



# User Manual for Gateway

Model: EQ-MU-WG

Document version 01

Published: March 11, 2025

# Copyright notice

Copyright 2025 Xi'an WANHEYUE Energy Technology Co. , Ltd. . All rights reserved.

Without the express permission of Xi'an wanheyue Energy Technology Co. , Ltd. , no unit or individual may copy, extract or reproduce some or all of the contents of this manual. And shall not be for profit in any way for the purpose of dissemination.



And other Wanhe Yueneng trademarks are trademarks of Xi 'an Wanhe Yueneng Energy Technology Co., LTD. and other WANHEYUE trademarks. All trademarks mentioned in this manual are owned by their respective owners. The contents of this manual are for reference only and are subject to change without prior notice. Unless otherwise agreed, this manual is intended to be used only as a guide and no representations are made to warrant any form of warranty.

# Overview of the manual

This manual describes the safety precautions, product features, product storage, installation and connection, system activation, system monitoring, equipment maintenance, equipment replacement and troubleshooting methods.

In order to obtain the best reliability and meet warranty requirements, please read this manual carefully before installing and using the equipment, and install and use the product strictly according to the instructions in the manual.





## Target group

This booklet is intended for:

- Technical professionals  
(all installation and maintenance operations must be carried out by qualified technicians)

## Sign Conventions

The following symbols may appear in the manual and have the following meanings:

Signs	Description
	An emergency is a dangerous situation that, if not avoided, will result in death, serious personal injury or fire.
	A potentially dangerous situation that, if not avoided, may result in death or serious personal injury.
	Means a potentially dangerous situation that, if not avoided, may result in moderate or minor personal injury or equipment damage.
	It means to make necessary supplement and explanation to the content, and it doesn't involve personal and equipment injury.

# Version Records

Document Version 012025-03-11 for internal testing only.

# 1 Safety precautions

Before installing or using this product, please read this user manual and all instructions and safety warning signs on the equipment and relevant safety manuals carefully. Failure to follow these instructions may result in equipment damage, warranty lapse, or even personal injury.

All operations, including transportation, installation, start-up and maintenance, must be carried out by trained technicians. In addition to the contents of this manual, also need to comply with relevant international, national or regional laws and regulations, standards, norms and industry practices.

Please check that the equipment is in good condition before installation. In case of damage, the insulation integrity or safety of the equipment may be affected. Before connecting a photovoltaic device to the grid, contact your local power company for approval.

Die Firma hat keine Verantwortung für any der Folgen:

- Failure to obtain permission from the national or regional power authority.
- Installation and operating environment does not comply with relevant international, national or regional standards;
- Failure to comply with local laws, regulations and codes when operating and maintaining equipment.
- Installation and use of equipment by unqualified personnel
- Failure to follow product and user manual instructions
- Unauthorized disassembly, replacement of equipment or modification of software code caused by improper operations such as equipment damage;
- Damage caused by storage conditions that do not meet product documentation requirements
- The self-provided parts and tools do not meet the requirements of local laws and regulations and relevant standards;
- Damage caused by negligence, improper handling, or willful intent.

- Equipment damage caused by force majeure, such as natural disasters, war, armed conflict;

# 2 Product introduction

## 2.1 OneHo grid-connected photovoltaic system

OneHo roof photovoltaic system consists of micro inverter, Gateway and cloud monitoring platform. The system architecture is shown below:

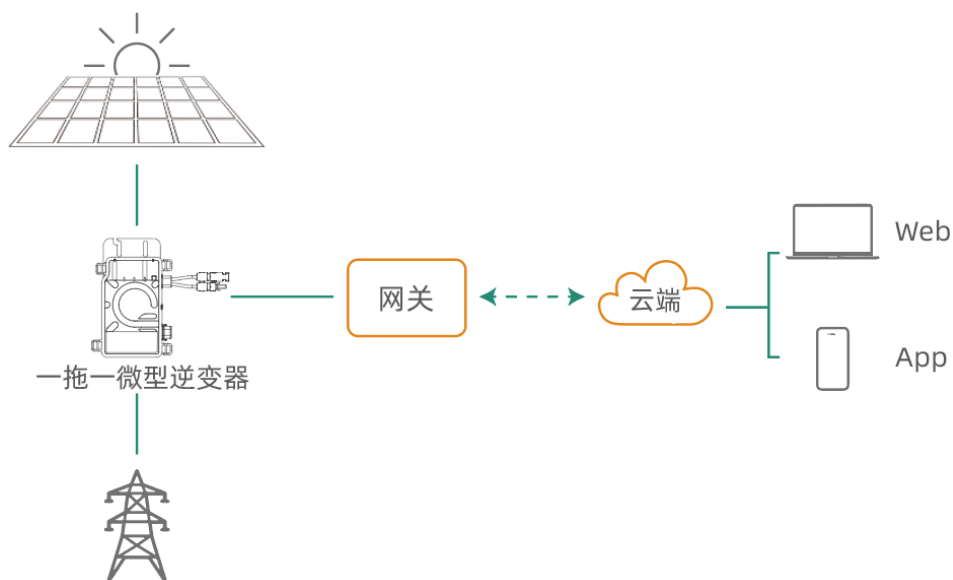


Figure-1 roof photovoltaic system

**Micro-inverter:** OneHo micro-inverter as part of the photovoltaic power generation system, the output of the photovoltaic module of the dc-efficient conversion to meet the requirements of the AC power grid for household load or feed into the grid.

**Gateway:** OneHo Gateway is a communication device that connects the operation data of the Solar Module and the micro inverter to the cloud monitoring platform. It collects the production and performance data of the micro inverter through the PLC power line and uploads it to the network, to achieve remote monitoring and management.

**Web monitoring platform:** it is a Web-based energy management portal that allows you to view PV system details, manage systems, and resolve system problems.

**App:** a mobile App for iOS and Android devices that allows users to view PV system performance data at any time, mIT Fernen Konstruktionen, Schnelle

Katastrophenordnung, notification Sowie produktion-und lösungsanalyse.

## **2.2 Gateway EQ-MU-Pro**

### **2.2.1 Product features**

The EQ-MU-Pro communicates with the micro-inverse in the system through PLC Power Line, collects all the running data and status of the micro-inverse in the system, and is also responsible for transmitting the control command to the micro-inverse in the system to adjust the running state of the system, to achieve system maintenance. One EQ-MU-Pro can be networked with up to 250 micro-inverters.

EQ-MU-Pro supports Ethernet, WIFI and 4G modes to connect to the Internet to achieve information exchange with wanhe cloud monitoring service platform. Send the running data and status of all micro-inversion in the system to the WANHE Cloud Monitoring Server, and also be responsible for sending the system control command and data of the cloud monitoring server to the micro-inversion in the system, realize the remote operation and maintenance of the system. Real-time detection of network status, automatic switching of communication mode, priority to ensure the quality of communication, while reducing communication costs, complete data upload and send.

Once you've installed and networked the EQ-MU-Pro, micro-inverter, you can access the Web or APP to monitor and manage the device.

One side of the EQ-MU-Pro communicates with the MI via PLC power lines, and the other side communicates with the cloud via wired or wireless networks.

The communication topology between EQ-MU-Pro and external devices is as follows:



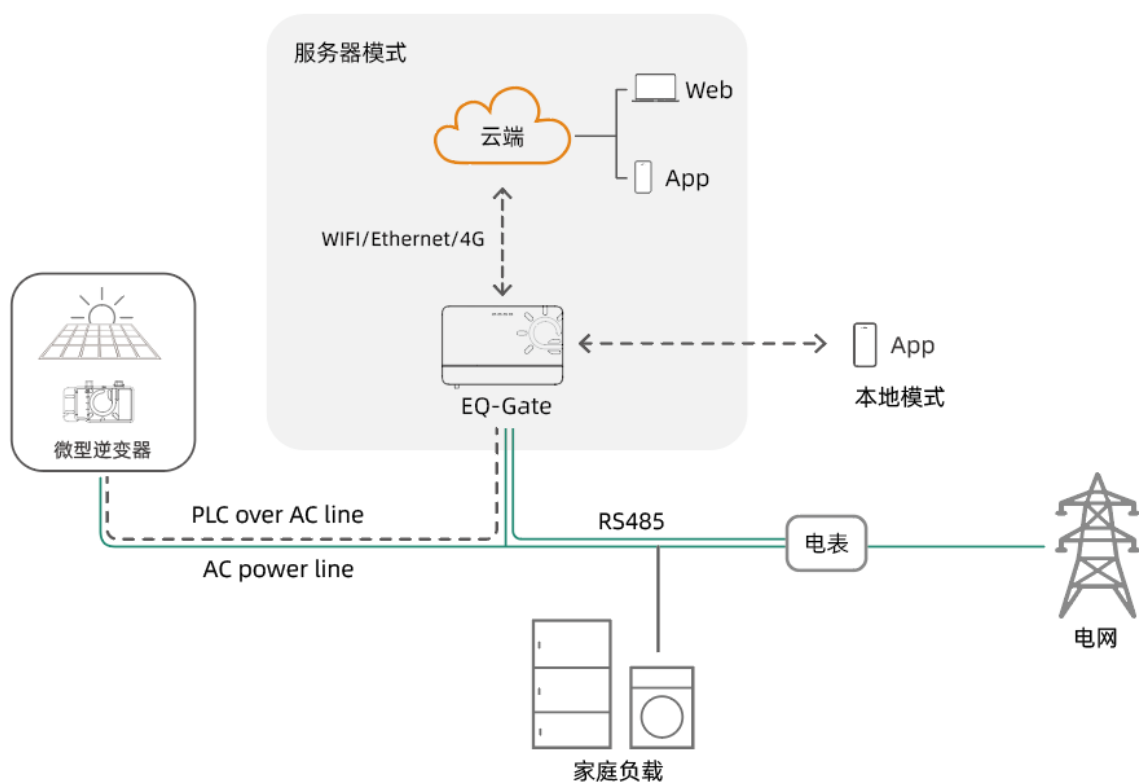


FIGURE-2EQ-MU-PRO communication topology

## 2.2.2 Appearance and interfaces

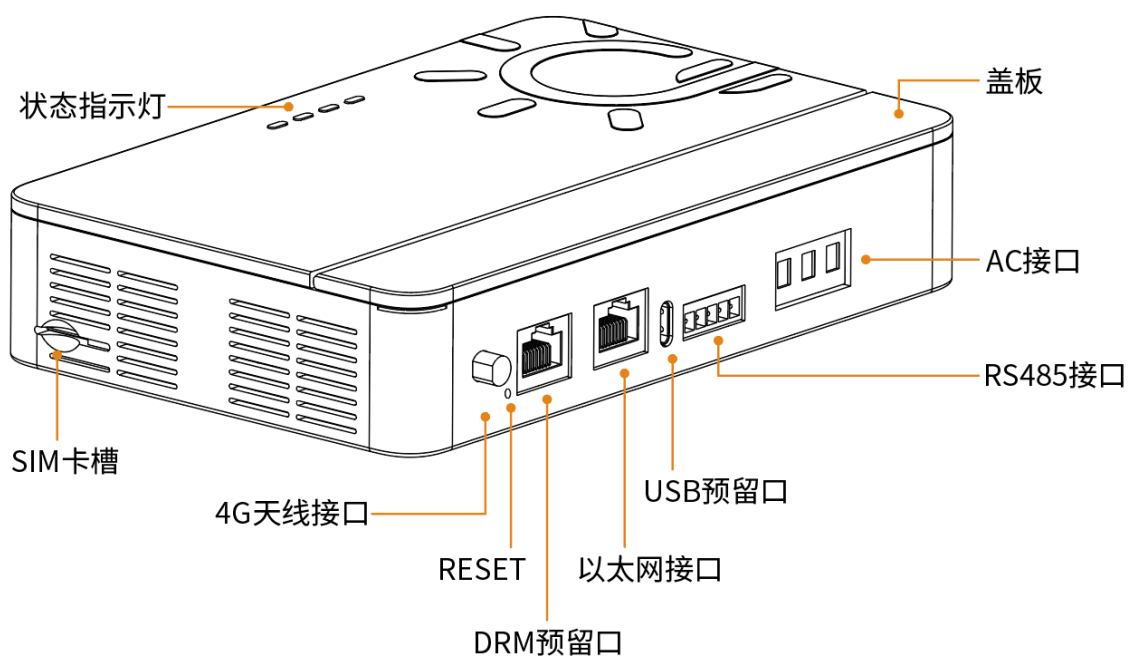


Figure 3eq-mu-pro introduction to appearance and interfaces

## 2.2.3 Product dimensions

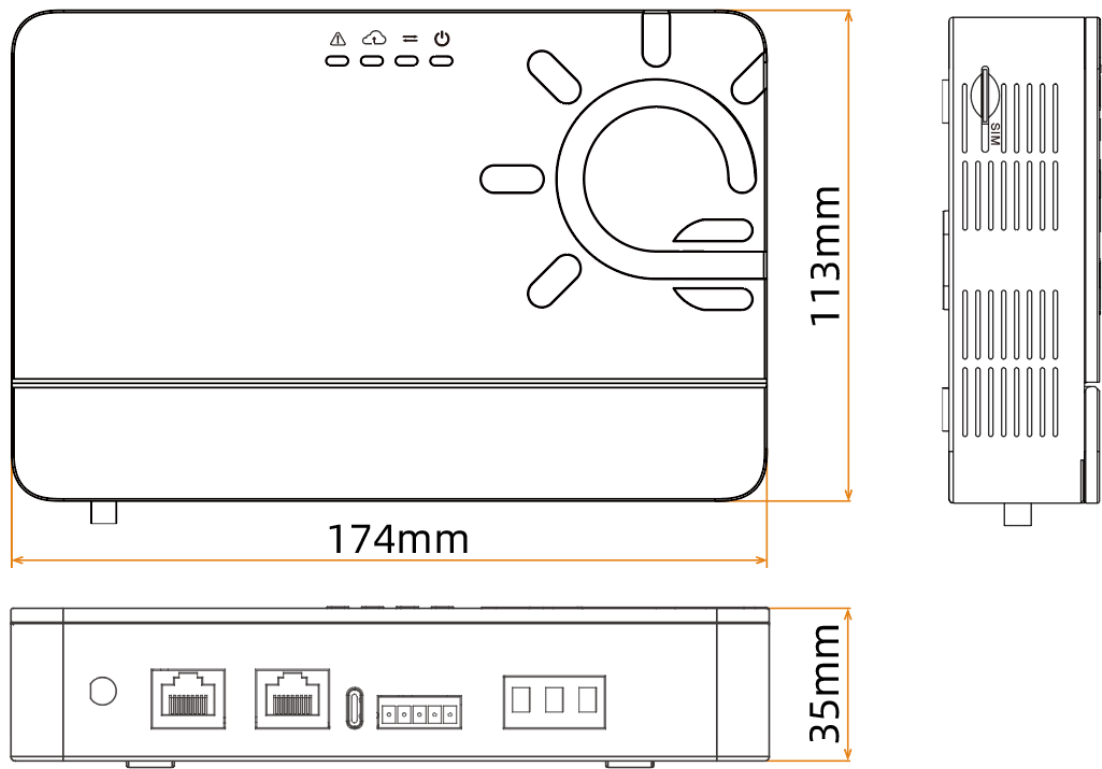


Figure 4eq-mu-pro size chart

# 3 Installation and connection



Disconnect all electrical circuits before installing and repairing cables.

## 3.1 Install equipment

### 3.1.1 Install rail buckles

Remove the guideway snap from the package and secure the snap to the equipment using matching screws. The reference torque is 0.7 ~ 0.9 n. M.

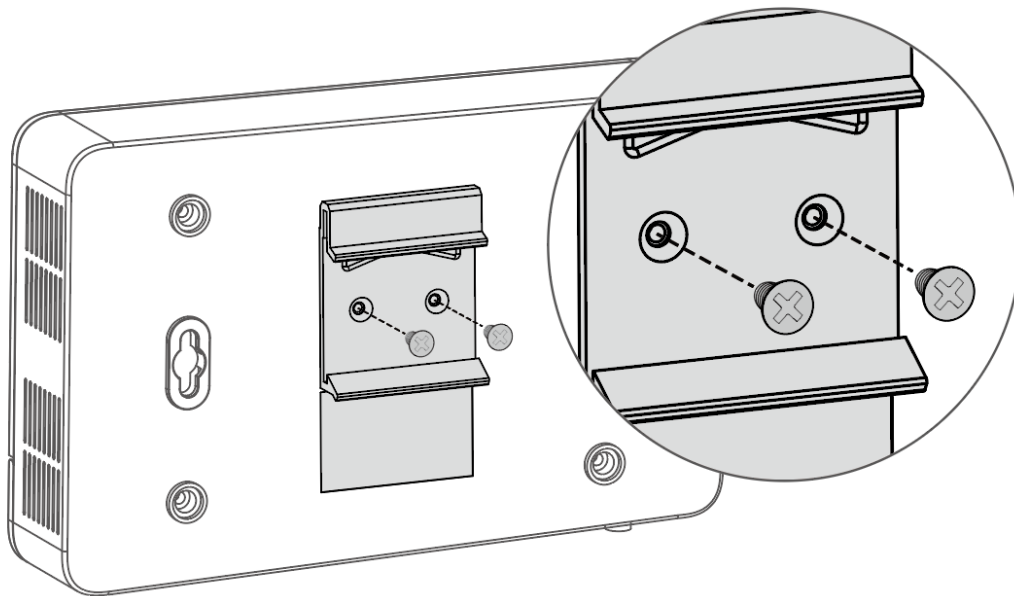


Fig. 1 schematic diagram of mounting guide rail buckle

### 3.1.2 Install EQ-MU-Pro

The equipment buckle from top to bottom card into the C45 standard guide, after

completion as shown in the picture below.

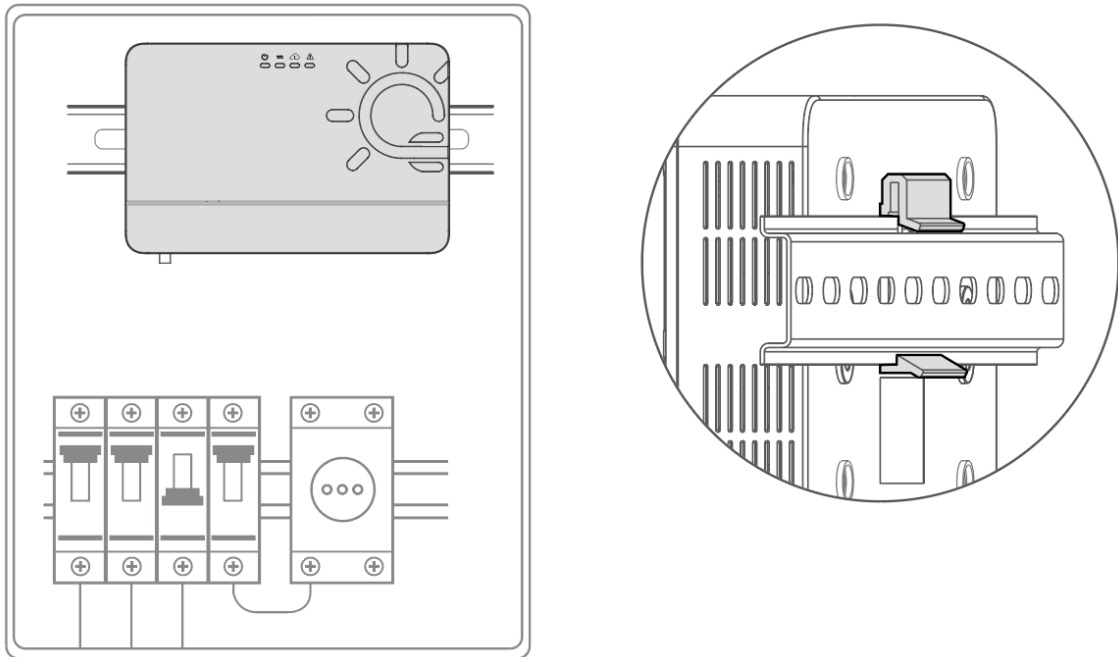


Figure 2. Installation of EQ-MU-Pro

## 3.2 Electrical connection

### 3.2.1 Wiring

Connect the L and N of the AC cable and the ground wire to the EQ-MU-Pro terminal as shown below. Connect the meter and the customer acquisition device.

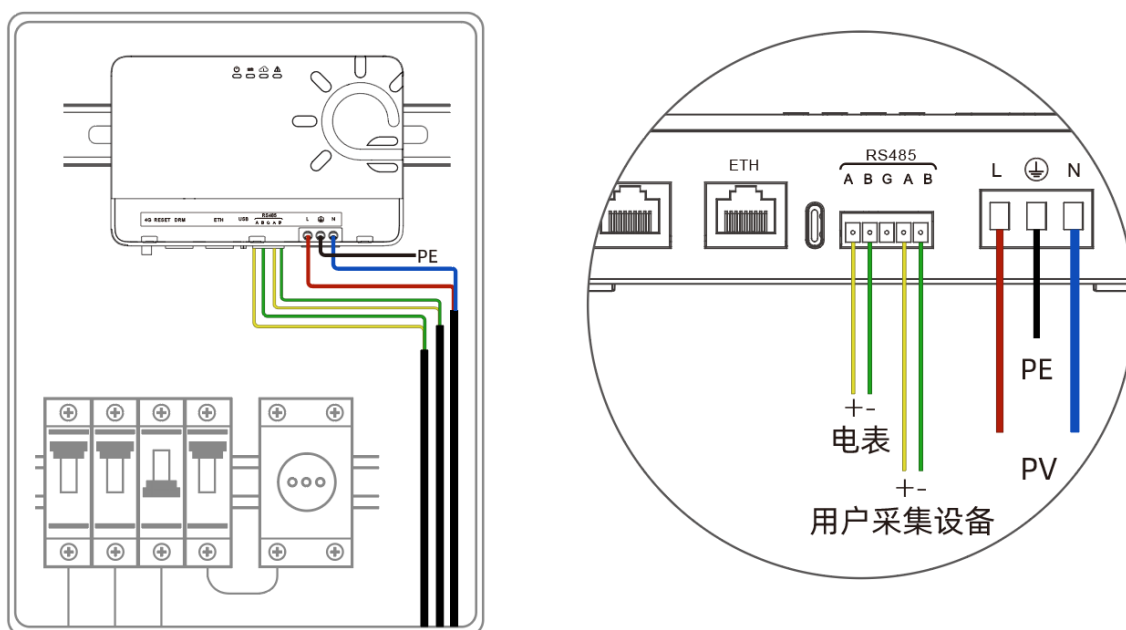


Fig. 3 wiring diagram



The color of the cable in the picture is only for differentiation, please refer to the actual situation when installing.

### 3.2.2 Networking of devices

Different networking methods use different wiring methods, in order to facilitate reference, the article introduced separately. Please choose the content according to your actual needs.

#### Ethernet

Using Ethernet requires a standard Ethernet cable of the right length in advance to connect EQ-MU-Pro to your home router. The wiring is shown below.

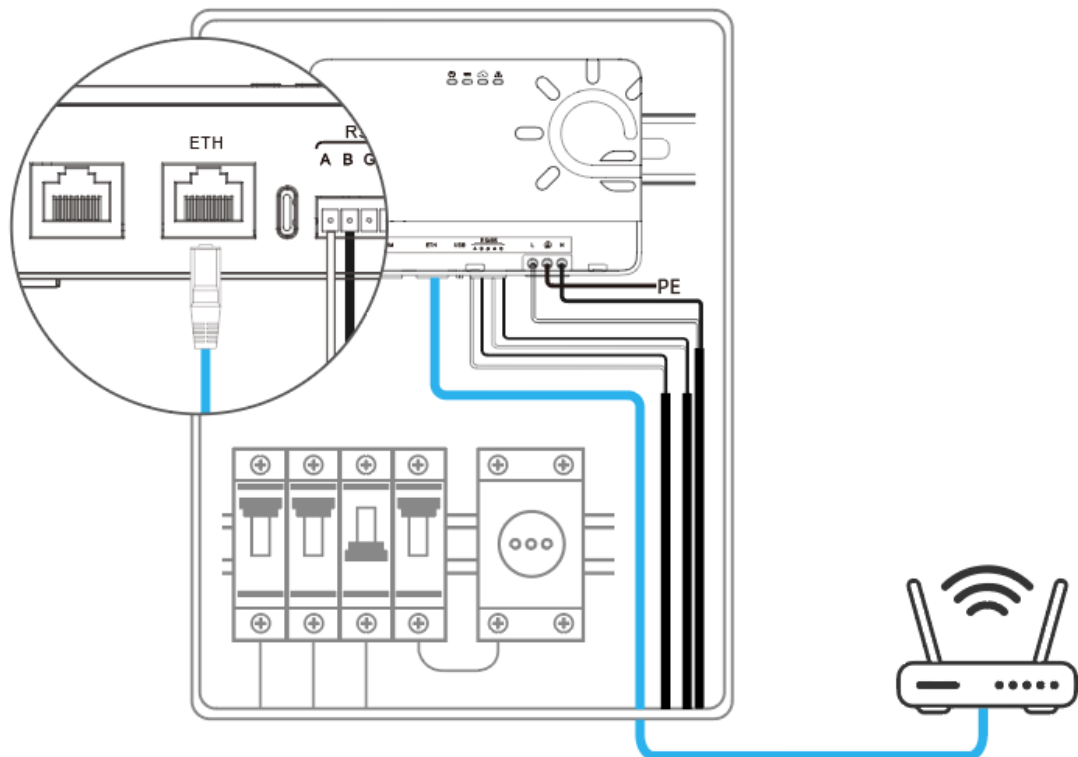


Fig. 4 diagram of Ethernet connection



The color of the cable in the picture is only for differentiation. Please install according to the local actual situation.

## WIFI

For WIFI connectivity, install EQ-MU-Pro within a 10m radius of the router to ensure signal strength.

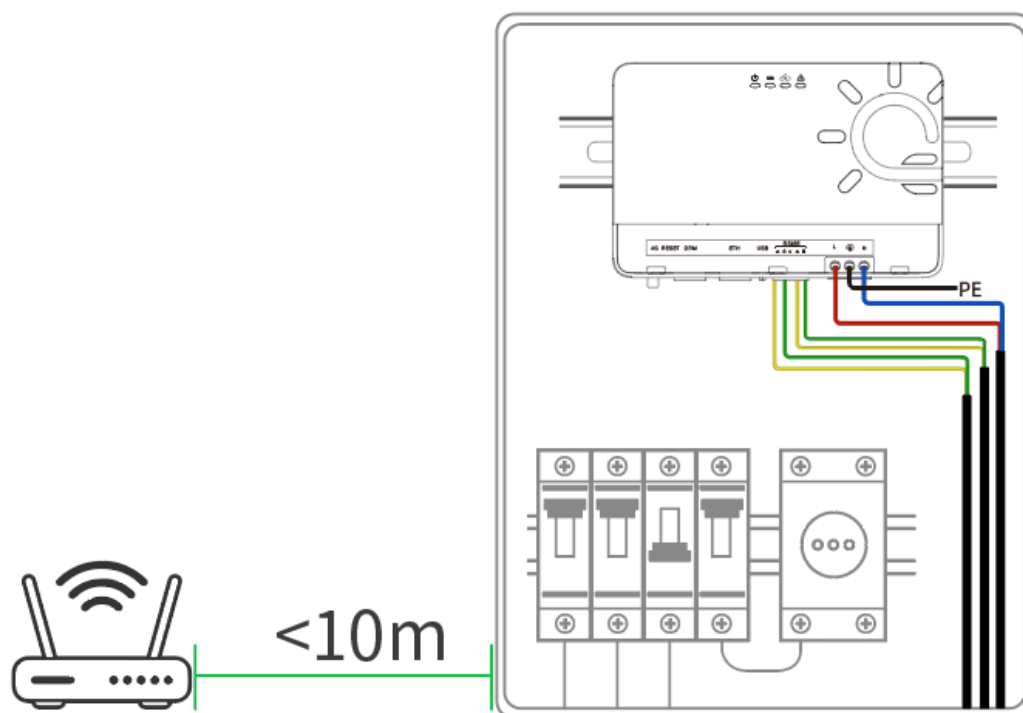


Figure-5 installation distance diagram

## 4G

For 4G connectivity, prepare a valid SIM card in advance and insert it correctly into the slot on the side of the device.

Then install a 4G antenna.

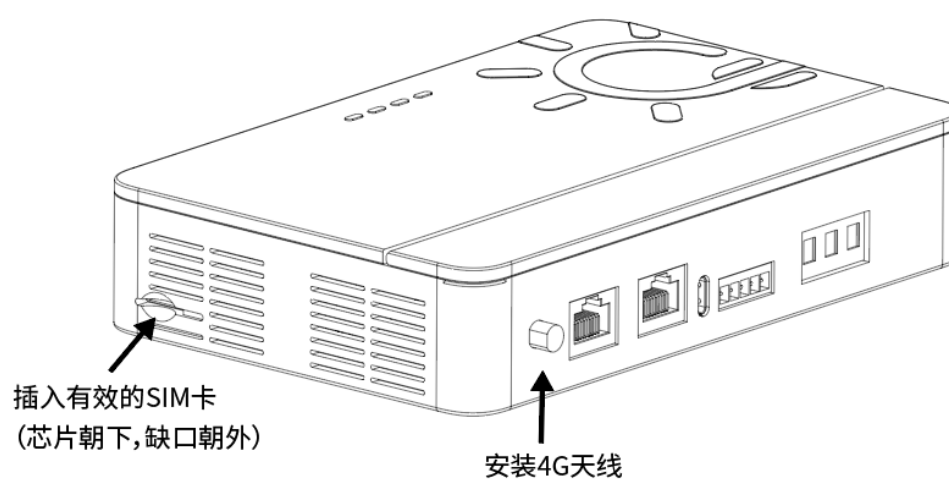


Fig. 6 4G Installation Guide

# 4 Technical specifications

Electrical parameters	
Grid-connected settings	Single-phase
Rated voltage (V)	220/230/240
Operating voltage range (V)	100 ~ 240 V AC
Frequency (Hz)	50/60
Overvoltage type	III
AC surge protection	Type II
Power consumption (W)	< 10
Communications	
Mode of communication	PLC, WIFI, 4G, Ethernet, RS485
Max communication distance of PLC (m)	1000
Maximum WIFI transmission distance (m)	50
WIFI protocol	WIFI 4, IEEE 802.11 b/g/n
Maximum number of acquisition components	250
Acquisition Frequency (min)	5/10/15
Mechanical parameters	
Dimensions (length × width × height)(mm)	174 x 113 x 35
Weight (Kg)	0.3
Ambient temperature range (°C)	-40 ~ 60
Cooling method	Natural heat dissipation
Working altitude (m)	5000
Level of protection	IP30
Pollution levels	Level 3
Compliance	
Certification	CE, FCC, ISED, RCM, Anatel
EMC	IEC 61000-6-3, IEC 61000-4-3, EN 301489, IEC 61000-4-5, IEC 61000-4-8:2001, IEC 61000-4-2





**FCC Statement**

1. This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

(1) This device may not cause harmful interference.

(2) This device must accept any interference received, including interference that may cause undesired operation.

2. Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

**NOTE:**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules.

These limits are designed to provide reasonable protection against harmful interference in a residential installation.

This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

To comply with RF exposure requirements, a minimum separation distance of 20cm must be maintained between the user's body and the device, including the antenna.