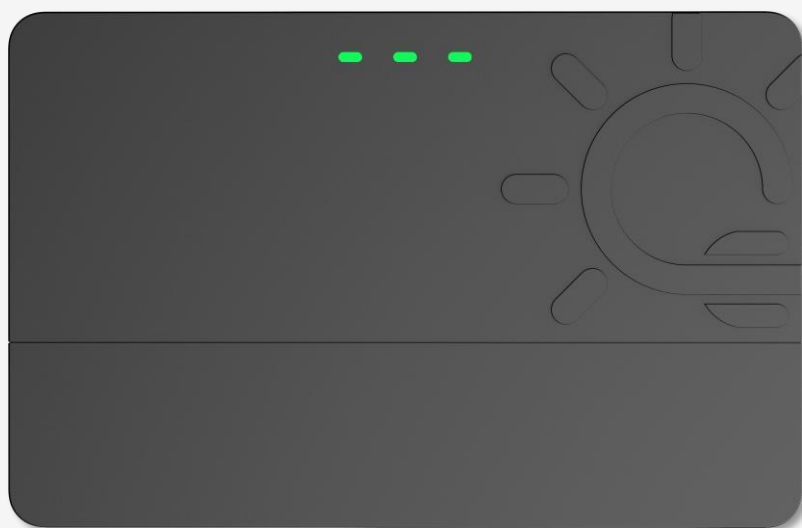




User Manual

EQ2-MU-WG

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Overview

This manual introduces the safety precautions, product features, storage guidelines, installation and connection procedures, power-on testing, equipment maintenance, replacement methods, and troubleshooting for the gateway product EQ2-MU-WG.

To ensure optimal reliability and comply with warranty requirements, carefully read this manual before installing and operating the device, and strictly follow the instructions provided.

Intended Users

This manual is intended for the following personnel:

- Professional technical personnel
(All installation and maintenance operations must be performed by qualified technical personnel with appropriate certifications.)

Symbol Conventions

The following symbols may appear in this manual, with their meanings defined as below:

Label	Description
 DANGER	Indicates an imminent hazardous situation which, if not avoided, will result in death, serious personal injury.
 WARNING	Indicates a potential hazardous situation which, if not avoided, could result in death or serious personal injury.
 CAUTION	Indicates a potential hazardous situation which, if not avoided, may cause moderate or minor injury, or equipment damage.
 NOTE	Indicates supplementary notes or explanations that contain essential information, with no risk of personal injury or equipment damage.

Version History

Revision	Date	Description
Rev01	March 2026	First release.

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1 Safety Precautions

1.1 Declaration

Before transporting, storing, installing, operating, or maintaining this product, carefully read this user manual and strictly follow its instructions. Adhere to all labels and safety warnings on the equipment. Failure to comply may result in equipment damage, voided warranty, or personal injury.

All operations, including transportation, installation, startup, and maintenance, must be performed by trained professional and technical personnel.

In addition to the contents of this manual, compliance with applicable international, national, and regional laws, regulations, standards, norms, and industry practices is required.

Grid connection and operation shall only be permitted after obtaining approval from the local electric power authority.

The Company shall not assume any responsibility caused by violation of safety operation requirements or violation of safety standards in the design, production and use of the equipment.

This device shall only be used in environments compliant with its design specifications. Any malfunction, operational failure, or component damage resulting from non-compliant usage shall be excluded from the product warranty. The Company shall not be liable for any personal injury, property damage, or other consequential losses arising therefrom.

All operations, including transportation, storage, installation, operation, use, and maintenance, shall comply with applicable laws, regulations, standards, and normative requirements.

Reverse engineering, decompilation, disassembly, adaptation, implantation, or any derivative operations of the device software are strictly prohibited. No attempts shall be made to study the internal implementation logic, obtain the software source code, infringe intellectual property rights, or disclose any performance test results of the

device software.

The Company shall not be liable for any consequences arising from the following circumstances:

- Installation/operation in environments failing to meet international, national, or regional standards;
- Violation of local laws, regulations, or norms during operation/maintenance.
- Installation/use of device by unqualified personnel;
- Failure to operate the product in accordance with the instructions in the product documentation and user manual;
- Unauthorized disassembly, modification of the equipment, or alteration of software code resulting in device damage;
- Damage caused by failure to meet storage conditions specified in the product documentation;
- Damage caused by you or any third-party transporter authorized by you;
- Damage caused by use of self-provided components or tools that fail to comply with local laws, regulations, and applicable standards;
- Damage caused by negligence, improper operation, or intentional acts;
- Damage resulting from force majeure events including natural disasters, wars, armed conflicts.

1.2 Personal Safety



Live working is strictly prohibited during installation. Live cable installation or removal is prohibited. Contact between cable cores and conductors may generate electric arcs or sparks, potentially causing personal injury.



Nonstandard and incorrect operation of energized equipment may cause electric shock, leading to casualties or property loss.



Watches, bracelets, rings, necklaces, or other conductive objects are strictly prohibited during operation to prevent electric shock or burns.



Only dedicated insulated tools with voltage resistance ratings compliant with local laws, standards, and normative requirements shall be used to avoid electric shock or short-circuit failures.



Operators must wear dedicated protective articles such as protective clothing, insulated shoes, safety goggles, safety helmets and insulated gloves during operation.

- Never deactivate device protection devices or ignore warnings, cautions, and preventive measures specified in manuals and on the devices.
- If any malfunction potentially causing personal injury or equipment damage is detected during operation, immediately terminate the operation, report to the supervisor, and implement effective protective measures.
- Do not energize the equipment until installation is completed and verified by qualified personnel.
- Never directly touch, use conductors to contact, or indirectly contact energized equipment through damp objects. Always measure voltage at contact points before touching any conductor surface or terminal to confirm no shock hazard exists.
- All operations, including transportation, installation, startup, and maintenance, must be performed by trained professional and technical personnel.
- Installation personnel must comply with all safety instructions and preventive measures specified in this manual, while adhering to requirements from authorized bodies and local regulations.

Anti-static Requirements

The static electricity generated by human body may damage static-sensitive components on single boards, such as large-scale integrated circuits (LSI).

- Before handling devices, single boards, modules with exposed circuits, or ASIC chips, strictly adhere to ESD protocols: Wear anti-static garments, grounded wrist straps, or ESD gloves, ensuring the strap's grounding end maintains proper contact.
- When handling single boards or modules with exposed circuits, always hold them by the edges where no components are mounted. Direct contact with components by hand is strictly prohibited.
- Disassembled single boards or modules must be packaged with ESD protective materials before storage or transportation.

1.3 Device Safety



Before making electrical connections, ensure the device is undamaged to prevent electric shock.

- This device contains no user-serviceable parts, therefore, never attempt to repair device components without authorization. Unauthorized disassembly, repair, or damage to the equipment and its internal components will void the warranty and may cause personal injury.
- Do not operate the device in any manner not specified in the user manual. Unauthorized use may cause personal injury or equipment damage.
- The use of unapproved accessories is prohibited, as it may lead to equipment failure or personal injury.
- Never operate the device with damaged or substandard cables/connectors.
- During installation, comply with all applicable local electrical codes and regulations.
- The device is designed for operation in environments with temperatures not exceeding 60°C.
- Do not alter, damage, or cover any markings or nameplates on the device.
- Do not clean electrical components (internal or external) with water, alcohol, oil, or any other solvents.
- Upon detection of liquid ingress, immediately turn off the power supply and discontinue all operations.
- All-pole power switches that meet the standards shall be installed in the electrical facilities of buildings.
- This product is for use only in restricted access areas.

1.4 Cable Safety



Before installing or servicing cables, always disconnect the circuit.

- Before the power cables are installed, it must be confirmed that the cable label identification is correct and the cable terminals have been insulated and protected.
- Ensure all cable routing complies with local regulations and wiring is correctly installed. Ensure all junction boxes are properly closed.
- When stripping cable sheaths, take care not to damage the copper conductors. If exposed wiring is damaged, the system may fail to operate normally.

- If the power cable length is insufficient, the cable must be replaced. Joints or soldering points on power cables are strictly prohibited.
- All cables must be securely connected, well insulated, and properly sized. Coiling, looping, or twisting of cables is strictly prohibited.
- Do not expose terminals or cable connectors to sustained tension, and avoid pulling or bending cables at connection points.
- Cable entry holes must be free of sharp edges to prevent damage from burrs or abrasion.
- Ensure cable connectors are free from dirt or debris.
- All cable entry holes must be subject to sealing treatment.
- Damaged cables must be replaced by a professional to avoid safety risks.
- Cables used in high-temperature environments may suffer insulation aging or damage. Maintain sufficient distance from heat-generating components or thermal zones.

1.5 Environment Safety



The equipment shall never be placed or installed in flammable, explosive, corrosive, humid, or volatile gas/smoke environments.



Keep the device away from heat or ignition sources (e.g., fireworks, candles, heaters).



During device operation, do not block the ventilation openings, cooling system, or cover them with any objects to prevent overheating, equipment damage.



Prior to drilling into walls during installation, verify that the drilling path is clear of concealed water pipes and electrical conduits.

- The device shall be used in environments that comply with its design specifications. Any malfunctions or component damage caused by non-compliant usage conditions shall not be covered under the product warranty. The Company shall not be held liable for any resulting personal injuries, fatalities, or property losses.
- Do not install, use or operate outdoor equipment and cables in severe weather such as lightning, rain, snow, and strong winds above grade 6 (this includes but is not limited to moving equipment, operating equipment and cables, plugging in and connecting to outdoor signal interfaces, working at heights, outdoor installation, and

door opening).

- Do not install the equipment in an environment with direct sunlight, dust, smoke, volatile gases, corrosive gases, infrared radiation, organic solvents, or high salt content.
- Do not install the equipment in an environment with metal conductive dust and magnetic conductive dust.
- Do not install the equipment in the area where fungi, molds, and other microorganisms are easy to grow.
- The site selection shall comply with the requirements of local laws, regulations, and relevant standards.
- The installation site must have firm ground conditions, free from spongy soil, soft soil, or other unstable geological formations. Areas prone to water accumulation, snow accumulation, or low-lying terrain are strictly prohibited. The station's horizontal plane shall be elevated above the region's historical highest water level.
- Never install the device in locations susceptible to flooding.
- The device is susceptible to corrosion in salt-affected areas. Outdoor installation in such regions is strictly prohibited. Salt-affected areas refer to regions within 500 meters of the coastline or areas affected by sea winds. The sea breeze-affected zone varies depending on meteorological conditions (e.g., typhoons, monsoons) or topographic features (e.g., embankments, hills).
- Before installation, operation, or maintenance, ensure that accumulated water, ice/snow, or other debris on the top surface is thoroughly cleared.
- When installing the device, please ensure that the installation surface is firm and meets the load bearing requirements of the equipment.
- Install the device in a protected, shaded, and dry space.
- The device is designed for operation in environments with temperatures not exceeding 60°C.
- Do not expose terminals or connectors to pressurized liquids.
- Do not immerse terminals or connectors in liquid continuously.
- Do not install the device in areas with strong vibrations, significant noise sources, or substantial electromagnetic interference.
- After installing the device, remove all empty packaging materials, including cartons, foam, plastic, and cable ties.
- All cable entry holes must be sealed during device installation.

2 Product Introduction

2.1 Model Specification

This document describes the following product model:

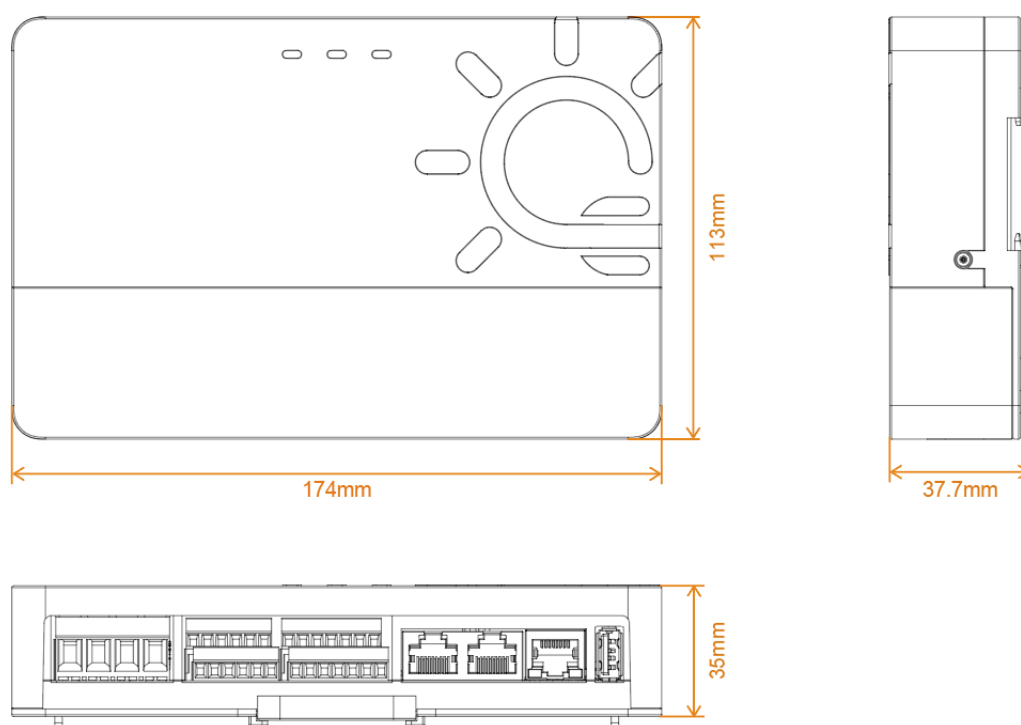
- EQ2-MU-WG

Model Specification

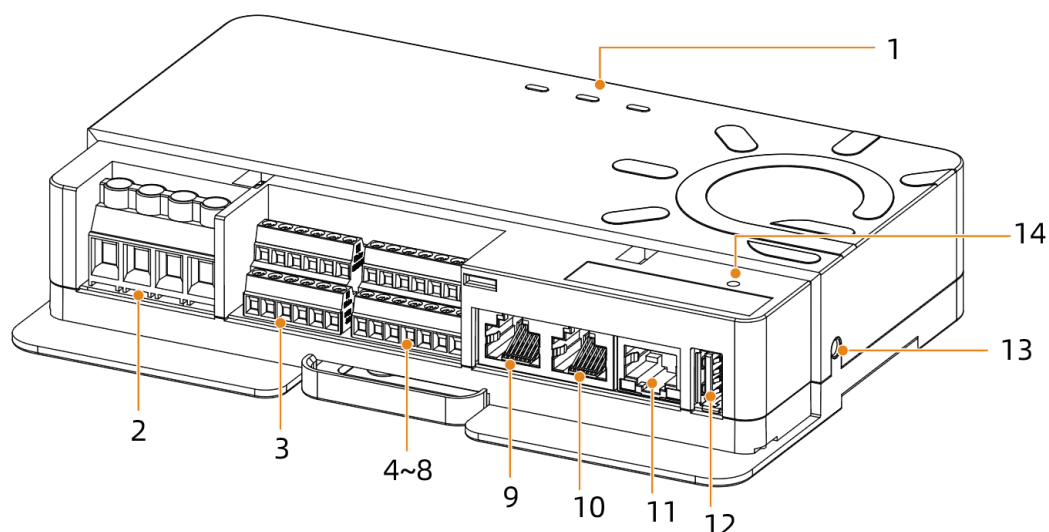
Item	Description
EQ2	Series name.
MU	Gateway device identification.
WG	Supports Wi-Fi and Ethernet connectivity.

2.2 Appearance Introduction

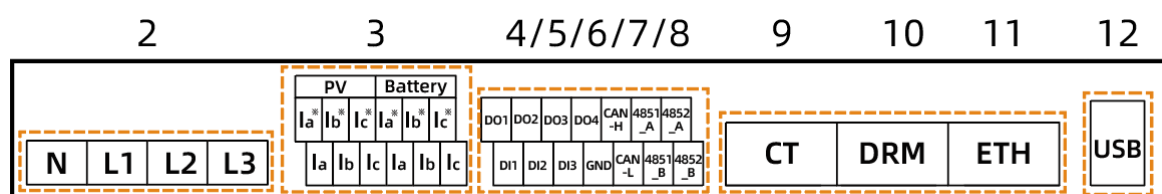
2.2.1 Product Dimensions



2.2.2 Appearance and Interface



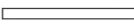
Interface Labels:



No.	Item	Description
1	LED Indicator	See Section 2.2.3 Description of LED Indicator.
2	Power & PLC Communication Interface	Single-phase Scenario: Connect to N and L1; Three-phase Scenario: Connect to N, L1, L2 and L3.
3	CT Interface	PV: For PV-side CT wiring; Battery: For battery side CT wiring.
4	DO Interface	Four digital outputs for connection to external devices such as heat pumps, relays, etc.
5	DI Interface	Three digital inputs for connection to external devices such as an ATS switch for on-grid/off-grid detection.
6	CAN Interface	One CAN communication port for connection to energy storage equipment.
7	RS4851 Interface	Supporting communication with third-party devices (e.g., M-Relay, electricity meters, diesel engines, etc.).
8	RS4852 Interface	Available for data acquisition by external devices.

9	CT Interface	RJ45 interface for direct connection to the grid CT.
10	DRM Interface	Used only for controlling third-party devices in Australia.
11	ETH Interface	Connecting to a wired network.
12	USB Interface	Reserved 4G interface.
13	Wi-Fi Antenna Interface	Used to connect the Wi-Fi antenna.
14	RESET	Press and hold for 3 seconds or longer to restore factory settings.

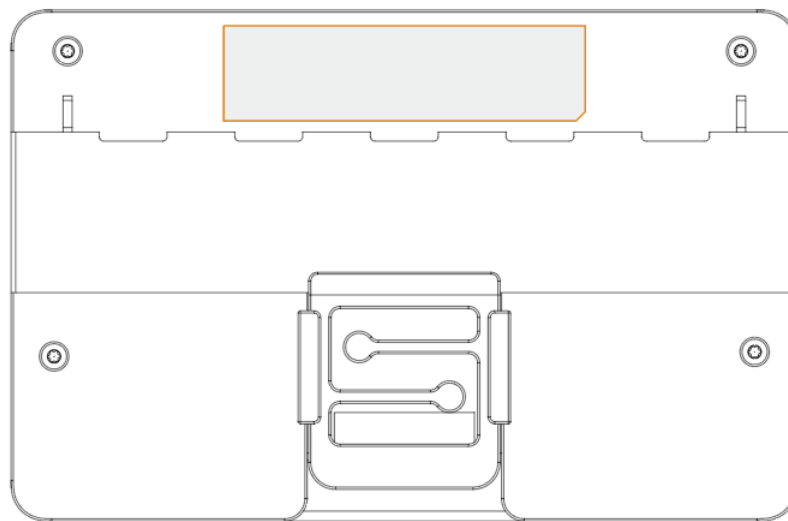
2.2.3 Description of LED Indicator

LED Indicator	Status		Description
 Microinverter communication indicator		Green-Solid	All microinverters are communicating.
		Green-Quick Flash (0.25s ON, 0.25s OFF)	Microinverter upgrade in progress
		Green-Slow Flash (1s ON, 1s OFF)	At least one microinverter is not communicating.
		Green-Slow Flash (3s ON, 3s OFF)	The devices are not communicating.
 Server communication indicator		Green-Solid	Server is communicating.
		Green-Quick Flash (0.25s ON, 0.25s OFF)	Online upgrade in progress
		Red-Slow Flash (1s ON, 1s OFF)	Internet connection is established, but the server connection is lost.
		Off	No network connection
		Green-Solid	All microinverters are producing.

Microinverter power production indicator		Green-Slow Flash (1s ON, 1s OFF)	At least one microinverter is not producing.
		Off	All microinverters are not producing.

2.2.4 Nameplate Description

The nameplate is positioned as follows, containing the trademark, product model, key technical parameters, and compliance certification marks.



Description of some nameplate icons:

Icon	Description
	The product has obtained CE certification.
	There is a risk of electric shock.
	Class II or double-insulated electrical equipment needs not to be grounded.
	The product has obtained TUV certification.



Waste Electrical and Electronic Equipment (WEEE) must not be disposed of as household waste. Instead, they shall be returned to the manufacturer or disposed of in compliance with local regulations.

2.3 Networking Application

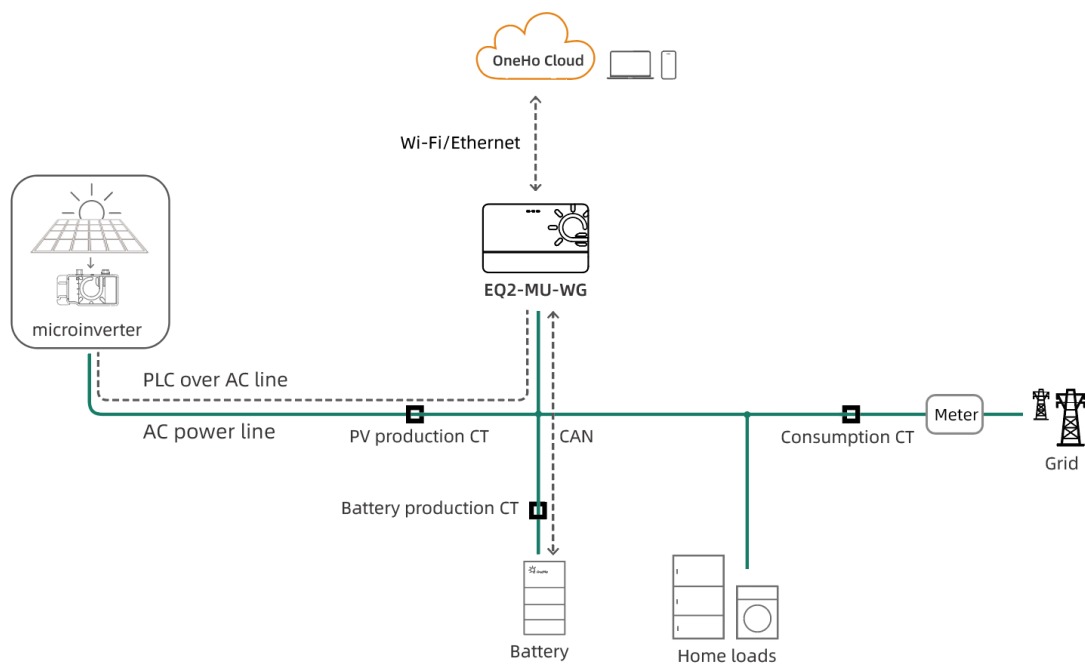
EQ2-MU-WG communicates with microinverters in the system via PLC (Power Line Communication) to collect operational data and status from all microinverters. It also transmits control commands to adjust system operation and perform maintenance. An EQ2-MU-WG can support networking with a maximum of 250 microinverters.

EQ2-MU-WG supports multiple internet connectivity modes, including Ethernet and Wi-Fi, enabling seamless data exchange with the OneHo Cloud Monitoring Service Platform. The system transmits operational data and status from all microinverters to the OneHo Cloud Monitoring Platform, while simultaneously delivering control commands and data from the cloud platform to the microinverters, enabling remote operation and maintenance of the system.

After completing the installation and networking of the gateway and microinverters, you can access the system via the Web portal or App to monitor and manage the devices.

The gateway communicates with the microinverters via PLC on one side, and connects to the cloud via a wired or wireless network on the other side.

The networking application diagram of EQ2-MU-WG with external devices is as follows:



3

Device Storage

If the device is not put into use immediately, the following storage requirements must be met:

- Do not remove the device's outer packaging.
- The storage temperature shall be maintained at -40°C to $+85^{\circ}\text{C}$; while the relative humidity shall be kept within 0% RH to 60% RH. The ambient air must not contain corrosive or flammable gases.
- Store the device in a clean, dry place, away from dust and moisture.
- During storage, it is recommended to inspect the device every three months. If packaging damage is found, promptly replace the packaging materials. If the outer packaging has been opened and the device is not put into immediate use, place it back into its original packaging and seal it with tape.
- If the storage duration is two years or longer, the device must be inspected and tested by qualified personnel before being put into service.

4 Preparation for Installation

4.1 Safety Precautions



- Live working is strictly prohibited during installation.
- All operations must be performed by trained professional and technical personnel.
- Operators must wear certified protective gear, including insulated suits, dielectric footwear, safety goggles, safety helmets, and insulated gloves, during operation.
- Please recheck all enclosed content within the "1 Safety Precautions".

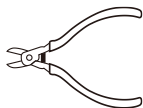
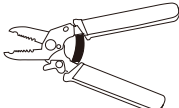
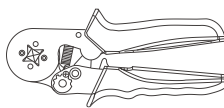
4.2 Inspect the Items inside the Package

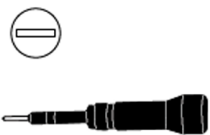
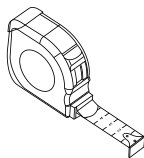
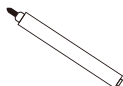
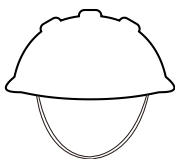
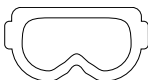
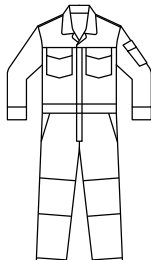
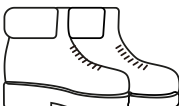
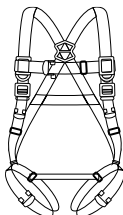
Before installation, confirm all items in the package are complete and undamaged. If any items are missing or damaged, please contact your distributor immediately.

The packaging list for a single EQ2-MU-WG unit is as follows:

No.	Item	Quantity	Description
1	EQ2-MU-WG	1	Standard equipment.
2	Wi-Fi Antenna	1	Installed when using Wi-Fi connectivity.
3	Quick Installation Guide	1	Guide on-site installation.

4.3 Preparation of Tools and Materials

Installation Tools			
			
Diagonal plier	Wire stripper	Wire crimper	Phillips insulated torque screwdriver

 Slotted insulated torque screwdriver	 Steel measuring tape	 Marker pen	 Multimeter
Installation Materials			
 Cable ties	 Cold-pressed terminals	 DIN 35mm rail	-
Personal Protective Equipment			
 Safety helmet	 Safety goggles	 Protective mask	 Insulated gloves
 Protective clothing	 Insulated shoes	 Safety belt	-

NOTE

The installation tools used include without limitation the aforesaid tools. If needed, please use other auxiliary tools.

4.4 Preparation of Cables

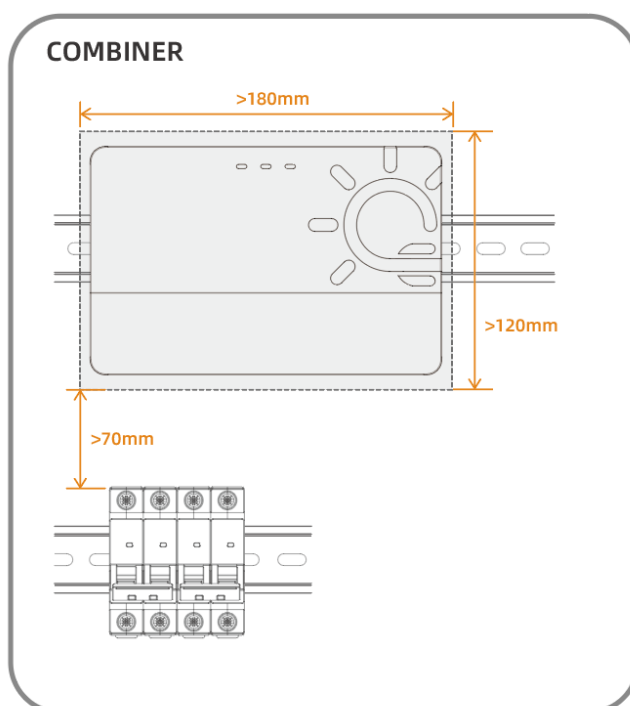
Name	Type	Conductor cross-sectional area (mm ²)
Single-phase AC input power line	Outdoor-rated copper-core cable (temperature resistance $\geq 90^{\circ}\text{C}$)	0.75~2.5
RS485 communication cable	Shielded Twisted-Pair (STP) outdoor-rated cable (2-core)	0.2-0.5 (recommended: 0.25)
Ethernet communication cable (optional)	Cat 5e cable, impedance $\leq 1.5\Omega/10\text{m}$, RJ45 connector	0.12-0.2 (recommended: 0.2)

4.5 Select an Installation Location



For specific requirements regarding installation environment safety, please review all content within "1.5 Environment Safety".

- Select the installation location in accordance with the space requirements shown in the diagram below.



- Install the device in a protected, cool, and dry space, such as inside a combiner. The device is designed for operation in environments with temperatures not exceeding 60°C.
- The device protection level is IP30, please install it in a suitable environment to guarantee the normal operation.
- Additionally, metallic enclosures may impair Wi-Fi signal strength.

4.6 Network Connectivity Planning

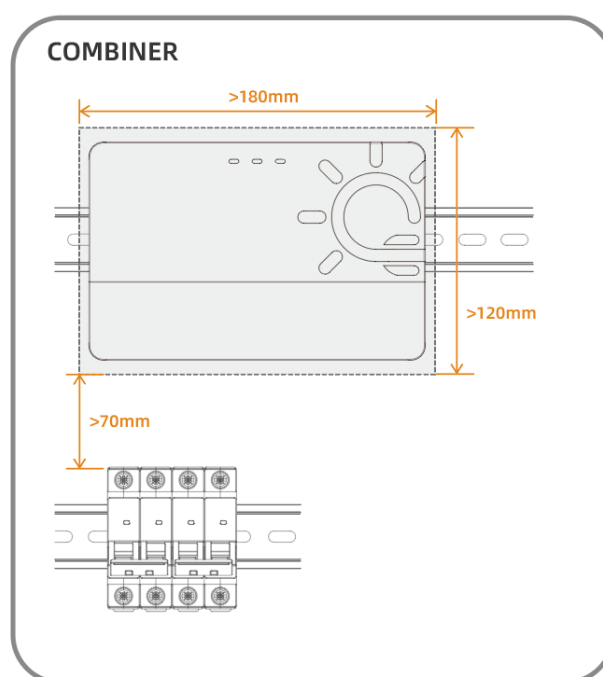
EQ2-MU-WG supports two connectivity methods, including Ethernet and Wi-Fi.

- For wired connection via Ethernet, prepare a standard Ethernet cable in advance to connect the gateway device and router.
- For wireless connection via Wi-Fi, install the external antenna and place the device within a 10-meter radius of the router to maintain optimal signal strength.

5 Installation and Connection

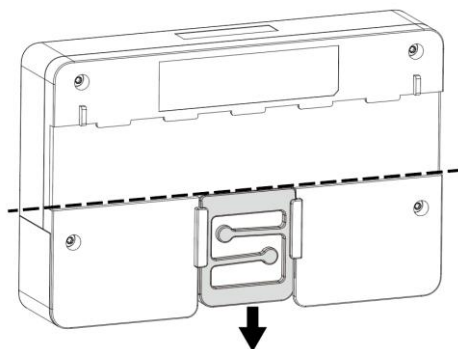
5.1 Install the DIN Rail

Select the installation location in accordance with the space requirements shown in the diagram below, and then install the DIN 35mm rail.



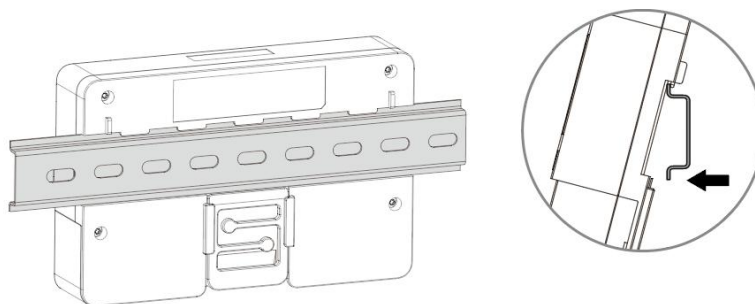
5.2 Mount the Device

1. Pull down the securing clip on the device.

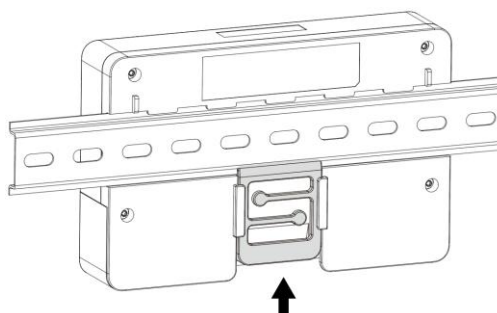


2. Hook the upper part of the device's slot onto the rail first, then snap the lower

part of the slot onto the rail. During installation, keep the securing clip pulled downward.

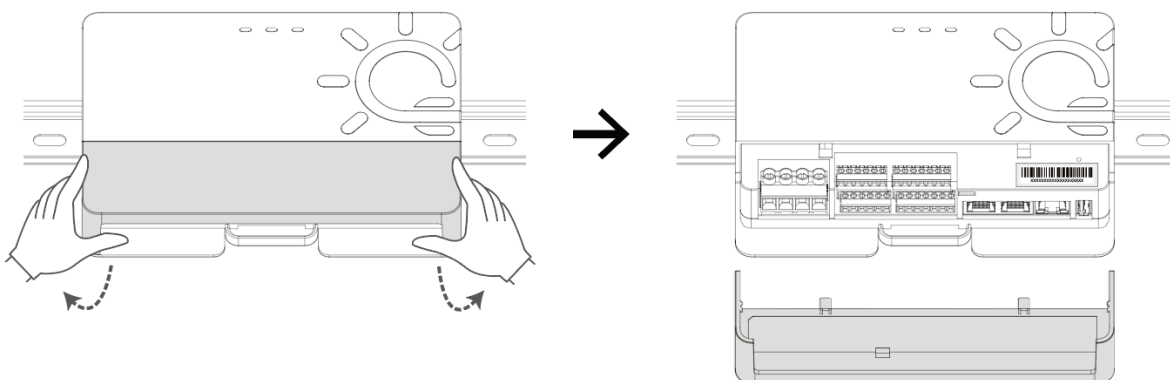


3. Release the securing clip.



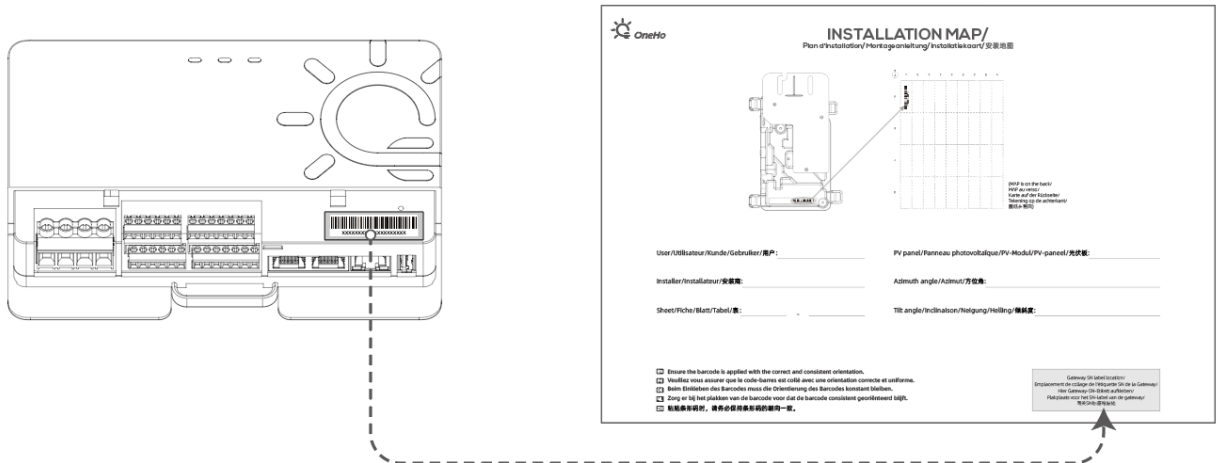
5.3 Remove the Device Cover

Hold the cover with both hands and rotate it outward to open.



5.4 Create the Installation Map

Remove the detachable label and affix it to the designated position on the installation map. (The installation map can be found in the microinverter packaging box.)



5.5 Connect the Cables



- The worksite must be equipped with compliant firefighting facilities, such as fire sand and CO₂ fire extinguishers.
- Always use dedicated protective gear and insulated tools to prevent electric shock or short-circuit faults.



- Equipment damage caused by incorrect wiring is not covered by the product warranty.
- Only qualified electrical technicians are permitted to perform electrical connection.
- Operators must wear appropriate personal protective equipment (PPE) during electrical connection.
- To prevent poor connections caused by excessive cable tension, it is recommended to leave sufficient slack and form a service loop before connecting to the corresponding port.



When preparing cables, always work away from the device to prevent metal debris from entering the device, which could result in equipment damage.

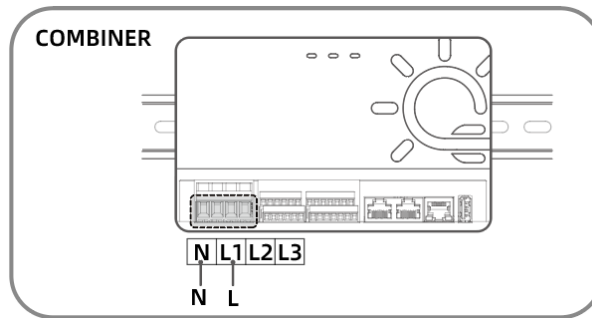


The cable colors in all diagrams of this section are for illustrative purposes only. Actual cable selection shall comply with local cable standards.

5.5.1 Single-phase Scenario

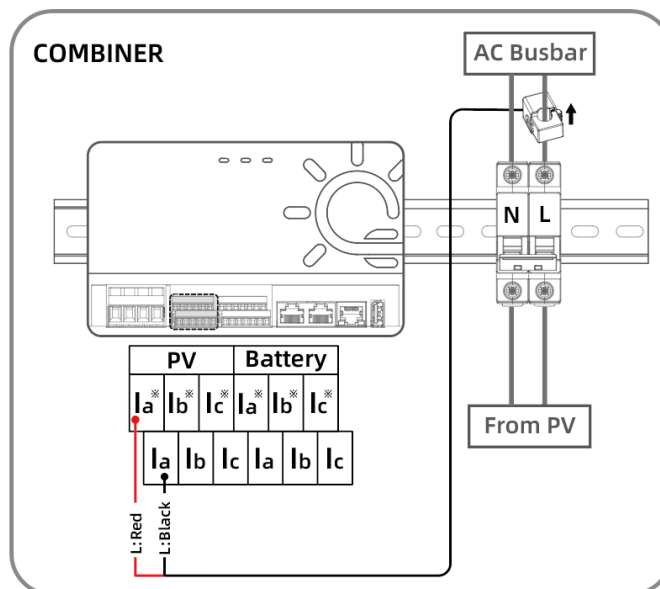
1. Connect the power cables

Connect the L and N wires of the AC power cable to the corresponding terminals on the device as shown in the diagram below. Tighten the screws to 0.5 N·m.



2. Connect the PV production CT

- 1) Connect the red wire of the CT to the Ia* terminal.
- 2) Connect the black wire of CT to the Ia terminal.
- 3) Locate the arrow mark on the CT and position the CT onto the L cable with the arrow pointing away from the PV system.
- 4) Tighten the gateway screws to 0.2 N·m.

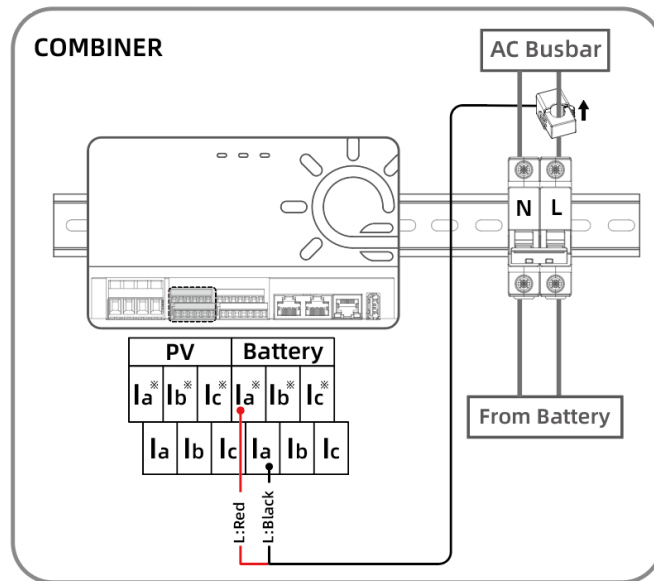


3. Connect the battery production CT

- 1) Connect the red wire of the CT to the Ia* terminal.
- 2) Connect the black wire of CT to the Ia terminal.
- 3) Locate the arrow mark on the CT and position the CT onto the L cable with the

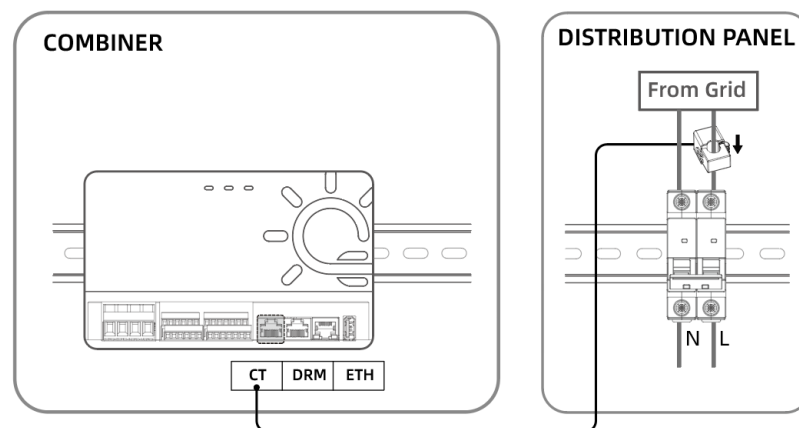
arrow pointing away from the battery system.

- 4) Tighten the gateway screws to 0.2 N·m.



4. Connect the consumption CT

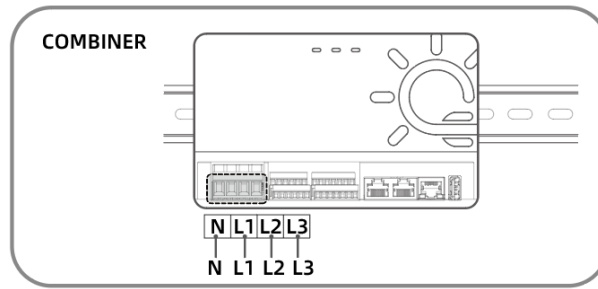
- 1) Connect the CT signal line to the RJ45 terminal as shown below.
- 2) Locate the arrow mark on the CT and position the CT onto the L cable with the arrow pointing away from the grid.



5.5.2 Three-phase Scenario

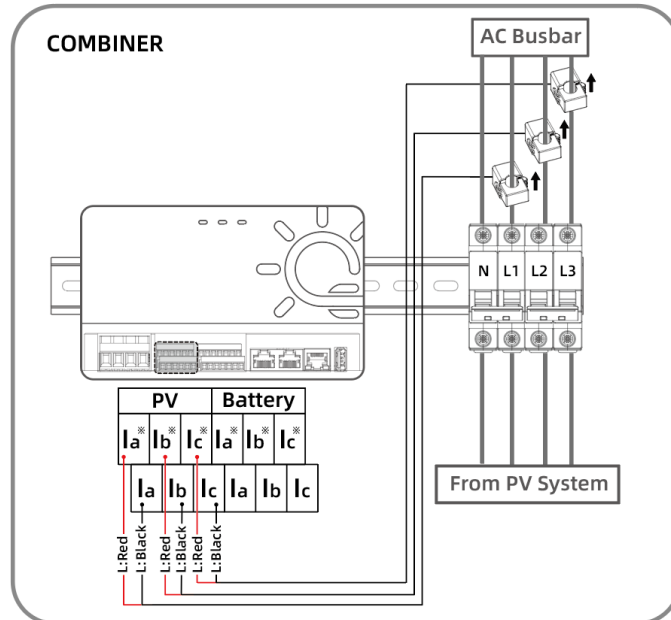
1. Connect the power cables

Connect the L1, L2, L3, and N wires of AC power cable to the corresponding terminals on the device as shown in the diagram below. Tighten the screws to 0.5 N·m.



2. Connect the PV production CT

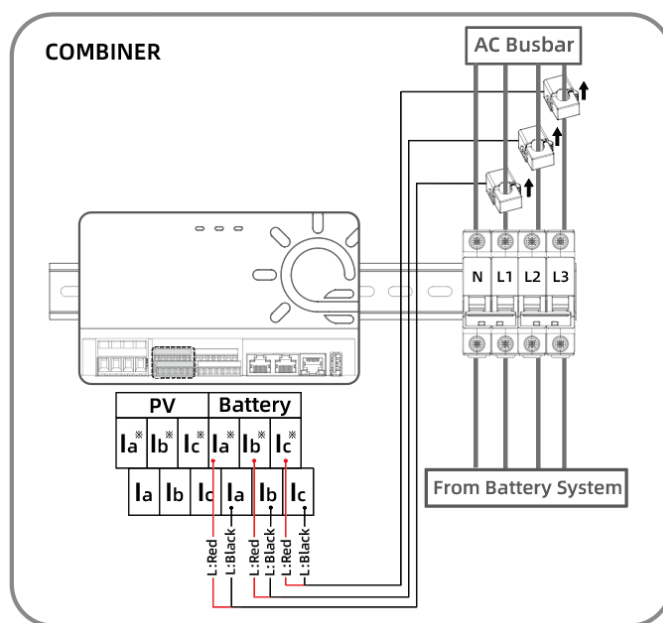
- 1) Connect the red wire of the CT to the Ia* terminal; connect the black wire of CT to the Ia terminal; locate the arrow mark on the CT and position the CT onto the L1 cable with the arrow pointing away from the PV system.
- 2) Connect the red wire of the CT to the Ib* terminal; connect the black wire of CT to the Ib terminal; locate the arrow mark on the CT and position the CT onto the L2 cable with the arrow pointing away from the PV system.
- 3) Connect the red wire of the CT to the Ic* terminal; connect the black wire of CT to the Ic terminal; locate the arrow mark on the CT and position the CT onto the L3 cable with the arrow pointing away from the PV system.
- 4) Tighten the gateway screws to 0.2 N·m.



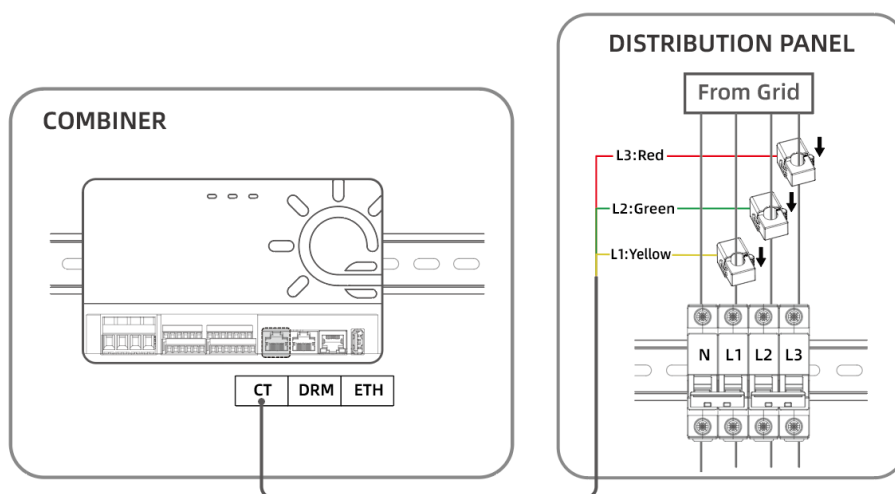
3. Connect the battery production CT

- 1) Connect the red wire of the CT to the Ia* terminal; connect the black wire of CT to the Ia terminal; locate the arrow mark on the CT and position the CT onto the L1 cable with the arrow pointing away from the battery system.
- 2) Connect the red wire of the CT to the Ib* terminal; connect the black wire of CT to the Ib terminal; locate the arrow mark on the CT and position the CT onto the L2 cable with the arrow pointing away from the battery system.

- to the Ib terminal; locate the arrow mark on the CT and position the CT onto the L2 cable with the arrow pointing away from the battery system.
- 3) Connect the red wire of the CT to the Ic* terminal; connect the black wire of CT to the Ic terminal; locate the arrow mark on the CT and position the CT onto the L3 cable with the arrow pointing away from the battery system.
 - 4) Tighten the gateway screws to 0.2 N·m.



4. Connect the consumption CT
 - 1) Connect the CTs' signal line to the RJ45 terminal as shown below.
 - 2) Locate the arrow mark on the CT and position the CT onto the L1, L2 and L3 cables respectively with the arrow pointing away from the grid.



Install the three CTs on the corresponding power line in the following order:



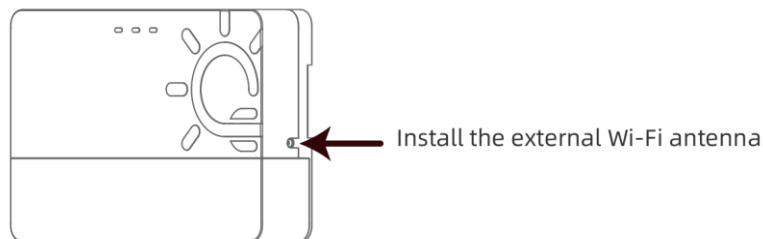
- L1: CT with yellow wire
- L2: CT with green wire
- L3: CT with red wire

5.6 Connect to the Internet

Different networking modes require distinct cabling methods, as detailed below. Select the appropriate networking mode based on actual requirements.

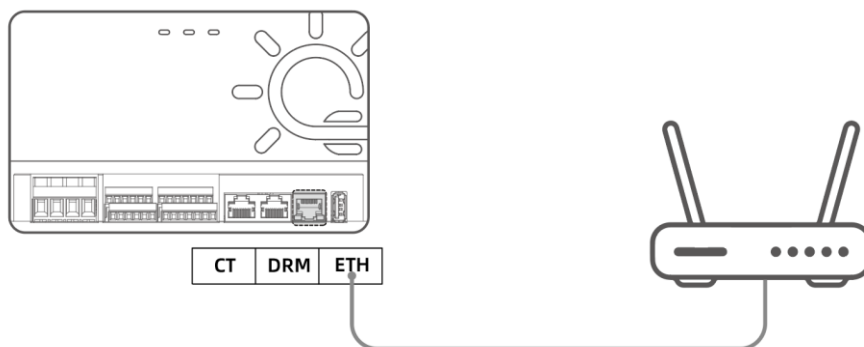
Method 1: Wi-Fi Connection

For Wi-Fi connectivity, install the external antenna and place the gateway within a 10-meter radius of the router to maintain optimal signal strength.



Method 2: Ethernet Connection

For Ethernet connectivity, prepare a standard Ethernet cable of appropriate length in advance to connect the gateway to your home router. The specific wiring is as shown in the diagram below.



5.7 Close the Device Cover

Check that the cables are connected correctly and re-install the cover.

6 Power-on Testing



Always use dedicated protective gear and insulated tools to prevent electric shock or short-circuit faults.



Before initial power-on, the device parameters must be properly configured by qualified personnel. Incorrect settings may cause non-compliance with local grid-connection requirements and affect normal operation.

6.1 Pre-power-on Check

No.	Test standard
1.	The gateway device has been securely installed.
2.	All cables are properly connected.
3.	Power line routing and signal line routing comply with strong/weak current wiring requirements and conform to system cabling specifications.
4.	Cables shall be neatly bundled with uniform tie spacing, proper tension, and consistent orientation.
5.	No residual adhesive tapes, cable ties, or other foreign materials shall remain on the cables.

6.2 Power on the Device

Steps:

1. Close the main incoming switch between the gateway and the power grid.
2. Close the AC switch between the gateway and the inverter.
3. Observe the LED indicators on the gateway to monitor its operational status.

For LED indicator specifications, refer to 2.2.3 Description of LED Indicator.

6.3 Device Commissioning

6.3.1 Power System Creation and Commissioning

The basic procedures are shown as follows:

- 1、 Scan the QR code below or search for "OneHo-Installer" in the App Store and Google Play to download the App and install it.



OneHo-Installer App

- 2、 Log in to the installer account.
- 3、 Create and activate a new system. Establish the owner account during the system creation process.



For detailed operations, please refer to the OneHo-Installer App User Manual.



Download Center

6.3.2 System Operation & Maintenance and Data Monitoring

The Installer App enables data management, equipment maintenance, and power system monitoring.

Functional category	Functional characteristic	Detailed operation
Power system management	Power system sorting, filtering, modifying station information, viewing/editing station equipment, adjusting component layouts, configuring anti-backflow parameters, and setting fault notification methods.	For detailed operations, please refer to the OneHo-Installer App User Manual.
Equipment operation & maintenance	View power system statistics and configure power system equipment.	
Data monitoring	Single power system overview, historical data statistics, component data viewing, equipment replacement, revenue conversion, station transfer, and installer information review.	

7

System Maintenance



- Always use dedicated protective gear and insulated tools to prevent electric shock or short-circuit faults.
- Before performing maintenance, ensure all circuits are turned off.



There are no serviceable parts inside the device. Do not attempt to open the housing or replace any internal components. Please contact your installer if necessary. Otherwise, any resulting damage will not be covered under warranty.

7.1 Routine Maintenance

To ensure long-term optimal operation of the device, routine maintenance as described in this section is recommended.

Item	Maintenance method	Maintenance cycle
System cleaning	Inspect the device's exterior and surrounding area to ensure proper heat dissipation, and maintain cleanliness on surfaces and peripherals.	Once every 6 months to 1 year
System operation status	Inspect the device exterior for any damage or deformation. Monitor the device for abnormal noises during operation. Verify all parameters are correctly configured while the device is running.	Once every 6 months
Electrical Connection	Inspect all cables for detachment or looseness. Check cables for damage, particularly at points of contact with metal surfaces. Inspect cable sheaths for cuts marks.	Perform the first inspection 6 months after initial commissioning, then repeat every 6 to 12 months thereafter.

7.2 Device Replacement and Treatment



- Live working is strictly prohibited during installation.
 - All operations must be performed by trained professional and technical personnel.
 - Operators must wear certified protective gear, including insulated suits, dielectric footwear, safety goggles, safety helmets, and insulated gloves, during operation.
-

If the device still fails to function after troubleshooting, please contact the installer or our technical support. Device disassembly and replacement may proceed after warranty conditions are verified.

7.2.1 Device Replacement

Steps:

1. Disconnect the AC switch between the inverter and gateway.
2. Turn off the main power switch connecting the gateway to the grid.
3. Verify all gateway LED indicators are extinguished.
4. Disconnect all electrical connections from the gateway.
5. Remove the decommissioned gateway.
6. Install the new gateway and complete electrical connections as specified in the installation manual 5 Installation and Connection.
7. Close the main power switch connecting the gateway to the grid.
8. Close the AC circuit breaker linking the gateway and inverter.
9. Replace the gateway via the OneHo-Installer App (For details, see the user manual of the Oneho-Installer App) .

7.2.2 Device Disposal

If the original packaging is still available, repack the device in its original container and securely seal all openings with reinforced packaging tape.

If the original packaging is unavailable, use a rigid corrugated box appropriate for the device's weight and dimensions to ensure secure encapsulation.

Then dispose of the device in compliance with the applicable Waste Electrical and Electronic Equipment (WEEE) regulations in your jurisdiction.

8

Troubleshooting



There are no serviceable parts inside the device. Do not attempt to open the housing or replace any internal components. Please contact your installer if necessary. Otherwise, any resulting damage will not be covered under warranty.

8.1 Device LED Indicator Troubleshooting

LED indicators serve as critical fault display markers, enabling users to determine the system's basic operational status.

For LED indicator specifications, refer to 2.2.3 Description of LED Indicator.

Next, learn how to troubleshoot issues using LED indicator.

8.1.1 Microinverter Communication Indicator Shows Green Slow Flashing (1s ON, 1s OFF)

Indicates one or more microinverters not communicating.

Troubleshooting methods:

1. Identify the specific non-communicating microinverter in the App, then check proper connection of the power line between the microinverter and gateway.
2. Check for proper power generation of the microinverter.
3. If the issue persists, contact our technical support team.

8.1.2 Server Communication Indicator OFF

Indicates offline status.

Troubleshooting methods:

1. Check the configuration settings of the MQTT server for accuracy.
2. For wireless connections, check the accuracy of the Wi-Fi name (SSID) and password.
3. Confirm whether the gateway is installed in a metal enclosure, as this may affect

wireless communication.

4. The presence of metal mesh within walls may affect wireless communication. Relocate the gateway closer to the router and attempt reconnection.
5. Use other methods to expand the router's signal range.
6. Check the router for proper functioning.
7. For wired connections, reseal the Ethernet cable and reboot both the router and the gateway.

8.1.3 Microinverter Power Generation Indicator Shows Green Flashing

Indicates at least one microinverter not generating power.

Troubleshooting methods:

1. Check the online status of each microinverter in the App.
2. Check the status of Anti-backflow in the App, as enabling this function results in limited power of certain microinverters.
3. If the issue persists, contact our technical support team.

8.2 App Fault Information List

Fault description	Solution
PV1 overvoltage	Please check the input voltage at the PV port of the microinverter.
PV1 overcurrent	1. If an alarm is given occasionally, the equipment's protection function may be enabled. After a while, the microinverter will recover automatically. 2. If an alarm is given frequently, please contact a local installer.
PV2 overvoltage	Please check the input voltage at the PV port of the microinverter.
PV2 overcurrent	1. If an alarm is given occasionally, the equipment's protection function may be enabled. After a while, the microinverter will recover automatically. 2. If an alarm is given frequently, please contact a local installer.
AC overvoltage	1. If an alarm is given occasionally, the grid voltage may be abnormal temporarily. After the grid voltage returns to normal, the microinverter will recover automatically. 2. If an alarm is given frequently, please check if the grid

	voltage is within the permissible range. If the grid voltage exceeds the range, please contact a local electric power operator, or a local installer to regulate the grid overvoltage protection limit.
10min average overvoltage	1. If an alarm is given occasionally, the grid voltage may be abnormal temporarily. After the grid voltage returns to normal, the microinverter will recover automatically. 2. If an alarm is given frequently, please check if the grid voltage is within the permissible range. If the grid voltage exceeds the range, please contact a local electric power operator, or a local installer to regulate the grid overvoltage protection limit.
AC undervoltage	1. If an alarm is given occasionally, the grid voltage may be abnormal temporarily. After the grid voltage returns to normal, the microinverter will recover automatically. 2. If an alarm is given frequently, please check if the grid voltage is within the permissible range. If the grid voltage exceeds the range, please contact a local electric power operator, or a local installer to regulate the grid overvoltage protection limit. 3. If the fault still exists, please check the AC switch or the AC line.
AC overfrequency	1. If an alarm is given occasionally, the grid frequency may be abnormal temporarily. After the grid frequency recovers to normal, the microinverter will recover automatically. 2. If an alarm is given frequently, please check if the grid frequency is within the permissible range. If the grid voltage exceeds the range, please contact a local electric power operator, or a local installer to regulate the grid overvoltage protection limit.
AC underfrequency	1. If an alarm is given occasionally, the grid frequency may be abnormal temporarily. After the grid frequency recovers to normal, the microinverter will recover automatically. 2. If an alarm is given frequently, please check if the grid frequency is within the permissible range. If the grid voltage exceeds the range, please contact a local electric power operator, or a local installer to regulate the grid overvoltage protection limit.
Device fault	1. If an alarm is given occasionally but the microinverter still can work normally, no special measure should be adopted.

	2. Please check if the AC switch, the branch circuit breakers and the AC line are normal. 3. If an alarm is given frequently and cannot be eliminated, please contact a local installer.
Overtemperature	1. Please check ventilation and ambient temperature in the mounting position of the microinverter. 2. If the ventilation condition is poor or the ambient temperature exceeds the limit, please improve the ventilation and heat dissipation conditions. 3. If ventilation and ambient temperature are appropriate, but the fault still exists, please contact a local distributor.
Insulation resistance	1. If the insulation resistance is low in cloudy and rainy weather, restart the equipment when it is sunny. 2. If the fault still cannot be eliminated after the equipment is restarted repeatedly, contact after-sales service staff.
Island	1. If an alarm is given occasionally, the grid frequency may be abnormal temporarily. After the grid voltage returns to normal, the microinverter will recover automatically. 2. If all microinverters in the station give an alarm frequently, please contact a local electric power operator. Confirm if there is a grid island. 3. If an alarm is still given or only a few microinverters give an alarm, please contact a local installer.
Frequency hopping	1. If an alarm is given occasionally, the grid frequency may be abnormal temporarily. After the grid frequency recovers to normal, the microinverter will recover automatically. 2. If an alarm is given frequently, please if the grid frequency variation rate is within the permissible range. If it exceeds the range, please contact a local electric power operator, or a local installer to adjust the grid frequency variation rate limit through OneHo monitoring platform.
Grid profile error	1. Please check if the grid profile is correct, and upgrade it again. 2. If the fault still exists, please contact a local installer.

9

Technical Specification

Electrical parameters	
Grid-connection settings	Single-phase/Three-phase
Nominal voltage (V AC)	100~240
Nominal Current (A)	0.5
Operating voltage range (V)	90~264
Frequency (Hz)	50/60
Overvoltage category	III
AC surge protection	TYPE II
Power consumption (W)	<20
Communication	
Communication Mode (Wired)	PLC、Ethernet、RS485、CAN
Communication Mode (Wireless)	Wi-Fi、Bluetooth
WI-FI protocol	2.4 GHz Wi-Fi 6, 802.11 b/g/n
Maximum number of collectable components	250
Acquisition frequency (min)	5/10/15
Mechanical parameters	
Dimensions (L x W x H) (mm)	174×113×37.7
Weight (kg)	0.35
Ambient temperature range (°C)	-40 ~ 60
Cooling method	Natural heat dissipation
Working altitude (m)	4000
Protection level	IP30
Pollution class	Class 2
Compliance	
Certification	CE

EMC	EN/IEC 61010-6-1, EN/IEC 61010-6-3, EN 55032/55035, EN 50561-1, EN 50412-2-1, EN/IEC 62311, EN 300328, EN 301489-1/17, EN18031-1
Security	EN/IEC 61010

Appendix 1 Terms and Abbreviations

A	
AC	Alternating Current
App	Application
C	
CT	Current Transformer
D	
DC	Direct Current
DI	Digital Input
DO	Digital Output
E	
EMC	Electro Magnetic Compatibility
L	
LED	Light Emitting Diode
R	
RH	Relative Humidity
W	
WEEE	Waste Electrical and Electronic Equipment



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