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Anjfylque ANJ-3600W-48V-WIFI

Anjfylque 3600W Hybrid Solar Inverter 48V: User Manual

Model: ANJ-3600W-48V-WIFI

Introduction Safety Information Product Overview Setup Operation Maintenance Troubleshooting Specifications Warranty & Support

1. Introduction

This manual provides essential information for the safe and efficient operation of your Anjfylque 3600W Hybrid Solar Inverter. This inverter is designed to manage power from solar panels, batteries, and the utility grid, providing a reliable power supply for various applications. It features an 80A MPPT controller, pure sine wave output, and supports parallel operation for expanded capacity.
Please read this manual thoroughly before installation and use, and retain it for future reference.

2. Safety Information

WARNING: Improper installation or operation can lead to serious injury or death. Always follow local electrical codes and safety regulations.

- Installation must be performed by qualified personnel.
- Do not attempt to repair the inverter yourself. Contact qualified service personnel.
- Ensure proper grounding of the unit.
- Disconnect all power sources (solar, battery, utility) before performing any maintenance or wiring.
- Avoid contact with live terminals.
- Do not operate the inverter in wet conditions or near flammable materials.
- Ensure adequate ventilation around the inverter to prevent overheating.

3. Product Overview

The Anjfylque 3600W Hybrid Solar Inverter is an all-in-one solution for home energy management. It integrates a solar charger, inverter, and battery charger into a single unit, offering flexible power options.

Key Features:

- **Hybrid Functionality:** Supports grid-tied, off-grid, and anti-backflow operations.
- **UPS-Grade Seamless Switching:** Transfers to battery power in under 10 milliseconds during grid failures.
- **Smart BMS Communication:** RS485/CAN ports for real-time communication with lithium batteries.
- **High-Efficiency MPPT Charging:** 99.9% tracking efficiency, supporting up to 4000W PV input (Voc ≤300V, MPPT range 90-260V).
- **Flexible Expansion:** Up to six units can be connected in parallel for a total output of 21.6kW, supporting single-phase, split-phase, or three-phase systems.
- **Compact Design:** Lightweight and wall-mountable for space-saving installation.
- **Multiple Protections:** Includes overload, short circuit, over-temperature, and reverse polarity protection.
- **WiFi Module:** For remote monitoring and system status checks.

Package Contents:

Verify that all items are present in the package:

- Anjfylque 3600W Hybrid Solar Inverter
- Instruction Manual
- WIFI Module
- CT Cable (Current sharing detection line)
- Ring terminals (mounting tool)
- Parallel Cable (for multi-unit setups)



Figure 3.1: Package Contents. This image displays the inverter unit along with its accessories: instruction manual, anti-reverse current CT cable, WiFi module, mounting tools (ring terminals), and parallel cable.

Inverter Ports Overview:



Figure 3.2: Inverter Ports Overview. This diagram labels the various ports and connections on the inverter, including indicator lights, LCD screen, touch keys, overload protector, grounding screw hold, AC output port, WiFi port, AC input port, RS485 communication ports, USB communication port, cooling fan, ON/OFF rocker switch, dry contact port, current sharing port, parallel communication port, battery port, and PV port.

1. Indicator light
2. LCD screen
3. Touch key
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

4. Setup and Installation

Proper installation is crucial for the inverter's performance and safety. Consult a qualified electrician for installation if you are unsure.

4.1 Mounting the Inverter

The inverter is designed for wall-mounting. Ensure the mounting surface is strong enough to support the unit's weight. Allow sufficient clearance around the inverter for proper ventilation.



Figure 4.1: Compact Size for Easy Installation. This image illustrates the compact design of the solar inverter, making it easy to wall-mount and save space.

4.2 Wiring Connections

Follow the wiring diagram carefully. All connections must be secure and properly insulated.

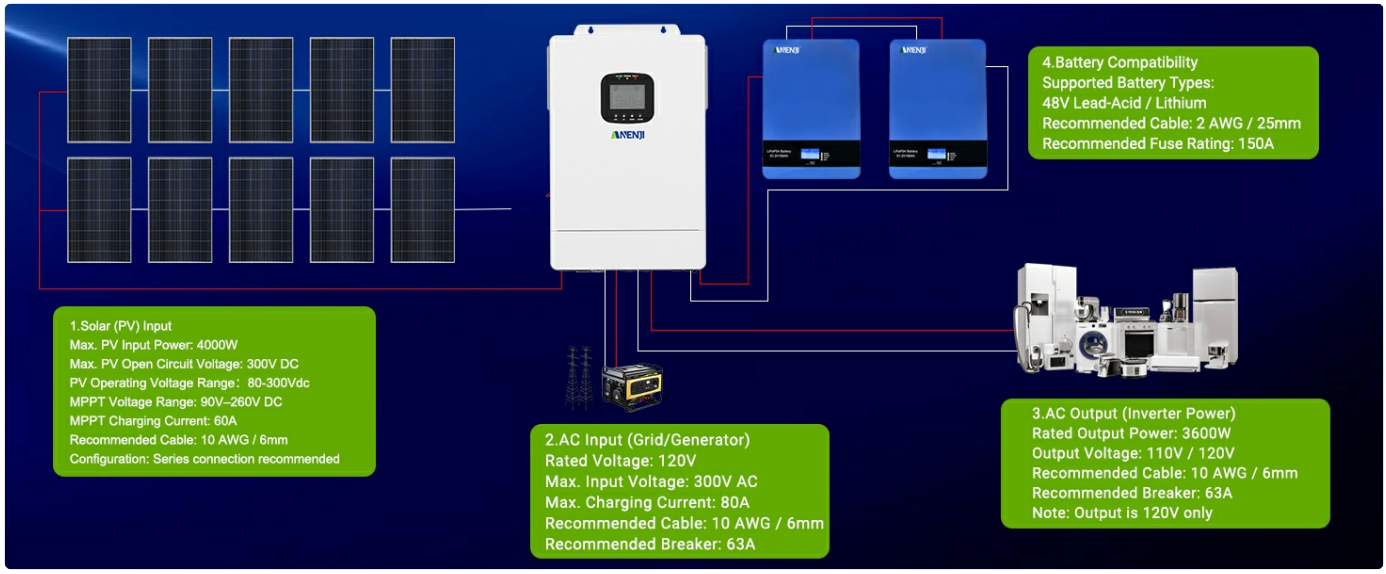


Figure 4.2: System Wiring Diagram. This diagram shows the connections for solar PV input, AC input (grid/generator), AC output (inverter power), and battery compatibility. It specifies recommended cable gauges and fuse ratings.

4.2.1 Solar PV Input:

- Max. PV Input Power: 4000W
- Max. PV Open Circuit Voltage: 300V DC
- PV Operating Voltage Range: 80-300Vdc
- MPPT Voltage Range: 90-260V DC
- MPPT Charging Current: 80A
- Recommended Cable: 10 AWG / 6mm
- Configuration: Series connection recommended

4.2.2 AC Input (Grid/Generator):

- Rated Voltage: 120V
- Max. Input Voltage: 300V AC
- Max. Charging Current: 80A
- Recommended Cable: 10 AWG / 6mm
- Recommended Breaker: 63A

4.2.3 AC Output (Inverter Power):

- Rated Output Power: 3600W
- Output Voltage: 110V / 120V
- Recommended Cable: 10 AWG / 6mm
- Recommended Breaker: 63A
- Note: Output is 120V only

4.2.4 Battery Compatibility:

The inverter supports various 48V battery types:

- 48V Lead-Acid / Lithium batteries
- Recommended Cable: 2 AWG / 25mm

- Recommended Fuse Rating: 150A



Figure 4.3: Versatile Battery Compatibility. This image highlights the inverter's support for 48V LEAD-ACID, GEL, FLD, and Lithium batteries.

4.3 Parallel Expansion (Up to 6 Units)

The inverter supports parallel operation for increased power output and system flexibility. Up to six units can be connected.

4.3.1 Split-Phase Connection:

For 240V and 120V systems, recommended for large residential or small commercial applications.

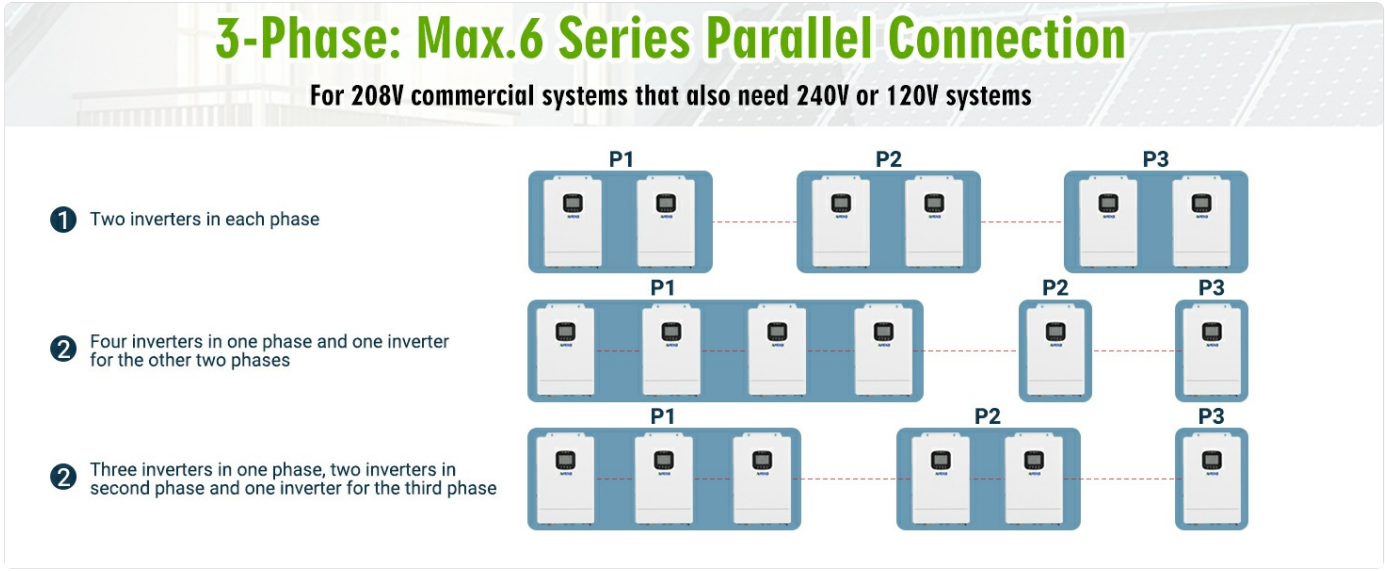


Figure 4.4: Split-Phase Series and Parallel Connection. This diagram illustrates configurations for one inverter per phase, two inverters per phase, and up to six inverters in two groups of three parallel for split-phase systems.

4.3.2 Three-Phase Connection:

For commercial applications needing 240V or 208V systems.



Figure 4.5: 3-Phase Series-Parallel Connection. This diagram shows various configurations for 3-phase systems, including one inverter per phase, two inverters in one phase, and combinations for larger systems.

5. Operating Instructions

The inverter offers flexible settings for charging and output priorities to optimize energy usage.

5.1 Charging Priority Settings

Control how the battery bank charges from different power sources.

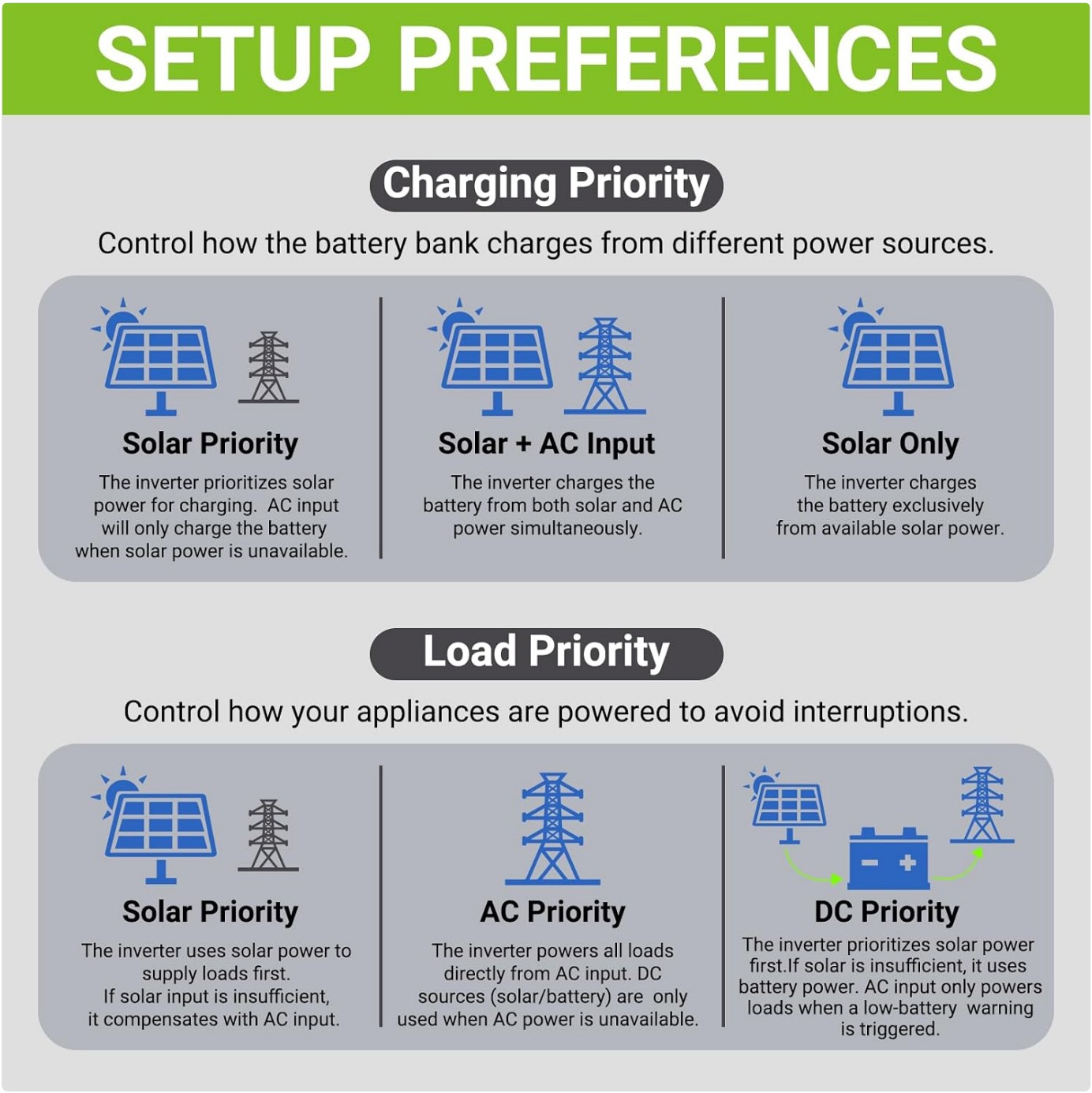


Figure 5.1: Charging Priority Options. This image details three charging priority modes: Solar Priority (inverter prioritizes solar for charging, AC only charges if solar is unavailable), Solar + AC Input (inverter charges from both solar and AC simultaneously), and Solar Only (inverter charges exclusively from available solar power).

- **Solar Priority:** The inverter prioritizes solar power for charging. AC input will only charge the battery when solar power is unavailable.
- **Solar + AC Input Simultaneously:** The inverter charges the battery from both solar and AC power simultaneously.
- **Solar Only:** The inverter charges the battery exclusively from available solar power.

5.2 Output Source Priority Settings

Control how your appliances are powered to avoid interruptions.

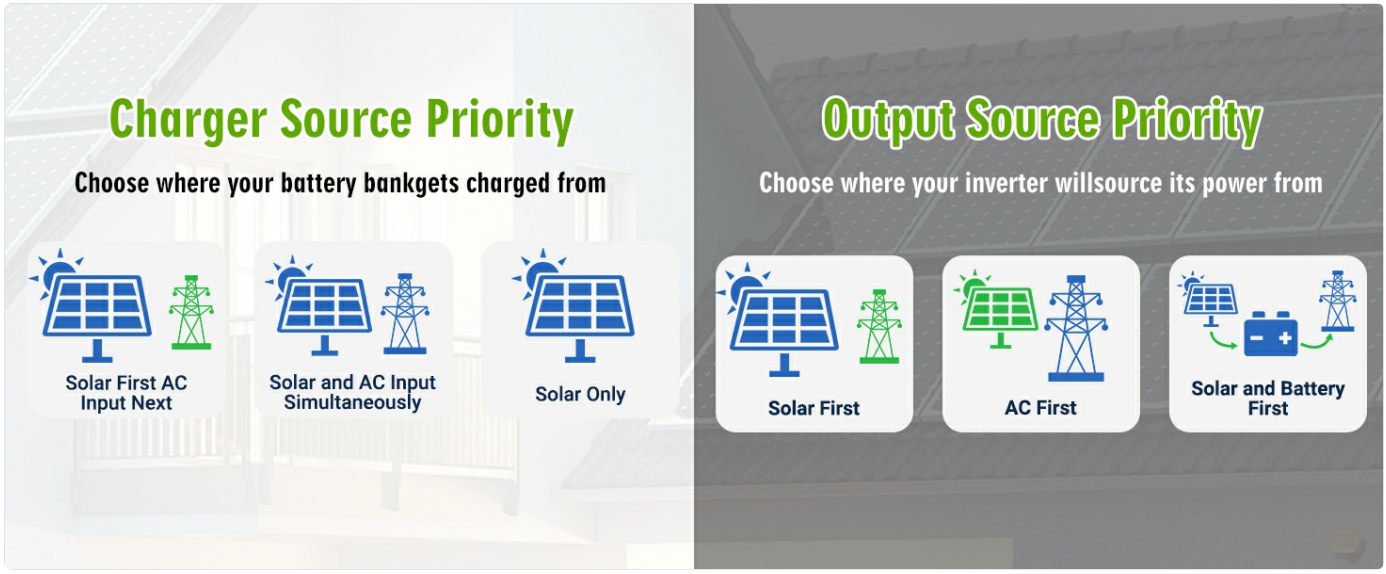


Figure 5.2: Output Source Priority Options. This image illustrates three output priority modes: Solar First (powers appliances from solar, AC input supplies if solar is insufficient), AC First (redirects AC input to power all appliances, uses solar/batteries only if AC is unavailable), and DC Priority (prioritizes solar, then battery, AC input only when battery voltage drops to a programmable value).

- **Solar First:** Power your appliances from solar power first. If solar power is not enough, the AC input will supply power to the appliances at the same time.
- **AC First:** Redirect the AC Input to power all appliances and only use solar and batteries when your AC input is not available.
- **DC Priority (Solar and Battery First):**Prioritize solar power first. If solar is not enough, the battery bank will supply power. AC input only when the voltage drops to a programmable value.

5.3 WiFi Remote Monitoring

The included WiFi module allows you to monitor your hybrid inverter system remotely via a mobile application. Registration is required for setup.



Figure 5.3: WiFi Remote Monitoring. This image shows the inverter connected to a WiFi module, with a person monitoring the system on a smartphone, illustrating the remote monitoring feature.

6. Maintenance

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

- **Cleaning:** Keep the inverter's exterior clean and free from dust. Use a dry cloth. Do not use liquid cleaners.
- **Ventilation:** Ensure the cooling fan and ventilation openings are not blocked. The smart temperature-controlled fan adjusts speed based on load and temperature.
- **Connections:** Periodically check all electrical connections for tightness and signs of corrosion.
- **Battery Inspection:** If using lead-acid batteries, check electrolyte levels and terminal conditions as per battery manufacturer guidelines. For lithium batteries, monitor BMS data via the WiFi app.
- **Environment:** Ensure the inverter is operating within its specified temperature and humidity ranges.

7. Troubleshooting

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

Problem	Possible Cause	Solution
Inverter not turning on	No DC input from battery/solar; AC input not present; ON/OFF switch off; Blown fuse.	Check battery connections and voltage; Verify AC input; Ensure ON/OFF switch is in 'ON' position; Check fuses.
No AC output	Overload; Short circuit; Over-temperature; Battery low voltage; Output breaker tripped.	Reduce load; Check for short circuits; Allow inverter to cool; Charge battery; Reset output breaker.
Low battery charging current	Insufficient solar input; AC input current limit set too low; Battery full.	Check solar panel connection and sunlight; Adjust AC charging current setting; This is normal if battery is full.
WiFi monitoring not working	WiFi module not connected; Incorrect network configuration; App not registered.	Ensure WiFi module is securely connected; Verify network settings; Register the app as per instructions.
Error code on LCD	Specific system fault.	Refer to the detailed error code list in the full user manual or contact support with the code.

8. Specifications

Feature	Specification
Brand	Anjfylque
Model Name	ANJ-3600W-48V-LVP-WIFI
Wattage	3600 watts
Voltage	48 Volts (DC)
Input Voltage	120 Volts (AC)
Output Power	3600 Watts
Output Voltage	120 Volts (AC)
Peak Output Power	7200 Watts
Electrical Output Waveform	Pure Sine Wave
Frequency	60 Hz
MPPT Controller	Built-in 80A
Max. PV Input Power	4000W
Max. PV Open Circuit Voltage	300V DC
MPPT Voltage Range	90-260V DC
Parallel Capability	Up to 6 units

Feature	Specification
Switching Time (UPS-Grade)	Under 10 milliseconds
Communication Ports	RS485/CAN (for BMS), WiFi
Display Type	LED
Item Dimensions (L x W x H)	16.33" x 11" x 3.9"
Certifications	CE certified, UL Energy Specifications Met

9. Warranty & Support

9.1 Warranty Information

The Anjfylque 3600W Hybrid Solar Inverter comes with a**5-year warranty**. This warranty covers defects in materials and workmanship under normal use. 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.

9.2 Customer Support

For technical assistance, troubleshooting, or warranty inquiries, please contact Anjfylque customer support. Refer to the contact information provided in your product packaging or visit the official Anjfylque website.
Manufacturer: Anenxi Trade Limited

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