



HOPETREK

Installation guide

Product Model:

AIO-SL-HP6KB5-A1



CONTENTS

01 System Installation Guide

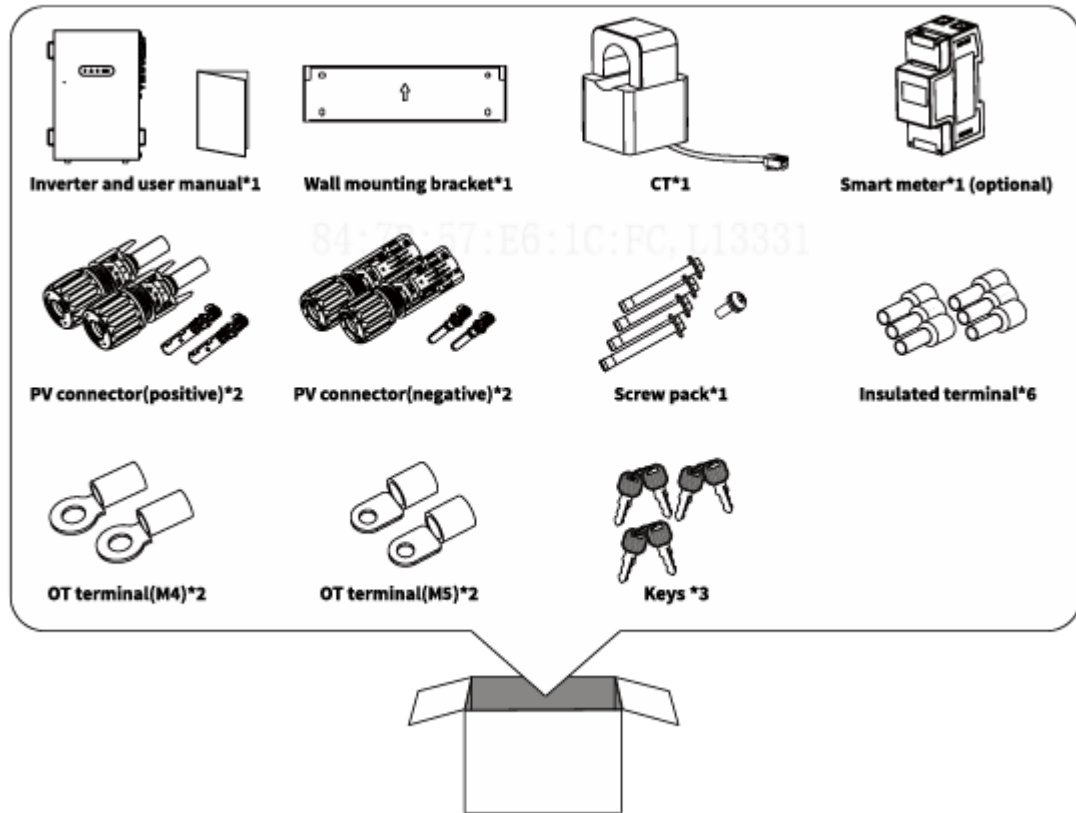
02 App Operation Guide

PART 01

System Installation Guide

1.1 Packing List

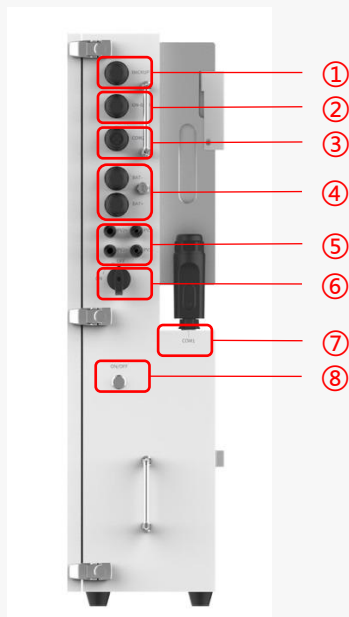
The package contents may vary with device model and version.



Note:

- CT and smart meter are optional accessories, and only one is included.
- If a smart meter is purchased, two RJ45 waterproof connectors will be provided in the packaging box.
- The product is heavy, handle with care when removing it from the packaging.
- The key is used for the cabinet door lock of the device.

1.2 Structure and Ports



Name	Description
①BACKUP	BACKUP cable hole
②ON-GRID	ON-GRID cable hole
③COM2	Multi-function cable hole
④BAT +/-	Power cable hole for expansion battery
⑤PV1, PV2	PV input port
⑥DC Switch	PV input switch
⑦COM1	For communication with the monitoring device.
⑧Battery switch	Controls the start/stop of the internal battery in the device

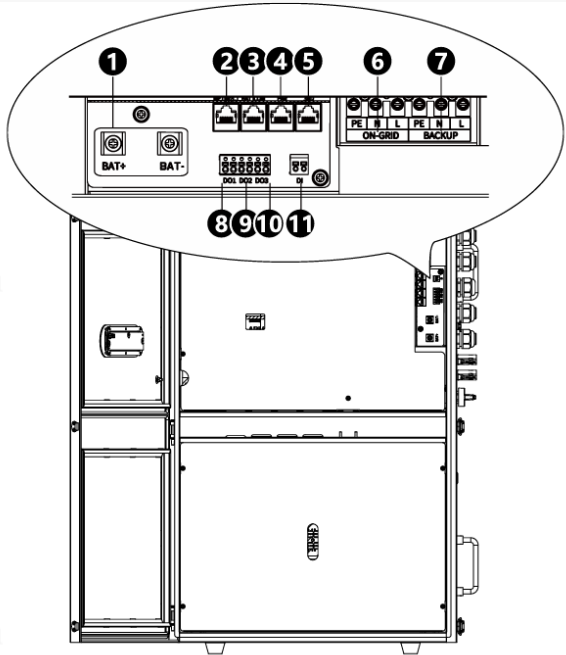
Page 1: External Structure



Note:

If parallel operation is not required, there is no need to remove the COM2 waterproof cover during the installation.

1.2 Structure and Ports

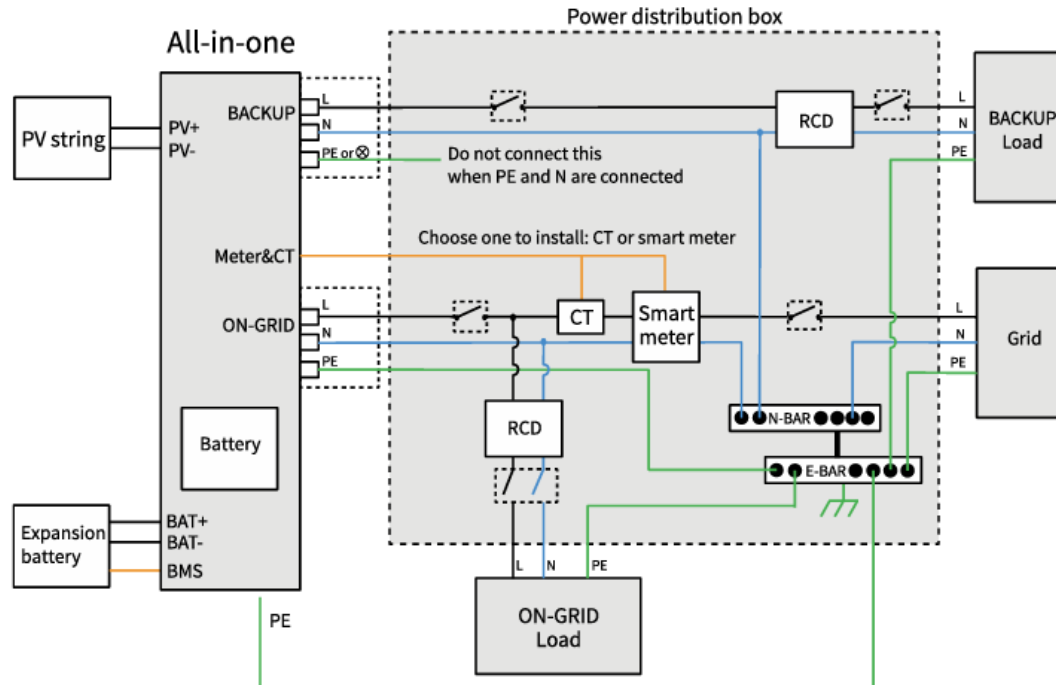


Page 2: Internal Structure

Name	Description
①BAT	Positive and negative terminals for the expansion battery.
②METER/CT	For communication with the meter or CT.
③BMS	For communication with the battery.
④PAR	Connect standard RJ45 network cables.
⑤3RD	For communication with the third-party system or device.
⑥ON-GRID	Grid connection port.
⑦BACKUP	BACKUP connection port.
⑧⑨⑩DO1、DO2、DO3	Dry connection point.
⑪DI	Receives switch signals from dry contacts to control the remote shutdown of the device.

1.3 System Wiring Diagram

N Line and PE Line Connected



① 3P MCB for backup port:
230V 32A

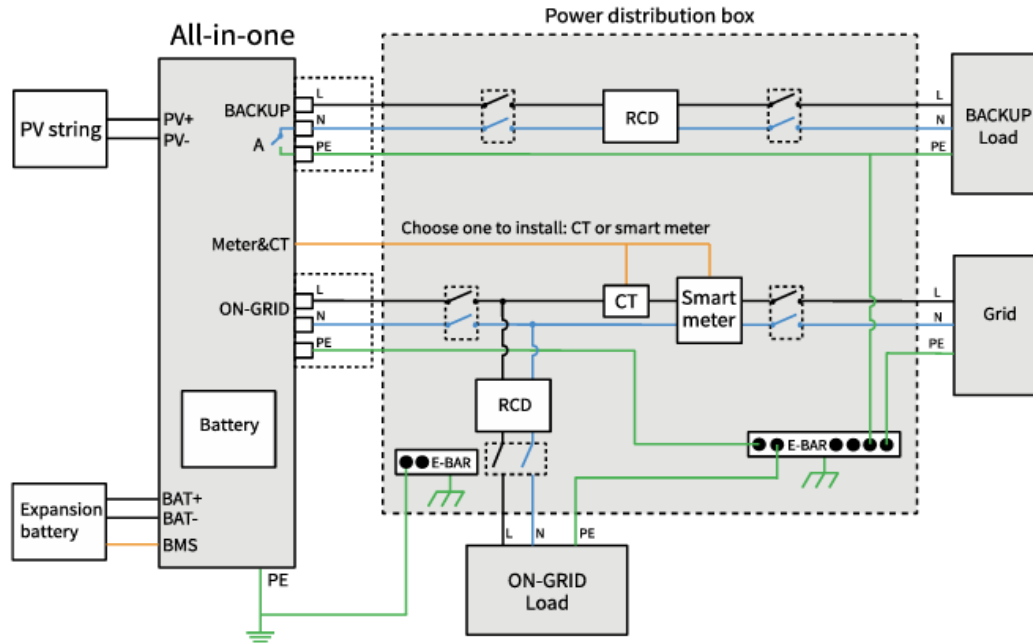
② 3P MCB for on-grid port:
230V 32A

RCD Recommended:

- Type A
- On-GRID RCD: 300mA
- BACK-UP RCD: 30mA

1.2 System Wiring Diagram

N Line and PE Line Not Connected



① 3P MCB for backup port:
230V 32A

② 3P MCB for on-grid port:
230V 32A

RCD Recommended:

- Type A
- On-GRID RCD: 300mA
- BACK-UP RCD: 30mA

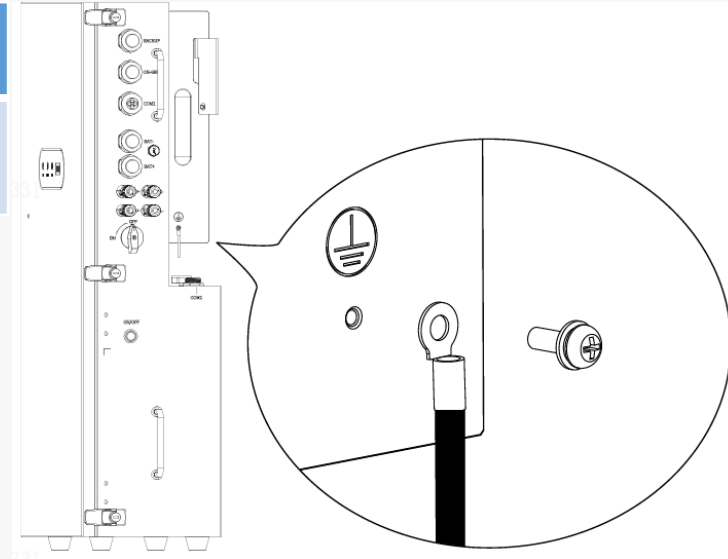
1.4 Electrical Connection – Grounding

➤ Inverter Grounding Connection

1. Choose the appropriate cable. Refer to the table below for specifications. Use a wire stripper to remove the insulation layer from the cable.

Cable Type	Cable Specification	Stripping Length
Copper wire	Cross-sectional area: 4.0 mm ² to 6.0 mm ² / 12 AWG to 10 AWG	7mm~8mm

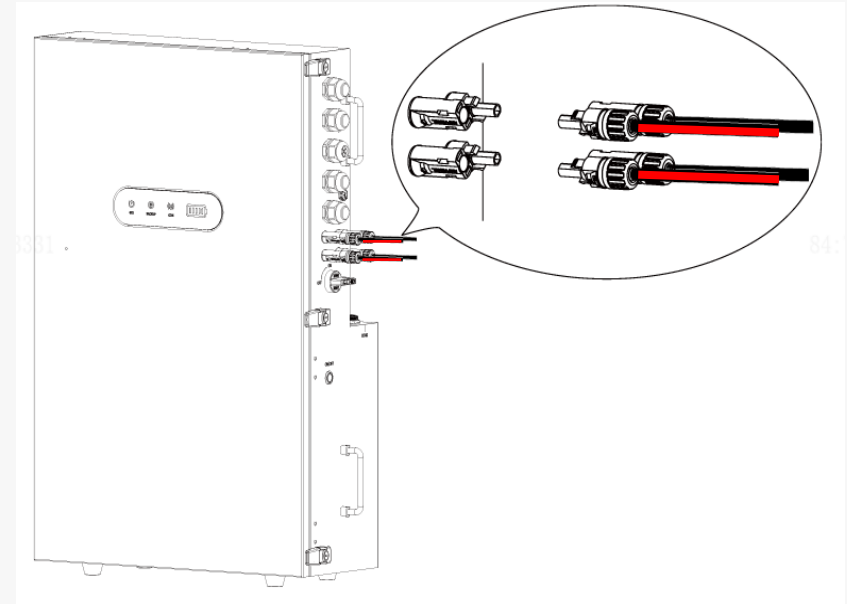
2. Place the core of the cable into the crimping area of the OT terminal, and crimp it using hydraulic pliers.
3. There is one grounding terminal on each side of the inverter. Install on the side that is more convenient for wiring. Use a screw to secure the OT terminal of the ground cable to the corresponding hole.



1.4 Electrical Connection – PV Cable

➤ PV Cable Connection

1. Use a Multimeter to measure the output voltage of the PV string between the positive and negative terminals, and ensure that it does not exceed the inverter's maximum PV input voltage rating of **600V**.
2. Distinguish between the male and female connectors, connect the completed PV terminal to the inverter with a "click" sound.



Note:

There are two MPPT circuits, and each MPPT circuit can connect to one string of PV.

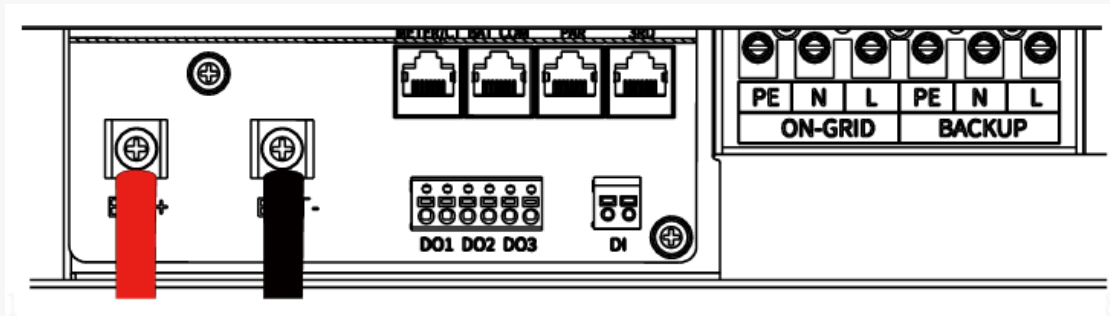
1.4 Electrical Connection – Battery Power Cable

➤ Battery Power Cable Connection

1. Choose the appropriate cable. Refer to the table below for specifications. Use a wire stripper to remove the insulation layer from the cable.

Cable Type	Cable Specification	Stripping Length
Copper wire	• Outer diameter: 12mm~14mm • Cross-sectional area: Min. 35mm²/ 2 AWG	18mm

2. Through the cable hole, place the core of the cable into the crimping area of the M5 OT terminal, and crimp it using hydraulic pliers.
3. Crimp the prepared OT terminal to the corresponding BAT port.



1.4 Electrical Connection – AC Cable

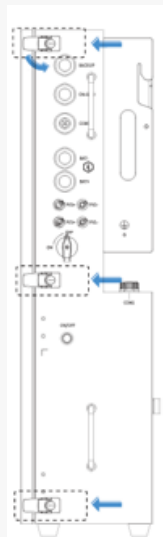
➤ AC Cable Connection

The installation methods for ON-GRID and BACKUP are the same. Choose the appropriate cable, and refer to the table below for specifications. Use a wire stripper to remove the insulation layer from the cable.

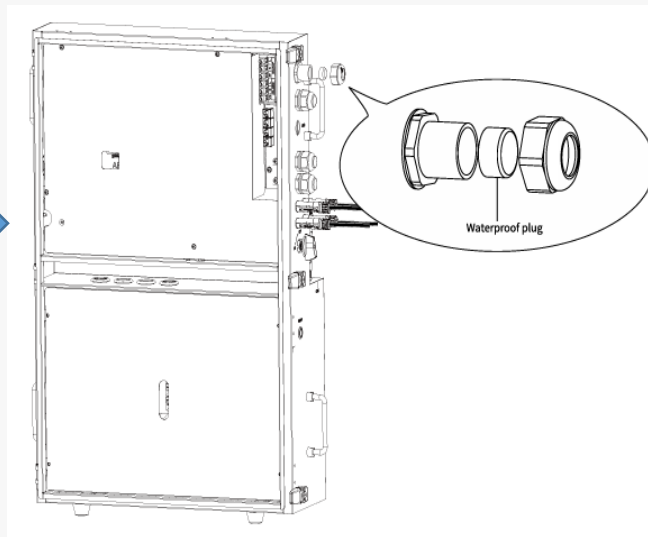
Ports	Cable Type	Cable Specification	Stripping Length
ON-GRID	3-core	- Outer diameter: 11mm~16mm - Cross-sectional area: 6.0 mm² to 10.0 mm² / 10 AWG to 8 AWG	Inner insulation 9mm Outer insulation 15mm
BACKUP	3-core	- Outer diameter: 11mm~16mm - Cross-sectional area: 4.0 mm² to 6.0 mm² / 12 AWG to 10 AWG	Inner insulation 9mm Outer insulation 15mm

1.4 Electrical Connection – AC Cable

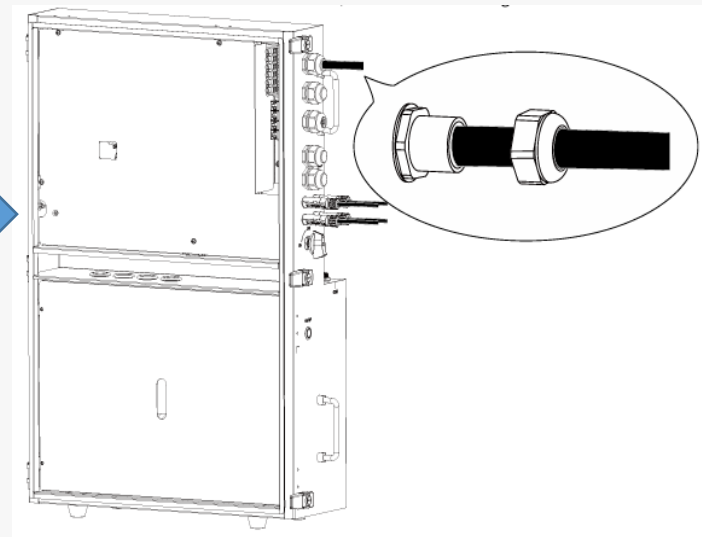
➤ AC Cable Connection



Step1



Step2

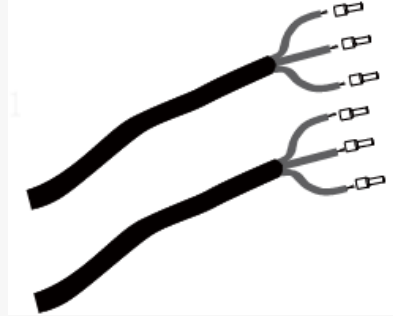


Step3

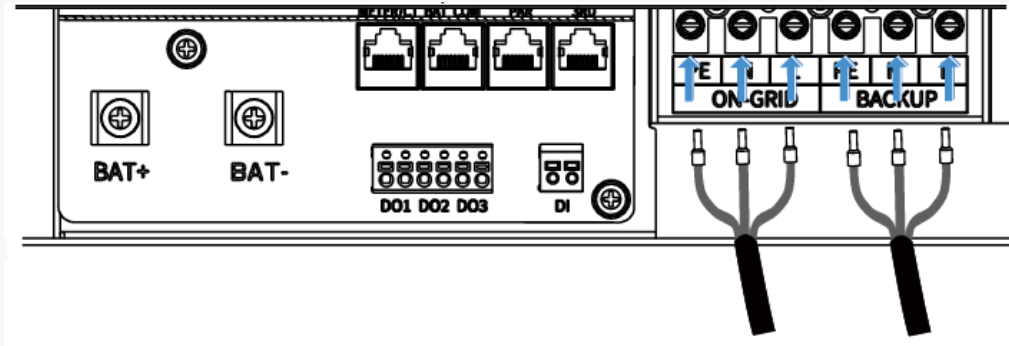
1.4 Electrical Connection – AC Cable

➤ AC Cable Connection

Step 1: Pass the cable through the cable hole and use an insulation terminal to crimp the AC cable.



Step 2: Distinguish between ON-GRID and BACKUP according to the silkscreen. Accurately place their neutral wire, ground wire, and live wire into the corresponding holes, and use a flat-head screwdriver to crimp and secure them.



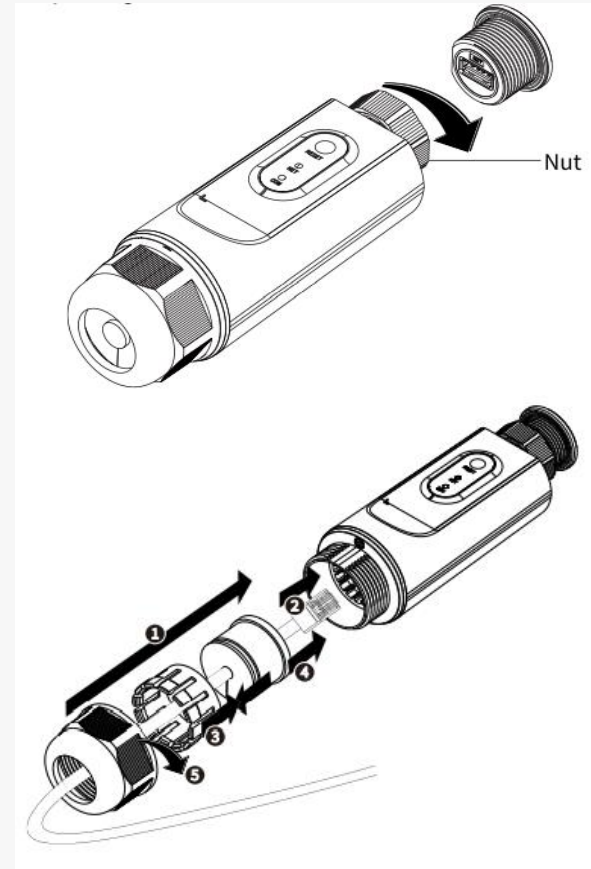
1.4 Electrical Connection – COM1 Port

➤ COM1 Port Connection

Connect the monitoring device to the COM1 port on the inverter and secure it with the nut by turning it clockwise.

Two methods are available. Choose one as needed.

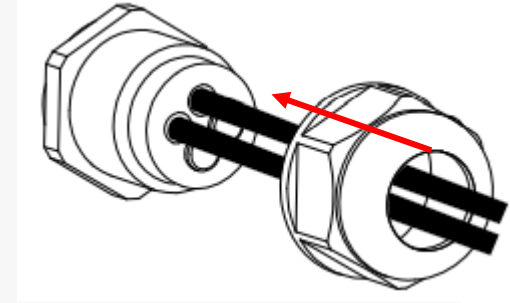
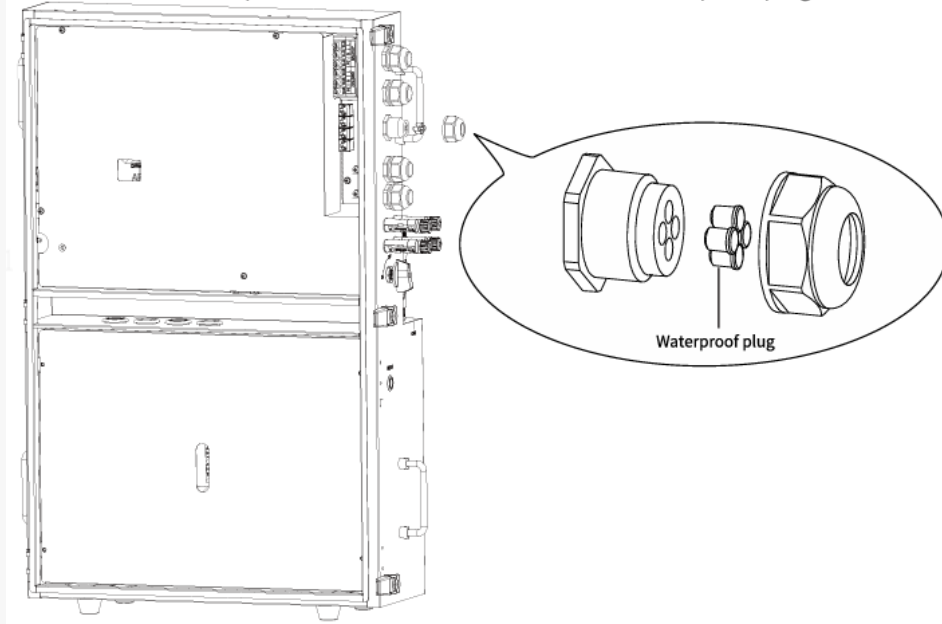
- **Option 1: Wi-Fi connection** After the monitoring device is installed, refer to Wi-Fi Connection for the Monitoring Device for detailed operations.
- **Option 2: LAN connection** If Wi-Fi connection is unavailable due to weak wireless signals of the router or other reasons, you can connect the device to network with a network cable.



1.4 Electrical Connection – COM2 Port

➤ COM2 Port Connection

Remove the waterproof connector nuts and take out the number of waterproof plugs required for your wiring needs. Thread the cables through the waterproof rubber plug.



Note*

If the cable has an RJ45 connector, make an opening in the rubber plug (by cutting or trimming), and then insert the cable through the opening.

1.4 Electrical Connection – COM2 Port

➤ BMS Cable Connection

1. Find the supplied RJ45 connector in the inverter accessories package. And prepare a network cable.



2. Crimp the RJ45 connector to the network cable according to the BMS pin order of the inverter. The pin order of the inverter's RJ45 terminal is as shown below.

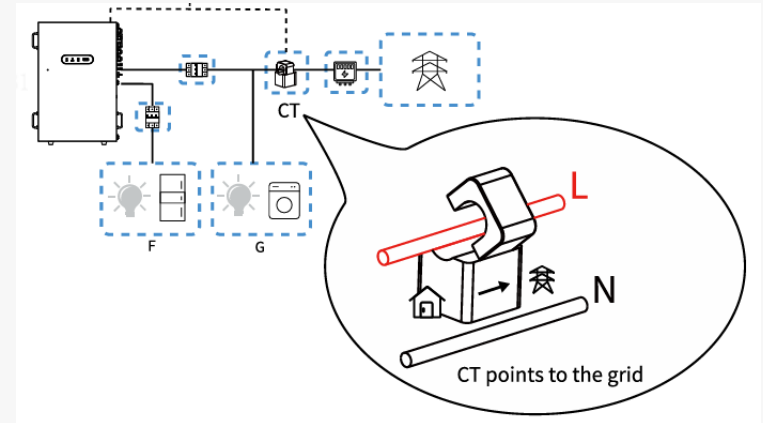
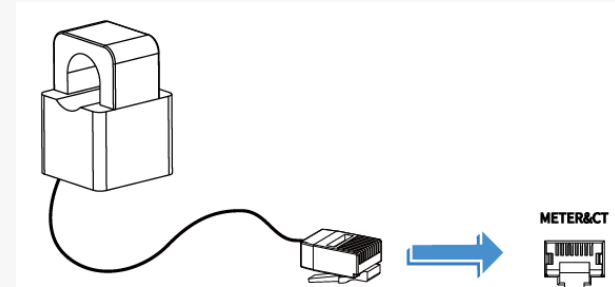
Pin	Color	Description
1	Orange/white	-
2	Orange	-
3	Green/white	-
4	Blue	CAN_H
5	Blue/white	CAN_L
6	Green	GND_CAN
7	Brown/white	-
8	Brown	-

Table: The pin definitions for the BMS port

1.4 Electrical Connection – COM2 Port

➤ CT Connection

1. Locate the attached CT (current transformer), and insert its RJ45 connector through the waterproof interface of COM2, and connect it to the "Meter/CT" port inside the inverter.
2. Clamp the CT onto the AC cables connected to the power to complete the installation.
3. The small arrow "→" on the CT are pointing towards the power grid.



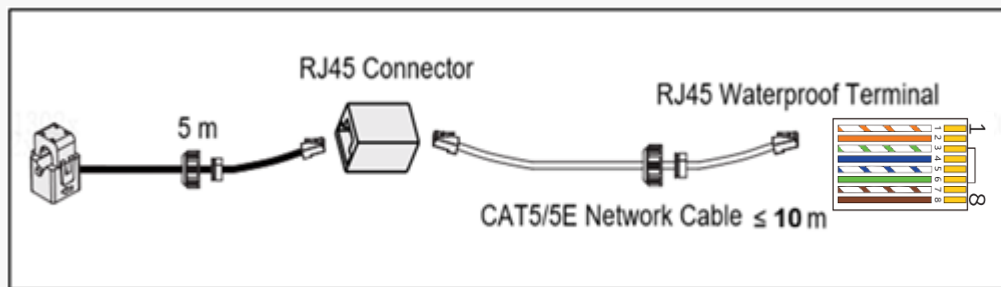
1.4 Electrical Connection – COM2 Port

➤ CT cable extension

The standard CT cable length is 5 meters. But the maximum communication distance of CT can reach 15 meters.

Therefore, if you need to extend the CT cable, It is recommended to use CAT5/CAT5E or higher twisted pair cables.

And also prepare a RJ45 terminal and a RJ45 connector.

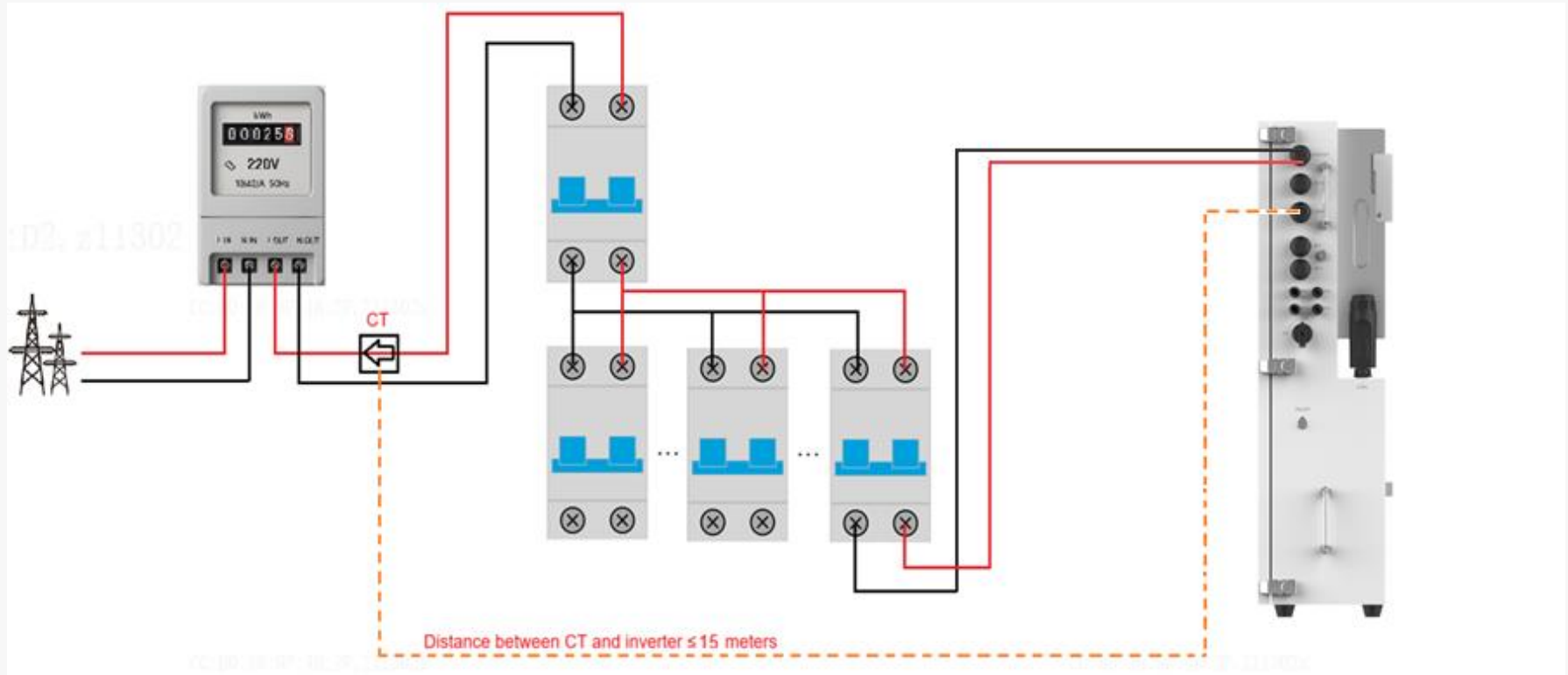


Pin	Color	Description
1	Orange/white	CT1+
2	Orange	CT1-
3	Green/white	-
4	Blue	METER_RS485_B
5	Blue/white	METER_RS485_A
6	Green	-
7	Brown/white	-
8	Brown	-

Inverter CT Port Definition

1.4 Electrical Connection – COM2 Port

➤ CT Connection



1.4 Electrical Connection – COM2 Port

➤ The pin definitions for the other cable

Port	Pin	Color	Description
RAR	1	Orange/white	PAR_SYNC
	2	Orange	PAR_GND
	3	Green/white	-
	4	Blue	PAR_CAN_H
	5	Blue/white	PAR_CAN_L
	6	Green	GND_RS485
	7	Brown/white	PAR_RS485_A
	8	Brown	PAR_RS485_B
3RD	1	Orange/white	-
	2	Orange	-
	3	Green/white	-
	4	Blue	3rd_RS485_B
	5	Blue/white	3rd_RS485_A
	6	Green	-
	7	Brown/white	EV_RS485_B
	8	Brown	EV_RS485_A

NOTE*

PAR, 3RD Cable Connection:

Before connecting, ensure the communication pin sequence of the device matches that of the corresponding cable. If they do not match, cut the communication cable and remake the RJ45 connector. Insert the correctly sequenced RJ45 connector into the COM2 port of the device according to the silkscreen marking, and connect it to the corresponding port.

1.4 Electrical Connection – Smart Meter

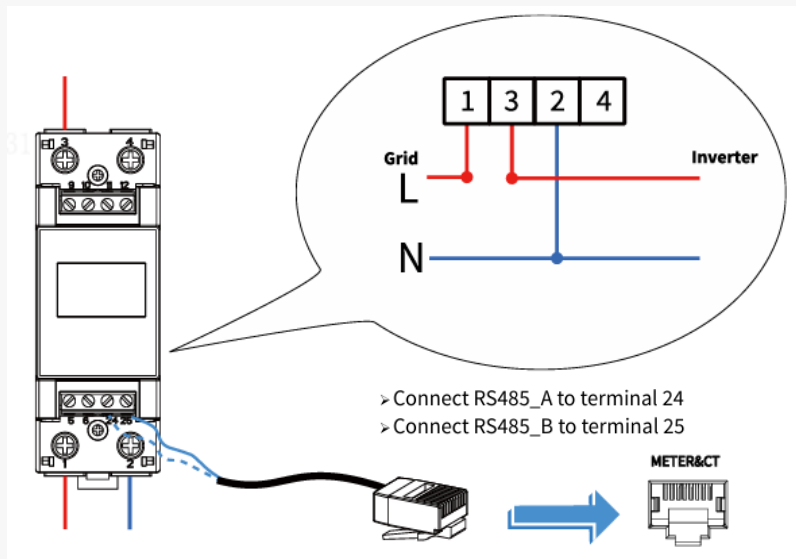
➤ Smart Meter Connection

- The maximum communication distance of smart meter can reach 100 meters. It is recommended to use CAT5/CAT5E or higher twisted pair cables. And also prepare a RJ45 waterproof terminal.
- The smart meter needs to be purchased from us or official cooperation channels. Installation of third-party smart meters is not supported.



1.4 Electrical Connection – Smart Meter

➤ Smart Meter Connection



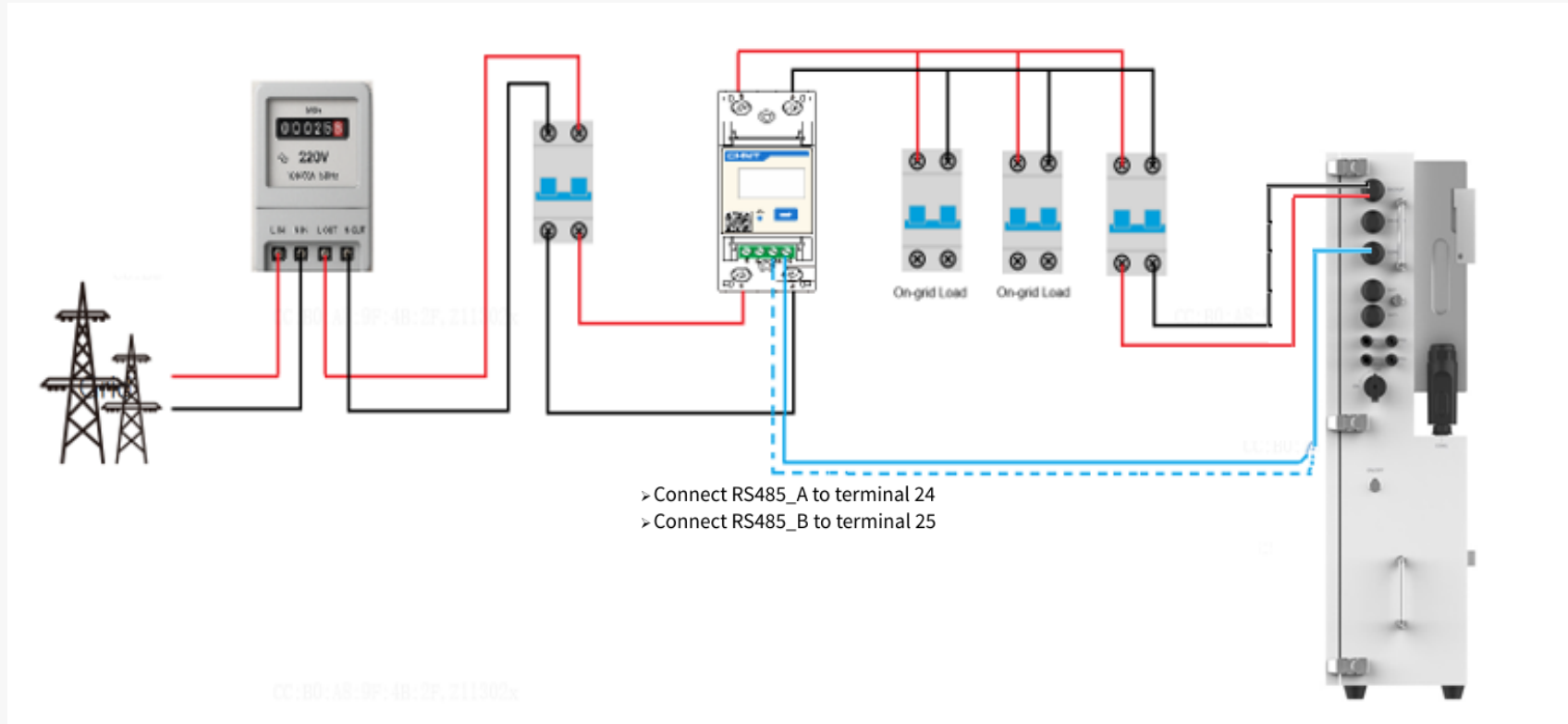
Pin	Color	Description
1	Orange/white	CT1+
2	Orange	CT1-
3	Green/white	-
4	Blue	METER_RS485_B
5	Blue/white	METER_RS485_A
6	Green	-
7	Brown/white	-
8	Brown	-



- Smart meters: It is recommended to use CAT5/CAT5E or higher twisted pair cables. The allowed distance between the smart meter and the inverter can be up to 100 meters.
- The smart meter needs to be certified and approved by our company. Installation of third-party smart meters is not supported.

1.4 Electrical Connection – Smart Meter

➤ Smart Meter Connection



1.4 Electrical Connection

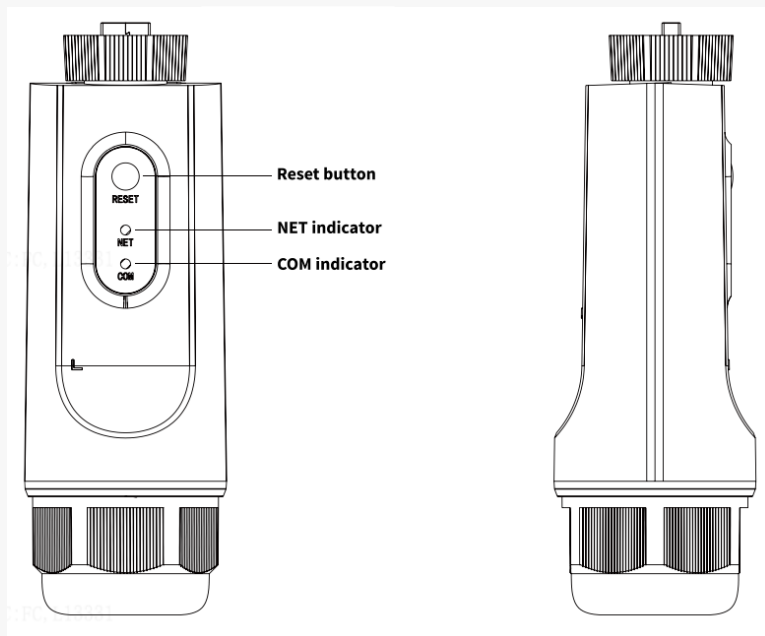
➤ Power on the system

Follow the steps to power on the system:

1. Switch on the inverter' s DC switch.
2. Turn on the battery system:
 - ①Push up the circuit breaker on the high voltage control box.
 - ②Press and hold the power button for 10 seconds, then release.
3. Switch on the AC breaker for the grid and load.
4. Check the inverter and battery's LED indicator to ensure the system is operating normally.

1.4 Electrical Connection

➤ Wi-Fi Dongle Indicators



Button	Operation	Description
Reset button	Short press (< 3s)	Upload the collected information to the cloud server.
	Long press (> 3s)	Restore factory defaults.

Indicator	Status	Description
NET	Blinking blue	Connected to the router but not connected to the cloud server
	Steady blue	Connected to the router and cloud server
	Steady red	Router connection error
COM	Steady blue	Connected to the inverter
	Steady red	Inverter connection error

PART 02

APP User Guide

2.1 Download Hopetrek Link APP

APP download: Android system can search "Hopetrek Link" through Google store for download, while IOS system can choose to download Hopetrek Link APP in Apple Store.

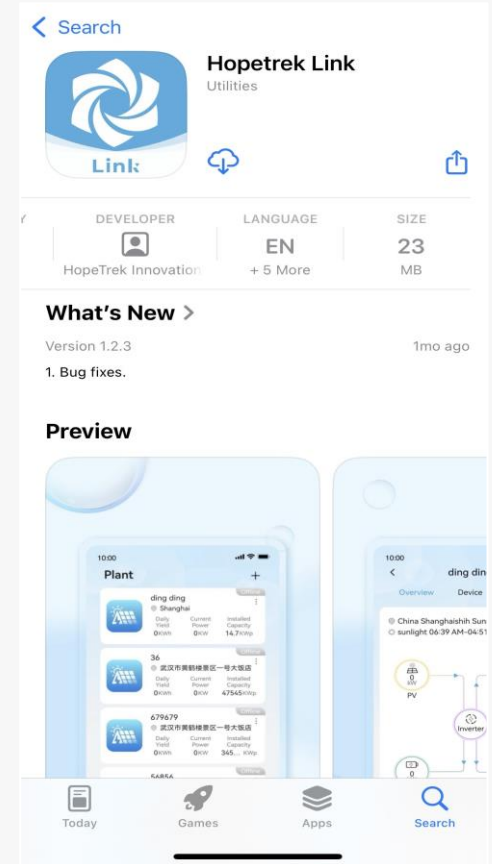
QR download: Hopetrek Link APP can also support scanning QR code with mobile phone for downloading. Please use mobile phone for scanning code.



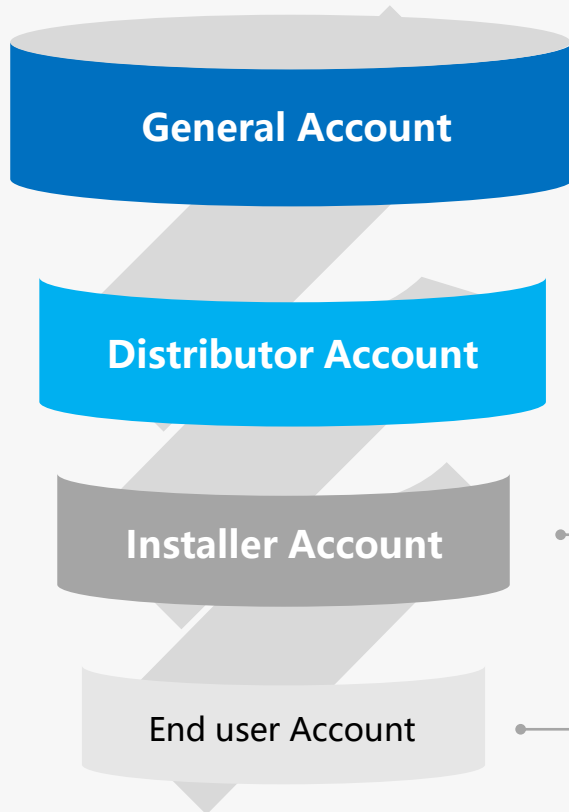
iOS



Android



2.2 Account authority allocation



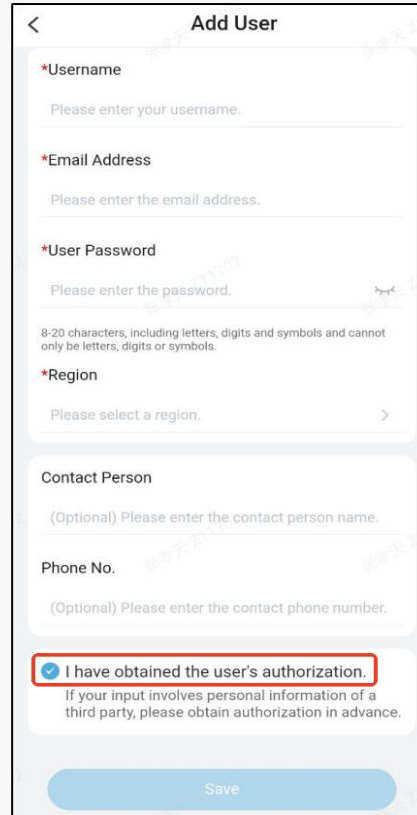
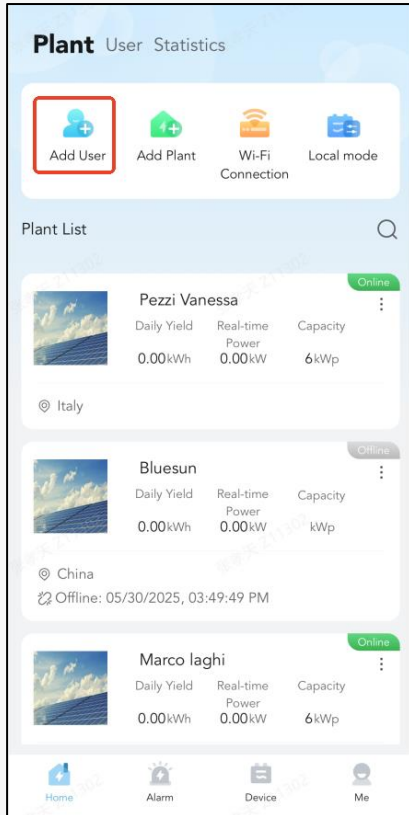
Notice:

1. All distributor account and installer account need to be created on the WEB, the APP does not support.
2. The account of distributor or installer who work directly with Hopetrek must be created by the HOPETREK general account.

- Create a sub-distributor account
- Create a direct cooperation installer account
- View and operate the power plants of all subordinate accounts
- Create a end user account and power plant for their customer
- Create a subordinate installer account
- View and operate the power plants of all subordinate accounts
- View only your own power plant

2.3 Power Plant Creation Guide

➤ Add a user account for your client



Add User

*Username
Please enter your username.

*Email Address
Please enter the email address.

*User Password
Please enter the password.
8-20 characters, including letters, digits and symbols and cannot only be letters, digits or symbols.

*Region
Please select a region.

Contact Person
(Optional) Please enter the contact person name.

Phone No.
(Optional) Please enter the contact phone number.

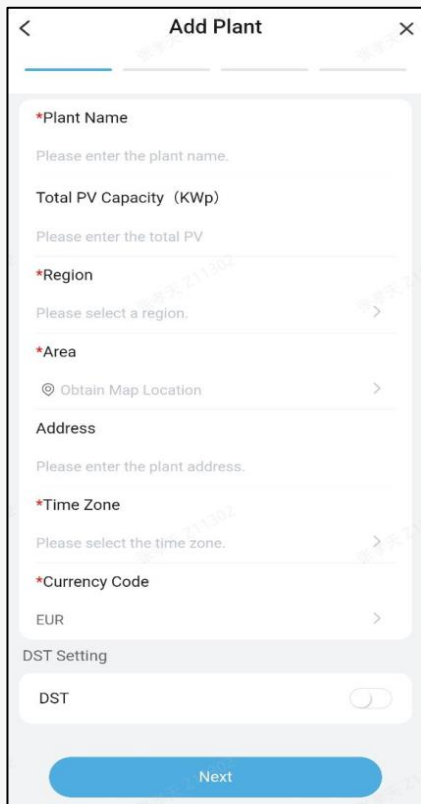
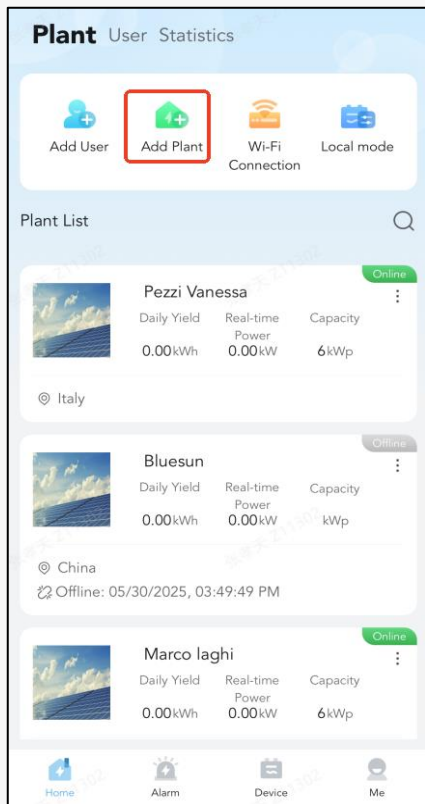
☒ I have obtained the user's authorization.
If your input involves personal information of a third party, please obtain authorization in advance.

Save

- Please use the lowest level installer's account to help creating the power plant and end user account, So that end user can log in directly to their accounts without having to register themselves, and check their power plant.
- At the same time, the higher-level installer or distributor account can also view the power plant.

2.3 Power Plant Creation Guide

➤ Add a user account for your client



The screenshot shows the 'Add Plant' form. It includes fields for: *Plant Name, Total PV Capacity (KWp), *Region, *Area, Address, *Time Zone, *Currency Code, and DST Setting. The 'Next' button is at the bottom.

< Add Plant ×

*Plant Name
Please enter the plant name.

Total PV Capacity (KWp)
Please enter the total PV

*Region
Please select a region. >

*Area
Obtain Map Location >

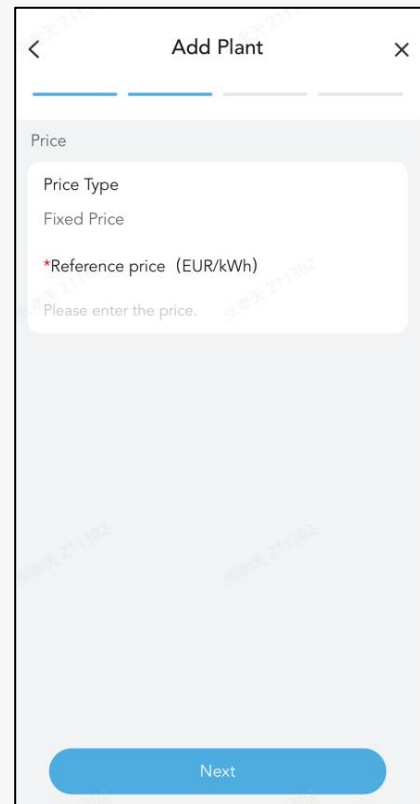
Address
Please enter the plant address.

*Time Zone
Please select the time zone. >

*Currency Code
EUR >

DST Setting
DST [toggle]

Next



The screenshot shows the 'Add Plant' form, specifically the 'Price' section. It includes fields for: Price Type, Fixed Price, and *Reference price (EUR/kWh). The 'Next' button is at the bottom.

< Add Plant ×

Price

Price Type
Fixed Price

*Reference price (EUR/kWh)
Please enter the price.

Next

2.3 Power Plant Creation Guide

➤ Add a user account for your client

<

Add Plant

×

Link User

*Link User

Please enter the email address.

☒ I have obtained the user's authorization to perform maintenance to the plant.

Note:

1. Enter the email address of the account just created for the end user

2. Tick "I have obtained"

Next

<

Add Plant

×

More

Installer Email

Enter the installer email address.

Installer Phone No.

Enter the installer phone number.

PV Qty

Enter the PV quantity.

On-grid Time

Select the on-grid time. >

Plant Contact

Please enter the contact person name.

Plant Photo

Finish

×

Created successfully.

Created successfully

You can perform the following operation:

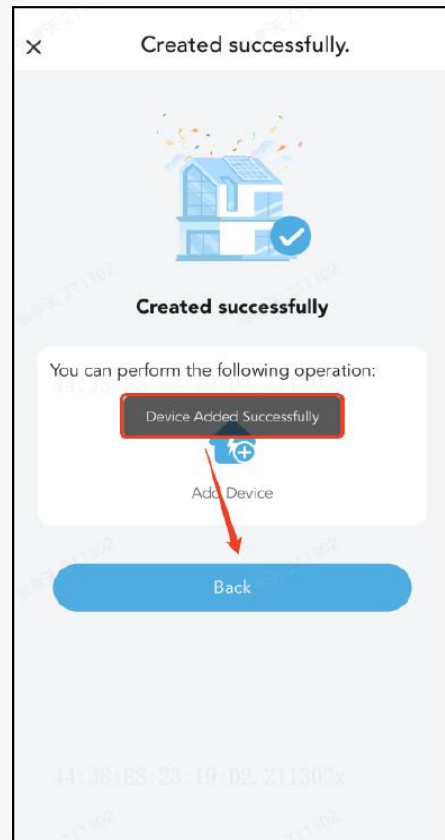
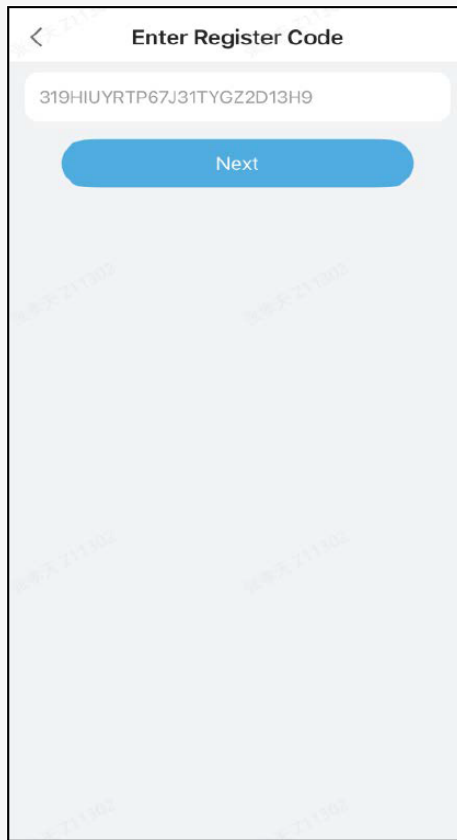
Add Device

Add a inverter to this power plant

Back

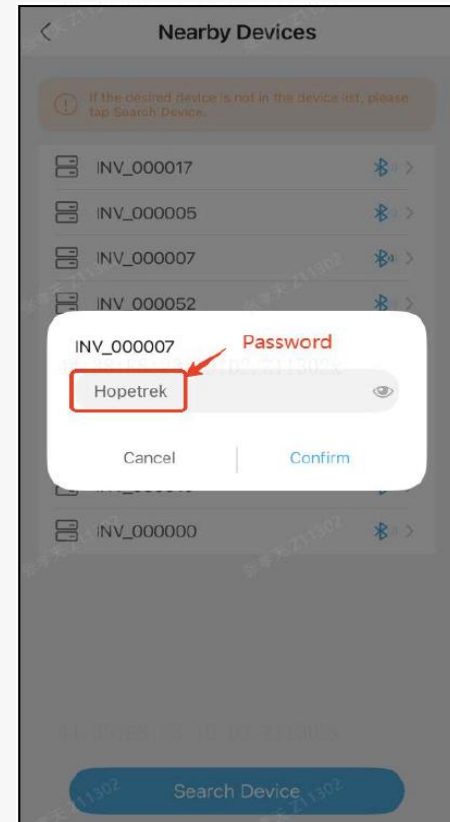
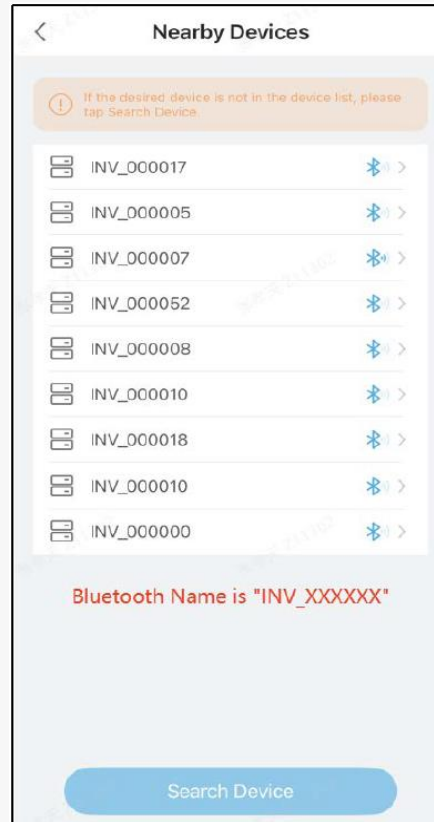
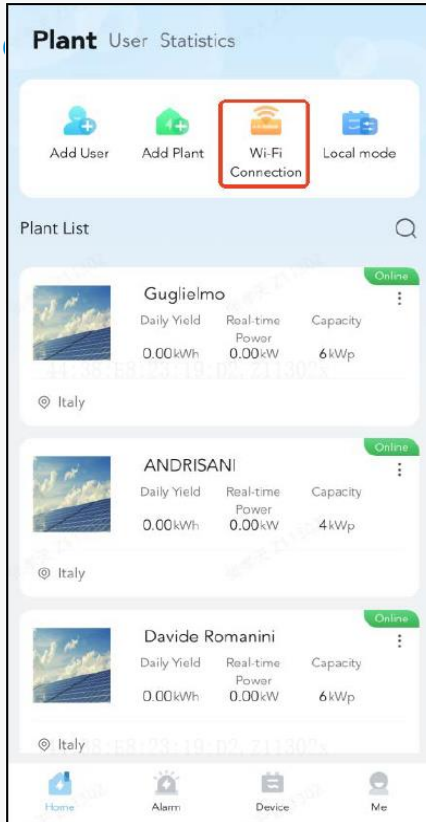
2.3 Power Plant Creation Guide

➤ Add a power plant for your client



2.3 Power Plant Creation Guide

➤ Wi-Fi configuration for your



2.3 Power Plant Creation Guide

➤ Wi-Fi configuration for your client

WiFi Configuration



Please put your mobile phone as close to the device as possible.

Wi-Fi Name

DZ2101081.11384

Wi-Fi Password

Enter wifi password

Connect



Plant

UserStatistics

Add User

Add Plant

Wi-Fi Connection

Local mode

Plant List



Demo Plant2

Daily Yield

0.00kWh

Real-time Power

0.00kW

Capacity

6kWp

China



81.90kWh

Real-time Power

13.93kW

Capacity

12kWp

China



Home

Daily Yield

0.00kWh

Real-time Power

0.00kW

Capacity

kWp

Ukraine

Configured successfully.

Home

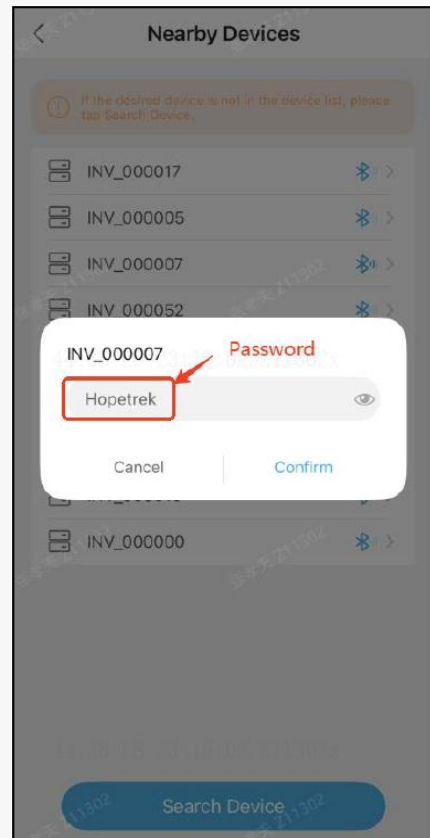
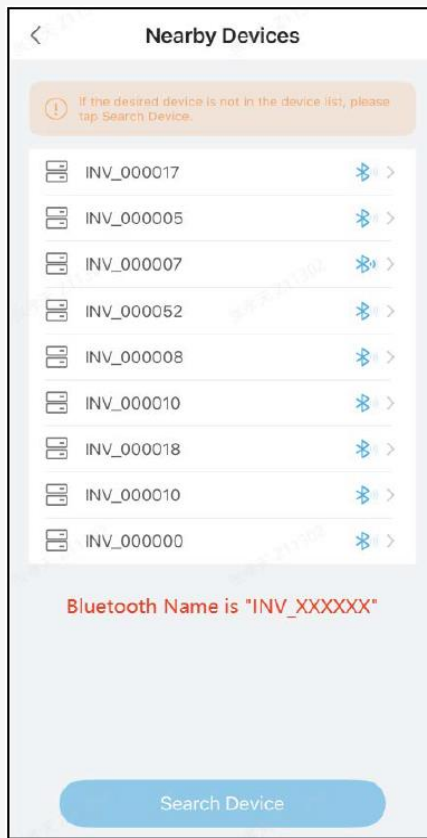
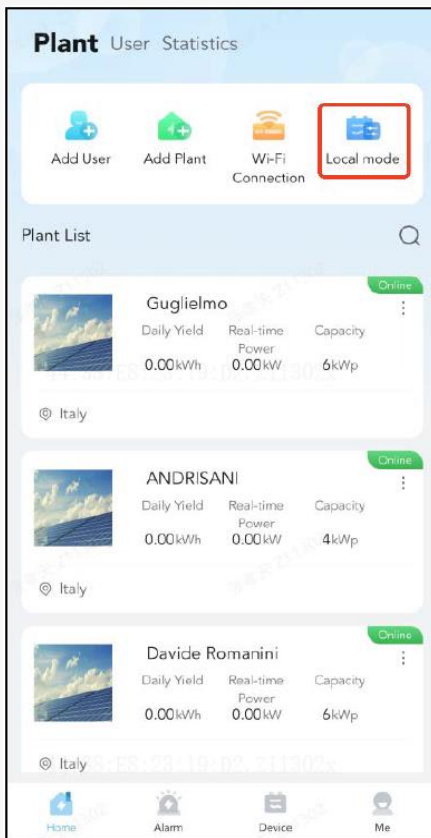
Alarm

Device

Me

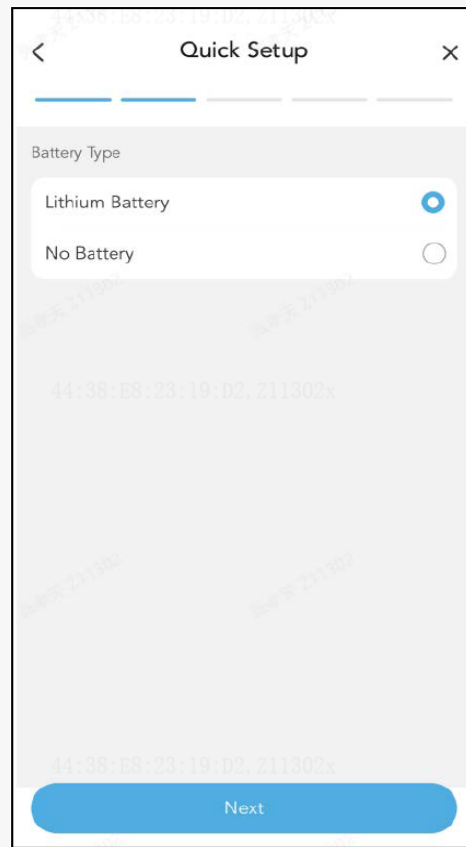
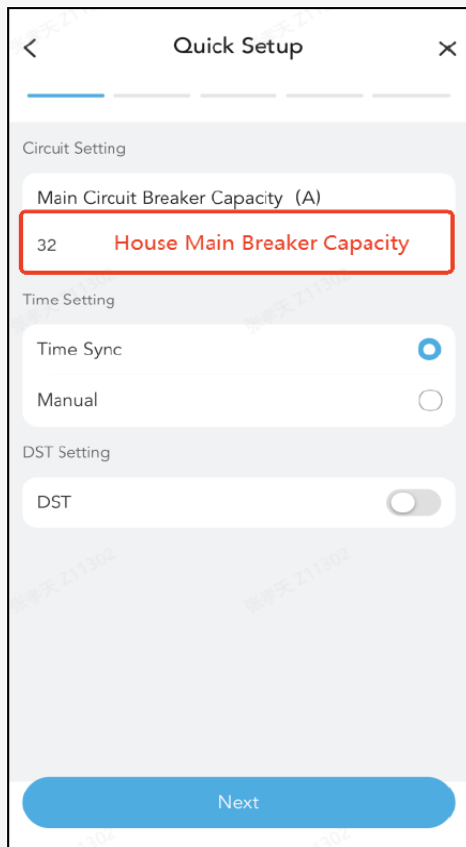
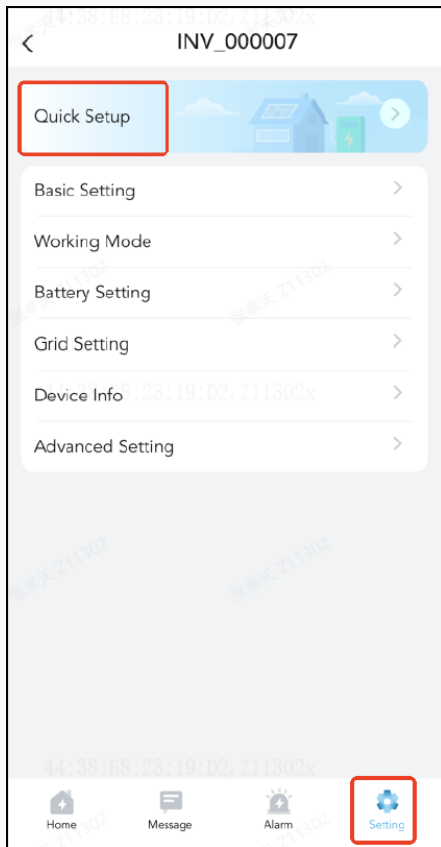
2.3 Power Plant Creation Guide

➤ Quick setup for your client



2.3 Power Plant Creation Guide

➤ Quick setup for your client



2.3 Power Plant Creation Guide

➤ Quick setup for your client

<

Quick Setup

×

Select CT/Meter

CT

☒

Meter

☐

Choose according to CT or Meter

CT/Meter Test

Set successfully.

Testing...

Notes:

1. Inverter should be connected to grid.

2. Smart meter's communication should be normal.

3. Battery's communication should be normal.

4. Battery can discharge.

5. Turn off unstable loads in the system, such as washing machine.

6. Turn off other power generation equipment in the system, such as on-grid inverter.

7. Turn off the system's Power Limit function before the

Next

<

Quick Setup

×

Select Safety Code

EN50549

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IT_CEI0-21

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UK_G98

☐

UK_G99

☐

UK_G100

☐

ES_NTS-TypeA

☐

ES_UNE-217002

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ES_UNE-217001

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PL_NC-RFG

☐

HU_IEC62116

☐

HU_IEC61727_50

☐

DE_VDE 4105

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Next

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Quick Setup

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Working Mode

Self-use

☒

Discharge Cutoff SOC (%)

11

Backup

☐

Peak Shaving

☐

Self-define

☐

Save



HOPETREK

THANKS