HOPETREK

Installation guide

Product Model:

SUN-SL-HP3K/3K6/5K/6K-A1

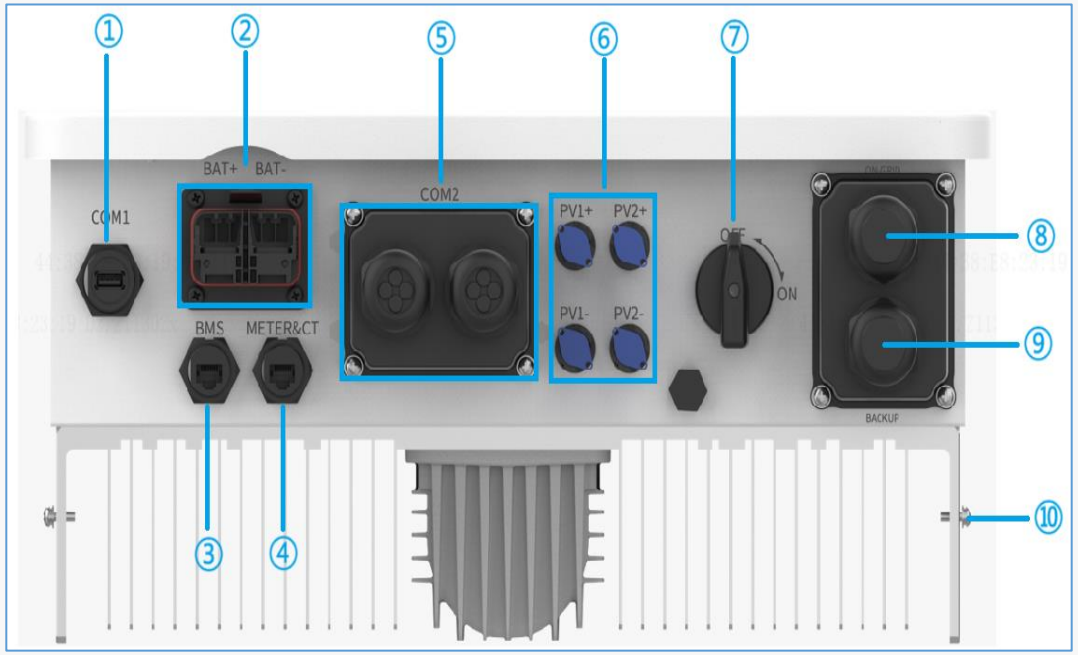
SUN-SL-HP5K /6K-A2

CONTENTS

PART 01

System Installation Guide

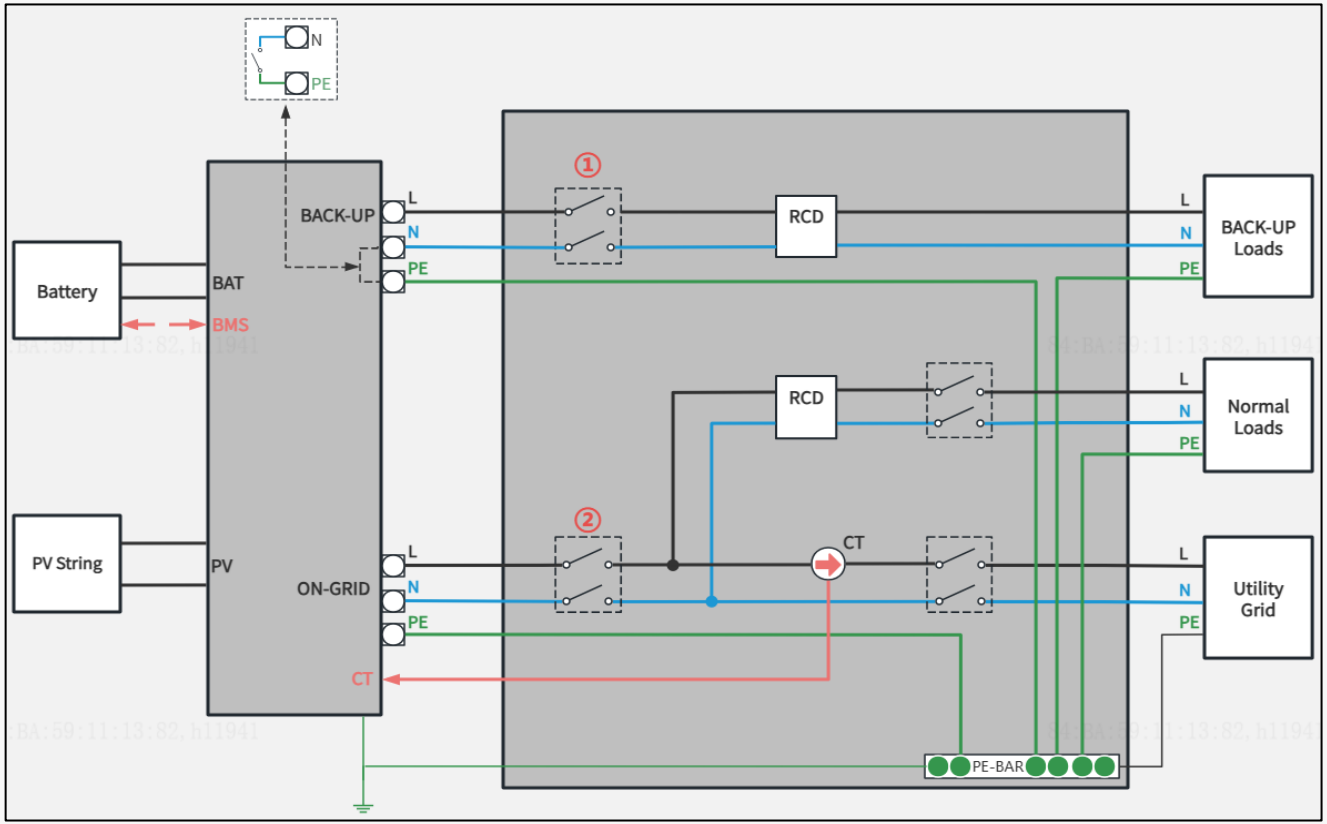
1.1 Inverter Interface



Name	Description
① COM 1	Wi-Fi Dongle Port
② BAT+/ BAT-	Battery Positive and Negative Port
③ BMS	Battery BMS Communication Port
④ Meter & CT	Meter & CT Communication Port
⑤ COM 2	Multifunction Port
⑥ PV1 / PV2	PV Input Port
⑦ DC Switch	PV Input Switch
⑧ ON-GRID	Grid Connection Port
⑨ BACKUP	EPS Load Connection Port
⑩ Grounding	Protective Earth (PE) Terminal

It is not necessary to remove the COM2 port's waterproof cover during installation when the COM2 port is not in use.

1.2 System Wiring Diagram



① 2P MCB for backup port:
5K model: 230V 40A
6K model: 230V 40A

② 2P MCB for on-grid port:
5K model: 230V 63A
6K model: 230V 63A

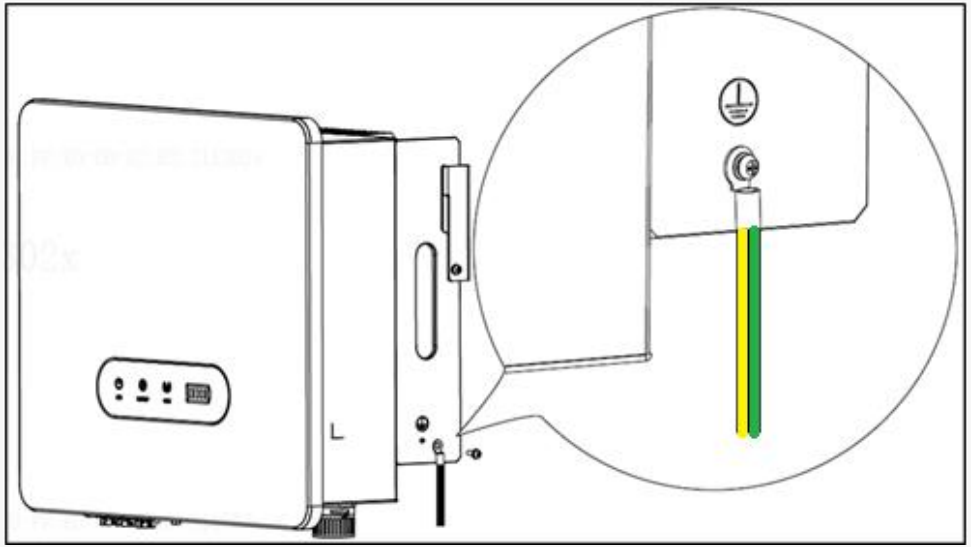
RCD Recommended:
- On-GRID RCD: Type A 300mA
- BACK-UP RCD: Type A 30mA

1.3 Electrical connection

➢ Inverter Grounding

Connection

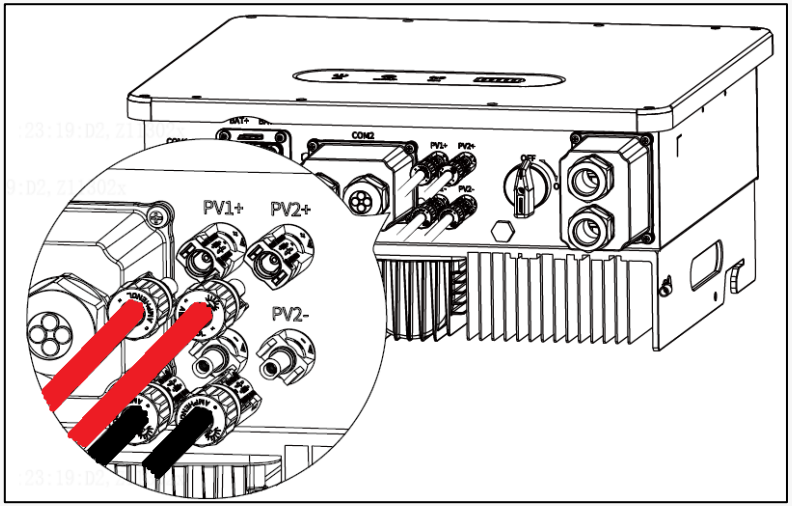
1. Choose the appropriate cable. Cross-sectional area is 6.0 mm² / 8 AWG .
2. Place the core of the cable into the crimping area of the M4 OT terminal (included in the inverter accessory package), and crimp it using hydraulic pliers.
3. Secure the M4 OT terminal to the hole on right side of the inverter using a screw, and screw the other side of the grounding cable to the PE bar of the house distribution box.



1.3 Electrical connection

➢ 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 550V.
2. Distinguish between the male and female connectors, connect the completed PV terminal to the inverter with a “click” sound.

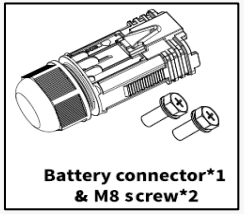


Notice: If necessary, install a DC BOX between the PV string and the inverter. It contains protective devices (fuses, circuit breakers, etc.) and can enhance the system safety.

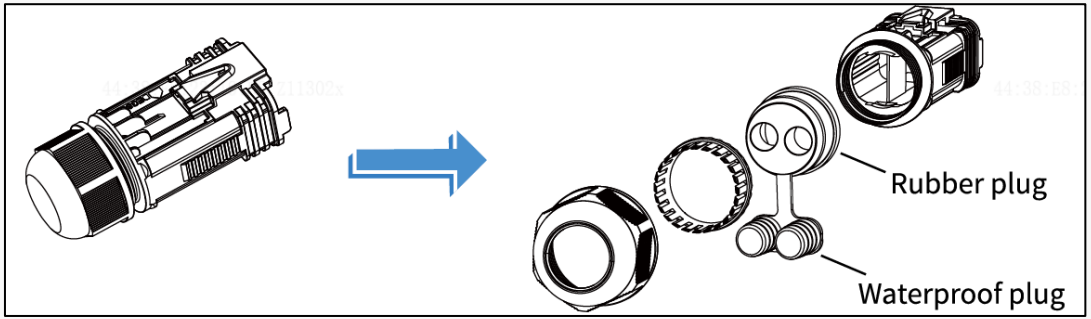
1.3 Electrical connection

➢ Battery Power Cable Connection

1. Find the battery connector with 2 M8 screws in the inverter accessories package.



2. Disassemble the battery connector, unplug and cut off the waterproof plug from the rubber plug before threading cables.



1.3 Electrical connection

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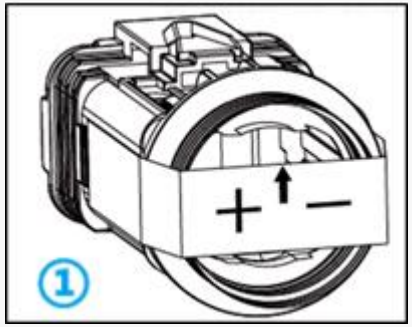
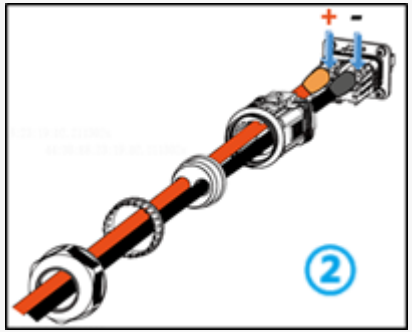
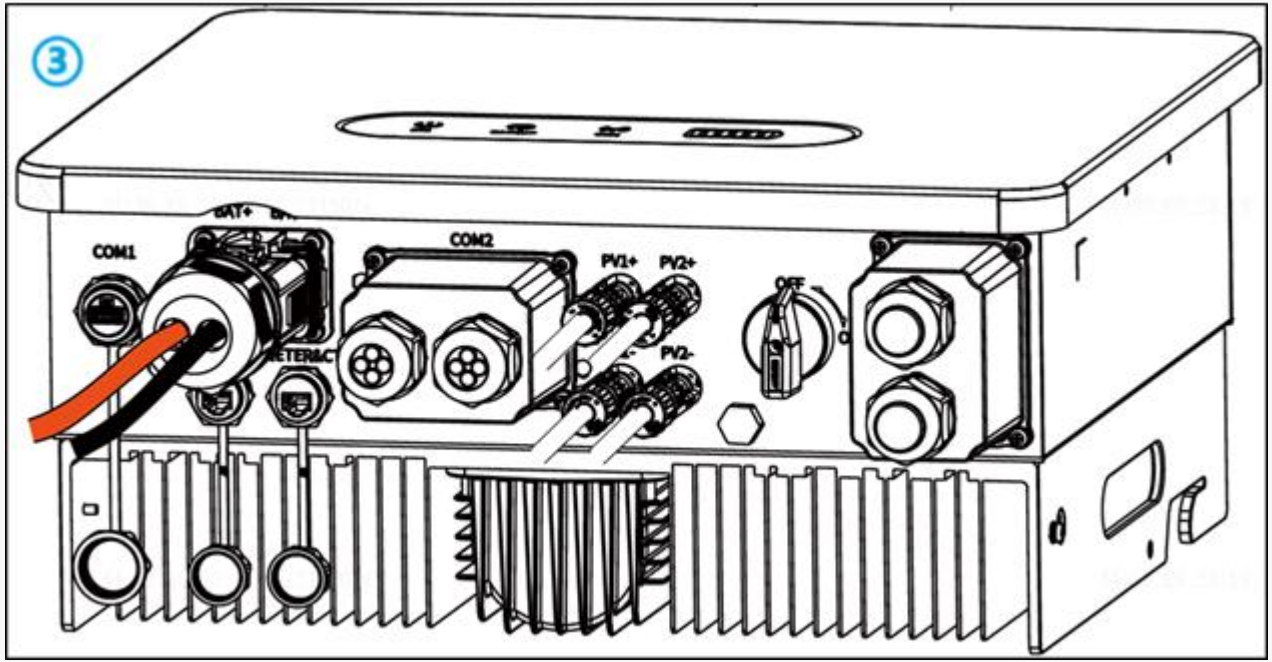
➢ Power cable connection between battery and inverter

3. Lead the battery power cable by following the instructions on the label at the bottom of the power connector. Then using 2 M8 screws to secure the power cables to the BAT terminals of the inverter.
4. Re-assemble the power connector and push it until hearing a click sound means the connection is secure.







1.3 Electrical connection

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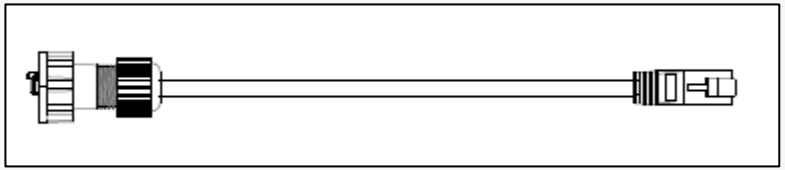
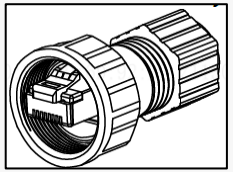
➢ BMS Cable Connection

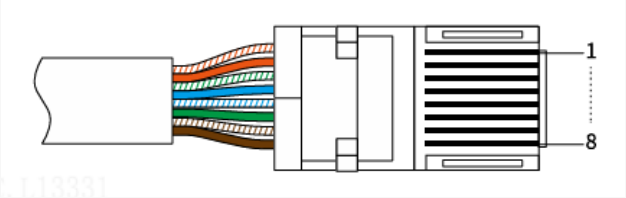
1. Find the supplied RJ45 waterproof terminal in the inverter accessories package. And prepare a network cable.





2. Crimp the RJ45 waterproof terminal 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	White-Orange	-
2	Orange	-
3	White-Green	-
4	Blue	CAN_H
5	White-Blue	CAN_L
6	Green	GND_CAN
7	White-Brown	-
8	Brown	-



1.3 Electrical connection

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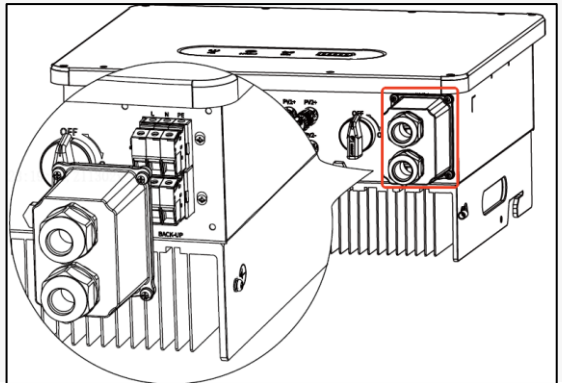
➢ BMS Cable Connection between battery and inverter

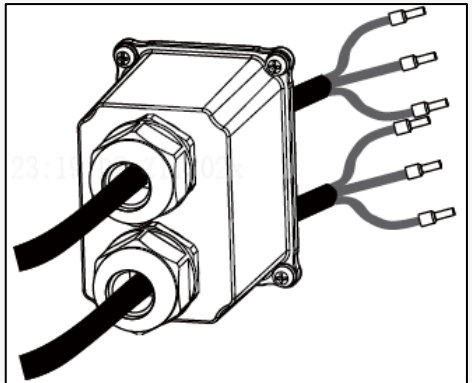
3. Connect the crimped RJ45 terminal of the BMS cable to the inverter BMS port.

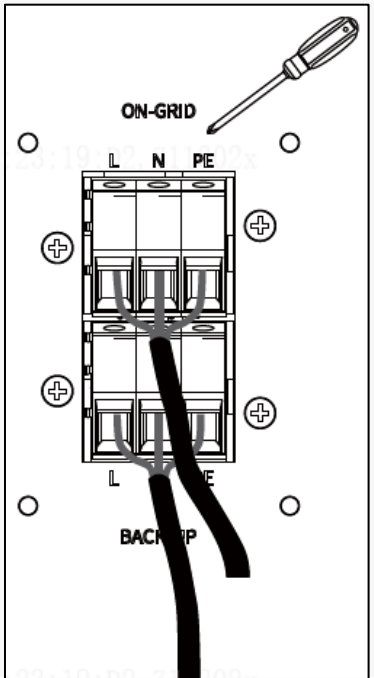
1.3 Electrical connection

AC Cable Connection

1. Use a Phillips screwdriver to loosen the screws on the waterproof cover at the ON-GRID and BACKUP ports, and then remove it.
2. Choose the appropriate three-core cable. Recommended cross-sectional area is 6.0~10.0mm²/8AWG~6AWG for Grid port, 4.0~6.0mm²/10AWG~8AWG for BACKUP port.
3. Use insulated terminal connectors (Included in the inverter accessory package) to crimp the 3-core cables.
4. Thread the 3-core cables through the waterproof rubber plugs.
5. Press the neutral wire, ground wire, and live wire into the corresponding holes of the terminal block. The ON-GRID port is on the top, and the BACKUP port is at the bottom. Use a Philips screwdriver to press and secure them.



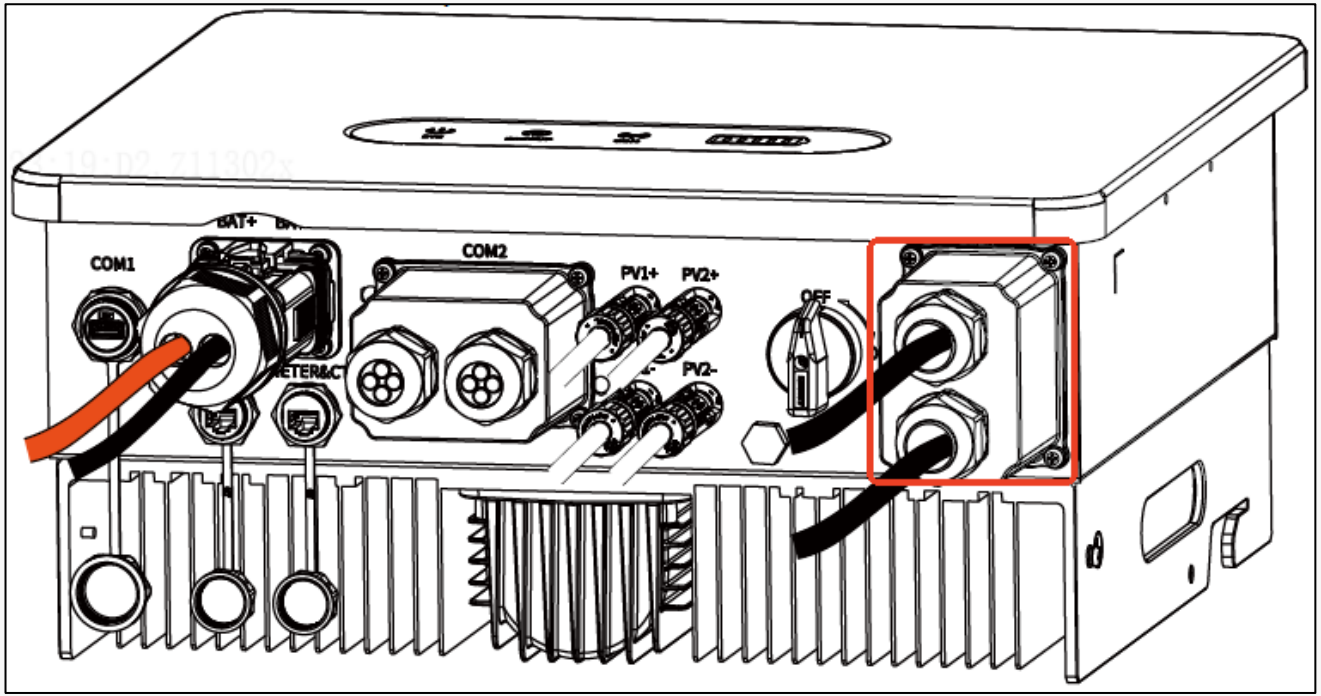




1.3 Electrical connection

➢ AC Cable Connection

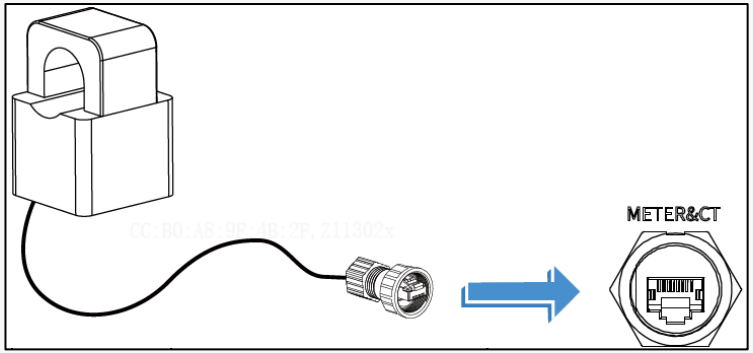
6. Check that the cables inside the waterproof cover are not overly bent or stretched, and then install the waterproof cover.



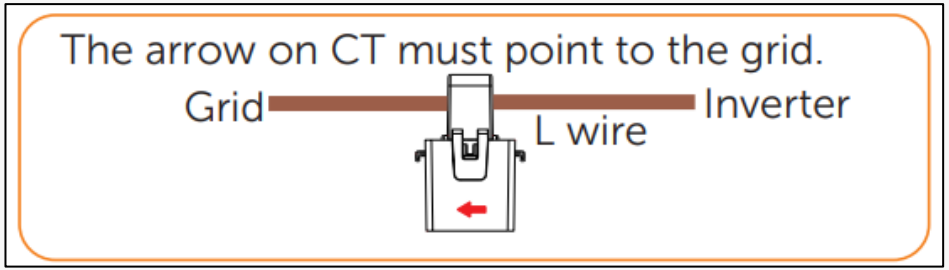
1.3 Electrical connection

➢ CT Connection

1. Find the supplied CT, connect its RJ45 waterproof terminal to the METER&CT port at the bottom of the inverter, and secure with a nut.



2. Clamp the CT onto the AC live cable connected to the power grid to complete the installation.

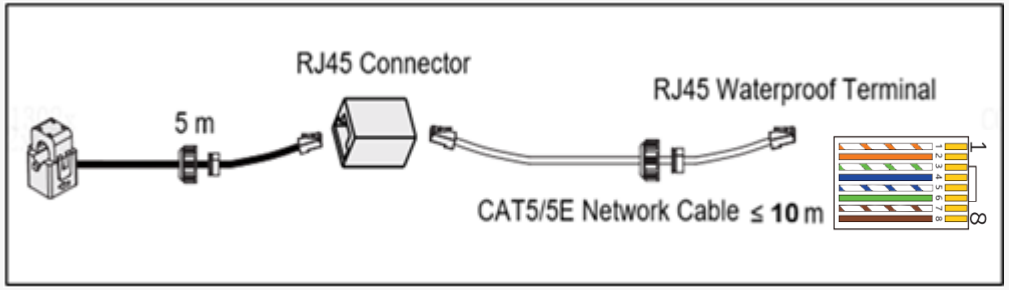


1.3 Electrical connection

➢ 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 waterproof terminal and a RJ45 connector.

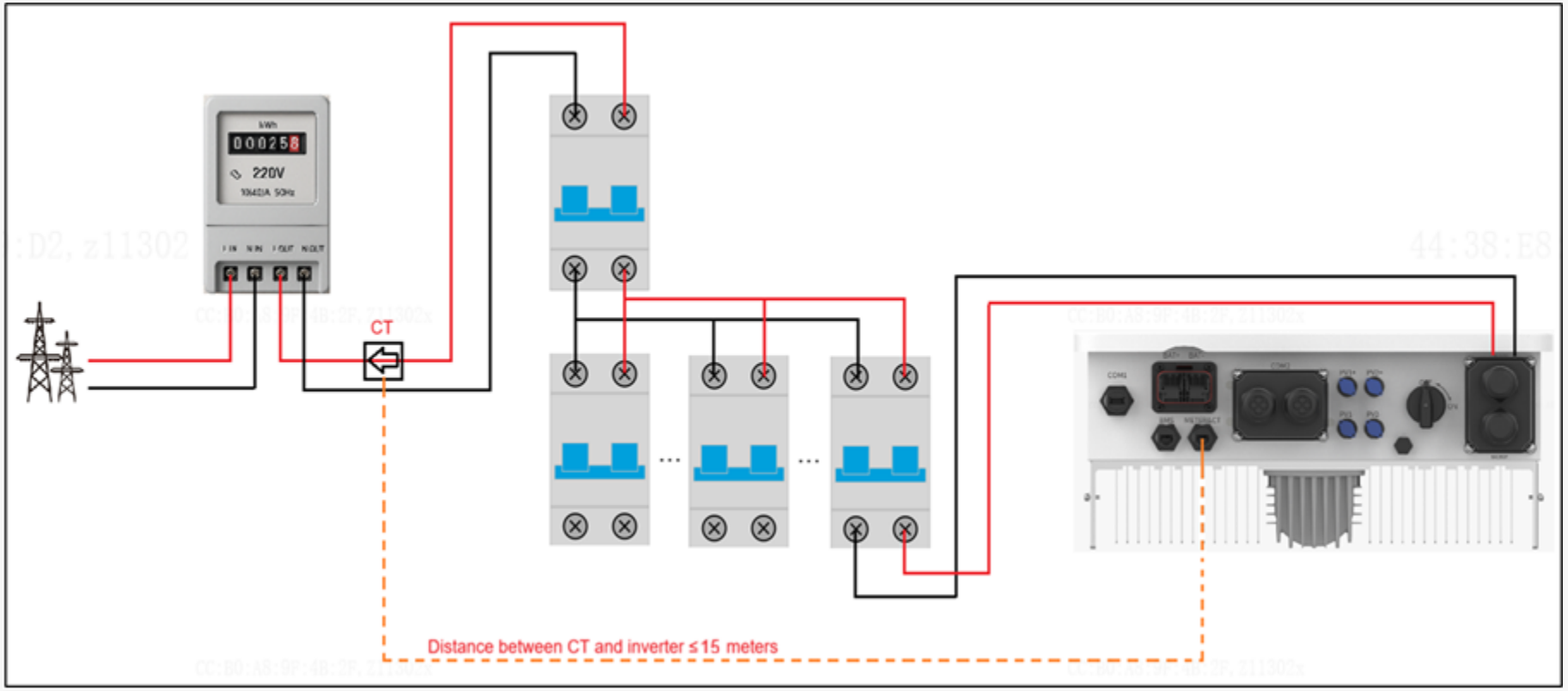


Pin	Color	Description
1	Orange/white	CT1+
2	Orange	CT1-
3	Green/white	-
4	Blue	METER_RS485_B
5	Blue/white	METER_RS485_A
6	Green	-
7	Brown/white	-
8	Brown	-

Inverter CT Port Definition

1.3 Electrical connection

➢ CT Connection



1.3 Electrical connection

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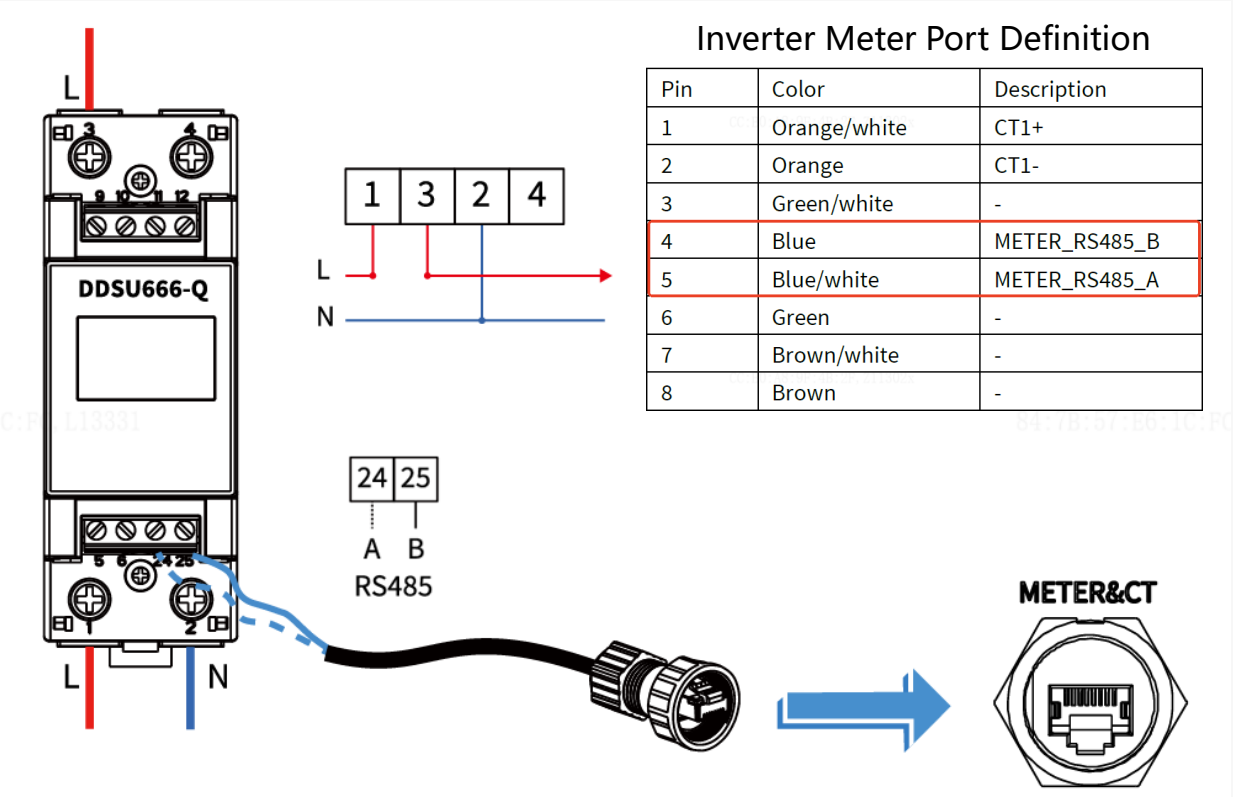
➢ Smart Meter Connection

- 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.
- Compatible meters: DDSU666-Q (Direct Insert); DDSU666 (With CT)

1.3 Electrical connection

➢ Smart Meter Connection（DDSU666-Q meter）

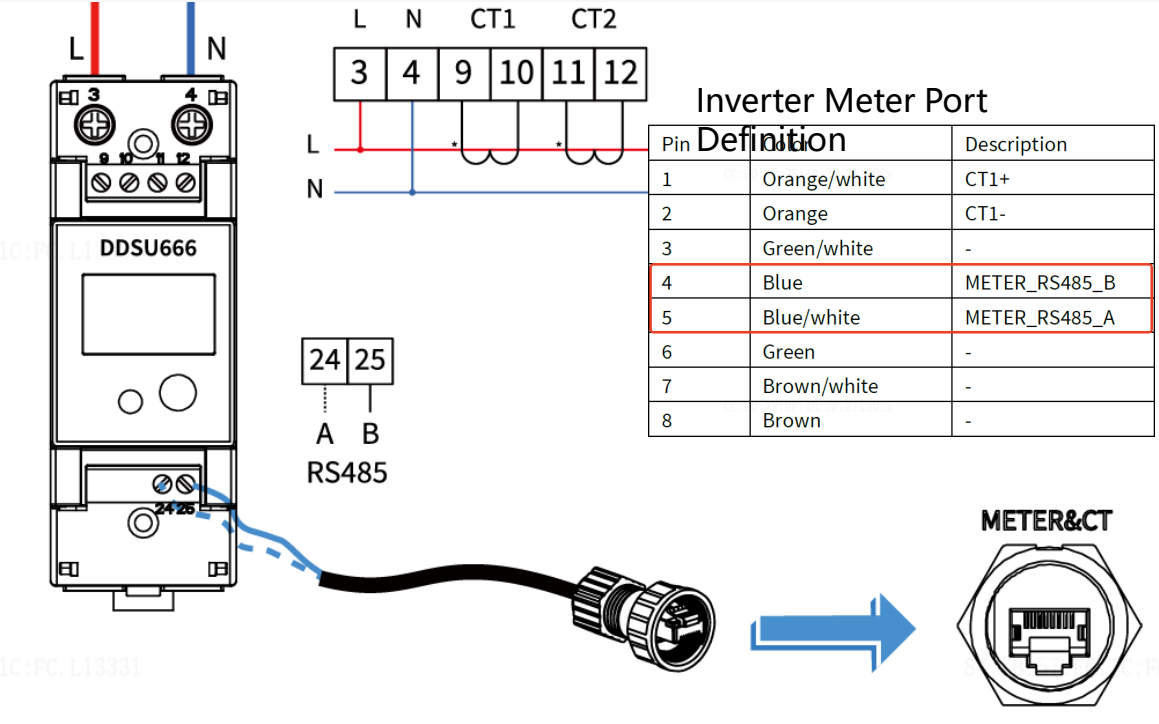


Inverter Meter Port Definition

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	-

1.3 Electrical connection

➢ Smart Meter Connection (DDSU666 meter)



Inverter Meter Port Definition

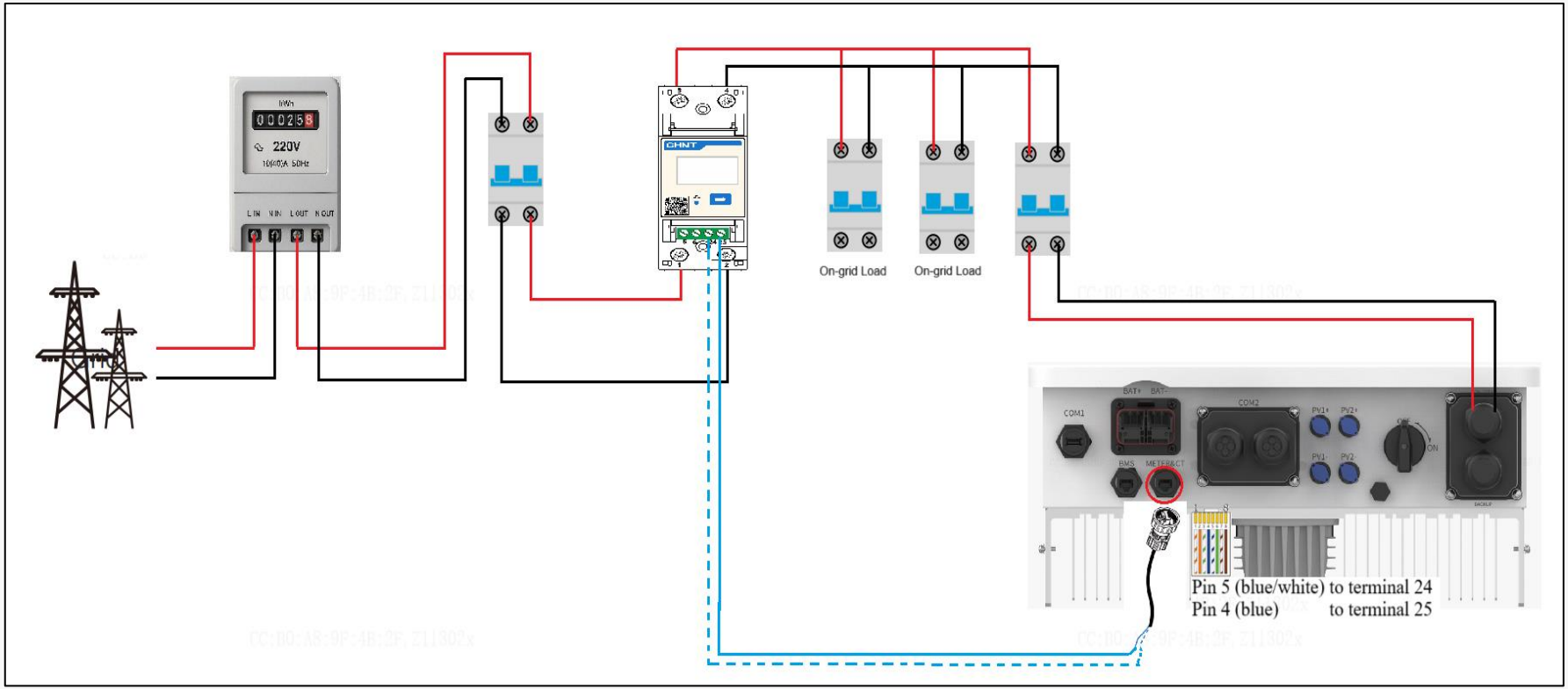
Pin	Color	Description
1	Orange/white	CT1+
2	Orange	CT1-
3	Green/white	-
4	Blue	METER_RS485_B
5	Blue/white	METER_RS485_A
6	Green	-
7	Brown/white	-
8	Brown	-

For the DDSU666 meter, which has two external CTs (CT1, CT2), it is mainly used in AC coupling applications.

1.3 Electrical connection

HOPETREK

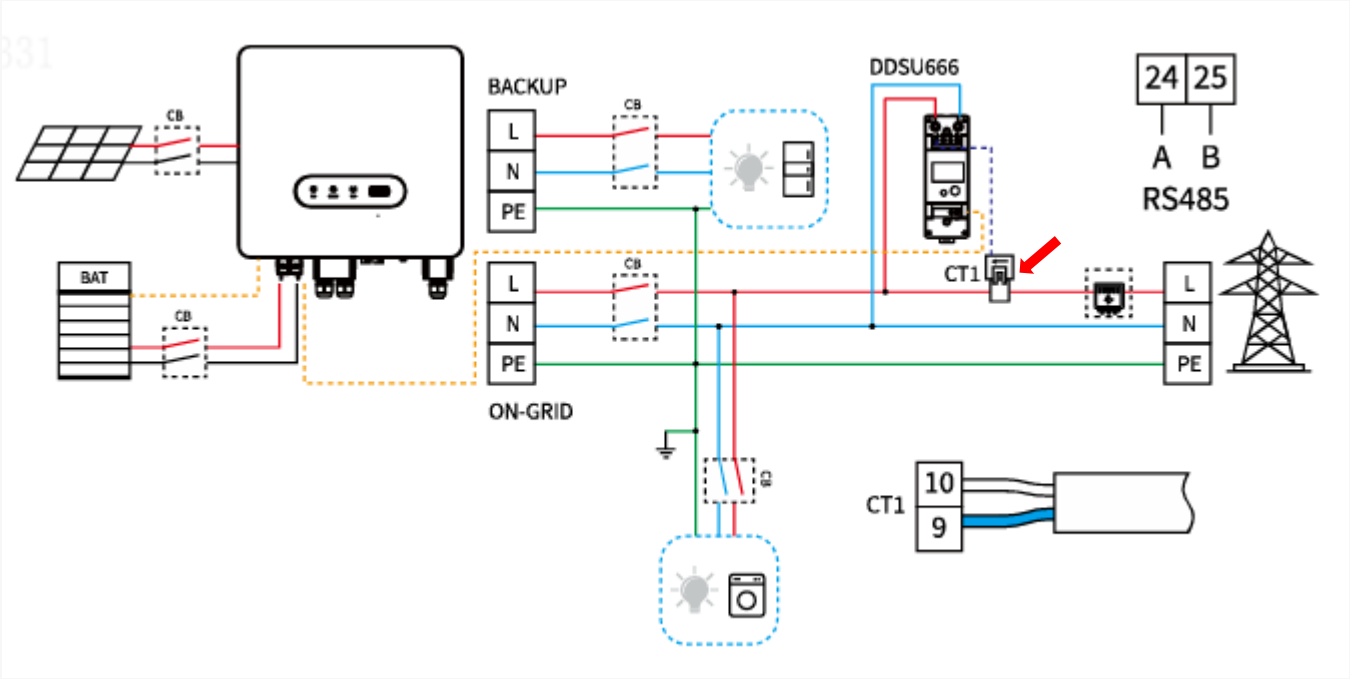
➢ Smart Meter Connection (DDSU666-Q meter)



1.3 Electrical connection

HOPETREK

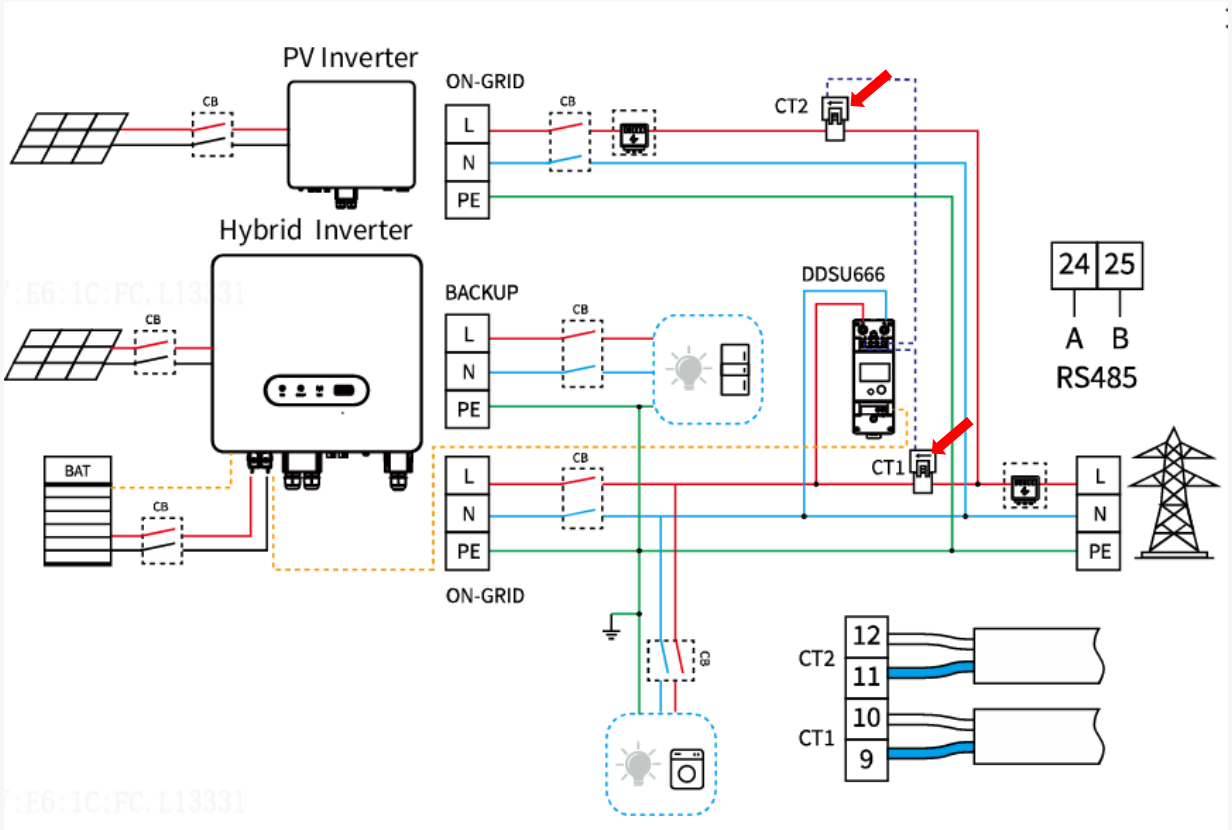
➢ Smart Meter Connection（DDSU666 meter)



1.3 Electrical connection

HOPETREK

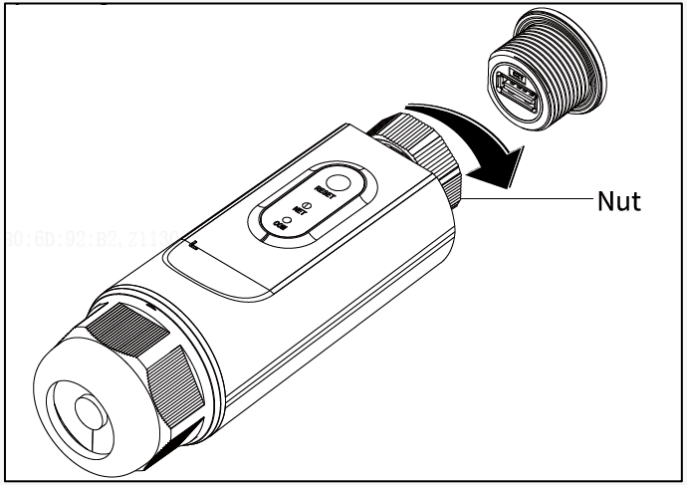
➢ Smart Meter Connection（DDSU666 meter)



1.3 Electrical connection

➢ Wi-Fi Dongle Installation

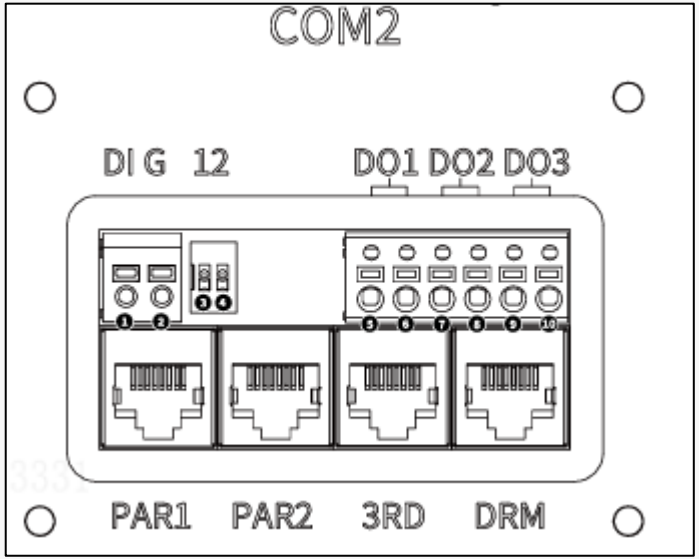
Find the Wi-Fi dongle in the inverter accessory kit, and connect the Wi-Fi dongle to the COM1 port on the inverter and secure it with the nut by turning it clockwise.



Two methods are available for connecting the inverter to the network: Wi-Fi connection and LAN connection.

1.3 Electrical connection

➢ COM2 Function Description



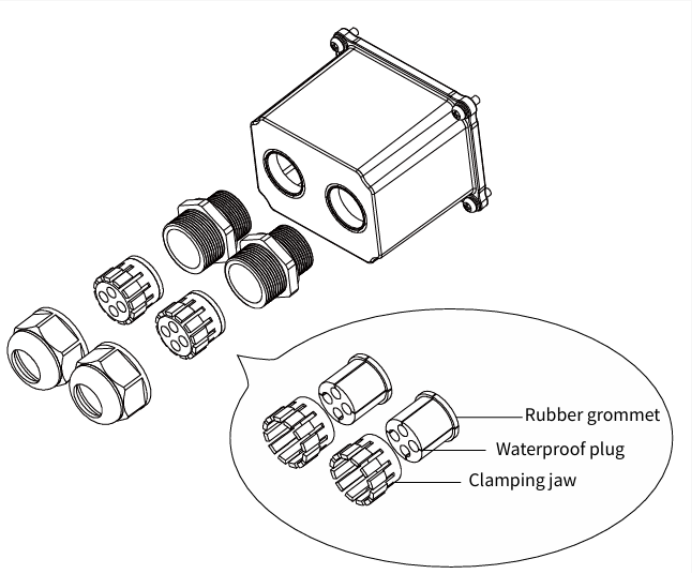
Terminals	Description
DI	①②: Receives dry contact switch signals for remote shutdown control of the inverter.
DIP	③④: Used in parallel systems to adjust the terminal matching resistor, improving signal quality on the communication bus.
DO1	⑤⑥: Used to control home loads such as heat pumps. • Switch mode: Manually trigger or deactivate DO1. Once triggered, the system cannot automatically deactivate it under normal conditions. • Time mode: DO1 is triggered within the set time period and automatically deactivated outside that period.
DO2	⑦⑧ Reserved for diesel generator control.
DO3	⑨⑩ Reserved for external ATS switching.
PAR1, PAR2	Reserved for external system interaction and functional expansion (parallel system communication ports).
DRM	• Complies with the Demand Response Mode requirements specified in AS/NZS 4777. • Complies with Australian DRED certification requirements and provides corresponding signal and control ports. • Supports grid dispatch signaling via RCR as required by utility companies in Germany and certain other European regions.
3RD	Communication interface for third-party systems or devices.

1.3 Electrical connection

➢ COM2 Connection

1. Use a Phillips screwdriver to unscrew the screws around the COM2 port waterproof cover and remove it.

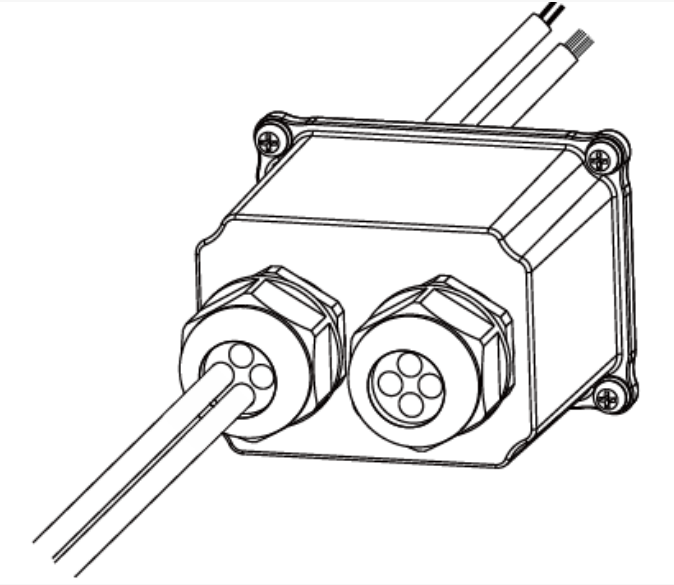
2. Separate the waterproof cover and remove the waterproof plugs from the rubber grommet according to the number of cables to be installed.



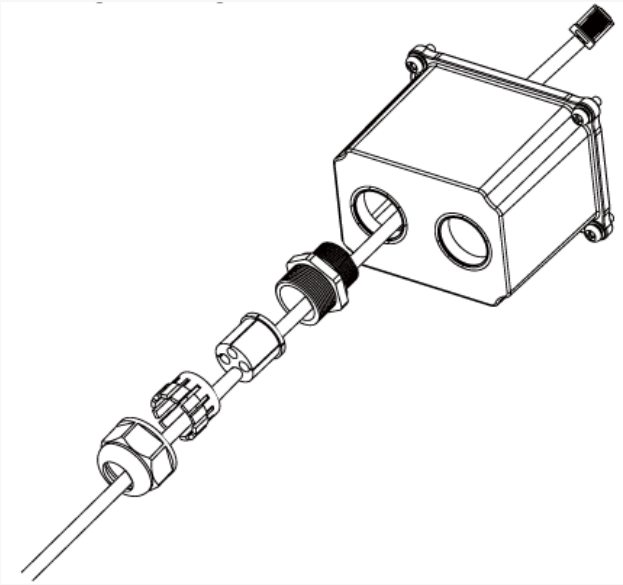
1.3 Electrical connection

➢ COM2 Connection

3. Pass the cables through the rubber grommet.



➢ Cables that do not require or have not been integrated with RJ45 connectors can pass directly through the rubber grommet.

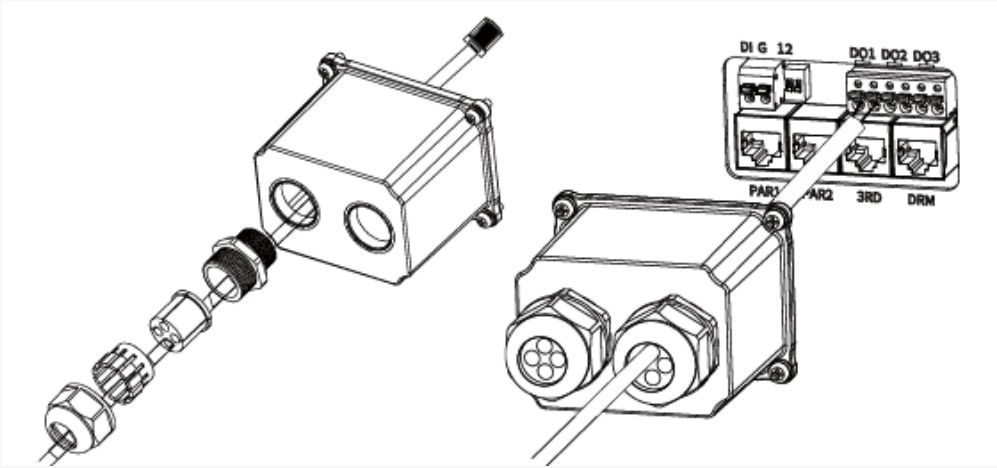


➢ For pre-terminated RJ45 cables, create an opening in the rubber grommet (by cutting or slitting it), and then insert the cable through this opening.

1.3 Electrical connection

➢ COM2 Connection

4. Bare wire terminal installation and RJ45 connector installation.



Port	Pin	Description
DI	1	DI+
	2	DI-
DIP	3	CAN communication matching resistor
	4	RS485 communication matching resistor
DO1	5	DO1+
	6	DO1-
DO2	7	DO2+
	8	DO2-
DO3	9	DO3+
	10	DO3-

➢ DI, DIP, DO1, DO2, DO3: Use bare wire installation—insert the stripped conductors directly into the designated terminals according to the pin positions, refer to the table below for pin definitions.

1.3 Electrical connection

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➢ COM2 Connection

4. Bare wire terminal installation and RJ45 connector installation.

Port	Pin	Color	Description
RAR1, PAR2	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

Port	Pin	Color	Description
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
DRM	1	Orange/white	Reserved
	2	Orange	Reserved
	3	Green/white	Reserved
	4	Blue	Reserved
	5	Blue/white	RefGen
	6	Green	Com/DRM0
	7	Brown/white	V+
	8	Brown	V-

➢ The PAR1, PAR2, 3RD, and DRM interfaces use RJ45 connectors. Crimp the cable wires into the RJ45 connector according to the pinout defined below, and connect it to the corresponding port. If the cable is already pregerminated with an RJ45 connector, verify correct pin alignment before insertion.

1.3 Electrical connection

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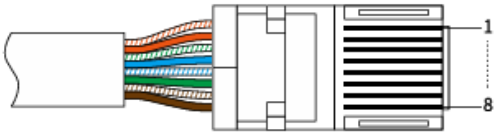
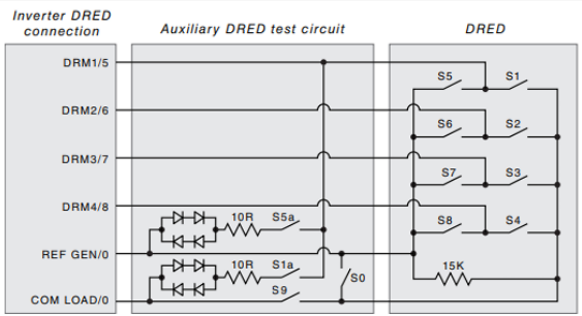
➢ DRM Settings

Pin	Color	Description
1	White-Orange	Reserved
2	Orange	Reserved
3	White-Green	Reserved
4	Blue	Reserved
5	White-Blue	+5V
6	Green	Com/DRM0
7	White-Brown	+12V
8	Brown	GND



DRM port pin definitions



Mode	Activated by Closing Switch	Requirement
DRM0	S0	Operate the disconnection device
DRM1	S1	Do not consume power
DRM2	S2	Do not consume at more than 50 % of rated power
DRM3	S3	Do not consume at more than 75 % of rated power AND supply reactive power if capable
DRM4	S4	Increase power consumption (subject to constraints from other active DRMs)
DRM5	S5	Do not generate power
DRM6	S6	Do not generate at more than 50 % of rated power
DRM7	S7	Do not generate at more than 75 % of rated power AND absorb reactive power if capable
DRM8	S8	Increase power generation (subject to constraints from other active DRMs)

1.3 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: Press the power button and there is a beep indicating the system is powered on.
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.

1.3 Electrical connection

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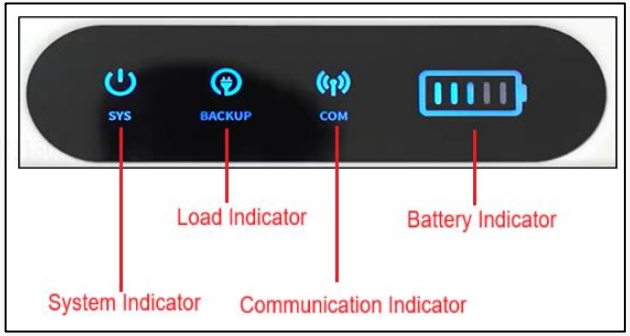
➢ Inverter Indicators

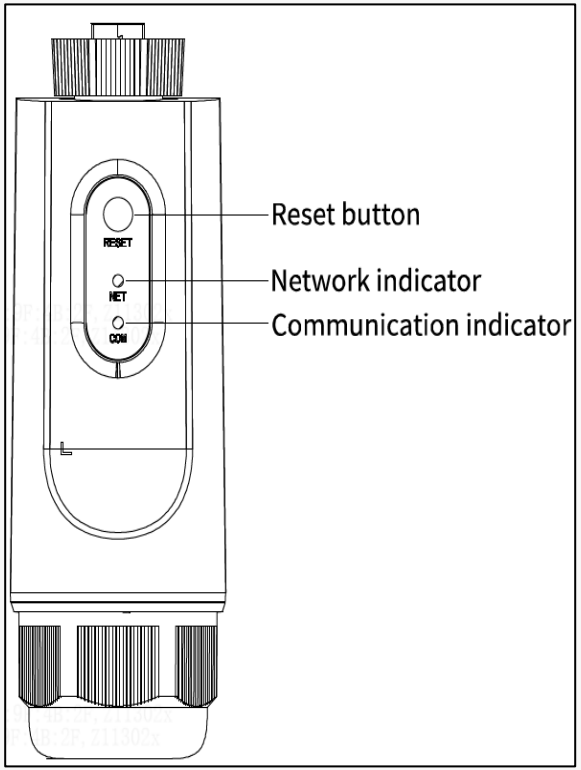


Indicator	Status	Description
SYS	Steady blue	System operating normally
	Blinking blue	System standby
	Steady Red	System fault
	Off	System not powered
BACKUP	Steady blue	System on-grid, BACKUP output available
	Blinking blue	System off-grid, BACKUP output available
	Off	No BACKUP output
COM	Steady blue	Inverter online
	Blinking blue	Connected to inverter Bluetooth
	Off	No connection to server or Bluetooth
BATTERY	Steady blue	Battery in discharging or in standby
	Last LED blinking	Battery in charging
	Steady red	Battery fault
	Off	No battery

1.3 Electrical connection

HOPETREK

➢ Wi-Fi Dongle Indicators



Indicator	Status	Description
NET	Blinking blue	Connected to the router but disconnected from the cloud server
	Steady blue	Connected to the router and cloud server
	Steady Red	Disconnected from the router
COM	Steady blue	Connected to the inverter
	Steady red	Disconnected from the inverter

PART 02

APP User Guide

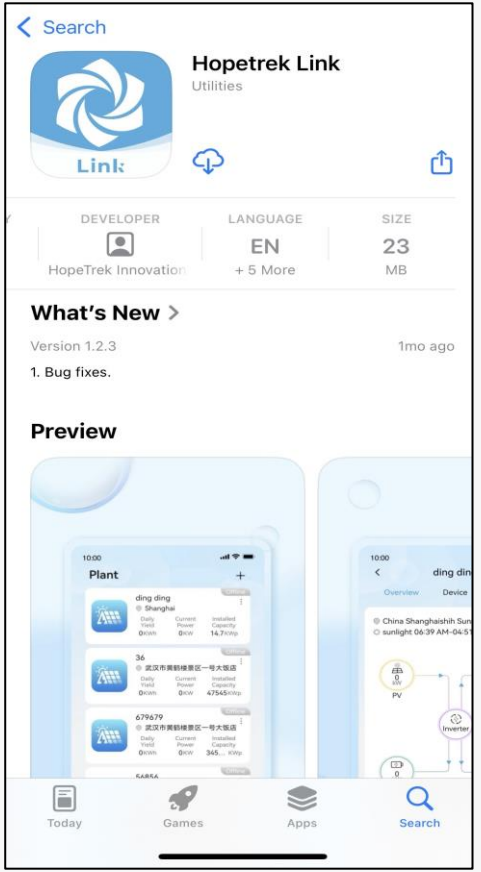
2.1 Download Hopetrek Link APP

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.

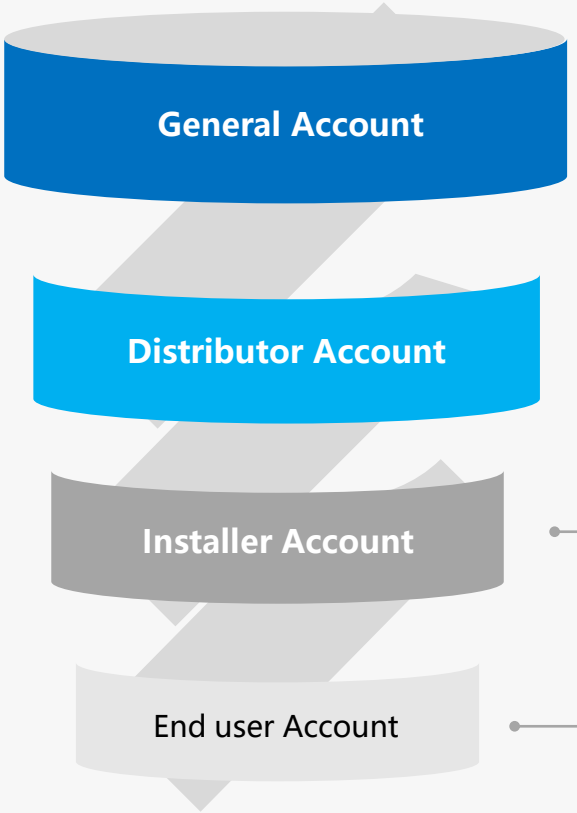
QR download: Hopetrek Link APP can also support scanning QR code with mobile phone for downloading. Please use mobile phone for scanning code.

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

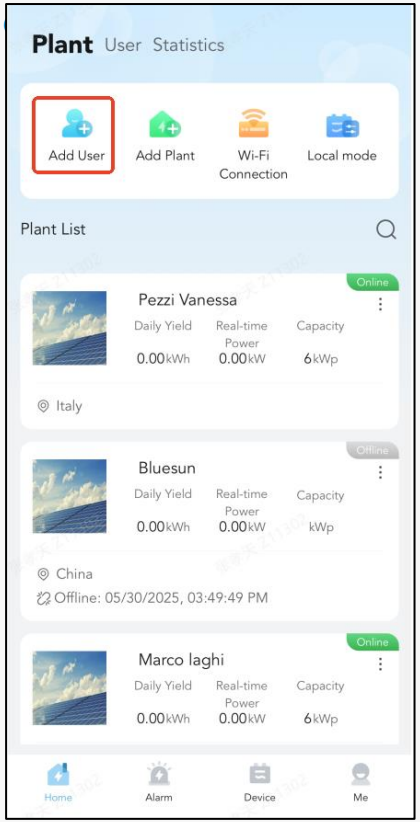
- Create a end user account and power plant for their customer
- Create a subordinate installer account
- View and operate the power plants of all subordinate accounts

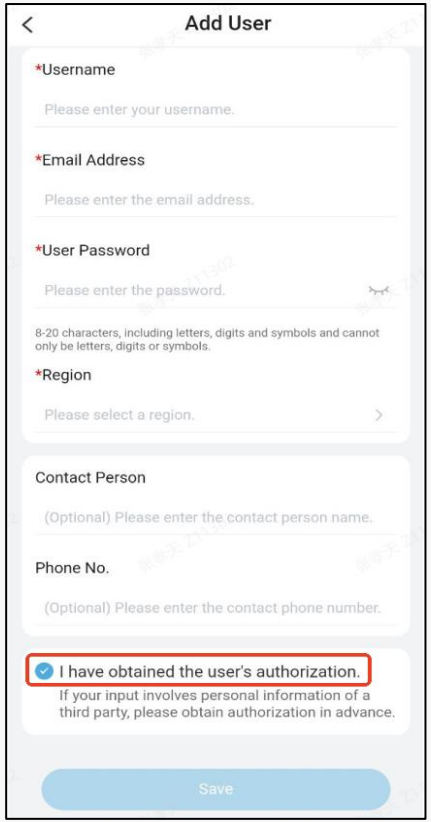
- View only your own power plant

2.3 Power Plant Creation Guide

HOPETREK

➢ Add a user account for your

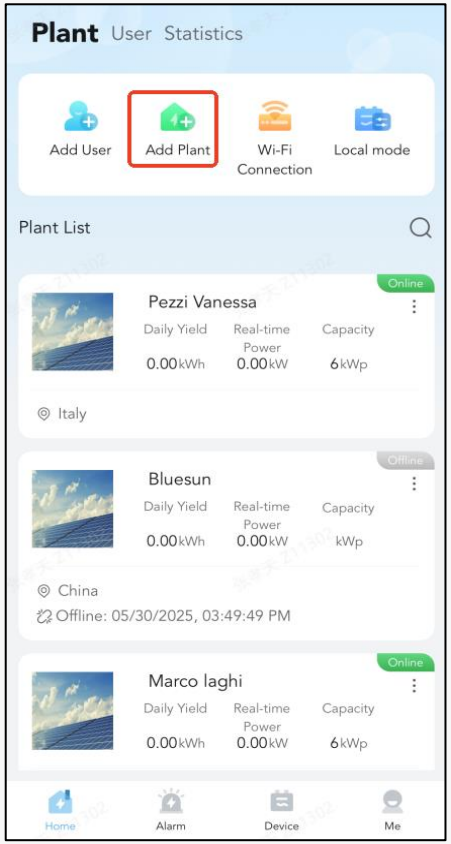


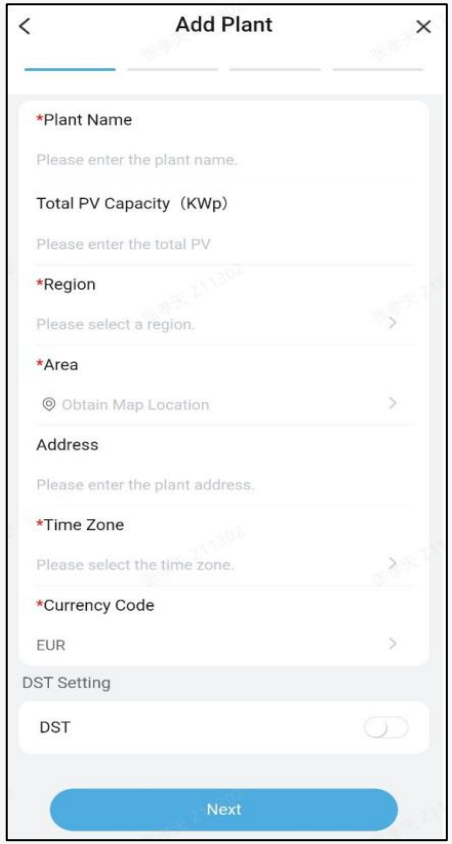


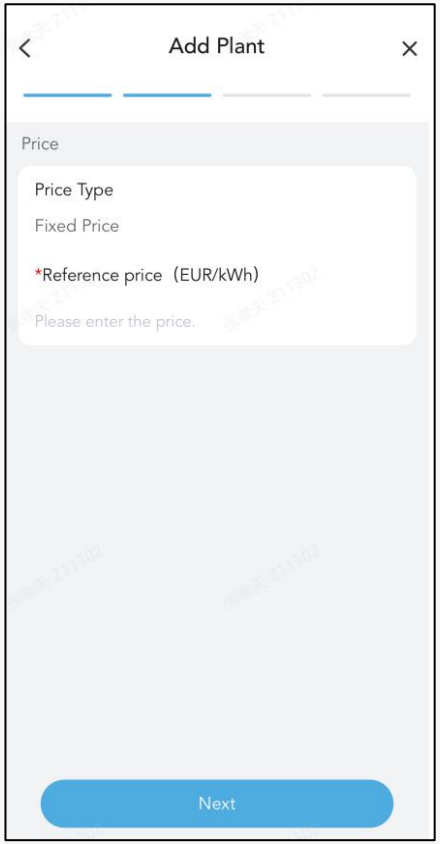
- Please use the lowest level installer’ s account to help creating the power plant and end user account, So that end user can log in directly to their accounts without having to register themselves, and check their power plant.
- At the same time, the higher-level installer or distributor account can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

2.3 Power Plant Creation Guide

➢ Add a power plant for your client



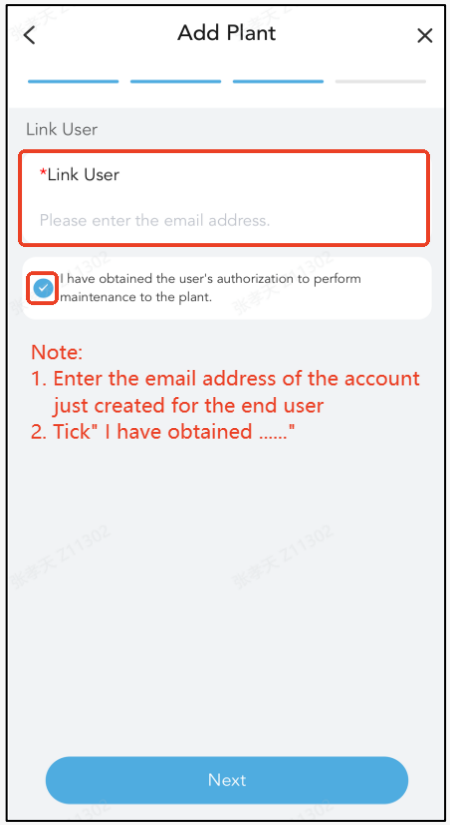


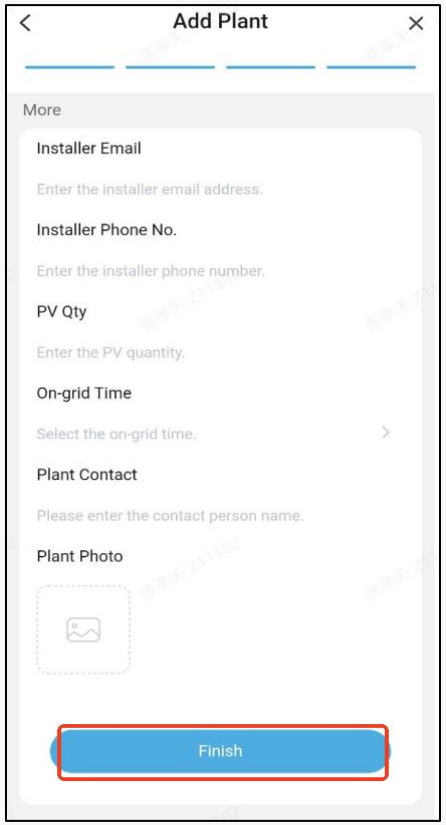


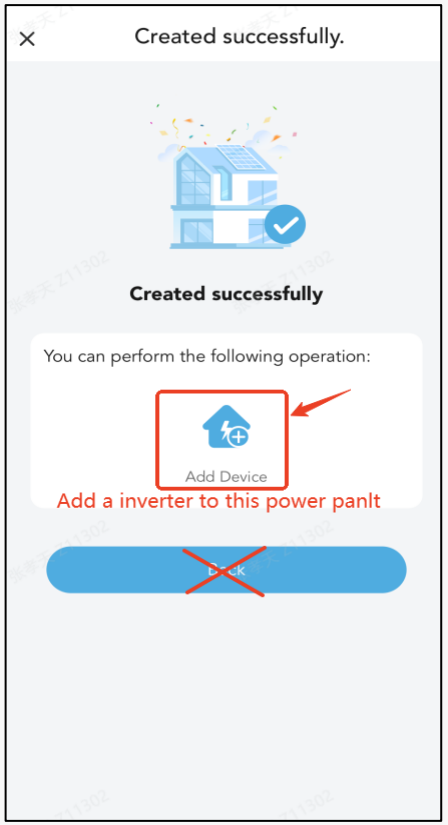
2.3 Power Plant Creation Guide

HOPETREK

➢ Add a power plant for your client



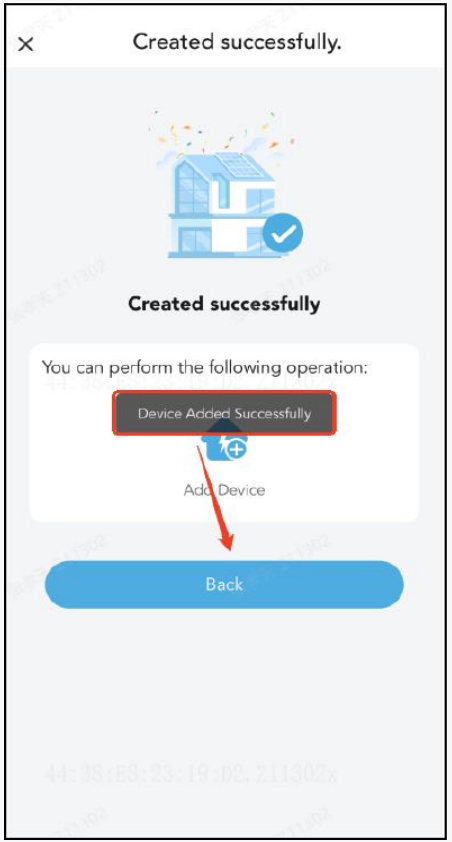




2.3 Power Plant Creation Guide

HOPETREK

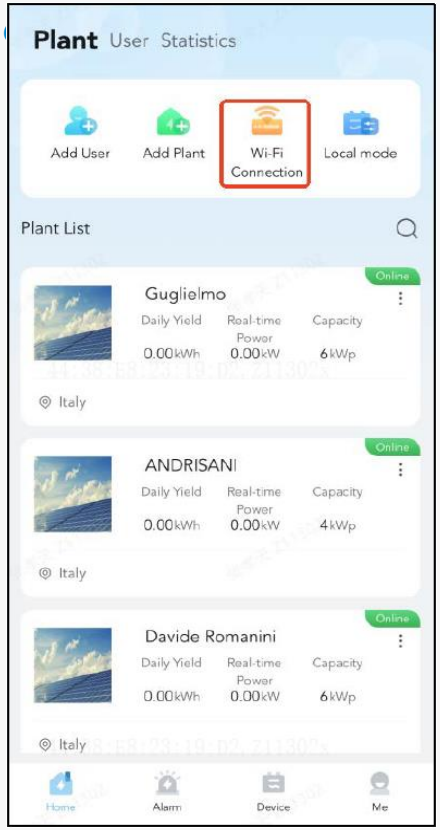
➢ Add a power plant for your client

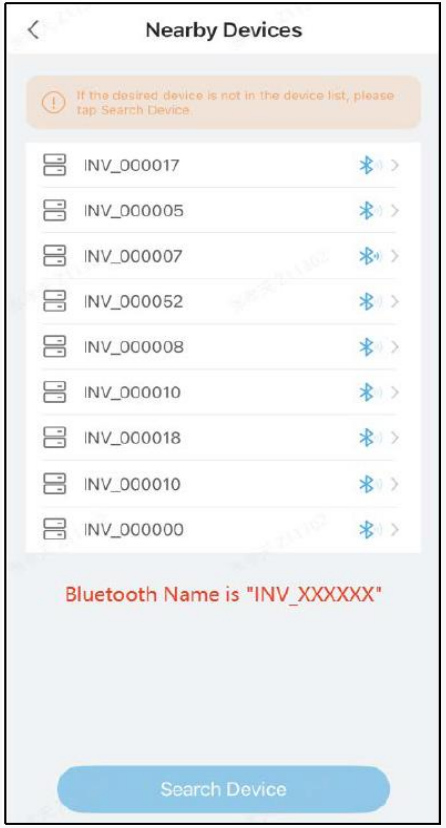


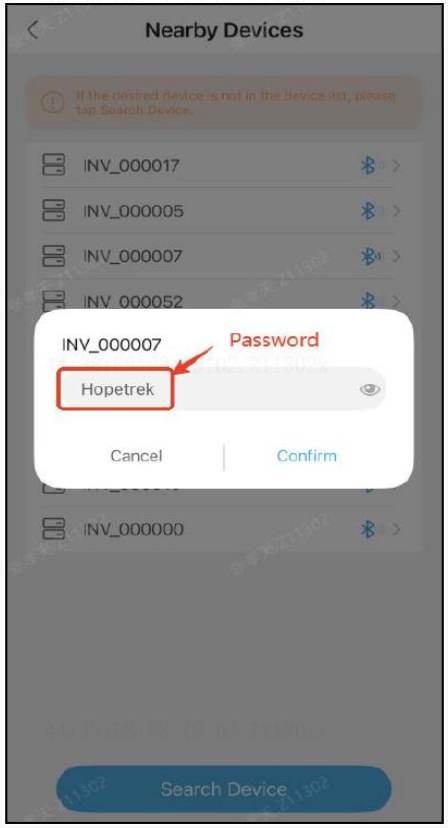
2.3 Power Plant Creation Guide

HOPETREK

➢ Wi-Fi configuration for your



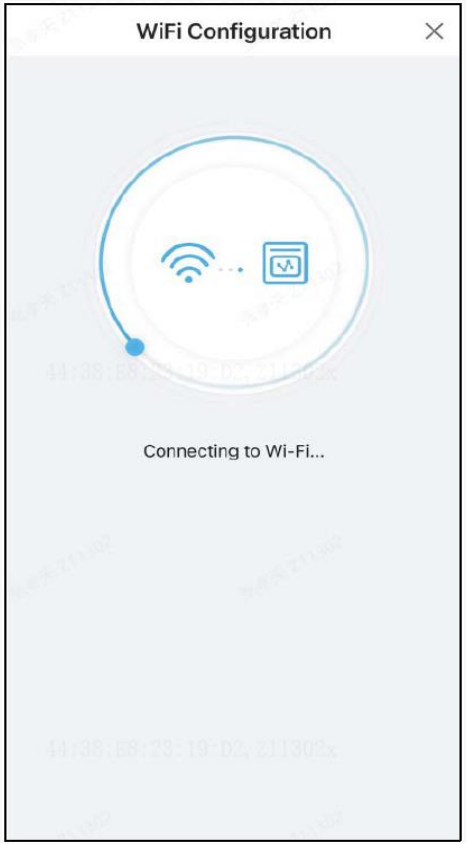


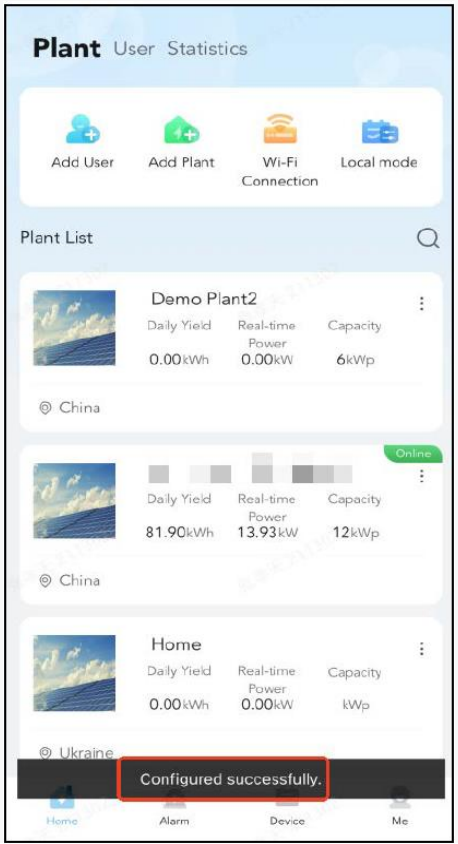


2.3 Power Plant Creation Guide

HOPETREK

➢ Wi-Fi configuration for your

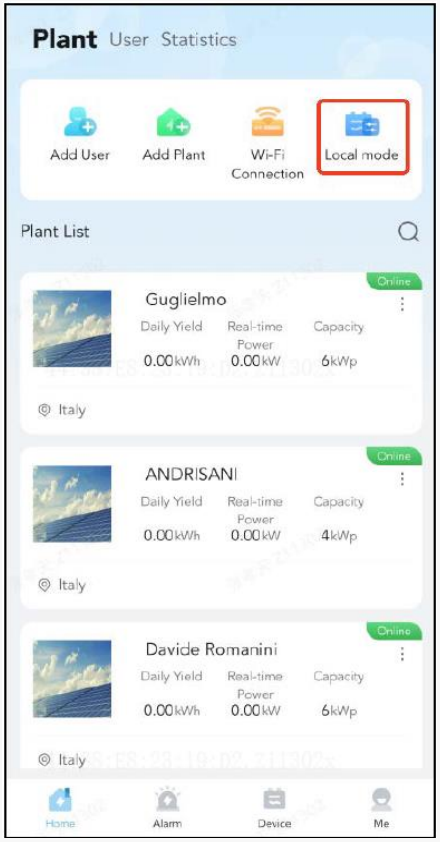


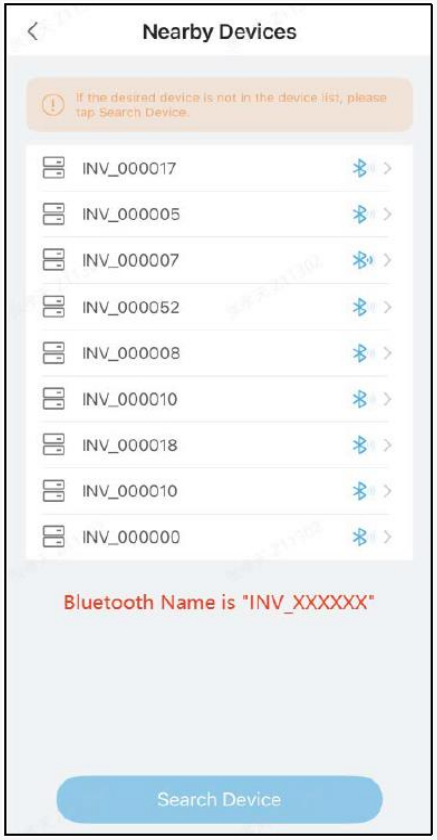


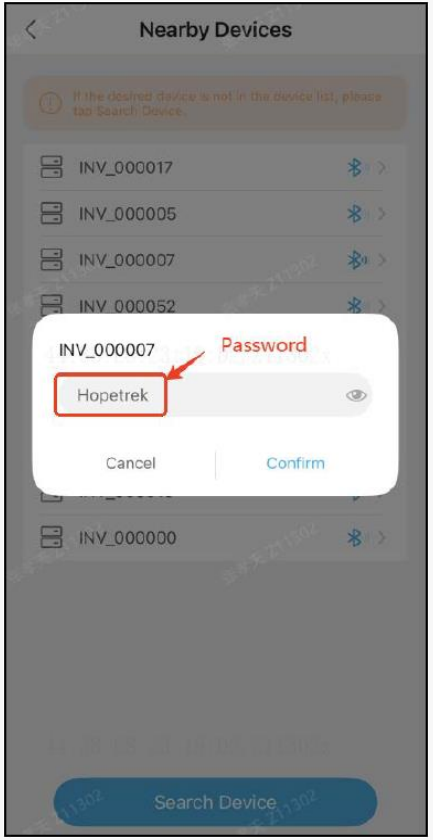
2.3 Power Plant Creation Guide

HOPETREK

➢ Quick setup for your client



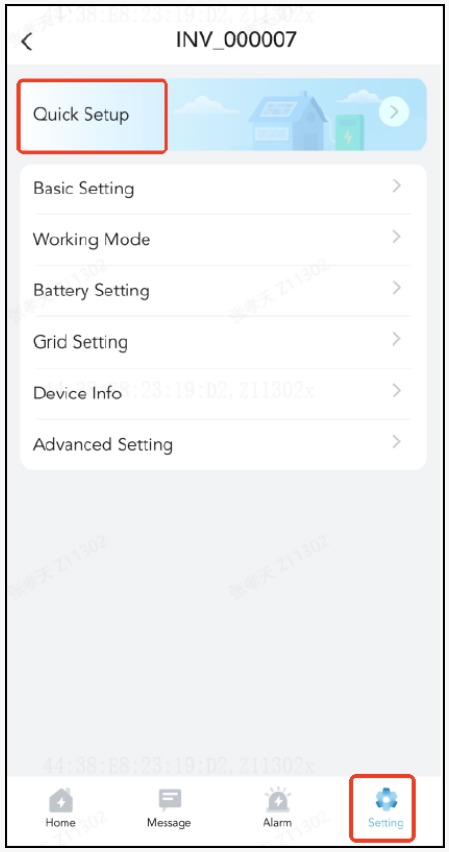


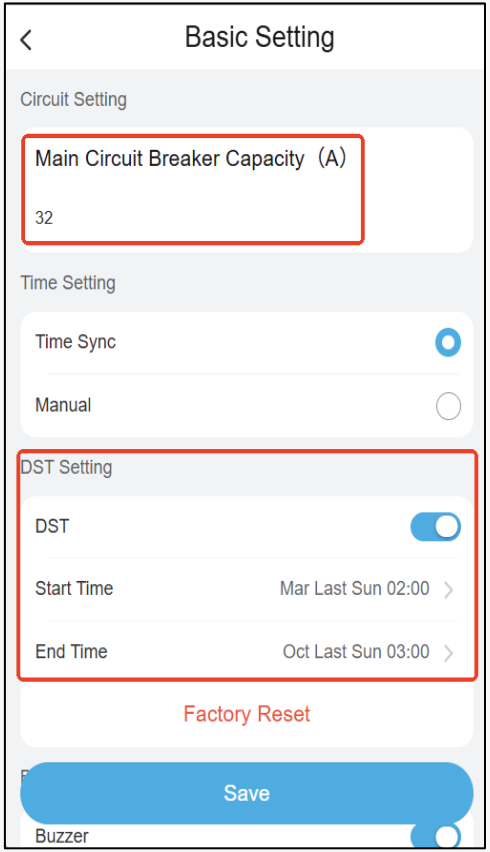


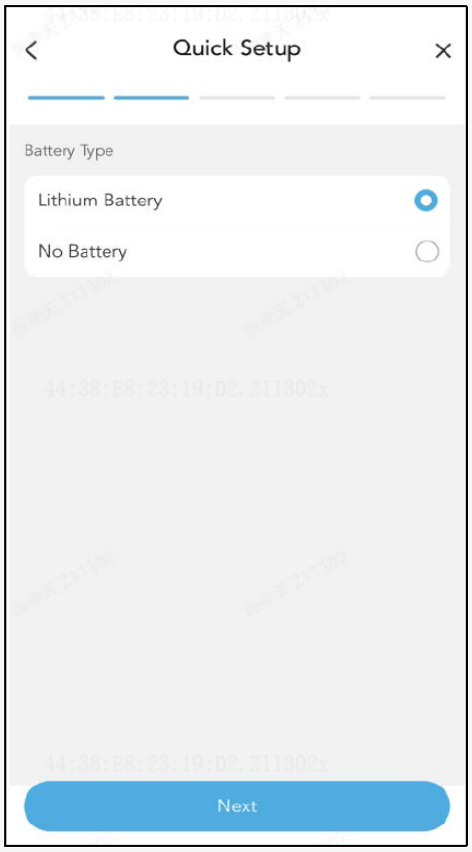
2.3 Power Plant Creation Guide

HOPETREK

➢ Quick setup for your client



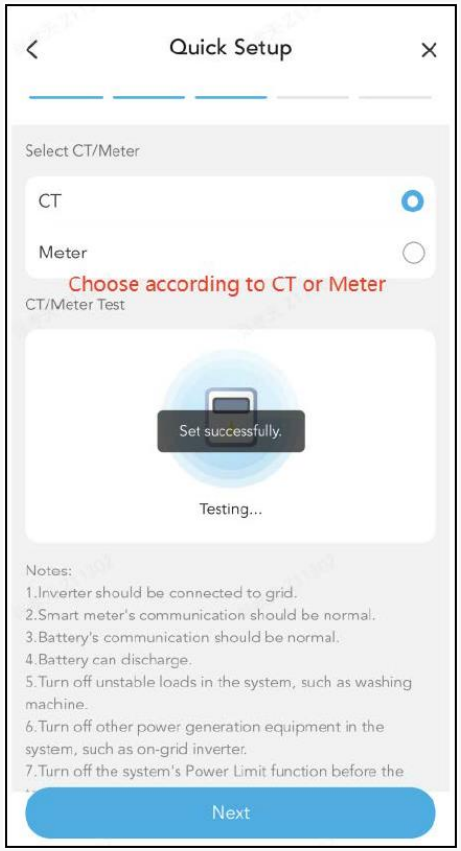


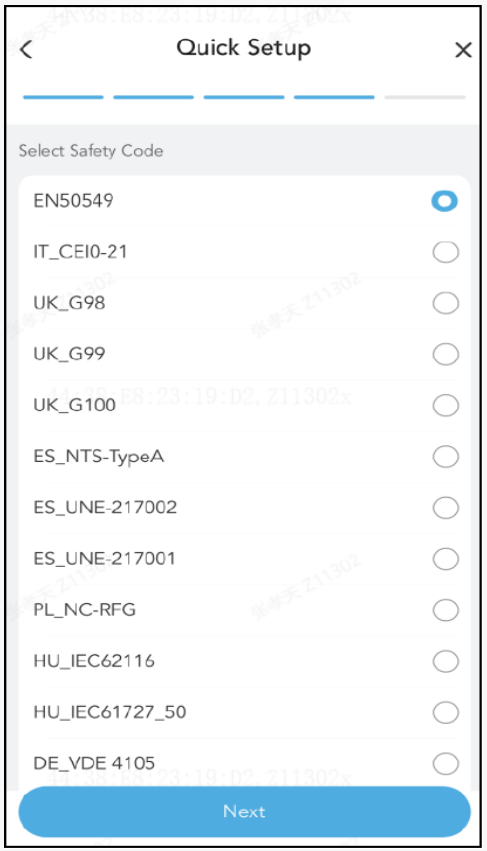


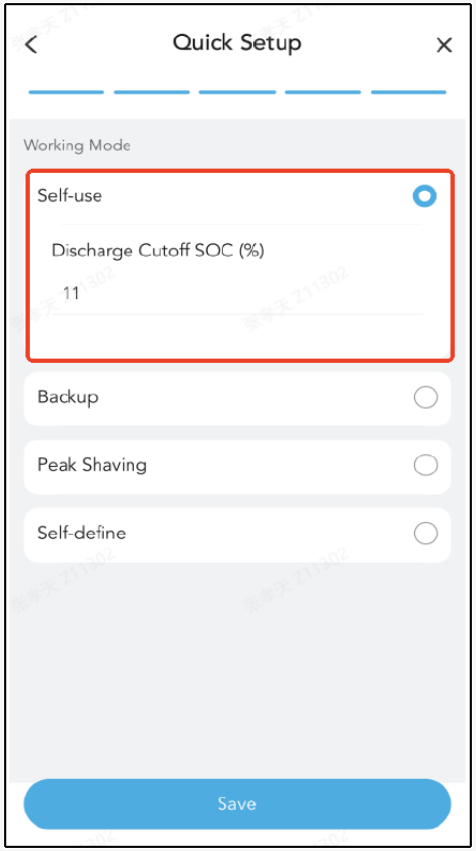
2.3 Power Plant Creation Guide

HOPETREK

➢ Quick setup for your client







THANKS