V01

COMMISSIONING GUIDE & REPORT

SMILE-S6-HV, SMILE-T6-HV，SMILE-T10-HV,

SMILE5，SMILE-B3，SMILE-S5/B5, SMILE-B3-PLUS



1. Commissioning Procedures

1.1. Checking Before Power-On

No.	Check Item	Acceptance Criteria
1	Mounting environment	The mounting space is proper, and the mounting environment is clean and tidy, without foreign objects.
2	Battery pack and inverter mounting	The battery pack and inverter are mounted correctly, securely, and reliably.
3	WiFi mounting	The WiFi module is mounted correctly, securely, and reliably.
4	Cable layout	Cables are routed properly as required by the customer.
5	Cable tie	Cable ties are secured evenly and no burr exists.
6	Grounding	The ground cable is connected correctly, securely, and reliably.
7	Switch and breakers status	The PV switch and battery breakers and all the breakers connecting to the product are OFF.
8	Cable connections	The AC cables, PV cables (if there is any), battery power cables, and communication cables are connected correctly, securely, and reliably.
9	Unused power terminals	Unused power ports and communication ports are blocked by watertight caps.

1.2. Powering on the Product

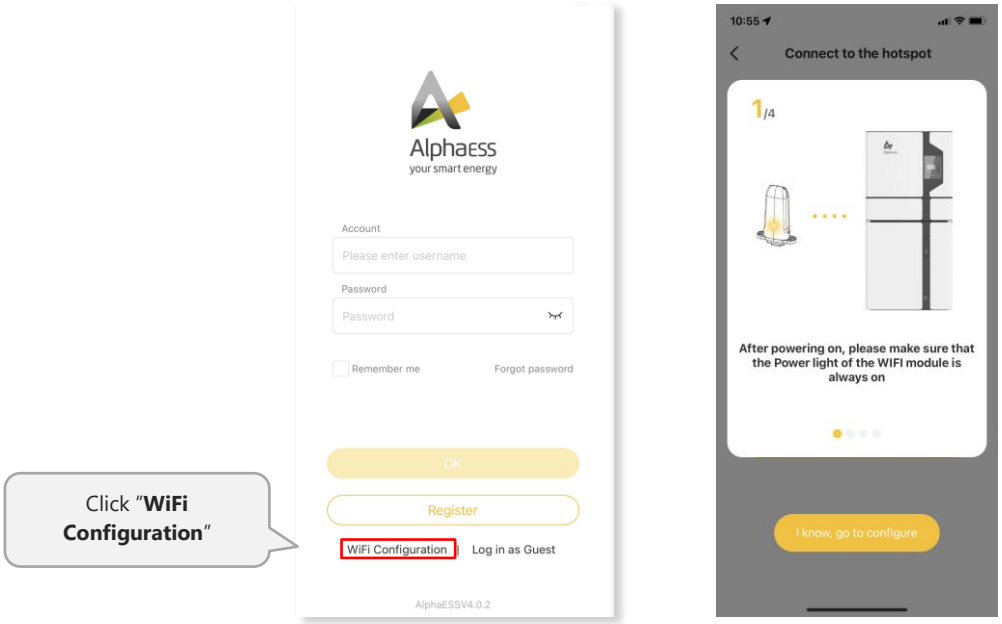
- Check the voltage range and frequency range of the grid and the installation of CT(s) or meter(s).
- Switch on the battery breaker of the battery.
- Switch on the battery breaker located on the energy storage inverter.
- Switch on the external AC breaker between the grid and the energy storage inverter.
- Firstly, don’t press the battery button, don’t switch on the PV switch on the energy storage inverter and don’t switch on the AC breaker on the PV inverter if there is any.

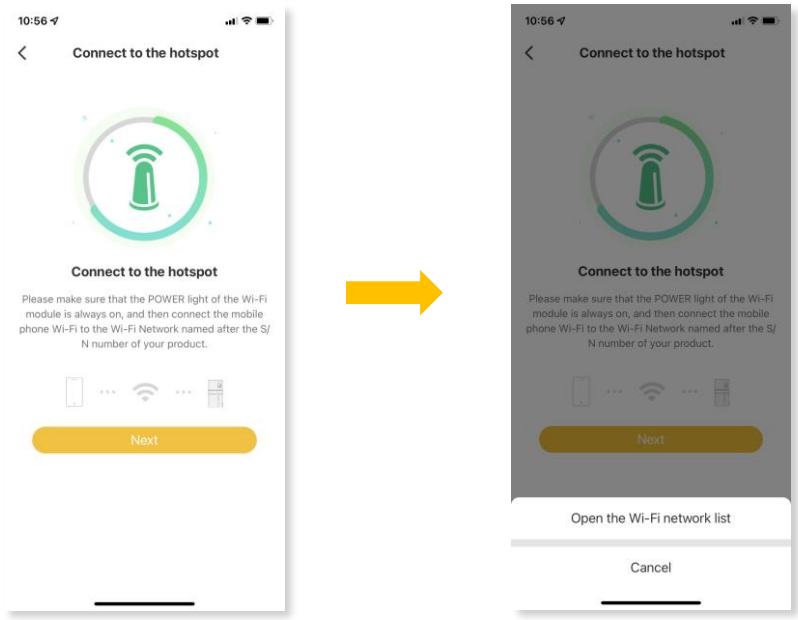
1.3. WiFi Module Configuration and Parameter Settings

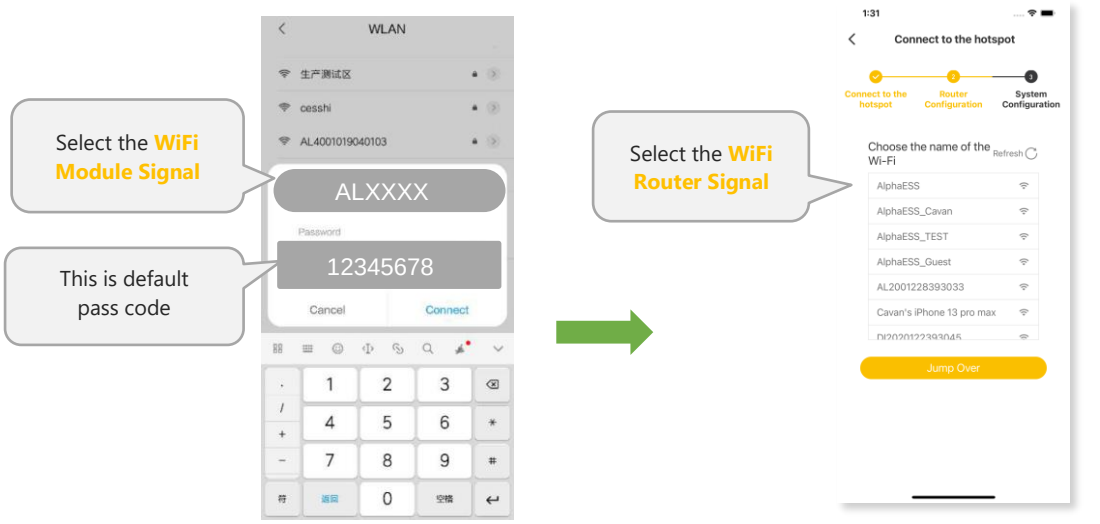
1.3.1. WiFi Configuration

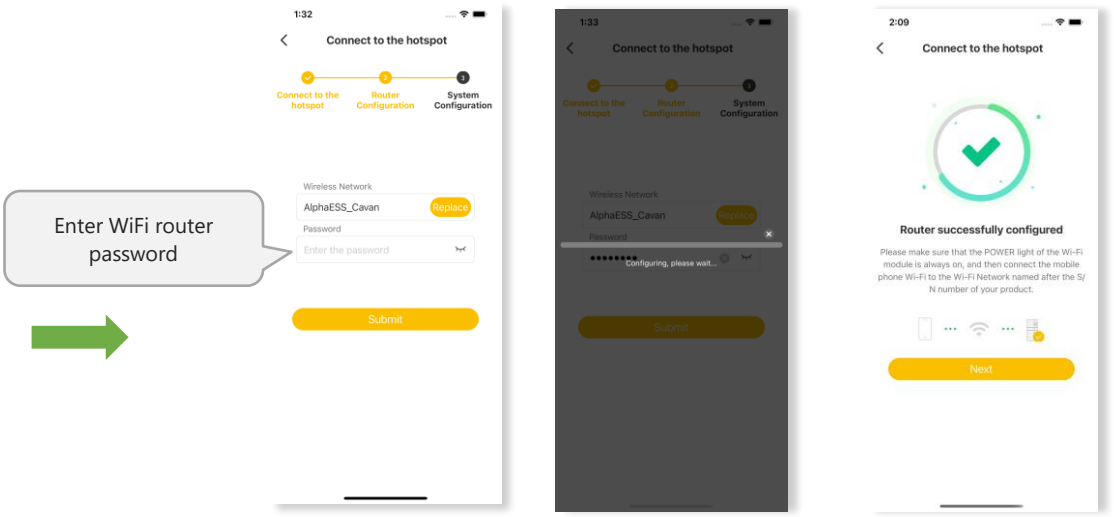
This section is for users who have an energy storage system with a WiFi module.

AlphaESS App is able to configure the network, set system basic parameter, monitor system operation status and check configuration information.





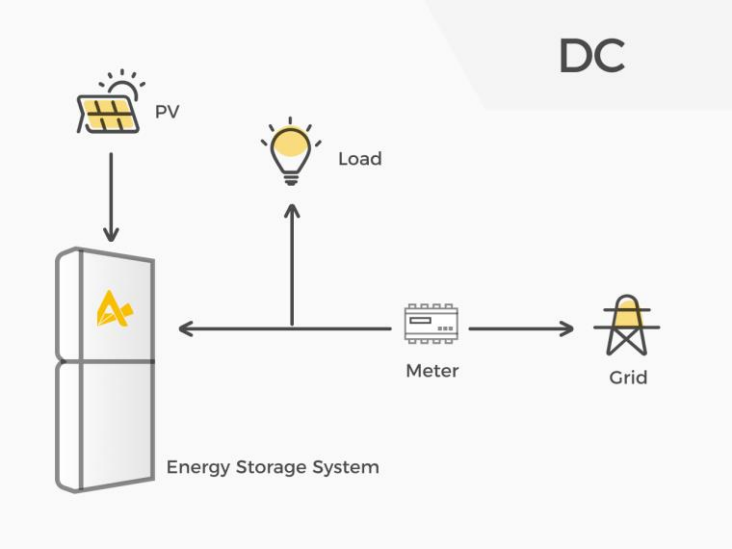


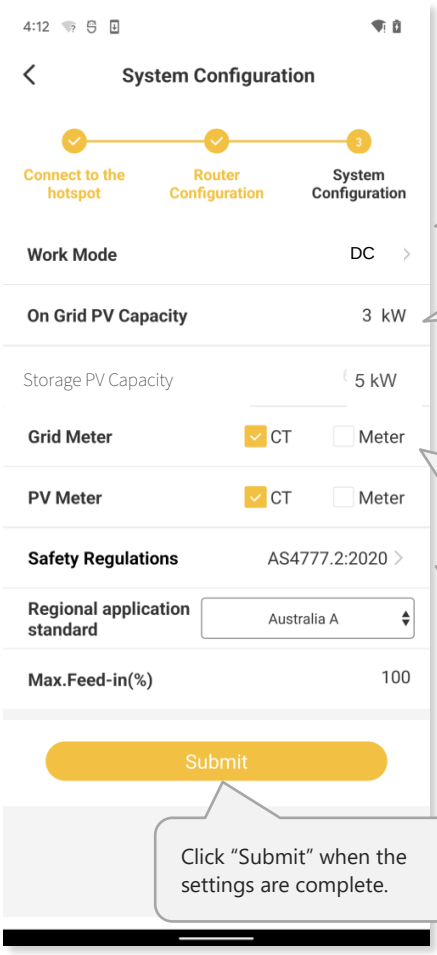


> **NOTE**
>
> The system will not be able to connect to the internet without WiFi configuration.

1.3.1.1 Basic Parameters Settings

DC Mode





Three mode options: **DC**/AC/Hybrid

Storage PV capacity: PV capacity on the energy storage inverter side

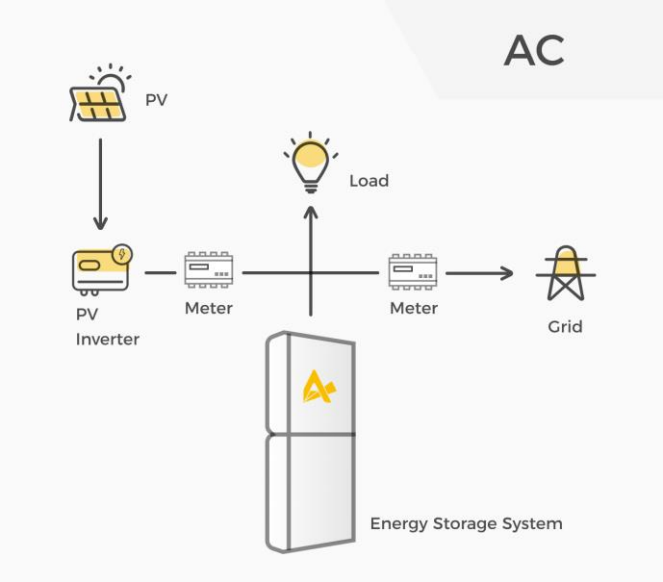
On the grid side, if only a CT is installed, please select CT for grid side.
If the grid meter is installed, please select Meter for grid side. If this meter is a CT meter and the CT ratio is not 1, please select CT below and input the Meter CT Ratio. If this meter is not a CT meter or the CT ratio is 1, please do not select CT below.

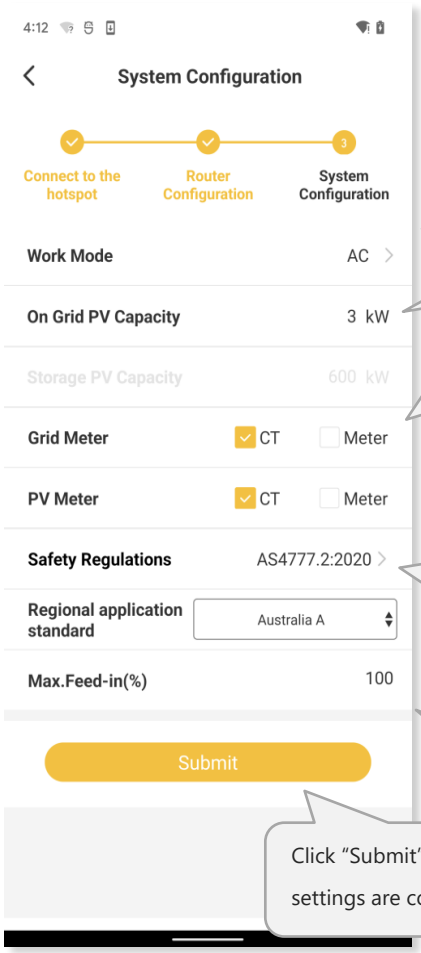
Note:
When the safety standard is set as AS4777.2 (Australia and New Zealand), the secondary sub-options can be selected according to the region or local grid company.

You can set the allowable feed-in ratio from 0%-100%.

Click "Submit" when the settings are complete.

AC Mode





Three mode options: DC/**AC**/Hybrid

PV capacity on the PV-inverter (on-grid) side

On the grid side, if only a CT is installed, please select CT for grid side.
If the grid meter is installed, please select Meter for grid side. If this meter is a CT meter and the CT ratio is not 1, please select CT below and input the Meter CT Ratio. If this meter is not a CT meter or the CT ratio is 1, please do not select CT below.

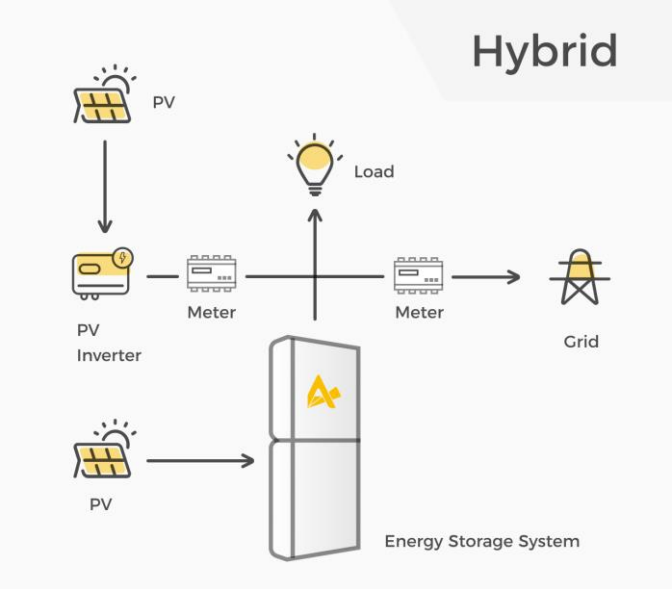
Note:
When the safety standard is set as AS4777.2 (Australia and New Zealand), the secondary sub-options can be selected according to the region or local grid company.

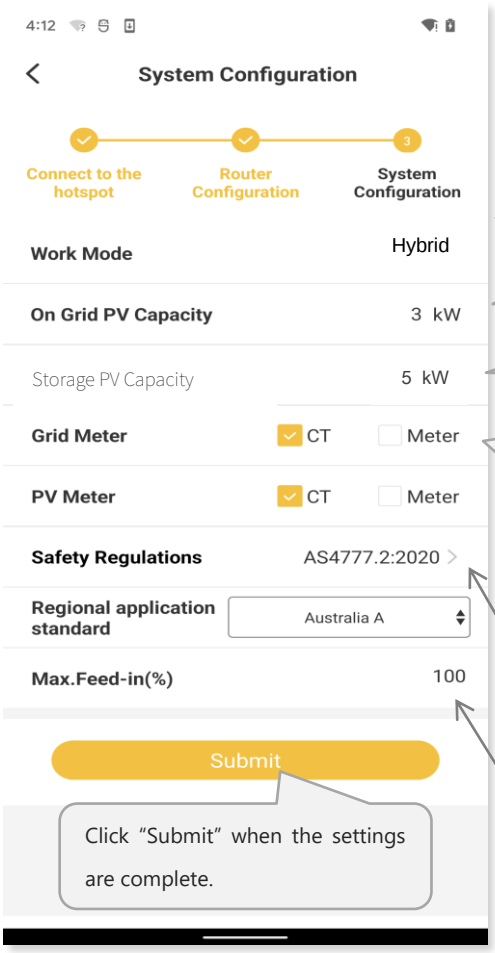
You can set the allowable feed-in ratio from 0%-100%.

Click "Submit" when the settings are complete.

SMILE-B3, SMILE-B3-PLUS and SMILE-B5 work as AC coupled energy storage system.

Hybrid Mode





Click "Submit" when the settings are complete.

Three mode options: DC/AC/**Hybrid**

PV capacity on the PV-inverter (on-grid) side

Storage PV capacity: PV capacity on the energy storage inverter side

On the grid side, if only a CT is installed, please select CT for grid side. If the grid meter is installed, please select Meter for grid side. If this meter is a CT meter and the CT ratio is not 1, please select CT below and input the Meter CT Ratio. If this meter is not a CT meter or the CT ratio is 1, please do not select CT below.

Note:
When the safety standard is set as AS4777.2 (Australia and New Zealand), the secondary sub-options can be selected according to the region or local grid company.

You can set the allowable feed-in ratio from 0%-100%.

NOTICE

The safety regulation must be set correctly

If you select a safety regulation which is not valid for your country and purpose, it will cause a disturbance in the energy storage system and lead to problems with the grid operator. When selecting the safety regulation, you must always observe the locally applicable standards and directives as well as the properties of the PV system (e.g. PV system size, grid-connection point).

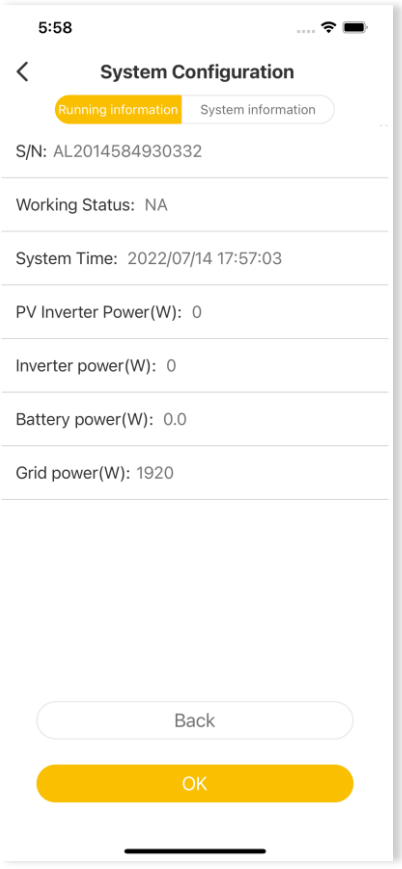
- If you are not sure which safety regulation is valid for your country or purpose, please contact your grid operator for information on which safety regulation is to be configured.

1.3.2. Direct Commissioning on WiFi configuration

You can commission the system during the WiFi configuration process directly.

1.3.2.1 Check the Running State without PV and Battery

- Keep the PV switch of the energy storage inverter and AC breaker of the PV-inverter off. Don't power on the batteries.
- Turn on some larger loads directly connected on the grid to check the grid status, the inverter LED ("Fault") will be red, don't worry, because the battery is not communicated. The grid power should be positive. Otherwise please check the direction of grid CT or grid meter installation.

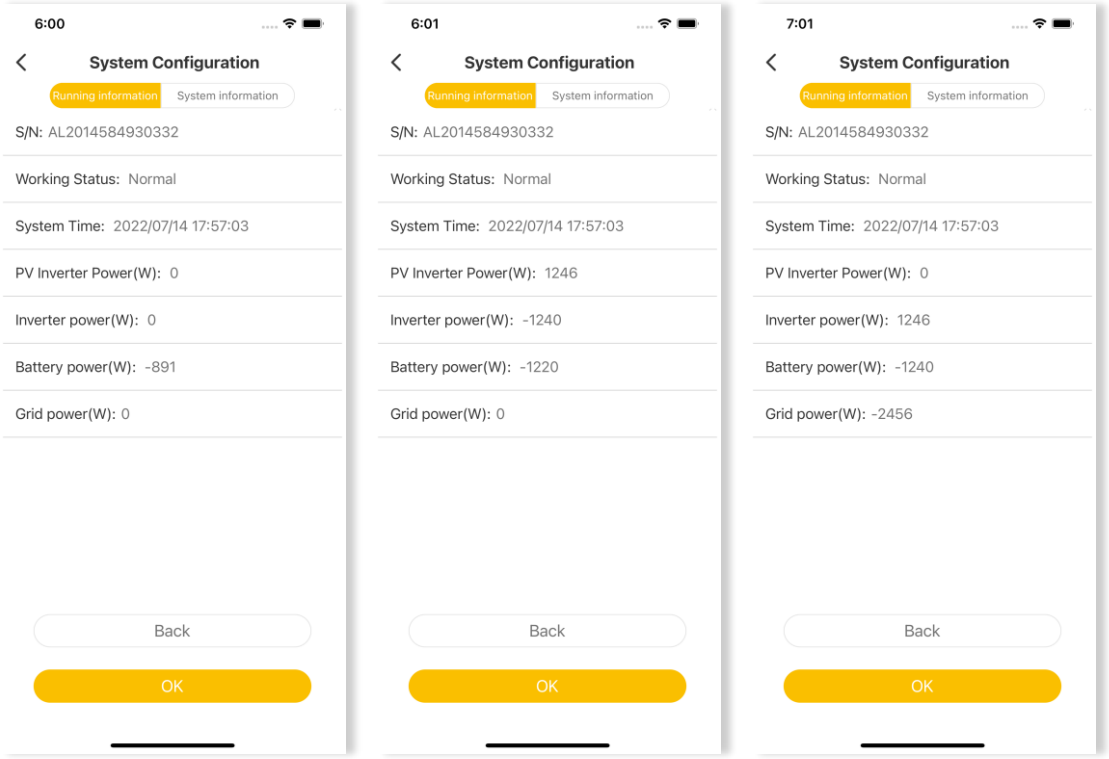


1.3.2.2 Check the Running State of PV and Battery

- Switch off the AC breaker between the grid port on the energy storage inverter and the grid, and switch off the AC breaker between the backup port on the energy storage inverter and the loads.
- Press the battery button. If there are more than one battery, press the button of each battery and the interval time of powering on any two batteries should

be less than 5s.

- Switch on the AC breaker between the grid port of the energy storage inverter and the grid.
- Switch on the PV switch on the energy storage inverter if there is any and AC breaker on the PV-inverter if there is any.
- Switch off all the loads to see the battery charging status and the inverter LED ("SYSTEM")* will be solid on green. Battery power value should be negative. If the system is in AC or hybrid mode, the PV inverter power value should be positive. If it is not normal, please check the direction of PV CT or PV meter installed.



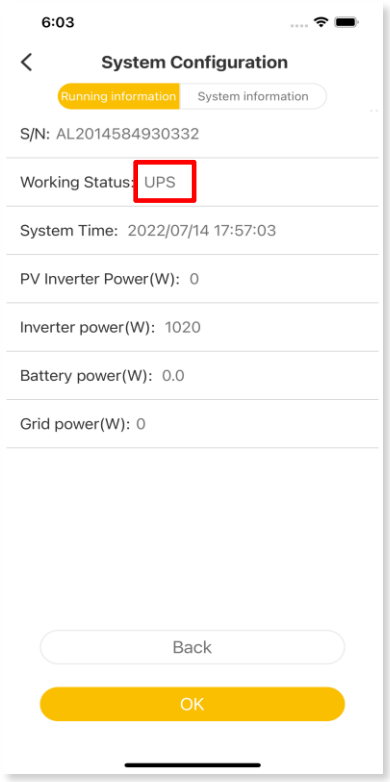
DC Mode **AC Mode** **Hybrid Mode**

*The inverter LED ("Normal") will be solid on green for SMILE-B3, SMILE-B3-PLUS, SMILE-S5/B5 and SMILE5.

1.3.2.3 Check the UPS State

- Please connect an essential electrical appliance to the socket of backup load. Or switch on an essential electrical appliance already connected on the backup load port of the inverter.
- Switch on the AC breaker on the backup port of the energy storage inverter.
- Switch off external AC breaker between the grid and the energy storage inverter.
- The inverter will enter the UPS mode at once.

- If the electrical appliance on backup side can work normally, it means that the wiring of the backup has been connected correctly.



NOTICE

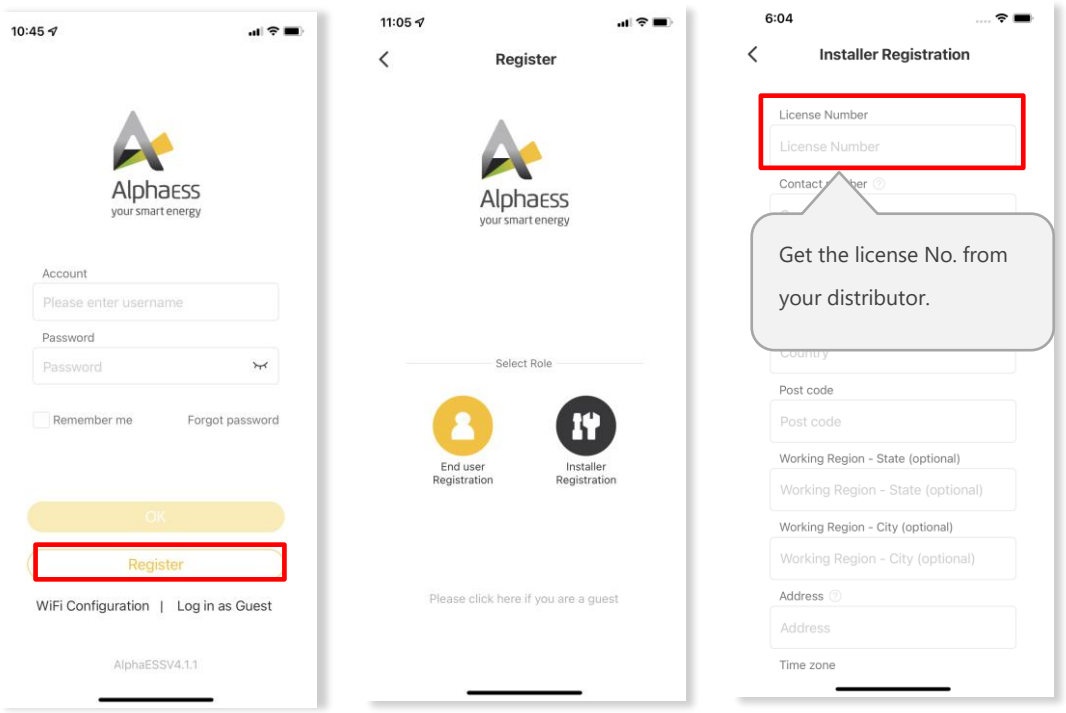
During commissioning, if the LED indictors on the display panel of the inverter or the battery pack show red, please refer to chapter troubleshooting.

1.4. Installing New System and Settings on the APP

1.4.1. Download and Install the APP

1.4.2. Register as an Installer

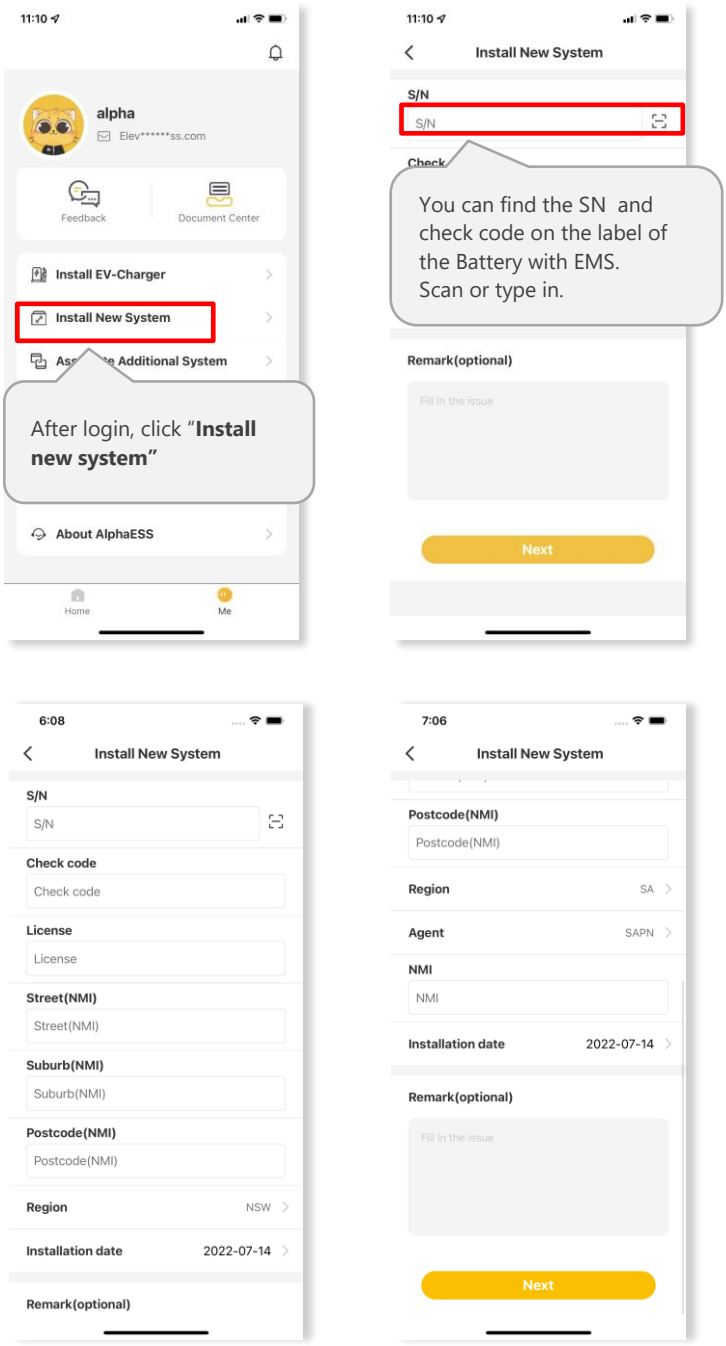
If you don’t have an installer account, please register first.



If you already have an installer account, please log in directly.

1.4.3. Install New System

If you have “installed” the new system already or want to install it later, please directly to the Section 1.3 WiFi Module Configuration and Parameter Settings. If not, you can “Install New System” first.



Australian Installer

Please enter your installer account and click “Install New System” to bind the system to your account and set the system.

Enter S/N, check code, license, create time, customer full name, contact number, address, and click the save button. If you are an Australian installer, you will need to fill in the Street (NMI), Suburb (NMI) and Postcode (NMI) fields and add a new Region

field, which has six fixed options (NSW, QLD, VIC, SA, TAS, WA). If SA is selected for Region, two more fields are added which are Agent and NMI.

Fields that are not marked "optional" need to be filled in.

Click "Next" and go to Section 1.3 if the WiFi has not been configured.

1.5. Check the Running State On-line

If you have completed commissioning as described in section 1.3.2, please ignore this section.

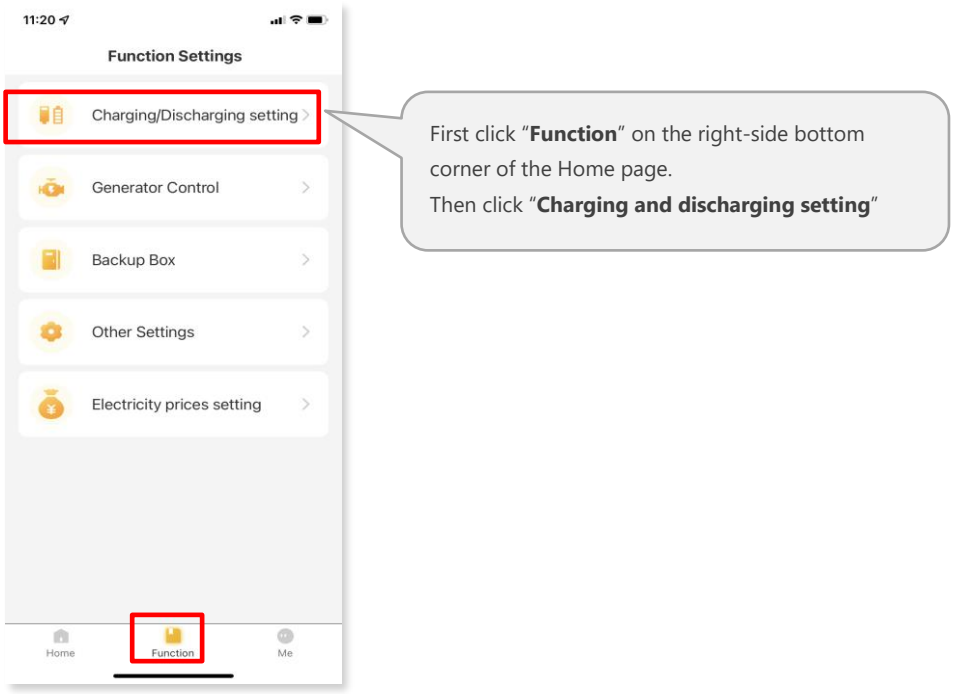
You can also commission the system after WiFi configuration.

Please make sure the PV switch and battery breakers and all the breakers connecting to the product are ON.

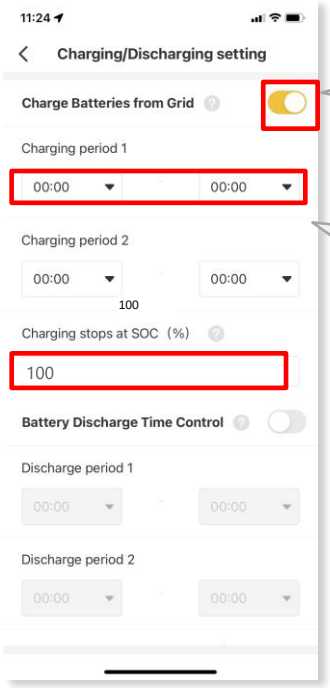
1.5.1. Check the Charging Function of the Product

- To make sure the system is installed and operating correctly, please set the system to “Charging/Discharging Setting” by following the instructions below.

Step1



Step2



Select "**ON**" to Charge Batteries from Grid"

please set the "Charging period 1" for the time and the SOC would be **100** under this operation.

Step3

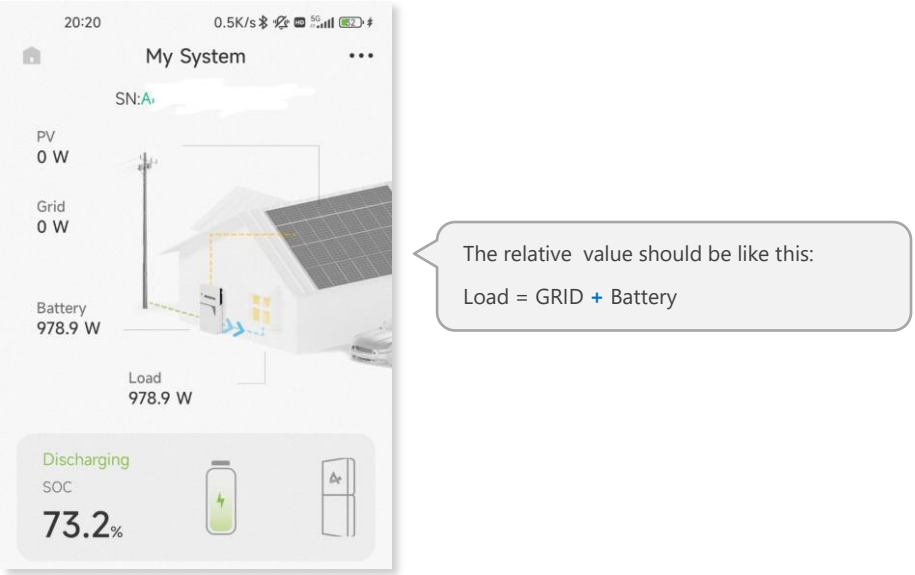


The relative value should be like this:Load = PV ± GRID – Battery
Battery should be in **charging** status.**PV arrow** should be as the picture shows.±: >>absorbing from grid: +; << feed-in to grid:-
If not correct, please check the CT or meter installed direction of both grid and PV side

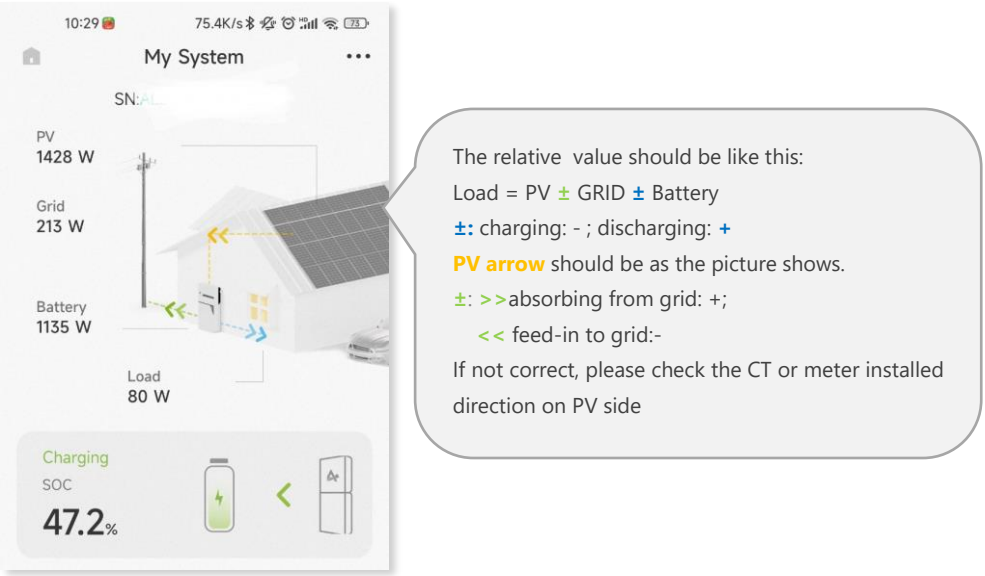
- Check the running status of the system in "Step 3".
- If the operation is normal as described in "Step3", please remember to deactivate the "Charging/Discharging Setting" by clicking "OFF" and save the changes.

1.5.2. Check the PV Generation and Discharging Function of the Product

Step1: Please switch off the PV switch on the energy storage inverter and the AC breaker on the PV inverter if there is any. Switch on some larger loads to see the battery discharging status.



Step 2: Please switch on the PV switch on the energy storage inverter and the AC breaker on the PV inverter if there is any. Check the running status of the system.



1.5.3. Check the UPS State of the Product

- Switch off the external AC breaker between the grid and the inverter. The inverter will enter the UPS mode at once.

- Switch on the external AC breaker between the inverter and the backup loads.
- Please connect a low-power electrical appliance to the socket of backup load.
- If the electrical appliance can work normally, it means that the wiring of the backup has been connected correctly.

NOTICE

During commissioning, if the LED indictors on the display panel of the inverter or the battery pack show red, please refer to chapter troubleshooting.

1.5.3.1 Switch on all of the Breakers.

Please don't forget to switch on all of the breakers.

1.6. Instruct the End User to Install the APP

Please make sure that your end user has downloaded the APP and registered the account correctly, and added the system SN.

2. Commission Report

Basic Information				
System name		SN number		
Commissioning date		User name		
Installation address				
Contact		Email		
Grid codes				
System checklist				
Category	Model	Serial number	Quantity	√/×
☐Inverter				
☐Battery				
☐Meter				
☐CT				
☐Connectors(PV, Grid, Backup, Battery)				
☐Inverter Brackets				
☐Battery Brackets				
☐WIFI module				
☐Battery Cables (Power and communi-cation)				
☐Others				
Confirm item				
Serial	Content			
1	☐The appearance of the system has no visible damage;			

2	☐The system installation location is reasonable;
3	☐The user has obtained the system-related operation and use documents;
4	☐The system has completed online registration and APP download has been completed;
5	☐All system settings are completed (Meter setting, WiFi configuration, etc.)；
6	☐The UPS and charging and discharging functions of the system are normal.
7	☐The system is online and running normally;
Acceptance results	

Notes：

1. Please confirm and sign the list with the on-site installer in person;
2. If the user does not sign and confirm after the commissioning has been completed, the commissioning will be qualified by default after 15 days;
3. Please read the operation manual carefully before using the system to understand the way of safe operation;
4. If the system fails, please contact the AlphaESS service in time, we will deal with the problem as soon as possible

End user signature：	Installer signature：
Date：	Date：
Feedback：	