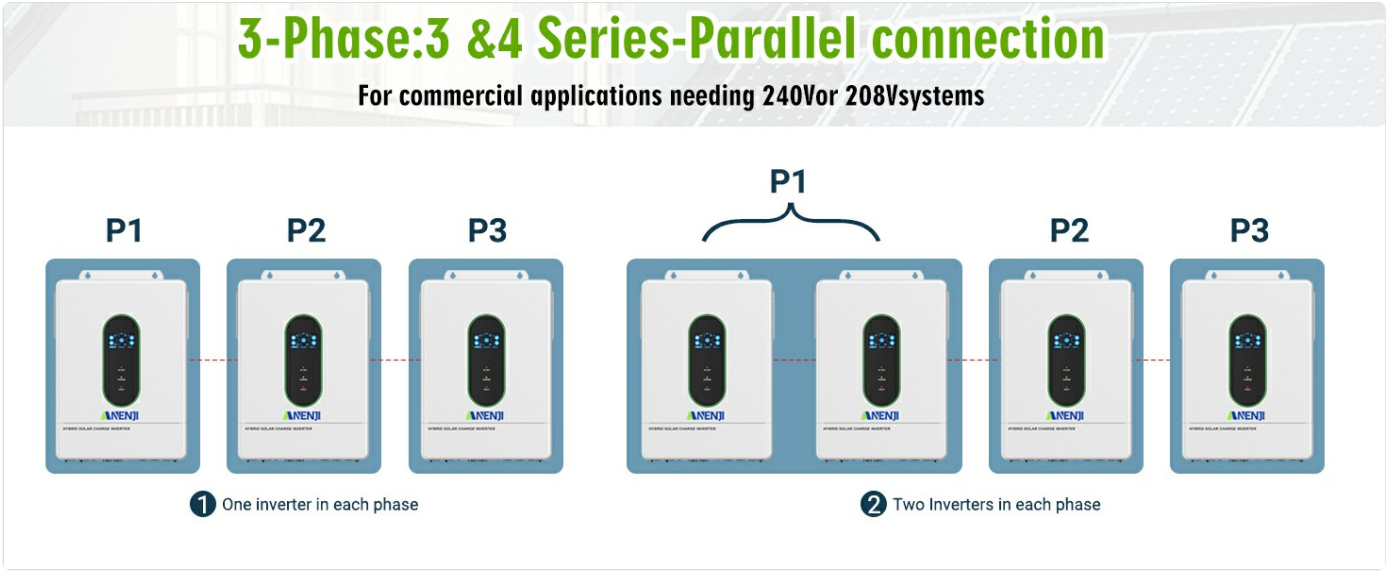


Figure 8: Example of 3-phase parallel connection for commercial applications, showing configurations for 3 or 4 inverters.

6. Operating Instructions

Once installed, the inverter can be configured and monitored via its integrated display or the mobile application.

6.1 Display Interface

The LED display provides real-time information on power generation, battery status, and load conditions. Use the buttons to navigate menus and adjust settings.



Figure 9: The inverter's display interface, showing system status, power flow, and settings options.

6.2 Operating Modes

The inverter supports various operating modes to optimize energy usage:

- **Grid-Tied Mode:** Feeds excess solar power back to the grid.
- **Off-Grid Mode:** Operates independently from the grid, relying on solar and battery power.
- **Hybrid Mode:** Combines grid, solar, and battery power for optimal efficiency, including UPS functionality for seamless power transition.

6.3 Charger Source Priority

Configure the priority for charging your battery bank:



Figure 10: Options for charger source priority: Solar First, Solar and AC Input Simultaneously, or Solar Only.

6.4 Output Source Priority

Set the priority for powering your loads:



Figure 11: Options for output source priority: Solar First, AC First, or DC Priority (Solar and Battery First).

7. Maintenance

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

- **Cleaning:** Periodically clean the exterior of the inverter with a dry cloth. Ensure ventilation openings are free from dust and debris.
- **Connections:** Annually check all electrical connections for tightness and signs of corrosion.
- **Battery Health:** Monitor battery voltage and health regularly, especially for lead-acid batteries. Follow battery manufacturer's maintenance guidelines.
- **Firmware Updates:** Check the manufacturer's website for any available firmware updates for improved performance or new features.
- **Environmental Check:** Ensure the installation environment remains within specified temperature and humidity ranges.

8. Troubleshooting

This section provides solutions to common issues. For complex problems, contact technical support.

Problem	Possible Cause	Solution
Inverter not turning on	No battery connection, low battery voltage, AC input breaker tripped	Check battery connections and voltage. Reset AC input breaker.
No AC output	Overload, short circuit, output breaker tripped	Reduce load. Check for short circuits. Reset output breaker.
Low solar power generation	Shaded panels, dirty panels, incorrect PV wiring	Clear shading. Clean panels. Verify PV wiring and polarity.
Error code on display	Specific system fault	Refer to the full manual's error code section for detailed explanations and solutions.
Remote monitoring not working	WiFi module not connected, network issues, app configuration error	Ensure WiFi module is properly installed. Check network connectivity. Reconfigure app settings.

9. Specifications

Key technical specifications for the Anjfylque 12000W Hybrid Solar Inverter:

Parameter	Value
Model Name	ANJ-12000W-48V-LVP-WIFI
Wattage	12000 Watts
Voltage	48 Volts (DC)
Input Voltage (AC)	120 Volts
Output Voltage (AC)	120 Volts (AC) / 240 Volts (Split-Phase)
Peak Output Power	18000 Watts
Electrical Output Waveform	Pure Sine Wave
Frequency	60 Hz (Auto Sensing 50Hz/60Hz)
Max. PV Input Voltage	500V DC

Parameter	Value
Max. MPPT Charging Current	220A (Dual MPPT)
Max. AC Charging Current	200A
Battery Compatibility	48V Lead-Acid, Lithium (with BMS communication)
Parallel Capability	Up to 6 units
Protection Rating	IP65
Certifications	UL1741
Item Dimensions (L x W x H)	2.44"L x 1.77"W x 5.19"H (Note: These dimensions seem unusually small for a 12kW inverter and might be incorrect in the source data. Please refer to the physical product or official documentation for accurate dimensions.)
Item Weight	23 Kilograms

10. Warranty & Support

10.1 Warranty Information

The Anjfylque 12000W Hybrid Solar Inverter comes with a**5-year warranty** from the date of purchase. This warranty covers defects in materials and workmanship under normal use and service conditions. Please retain your proof of purchase for warranty claims. The warranty does not cover damage caused by improper installation, misuse, unauthorized modifications, natural disasters, or external factors.

10.2 Technical Support

For technical assistance, troubleshooting beyond this manual, or warranty inquiries, please contact Anjfylque customer support. Contact information can typically be found on the manufacturer's official website or on your purchase documentation.

When contacting support, please have the following information ready:

- Product Model: ANJ-12000W-48V-LVP-WIFI
- Serial Number (located on the product label)
- Date of Purchase
- A detailed description of the issue

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.

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Details

Model number, symptoms, what you tried, or the section of the manual you are using.

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