Lybunair WVC-300

WVC 300 Solar Micro Inverter User Manual

Model: WVC-300 | Brand: Lybunair

1. Introduction

This manual provides essential information for the installation, operation, and maintenance of the Lybunair WVC-300 Solar Micro Inverter. This device is designed for household photovoltaic power generation systems, converting DC power from solar panels into AC power for grid connection.
The WVC-300 Micro Inverter offers:

- **Enhanced Security:** Input and output are fully isolated, guaranteeing heightened security and reliability.
- **Smart Tracking:** Features high-speed MPPT (Maximum Power Point Tracking) and reverse power transmission, optimizing efficiency.
- **Scalable Units:** Designed for parallel stacking with integrated high-accuracy electric meters, making expansion easy and adaptable to global voltage/frequency standards.
- **Innovative Cooling:** Employs a self-cooling technique to dissipate heat, ensuring longevity and stable performance, complemented by mobile app monitoring for convenience.
- **Grid-Connected Efficiency:** Supports forward full-bridge topology for high-frequency modulation, facilitating efficient grid connection and enhancing overall system productivity.

2. Safety Information

Important Safety Instructions:

- Before installing WVC series micro-inverter products, please read this manual thoroughly and pay attention to all installation details.
- This manual contains important instructions that should be followed when installing and maintaining Kadant micro-inverters.
- To reduce the risks of electric shock and ensure safe installation and operation of the inverter, always follow the safety symbols present in this document to indicate danger situations and important safety instructions.

- Ensure all electrical connections comply with local and national electrical codes.
- Only qualified personnel should perform installation and maintenance.

3. Package Contents

Upon opening the package, verify that all components are present and undamaged:

- 1 x Micro Inverter (WVC-300)
- 1 x Cable
- 1 x English Manual (this document)
- 1 x Bag of Accessories (2 x Screw, 2 x Nut, 4 x Additional Accessories, total 8pcs)

Figure 3.1: WVC-300 Micro Inverter and included accessories (screws, nuts, washers, cable).

4. Setup and Installation

Follow these steps carefully for proper installation of the WVC-300 Micro Inverter.

4.1. Physical Installation

1. **Step 1: Mount the Inverter.** Use the screws provided with the machine to install and fix the inverter on the support of the photovoltaic panel or a flat board.
2. **Step 2: Connect DC Input.** Connect the positive and negative poles of the DC connection MC4 plug on the photovoltaic board to the DC input terminal of the inverter. The input voltage range is 30-60V DC.
3. **Step 3: Connect AC Output.** Open the waterproof cover of the AC output connector of the inverter and connect the AC cable to the AC waterproof plug. The connection method is shown in the plug connection diagram.

4. **Step 4: Connect to AC Main Cable.** Connect the AC output cable from the inverter to the AC main cable.
5. **Step 5: Repeat for Multiple Units.** Repeat steps 1 to 3 to install and connect all additional inverters if you are using multiple units in parallel.
6. **Step 6: Connect to Utility Grid.** Connect the AC main cable to the utility grid to start your green energy journey.

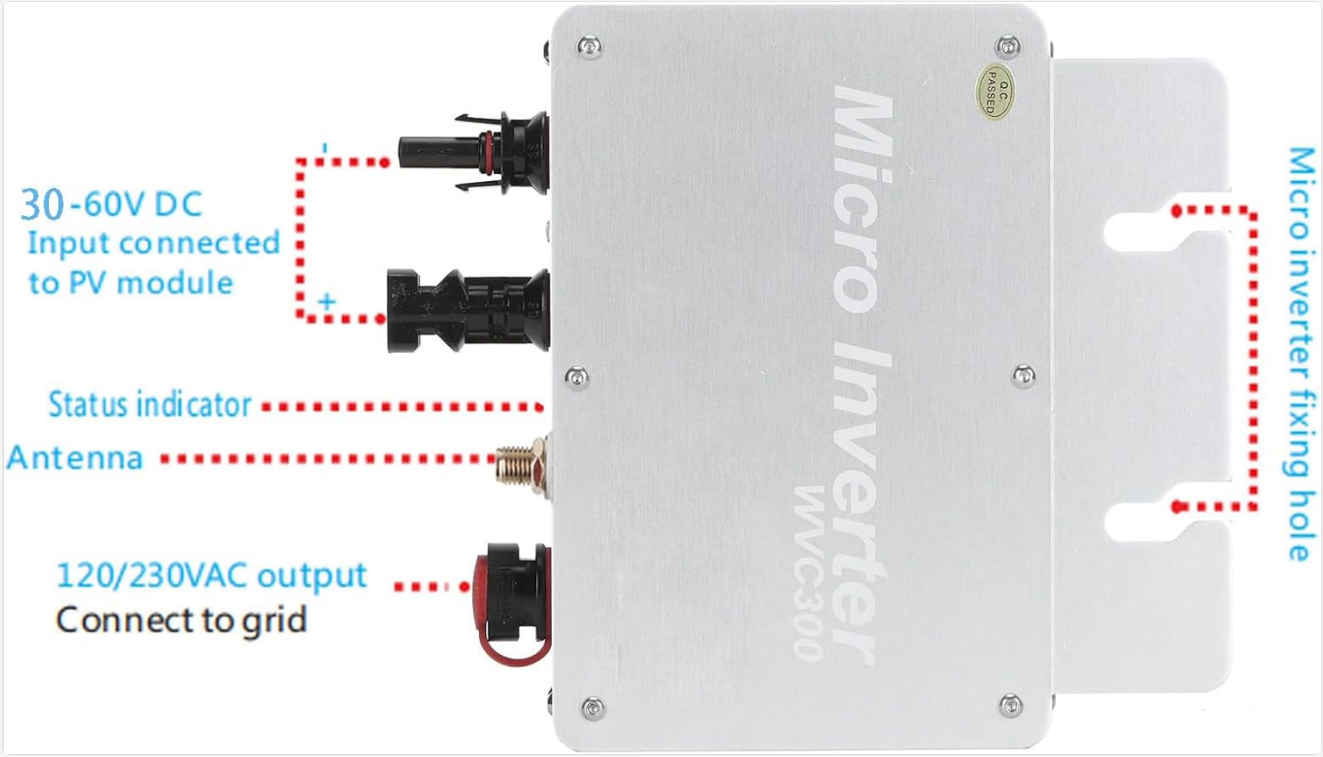

Figure 4.1: Diagram showing DC input (30-60V), status indicator, antenna, and 120/230VAC output connections for the WVC-300 Micro Inverter.

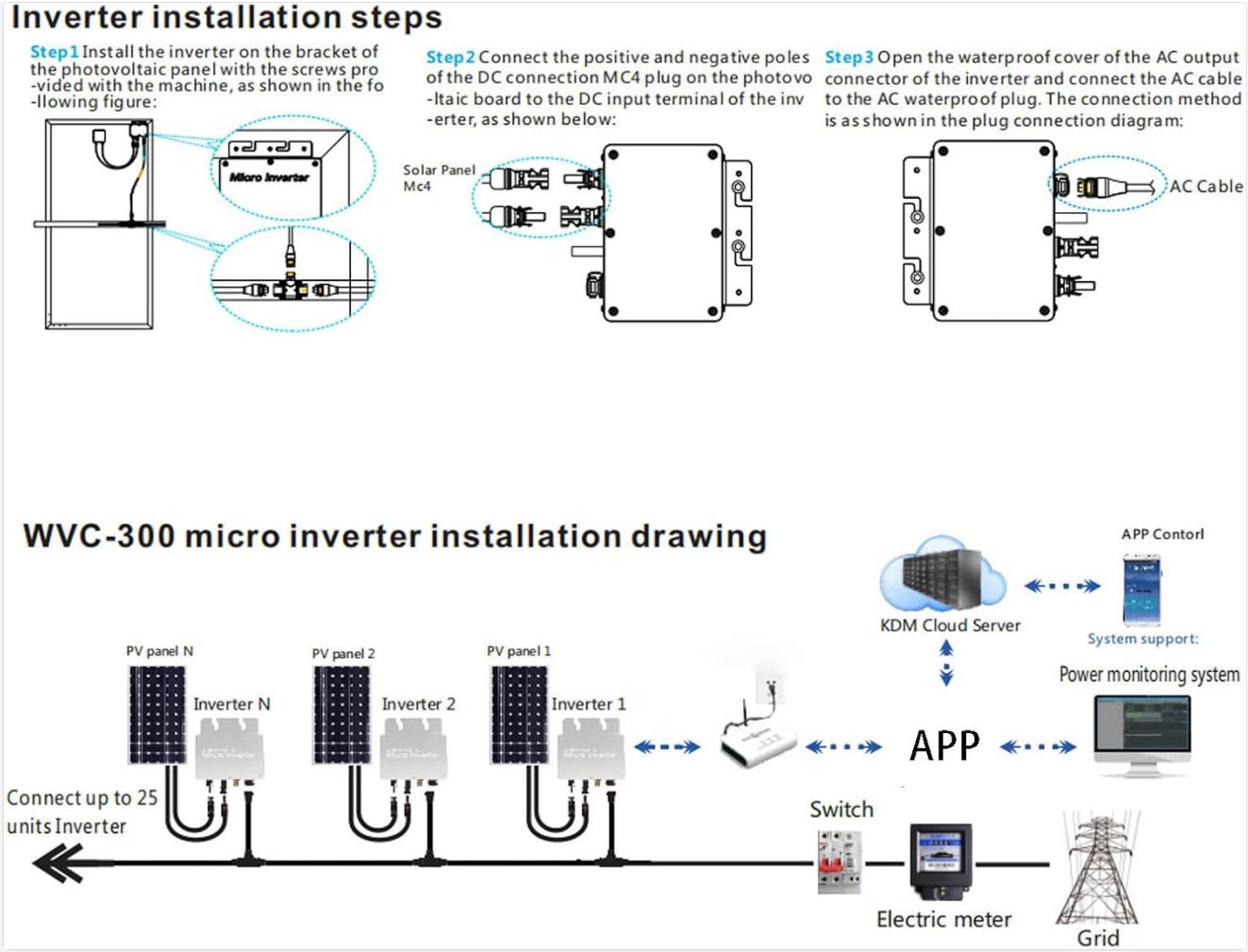

Figure 4.2: Visual guide for inverter installation, including mounting, DC connection, and AC connection.

Figure 4.3: Example of a WVC-300 Micro Inverter installation with solar panels in a field setting.

Figure 4.4: Example of a WVC-300 Micro Inverter installation with solar panels on a residential rooftop.

5. Operating Instructions

Once installed and connected to the utility grid, the WVC-300 Micro Inverter will automatically begin converting DC power from your solar panels into AC power. The inverter features high-speed MPPT to maximize energy harvest from your solar array.

5.1. Monitoring System

The WVC-300 supports mobile app monitoring for convenience. This allows you to track the performance of your solar power generation system.

Figure 5.1: Illustration of smartphone app monitoring for the solar power system, showing data flow to a cloud server and system support.

For detailed instructions on setting up and using the mobile app, please refer to the specific app guide or contact Lybunair support.

6. Maintenance

The WVC-300 Micro Inverter is designed for low maintenance. It employs a self-cooling technique to dissipate heat, contributing to its longevity and stable performance.

- **Regular Inspection:** Periodically inspect the inverter and all connections for any signs of damage, corrosion, or loose wiring.
- **Cleaning:** Ensure the inverter's exterior is clean and free from dust or debris that could obstruct airflow. Use a soft, dry cloth for cleaning. Do not use abrasive cleaners or solvents.
- **Waterproof Integrity:** The solar inverter is waterproof. However, ensure all waterproof covers and seals remain intact, especially after any maintenance or inspection.

Figure 6.1: The WVC-300 Micro Inverter is designed to be waterproof, suitable for outdoor installation.

Caution: Do not attempt to open the inverter casing. There are no user-serviceable parts inside. Refer all servicing to qualified service personnel.

7. Troubleshooting

This section provides basic troubleshooting steps for common issues. For more complex problems, contact Lybunair customer support.

- **No Power Output:**
  - Check DC input connections from solar panels. Ensure correct polarity and voltage (30-60V DC).
  - Verify AC output connections to the main grid.
  - Check the status indicator light on the inverter. Refer to the indicator guide (if available in separate documentation) for specific error codes.
  - Ensure the utility grid is active and stable.

- **Low Power Output:**
  - Check solar panel cleanliness and shading.
  - Verify solar panel health and performance.
  - Ensure proper ventilation around the inverter to prevent overheating.
- **App Monitoring Issues:**
  - Ensure the inverter's antenna is properly connected.
  - Check your internet connection and router settings.
  - Verify the app is updated to the latest version.

8. Specifications

Feature	Specification
Model	WVC-300
Material	Aluminum Alloy + Electronic Components
Product Size (Approx.)	15.1 x 16.5 x 3.9 cm / 5.9 x 6.5 x 1.5 inches
Weight (Approx.)	1017g / 35.9oz (2.24 pounds)
Input Voltage Range	30-60V DC (from PV module)
Output Voltage	120/230VAC (Grid-connected)
Cooling Method	Self-cooling
ASIN	B0DCP6VVGC
Item Model Number	Lybunairorb5myv2eu
Manufacturer	Lybunair

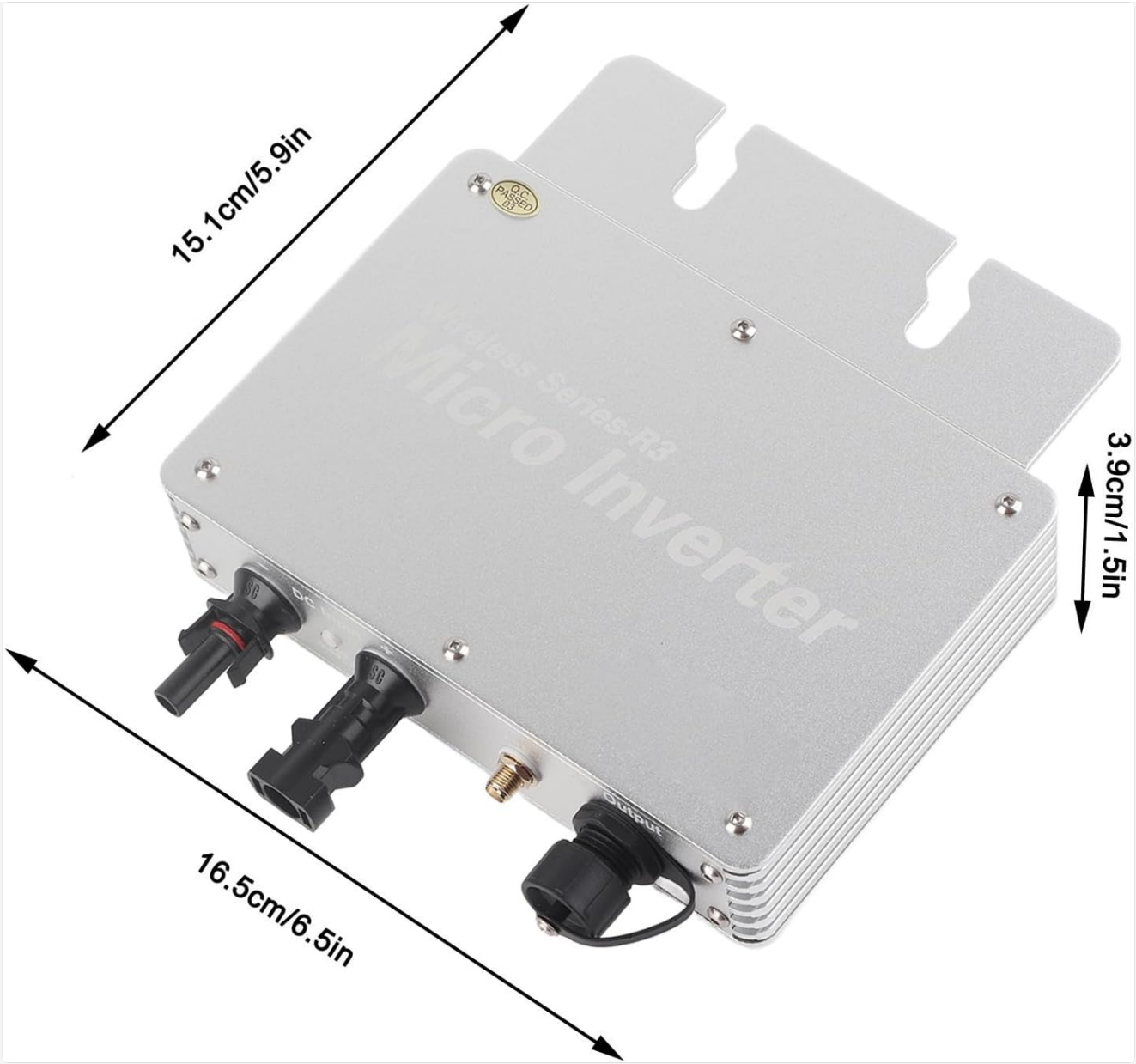

Figure 8.1: Approximate dimensions of the WVC-300 Micro Inverter.

9. Warranty and Support

For warranty information, technical support, or service inquiries, please contact Lybunair customer service. Keep your purchase receipt as proof of purchase.

For the most up-to-date support information, please visit the official Lybunair website or contact your local distributor.

Online Support: www.lybunair.com/support (*Note: This is a placeholder link, replace with actual support URL if available.*)