PYTES

Battery Cloud

User Manual

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This manual is suitable for the Pytes batteries with WiFi function, either through external WiFi Dongle LSW-5, or built-in WiFi Module.

Applicable Battery	WiFi Dongle
V5 Series	LSW-5
V10	
Pi LV1	Built-in WiFi Module.
V15	
HV48100	

The battery cloud supports both APP on smart phone and PC/Laptop.

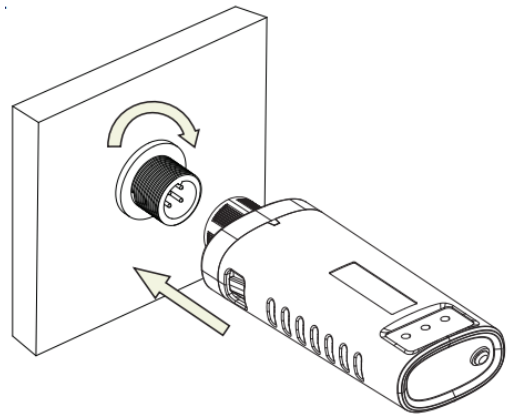
Follow the steps below to complete WiFi Setting for remotely monitoring your battery data.

1. Install LSW-5

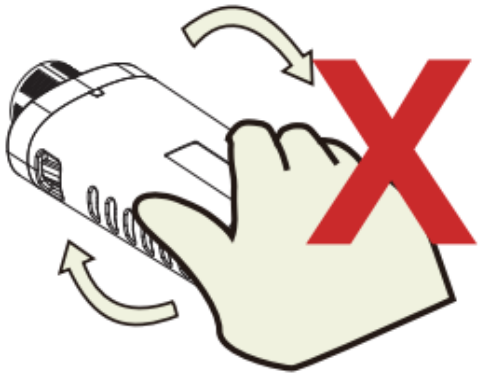
*** Skip this, if battery comes with built-in WiFi.**

1.1. Assemble

Insert LSW-5 to battery communication interface as below.



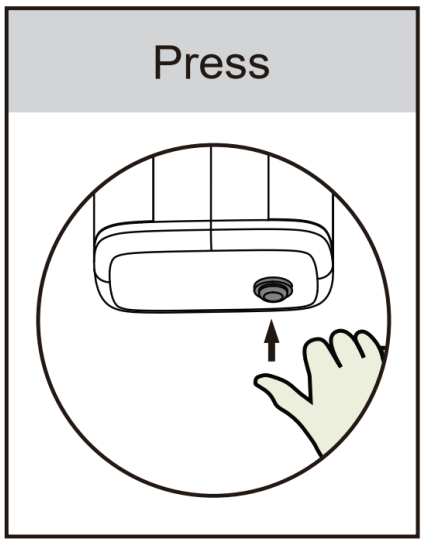
Warning: When Assemble or Disassemble the Dongle, Rotating the dongle is prohibited.



Warning: Do NOT Remove Waterproof Plug.

1.2. Indicator Lights

Lights	Implication	Status Description(All lights are single green lights.)
NET	Communication with router	1.Light off: Connection to the router failed. 2.On 1s/Off 1s(Slow flash): Connection to the router succeeded. 3.Light keeps on: Connection to the server succeeded. 4.On 100ms/Off 100ms(Fast flash): Distributing network fast.
COM	Communication with battery	1.Light keeps on: Logger connected to the battery. 2.Light off: Connection to the battery failed. 3.On 1s/Off 1s(Slow flash): Communicating with battery.
READY	Logger running status	1.Light off: Running abnormally. 2.On 1s/Off 1s (Slow flash): Running normally. 3.On 100ms/Off 100ms(Fast flash): Restore factory settings



Key-press	**Status Description**	**Light Status**
Long press 5s then release	Rebooting the stick logger.	All lights are extinguished immediately.
Long press 10s then release	Resetting the stick logger.	1.All lights are extinguished after 4s. 2.READY light flashes fast for 100ms.

1.3. Trouble Shooting

Dongle Indicators			Fault Description	Fault Cause	Solution
NET	COM	READY			
Any state	OFF	Slow flash	Battery Communication abnormally	1.Connection between dongle and battery loosen. 2.Battery doesn't match with dongle's comm. rate.	1.Check the connection between dongle and battery. Remove and install dongle again. 2.Check battery communication rate if it matches with dongle. 3.Long press Reset button for 5s to reboot dongle.
OFF	ON	Slow flash	Connection between dongle and router abnormal	1.Dongle does not have a network. 2.Router WiFi signal weak.	1.Check if the wireless network configured. 2.Enhance router WiFi signal strength.
Slow flash	ON	Slow flash	Dongle and router Connection normal, dongle and remote server connection abnormal.	1.Router networking abnormal. 2.Server point of dongle is modified. 3.Network limitation, server can't be connected.	1.Check if router has access to network. 2.Check router's setting, if connection is limited. 3.Contact customer service.
OFF	OFF	OFF	Power supply abnormal	1.Connection between dongle and battery loosen or abnormal. 2.Battery power insufficient. 3.Dongle abnormal.	1.Check the connection, remove the stick logger and install again. 2.Check battery output power. 3.Contact our customer service.
Fast flash	Any state	Any state	Networking status	Normal	1.Exit automatically after 2mins. 2.Long press Reset button for 5s, reboot Dongle. 3.Long press Reset button for 10s, restore factory settings.
Fast flash	Any state	Any state	Restore factory settings	Normal	1.Exit automatically after 1mins. 2.Long press Reset button for 5s, reboot dongle. 3.Long press Reset button for 10s, restore factory settings.

2. APP Setting and Guide

2.1. Pair to Smart Phone

Download SOLARMAN APP

Scan the QR code with smart phone.

Run SOLARMAN APP and click Register to create your account.

3. Account

3.1. Login & Registration

3.1.1. Registration

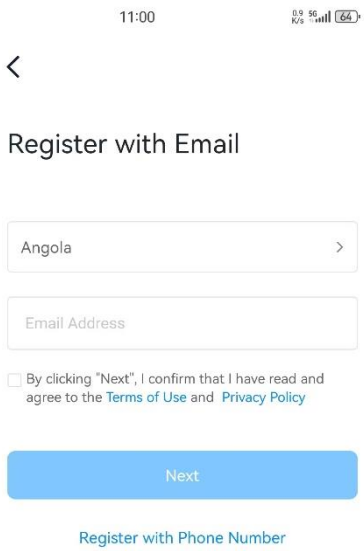
After entering SOLARMAN Smart App，please register at SOLARMAN Smart App to ensure the normal function.

Click **"Register"** to continue.

System supports E-mail or phone registration currently. Please follow:

1） Set login account. (Phone number and E-mail are supported.)

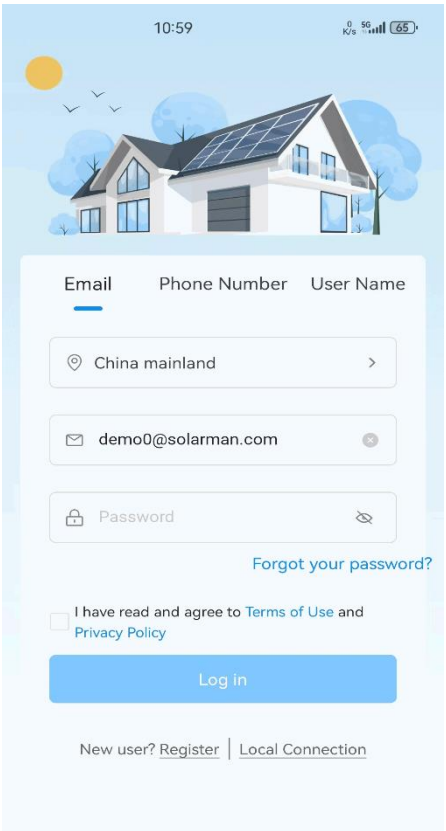
2） Set password. (Password length: 6-50 bits)



For security reasons, passwords with consecutive numbers (e.g. 123456) or same characters (e.g. AAAAA123) will be forbidden to use.

3.1.2. Login

If you have an account at SOLARMAN Smart Platform, you can login directly.



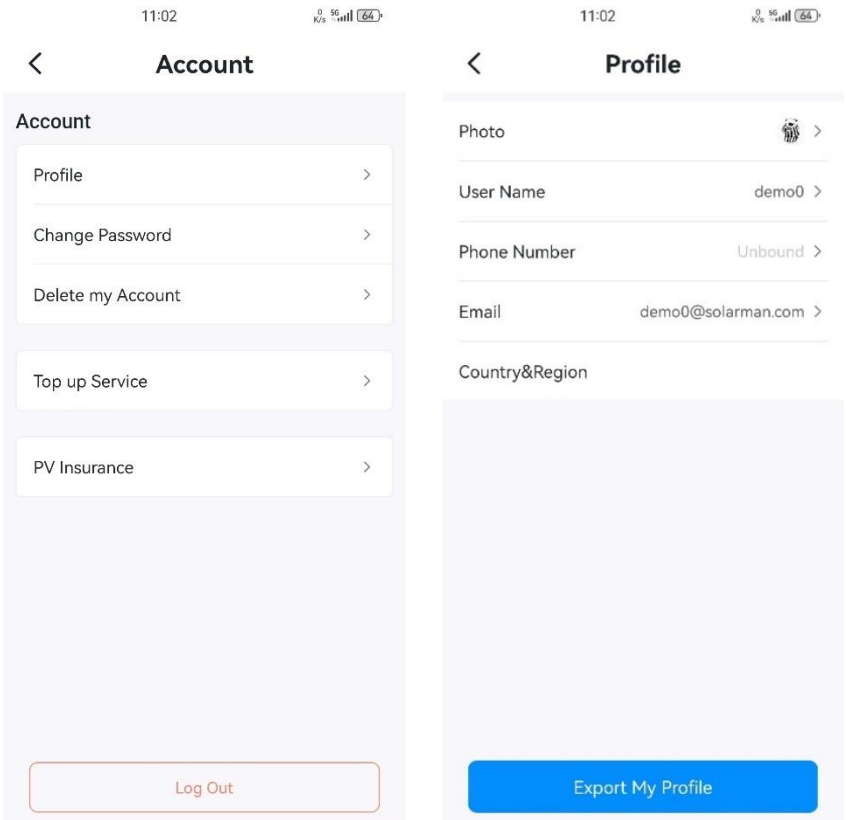
3.2. Account Binding

Go to 「**Menu**」-「**Account**」-「**Profile**」 to bind your account with your main contact way.

1. You can log in via your main contact way after the binding is done.
2. Some functions (e.g. send alerts to E-mail) are available for you after the binding is done.

Binding Methods:

1. Phone Number (China, America, Brazil, Nigeria, Netherlands and Saudi Arabia);
2. E-mail;
3. Username;



3.3. Password

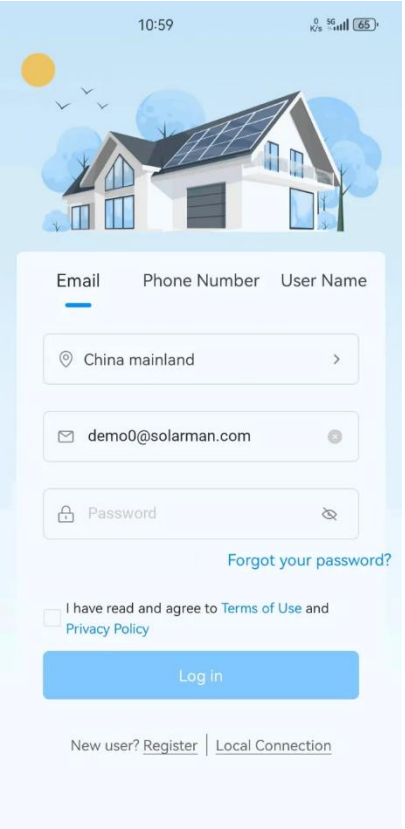
3.3.1. Forgot Password?

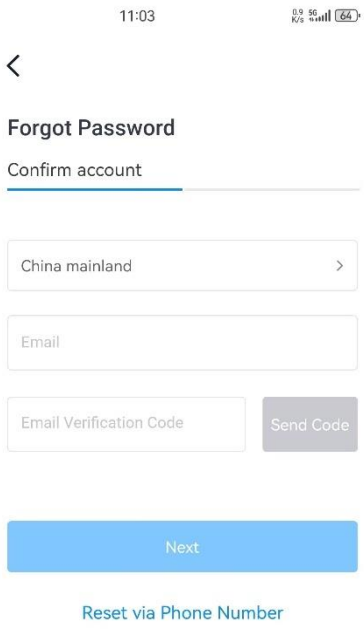
If your password is forgotten, please click ***"Forgot your password?"*** to reset your password.

1. If you try to find your password via your phone, please enter your phone number first, then click **"Send Code"**. System will send a verification code message to your phone. Please enter the right verification code and reset your password.
2. If you try to find your password via E-mail, please enter your E-mail address first, then click **"Send Code"**. System will send a verification code E-mail to your mailbox. Please enter the right verification code and reset your password.

Notice: If you encounter the following problems, please contact Customer Service.

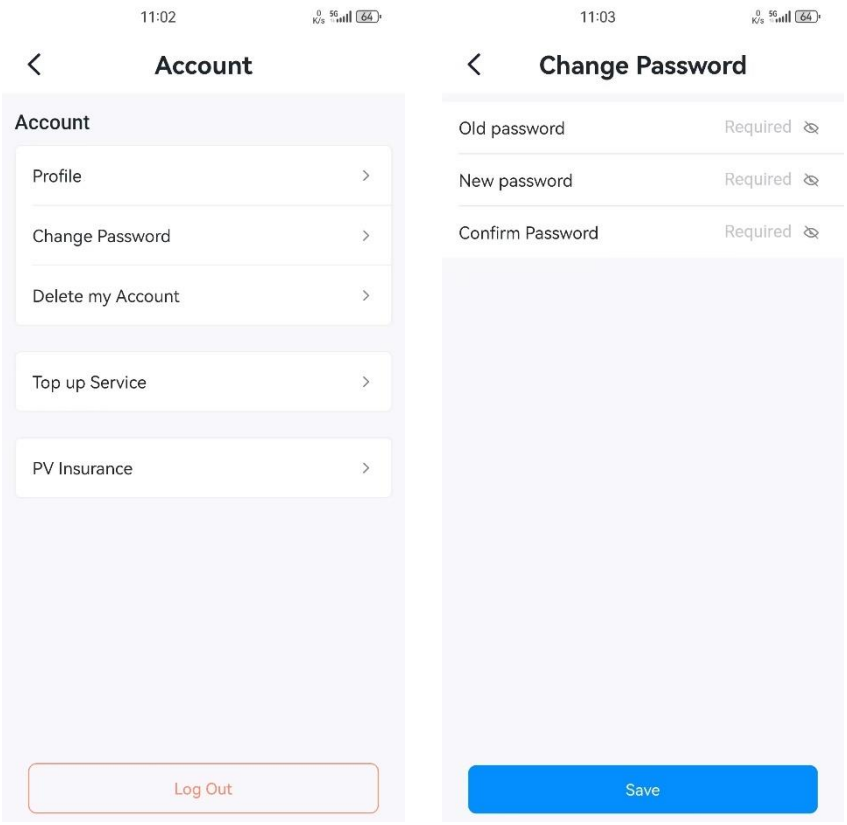
- Your phone or E-mail has been deactivated.





3.3.2. Password Modification

Go to 「**Menu**」-「**Account**」-「**Change Password**」to change your password.



3.3. Account Cancellation

Step 1: Go to「Account Cancellation」Page

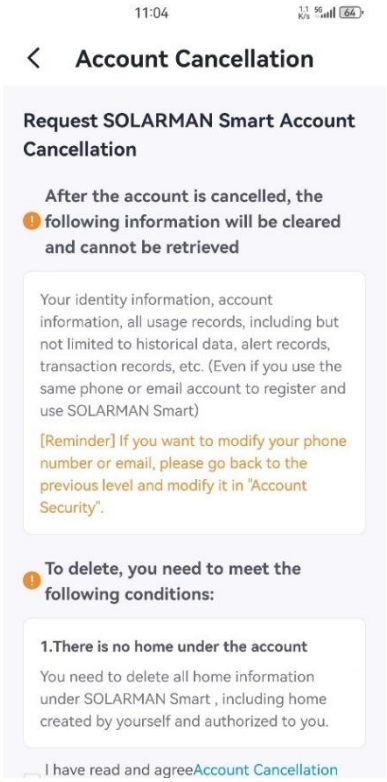
「Menu」-「Account」-「Delete my Account」

Step 2: Read Account Cancellation Reminder

Please read the following instructions carefully before you apply for cancellation of your account.

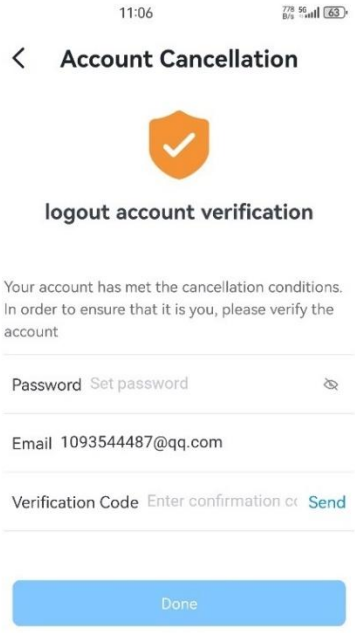
1. Please back up your data (e.g. Production Data, Grid-tied Data, SN and etc,) in advance to avoid unnecessary losses.
2. Your home data (e.g. Production Data, Grid-tied Data, SN and etc,) will be erased permanently after your account is cancelled, which is unable to recover.
3. Your personal data will be erased permanently after your account is cancelled, which is unable to recover.
4. The connections between the account and business units will be erased permanently after your account is cancelled, which is unable to recover. And the business unit will not be able to use this software.

5. All data will be erased permanently after your account is cancelled, which is unable to recover.
6. You can create a new account after this account is cancelled.



Click **"Confirm Cancellation"** to continue.

Notice: Account that has data on SOLARMAN Business can't be cancelled from SOLARMAN Smart.



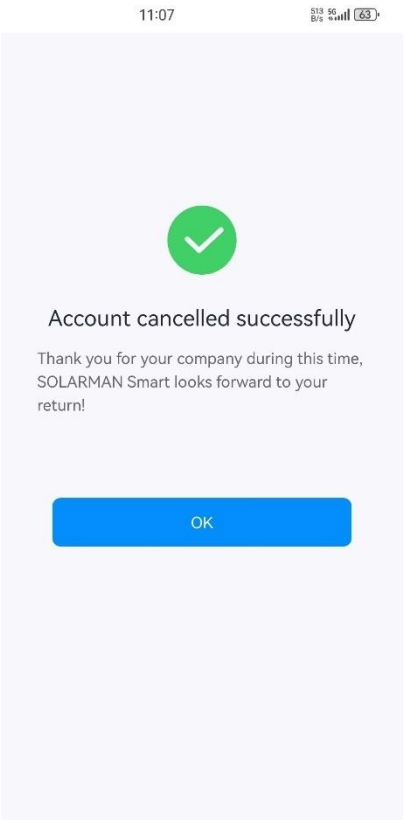
Step 3: Phone Number/E-mail Verification

If your account has bound to phone number or E-mail, phone number/E-mail verification will be required.

You can select either method for verification.

Step 4: Complete Account Cancellation

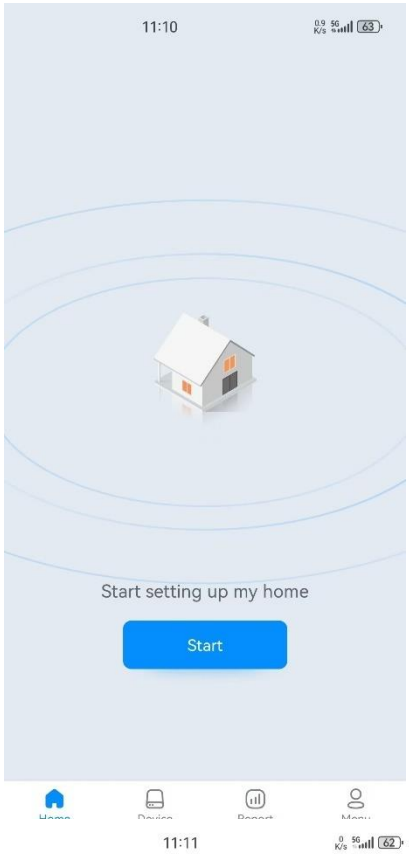
Click **"Done"**, Complete Account Cancellation



4. Home

4.1. Create a Home

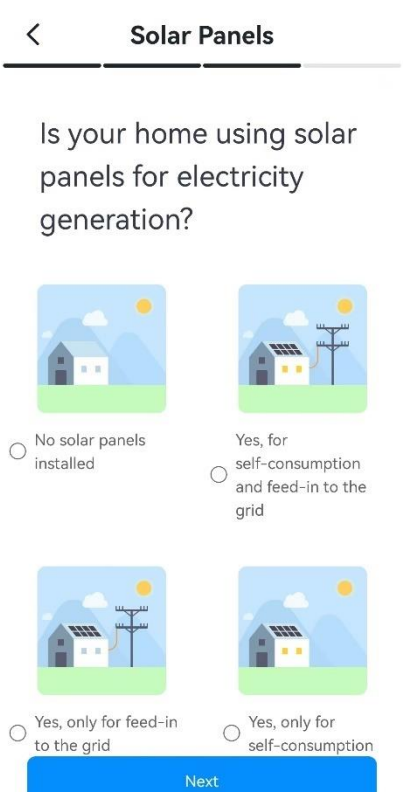
You can create your own home at "SOLARMAN Smart" to run a real-time monitoring. System will collect and calculate data from associated devices, which enables a full understanding of PV plant running status.



Step 1: Add Now

Click "Start" to create your home on SOLARMAN Smart.

Notice: If you have already created a home, you will not see the following page. And if you wish to create another home, please click "+" in the upper-right corner and select "Create a Plant".



Step 2: Enter Home Details

Please enter detailed home information according to your actual situation. System will create a unique home for you. In order to calculate plant data precisely, please enter

- Home Name,
- Home Type,
- Grid Type,
- Home Location,
- Other information.

You can click the right icon to switch between 2D Plan and Satellite Map.

Click **"Finish"** to complete the creation.
If there is no data in your plant, which means you have not added a device in your plant.

4.2. Add a Logger

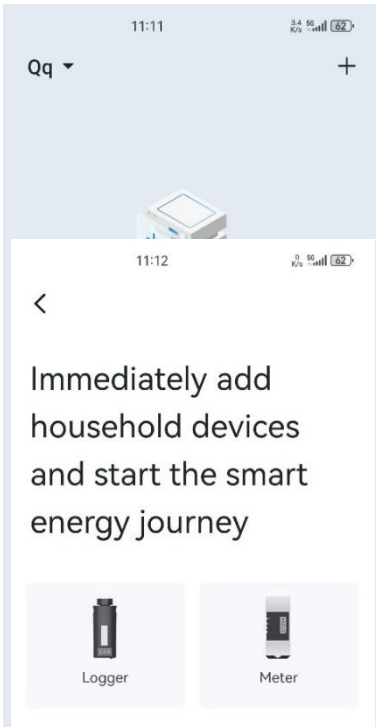
After the home is created, you can add a logger. Logger can collect running data from PV devices and upload to server, which enables a full understanding of PV plant running status and revenue information. Furthermore, SOLARMAN Smart will determine whether the plant is running normally, which avoid property losses caused by device failure and other reasons.

Step 1: Select a Home

In case you have various power homes, which might cause data corruption, it is recommended to select a home first before adding a logger.

Ways to add a logger :

1. Go to "Home" , click "+" in the upper-right corner, select "Add a Logger", then「Select a Home」according to your actual situation.



2. Go to「**Device**」 , click **"Start"** to add a logger to the target plant.

Step 2: Enter Logger SN

Users can enter logger SN manually or click icon in the right to scan SN.
SN can be found on the product box. If the product box has been lost, you can find SN on product body.

Step 3: Select Authorization Mode

When you add a logger, it is required to select authorization mode. System will add a device to your plant according to your authorization mode.

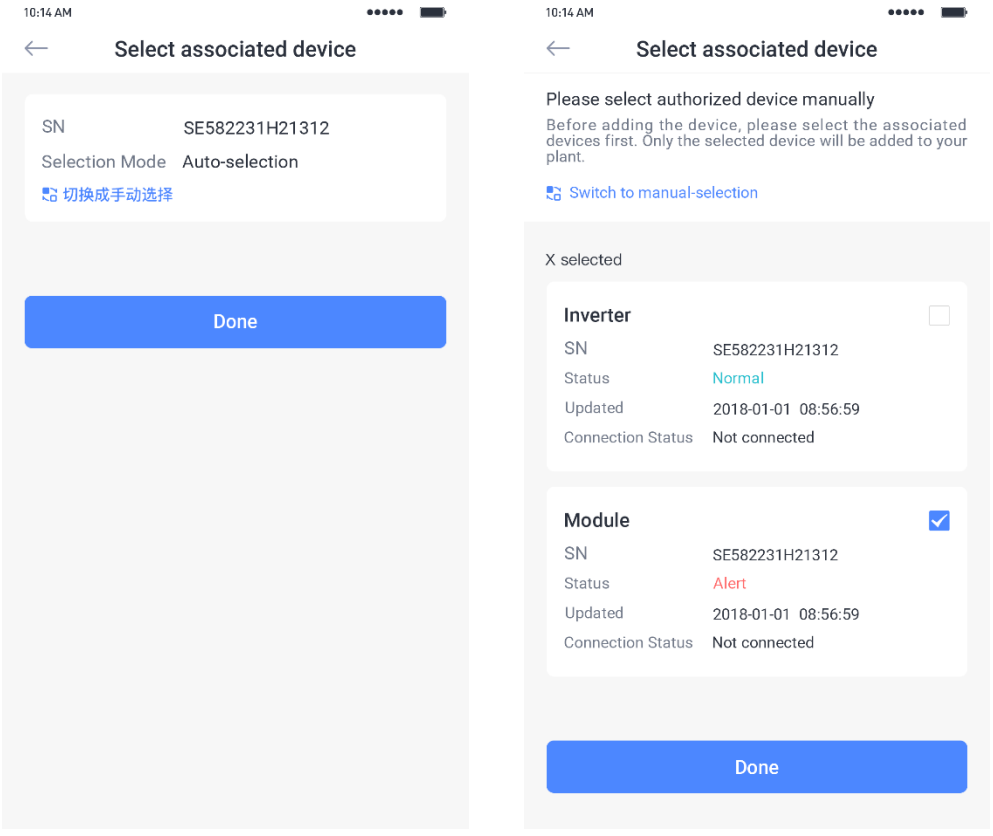
1. Select authorized device automatically

Default authorization mode: Select authorized device automatically. If you select this mode, devices connected to logger will be added to the plant automatically.

2.Select authorized device manually

If you select authorized device manually, it is required to select the device connected to logger first, then add the target devices to the plant. If the logger does not have normal networking or devices have no connection with the logger at this period, you can go to 「**Device Details**」 and add device manually when it runs normally.

Notice: Once the device has been added to the plant, authorization mode cannot be changed. If you want to change the authorization mode, please delete the logger first and add to the plant again.



4.3. Network Settings

If the logger is equipped with a WiFi module, it is required to operate networking configuration to ensure normal communication.

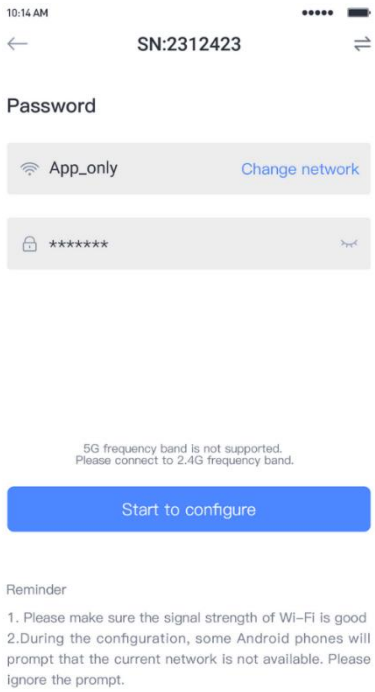
Go to「**Device List**」and check if there is **"Networking Configuration"** button. If not, it means networking configuration is not required.

4.3.1. Networking Process

Please use 2.4G network for configuration. 5G network is not supported.

Step 1: Confirm Wi-Fi Info

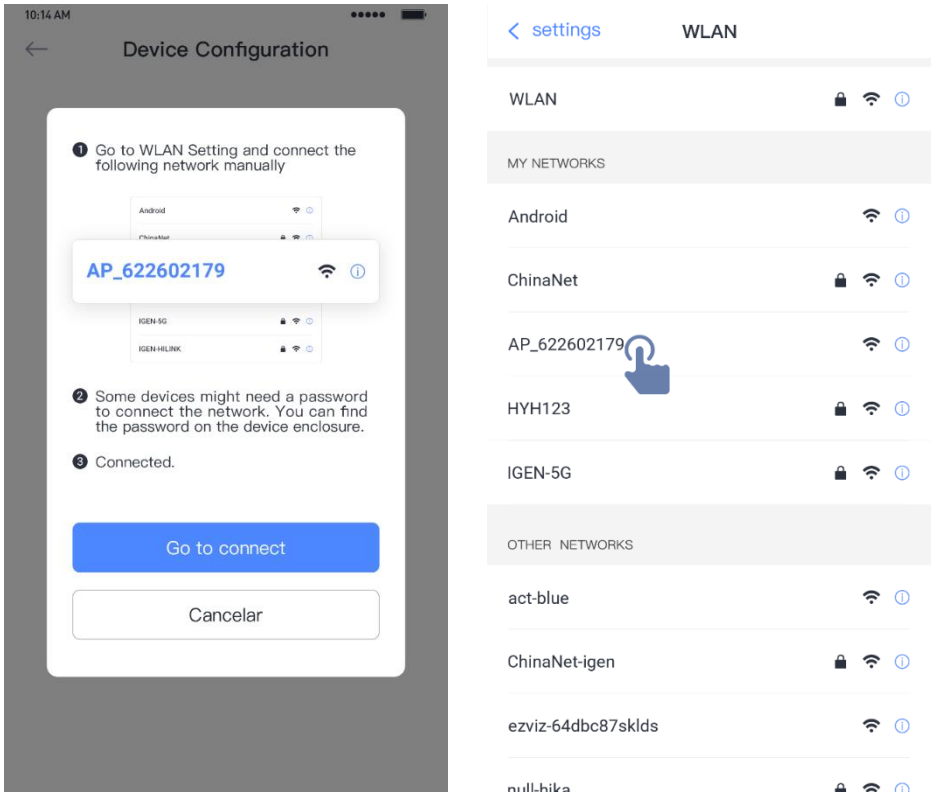
Please make sure your phone has connected to the right WiFi network and click **"Start"**.



Step 2: Connect to AP network

Go to Phone Settings-WLAN, find the right **"AP_XXXXX"** network and click **"Go to connect"**.

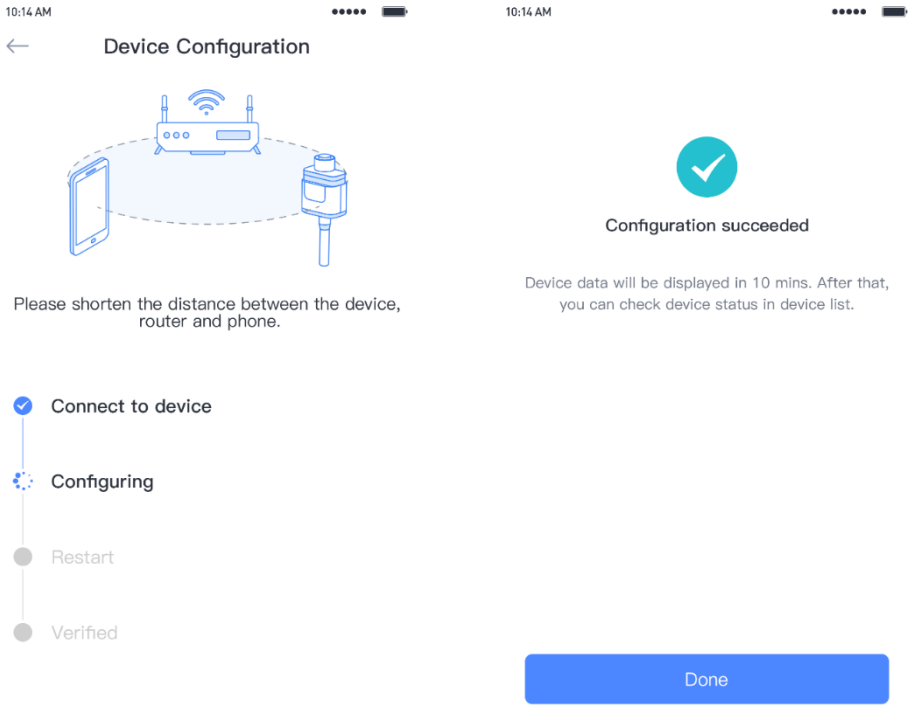
Go back to SOLARMAN Smart after your phone has connected to AP network.



Step 3: Auto Configuration

Please wait for a while to complete the configuration. System will switch to the Configured Page automatically.

When you go back to 「**Device List**」, the logger will still at **Offline** status. Usually, the data will be updated in 10 mins. Please wait patiently.



If configuration failure occurs, please check the following reasons and try it again.

1. Make sure WLAN is ON;
2. Make sure WiFi is normal;
3. Make sure wireless router does not implement the white-black list;
4. Shorten the distance between the phone and device;
5. Try to connect to other Wi-Fi;
6. Remove the special characters（，；‘’=“”`） in Wi-Fi network.

Demo Video

iOS System

Click the following URL to view.
https://www.solarman.cn/download/video/iOS_DemoVideo_AP_EN.MP4

Android System

Click the following URL to view.
https://www.solarman.cn/download/video/Android_DemoVideo_AP_EN.mp4

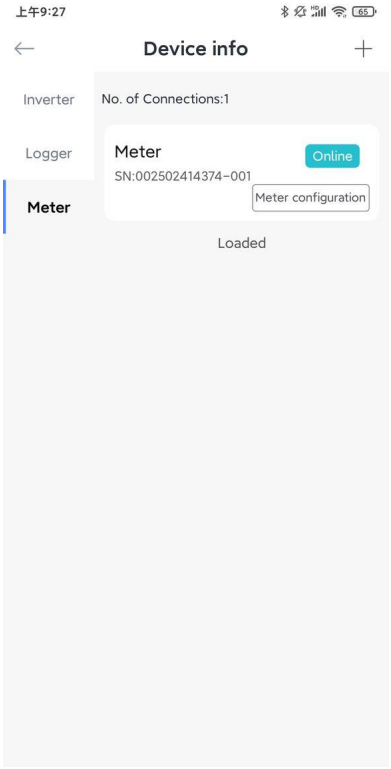
4.4. Meter Configuration

The purpose of this function is to properly configure the meter connected to the SOLARMAN platform so that the data transmitted to the platform can be calculated and counted normally, and finally displayed in a suitable way.
The following mainly describes the configuration method based on the type of electric meter.
Note: CT refers to the transformer in the meter.

Configuration method of single-phase Meter

Step 1: Add the Meter to the power station through the Logger

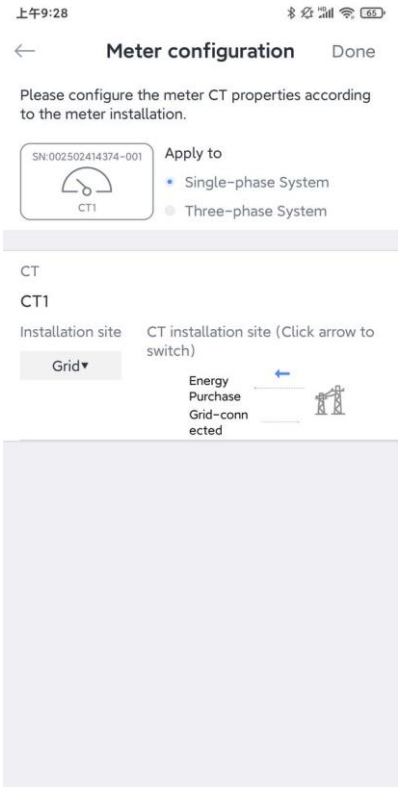
The SOLARMAN platform does not support adding meter devices directly. You need to add a logger first, and then transfer the meter data to the platform through the logger. Please complete the connection between the device and the device in the real offline scenario. The meter device will appear in the device list of the power station after the logger is powered on and starts to upload data.



Step 2: Configure the Meter

Please enter the configuration page through the "Configure Meter" button on the "Device Information" page.

The single-phase meter supports selection and application to the **single-phase system** on the configuration page. You need to set the installation position of the meter and the direction of the transformer.



1） Installation location of transformer

According to the type of data to be monitored by the meter, select the appropriate installation location. The currently supported locations are **power generation, power grid, electricity consumption, and battery,** which means that

your meter can collect the above types of data and participate in the data calculation and statistics of the power station.

The installation position of the single-phase meter transformer is equivalent to the installation position of the electric meter. If the installation location is a power grid, the data collected by the meter will only participate in the calculation and statistics of the grid dimensions of the power station.

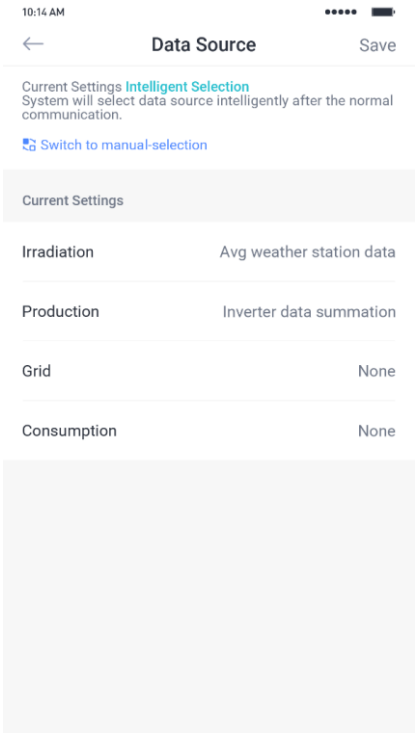
2）Direction of transformer

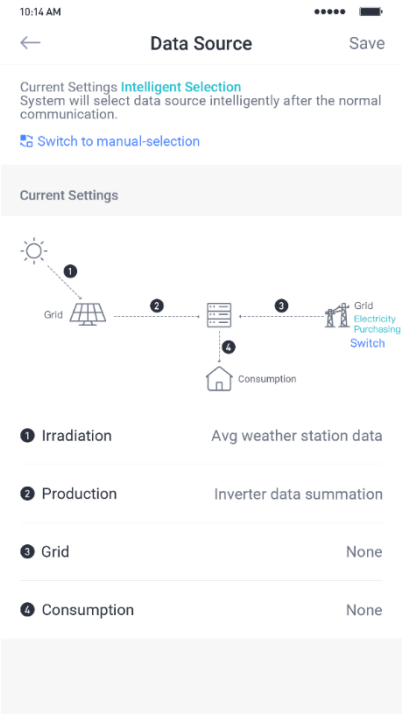
We support setting the installation direction of the transformers in the electricity meter. When the electricity meter is installed correctly, this setting can be used by default and does not need to be changed. If the data value is wrong or abnormal due to the wrong installation direction, you can try to change the direction of the transformer here, and then observe whether the data is ideal.

If the single-phase meter does not have a transformer, please ignore this setting.

Step 3: Set the data source of the power station

After completing the meter configuration, if the data source of the power station is the **intelligent selection of the system**, under normal circumstances you do not need to perform this step of operation, the platform will automatically select the appropriate plan for you according to the type of equipment under your power station and its data.





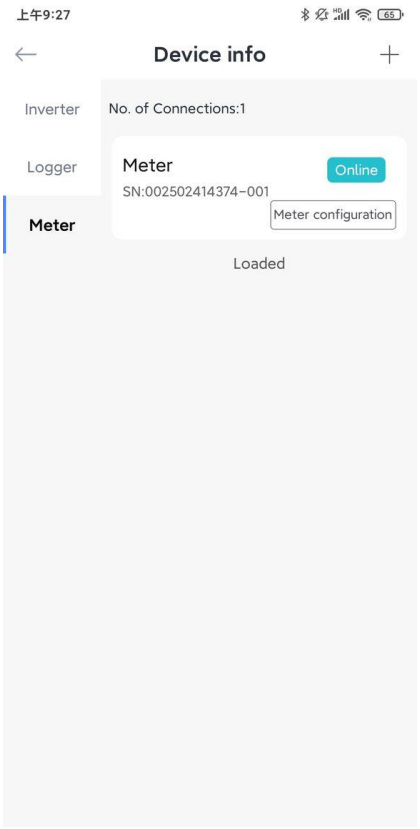
If the data of the power station has not been used for a long time through observation, please go to **"Data Source Settings"** to view and manually modify.

For example: the installation location of the meter is selected as G**rid**. If you want to use the data collected by the meter on the grid side of the power station, please set the G**rid** item in the data source setting in the figure below to **"Meter data summation"**, about 10 minutes, the meter data will be reflected under the power station

Configuration method of three-phase Meter

Step 1: Add the Meter to the power station through the Logger

The SOLARMAN platform does not support adding meter devices directly. You need to add a logger first, and then transfer the meter data to the platform through the logger. Please complete the connection between the device and the device in the real offline scenario. The meter device will appear in the device list of the power station after the logger is powered on and starts to upload data.

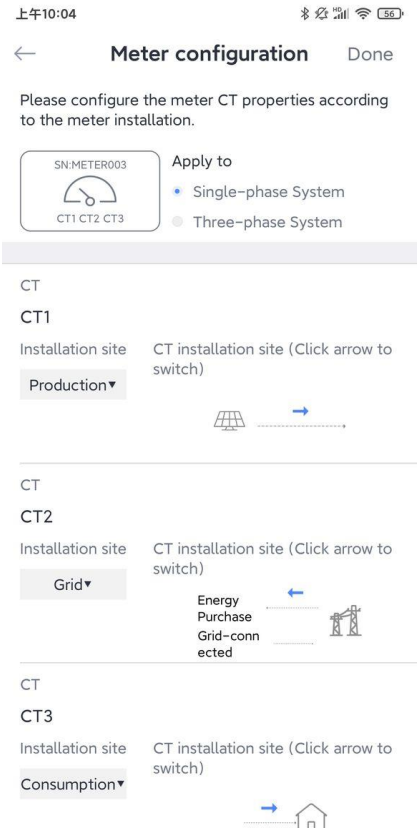


Step 2: Configure the Meter

Please enter the configuration page through the "Configure Meter" button on the "Device Information" page.
Three-phase meter supports **single-phase system** and **three-phase system** on the configuration page. Please choose according to your usage scenarios.

1. Three-phase meter is applied to single-phase system

When the three-phase meter is applied to the single-phase system, you need to set the installation position and direction of each transformer. At this time, the three-phase meter is used as multiple single-phase meters, and each transformer can be regarded as a single single-phase meter for individual configuration and data monitoring.



1) Installation position of transformer

According to the type of data to be monitored by each transformer in the meter, select the appropriate installation location. The currently supported locations are **Generation, Power Grid, Power Consumption, and Battery**, which means that your meter can collect the above types of data and participate in the power plant data calculation and statistics.

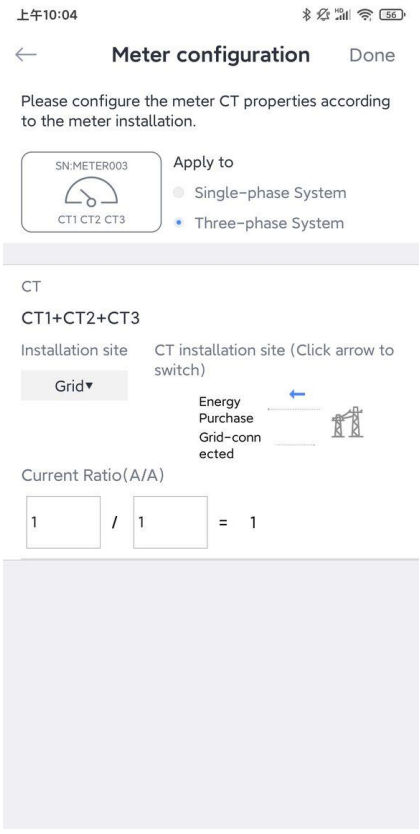
Only one installation location can be selected for each transformer. If the installation location is a power grid, the data collected by this transformer will only participate in the calculation and statistics of the grid dimensions of the power station.

2) Direction of transformer

We support setting the installation direction of the transformer in the meter. When the transformer is installed correctly, this setting can be used by default and does not need to be changed. If the data value is wrong or abnormal due to the wrong installation direction, you can try to change the direction of the transformer here, and then observe whether the data is ideal.

2. Three-phase meter is applied to three-phase system

When the three-phase meter is applied to the three-phase system, you need to set the installation position, direction and current transformation ratio of each transformer (each group). The platform defaults to one channel for CT1+CT2+CT3, one channel for CT4+CT5+CT6, and so on. The setting of each channel is relatively independent and does not affect each other. Eventually, according to the diversity of transformer settings, the data collected by the meter will participate in the power station data statistics of different dimensions.



1) Installation position of transformer

According to the type of data to be monitored by each transformer in the meter, select the appropriate installation location. The currently supported locations are **power generation, power grid, electricity consumption, and battery,** which means that your meter can collect the above types of data and participate in the data calculation and statistics of the power station. Only one installation location can be selected for each transformer (such as the combination of CT1+CT2+CT3). If the installation location is a power grid, the data collected by this transformer will only participate in the calculation and statistics of the grid dimension of the power station.

2) Direction of transformer

We support setting the installation direction of the transformer in the meter. When the transformer is installed correctly, this setting can be used by default and does not need to be changed. If the data value is wrong or abnormal due to the wrong installation direction, you can try to change the direction of the transformer here, and then observe whether the data is ideal. It is not supported here to set the direction of a single transformer in each channel.

3) Current ratio of transformer

Due to safety or other considerations, the data collected by the transformer in the meter may be reduced by a certain percentage. Please determine the current transformation ratio of each transformer according to the actual situation to ensure that the data will be restored to the true value when the platform performs data statistics.

If the battery in the actual circuit is 600A and the transformer current conversion ratio is 600:5, you need to enter 600:5 in the current conversion ratio on the page, and the final statistics are the real data.

Step 3: Set the data source of the power station

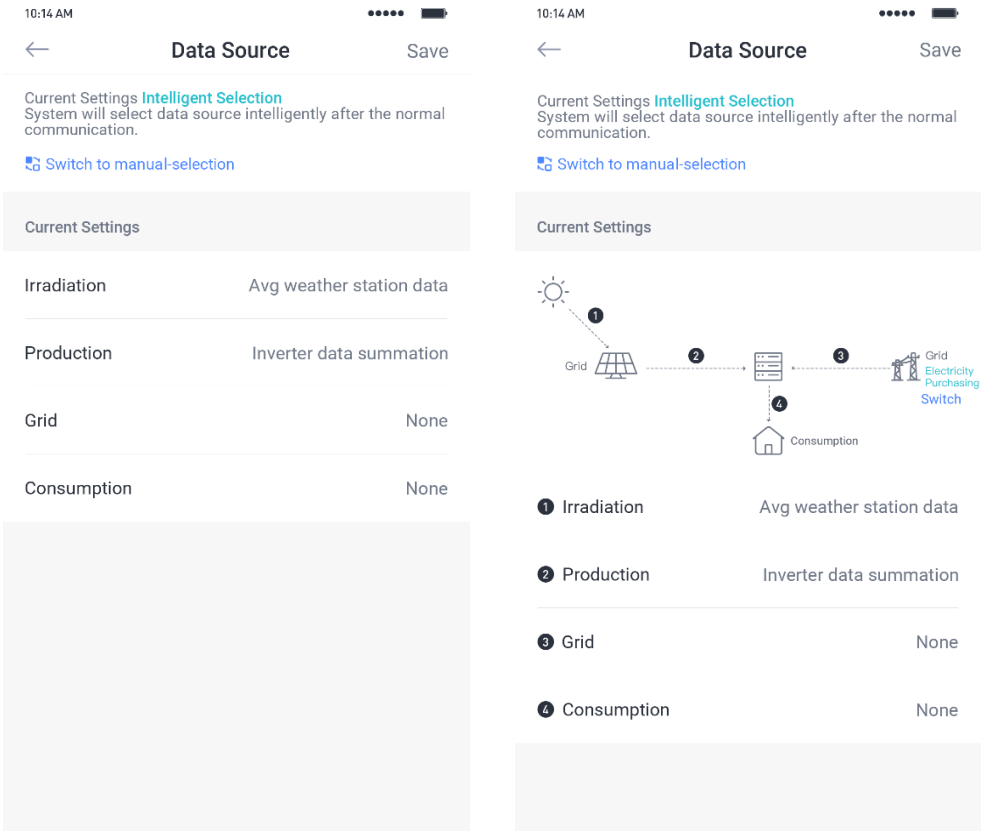
After completing the meter configuration, if the data source of the power station is the **intelligent selection of the system**, under normal circumstances you do not need to perform this step of operation, the platform will automatically select the appropriate plan for you according to the type of equipment under your power station and its data.

If the data of the power station has not been used for a long time through observation, please go to **"Data Source Settings"** to view and manually modify.

For example:

The installation location of the meter is selected as Grid. If you want to use the data collected by the meter on the grid side of the power station, please set the Grid item in the data source setting in the figure below to **"Meter data summation"**, about 10 minutes, the meter data will be reflected under the power station.

The installation position of the electricity meter is selected as **Consumption**. If you want to use the data collected by the meter at the power terminal of the power station, please set the **Consumption** item in the data source setting in the figure below to **"Meter data summation"**, about 10 minutes, the meter data will be reflected under the power station.



4.5. Data View

After home settings and device settings are done, users can check data at this moment.

Notice: The data will be updated in 5-10 mins after the configuration is done.

4.5.1. Real-time Data

Users can check various data on this page. E.g. real-time producing power, flow chart, statistic report, production, consumption and etc,

Notice: System will display different page layout according to the Grid and PV settings in the home information page. Please set the Grid and PV settings according to your actual situation.

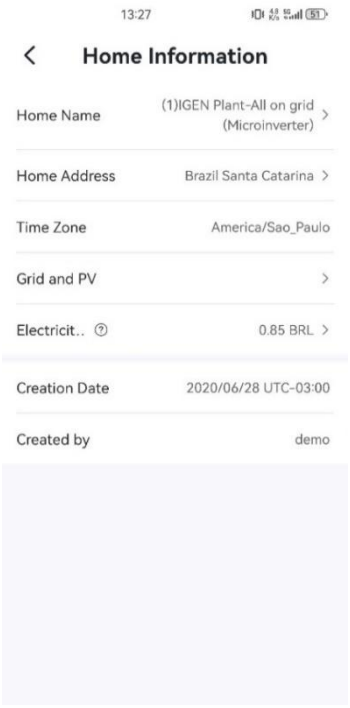
4.5.2. Statistics Data

Users may check home statistics data and historical data on this page and choose assigned specific date and conditions to query.

4.5.3. Home Information

Click 「**Menu**」-「**Home Settings**」-「**Edit**」**Button** to get into 「**Home Information**」 page.

Users can check Basic Info, System Info, Revenue Info and etc,. Moreover, you can modify the information here to ensure a better analysis of home data.



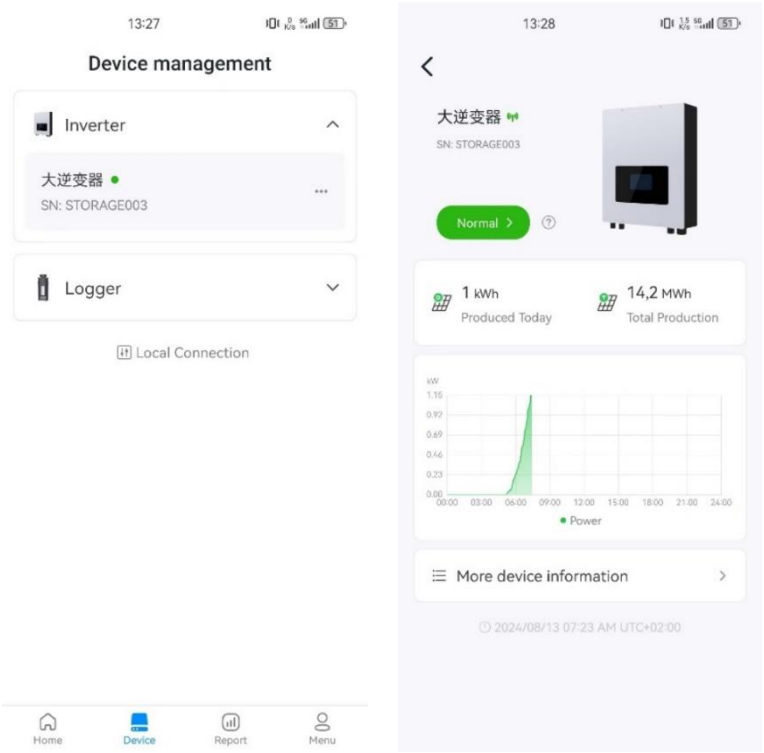
4.5.4. Device Info

Users can check device information on the 「**Device**」 page. Click a specific device to check specific info, including device real-time parameters, statistical chart and etc,. Moreover, users can check if the device is running normally.

Click **"..."** to edit or unbind a device.

If the device is a logger, **"Networking Configuration"** can be operated here.

If the device is a meter, **"Meter Configuration"** can be operated here



4.6. Home Share

「**Menu**」-「**Shared**」.

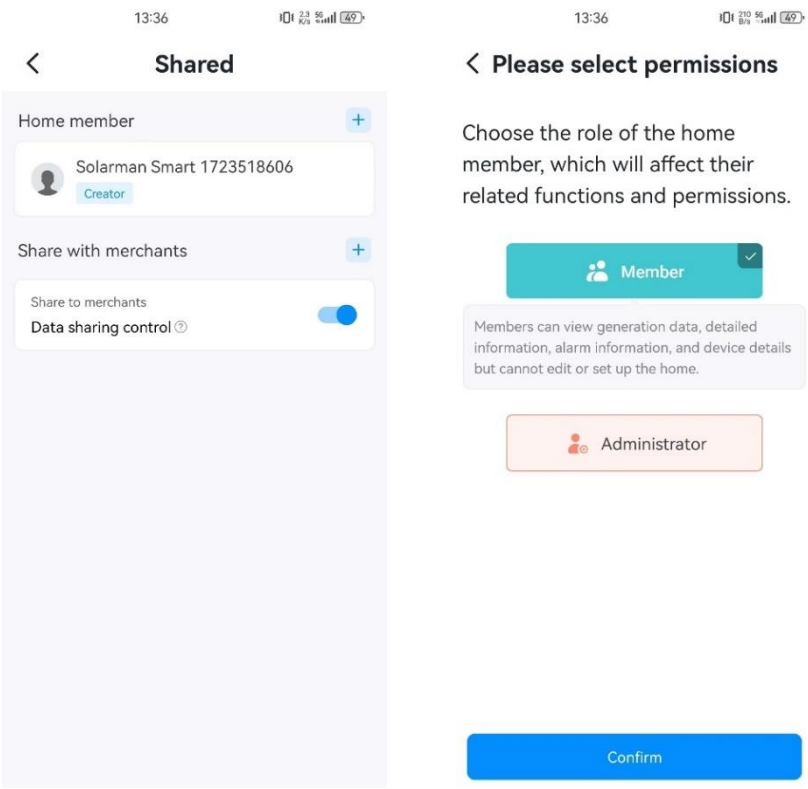
According to home property, there are two types of home. One is **created by myself**. Another is **authorized by others.**

4.6.1. Home created by myself

Please refer to authorization steps. Users can share the home to your service provider. After that, the shared service provider can check your home data and operate your device.

The shared scope is determined by the role you set for the service provider.

- If the service provider is **"Member"**, then it can check all home data.
- If the service provider is **"Administrator"**, then it can check all home data and operate the home/device.



4.6.2. Home authorized by others

Currently, the service provider can authorize the home to users. Users can check data of authorized home within the permissions.

Users cannot authorize such home to others.

If users do not wish to follow the home, click **"Unbind"**.

4.7. Home Settings

4.7.1. Delete Home

「**Menu**」-「**Home Settings**」-「**Edit**」.

System will display a popup dialog twice for confirmation. After your confirmation, the home will be deleted from your account. The deletion is not recoverable and all the data will be deleted. Please be cautious!

Notice: Authorized home cannot be deleted.

5. Others

5.1. Languages

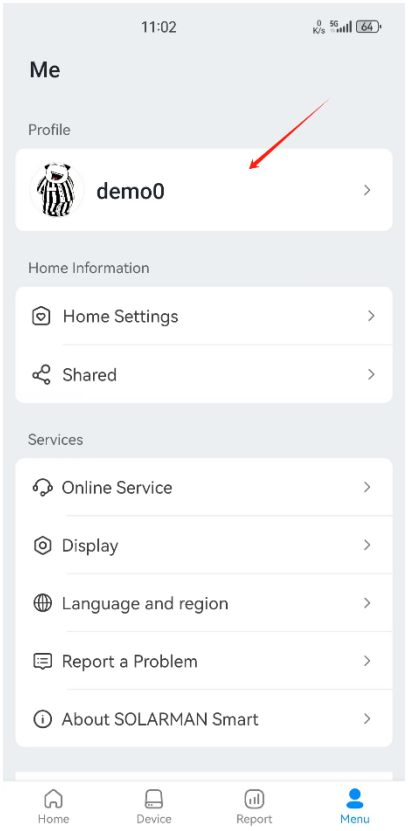
SOLARMAN Smart supports 15 languages for now, which are 简体中文, **English**, 日本語, **Deutsch**, **Português**, **Español**, **Nederlands**, **Polski**, **Français**, 한국어, **Tiếng Việt**, **Swedish**, **Italiano**, **Slovenščina**, **Čeština.**

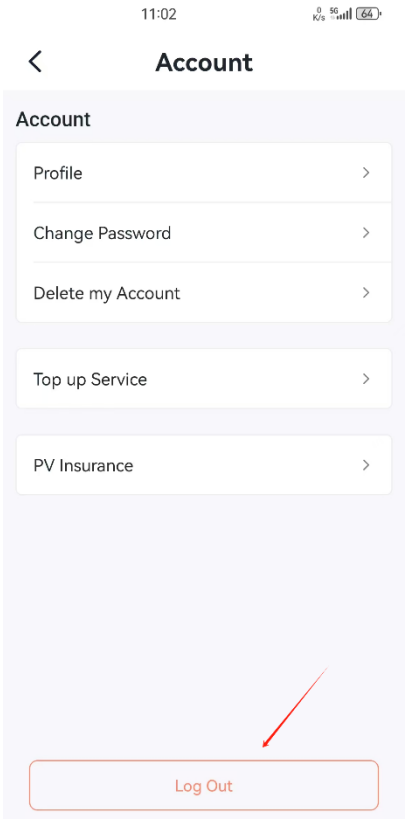
When you first log in to SOLARMAN Smart App, system will match the suitable language according to your phone system. If you wish to switch the language, please go to upper-right corner at login page or go to「**Menu**」-「**Language and region**」to select the language.

5.2. Common Operations

5.2.1. Log Out

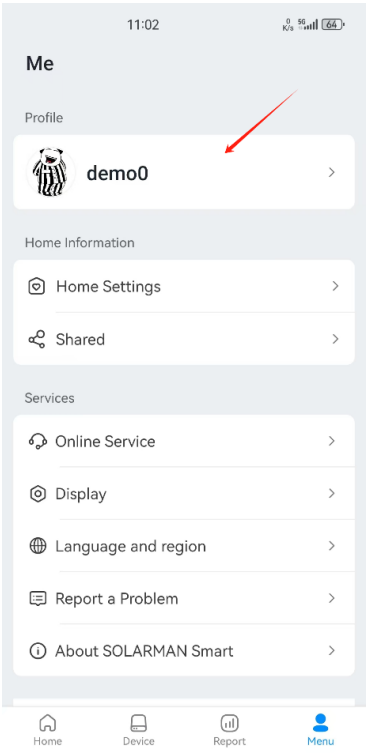
Go to「**Menu**」-「**Profile**」 to **log out**.

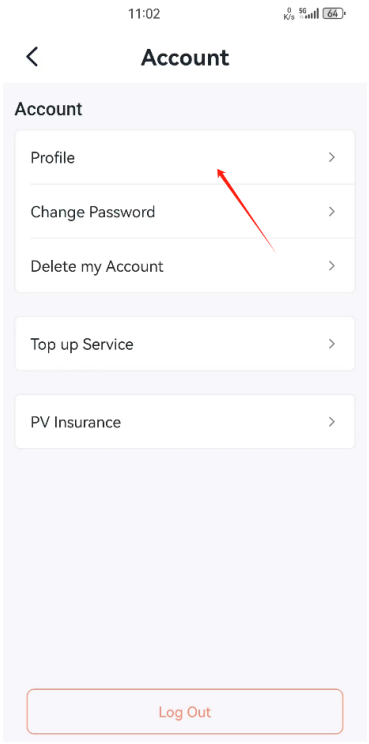




5.2.2. Personal Info

Go to「**Menu**」-「**Profile**」and click your avatar to modify your personal info.



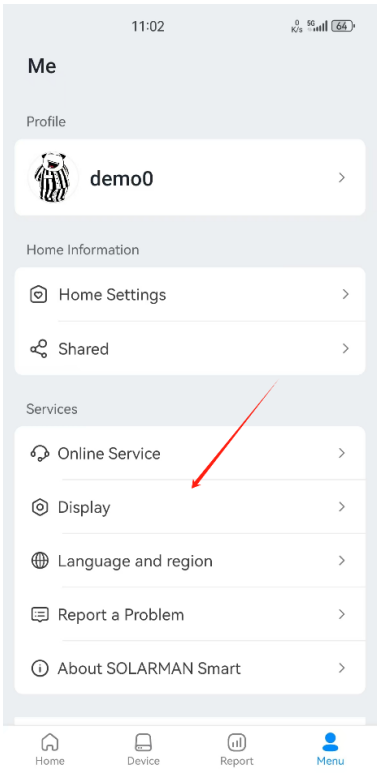


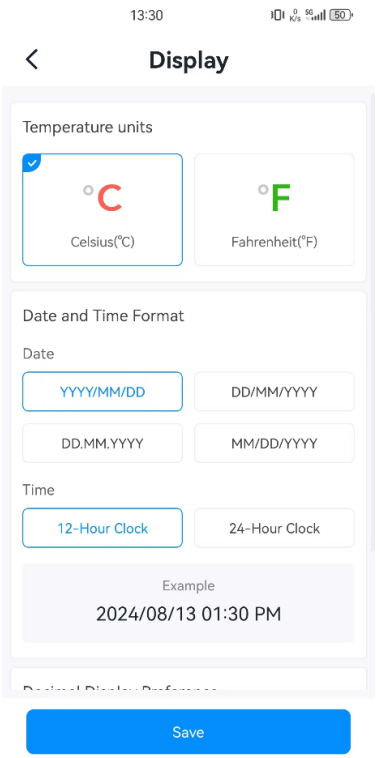
5.2.3. General

5.2.3.1. Temperature Unit

Go to「**Menu**」-「**Display**」to select temperature unit.

Only support Celsius and Fahrenheit for now.

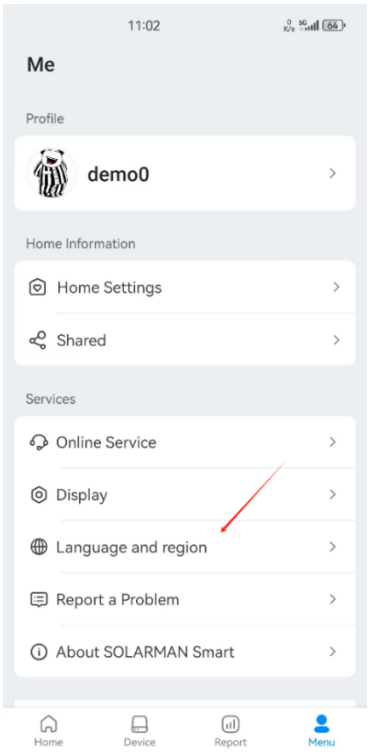


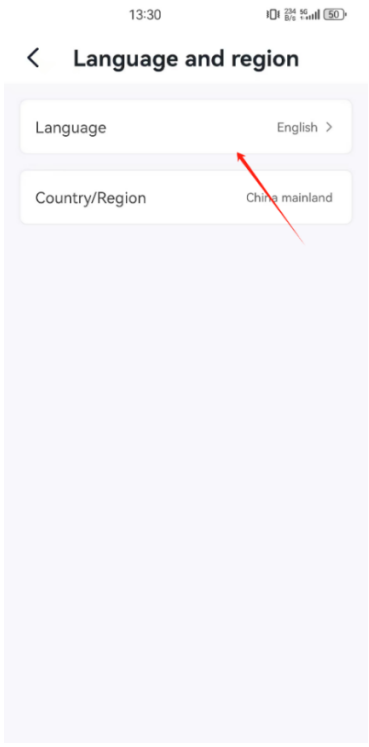


5.2.3.2. Language

Go to「**Menu**」-「**Language and region**」to select the language.

SOLARMAN Smart supports 15 languages for now, which are 简体中文, **English**, 日本語, **Deutsch**, **Português**, **Español**, **Nederlands**, **Polski**, **Français**,한국어, **Tiếng Việt**, **Swedish**, **Italiano**, **Slovenščina**, **Čeština**



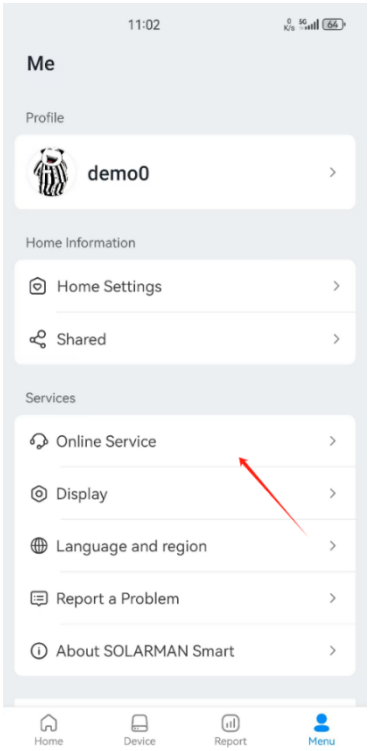


5.2.4. Online Service

Go to「**Menu**」-「**Online Service**」to contact SOLARMAN customer service directly.

Online Time: 09:00～11:30 AM, 12:30~18:00 PM (UTC+8).

Or users can leave a message here, customer service will reply to you as soon as possible.



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- Last updated time : 2024-08-14

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