BEXIE GROUP S.L.
Email: info@bexiegroup.com

Model

BE3.6KW-1PH
BE4.6KW-1PH
BE5KW-1PH
BE6KW-1PH

Model

BXB 5KLV

USER MANUAL

Single-phase ESS System
End User Version

Safety Precaution

IMPORTANT SAFETY WARNINGS FOR END USERS

This Energy Storage System (ESS) is designed to operate safely and efficiently ONLY when handled by qualified personnel. As an end user, you must NEVER attempt to open, modify, connect, or disconnect any hardware components of the photovoltaic installation, including:

- The inverter.
- Batteries.
- Connection terminals (AC, DC, PV, BACKUP, GRID).
- Switches or protective devices.
- Any internal or external wiring.

DO NOT:

- Open the inverter or battery covers.
- Touch or manipulate terminals while the system is operating.
- Perform maintenance, installation, or physical configuration tasks.
- Connect the BACKUP port to the grid.
- Connect the same PV string to more than one inverter.

YOU MAY:

- Check system status via the mobile app.
- View LED indicators for system status.
- Contact your installer or technical support in case of alarms or abnormal behavior.

RISKS OF IMPROPER HANDLING:

- Electric shock from high DC voltages.
- Burns from components exceeding 60°C.
- Loss of warranty if unauthorized manipulation is detected.
- Irreversible damage to the system and potential legal consequences.

Inverter and Battery

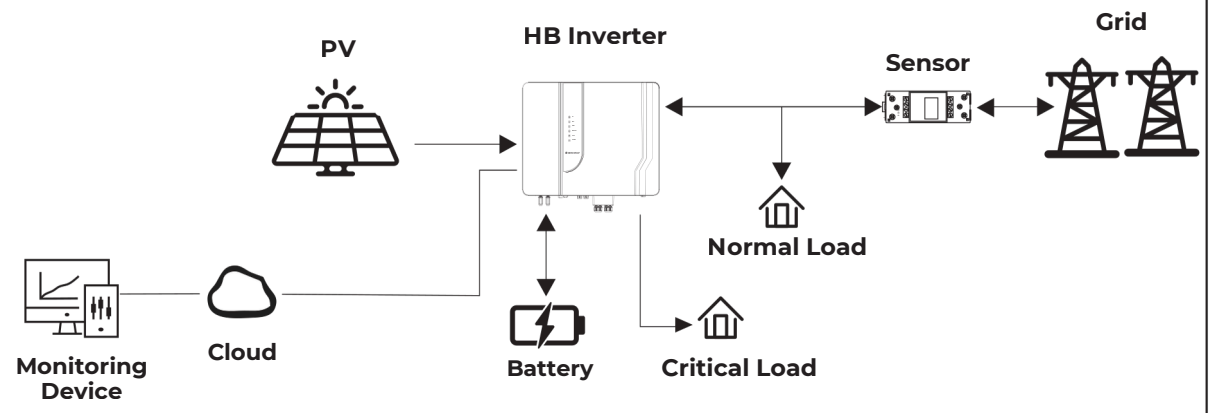
Product Introduction

Overview

Hybrid ESS System

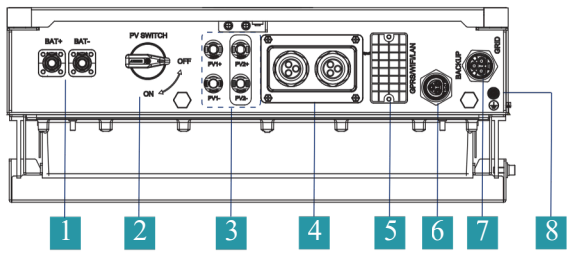
The hybrid ESS system is a high-quality inverter which can convert solar energy to AC power and store energy into battery. Typically, an ESS inverter system consists of a PV array, an ESS inverter, a battery, loads and an electricity sensor.

The energy generated by the inverter can be preferentially used for self-consumption, stored in the battery for future use or fed into public grid.



Hybrid ESS Application System

Inverter Ports



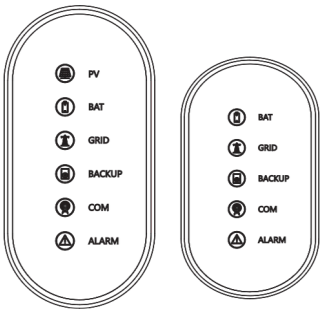
The bottom view of hybrid inverter

1. Battery Connect Terminals
2. PV Switch
3. PV Input Terminals
4. COM1 Ports (USB, PARAL, RS485, DRM,CT/METER, BMS, NTC/RMO/DRY)
5. COM2 Port (GPRS/WIFI/LAN)
6. BACKUP Output Terminal
7. GRID Output Terminal
8. External Protection Ground Terminal

Inverter User Interface

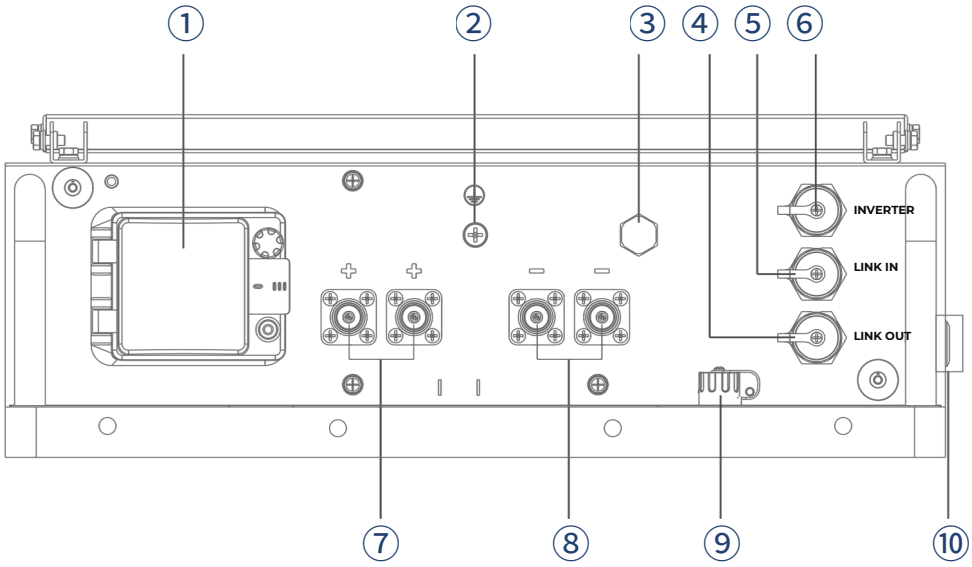
LED

This section describes the LED panel. LED indicator includes PV, BAT, GRID, BACKUP, COM and ALARM indicators. PV is N/A for AC couple. It includes the explanation and summary of indicator states under the running state of the machine.



LED Indicator	Status	Description
PV	On	PV input is normal.
	Blink	PV input is abnormal.
	Off	PV is unavailable.
BAT	On	Battery is charging.
	Blink	Battery is discharging (light on 2s and off 2s). Battery is abnormal (light on 1s and off 1s).
	Off	Battery is unavailable.
GRID	On	GRID is available and normal.
	Blink	GRID is abnormal.
	Off	GRID is unavailable.
COM	Blink	Data are communicating.
	Off	No data transmission.
BACKUP	On	BACKUP power is available.
	Blink	BACKUP output is abnormal.
	Off	BACKUP power is unavailable.
ALARM	On	Fault has occurred and inverter shuts down.
	Blink	Alarm has occurred but inverter doesn’t shut down.
	Off	No fault.

Battery Ports



Number	Name	Details	Notes
1	125 A DC Breaker		
2	GND	M6	Yellow-Green, 10 AWG
3	Breather Valve		
4	LINK OUT	RJ45	Internal RS485 communication between batteries
5	LINK IN	RJ45	Internal RS485 communication between batteries
6	INVERTER	RJ45	CAN communication to the inverter
7	Port Positive x2	PSR6XCBM5A	Red cable 25 mm² / 4 AWG,cable plug model: PSRP6XC25A
8	Port Negative x2	PSR6XABM5A	Black cable 25 mm² / 4 AWG,cable plug model: PSRP6XA25A
9	WIFI Socket		For optional WIFI stick
10	Power Switch		Red light: ALM, Blue light: RUN

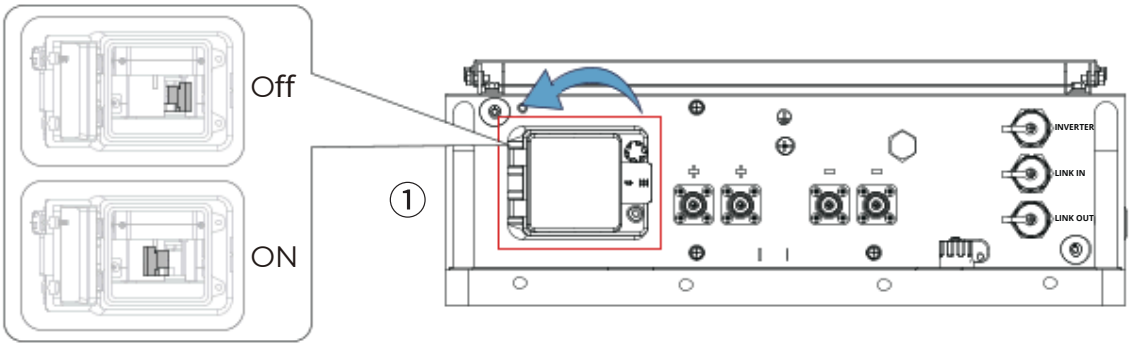
Battery User Interface

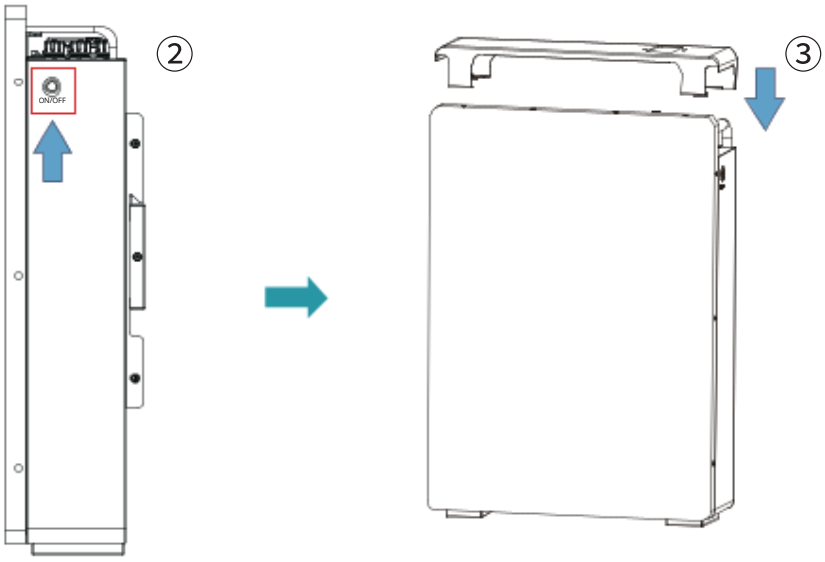
1.Turn on the circuit breaker while the power button is off.

2. Turn on Power Button to start battery. After five seconds, a blue light flashes to indicate normal operation.

3. Cover with the front cover after checking.

State	Standby	Charge	Discharge	Failure
Standby				
Remarks	Light 0.25 S / Lights out3.75 S	Light 0.5 S / Lights out0.5 S	Lights stay on	Flicker/Persist
	When the battery starts up, the red and blue lights alternately flash, indicating that the battery self-test is normal.			





Selecting the Mounting Location

Installation Environment Requirements

a. With an IP65 protection rating, the inverter can be installed indoors or outdoors.

b. The mounting location must be inaccessible to unrelated personnel since the enclosure and heat sinks are extremely hot during operation.

c. Do not install the devices in areas containing highly flammable materials or gases.

d. To ensure optimum operation and long service life, the ambient temperature must be below 50℃.

e. The devices must be mounted in a well-ventilated environment to ensure good heat dissipation.

f. To ensure long service life, the devices must not be exposed to direct solar irradiation, rain, or snow. It is recommended that the inverter be mounted in a sheltered place.

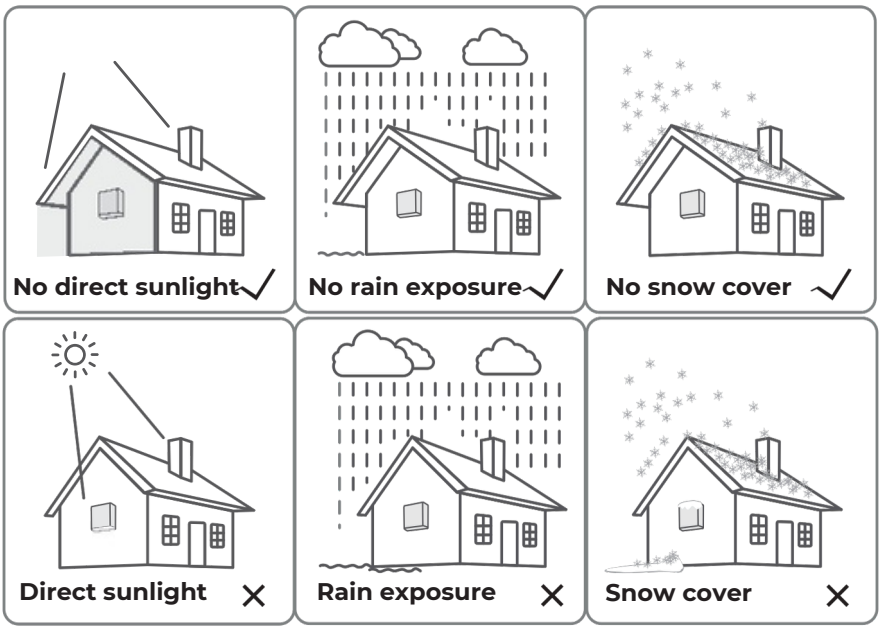
g. The carrier where the devices is mounted must be fire-proof. Do not mount the inverter on flammable building materials.

h. Do not install the devices in a rest area since it will cause noise during operation.

i. The installation height should be reasonable, and please make sure it is easy to operate and view the display.

j. Product label and warning symbols shall be clear to read after installation.

k. Please avoid direct sunlight, rain exposure, snow cover.



Startup/Shutdown Procedure

Startup Procedure

Check that the installation is secure and strong enough, and that the system is well grounded. Then confirm the connections of AC, battery, PV etc. are correct. Confirm the parameters and configurations conform to relevant requirements.

AC Frequency 50/60Hz	PV Voltage 90~530V
Battery Voltage 42~60V	Grid AC Voltage 180~270V

Make sure all the above aspects are right, then follow the procedure to start up the inverter:
1) Power on PV.
2) Power on the Battery.
3) Power on the AC.
4) Power on the BACKUP.
5) Connect the cell phone App via Bluetooth. Please refer to Section 7.2 for details.
6) Click the Power ON in the App for the first time. Please refer to Section 7.2 for details.

Shutdown Procedure

According to actual situation, if there is a must to shut-down the running system, please follow below procedure:
1) Connect the cell phone App via Bluetooth. Please refer to Section 7.2 for details.
2) Click the Power OFF on the App. Please refer to Section 7.2 for details.
3) Power off the BACKUP.
4) Power off the AC.
5) Power off the Battery.
6) Power off the PV.
7) If you need to disconnect the inverter cables, please wait at least 10 minutes before touching these parts of inverter

Routine maintenance

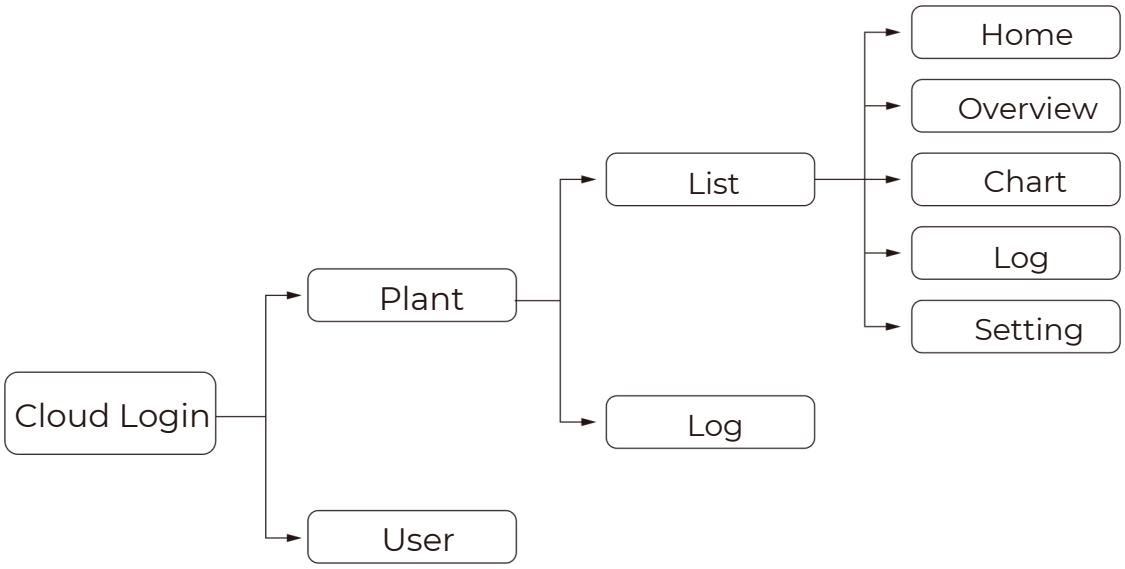
To ensure the long-term operation of the energy storage system, it is recommended to perform regular maintenance on the devices.

Check content	Inspection method	Maintenance cycle
System cleanliness	Check whether the appearance of the system is damaged or deformed.	Once every 6 to 12 months
System running state	1.Check that the devices does not generate abnormal sound when it is in operation. 2.Check that the devices parameters are correctly set when the battery is running.	Once every 6 months
Electrical connection	1.Check that cables are secured. 2.Check that cables are intact, and that in particular, the parts touching the metallic surface are not scratched.	Once every 6 months
Ground reliability	Check that ground cables are securely connected.	The first inspection is 6 months after the initial commissioning. From then on, the interval can be 6 to 12 months.

SOLARTOUCH APP

Introduction
App Architecture

- Cloud login: The app reads data from cloud server through API and display inverter parameter.



Downloading and Installing the App

- Scan the QR code on the inverter to download and install the app.

- Download and install the app from the App Store or Google Play.

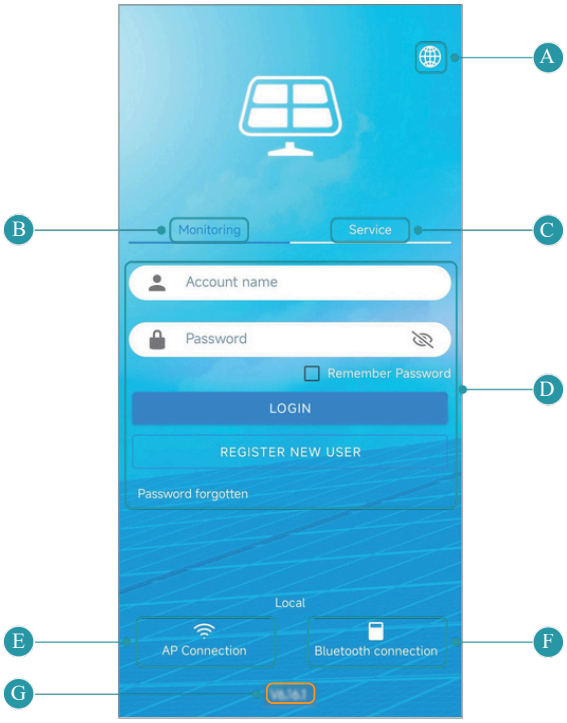
Note:

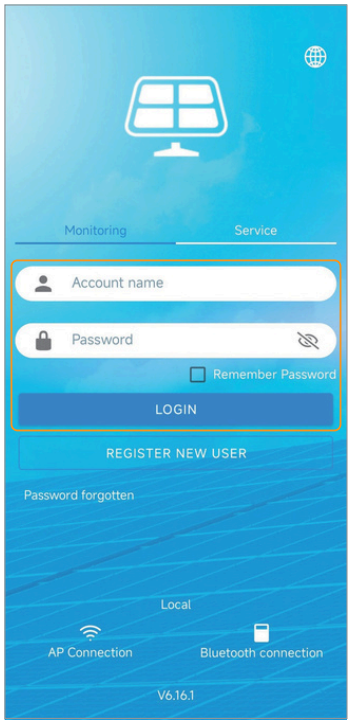
During the installation of the app, ensure you grant all requested permissions, including access to the device's location, by approving all prompts that appear in the pop-up windows.

Cloud Login

RegistrationandLogin to Cloud Account

- Register a cloud account and enter required information.
- Tap "GET" and you will receive a registration e-mail. Enter the verification code in the e-mail to activate your account and complete the registration,Enter account name and password to log in the App.

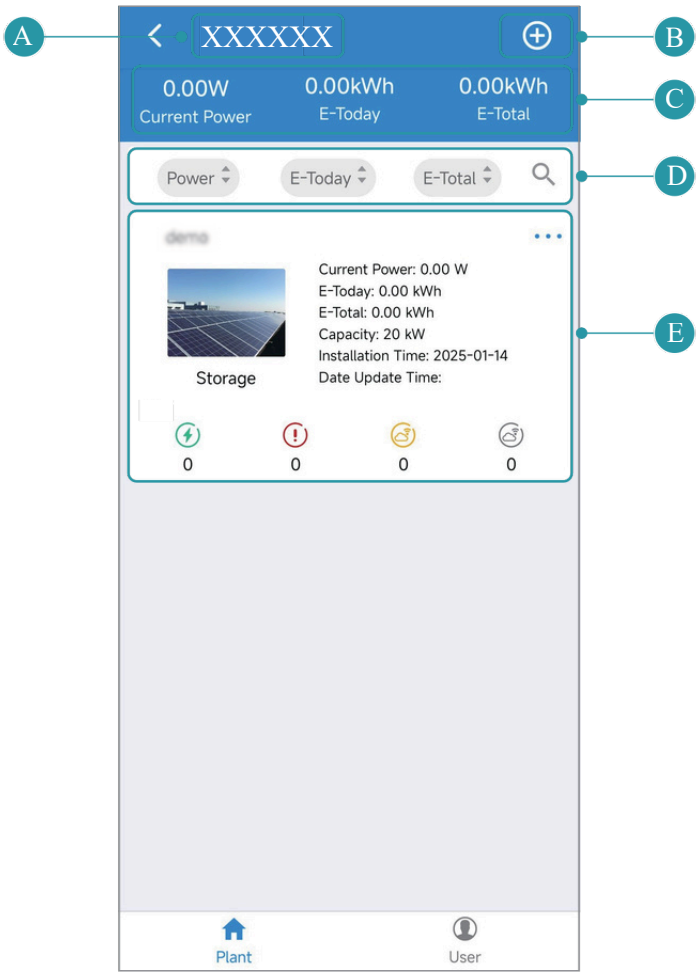




Number	Description
A	Switch language.
B	Monitoring page(for end user).
C	Service page (for distributor/installer).
D	• Enter account name and password, tap **LOGIN** to enter the cloud account. • Tap **REGISTER NEW USER** to register a cloud account. • Tick ***Remember Password*** and you won't have to re-type your login information on the next visit. • Tap ***Password forgotte***n to change password.
E	Connect the inverter through AP.
F	Connect the inverter through Bluetooth(local operation for distributors/installers).
G	App version.

Plant

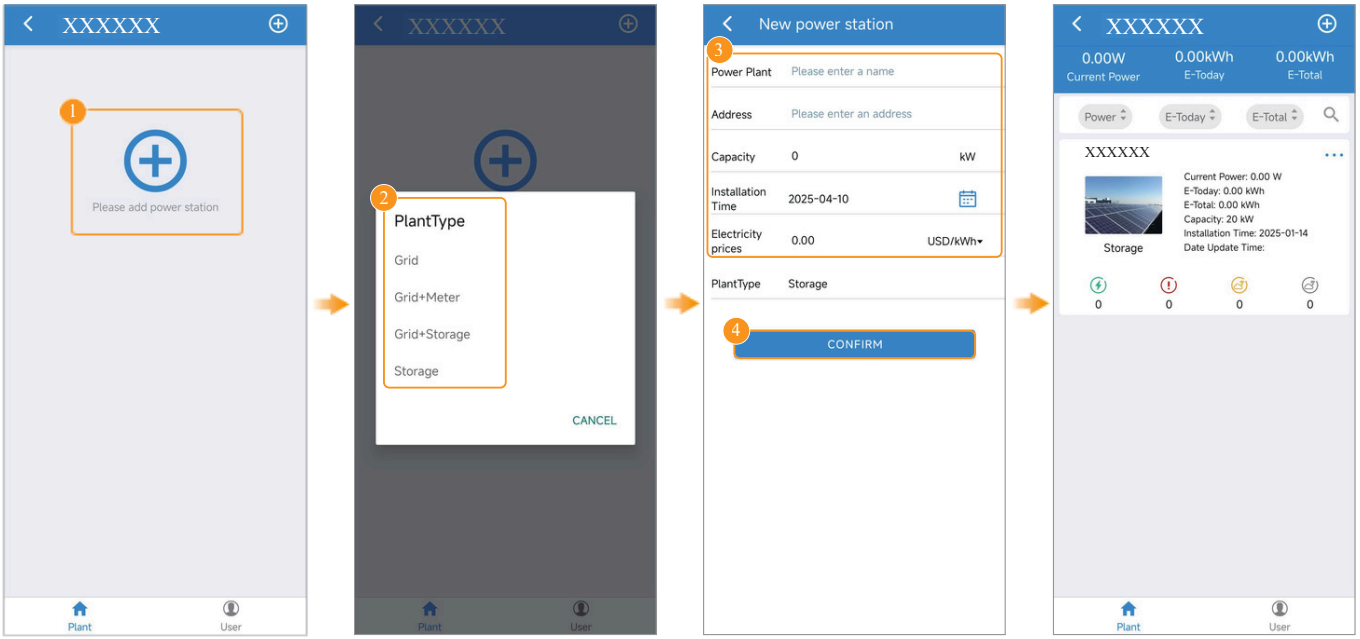
The ***Plant*** page displays basic information of the plant.



Number	Description
A	Account name.
B	Add power station.
C	Current total power of all power stations of the account. Daily total power generation of all power stations of the account. Total power generation of all power stations of the account.
D	Tap the corresponding icon to list power stations in order of current power/daily power generation /total power generation.
E	This area displays the basic information about the power station and the number of online/faulty/standby/offline inverters in the power station.

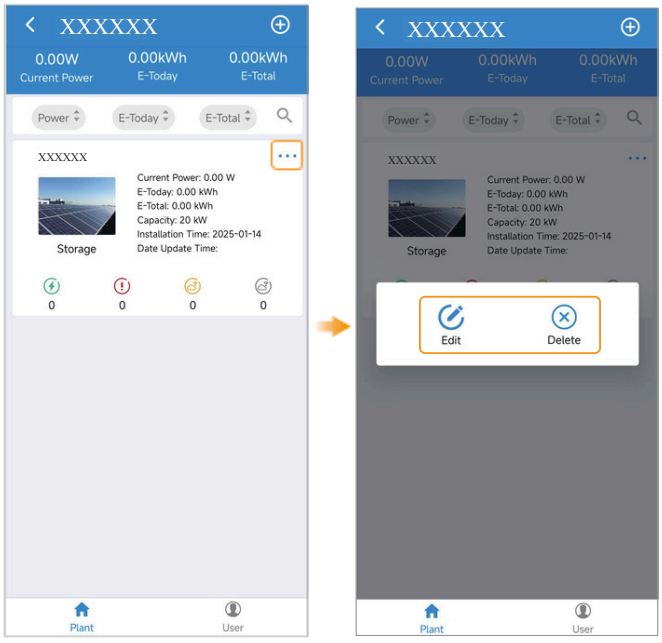
Add plant

Tap "+" and enter basic information of the power station to add new power station.



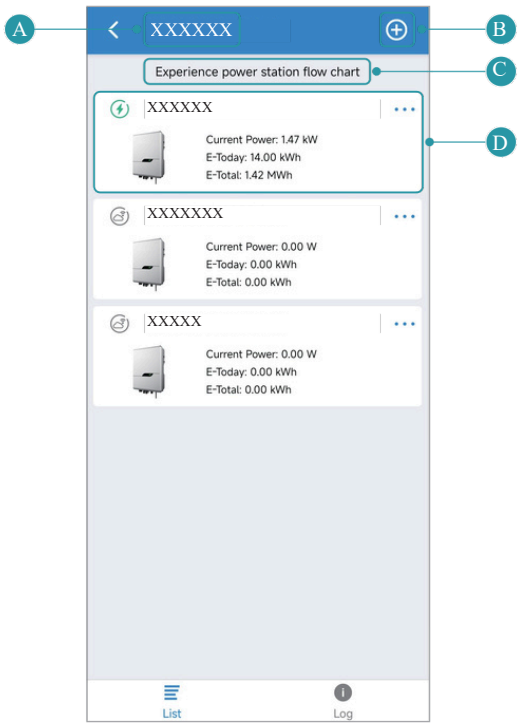
Edit/delete plant

Tap "..." to edit or delete the power station.



List

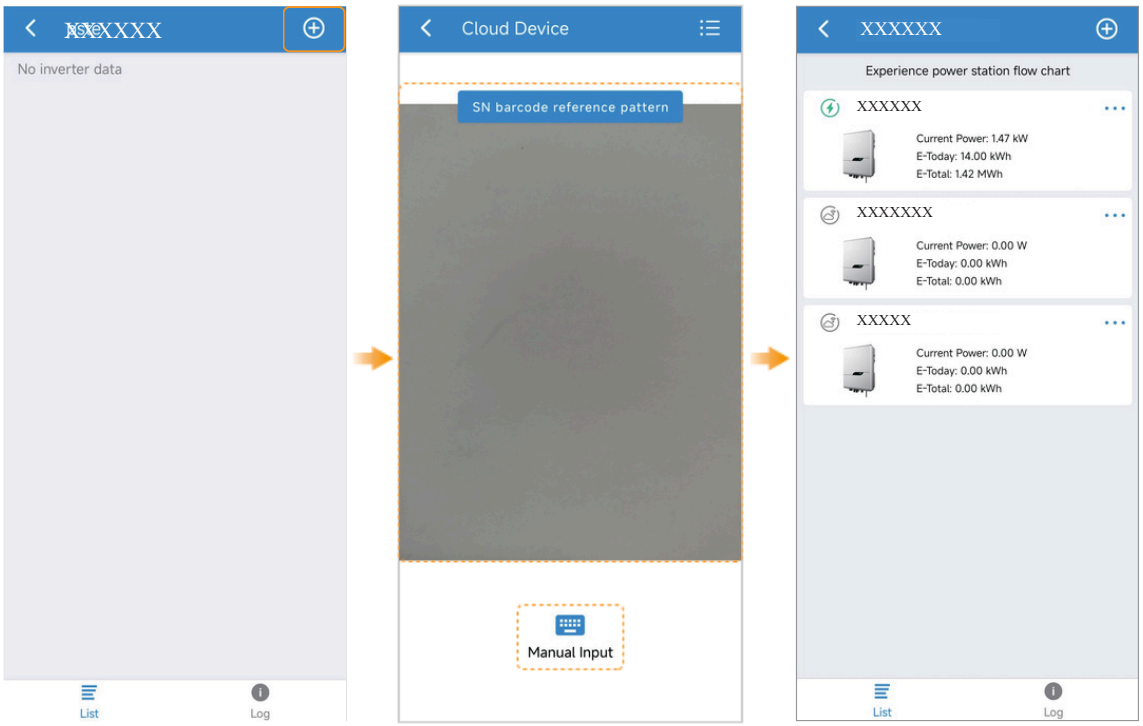
The ***List*** page displays basic information of the inverter.



Number	Description
A	Power station name.
B	Add inverter.
C	Tap to view power station flow chart.
D	This area displays basic information of the inverter. Tap this area to view more detailed information of the inverter and set the inverter.

Bind inverter

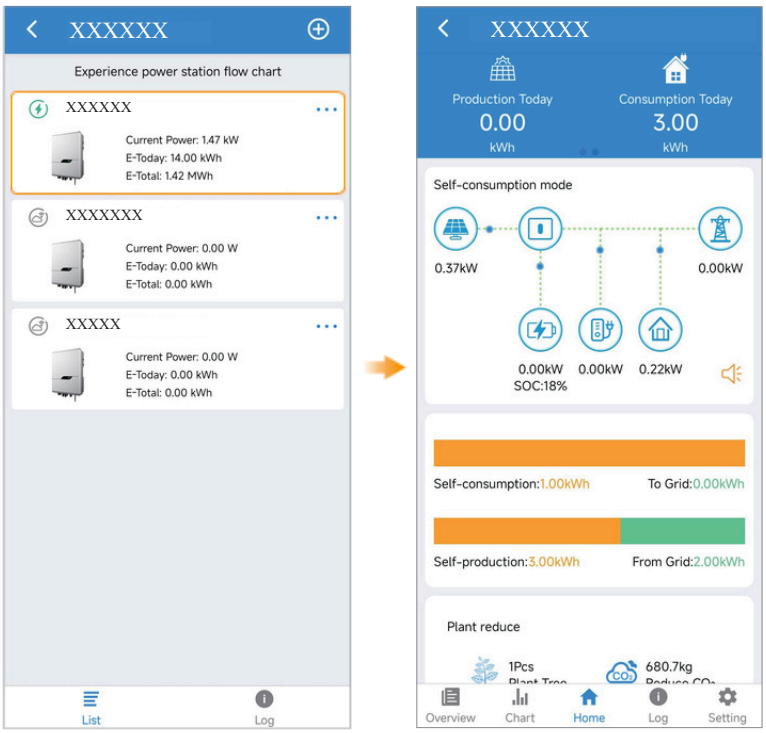
Tap "+" and bind the inverter by scanning SN bar code or manual input.



Inverter information

Home

The ***Home*** page displays the inverter flow chart and basic information of the inverter, PV, grid, battery, load, backup load and so on.



Overview

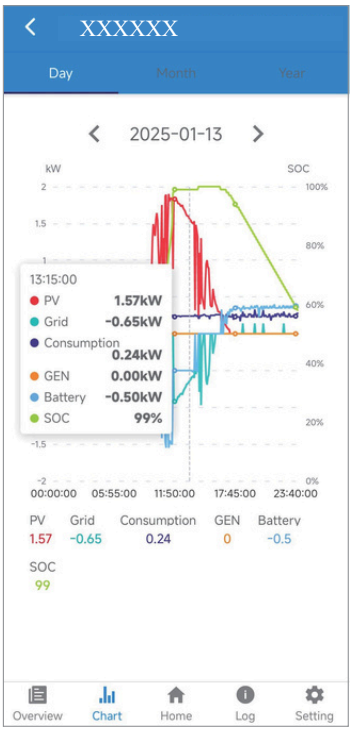
The ***Overview*** page displays the basic information about the inverter, photovoltaic, grid, load, battery, BMS, backup load and so on.

Chart

The ***Chart*** page displays daily, monthly and yearly power generation and electricity consumption. Data in the following graphs is for illustration purpose only.

Query Daily Data

Tap ***Chart > Day***. The line graph shows daily power generation and electricity consumption. You can tap anywhere on the line graph to view values.

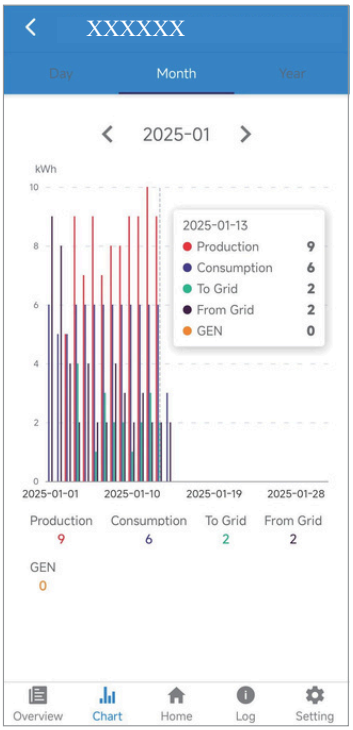


Icon	Description
PV Grid	PV generation power
Consum	Grid power
ption	Load consumption power
GEN	GEN power
Battery	Charging and discharging power of battery 1
SOC	SOC of battery

Note:
GEN, is displayed when connected to certain models only.

Query Monthly Data

Tap ***Chart > Month***. The bar graph shows monthly power generation and electricity consumption. You can tap anywhere on the bar graph to view values.

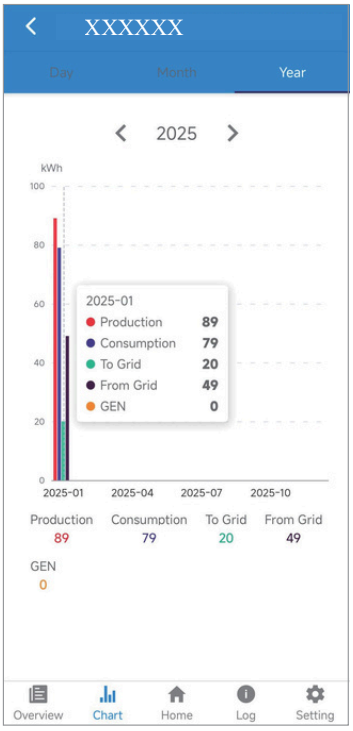


Icon	Description
Production	PV generation capacity
Consumption	Load consumption capacity
To Grid	Feed-in grid capacity
From Grid	Grid capacity
GEN	GEN capacity

Note:
GEN is displayed when connected to certain models only.

Query Yearly Data

Tap ***Chart > Year.*** The bar graph shows yearly power generation and electricity consumption. You can tap anywhere on the bar graph to view values.

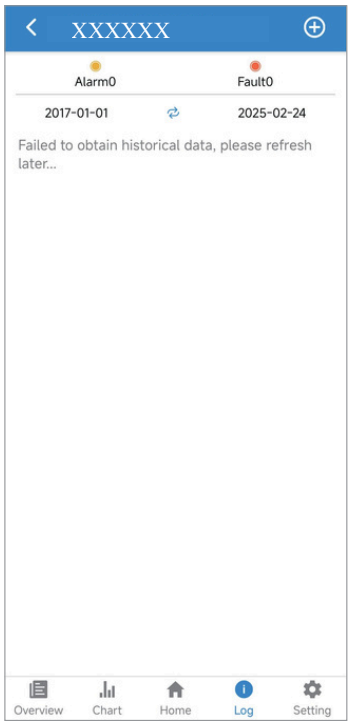


Icon	Description
Production	PV generation capacity Load
Consumption	consumption capacity
To Grid	Feed-in grid capacity
From Grid	Grid capacity
GEN	GEN capacity

Note:
GEN is displayed when connected to certain models only.

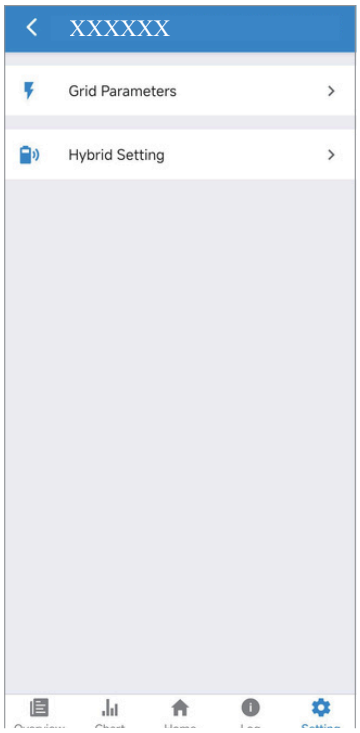
Log

The Log page displays the alarm and fault history of the selected inverter.



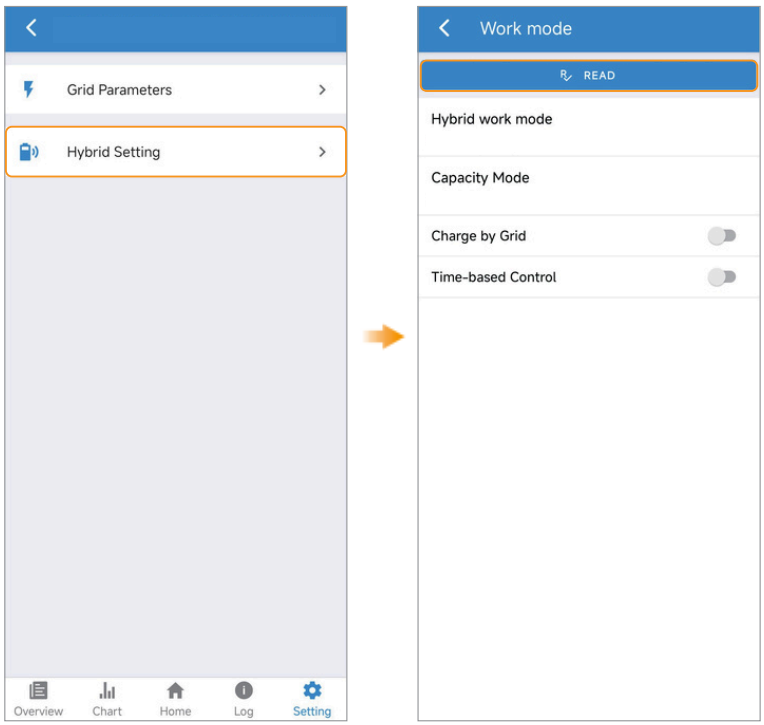
Setting

The ***Setting*** page displays grid parameters and hybrid setting. The more settings requires logging into the O&M platform, please consult the after-sales service for details.



Note:

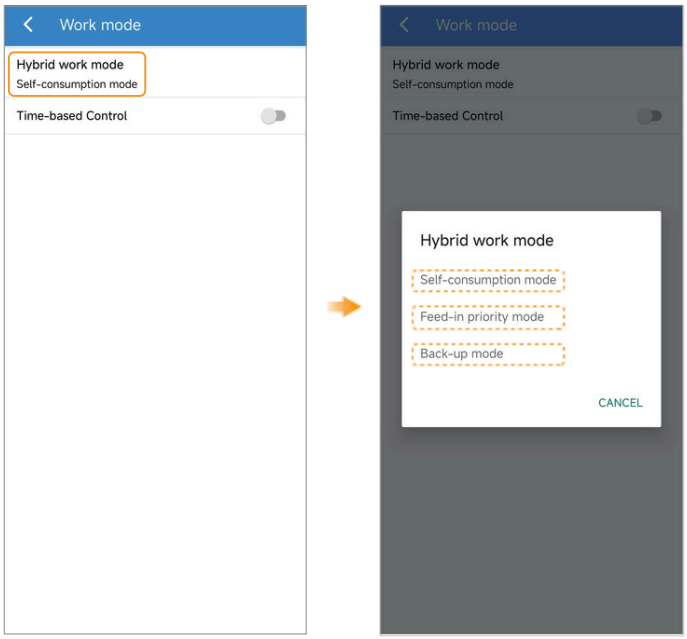
After entering the ***Hybrid Setting*** page, Tap ***READ*** to obtain the inverter data before setting.



Work mode

Hybrid work mode

Tap ***Console > Hybrid Setting > Work mode > Hybrid work mode*** to select work mode.



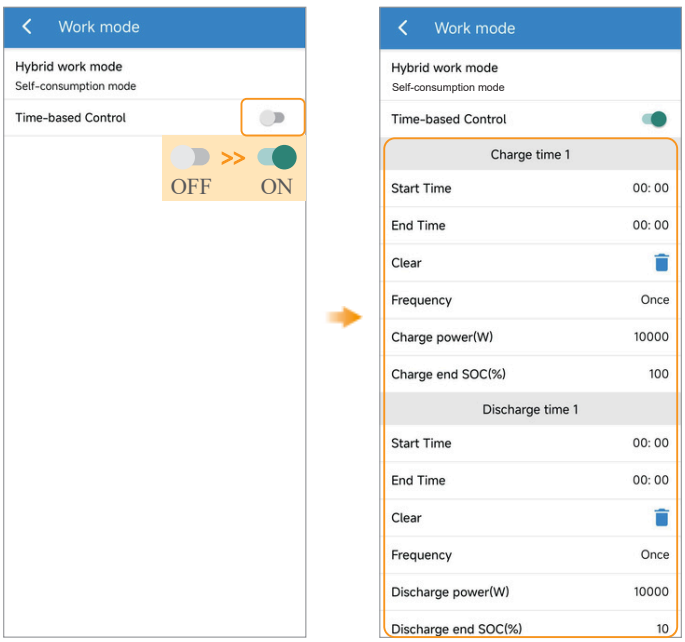
Time-based Control

Tap ***Console > Hybrid Setting > Work mode*** and enable ***Time-based Control*** to control the charging and discharging time.
You can set the following parameters based on your requirements:

- Charge and discharge frequency: once or every day
- Start charging time: 00:00 to 23:59
- End charging time: 00:00 to 23:59
- Start discharging time: 00:00 to 23:59
- End discharging time: 00:00 to 23:5

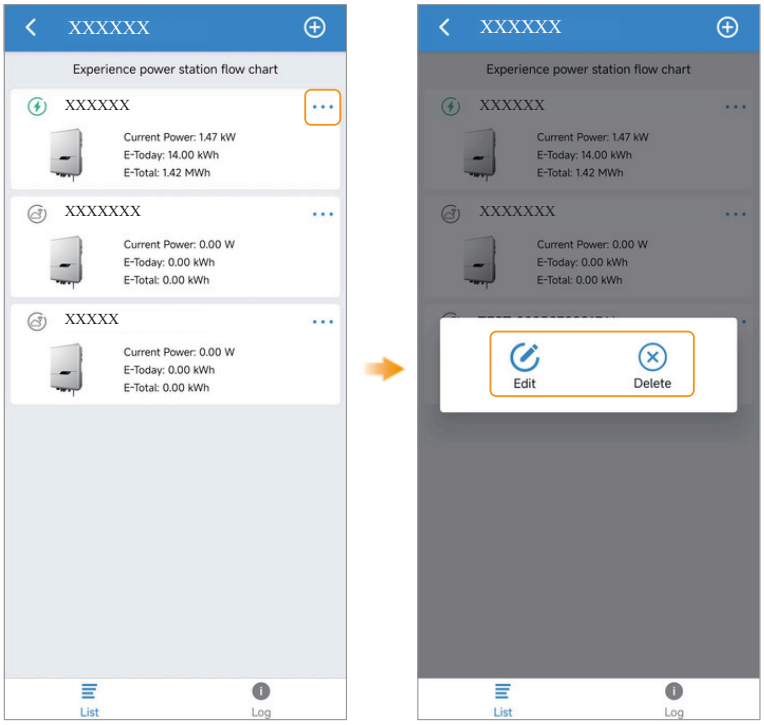
Note:

- The start charging time should be earlier than the end charging time.
- The start discharging time should be earlier than the end discharging time.



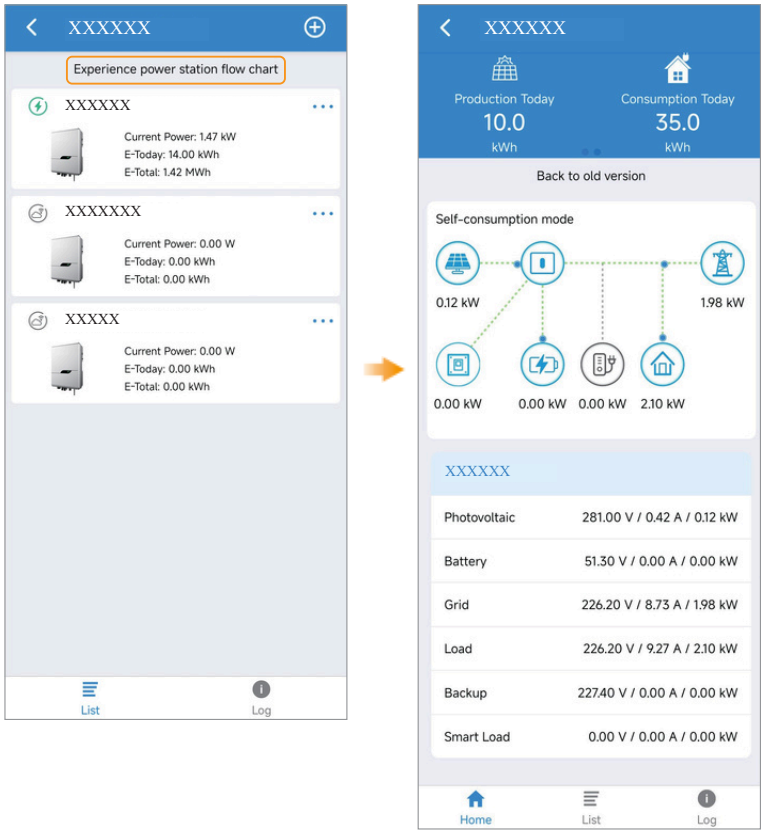
Edit/delete inverter

Tap "..." to edit or delete the inverter.



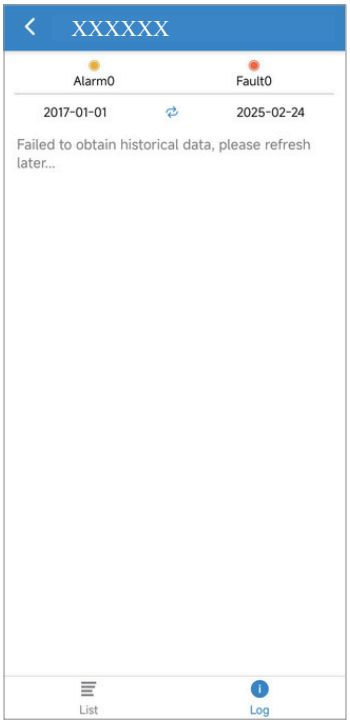
Experience Power Station Flow Chart

Tap ***Experience Power Station Flow Chart*** to view the power station flow chart and basic information about inverters binded to the power station.



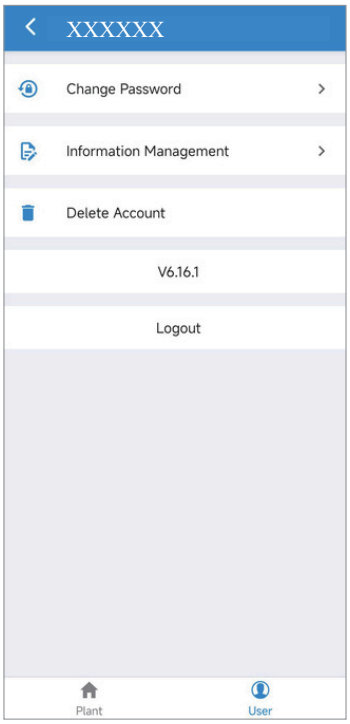
Log

The ***Log*** page displays the alarms and faults history of all inverters of the selected plant.



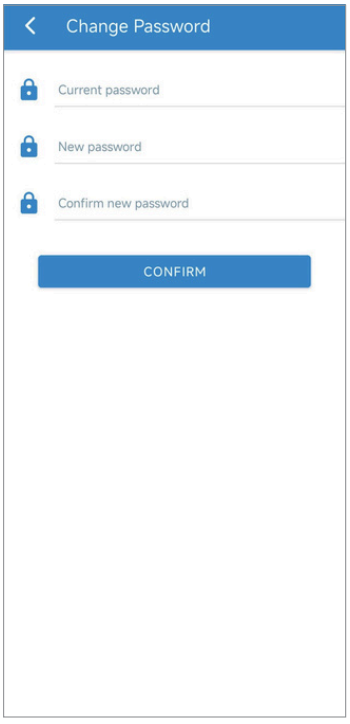
User

In ***User*** page, you can manage your account.



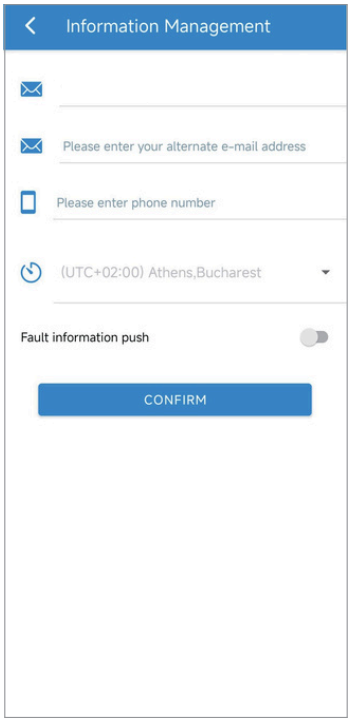
Change Password

Tap ***User > Change Password*** to change password.



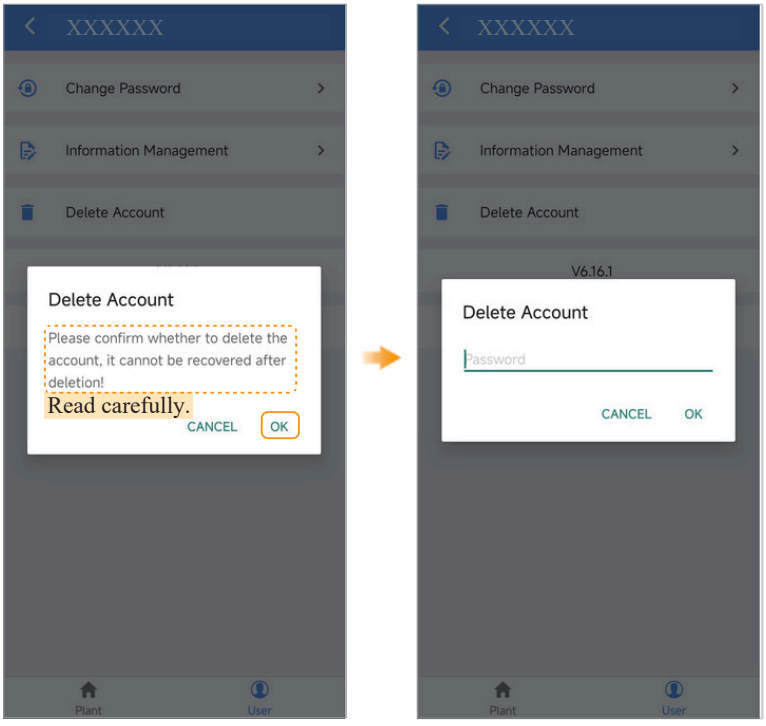
Information Management

Tap ***User > Information Management*** to modify account information.



Delete Account

Tap ***User > Delete Account*** to delete your account.



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