

WVC-700W

Generic WVC-700W Micro Inverter User Manual

MPPT Micro Solar Inverter with WiFi Mobile Phone Monitoring System

1. INTRODUCTION

This manual provides comprehensive instructions for the installation, operation, maintenance, and troubleshooting of your Generic WVC-700W Micro Inverter. This grid-tied micro inverter is designed to efficiently convert DC power from solar panels into AC power for your home or grid, featuring Maximum Power Point Tracking (MPPT) and intelligent WiFi monitoring.



Figure 1: Generic WVC-700W Micro Inverter with included accessories (screws, antenna, AC output line, and a smartphone displaying the monitoring app).

Micro Grid-Connected Inverter

Wireless WiFi communication APP monitoring

600W Silver



Figure 2: The Micro Grid-Connected Inverter shown installed with solar panels and a wind turbine in the background, highlighting its application in renewable energy systems.

2. SAFETY INFORMATION

Please read all safety instructions carefully before installation and operation. Failure to follow these instructions may result in electric shock, fire, or serious injury.

- Ensure all electrical connections are made by qualified personnel.
- Disconnect all power sources before performing any installation or maintenance.
- Do not attempt to disassemble or repair the inverter yourself. Contact customer service for assistance.
- Install the inverter in a well-ventilated area, away from flammable materials.
- Ensure proper grounding of the equipment.
- The inverter is IP65 waterproof, but avoid submerging it in water.

3. PACKAGE CONTENTS

Verify that all items listed below are included in your package:

- 1 x Micro Inverter (WVC-700W)
- 1 x Communication Antenna
- 2 x Set of Fixing Screws
- 1 x AC Output Line
- 1 x Installation User Manual (this document)

4. PRODUCT FEATURES

The Generic WVC-700W Micro Inverter offers advanced features for optimal solar energy conversion:

- **High Power Point Tracking (MPPT):** Optimizes energy collection from solar panels by accurately tracking and locking the maximum output power point, increasing power generation by over 25%.
- **Wide Voltage Input:** Supports a DC input range of 22V to 60V, with automatic adaptation to 120V/230V AC output voltage. Features secondary power transformation and automatic output shutdown during grid failure for enhanced safety.
- **APP Intelligent Monitoring:** Utilizes a wireless communication system for real-time monitoring via a mobile phone application. Track AC voltage, frequency, current, real-time power generation, and total power generation.
- **Stackable Use:** Multiple inverters can be stacked to meet higher power requirements, offering simple and flexible installation with low operating and maintenance costs.
- **IP65 Waterproof Quality:** Designed to prevent water ingress, with an aluminum alloy shell providing corrosion and oxidation resistance.



Figure 3: Visual representation of the inverter's IP65 waterproof rating under rain and its wide operating temperature range from -40°C to +65°C, suitable for various environmental conditions.

5. SPECIFICATIONS

Detailed technical specifications for the WVC-700W Micro Inverter:

Product information



Type:	Micro grid-tied inverter	Maximum output power:	700w
Material:	aluminum alloy + PCB board + various components	Rated AC current:	5.22A
Input the number of MC4 connectors:	4 groups	Operating temperature range:	-40°C to +65°C
MPPT maximum power point tracking voltage range:	30V-54V	Rated AC frequency:	50HZ
Operating voltage range:	22-60v	Monitoring system:	mobile APP
Minimum starting voltage:	20V	Output power factor:	>0.99
Maximum tributary input voltage:	60v	Output current total harmonic distortion:	THD <5%
AC output voltage:	120v/230v (automatic identification)	Maximum conversion efficiency:	95%
Maximum DC input power:	700w optional	MPPT tracking efficiency:	99.9%
Maximum DC input current:	4*12A	Waterproof grade:	IP65
Rated output power:	680w	Cooling method:	self-cooling

Figure 4: Diagram showing the physical dimensions (199mm x 210mm) and key specifications of the WVC-700W Micro Inverter.

Parameter	Value
Type	Grid-tied Micro Inverter
Model	WVC-700W
Material	Aluminum alloy + PCB board + various components
Number of MC4 Input Connectors	2 groups (for 700W model)
MPPT Max. Power Point Tracking Voltage Range	30V - 54V
Operating Voltage Range	22 - 60V
Minimum Start-up Voltage	20V
Max. Branch Input Voltage	60V
AC Output Voltage	120V/230V (automatic identification)

Parameter	Value
Max DC Input Power	700W
Operating Temperature Range	-40°C to +65°C
Rated AC Frequency	50Hz
Monitoring System	Mobile Phone APP
Output Power Factor	>0.99
Total Harmonic Distortion Rate of Output Current	THD<5%
Maximum Conversion Efficiency	95%
MPPT Tracking Efficiency	99.9%
Waterproof Class	IP65
Cooling Method	Auto - cooling
Item Weight	2.2 pounds
Manufacturer	WANGYYDS
Country of Origin	China

6. SETUP AND INSTALLATION

6.1 Physical Installation

The micro inverter can be installed in various locations, typically near the solar panels. Ensure the installation location allows for proper ventilation and access for wiring.



Figure 5: Examples of micro inverter installations, including on rooftops, walls, and ground-mounted solar arrays, demonstrating its versatility.

1. Choose a suitable mounting location, preferably shaded to prevent overheating, although the unit is auto-cooling.
2. Use the provided fixing screws to securely mount the inverter to a stable surface.
3. Ensure the communication antenna is properly attached for WiFi monitoring functionality.

6.2 Wiring Diagram

Follow the wiring diagram carefully to connect the solar panels and the AC grid.

Wiring Diagram

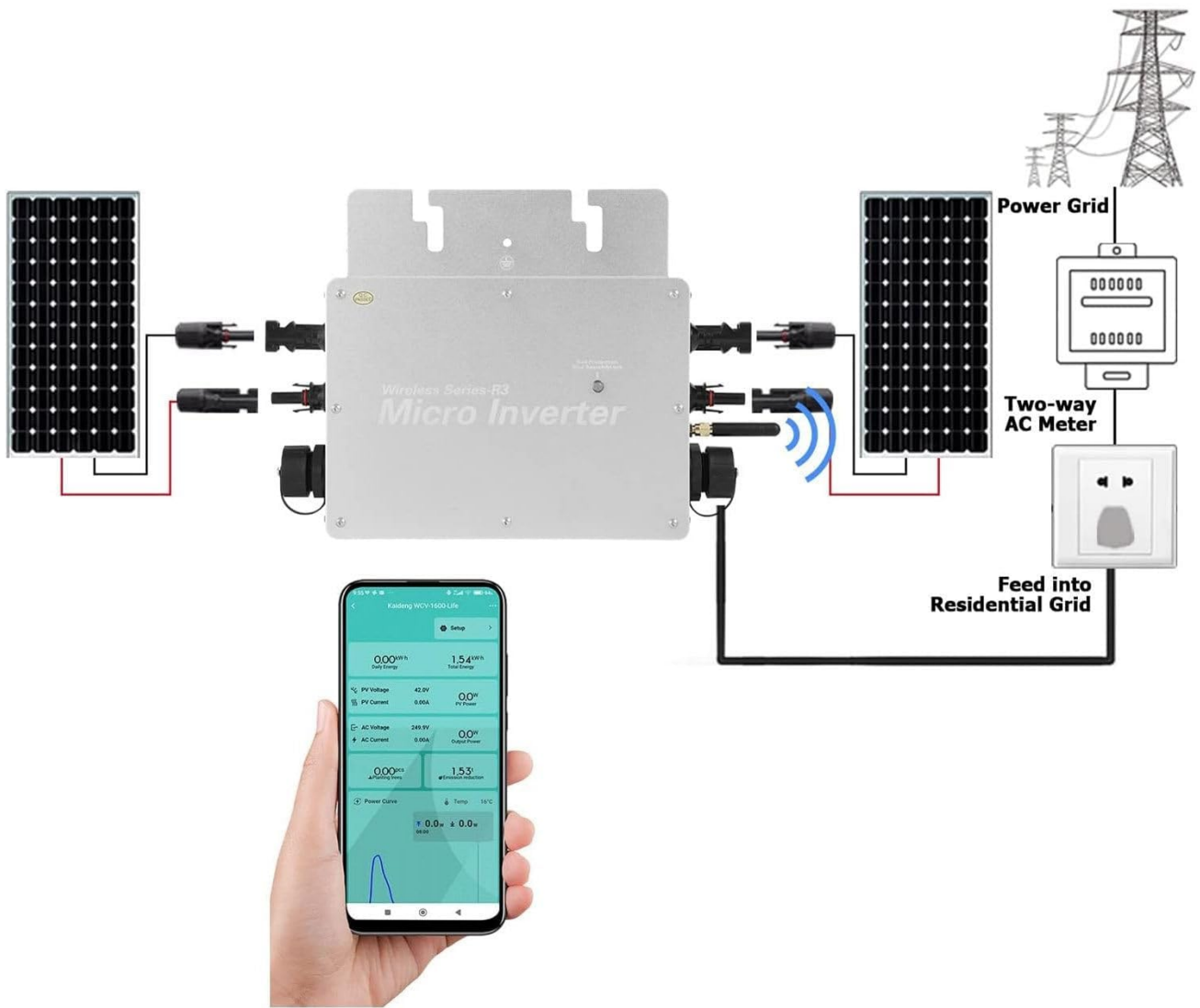


Figure 6: Detailed wiring diagram illustrating the connection of solar panels to the micro inverter's DC input, and the inverter's AC output to the residential grid via a two-way AC meter. Also shows the mobile app monitoring interface.

- DC Input Connection:** Connect your solar panels to the DC input connectors of the inverter.
 - The input voltage range is 22V to 60V.
 - Recommended solar panel power is greater than 30W, with a standard voltage of 36V.
 - It is recommended to connect solar panels in *parallel*. Series connection may cause the input voltage to exceed the inverter's operating range.
- AC Output Connection:** Connect the provided AC output line from the inverter to your residential grid. This typically involves connecting to a two-way AC meter.
- Ensure all connections are tight and secure to prevent loose contacts and potential hazards.

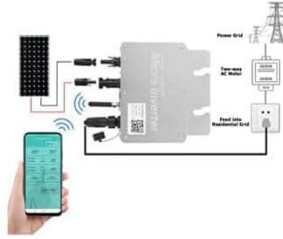
6.3 WiFi Mobile Phone Monitoring System Setup

The inverter supports intelligent monitoring via a mobile application. Follow these steps to set up the WiFi monitoring system:

Configuration Steps Of WIFI Cloud Monitoring



1
Download the APP (Cloud Intelligence) on your mobile phone or scan the QR code on the manual to download Register/login personal account



2
The mobile phone turns on Bluetooth, WIFI, positioning, and the device line is connected



3
Enter the APP, click "+" in the upper right corner to add devices



4
After scanning to the device is displayed, click Add



5
Enter your home wifi account password information



6
Click Next to start connecting the device



7
The device is added successfully, and the device name can be freely modified



8
The interface displays the current real-time power, added successfully

Figure 7: Step-by-step guide for configuring the WiFi cloud monitoring system, from downloading the app to viewing real-time power data.

- 1. Download the APP:** Download the "Cloud Intelligence" APP. You can scan the QR code provided in the manual or visit the official download link: [Download APP](#). Register or log in to your personal account.
- 2. Enable Connectivity:** On your mobile phone, turn on Bluetooth, WiFi, and location services. Ensure the device line (inverter) is connected and powered.
- 3. Add Device:** Open the APP, click the "+" icon in the upper right corner to begin adding devices.
- 4. Scan and Add:** After scanning, if the device is displayed, click "Add".
- 5. Enter WiFi Information:** Enter your home WiFi account password information when prompted.
- 6. Connect Device:** Click "Next" to start connecting the device to your WiFi network.
- 7. Device Added:** Once the device is successfully added, you can freely modify its name for easy identification.
- 8. View Data:** The APP interface will display current real-time power generation and other important parameters.

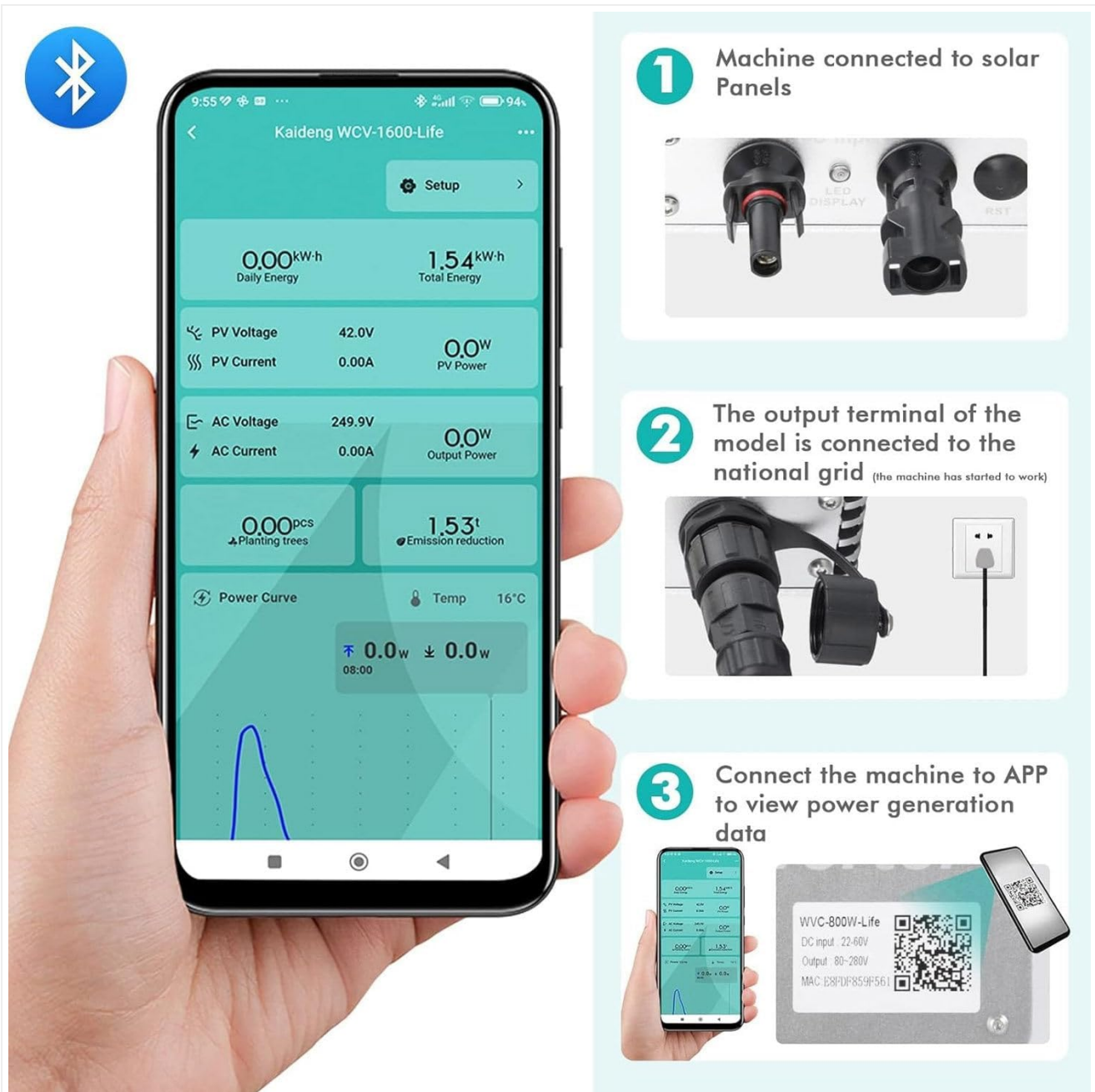


Figure 8: Screenshot of the mobile application interface showing real-time data such as PV voltage, current, AC voltage, AC current, output power, and total energy generation. It also illustrates the connection process from solar panels to the app.

7. OPERATING INSTRUCTIONS

Once installed and connected, the WVC-700W Micro Inverter operates automatically.

- **Automatic Operation:** The inverter will automatically start converting DC power from your solar panels to AC power and feed it into the grid when sufficient sunlight is available.
- **Grid Fault Protection:** In the event of a power grid failure, the inverter will automatically shut off its output for safety.
- **Monitoring:** Use the mobile APP to monitor the inverter's performance in real-time. This includes checking power generation, voltage, current, and frequency.
- **Indicator Lights:** Observe the indicator lights on the inverter for status:
 - **Red Protection:** Indicates a fault or protection mode.
 - **Green Search & Lock:** Indicates the inverter is searching for the maximum power point or is locked onto it and operating normally.

8. MAINTENANCE

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

- **Cleaning:** Periodically clean the exterior of the inverter to remove dust and debris. Use a soft, dry cloth. Do not use abrasive cleaners or solvents.
- **Inspection:** Regularly inspect all wiring connections for any signs of damage, corrosion, or looseness. Ensure the mounting is secure.
- **Ventilation:** Ensure that the area around the inverter remains clear to allow for proper auto-cooling.
- **Software Updates:** Check the mobile APP for any available firmware updates for the inverter to ensure optimal performance and security.

9. TROUBLESHOOTING

This section provides solutions to common issues you might encounter.

Problem	Possible Cause	Solution
Inverter not producing power (Green light off)	No DC input from solar panels; Insufficient sunlight; AC grid disconnected; Inverter fault.	Check solar panel connections and sunlight conditions. Verify AC grid connection. If problem persists, contact support.
Red Protection light is on	Over-voltage/under-voltage; Over-temperature; Grid fault; Internal error.	Check input/output voltages. Ensure proper ventilation. If grid is stable, power cycle the inverter. If error persists, contact support.
APP not connecting to inverter	WiFi/Bluetooth off on phone; Incorrect WiFi password; Inverter not powered; Inverter out of WiFi range.	Ensure phone's WiFi/Bluetooth is on. Re-enter WiFi password. Check inverter power. Move phone closer to inverter or improve WiFi signal.
Low power output	Shading on solar panels; Dirty solar panels; Suboptimal panel angle; DC input voltage too low.	Clear any shading. Clean solar panels. Adjust panel angle for optimal sun exposure. Verify solar panel voltage.

10. WARRANTY AND SUPPORT

Your Generic WVC-700W Micro Inverter is manufactured by WANGYYDS.

- **Warranty:** For specific warranty terms and conditions, please refer to the documentation provided at the time of purchase or contact your retailer.
- **Customer Service:** If you have any questions or require technical assistance, please contact our customer service team. We aim to reply within 24 hours.
- **Manufacturer:** WANGYYDS

