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Anjfylque ANJ-6500W-48V-WIFI

Anjfylque 6500W Hybrid Solar Inverter Instruction Manual

Model: ANJ-6500W-48V-WIFI

Brand: Anjfylque

1. Introduction

This manual provides essential information for the safe and efficient operation of your Anjfylque 6500W Hybrid Solar Inverter. This all-in-one unit converts 48V DC to 120Vac AC and features a powerful dual-channel MPPT solar charge controller. It is designed for off-grid or backup power applications in homes, cabins, RVs, and small businesses, capable of powering various electrical appliances up to 6500W continuous power. Please read this manual thoroughly before installation and use.



Figure 1: Anjfylque 6500W Hybrid Solar Inverter with WiFi module.

2. Safety Information

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

electrical codes.

- Ensure all connections are secure and correctly polarized.
- Do not attempt to open or repair the inverter unless qualified.
- Keep the inverter away from flammable materials and moisture.
- Ensure adequate ventilation around the inverter to prevent overheating.

3. Package Contents

The Anjfylque 6500W Hybrid Solar Inverter package includes the following items:

- The inverter unit x 1
- Instruction Manual x 1
- Anti-reverse current CT x 1
- WiFi Module x 1
- Mounting tool
- Parallel Cable x 1



Figure 2: Included items in the product package.

Unboxing Video

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Video 1: Unboxing the 6200W 48V Solar Inverter. This video demonstrates the unboxing process and shows the components included with a similar model inverter.

4. Product Overview

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

- **Dual-channel MPPT Controller:** Maximizes solar energy harvesting.
- **Pure Sine Wave Output:** Ensures compatibility with sensitive electronics.
- **LCD Display and Touch Buttons:** For real-time monitoring and configuration.

- **Optional WiFi/GPRS Remote Monitoring:** Allows system status checks from anywhere.
- **Versatile Battery Compatibility:** Supports Lead-Acid and Lithium batteries.
- **Parallel Operation:** Up to 6 units for increased power capacity and split-phase output (120V/240V).

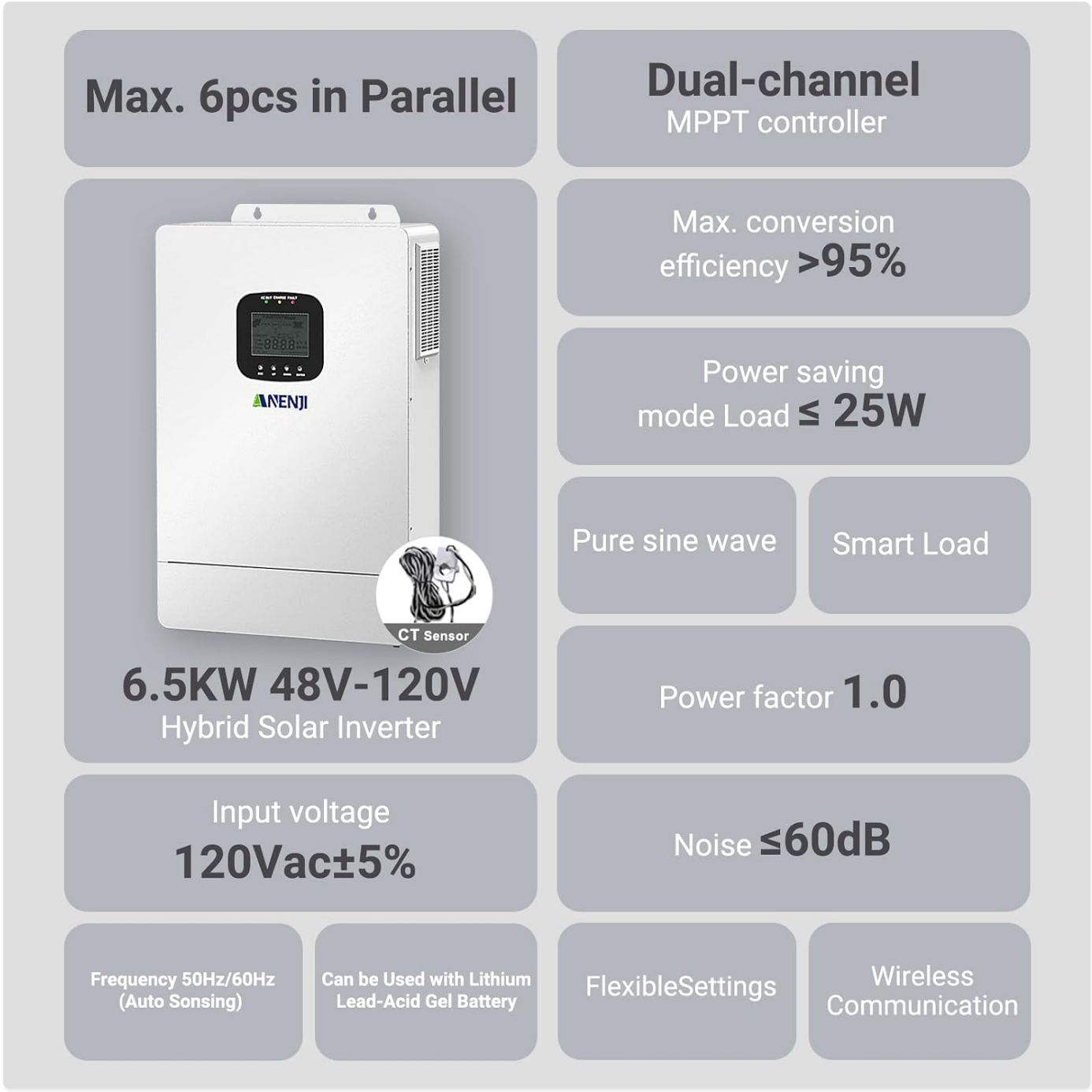


Figure 3: Key features of the Anjfylque 6500W Hybrid Solar Inverter.

Inverter Ports Overview

Familiarize yourself with the various ports and connections on the inverter:

1. Indicator light
2. LCD screen
3. Touch buttons
4. Overload protector
5. Grounding screw hold
6. AC output port

7. WiFi port (optional)
8. AC input port
9. RS485-2 communication port
10. RS485-1 communication port
11. USB communication port
12. Cooling fan
13. ON/OFF rocker switch
14. Dry contact port
15. Current sharing port (parallel module only)
16. Parallel communication port (parallel module only)
17. Battery port
18. PV port

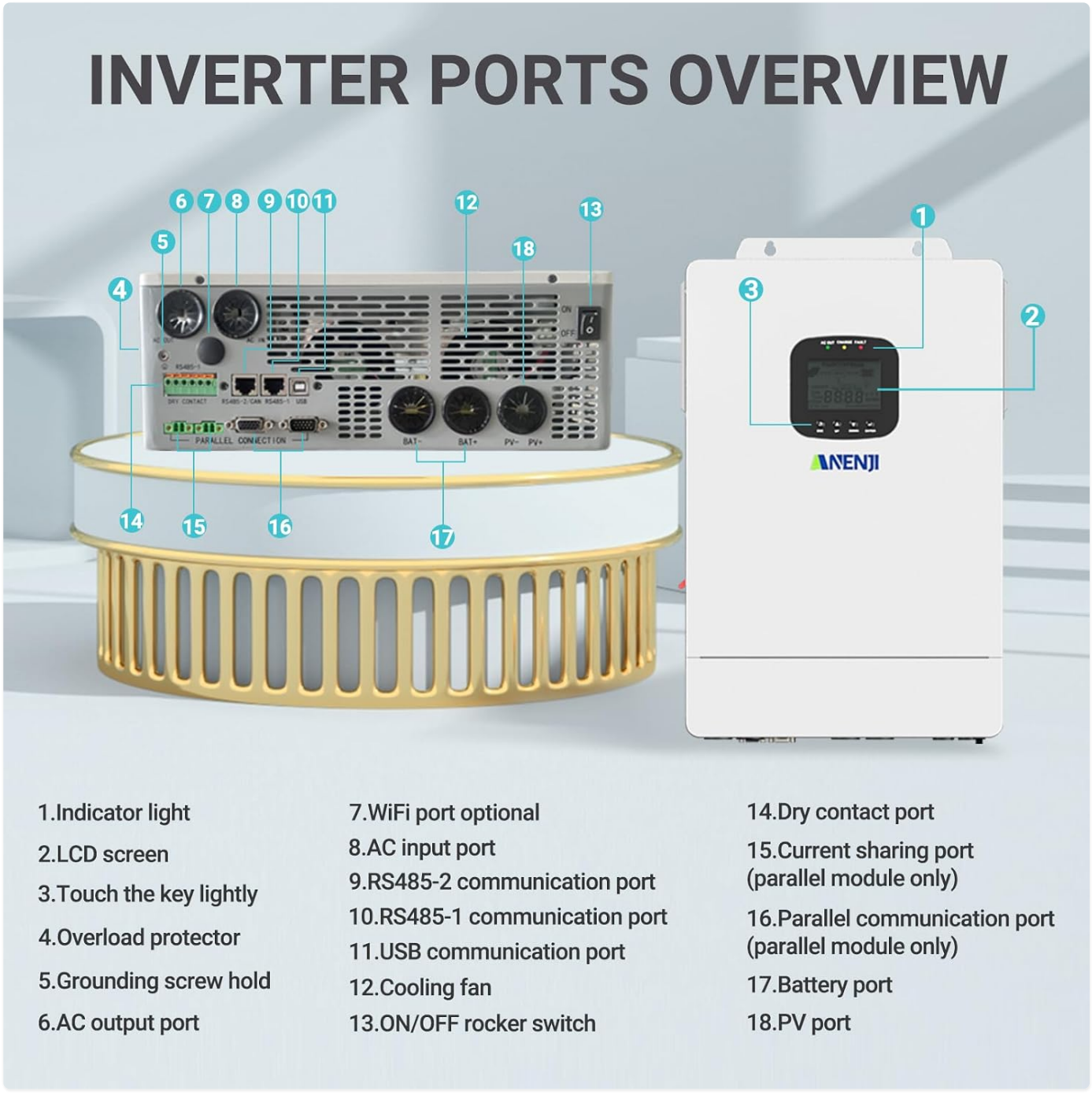


Figure 4: Detailed overview of the inverter's ports and connections.

5. Setup and Installation

Proper installation is crucial for the safe and efficient operation of your hybrid solar inverter. It is highly recommended that installation be performed by a certified electrician or solar professional.

Mounting the Inverter

Mount the inverter in a suitable, well-ventilated location, away from direct sunlight, moisture, and flammable materials. Use dedicated expansion bolts for secure long-term mounting.

Wiring Connections

Ensure all circuit breakers and surge protectors are installed as per safety guidelines before making any connections. Pay close attention to polarity for DC connections (PV and Battery) and correct wiring for AC connections (Input and Output).

- **AC Input Line:** Requires a 50A AC circuit breaker and a 40KA AC surge protector.
- **First AC Output Line:** Requires a 32A AC circuit breaker (supports up to 6.2KW load).
- **Second AC Output Line:** Requires a 10A AC circuit breaker (supports up to 2066W load). This output is recommended for loads requiring uninterrupted power.
- **PV Input Line:** Requires a 25A DC circuit breaker and a 40KA DC surge protector.
- **Battery Line:** Requires a 150A DC circuit breaker.
- **Grounding:** Ground the bus bar of the distribution box and the inverter separately.

Wiring Guide Video

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Video 2: Detailed wiring guide for the POW-HVM6.2M-48V-N All-in-one solar inverter using an ELECTRIC BOX-C distribution box.

6. Operating Modes

The inverter offers several configurable modes to optimize power usage based on your needs.

Charging Priority Modes

These modes control how the battery bank charges from different power sources:

- **Solar Priority (SOL):** Prioritizes PV energy. Switches to utility power only when solar energy is insufficient or the battery is low.
- **Mains Priority (UTL):** Charges primarily from the AC grid. Solar power is used if the grid is unavailable.
- **Solar + AC Input (CSO - Hybrid Charging):** Charges the battery from both solar and AC power simultaneously.
- **Solar Only:** The inverter charges the battery exclusively from available solar power.

AC Output Priority Modes

These modes control how your appliances are powered to avoid interruptions:

- **Utility Priority (UTL):** Switches to battery/inverter power only when the mains fails.
- **Battery Priority (BAT):** Primarily uses battery power, only switches to utility power when the battery is low.

- **Solar Priority (SOL):** Primarily uses PV energy, switches to utility power when solar energy is insufficient or the battery is low.
- **Hybrid Mode (HBR):** Allows for grid-tied or load-following (anti-backfeed) operation based on settings.

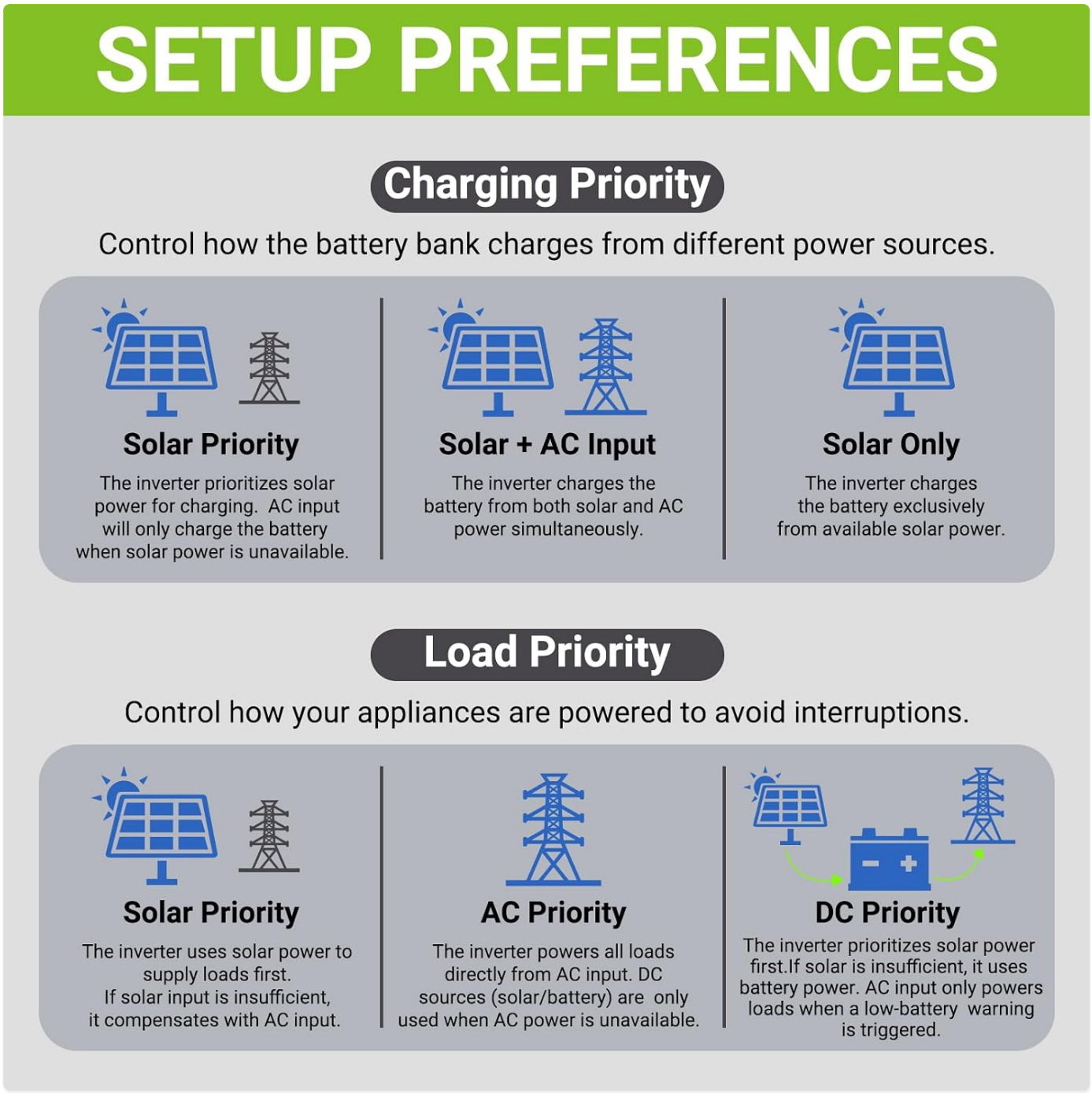


Figure 5: Visual representation of charging and load priority settings.

7. Battery Compatibility

The ANJ Series All-in-one Solar Charge Inverters support standard battery operation mode and simultaneous battery-less operation. The inverter can power the load directly from the PV array and/or the AC grid (Mains) without requiring a battery to be connected. (When no battery is connected, the minimum PV operating voltage must reach 80 Vdc).
The inverter features a dual lithium battery activation function (enabled by default), which can be triggered by PV or AC mains to reactivate a dormant battery. It supports communication with the BMS of various lithium battery manufacturers.



Figure 6: The inverter is compatible with 48V Lead-Acid, Gel, and Lithium batteries.

8. Monitoring

The Solar Inverter is equipped with an LCD display and touch buttons that show system data and operational status in real-time via a comprehensive interface with status icons.

WiFi Remote Monitoring

The inverter comes with a Wi-Fi transmitter that allows you to monitor your hybrid inverter via Wi-Fi anytime, anywhere. Remotely check system status (Registration required for setup).



Figure 7: Remote monitoring via WiFi module.

Communication with Battery/Computer

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Video 3: Demonstrates how to establish communication between the inverter and a battery or computer for monitoring and configuration.

9. Protection Features

The inverter incorporates numerous protection functions to safeguard the device, battery, and connected loads:

- Over/Under Voltage Protection
- Overload Protection

- Overtemperature Protection
- Short Circuit Protection
- Reverse Polarity Protection
- Arc Fault Detection
- Voltage Overload
- Charge Guardian



Figure 8: Overview of the 8-way protection features.

10. Parallel Operation

This inverter supports parallel operation of up to 6 units for higher power capacity and split-phase output (120V/240V) or 3-phase output. This feature is ideal for expanding your system to meet larger energy demands.

Split-Phase Connection Examples

- One inverter in each phase for 240V and 120V systems.
- Two inverters in each phase for increased capacity.
- Up to six inverters in two groups of three parallel for large residential applications.



Figure 9: Examples of split-phase series and parallel connections.

11. Troubleshooting

In case of a fault, a detailed fault code is displayed on the LCD screen, enabling quick troubleshooting. Refer to the fault code table in the full product manual for specific meanings and corrective actions.

Fault Code Demonstration Video

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Video 4: This video illustrates how fault codes are displayed on the inverter's screen.

12. Specifications

Specification	Value
Product Dimensions	15 x 11 x 3.9 inches
Item Weight	35.2 pounds
Item Model Number	ANJ-6500W-48V-WIFI
Recommended Uses	Home
Power Source	Solar and Battery Powered
Wattage	6500 watts
Max. PV Array Power	4500W + 4500W
Max. PV Array Open Circuit Voltage	300VDC
PV Array MPPT Voltage Range	90VDC–260VDC

Specification	Value
Max. Solar Input Current per Channel	22A
Max. Solar Charge Current	150A (configurable)
Max. AC Charge Current	120A
Max. Combined Charge Current (PV + AC)	150A

13. Maintenance

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

- Keep the inverter clean and free from dust and debris.
- Ensure all ventilation openings are unobstructed.
- Periodically check all electrical connections for tightness and signs of corrosion.
- Inspect cables for any damage or wear.
- Monitor the LCD display for any warning messages or fault codes.

14. Warranty and Support

For warranty information, technical support, or service inquiries, please refer to the contact details provided in your product packaging or visit the official Anjfylque website. Keep your purchase receipt as proof of purchase for warranty claims.

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