InstaGen
your energy



InstaGen Cloud Monitoring Platform

USER MANUAL

InstaGen Cloud (App)

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Frequently Asked Questions

Local Connection

Q: How to start commissioning?

A: Refer to ***5.3.5 Start Commissioning***.

Network Configuration

Q: How to configure the network?

A: Refer to ***5.2 Network Configuration***.

Password Management

Q: How to reset the password if I forget the password?

A: Refer to ***3.4 Reset the Password***.

Q: How to change the password?

A: Refer to ***6.2 Change the Password***.

Plant Management

Q: How to create a plant?

A: Refer to ***4.1 Create a Plant***.

Q: How to view the production and consumption of a plant?

A: Refer to ***4.5.1 Overview*** and ***4.5.2 View Historical Records***.

Q: How to remotely control a device?

A: Refer to ***4.5.4 Manage Devices***.

Q: How to select battery type?

A: Refer to ***4.5.4 Manage Devices*** and ***5.3.4 Select Battery Type***.

Q: How to set working mode?

A: Refer to ***4.5.6 Set Working Mode***.

Q: How to set the dry contact function?

A: Refer to ***4.5.7 Set Dry Contact Function***.

Q: How to set parameters of System, Battery, PV, Emergency Power Supply (EPS), and Generator?

A: Refer to ***4.5.8 Set Advanced Parameters***.

Q: How to configure the grid profile?

A: Refer to ***4.5.9 Configure Grid Profile***.

Q: How to set the export management parameters?

A: Refer to ***4.5.10 Set Export Management Parameters***.

Q: How to upgrade the firmware?

A: Refer to ***4.5.11 Upgrade the Firmware***.

1 About This Manual

1.1 Purpose

This manual explains how to use the InstaGen Cloud Installer App, including an overview and step-by-step instructions for key tasks.

The platform is referred to as **InstaGen Cloud** or **App** hereinafter unless otherwise specified.

1.2 Audience

This manual is intended for use by distributors and installers.

1.3 Validity

This manual is applicable to a residential energy storage system.

1.4 Symbol

Symbol	Description
ⓘ NOTE	This symbol indicates an important step or tip that leads to the best results but is not safety or damage-related.

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2 Product Information

2.1 Product Introduction

The InstaGen Cloud is a smart energy storage monitoring and management system developed by InstaGroup specifically for distributors, installers, and end-users of power plants. It allows you to:

- Track device performance and analyze power generation and revenue.
- Adjust parameters and view alarm notifications.
- Perform remote operation and maintenance (O&M).

2.2 System Composition

Install the DTU, inverter, smart meter, and battery before using the monitoring system. The DTU is used to collect status and operation data from inverters and transmit control commands to them. At the same time, the DTU also connects to the Internet through a router and sends inverter data to the InstaGroup Monitoring Server to achieve remote control of the whole system.

ⓘ NOTE

- The DTU mentioned in this manual refers to the DTS (Data Transfer Stick).
- In a residential energy storage system, the DTU displayed in the InstaGen Cloud refers to the DTS (Data Transfer Stick).

2.3 Recommended Running Environment

For iOS: iOS 14.0 and later

For Android: Android 10.0 and later

ⓘ NOTE

The screenshots (Version 2.0.0) shown in this manual are for reference only. Since the App version will be updated periodically, the interface displayed on your screen may differ.

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3 Login

3.1 Download

InstaGen Installer is a mobile application developed by InstaGroup especially for installers of power plants. It can help users better perform installation and maintenance.

InstaGen is a mobile application developed by InstaGroup especially for owners of power plants. It can absorb the operating data of plants from InstaGen Cloud.

Scan the QR code or search for “InstaGen” in the Google Play or App Store to download the InstaGen Installer or InstaGen App.

InstaGen Installer

InstaGen

3.2 Get an Account

- If you are a **new distributor**, send an email to InstaGroup. The InstaGroup Technical Service Center will apply for an account for you.
- If you are a **new Installer**, ask your distributor to create an account for you.
- If you are a distributor/installer and have a distributor/installer account, you can directly create subaccounts under your existing account. For details, refer to ***InstaGen Cloud User Manual (Web)***.

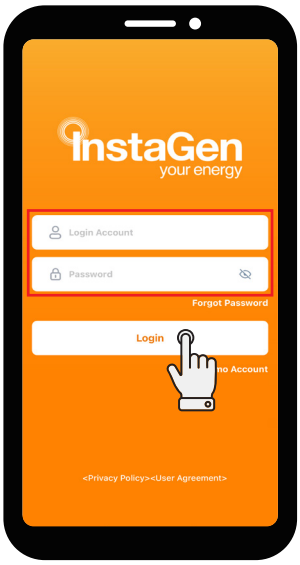
3.3 Log in to InstaGen Installer

NOTE

If your email address is linked to your account, you can log in with your email address. To link your email address to your account, refer to ***6.1 Manage Your Account***.

Step 1 Enter your account and password.

Step 2 Tap **Login**.



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3.4 Reset the Password

- If you forget the password and your email address isn't linked to your account:

  For distributors, ask InstaGroup to reset the password.

  For installers, ask your distributor to reset the password.

- If you forget the password and your email address is linked to your account:

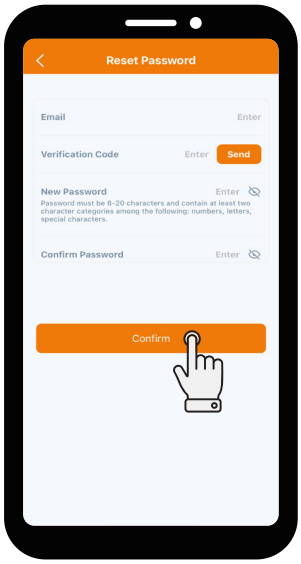
  Step 1 Tap **Forgot Password**.

  Step 2 Enter your email address, tap **Send** on the right side of **Verification Code**, and enter the verification code you received.

  Step 3 Enter the new password, confirm the password, and tap **Confirm**.

  Step 4 Enter your account and new password, and tap **Login**.



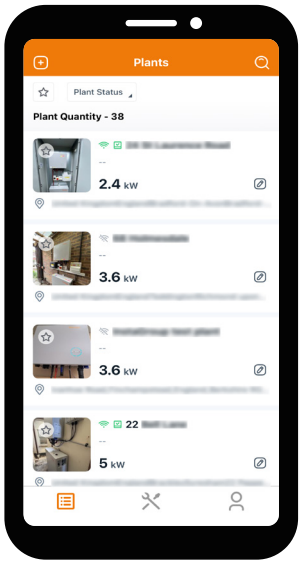




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4 Plant

in the lower left corner represents the **Plants** interface. You can create, search for, filter, view, and edit your plants.



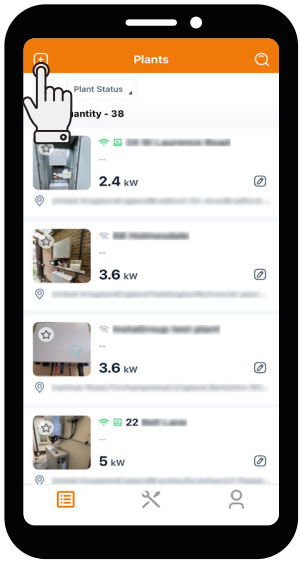
Icon	Description	
	Refers to Plants page.	
	Tap this icon to create a plant.	
	Tap this icon to search for a plant.	
	Tap this icon to view your favorite plants.	
	Tap this icon to add a plant to your favorites.	
	Tap this icon to edit a plant.	
	Refers to the plant address.	
	Network Status	Normal.
		Unstable Internet Connection.
		Offline.
	System Status	Normal.
		Alarm.
		Abnormal Grid.
		Meter Alarm.
		Communication Failure (only for the AC-coupled plant).
		SN Mismatch.
	Unfinished Plant.	

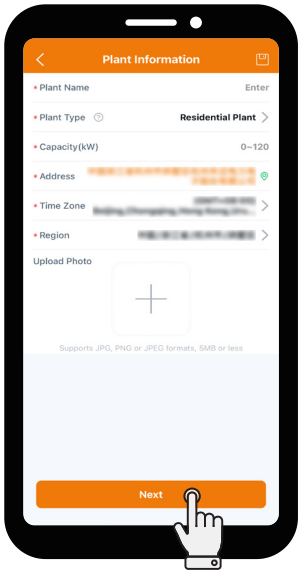
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4.1 Create a Plant

Step 1 Tap ⊞ in the upper left corner.

Step 2 Enter the basic information and tap **Next**.





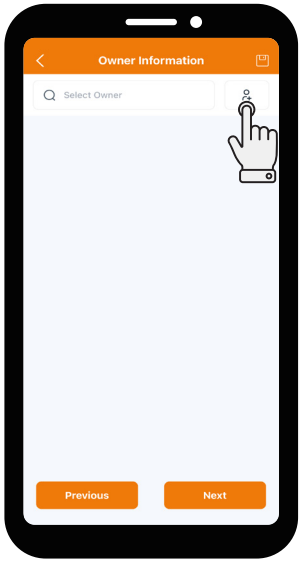
Step 3 Tap 👤+ to add an owner.

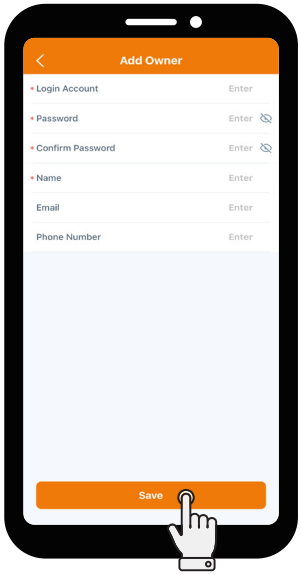
Step 4 Enter the login account, name, and password, confirm the password, enter Email and phone number as required, and tap **Save**. (It is recommended to enter an email address to help owners reset the password when they forget it.)

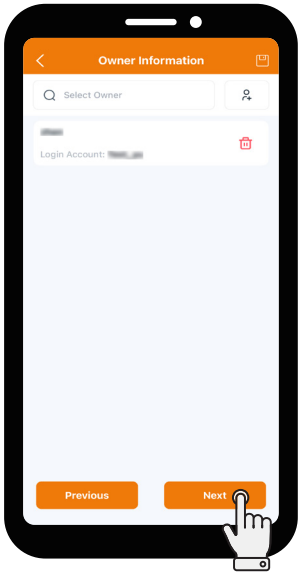
Step 5 Tap **Next**.

NOTE

If you don't want to create an owner, tap 🔍 **Select Owner** to select an existing owner.





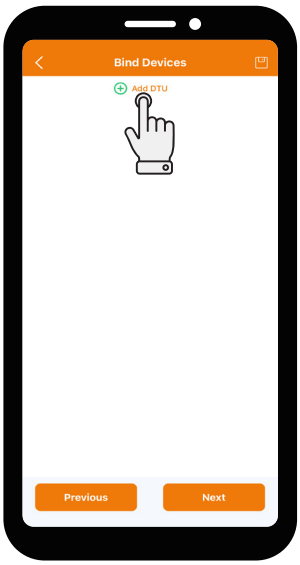


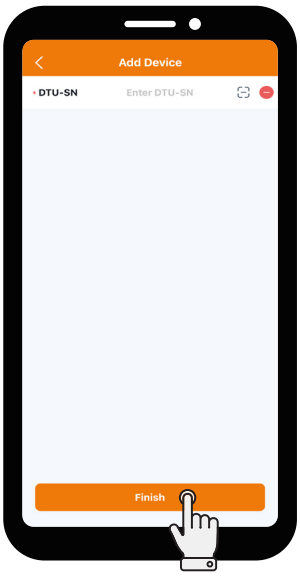
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Step 6 Tap ⊕ **Add DTU**.

Step 7 Enter the DTU SN. The energy storage inverter SN will be automatically identified.

Step 8 Tap **Finish**.

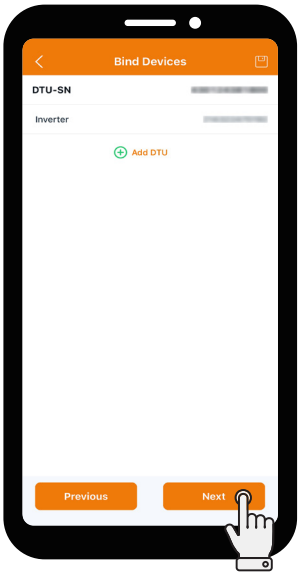


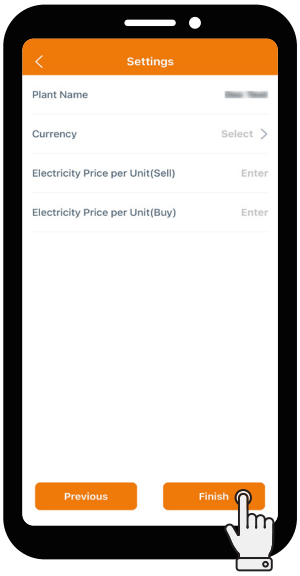


Step 9 Tap **Next**.

Step 10 (Optional) Set the currency type and the electricity price per unit (Sell and Buy).

Step 11 Tap **Finish**.



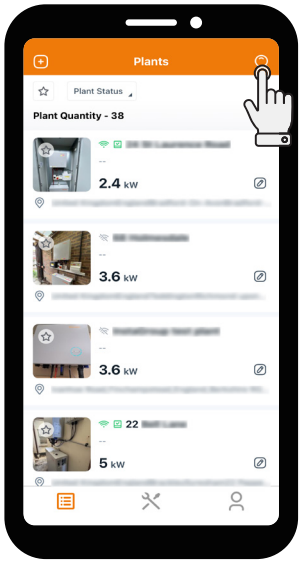


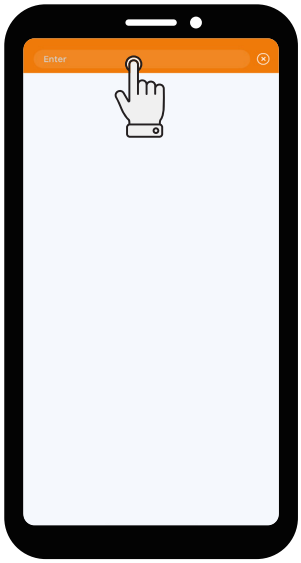
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4.2 Search for a Plant

Step 1 Tap in the upper right corner.

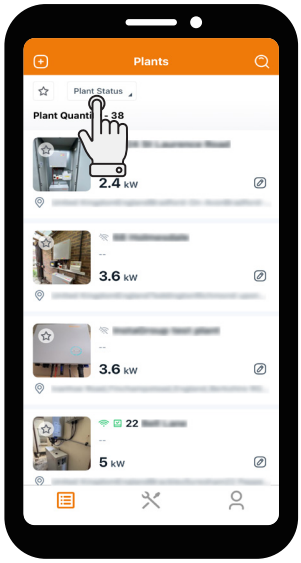
Step 2 Enter keywords of the plant name or the complete plant name.

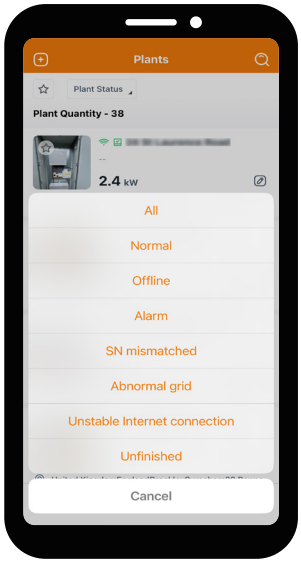




4.3 Filter Plants

Tap **Plant Status** to filter plants according to different status, such as Normal, Offline, and Alarm.



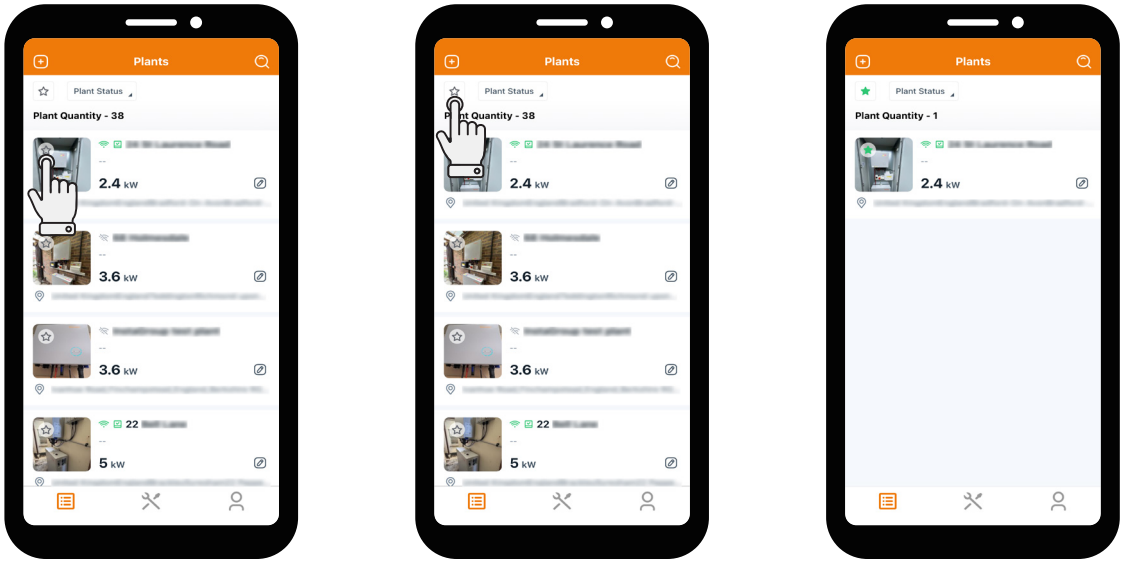


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4.4 Add a Plant to Your Favorites

Step 1 Tap ☆ in the upper left corner of the target plant.

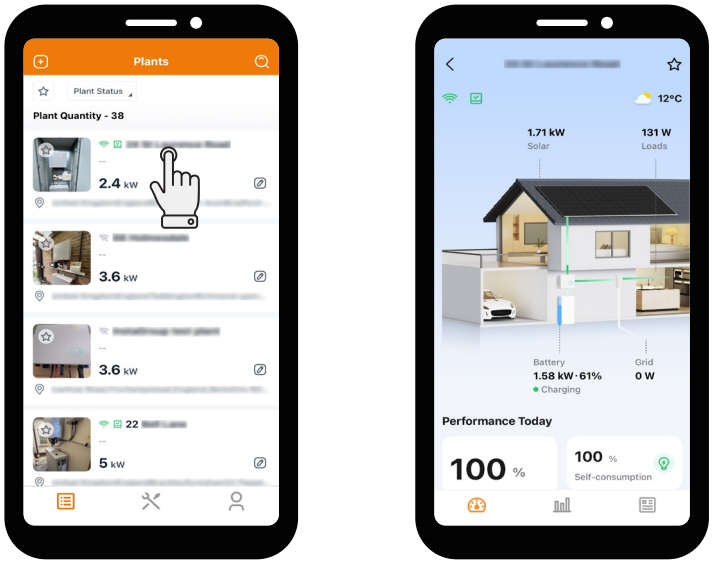
Step 2 (Optional) Tap ☆ on the left side of **Plant Status** to view your favorite plants.



4.5 View a Plant

4.5.1 Overview

Tap the target plant to enter the overview interface.



★ Favorite

Tap ☆ in the upper right corner to add this plant to your favorites.

★ Power flow

This figure displays the direction and status of real-time power flow. You can monitor the current operating status of the residential energy storage system through the real-time power flow. You can also tap the device name to view the corresponding real-time data.

ⓘ NOTE

- The power flow can be refreshed in seconds only when the DTS is upgraded to the latest version, nearly realizing real-time monitoring management.

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★ Self-consumption

The self-consumption data indicates the ratio of PV power used to meet daily needs. If the self-consumption ratio is higher, it means more PV power is used to meet daily needs.

★ Self-sufficiency

The self-sufficiency data indicates how independent your energy system is from the grid. The higher the self-sufficiency rate, the lower the dependence on the grid.

★ Reduction

The reduction data indicates how many carbon dioxide emissions are reduced.

★ Daily energy balance

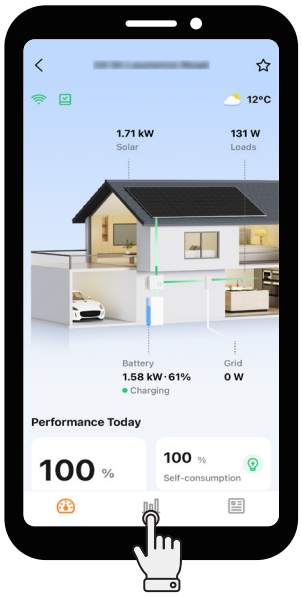
The daily energy balance chart can help you compare the current production and consumption, thus helping you master the use of energy and adjust the energy storage mode and the usage strategy.

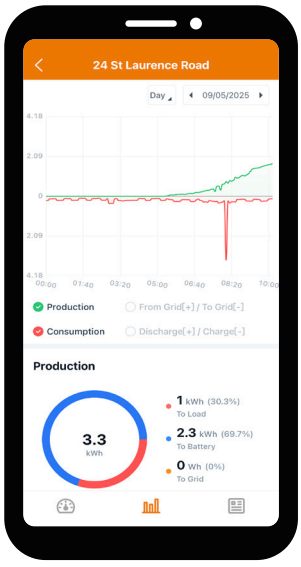
Icon	Item	Description
	Production	**To Load**. It refers to the PV power supplied to loads.
		To Battery. It refers to the PV power used to charge the battery.
		To Grid. It refers to the PV power sold to the grid.
	Consumption	**From Solar**. It refers to the PV power supplied to loads.
		From Battery. It refers to the battery power supplied to loads.
		From Grid. It refers to the grid power supplied to loads.

4.5.2 View Historical Records

Step 1 Tap the target plant.

Step 2 Tap in the lower middle to view production and consumption according to day, month, year, and total.





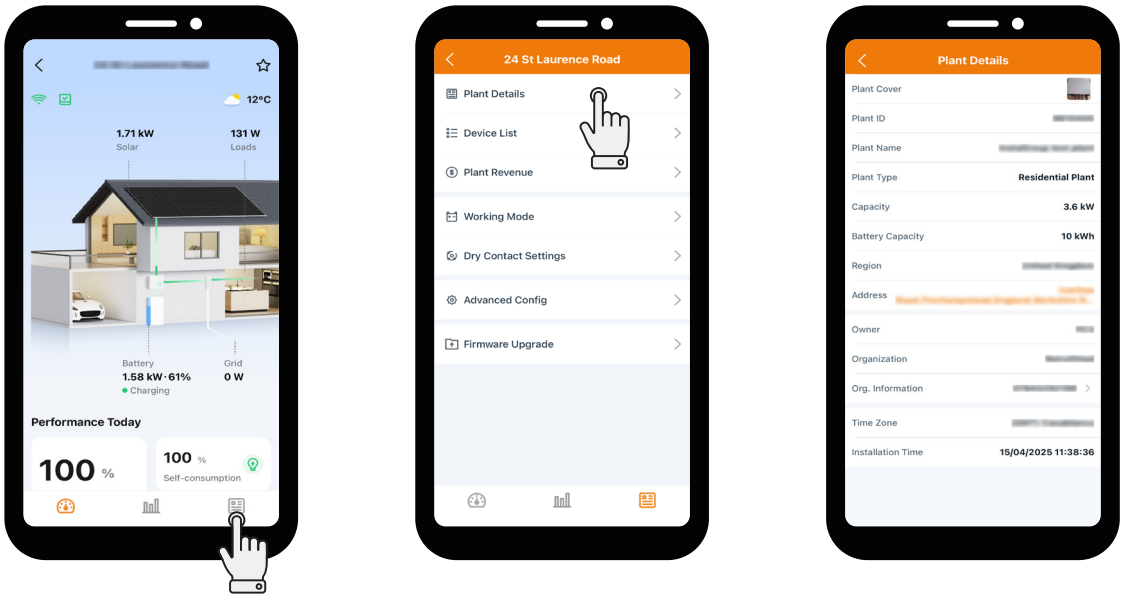
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4.5.3 View Plant Details

Step 1 Tap the target plant.

Step 2 Tap in the lower right corner.

Step 3 Tap **Plant Details**.



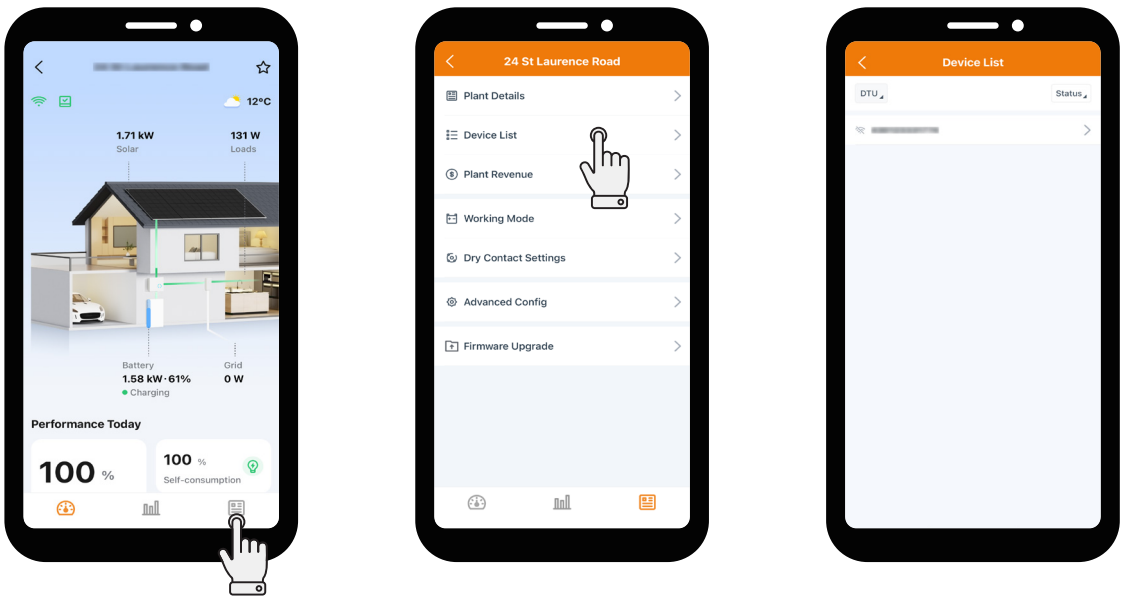
4.5.4 Manage Devices

Step 1 Tap the target plant.

Step 2 Tap in the lower right corner.

Step 3 Tap **Device List**.

Step 4 Tap the device name or the device status to filter devices.



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Step 5 Tap the **device SN** to view DTU/Meter/Inverter/Battery details and issue commands.

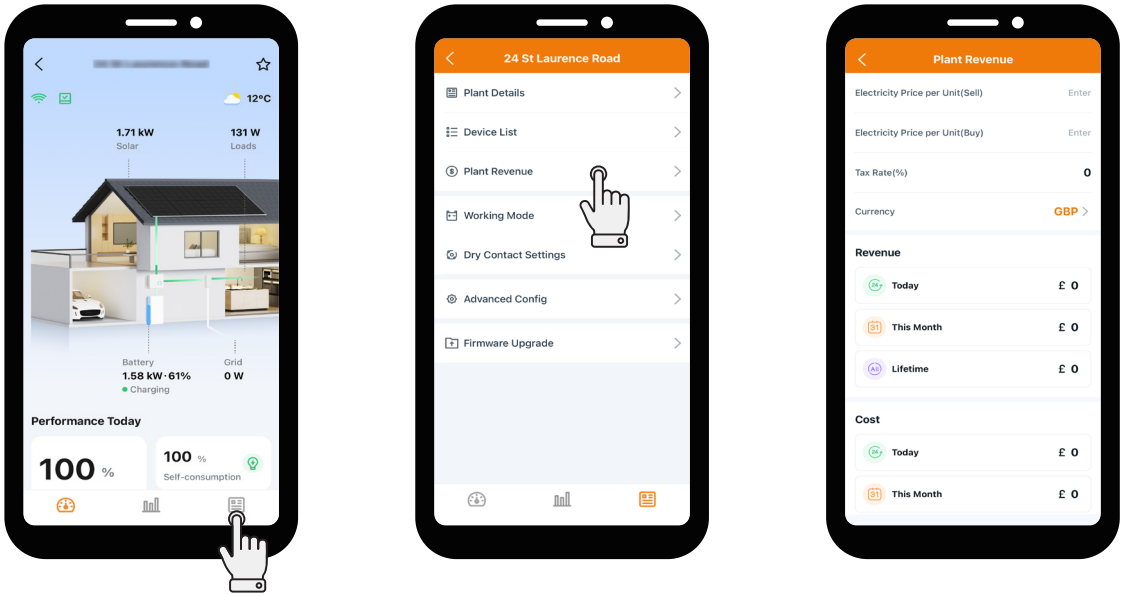
Devices	Commands	Steps
DTU	Restart the DTU.	Tap **Restart**.
	Replace the DTU.	Tap **Replace**, enter the new device SN, and tap **Confirm**.
	Stop the processing command of the DTU.	Tap **Stop Processing Command**.
	Delete the DTU.	Tap **Delete** > **Confirm**.
Meter	/	/
Inverter	Turn on the inverter.	Tap **Turn On**.
	Turn off the inverter.	Tap **Turn Off**.
	Restart the inverter.	Tap **Restart**.
	Restore the default settings of the inverter.	Tap **Restore Default Settings**.
	Clear alarms of the inverter.	Tap **Clear Alarm**.
	Select the battery if batteries are connected to the inverter.	Tap **Select Battery Type**, select the battery type, set relevant parameters, and tap **Save**. (If Li-ion batteries are connected in parallel via the busbar, and the master battery communicates with the master inverter, enable **Multiple PCS**.)
	Upload the real-time data of the inverter.	Tap **Upload Real-time Data**.
	Delete the inverter.	Tap **Delete** > **Confirm**.
Battery	Charge the battery in specific situations, such as a very low SOC.	Tap **Emergency Charging**.

4.5.5 View Plant Revenue

Step 1 Tap the target plant.

Step 2 Tap in the lower right corner.

Step 3 Tap **Plant Revenue** to set electricity price and view plant revenue and cost.



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4.5.6 Set Working Mode

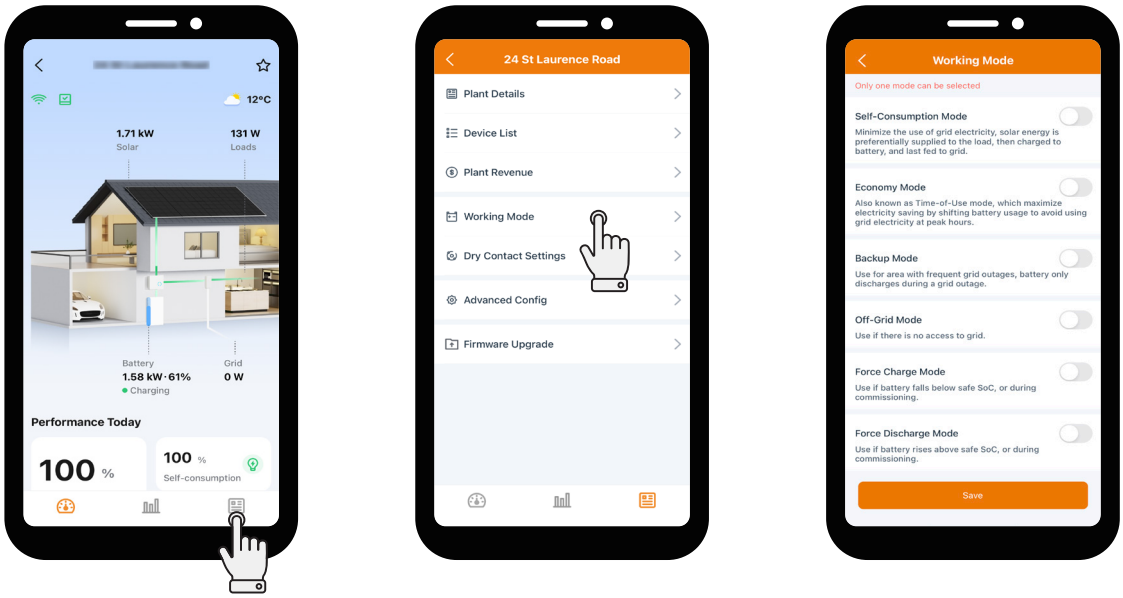
Step 1 Tap the target plant.

Step 2 Tap in the lower right corner.

Step 3 Tap **Working Mode**, select one mode, set relevant parameters, and tap **Save**.

NOTE

- Only one mode can be selected at a time.
- Another method to set working mode are shown in *5.3.6 Set System Parameters*.



★ Self-consumption Mode

In the daytime, solar energy supports the loads firstly, and surplus energy is stored in the battery. When the battery is fully charged or reaches the maximum charge power, the surplus energy is fed into the grid (or limited if required). At night, the battery discharges for the loads firstly, and the grid will supply the loads once the battery power is not enough. In this mode, battery cannot be charged from the grid at night.

The self-consumption mode can reduce the use of grid power. Solar energy is preferentially supplied to the loads, charged to the battery, and finally fed into the grid. Users can set the reserved SOC within a certain range. (A small amount of power can be reserved due to infrequent power outages.)

★ Economy Mode

In this mode, battery charging and discharging periods need to be defined. Meanwhile, the battery can be forced to charge from the grid during the preset charging time. For instance, the battery could be charged or discharged according to valley or peak electricity prices. You can set reserved SOC within a certain range (a small amount of power can be reserved due to infrequent power outages), select the type of currency you need, and set different time periods to be more flexible to save costs of electricity. Set the time period for peak, low and partial peak grid prices in different seasons or dates, and you can just add up to four time periods.

★ Backup Mode

Backup mode can be selected when the grid frequently breaks down. The battery will be forced to charge to a set capacity so that it has enough power to support the electricity consumption in daily life when the inverter is in off-grid mode. You can also set the reserved SOC within a certain range.

★ Off-grid Mode

When the system is not connected to the grid, you can choose the off-grid mode.

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★ Force Charge Mode

The force charge mode can be used during the commissioning of inverter or when the battery capacity falls below the value of safety SOC. You can set the reserved SOC within a certain range. If the battery capacity is lower than the setting, the battery will be forcibly charged. And You can set the max. charging power of battery if needed. Finally, save the values you have changed.

★ Force Discharge Mode

The force discharge mode can be used during the commissioning of inverter or when the battery capacity rises above the value of safety SOC. You can set the reserved SOC within a certain range. If the battery capacity is higher than the setting, the battery will be forcibly discharged. And you can set the max. discharging power of battery if needed. Finally, save the values you have changed.

★ Peak Shaving Mode

In this mode, the Peak Meter Power (the maximum power that the inverter obtains from the grid) can be set; only when PV and battery can fully supply the loads, can the Peak Meter Power be limited. Set the Baseline SOC to ensure the normal operation of this mode. When the battery SOC is less than the Baseline SOC, the grid can supply the loads or charge the battery with an output power not higher than the Peak Meter Power; when the battery SOC is less than the reserved SOC, the battery will not be discharged.

★ Time of Use Mode

The time of use mode allows users to customize the charge and discharge time of the battery within eight periods. During the pre-set charge time, the battery will be charged from the grid at the pre-set charging power until it reaches the pre-set stop charge SOC; during the pre-set discharge time, the battery will supply power to the load and the grid at the pre-set power until the battery discharges to the pre-set stop discharge SOC. The energy storage system allows users to freely set the charge and discharge time according to the local peak and valley electricity price to maximize the benefits. For the rest of the time, the system will run in self-consumption mode by default.

4.5.7 Set Dry Contact Function

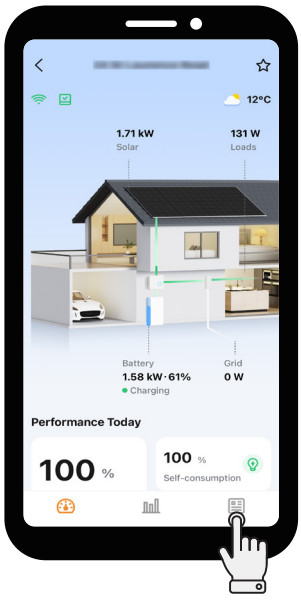
Step 1 Tap the target plant.

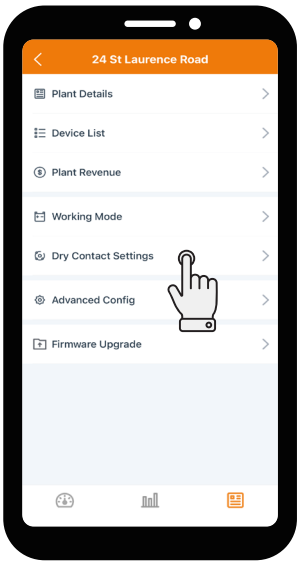
Step 2 Tap in the lower right corner.

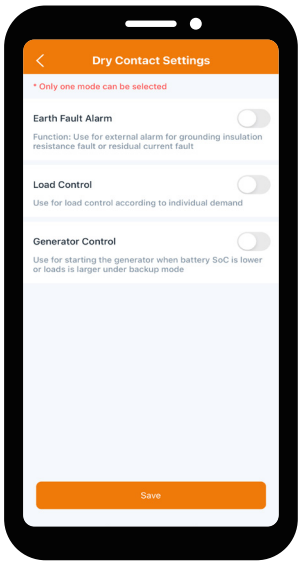
Step 3 Tap **Dry Contact Settings**, select one mode, set relevant parameters, and tap **Save**.

NOTE

- Only one mode can be selected at a time.
- Another method to set dry contact function is shown in *5.3.6 Set System Parameters*.







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★ Earth Fault Alarm

This function is used for external alarm caused by grounding insulation resistance fault or residual current fault. Disable the external alarm when the load is connected. This function is to produce alarm, not to cause tripping.

★ Load Control

Load control can be used according to individual demand. This setting is to control whether the load is working or not. There are six modes available as follows.

(1) Manual Mode

Manually turn on or turn off the dry contact.

(2) Scheduled Mode

Set the time period for the dry contact to work. The dry contact is closed during this set time and disconnected at other times.

(3) Intelligent Mode

Because the energy generated by PV fluctuates a lot, this mode is to make the dry contact avoid being turned on and off frequently. The dry contact will only be turned on when the residual energy generated by the PV exceeds the power set by the load within the set time period. You can set the minimum run time and the nominal power of the dry contact.

(4) EPS Port Smart Control

The unnecessary dry contact will be turned off in off-grid situation when the battery capacity is lower than the set SOC value. You can set the value of protection SOC if needed.

(5) EV Charger Smart Control

In this mode, whether to start the EV charger can be determined based on the total input current. When the input current is less than the value of the entrance breaker rated current minus the EV Charger rated current, the EV Charger is allowed to work; when the input current is larger than the entrance breaker rated current, shut down the EV Charger to protect the entrance breaker.

(6) Heat Pump Control

The heat pump control function allows users to add up to four runtimes. According to the set power and battery SOC, it can control the start and stop as well as the power of the SG Ready heat pump, maximizing the PV energy utilization.

Parameter	Description
Start Power	When the average feed-in power is greater than or equal to the start power, the heat pump will be started.
Shutdown Power	When the running time is greater than or equal to the minimum single runtime and the average grid input power is greater than or equal to the shutdown power, the heat pump will be shut down.
Battery Starting SOC	There is an ON/OFF option. The default option is OFF. ON: When the average feed-in power is greater than or equal to the start power or the battery SOC is greater than or equal to the battery start SOC, the heat pump will be started.
Battery Shutdown SOC	When the running time is greater than or equal to the minimum single runtime and the battery SOC is less than the battery shutdown SOC, the heat pump will be shut down.
Min. Single Runtime	The minimum single runtime of the heat pump.

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Max. Single-day Runtime	There is an ON/OFF option. The default option is OFF. ON: The heat pump will be shut down when the running time of the day reaches the maximum single-day runtime; it will be started again when the starting condition is reached the next day.
Time Range	Up to 4 operating periods can be set.

★ Generator Control

(1) Exercise Mode

The generator starts regularly during the preset period to ensure the operation of the generator.

Parameter	Description
Frequency	It allows the generator to start regularly at this frequency.
Duration	The generator will stop running after this duration.
Start Time	It allows the generator to start regularly at this time.

(2) Running Mode

This mode is the off-grid operation mode of the generator, including manual mode and auto mode.

A. Manual Mode

The manual mode is used to turn on or turn off the generator manually.

B. Auto Mode

The auto mode is used to turn on or turn off the generator according to the battery capacity. The auto mode only supports generators controlled by Dry Contact. Otherwise, please select the manual mode.

Parameter	Description
GEN Start SOC	In off-grid mode, start the generator when the battery capacity is lower than the safety SOC.
GEN Shutdown SOC	In generator mode, shut down the generator when the battery capacity is higher than the safety SOC.
Quiet Time	During the quiet time, the generator is disabled. If you set this time, it will affect the normal use of electricity.

(3) Battery Charge Time

Parameter	Description
Battery Charge Time	The generator will charge the battery during the preset period. Please choose the time period when the PV power is low to avoid wasting PV power.

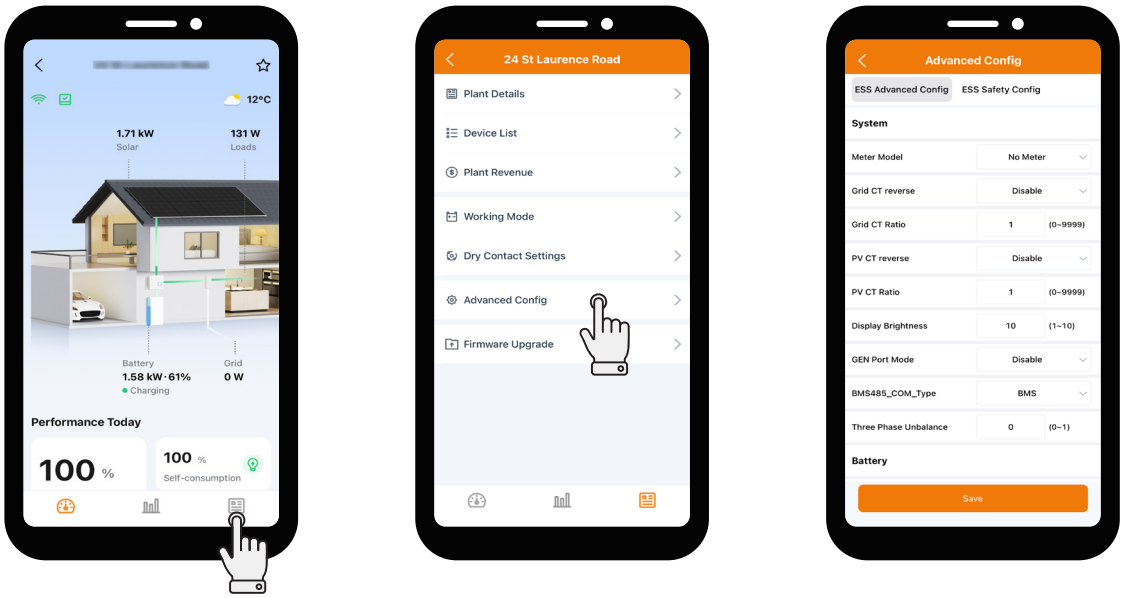
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4.5.8 Set Advanced Parameters

Step 1 Tap the target plant.

Step 2 Tap in the lower right corner.

Step 3 Tap **Advanced Config** to set parameters of System, Battery, PV, Emergency Power Supply (EPS), and Generator, and tap **Save**.



★ **System**

Parameter	Description	Default Value
Meter Model	For a single-phase inverter, please select “Single-phase Meter” or “Three-phase Meter”.	No Meter
Grid CT Reverse	Enable it to get correct sampling current when the grid side CT is reversely connected.	Disable
Grid CT Ratio	Set the grid side CT ratio.	1
PV CT Reverse	Enable it to get correct sampling current when the PV inverter side CT is reversely connected.	Disable
PV CT Ratio	Set the PV inverter side CT ratio.	1
Display Brightness	Set the brightness of LED indicators.	10
GEN Port Mode	After the generator port is connected to the inverter or generator, select the corresponding option.	Disable
BMS485_COM_Type	• If the RS485 port is connected to the battery, please select “BMS485”. • If the RS485 port is connected to the microinverter DTU, please select “DTU.COM”.	BMS
Three-phase Unbalance	When the loads of the three-phase inverter are not balanced, enable the three-phase unbalance function. It can compensate for each load.	Disable

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★ Battery

Parameter	Description	Default Value
Max. Discharging Power	Set the maximum discharging power.	100%
Max. Charging Power	Set the maximum charging power.	100%
Max. SOC	Set the maximum battery capacity as recommended by the battery manufacturer.	100%
Min. SOC	Set the minimum battery capacity as recommended by the battery manufacturer.	10%
Min. SOC Force Charging Power	Set the power to forcibly charge the battery when the battery SOC falls below the set minimum SOC.	200 W
Reserved SOC Force Charging Power	Set the power to charge the battery when the battery SOC falls below reserved SOC.	2%
Max. BAT Feed-in Power in Peak Time	Set the maximum value of battery feed-in power in peak time.	100%
Max. Grid Charging Power in Off-peak Time	Set the maximum power to charge the battery from the grid in off-peak time.	0 W
Max. BAT Discharging Power in Partial Peak Time	Set the maximum value of battery discharging power in partial peak time.	100%

★ PV

Parameter	Description	Default Value
MPPT Global Scan	If the PV modules are shaded, enable this function.	Disable

★ Emergency Power Supply (EPS)

Parameter	Description	Default Value
EPS Mode	• When the EPS port is connected, you can select “EPS” or “UPS”. You can select “UPS” when the load keeps power on, and the system will automatically switch between the on-grid mode and the off-grid mode under UPS mode. • EPS is characterized by continuous power supply, which means that the loads are powered by bypass under normal power supply, and the DC power will be inverted to supply the loads during power outage, maximizing energy utilization. • UPS is a kind of uninterrupted power supply which has stable voltage and frequency, and has an extremely high requirement for switching time. UPS not only operates during power outage, but also can output high quality power supply to ensure normal operation of electric equipment in case of abnormal situations such as overvoltage, undervoltage, and surge. • When the inverter is used as a PV inverter, select “Disable”.	EPS
External Bypass	For inverters with an external ATS (EPS) Box, when the external bypass switch is enabled, the inverter EPS port works in the off-grid mode and will not work in the on-grid mode.	Disable

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PV Only	In off-grid mode, PV can also operate without the battery. (This function is not recommended since the system is unstable under this mode)	Disable

★ **Generator**

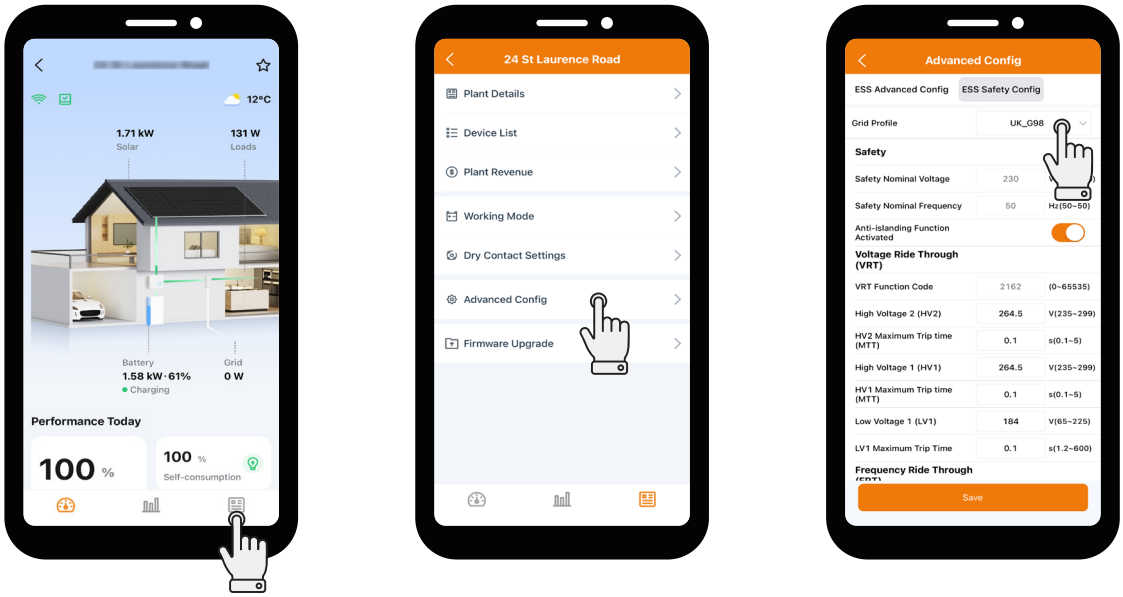
Parameter	Range
GEN Location	None/GenSide. To ensure the normal operation of the generator, please select “GenSide”.
GEN Signal Setting	Manual or DI/DO. If the generator cannot be controlled by dry contact, please select “Manual”. If the generator can be controlled by dry contact, please select “DI/DO”.
Min. Run Time	5-60 min
Max. Run Time	6-10 hour
Protection Interval	5-60 min
Synchronize Time	1-20 min
Shutdown Delay	1-20 min
GEN Rated Power	0-20000 W
High Voltage Limit	0-280 V
Low Voltage Limit	0-180 V
High Frequency Limit	0-70 Hz
Low Frequency Limit	0-59 Hz
Max. GEN Charging Power	0-20000 W

4.5.9 Configure Grid Profile

Step 1 Tap the target plant.

Step 2 Tap in the lower right corner.

Step 3 Tap **Advanced Config** > **ESS Safety Config** > **Grid Profile** to select the grid profile in your region, and tap **Save**.



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4.5.10 Set Export Management Parameters

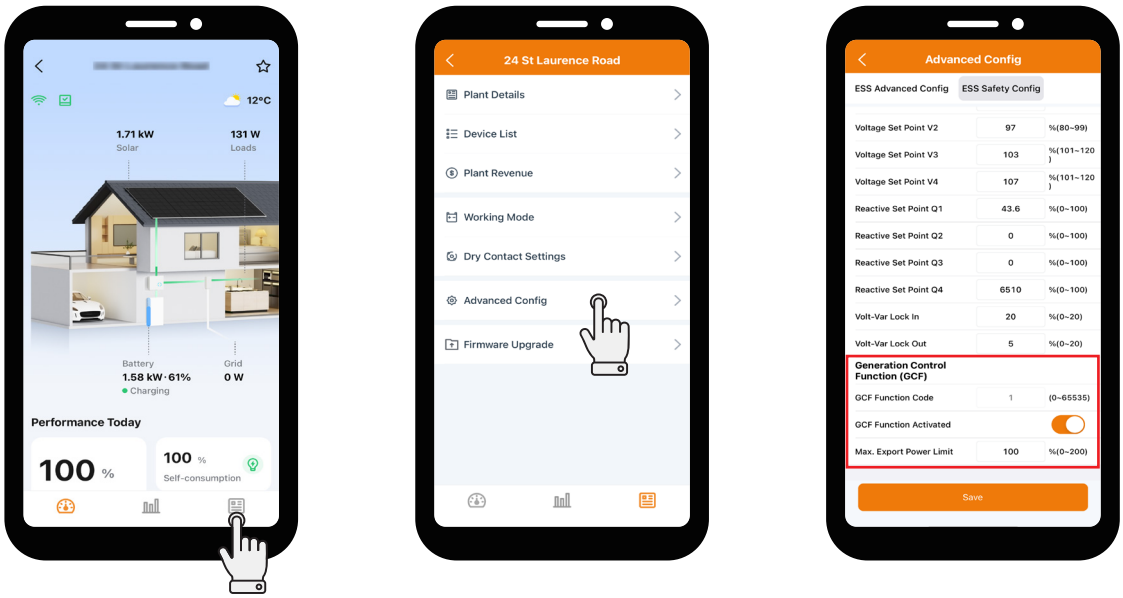
NOTE

- This function is enabled by default, and the default value of Max. Export Power Limit is 100%.
- ESS refers to a single energy storage inverter or a parallel system.

Step 1 Tap the target plant and tap in the lower right corner..

Step 2 Tap **Advanced Config** > **ESS Safety Config**, slide your finger down to the bottom, ensure **Generation Control Function (GCF)** is enabled, and set the value of Max. Export Power Limit.

Step 3 Tap **Save**.



- If no input device is connected to the grid side, and you do not need to limit the feed-in power, disable this function or skip this setting.
- If an input device, such as a microinverter, is connected to the grid side, and you do not need to limit the feed-in power, disable this function.
- If you need to limit the feed-in power, set Max. Export Power Limit as required.

  Scenario 1: Max. Export Power Limit is 0

  The feed-in power of an Energy Storage System (ESS) is 0. If an input device, such as a microinverter, is connected to the grid side, its output power cannot be controlled; it will output power according to its logic.

  Scenario 2: Max. Export Power Limit is 50%

  The maximum allowable feed-in power is 50% of the rated power of ESS. If an input device, such as a microinverter, is connected to the grid side, it can operate at full power, and the energy storage inverter will adjust the output of ESS in real time according to the set Max. Export Power Limit.

  Scenario 3: Max. Export Power Limit is 100%

  The maximum allowable feed-in power is 100% of the rated power of ESS. If an input device, such as a microinverter, is connected to the grid side, it can operate with its full power, and the energy storage inverter will adjust the output of ESS in real time according to the set Max. Export Power Limit.

  Scenario 4: Max. Export Power Limit is 150%

  The maximum allowable feed-in power is 150% of the rated power of ESS. If an input device, such as a microinverter, is connected to the grid side, it can operate with its full power, and the energy storage inverter will adjust the output of ESS in real time according to the set Max. Export Power Limit.

  NOTE

  - The energy storage inverter cannot control the output power of other input devices connected to the grid side. It means that the feed-in power cannot be limited to 0 if other input devices are connected to the grid side.
  - If no input device is connected to the grid side, Max. Export Power Limit can be set to 0-100%.

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4.5.11 Upgrade the Firmware

NOTE

During the firmware upgrade, do not power off the device.

NOTE

Parallel System Firmware Upgrade Instructions:

- For inverters with SYS_R_V01.xx.xx version, connect the DTS to each unit (Master and Slaves) individually to complete the firmware upgrade. To avoid any damage, please turn off the inverter before installing and removing the DTS.
- For inverters with SYS_R_V02.xx.xx version or later, upgrade the Master only. The firmware of the Slaves will be automatically upgraded to the same version as the Master, with no need to reconnect the DTS.

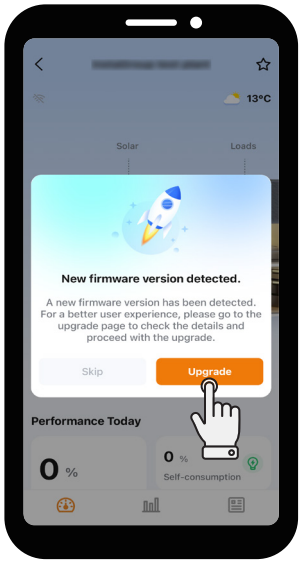
When you enter the plant overview interface, there will be a pop-up window if there is a new firmware version.

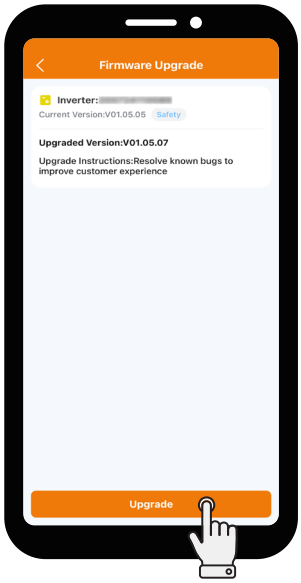
Method One

Step 1 Tap the target plant.

Step 2 Tap **Upgrade**.

Step 3 Tap **Upgrade**.





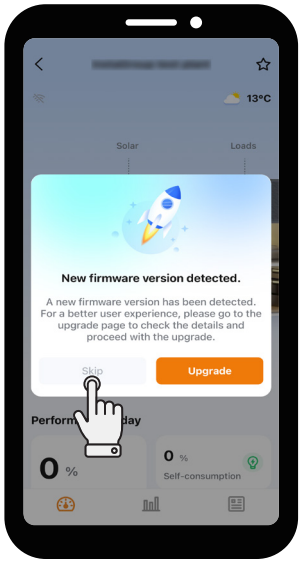
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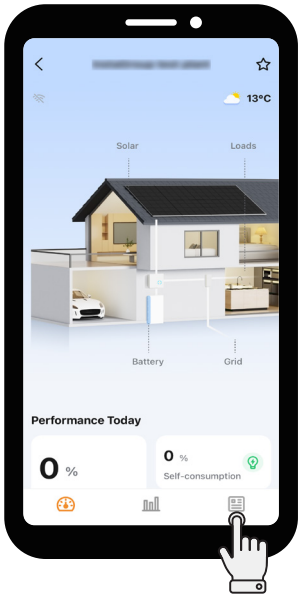
Method Two

Step 1 Tap the target plant.

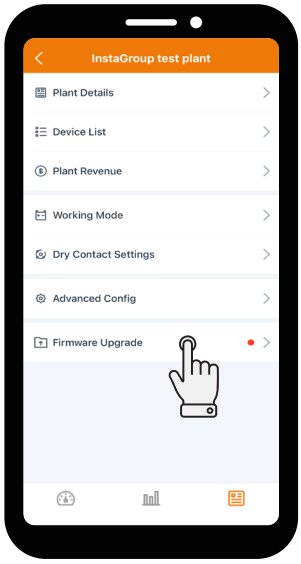
Step 2 Tap **Skip**.

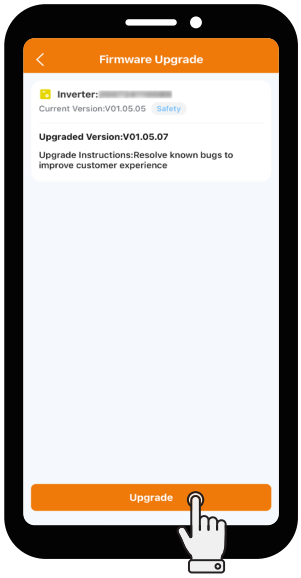
Step 3 Tap in the lower right corner.





Step 4 Tap **Firmware Upgrade** > **Upgrade**.





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4.6 Edit a Plant

4.6.1 Edit Plant Information

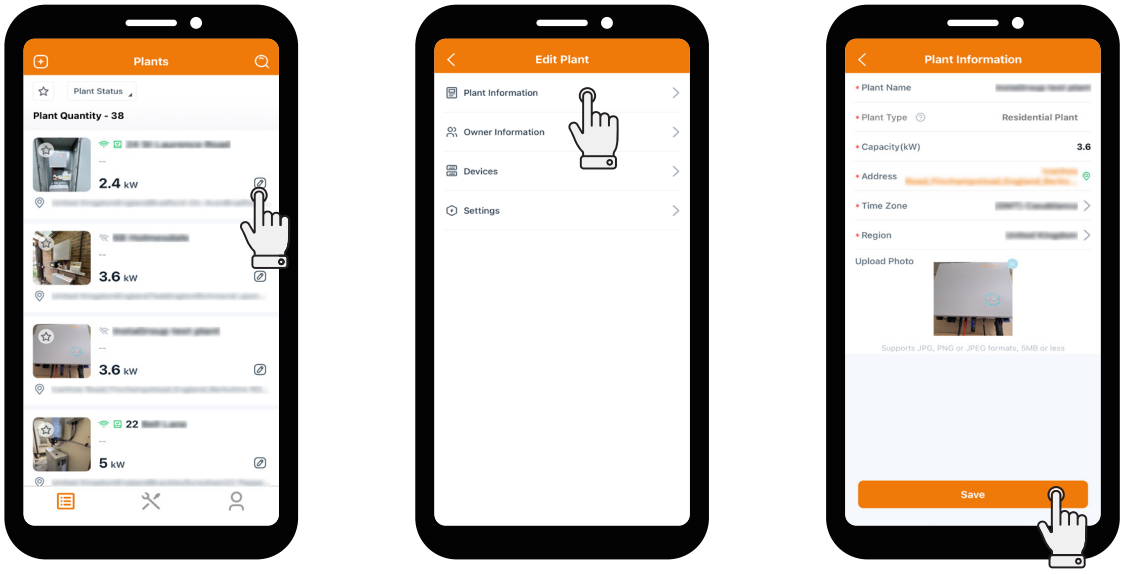
Step 1 Find the target plant.

Step 2 Tap on the right side.

Step 3 Tap **Plant Information**.

Step 4 Edit the basic information of this plant.

Step 5 Tap **Save**.



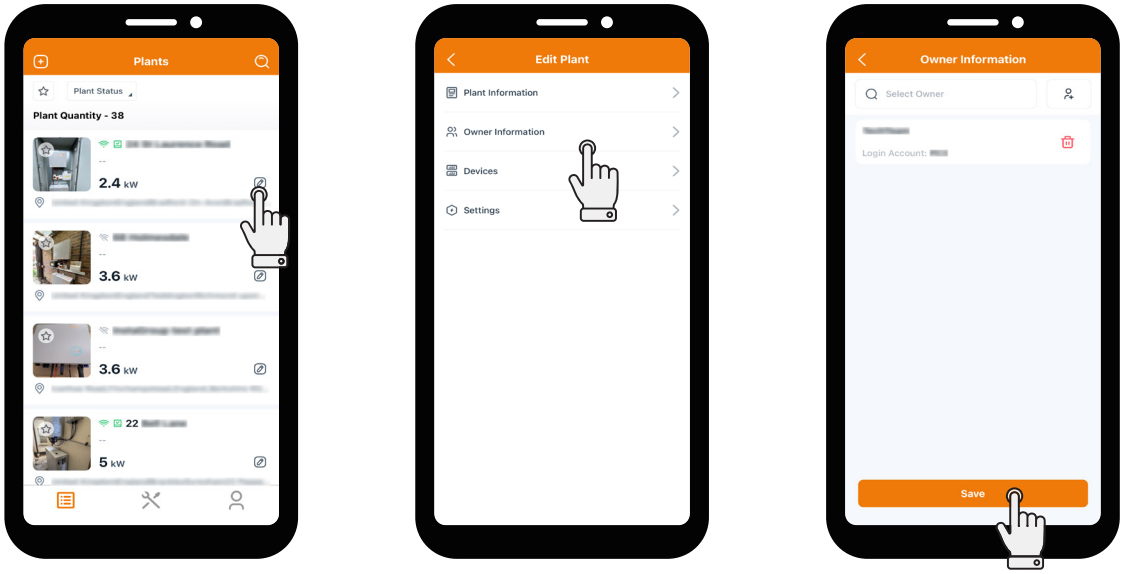
4.6.2 Edit Owner Information

Step 1 Find the target plant.

Step 2 Tap on the right side.

Step 3 Tap **Owner Information** to add a new owner, select an existing owner, or delete an owner.

Step 4 Tap **Save**.



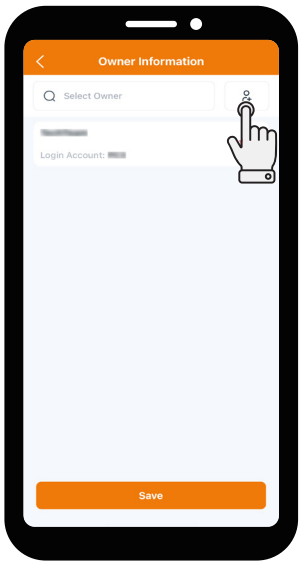
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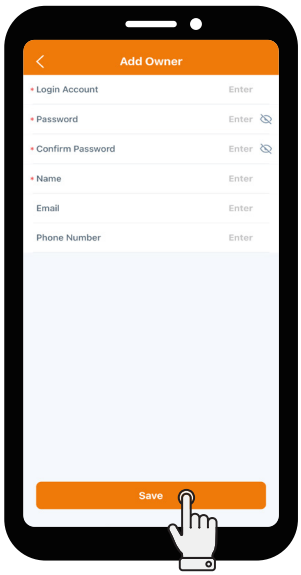
★ Create an owner

Step 1 Tap in the upper right corner.

Step 2 Enter the login account, name, and password, confirm the password, enter Email and phone number as required, and tap **Save**.

> **NOTE**
>
> It is recommended to enter an email address to help owners reset the password when they forget it.

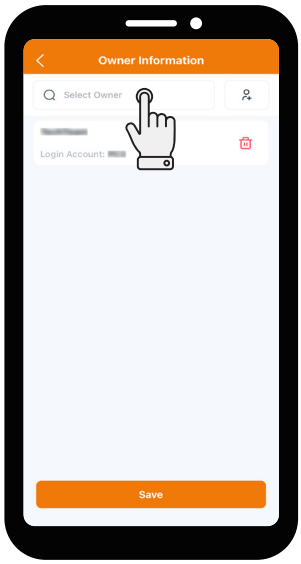


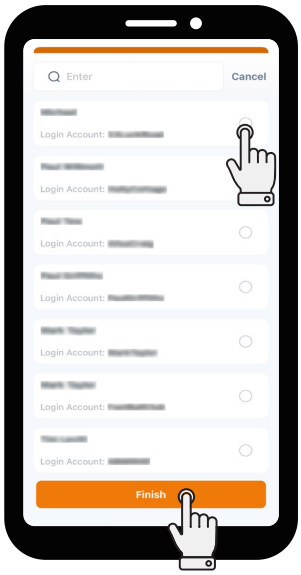


★ Select an existing owner

Step 1 Tap **Select Owner**.

Step 2 Select an owner and tap **Finish**.



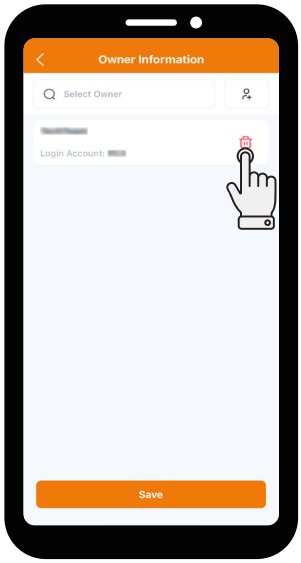


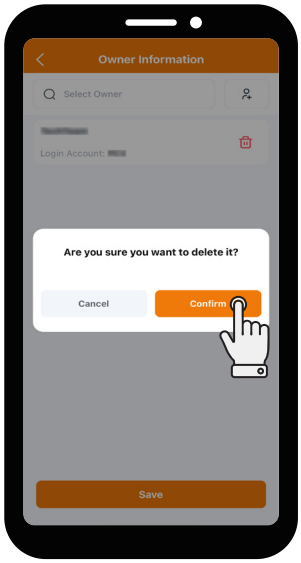
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★ **Delete an owner**

Step 1 Select an owner.

Step 2 Tap **Delete** > **Confirm**.





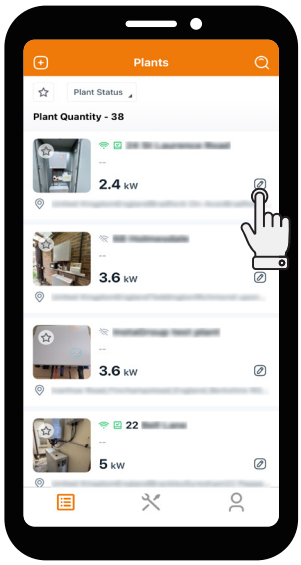
4.6.3 Set Electricity Price

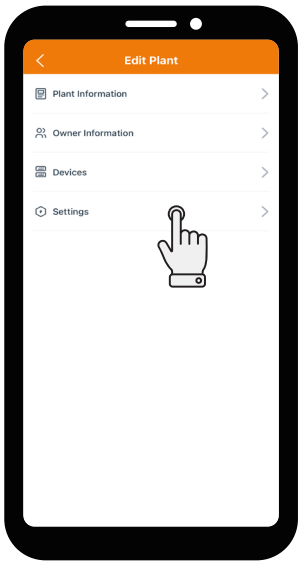
Step 1 Find the target plant.

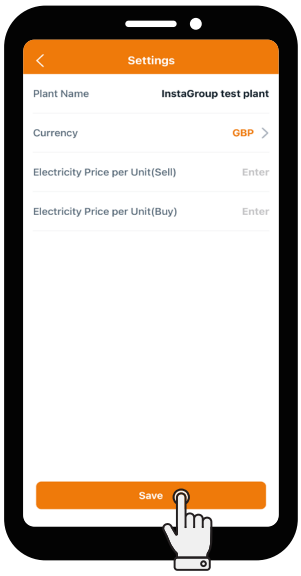
Step 2 Tap on the right side.

Step 3 Tap **Settings** to set the currency type and the electricity price per unit (sell and buy),

Step 4 Tap **Save**.



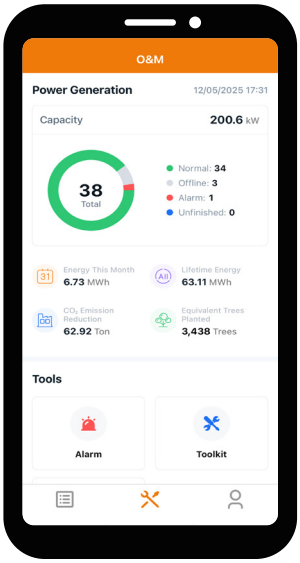


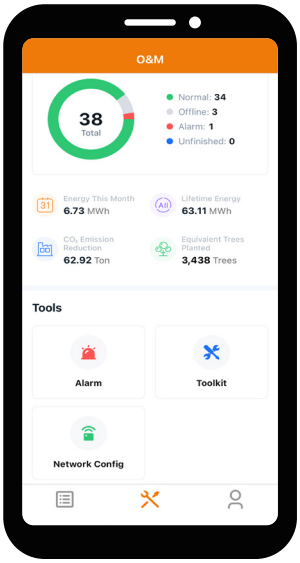


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5 Operation and Maintenance

in the lower middle represents the **O&M (Operation and Maintenance)** interface. You can view power generation data, view current alarms, configure the network, and perform relevant operations through a local connection.

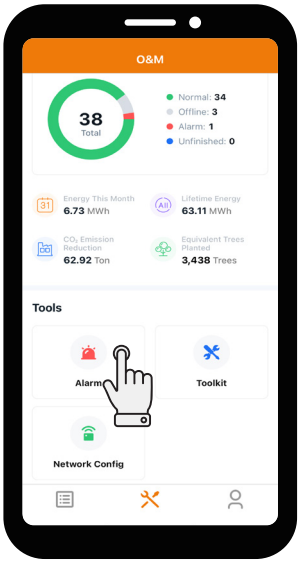


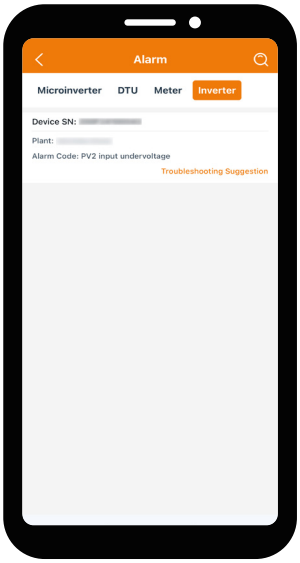


5.1 Alarm Query

Step 1 Tap **O&M**.

Step 2 Tap **Alarm** to view current alarms and the corresponding troubleshooting suggestions.





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5.2 Network Configuration

5.2.1 Configure the Network of the DTS

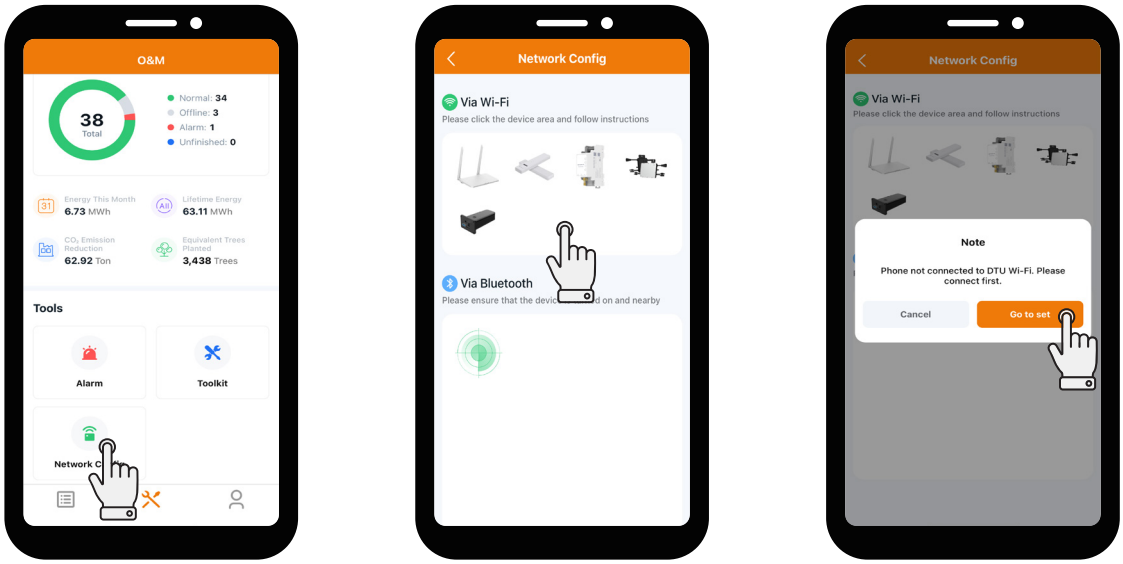
NOTE

- The DTS only supports 2.4 GHz router, and the IP of router cannot begin with 10.10.
- The Wi-Fi name and password should not contain special characters such as spaces.

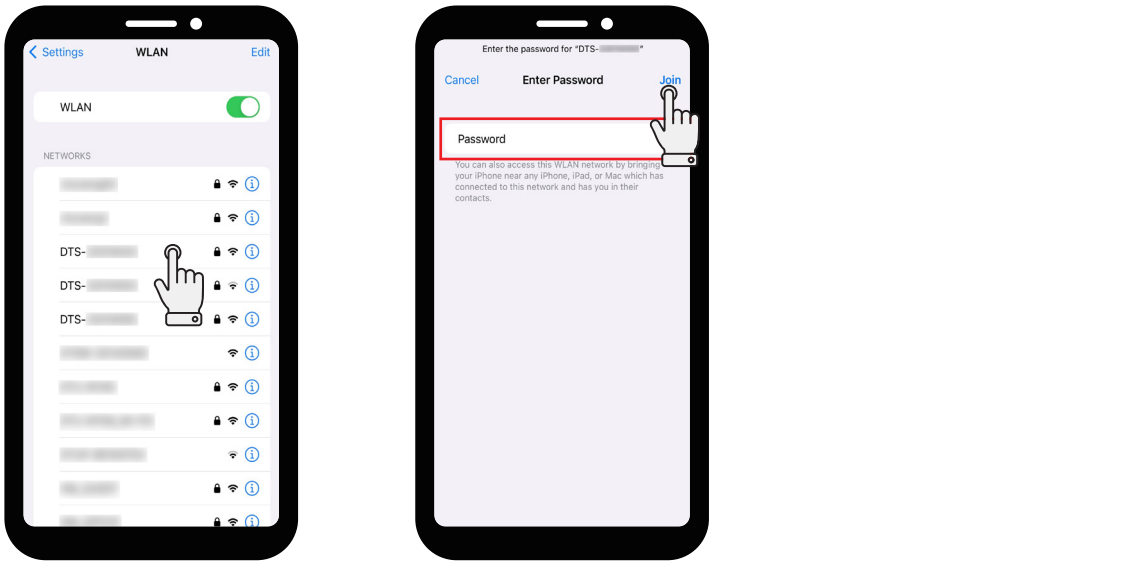
Step 1 Tap **O&M** > **Network Config**.

Step 2 Tap **Via Wi-Fi** area.

Step 3 Tap **Go to set**.



Step 4 Select the wireless network of DTS and enter the default password **ESS12345**. The DTS network name consists of “DTS” and the last eight digits of the product serial number.

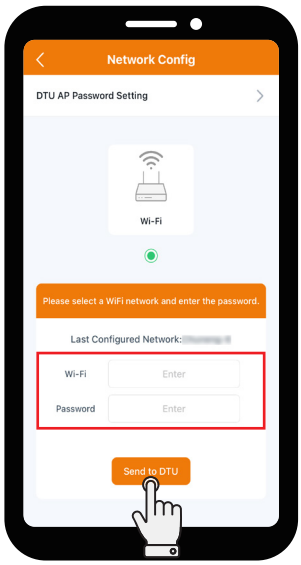


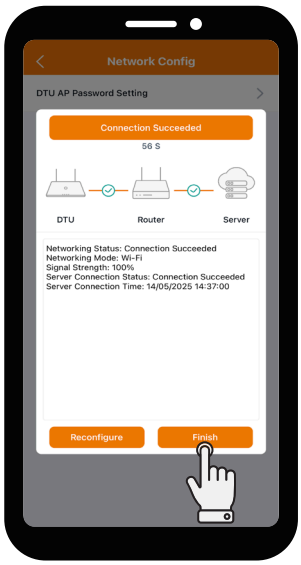
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Step 5 Return to the App (will automatically take you to the network configuration interface).

Step 6 Enter the Wi-Fi name and password of the nearby stable wireless network, and tap **Send to DTU**.

Step 7 Wait until “Connection Succeeded” appears and tap **Finish**.

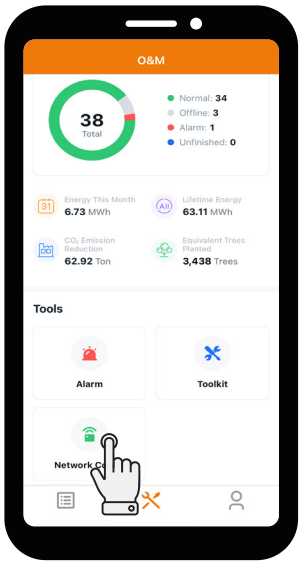


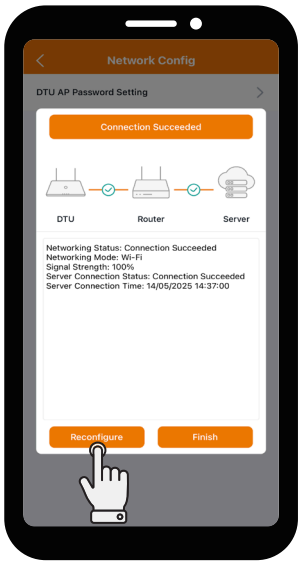


5.2.2 Change the Password of the DTS

Step 1 Tap **O&M** > **Network Config**.

Step 2 Tap **Reconfigure**.

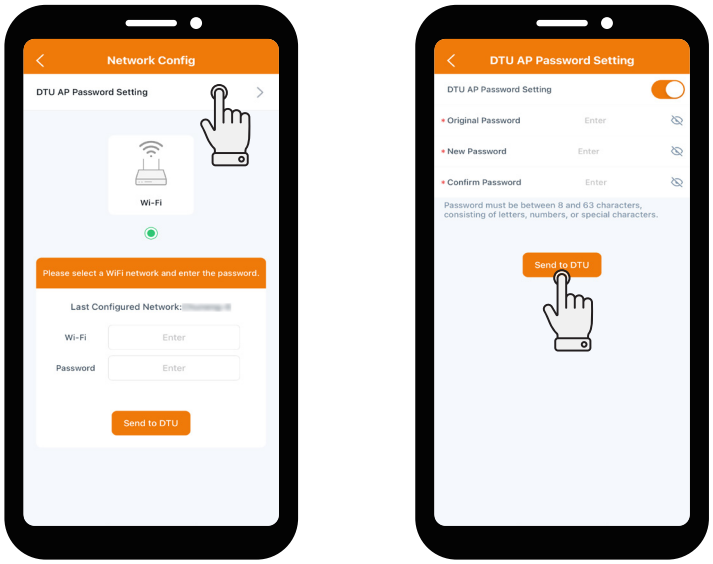




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Step 3 Tap **DTU AP Password Setting**.

Step 4 Enter the original password and new password, confirm the new one, and tap **Send to DTU**.



5.2.3 Reset the Password of the DTS

When the DTS is powered on, long press the “SET” button for 5-10 seconds. The DTS password will be reset to the default password **ESS12345**.



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5.3 Toolkit

By tapping **Toolkit**, you can establish a local connection via Wi-Fi or Bluetooth to operate and maintain a residential energy storage system. After entering the Toolkit interface, you can view cloud communication information, view and manage devices, set relevant parameters, and perform other operations.

NOTE

The parameters displayed on the App will differ based on different inverter models.

5.3.1 Connect to the DTS

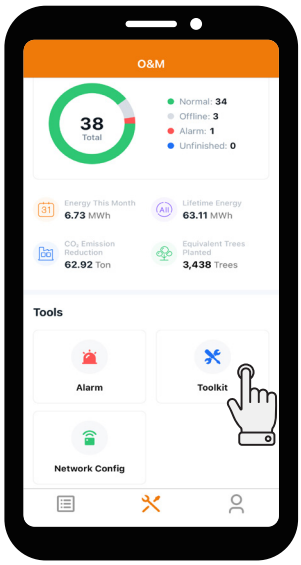
NOTE

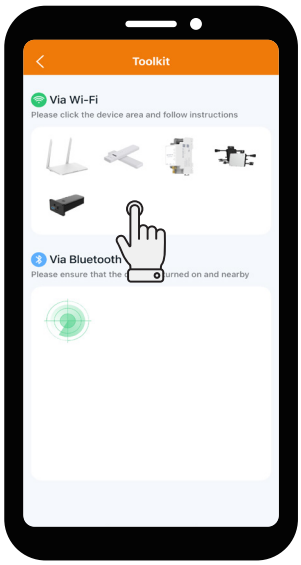
The steps about the password are only required for the first connection.

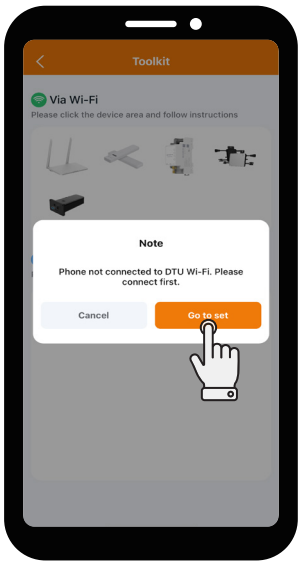
Step 1 Tap **O&M** > **Toolkit**.

Step 2 Tap **Via Wi-Fi** area.

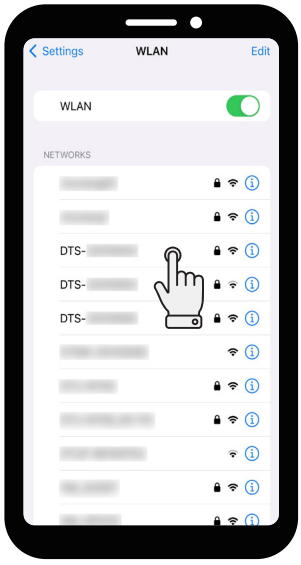
Step 3 Tap **Go to set**.

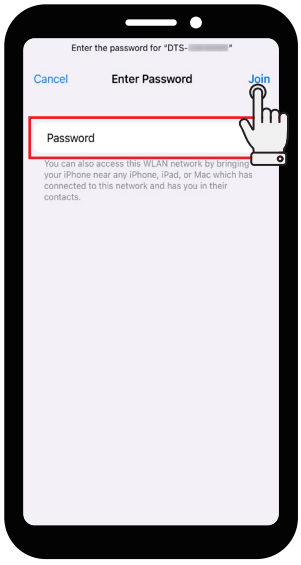






Step 4 Select the wireless network of DTS and enter the default password **ESS12345**. The DTS network name consists of "DTS" and the last eight digits of the product serial number.



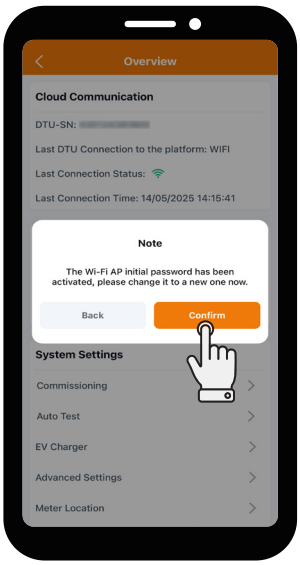


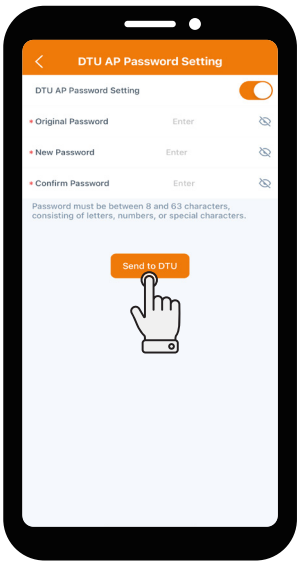
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Step 5 Return to the App.

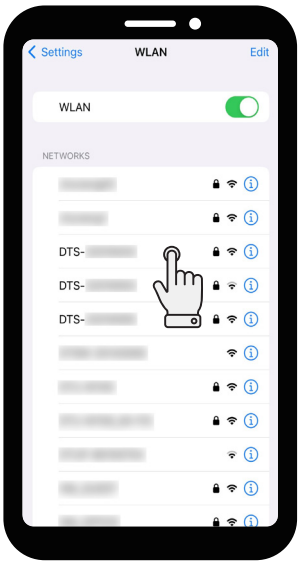
Step 6 Tap **Confirm** to change the default password to a new one.

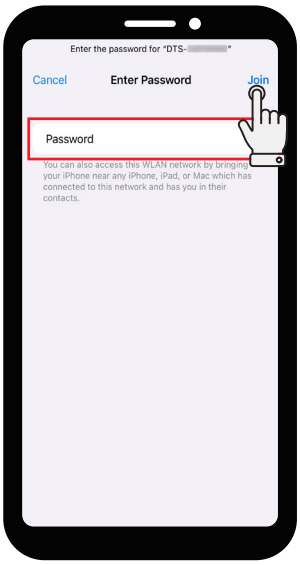
Step 7 Enter the original password and new password, confirm the new one, and tap **Send to DTU**.



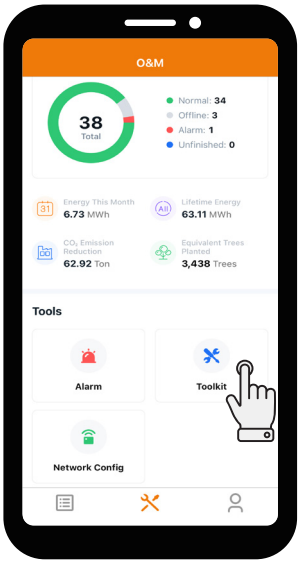


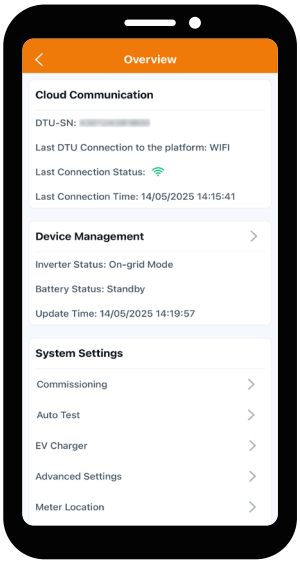
Step 8 Select the wireless network of DTS and enter the new password.





Step 9 Return to the App, and tap **Toolkit** again.





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5.3.2 View Devices

Step 1 Tap **O&M** > **Toolkit**.

Step 2 Tap **Device Management**.

Step 3 Tap the target SN below **Inverter SN**.

Step 4 (Optional) Slide your finger up or down to view the real-time data of PV, Battery, Grid, Generator, etc.

Step 5 Tap **Device** to view the basic information of the inverter and the battery.

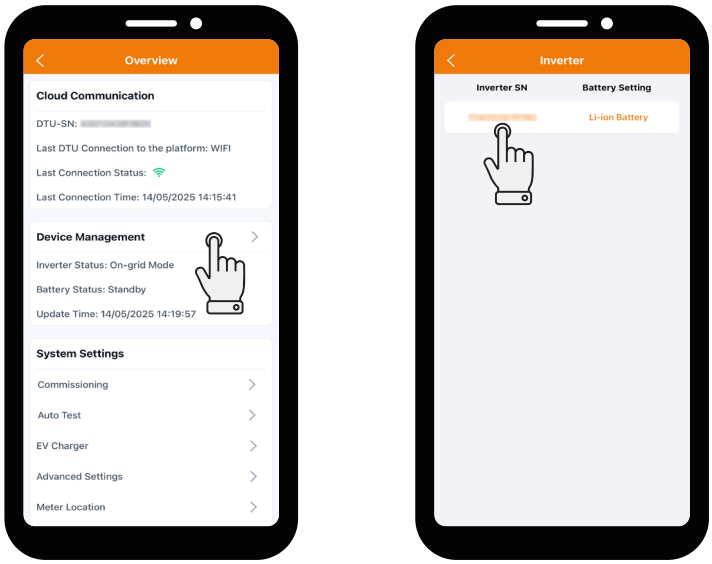


5.3.3 Control the Inverter

Step 1 Tap **O&M** > **Toolkit**.

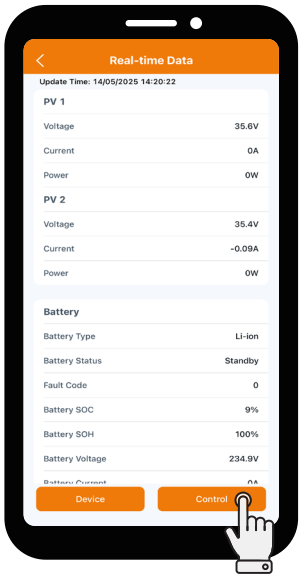
Step 2 Tap **Device Management**.

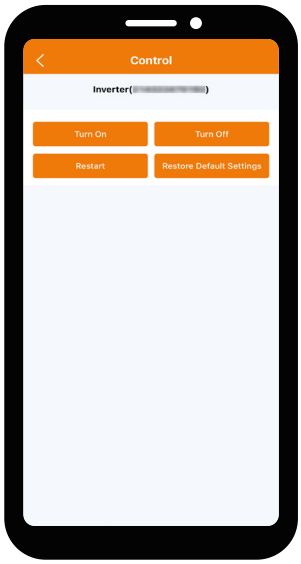
Step 3 Tap the target SN below **Inverter SN**.



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Step 4 Tap **Control** to turn on, turn off, or restart the inverter, or restore its default settings.





5.3.4 Select Battery Type

Step 1 Tap **O&M** > **Toolkit**.

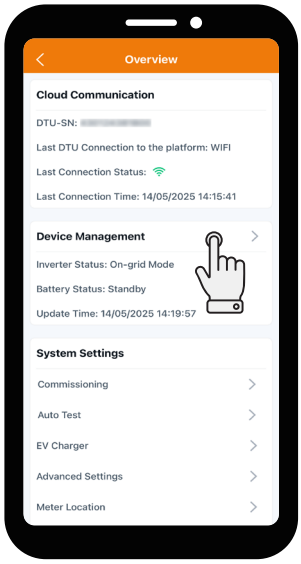
Step 2 Tap **Device Management**.

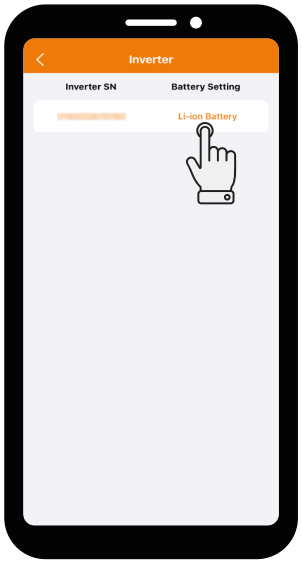
Step 3 Tap the target battery below **Battery Setting**.

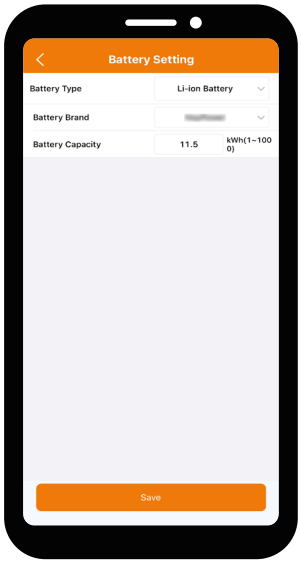
Step 4 Select battery type and set relevant parameters. (The default battery type is **No battery**.)

NOTE

- If Li-ion batteries are connected in parallel via the busbar, and the master battery communicates with the master inverter, enable **Multiple PCS**.
- You can also select battery type as instructed in *4.5.4 Manage Devices* and *5.3.5 Start Commissioning*.







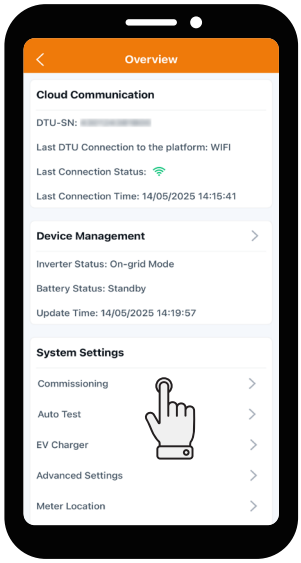
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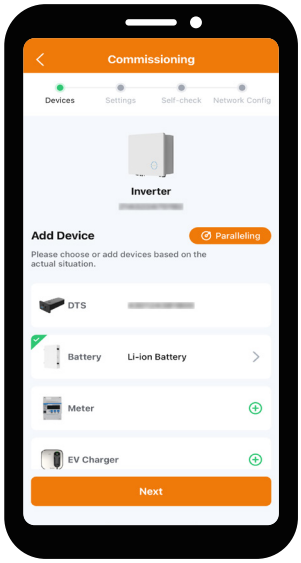
5.3.5 Start Commissioning

Commissioning is used to set and test a new residential energy storage system. It is a critical step to ensure that a new device and system can function properly according to the design specifications.

Step 1 Tap **O&M** > **Toolkit**.

Step 2 Tap **Commissioning**.

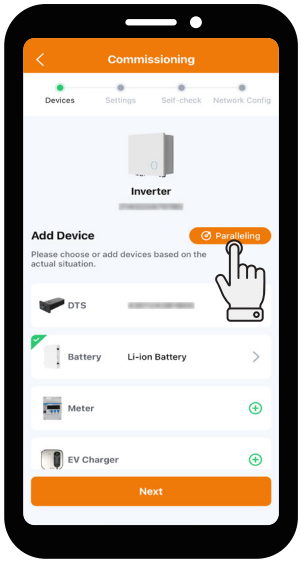




Step 3 Add devices

- If a parallel system is installed, tap **Paralleling**. All slave inverters will be automatically added.

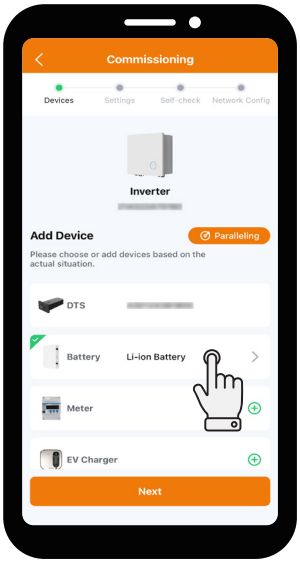
> **NOTE**
>
> - The DTS must be connected to the Master.
> - After the slaves are connected to the Master through a communication cable, they can communicate with the DTS.
> - A DTS can only communicate with up to 10 inverters.
> - For the firmware upgrade operation of the parallel system, please refer to *4.5.11 Upgrade the Firmware*.

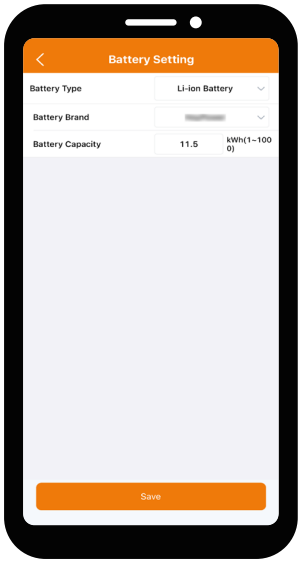


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- If batteries are connected to the inverter, tap **Battery** to set relevant parameters. InstaGroup batteries can be automatically identified. (The default battery type is **No battery**.)

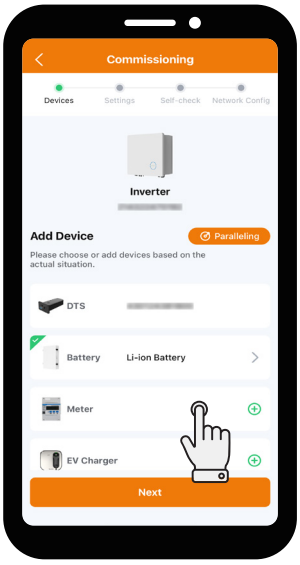
> **NOTE**
>
> If Li-ion batteries are connected in parallel via the busbar, and the master battery communicates with the master inverter, enable **Multiple PCS**.

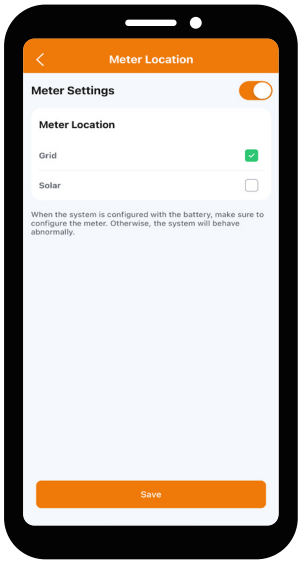




- Tap **Meter**, toggle on **Meter Settings,** and select the corresponding checkbox.

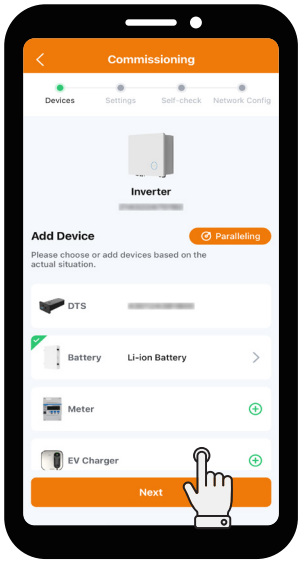
> **NOTE**
>
> If a PV inverter is connected to the GEN port, the checkbox on the right side of **Solar** should also be selected.

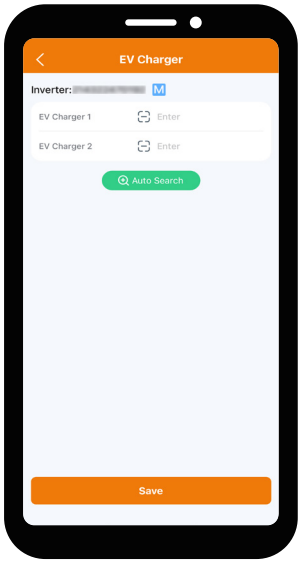




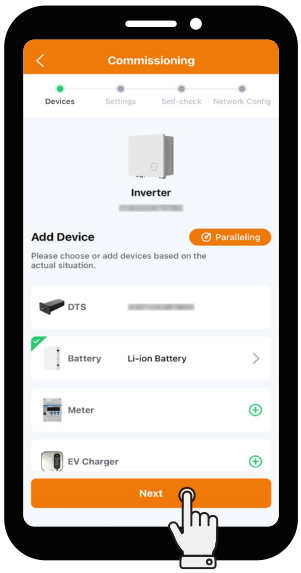
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- If an EV charger is connected, tap **EV Charger**. You can tap **Auto Search** or scan the QR code on the label to identify the serial number (SN).





- Tap **Next**.



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Step 4 Complete other settings

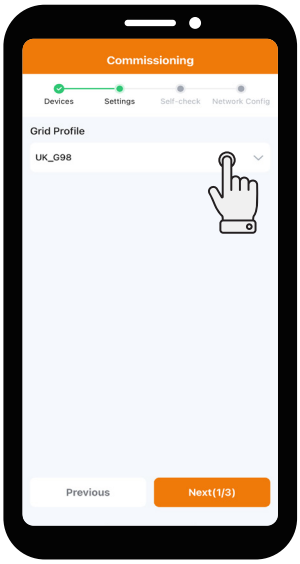
a. Select the grid profile in your region, and tap **Next**.

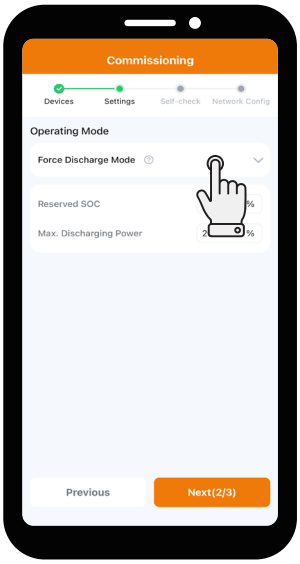
b. Select the working mode according to your actual needs, and tap **Next**. For details about working modes, refer to *4.5.6 Set Working Mode*.

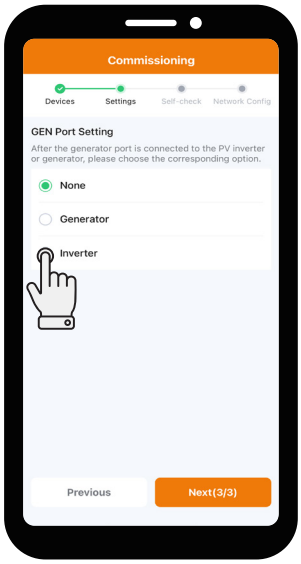
c. Select the corresponding option according to whether the device connected to the GEN port is **Generator** or **Inverter**, and tap **Next**. (The default option is **None**.)

NOTE

If a generator is connected the GEN port, set generator parameters as instructed in *5.3.6 Set System Parameters*. After setting the parameters, tap *Dry Contact Settings > Generator Control* to set its mode and corresponding parameters.







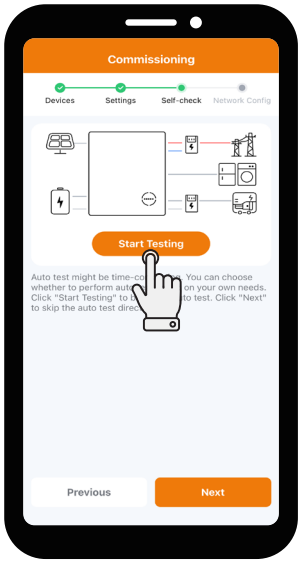
Step 5 Complete the self-check

You can complete the self-check or skip the self-check as required.

- If you want to complete the self-check, tap **Start Testing**.

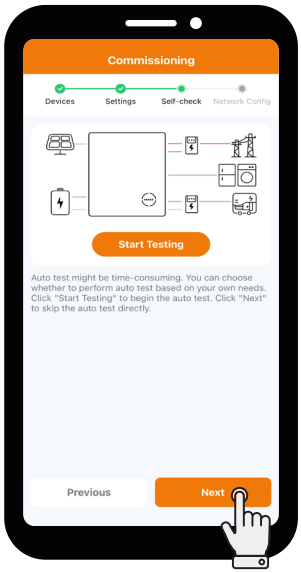
NOTE

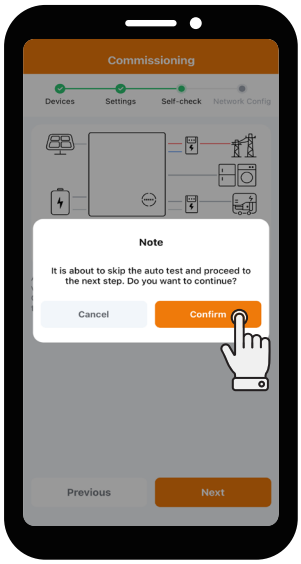
Before this operation, make sure that all cables including DC cables, AC cables, and communication cables are properly connected, and all AC and DC switches are turned on.



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- If you want to skip this step, tap **Next** > **Confirm**.





Step 6 Configure the network

You can follow the instructions to configure the network or skip this step.

NOTE

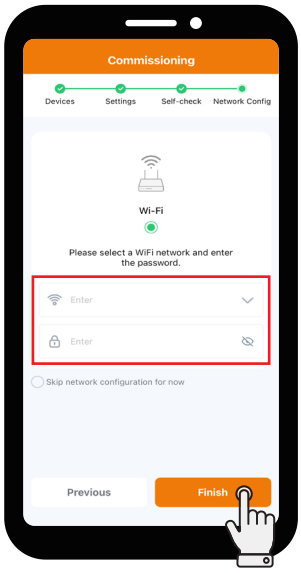
- **Go to Settings** will navigate to the new plant creation interface (haven't created a plant before the commissioning) or the homepage of the plant (have created a plant before the commissioning).
- After completing the commissioning, if you want to tap **Go to Settings**, first disconnect from the DTU Wi-Fi.

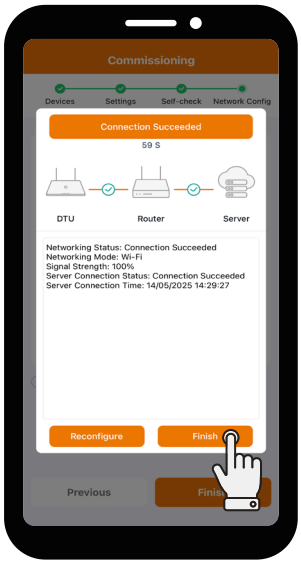
- If you want to configure the network:

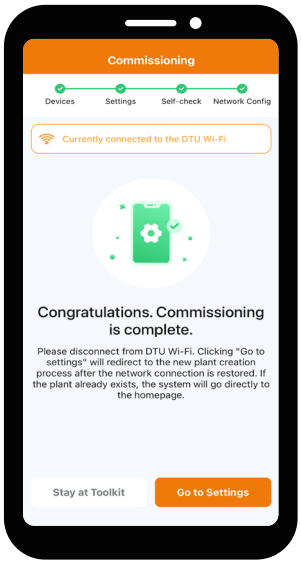
  a. Enter the Wi-Fi name and password, and tap **Finish**.

  b. Tap **Finish** after the network is successfully connected.

  c. Tap **Stay at Toolkit** or **Go to Settings**.





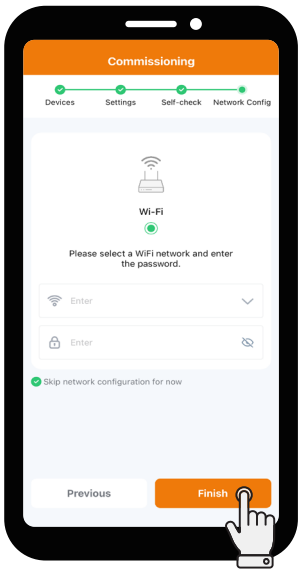


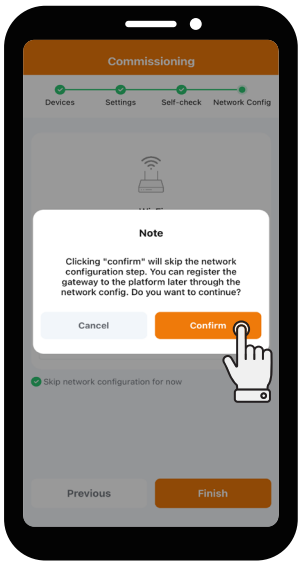
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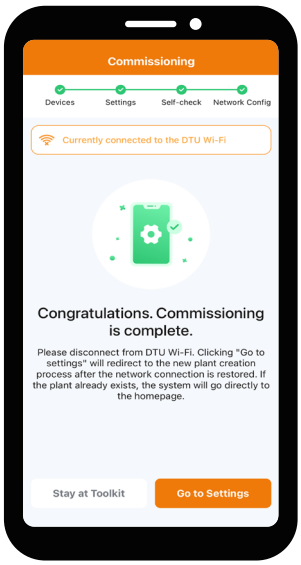
- If you want to skip this step:

  a. Tap **Skip network configuration for now** > **Finish** > **Confirm**.

  b. Tap **Stay at Toolkit** or **Go to Settings**.







5.3.6 Set System Parameters

NOTE

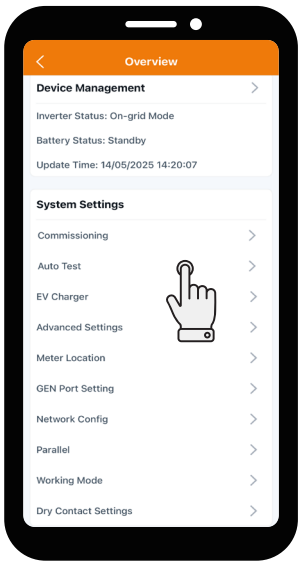
- This section includes some operations described in *5.3.5 Start Commissioning*.
- You can set more parameters about the system and devices here.
- You can perform the corresponding operations as required.

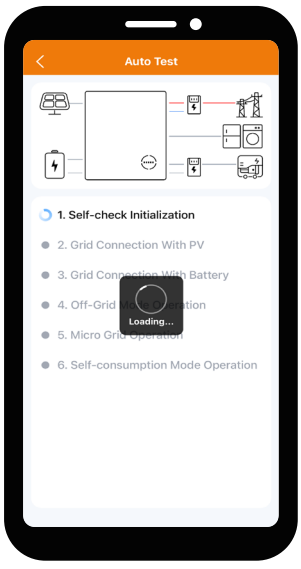
Tap **O&M** > **Toolkit** to set system parameters.

★ Auto Test

You can tap **Auto Test** to complete the system self-check.

- If there is any problem, solve it according to the prompts, and tap **Auto Test** again to confirm that the problem is completely solved.
- If there is no problem, this interface will display green checkmarks on the right of these items.





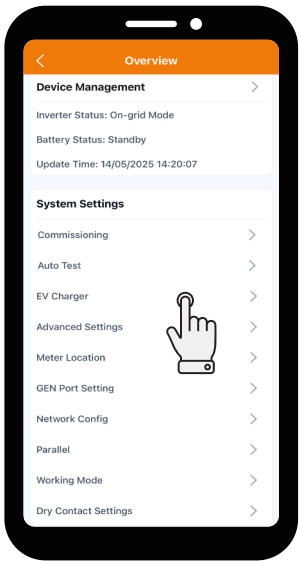
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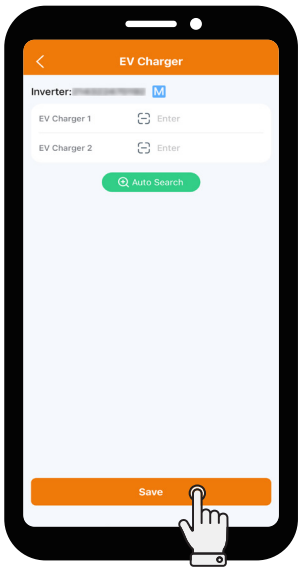
★ EV Charger

Step 1 Tap **EV Charger** if an EV charger is connected.

Step 2 Tap ⊕ **Auto Search** or scan the QR code on the label to identify the serial number (SN).

Step 3 Tap **Save**.

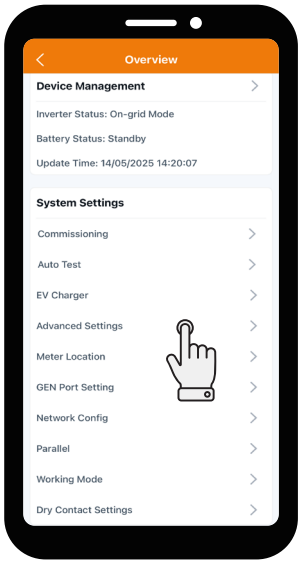


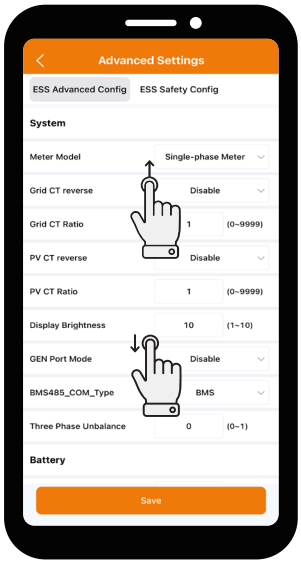


★ Advanced Settings

- Tap **Advanced Settings** to set parameters of System, Battery, PV, Emergency Power Supply (EMS), and Generator.

> **NOTE**
>
> For detailed parameter explanations, refer to *4.5.8 Set Advanced Parameters*.

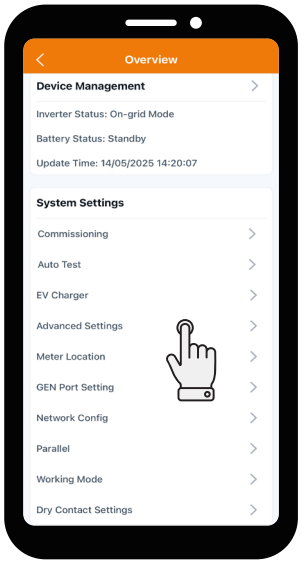


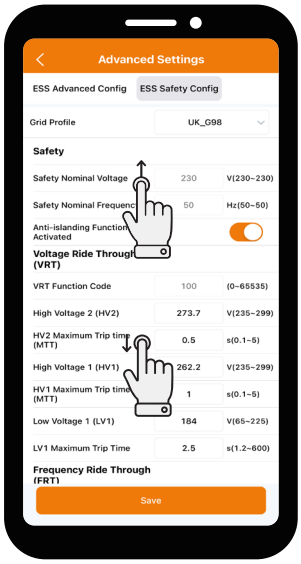


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- Tap **Advanced Settings** > **ESS Safety Config** to configure the grid profile, set export management parameters, or set other parameters.

> **NOTE**
>
> - You can also perform these operations as instructed in *4.5.9 Configure Grid Profile* and *4.5.10 Set Export Management Parameters*.
> - The installer account and end-user account are classified by authority management, and the installer can modify grid protection and power quality response mode parameters.





★ Meter Location

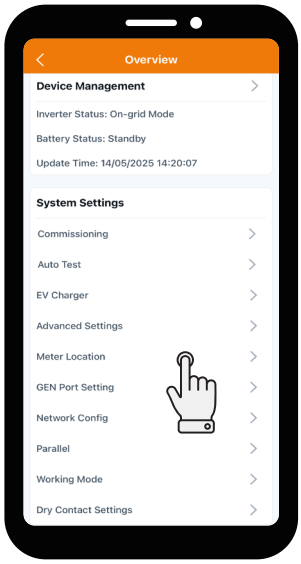
Step 1 Tap **Meter Location**.

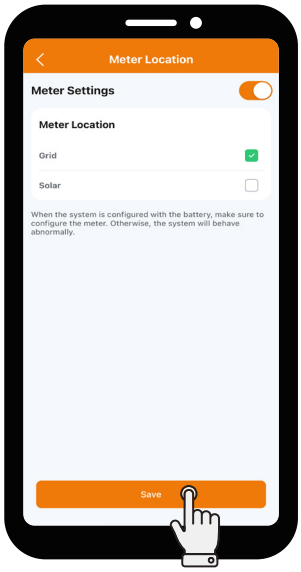
Step 2 Toggle on **Meter Settings**.

Step 3 Select the corresponding checkbox.

Step 4 Tap **Save**.

> **NOTE**
>
> If a PV inverter is connected to the GEN port, the checkbox on the right side of **Solar** should also be selected.





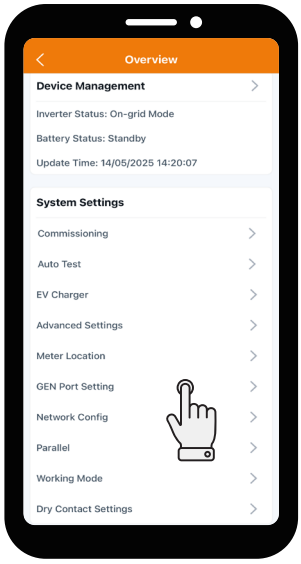
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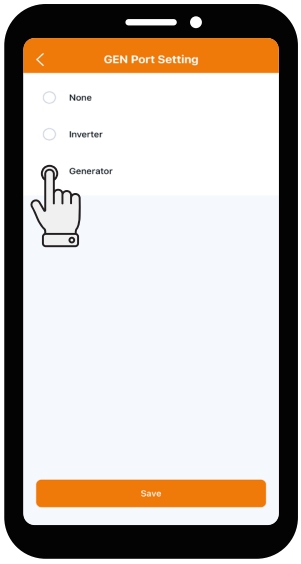
★ GEN Port Setting

Step 1 Tap **GEN Port Setting**.

Step 2 Select the corresponding option according to whether the device connected to the GEN port is **Inverter** or **Generator**. (The default option is **None**.)

Step 3 Tap **Save**.





ⓘ NOTE

If a generator is connected to the GEN port, set generator parameters as instructed in ***Advanced Settings***. After setting the parameters, tap ***Dry Contact Settings > Generator Control*** to set its mode and corresponding parameters.

★ Network Configuration

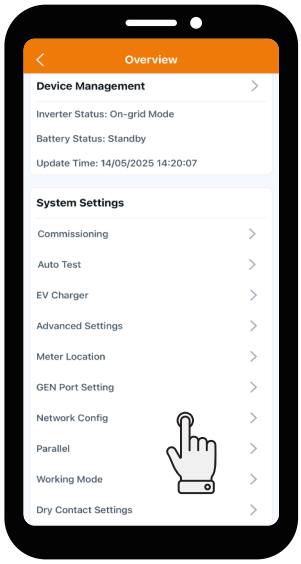
Step 1 Tap **Network Config**.

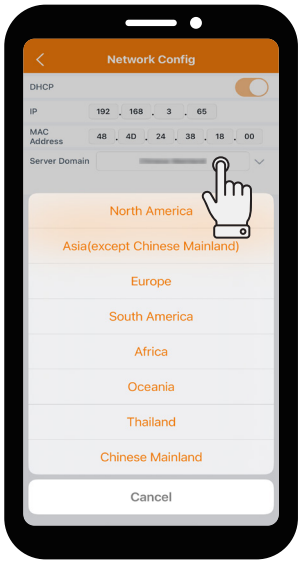
Step 2 Select the server domain and change other settings.

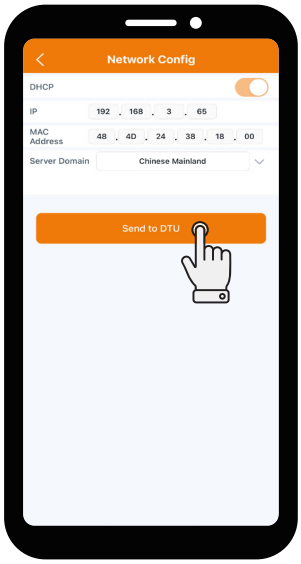
Step 3 Tap **Send to DTU**.

ⓘ NOTE

- The DHCP is enabled by default. The DTS can automatically obtain the router's IP address and connect to the router.
- If you want to manually configure the IP address, first disable the DHCP.







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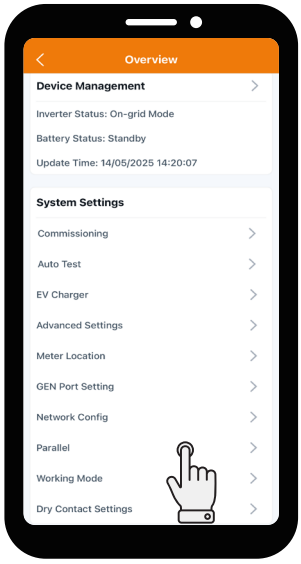
★ Parallel

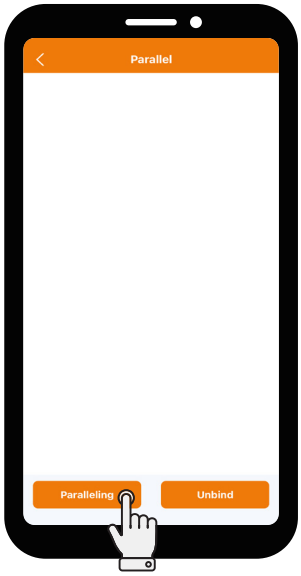
Step 1 Tap **Parallel** if a parallel system is installed.

Step 2 Tap **Paralleling** in the lower left corner.

NOTE

- The DTS must be connected to the Master.
- After the slaves are connected to the Master through a communication cable, they can communicate with the DTS.
- A DTS can only communicate with up to 10 inverters.
- For the firmware upgrade operation of the parallel system, please refer to *4.5.11 Upgrade the Firmware*.
- If you want to change the Master, tap **unbind**.





★ Working Mode

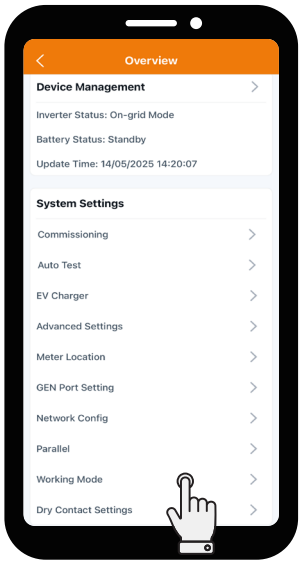
NOTE

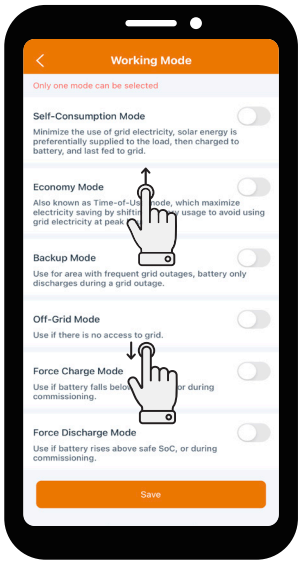
- Only one mode can be selected at a time.
- For the detailed introduction and another method to set the working mode, refer to *4.5.6 Set Working Mode*.

Step 1 Tap **Working Mode**.

Step 2 Select one mode and set relevant parameters.

Step 3 Tap **Save**.





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★ Dry Contact Settings

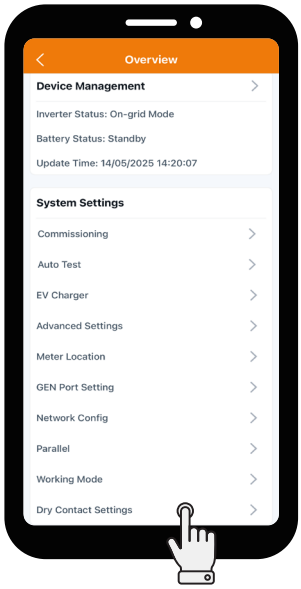
NOTE

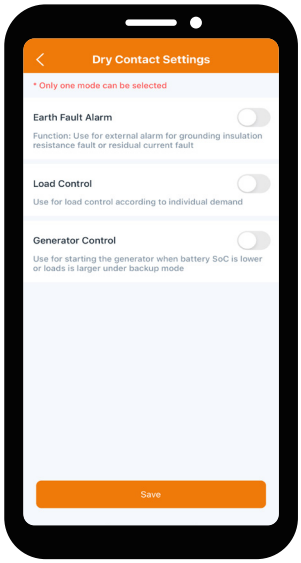
- Only one mode can be selected at a time.
- For the detailed introduction and another method to set dry contact function, refer to *4.5.7 Set Dry Contact Function*.

Step 1 Tap **Dry Contact Settings**.

Step 2 Select one mode and set relevant parameters.

Step 3 Tap **Save**.

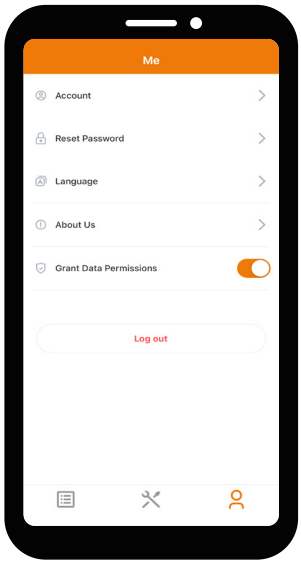




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6 Me

in the lower right corner represents the **Me** interface. You can view your account, change your password, set your preferences, or perform other operations.



6.1 Manage Your Account

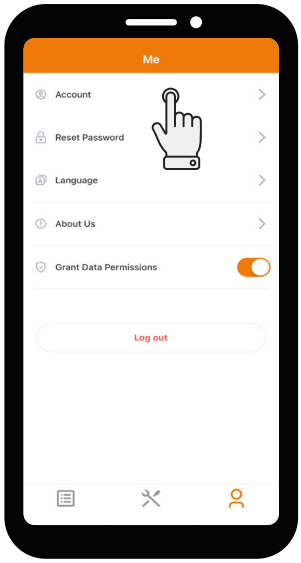
Step 1 Tap **Me** in the lower right corner.

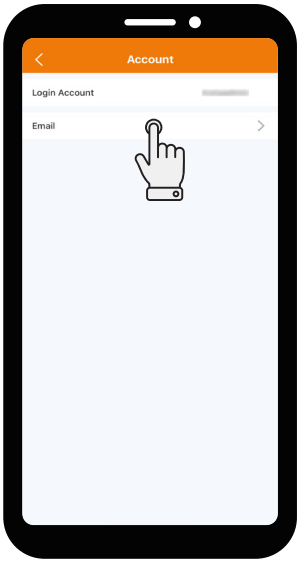
Step 2 Tap **Account** to view your account.

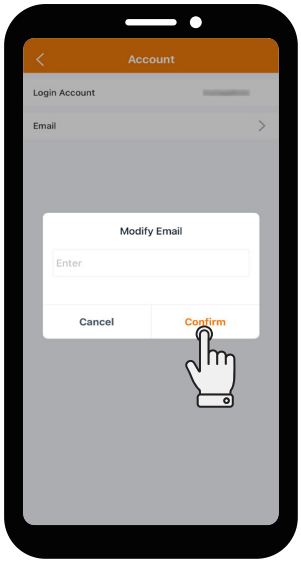
Step 3 (Optional) Tap **Email**, enter your email address, and tap **Confirm**.

NOTE

- This email address can help you reset the password when you forget it.
- You can use this email address to log in to the InstaGen Cloud.







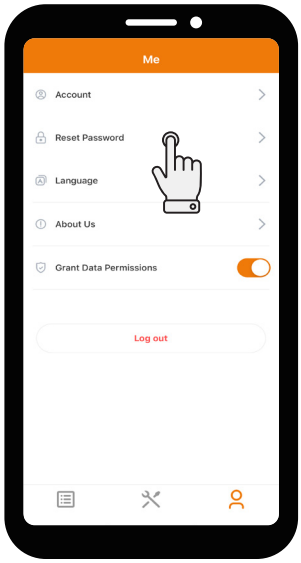
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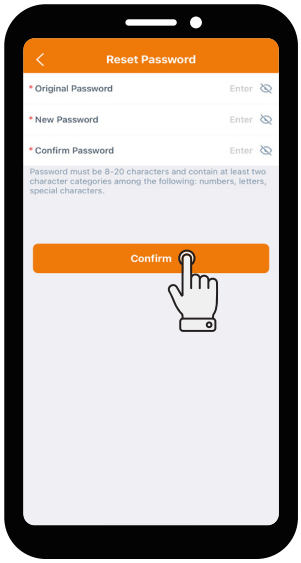
6.2 Change the Password

Step 1 Tap **Me** in the lower right corner.

Step 2 Tap **Reset Password**.

Step 3 Enter the original password and new password, confirm the new one, and tap **Confirm**.

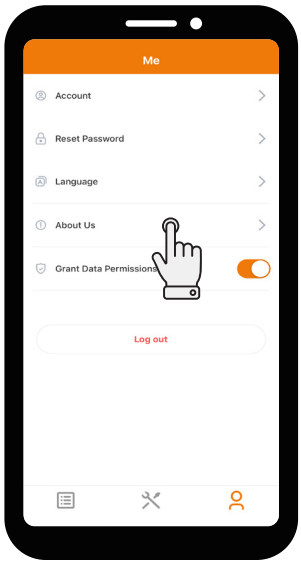


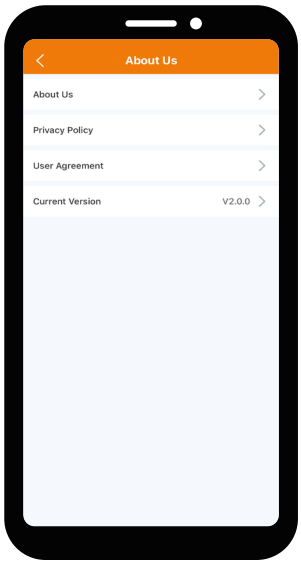


6.3 Get More Information

Step 1 Tap **Me** in the lower right corner.

Step 2 Tap **About Us** to view InstaGroup basic information, privacy policy, user agreement, and current version.



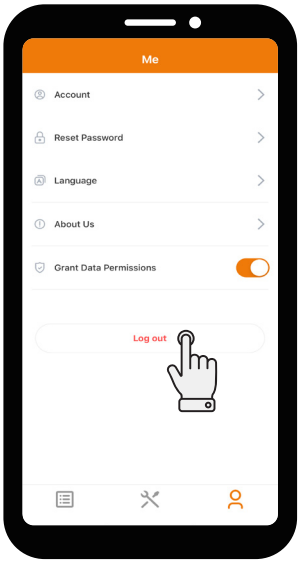


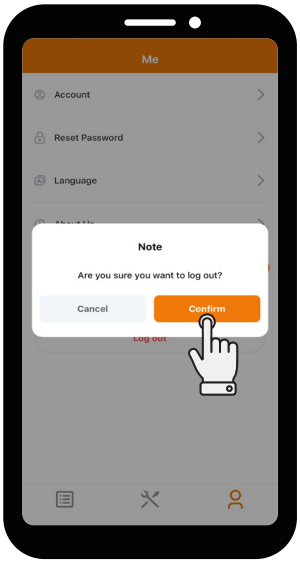
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6.4 Log out

Step 1 Tap **Me** in the lower right corner.

Step 2 Tap **Log out** > **Confirm** if you want to log out or switch to another account.





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7 Appendix: Role Instruction

7.1 Role Structure

Each level in the hierarchical structure has specific permissions to ensure a secure and tailored experience within the InstaGen Cloud system.

Role	Description
Distributor/Dealer	• New distributors/dealers: Send an email to InstaGroup for account creation. • Existing distributors/dealers: Add an organization user. (For details, refer to ***InstaGen Cloud User Manual (Web)***).
Installer	• New installers: Contact the distributor for account creation. • Existing installers: Add an organization user. (For details, refer to ***InstaGen Cloud User Manual (Web)***.
End-user	Refers to the owner. Contact the installer for account creation.

7.2 Role Permission

The operation permissions of each role on the App are listed as follows.

Operation Permission	Distributor/Dealer	Installer	End-user
Create Distributor/Dealer Accounts			
Create Installer Accounts			
Create End-user/Owner Accounts	●	●	
Create Plants	●	●	
Edit Plant Basic Information	●	●	
Remotely Control Devices	●	●	
View a Plant	●	●	●
Set Working Mode	●	●	●
Set Dry Contact Function	●	●	●
Configure the Network	●	●	●

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