

S6 Hybrid Series – SolisCloud App Local Bluetooth Connection Guide

Introduction

Welcome to the SolisCloud App, your gateway to seamless monitoring and control of your inverter. This help document is designed to guide you through the App view when locally connecting to your inverter via Bluetooth. By following the steps outlined below, you'll gain access to quick settings and a comprehensive array of standard settings, putting you in command of your energy management system.



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Prerequisites

To establish a connection to your inverter, ensure that you have the 'SolisCloud' app installed on your phone. If you do not already have the app, please use the following codes to install it.

SolisCloud Monitoring APP (Android)



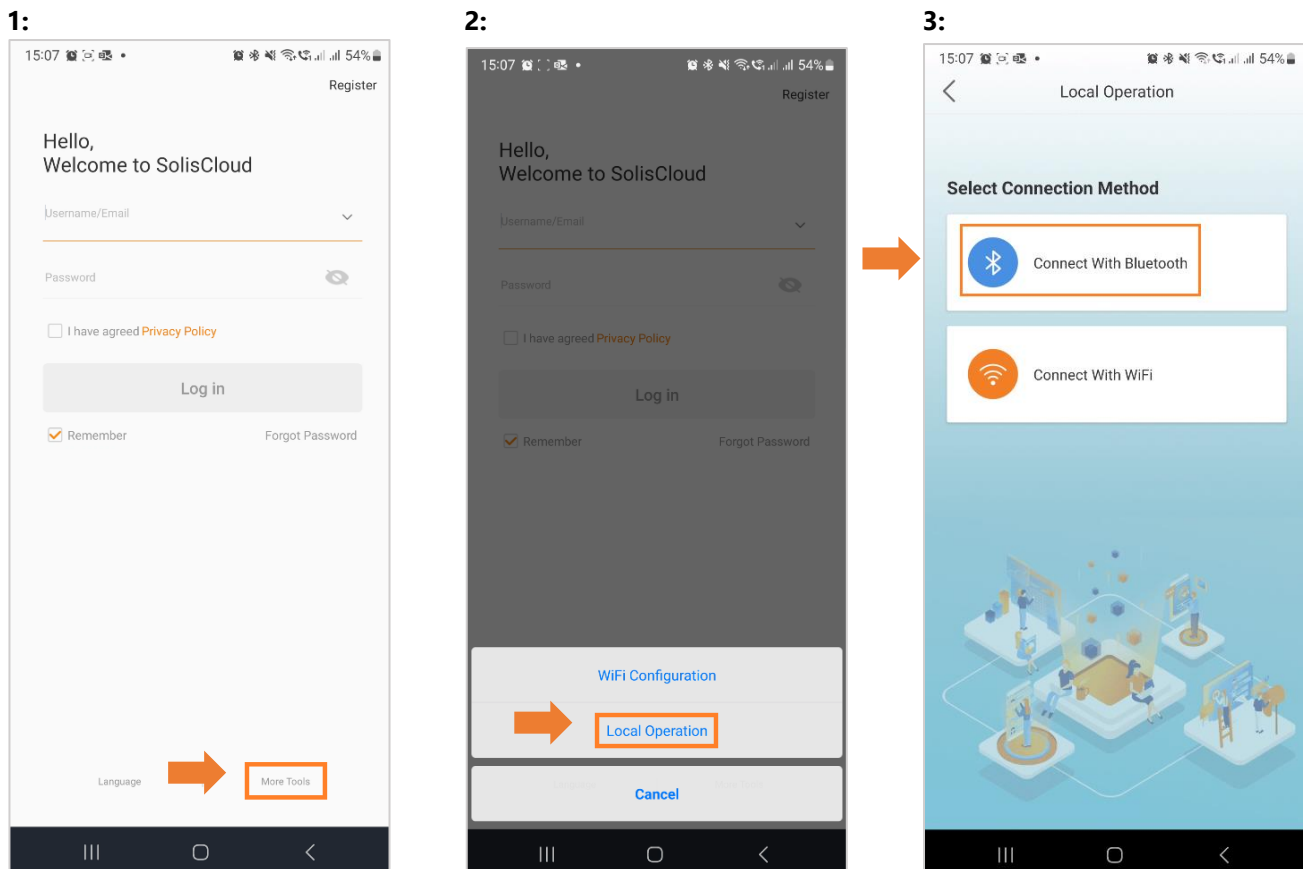
SolisCloud Monitoring APP (IOS)



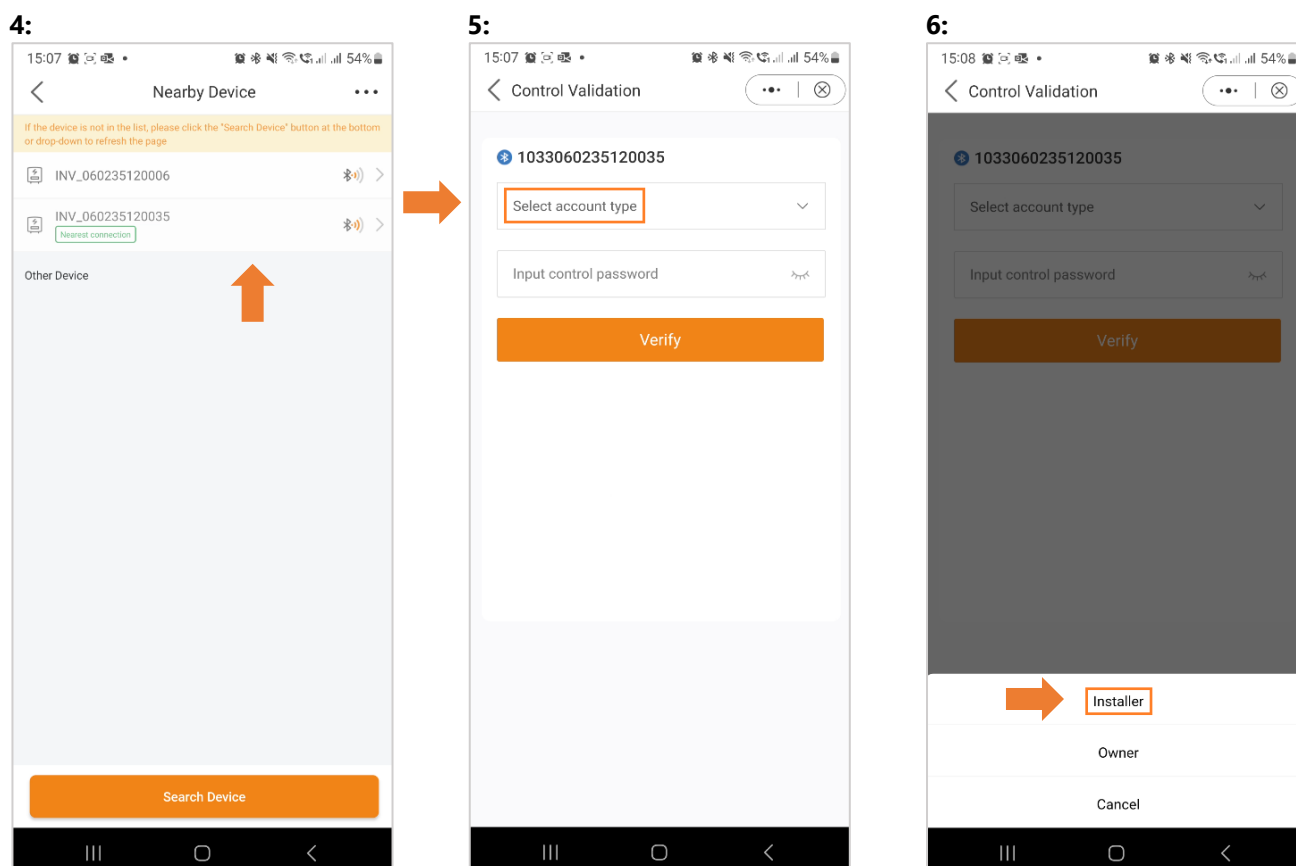
Connecting to your Inverter (First time login for INSTALLERS)

To establish a local connection, ensure that your device's Bluetooth is enabled.
Open the SolisCloud App and **DO NOT LOGIN**.

1. Navigate to the "More Tools" button on the bottom right-hand side.
2. Click on "Local Operation."
3. Select the "Connect with Bluetooth" button.

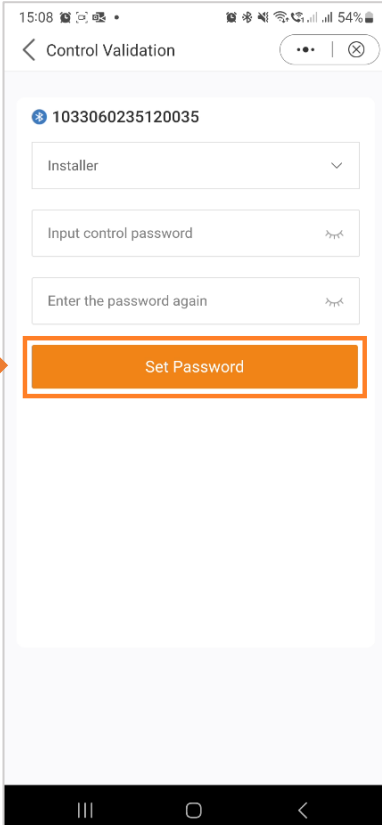


4. Your device should appear in the "Nearby Devices" section. Click on your device and verify the serial number.
5. Click on "Select account type."
6. Choose the "Installer" option.



7. When accessing the inverter for the first time, you will be asked to set a password. Please follow the on-screen instructions. Once the password is set, press "Set Password".

7:



After saving the password, you will now be connected to your inverter.

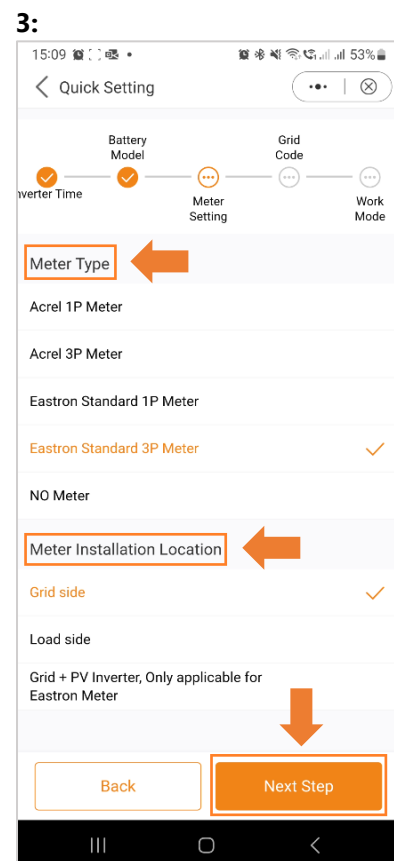
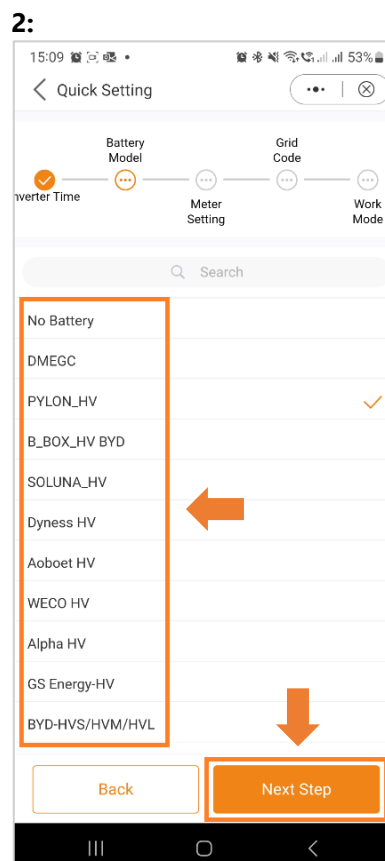
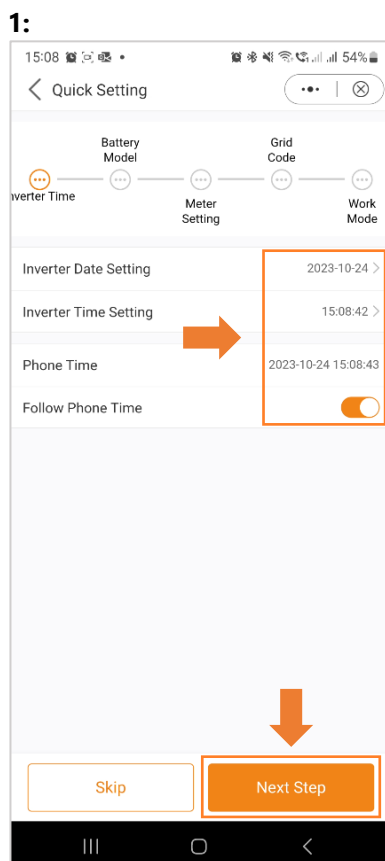


Quick Settings Overview

The Quick Settings will appear on your screen.

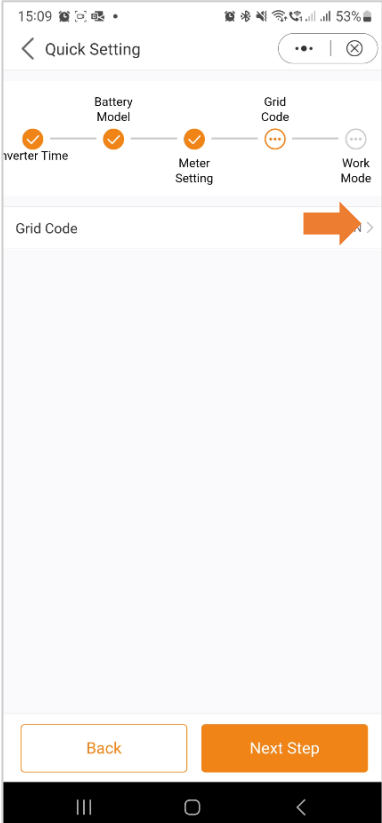
These are the 5 basic settings that need to be configured for the inverter to function properly.

1. Begin by setting the correct inverter time, or simply follow the phone time and press 'Next Step.'
2. Once the time is set, choose the correct battery model. Note: If you do not have a battery connected, please select 'No Battery.' Click on 'Next Step.'
3. In the third step, choose the correct meter and its placement. Refer to the instructions for your model for accurate meter placement.
Note: If you do not have a meter connected, please select 'No Meter.' Click on 'Next Step.'

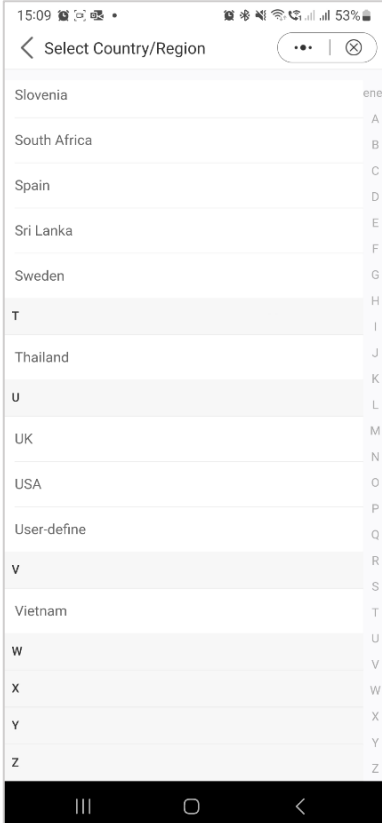


4. In the next step, choose the correct Grid code for your area.
5. Grid Codes are sorted by country names.
6. Once you have selected your country, various codes will be displayed. Please choose the correct one and click on "Save". If you are unsure about which grid standard to use, contact your local energy provider for more details.

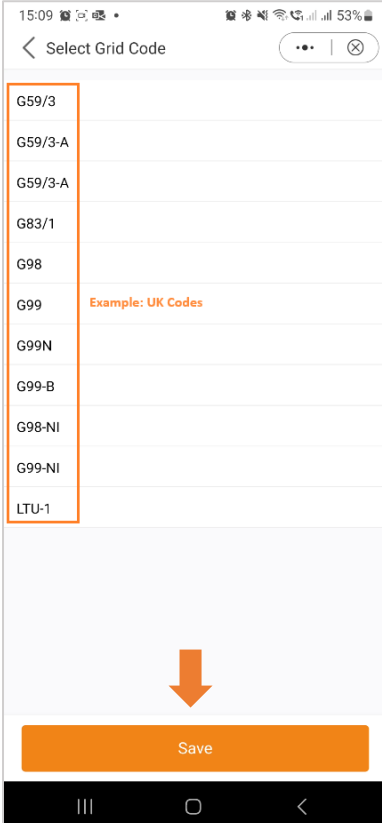
4



5:



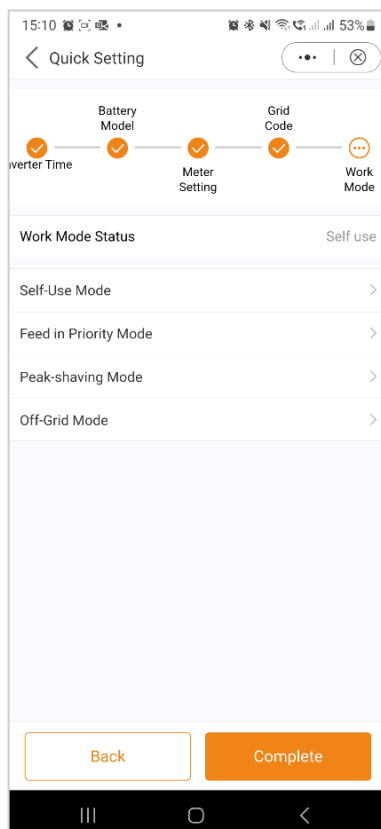
6:





7. In the last step of the Quick Settings, choose the mode that you want to apply. There are four different modes available:

- Self-Use Mode
- Feed-in Priority Mode
- Peak Shaving Mode
- Off-Grid Mode

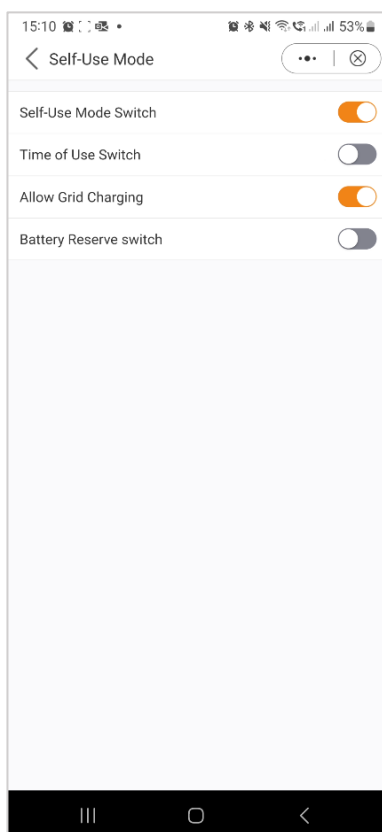


Self-Use Mode

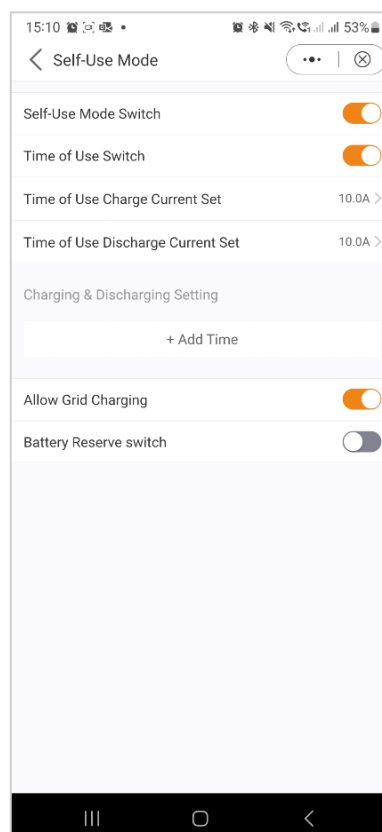
Self-Use Mode is designed to optimize the consumption of solar energy within a residential setting. In this mode, the system prioritizes directing all photovoltaic (PV) energy generated towards powering the home. Any surplus energy not immediately required by the household is intelligently stored in connected batteries. Only after the batteries are fully charged will any excess energy be fed back into the grid. In the absence of a battery system, the remaining surplus energy can be seamlessly exported to the utility grid, provided the system is configured accordingly. Most people in the European region will want to be using this mode over the others.

- Self-Use Mode is activated without any specific times set for the battery to charge/discharge, and the battery reserve is not switched on.
Note: Solis recommends activating the 'Allow Charging from Grid' option. Once the battery reaches the Forcecharge SOC, it will use the grid to charge the battery, preventing deep discharge.
- Activating the 'Time of Use Switch' will provide customers with several options to set charging/discharging times and current.
- Setting the charge or discharge current within the range of 0-50A.

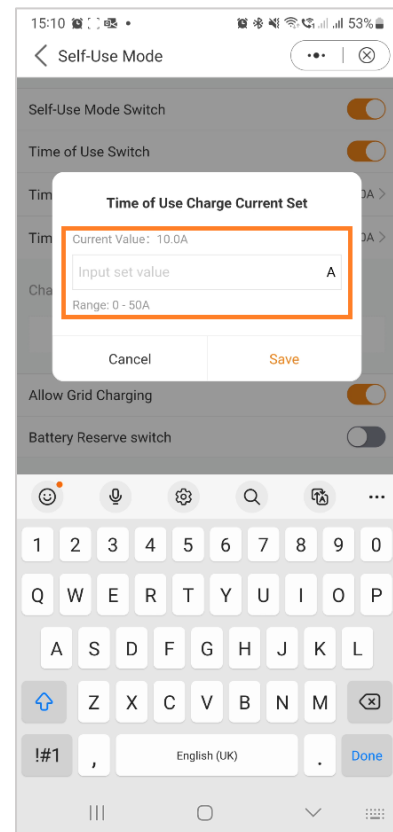
A:



B:

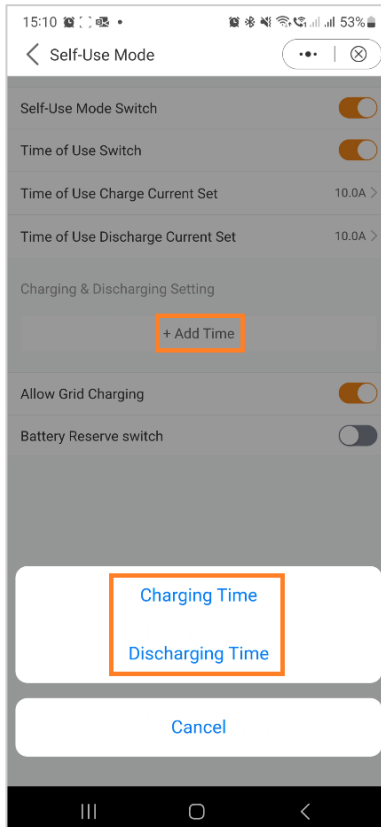


C:

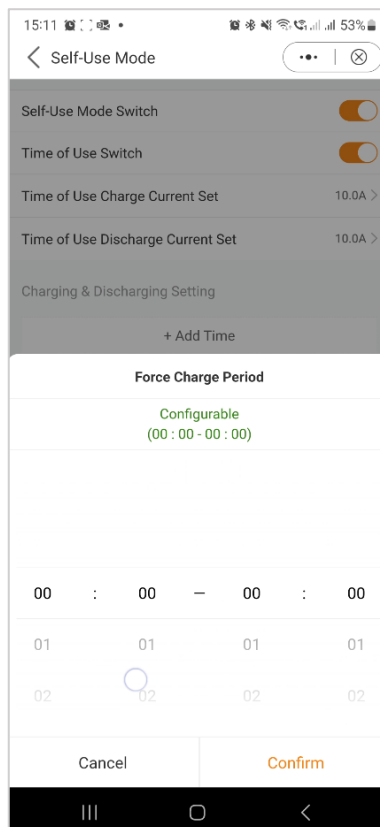


- D. If you want to set a specific charging or discharging value on your inverter, please first press "Add time" and then choose accordingly – Charging or Discharging Times.
- E. In the next step, please choose the actual time range for either Force Charge or Discharge.
- F. Once the Charge/Force charge period has been set, you will see the details on the screen.

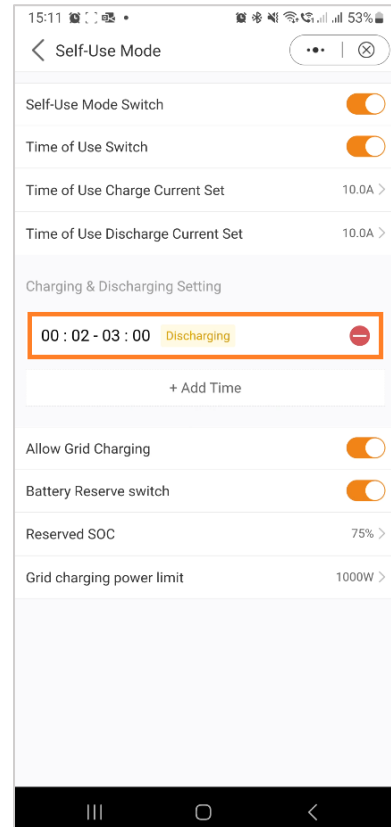
D:



E:

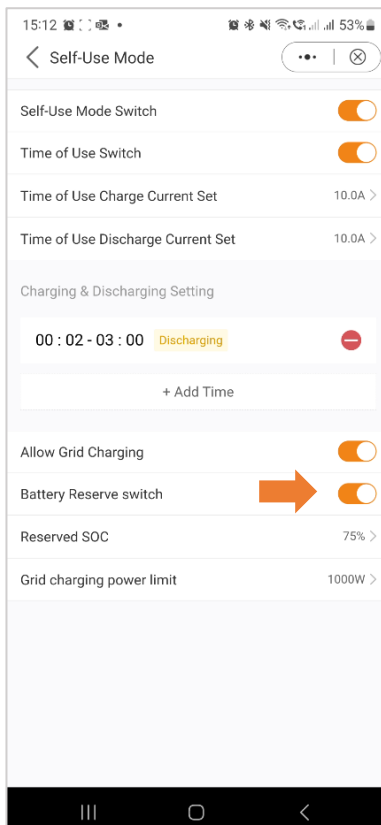


F:

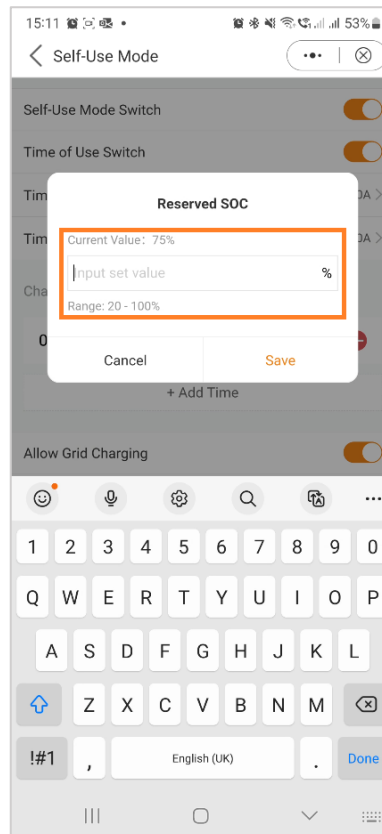


- G. The Self-Use Mode provides you with the option to set a Battery reserve value. Please toggle the switch to activate the battery reserve mode.
- H. You can set a range between 20% and 100% of the battery SOC. The inverter will strive to maintain the battery at the chosen set level.
- I. Finally, you have the option to establish a power limit that can be drawn from the grid side.

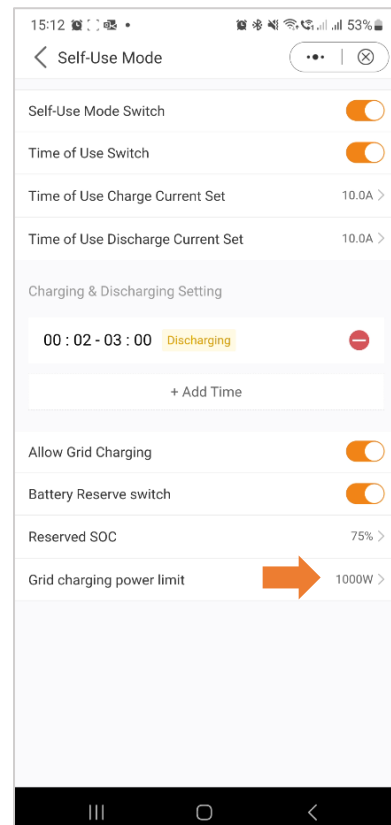
G:



H:



I:



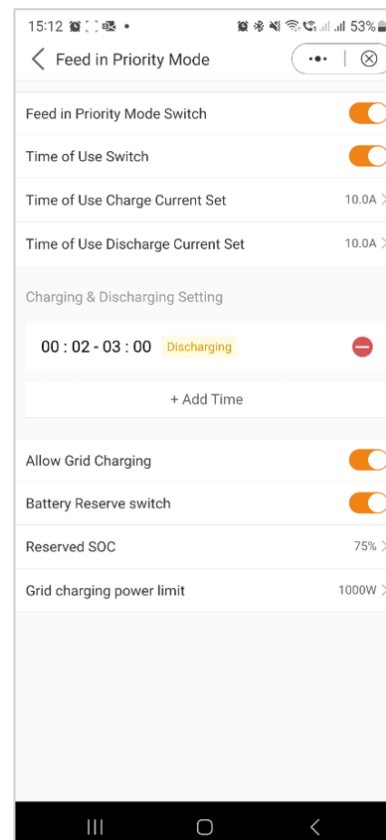
This completes the guide for the self-use mode. As mentioned before, the self-use mode is likely the setting you want for your inverter.



Feed in Priority Mode

Introducing the second Mode Option offered by Solis Inverters. Activating this mode directs the system to prioritize the sale of power to the grid. Consequently, the battery will remain inactive—neither charging nor discharging—unless Time Charging is enabled and properly configured. The Feed-In Priority mode is particularly well-suited for individuals with expansive PV systems in comparison to their power consumption and battery capacity. The primary objective of this mode is to maximize power sold to the grid, utilizing the battery only during brief intervals or in the event of a grid power outage.

The Feed-in Priority Mode bears a striking resemblance to the Self-Use Mode when observed through the app. Both modes provide the flexibility to define specific Charging and Discharging times, along with the ability to set Charging and Discharging Current. Additionally, users can establish a designated battery reserve State of Charge (SOC), and there is the option to restrict the power drawn from the grid side in both modes.



Peak Shaving Mode

"Peak Shaving" is a strategy used by households surpassing utility-set power limits. It involves using self-generated power during peak consumption to offset new tariffs. The Solis hybrid inverter, ideal for areas with peak power restrictions, pairs with a photovoltaic (PV) system and energy storage. This allows users to rely on green electricity, gain independence, and cut electricity costs.

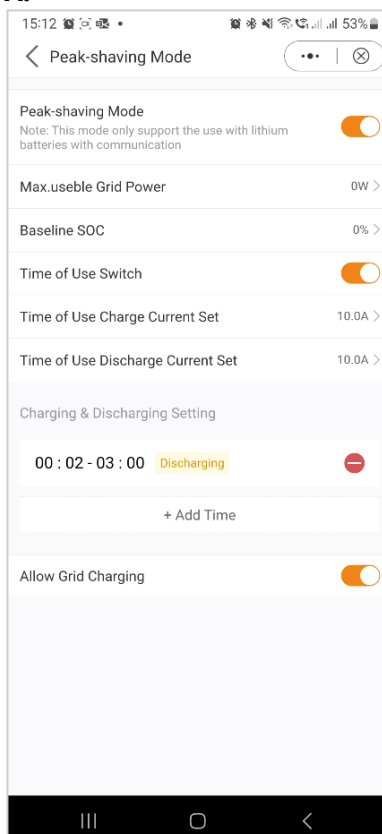
Throughout the day, surplus PV-generated power is used locally, charging the battery. Excess power can be sold to the grid. At night, batteries supply household needs. In grid interruptions, the system functions autonomously for continuous residential power.

Solis S6 energy storage inverter supports peak shaving in "self-use" mode, letting users set the maximum grid power for loads, supplemented seamlessly by PV or batteries.

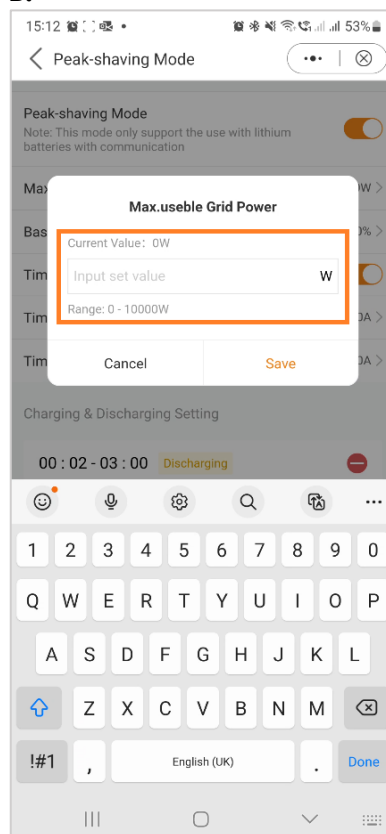
Note: The Peak Shaving Mode can only be used with lithium batteries.

- Peak Shaving Mode App View
- Define the maximum usable power drawn from the grid.
- Setting a baseline State of Charge (SOC) for the battery.

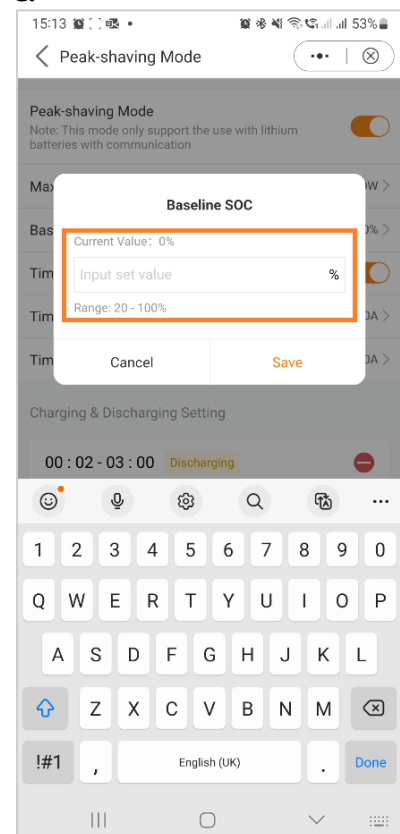
A:



B:



C:

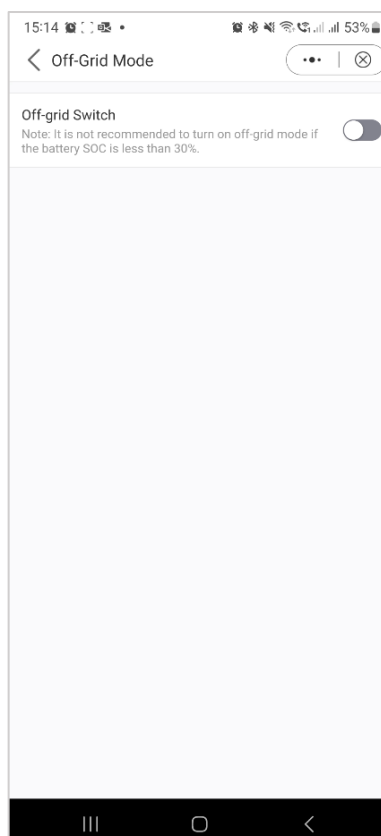


As evident in the screenshots, you have the option to configure the charge/discharge current and set charging times when activating the "Time of Use Switch."



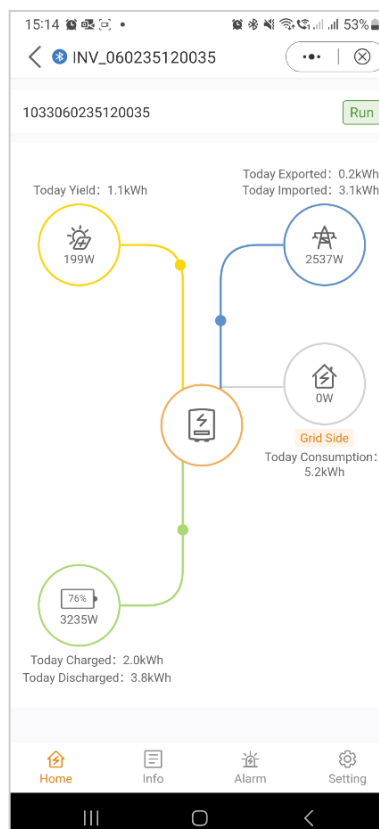
Off Grid Mode

This mode is exclusively designed for individuals installing the inverter in an off-grid configuration. Specifically, no cables should be connected to the "AC Grid" terminals of the inverter; rather, they should be directed solely to the "AC Backup terminals." In this operational state, the inverter will deliver power to the backup loads using energy sourced from both the PV system and the battery, depending on their availability.



After selecting and configuring your preferred mode, the quick setup of the device is finished. On the app, you should now observe a graphical representation illustrating the energy flow within the inverter system.

This graphic typically displays the current PV power, grid input, loads, and battery status. In the provided example, no loads are connected, thus the graphic will appear in grey.

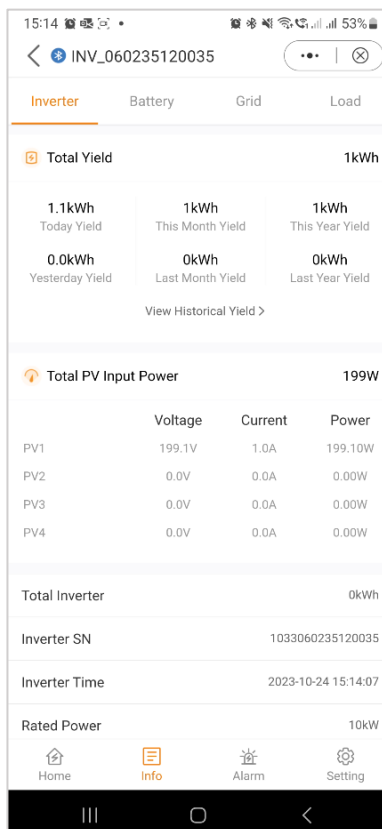


App Information Screen

On the App Information screen, you have easy access real-time data on inverter, battery, grid, and load side details.

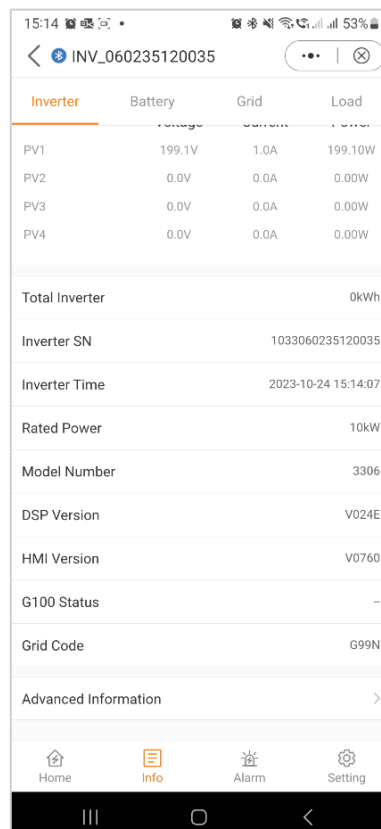
Inverter Information

Top section:



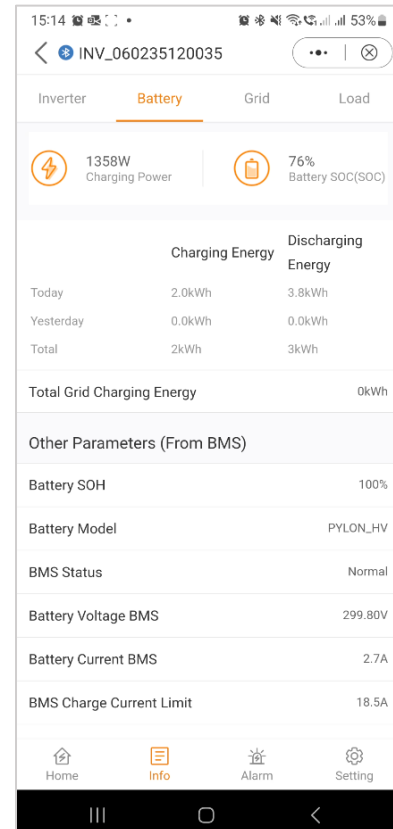
Inverter Information

Bottom Section:



Battery Information

Top Section:



Battery Information

Bottom section:

15:14 INV_060235120035	
Inverter	Battery
Other Parameters (From BMS)	
Battery SOH	100%
Battery Model	PYLON_HV
BMS Status	Normal
Battery Voltage BMS	299.80V
Battery Current BMS	2.7A
BMS Charge Current Limit	18.5A
BMS Discharge Current Limit	18.5A
Other Parameters (From Inverter)	
Battery Voltage BMS	301.9V
Battery Current BMS	4.5A
OverVoltage Protection Value	600.0V
UnderVoltage Protection Value	100.0V
Home	Info
Alarm	Setting

Grid Information

Top Section:

15:14 INV_060235120035	
Inverter	Battery
Grid	
Imported	
Today	-
Yesterday	-
Total	-
Exported	
Today	-
Yesterday	-
Total	-
Grid Data	
Power	-
Voltage A	-
Voltage B	-
Voltage C	-
Current A	-
Current B	-
Current C	-
Frequency	-
Meter Data	
Total Power	-
Home	Info
Alarm	Setting

Grid Information

Middle Section:

15:14 INV_060235120035	
Inverter	Battery
Grid	
Load	
Meter Data	
Total Power	-4301W
Power A	322W
Power B	522W
Power C	465W
Total Apparent Power	4305VA
Apparent Power A	410VA
Apparent Power B	536VA
Apparent Power C	493VA
Total Reactive Power	49Var
Reactive Power A	119Var
Reactive Power B	0Var
Reactive Power C	0Var
Voltage A	241.4V
Home	Info
Alarm	Setting



Grid Information

Bottom section:

INV_060235120035	
Inverter	Battery
Grid	
Reactive Power A	119Var
Reactive Power B	0Var
Reactive Power C	0Var
Voltage A	241.4V
Voltage B	236.5V
Voltage C	238.4V
Current A	6.59A
Current B	5.58A
Current C	5.78A
Meter/CT Power Factor	0.78
Meter/CT Grid Frequency	49.92Hz
Meter/CT Type	Eastron Standard 3P Meter
Meter Installation Location	Grid side

Load Information

Top Section:

INV_060235120035	
Inverter	Battery
Grid	Load
Grid side	
Grid Load Power (Active)	2849W
Total Grid Load Consumption	5kWh
Today Grid Load Consumption	5.2kWh
This Month Grid Load Consumption	5kWh
This Year Grid Load Consumption	5kWh
Backup side	
Backup Load Power (Active)	0W
Total Backup Load Consumption	0kWh
Today Backup Load Consumption	0.0kWh
This Month Backup Load Consumption	0kWh
This Year Backup Load Consumption	0kWh
Backup Port Voltage A	0.0V
Backup Port Voltage B	0.0V

Load Information

Bottom Section:

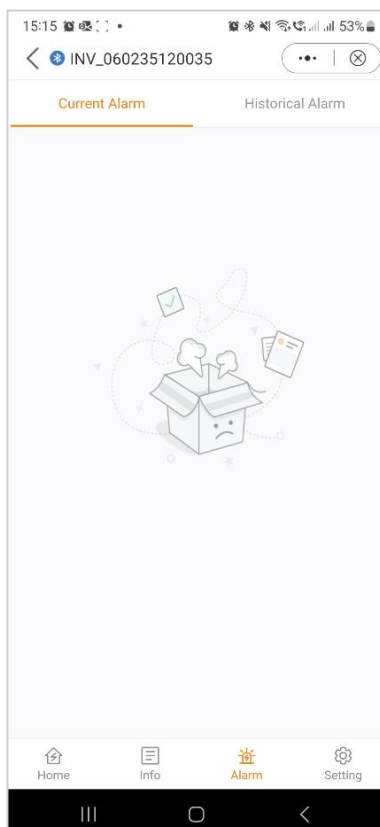
INV_060235120035	
Inverter	Battery
Grid	Load
1 This Month Grid Load Consumption	
5kWh	
This Year Grid Load Consumption	
5kWh	
Backup side	
Backup Load Power (Active)	0W
Total Backup Load Consumption	0kWh
Today Backup Load Consumption	0.0kWh
This Month Backup Load Consumption	0kWh
This Year Backup Load Consumption	0kWh
Backup Port Voltage A	0.0V
Backup Port Voltage B	0.0V
Backup Port Voltage C	0.0V
Backup Port Current A	0.3A
Backup Port Current B	0.4A
Backup Port Current C	0.3A



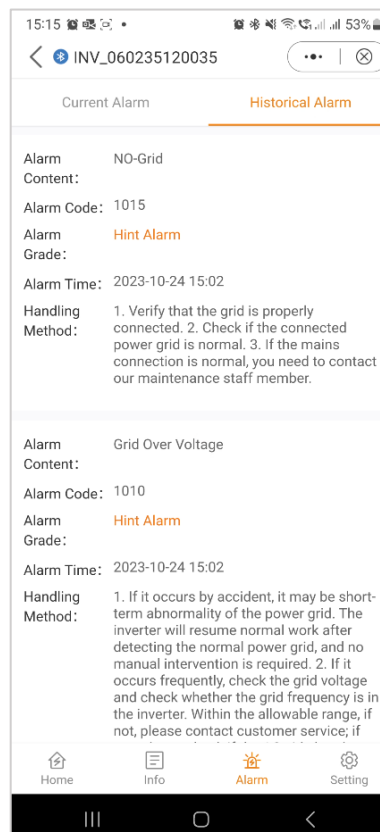
App Alarm Messages

Within the Alarm Messages section, both current and historical alarms are accessible. Users can review the specifics of each alarm message to obtain further details and insights into the system's status and any past issues that may have occurred. This feature enables users to track and address any alarms or issues that may have occurred during the operation of the inverter system.

Current Alarm Messages



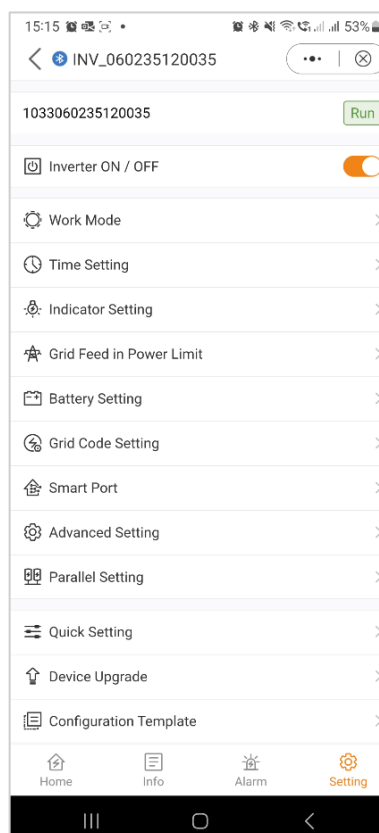
Historical Alarm Messages



Settings

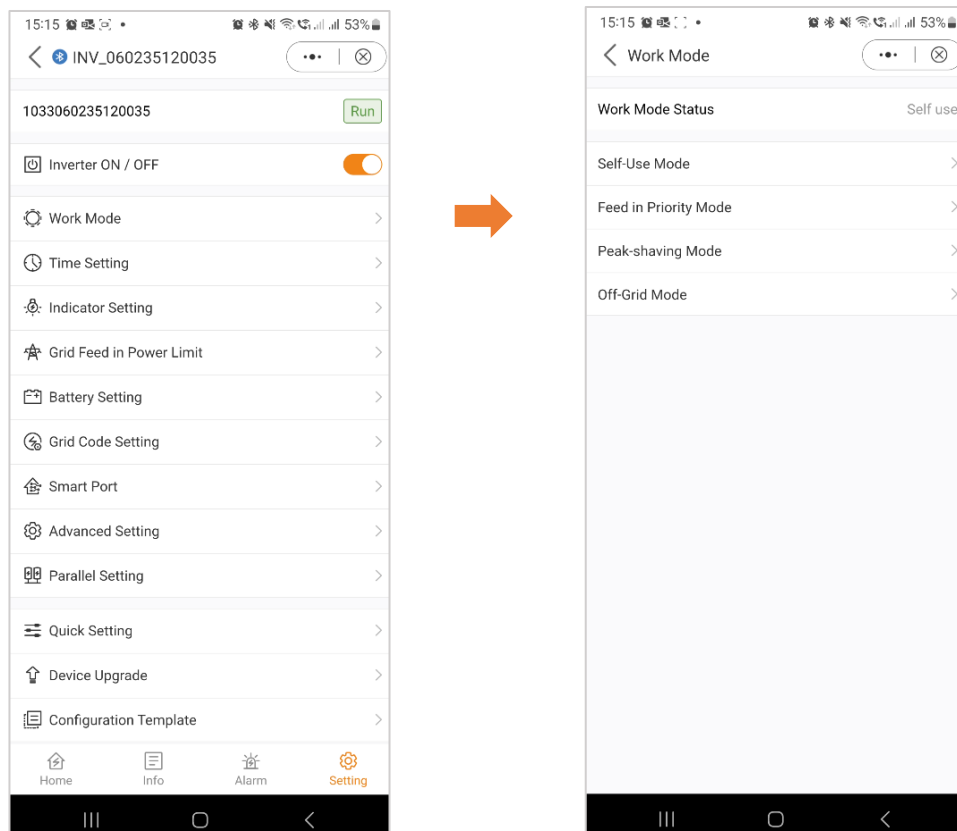
In the upcoming section, we'll provide you with an overview of the inverter settings accessible via the app. These settings offer a range of possibilities, from basic functions such as powering the inverter on/off, adjusting battery settings, to more advanced options like upgrading your device. We recommend exploring each of the following sections for a detailed understanding of the available features.

Settings Overview



Settings

Working Modes



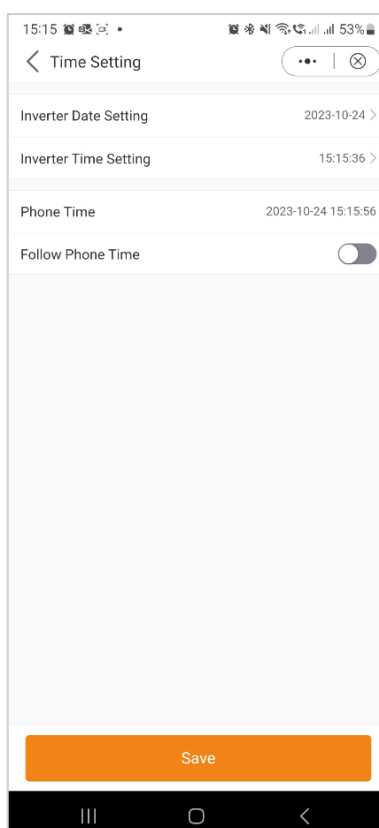
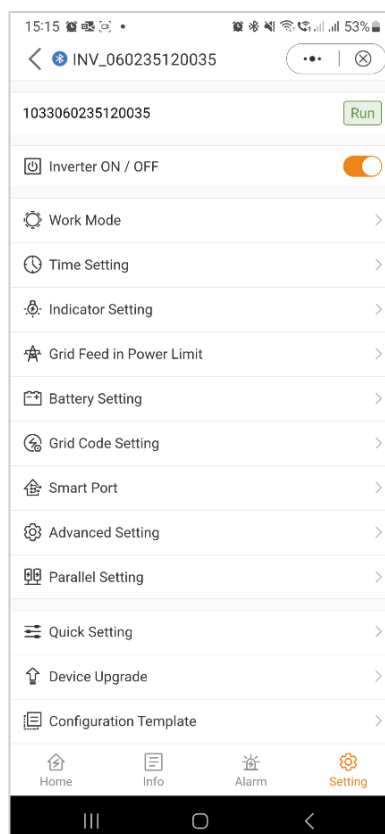
Note: For a comprehensive understanding of the various working modes, please refer to the previous section (Quick Setup), where we have already provided detailed explanations for each mode.



Settings

Time Setting

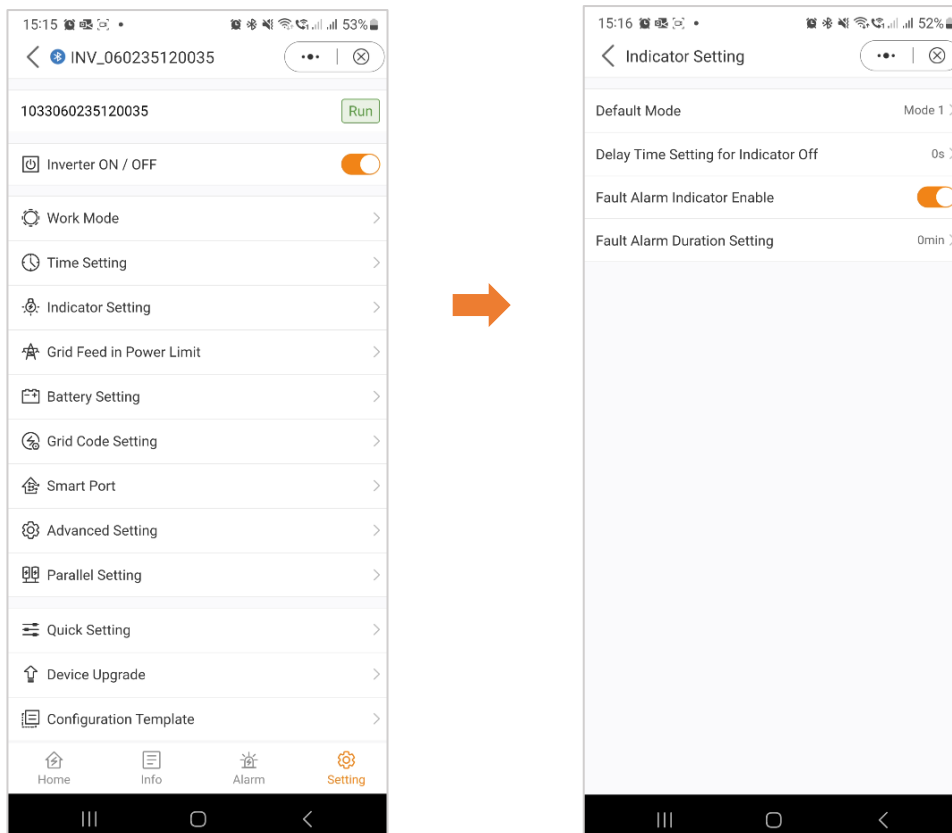
Ensuring that the correct time is set on the inverter is crucial for its proper functionality. This ensures accurate timing and synchronization, allowing the device to operate as intended.



Settings

Indicator Setting

The Indicator Mode on inverters offers users the ability to customize the front panel display according to their preferences. This feature allows for a tailored presentation of key indicators, such as power output, battery status, and system alerts. By providing flexibility in visual feedback, the Indicator Mode enhances user convenience, promoting a more personalized and efficient monitoring experience.



Settings

Grid Feed in Power Limit – EPM Function

To restrict the export of power from the inverter, customers can utilize the internal EPM (Export Power Limit) function. Through the app, users have the flexibility to easily adjust various settings, enabling them to control the amount of power exported to the grid. This feature provides a convenient way for users to manage and limit their power export based on their preferences and requirements.

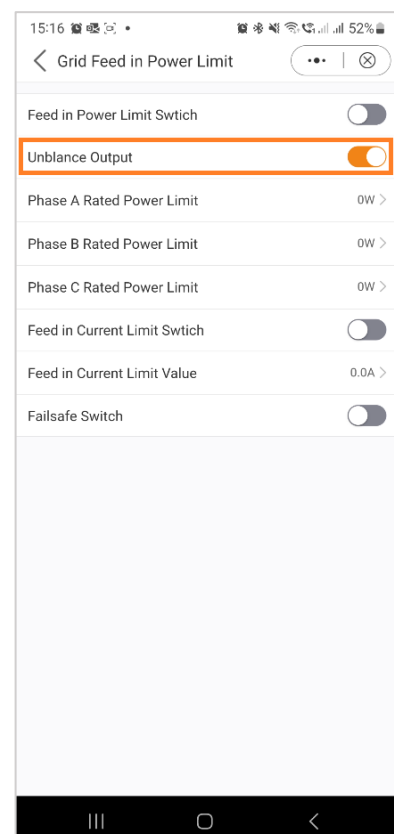
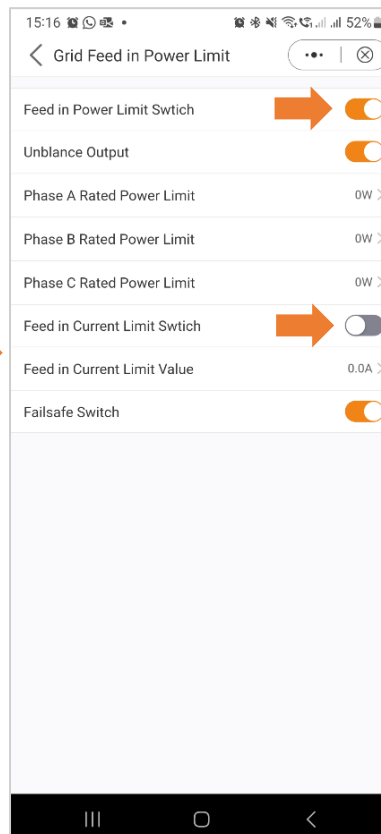
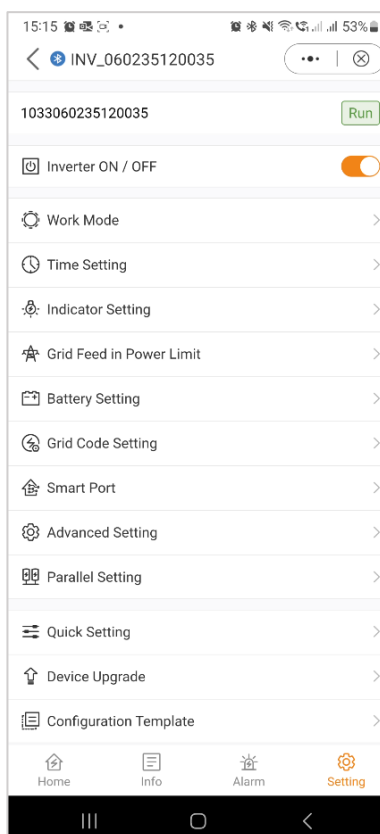
General Settings view:

Grid Feed in Power Limit view:

You have the flexibility to limit the feed-in of either power or current.

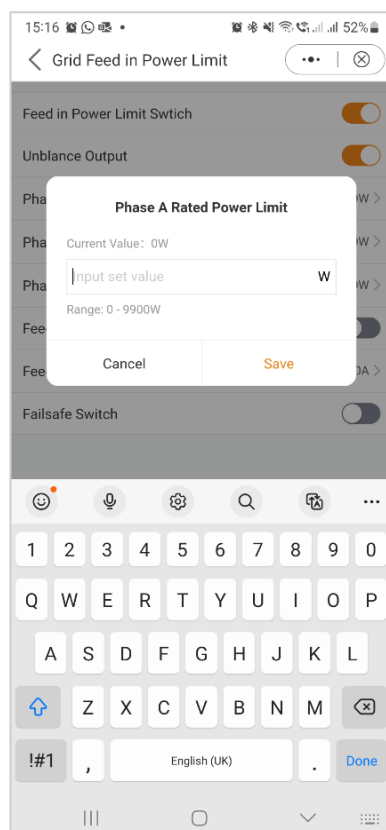
Unbalanced Output:

If this is set to "On," it will inject power to only one phase. If it's set to "Off," it will equalize on all three phases. (Feed in power only)

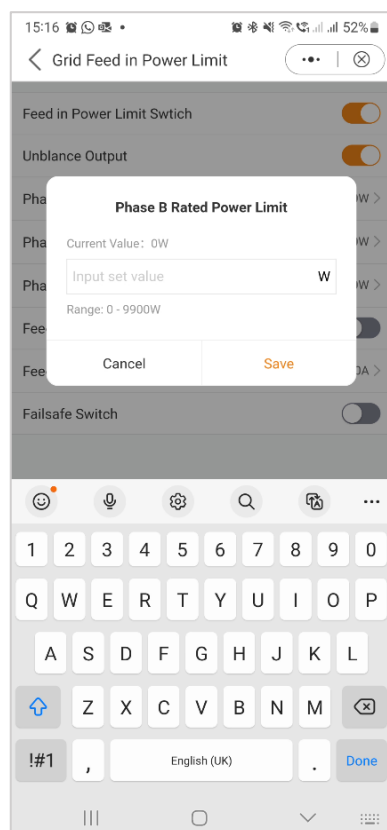


Once you activate the Feed in Power limit switch, you have the possibility to set the power limit for each phase individually.

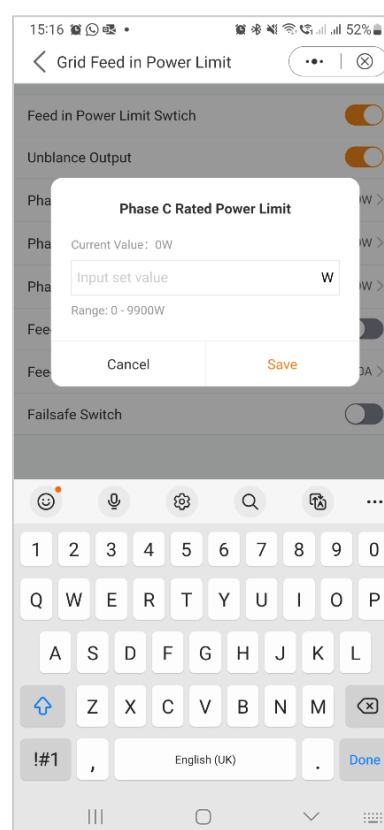
Phase A:



Phase B:



Phase C:

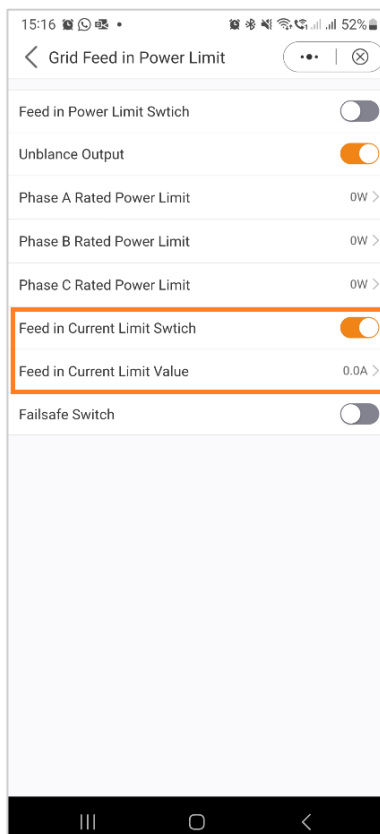
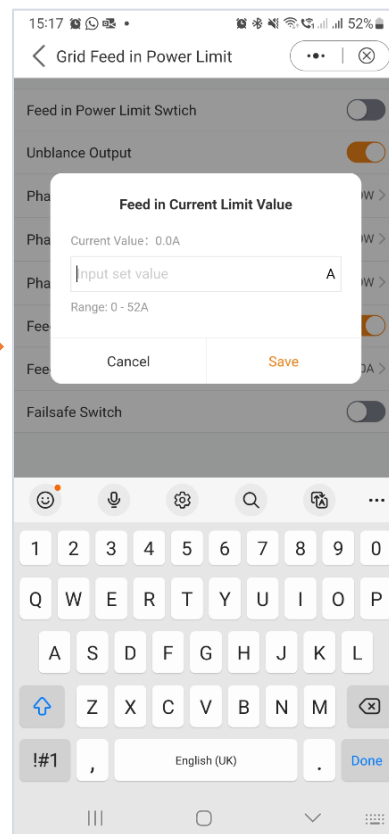
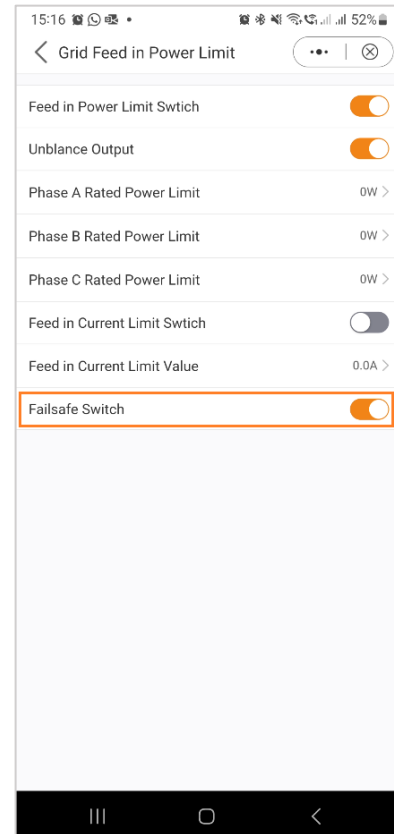



A & B:

In addition to limiting the power, you also have the option to limit the current only.

C:

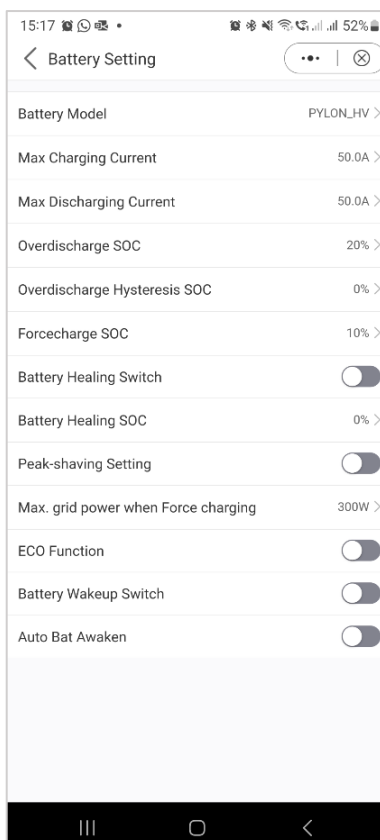
When this setting is enabled, the inverter will discontinue power generation if it loses communication with the external meter. In such instances, an alarm code will be displayed on the screen, and if a logger is installed, the information will be logged on SolisCloud. Enabling the failsafe ensures that no power is exported to the grid, providing an additional layer of control and safety in case of communication interruptions.

A:**B:****C:**

Settings

Battery Settings

The battery section of the app offers numerous options to customize the interaction between the inverter and the battery. Here, we provide explanations for the functions and features available in this section, allowing users to tailor the inverter's behavior to their specific preferences and requirements.



Battery Model: Please select the correct model of the battery. If you don't have a battery, choose "No battery" to ensure accurate configuration.

Max Charging/Discharging Current: Choose the maximum charge/discharge current that you wish to. This selection allows you to customize the charging and discharging parameters based on your preferences and requirements.

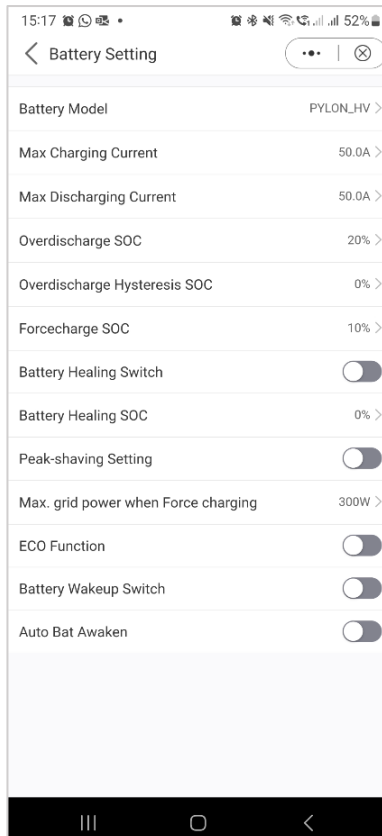
Overdischarge SOC: The Overdischarge SOC (State of Charge) is the minimum battery charge level to which the inverter will discharge. It acts as a safeguard to prevent the battery from discharging beyond this specified threshold, ensuring its longevity and health.

Overdischarge Hysteresis SOC: The Overdischarge Hysteresis SOC is designed to avoid the battery SOC jump to a value that higher than the real overdischarge soc leading to a battery discharge although the battery is in an overdischarged state. When the customer enables this function, the battery will force charge to Overdischarge SOC + Overdischarge Hysteresis SOC.

Forcecharge SOC: The Forcecharge SOC for the battery is the minimum state of charge (SOC) at which the inverter initiates charging the battery from the grid. It specifies the threshold below which the inverter actively engages in recharging the battery to maintain optimal performance.

Settings

Battery Settings



Peak-shaving setting:

If the switch is enable, the power of force charging will be dynamically adjusted. (see below for example)

Max Grid power when Force charging:

During Forcecharge activation, users have the option to set the maximum power utilized by the grid. This feature allows for customization of the power limit, ensuring control over the amount of energy drawn from the grid during the charging process. (Peak-shaving needs to be activated)

ECO Function:

If PV power is lower than 100W and SOC falls below overdischarge SOC, the inverter will turn of the grid relays and IGBT switching. If forcecharge SOC is reached, it will connect back to grid and charge battery back to overdischarge SOC, then turn off again.

Battery Wakeup Switch:

After Battery wake up command, the inverter powers the DC battery port using Battery Wakeup Voltage and low AMP till BMS communication of battery will be restored and within awaken time.

Auto Bat Awaken:

The battery will wakeup according to the battery wake up condition pre-set.

Example Peak Shaving setting:

If the switch is enable, the power of force charging will be dynamically adjusted.

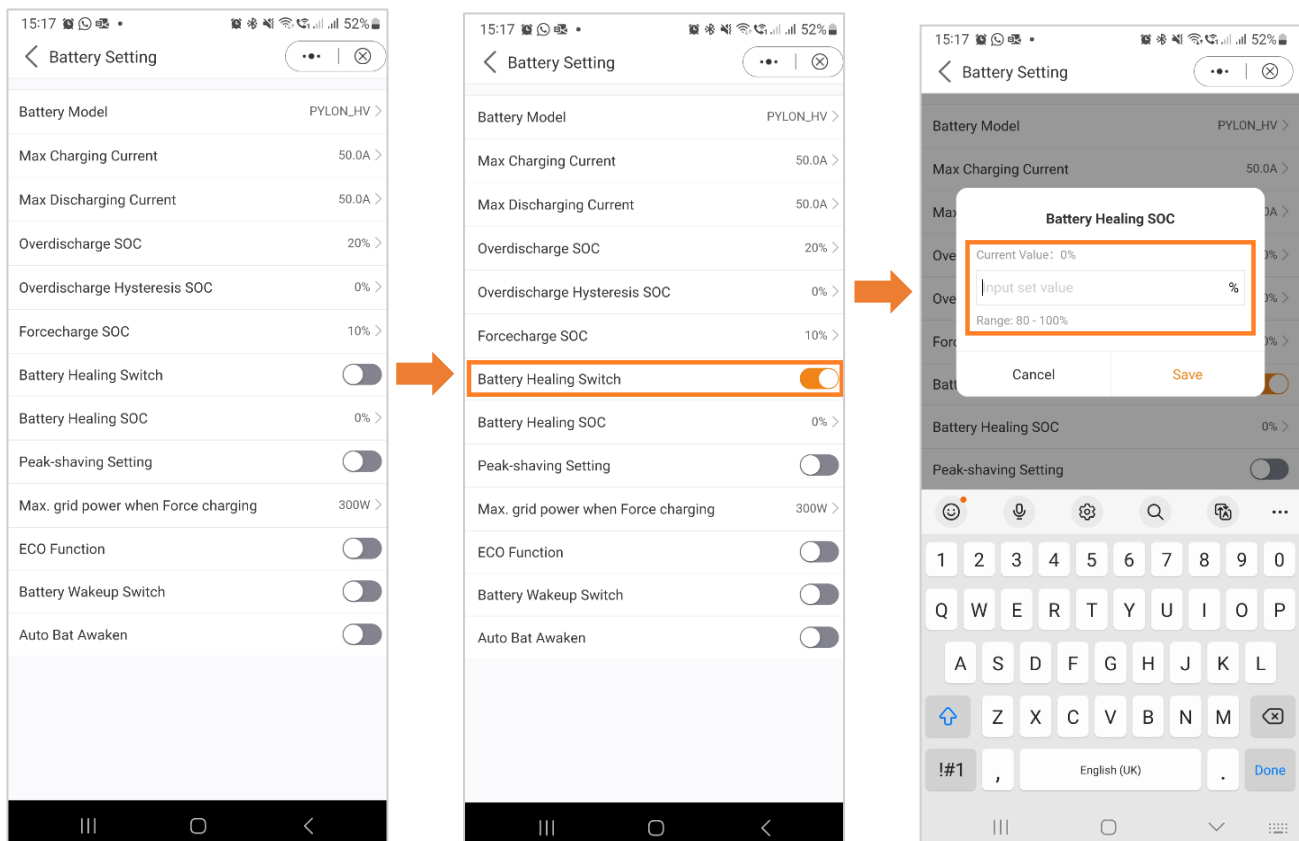
Few samples to be clear: (Forcecharge Limited Power Setting=4kW)

If the load=3kW,PV=0kW,P_forcecharge=P_Grid(4kW)-P_Load(3kW)=1kW.

If the load=10kW,PV=0kW,P_forcecharge=0kW,P_Grid=P_Load=10kW.

Battery Healing Switch

When the lithium battery is kept low for a long time, the measurement of the battery SOC is not accurate. This function will charge the battery to the set battery Healing SOC when the battery reaches the discharged SOC. This will ensure a healthy and stable operation of the battery.



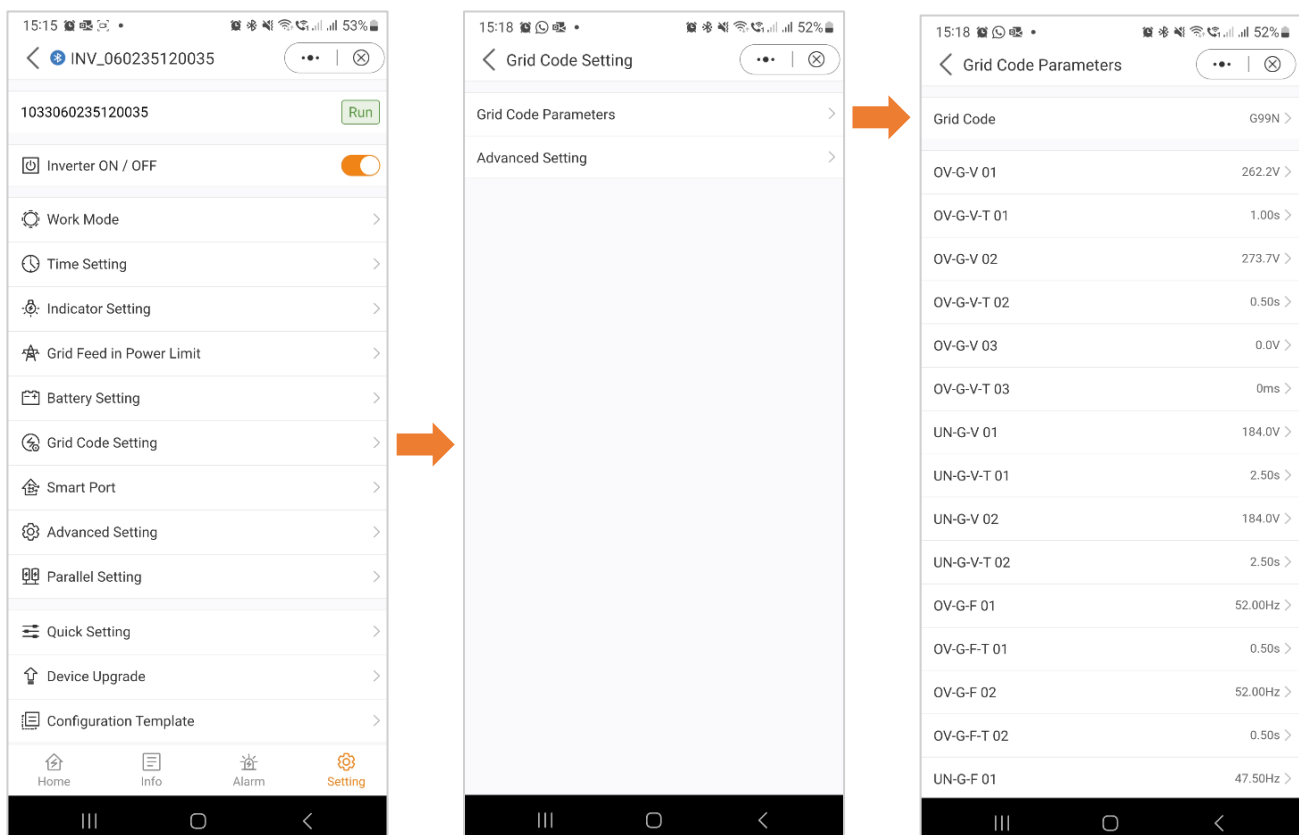
Settings

Grid Code Setting

The Grid Code settings provide users with information on both the Grid Code Parameters and Advanced Grid Code Settings.

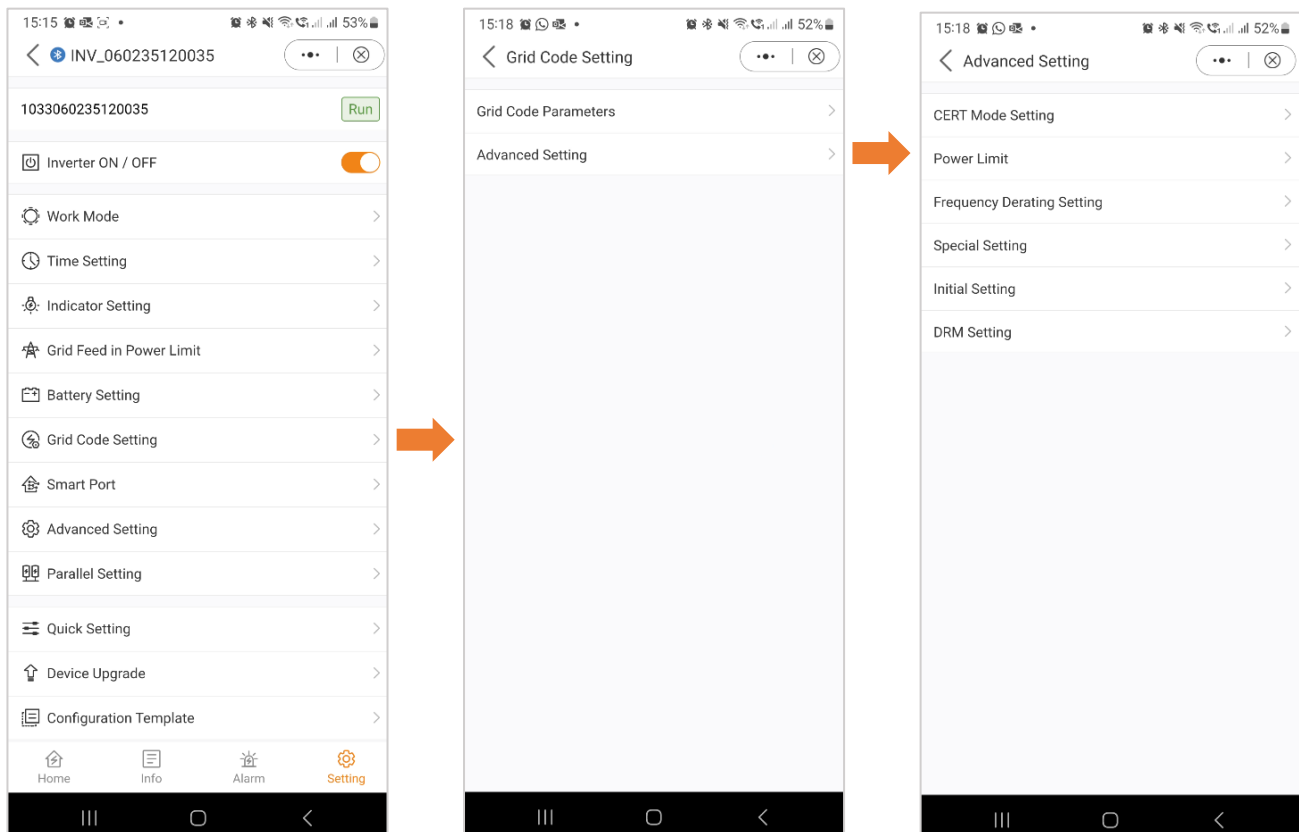
Grid Code Setting – Grid Code Parameters

Grid Code Parameters are giving you an insight into the details of the Grid Code that has been selected.



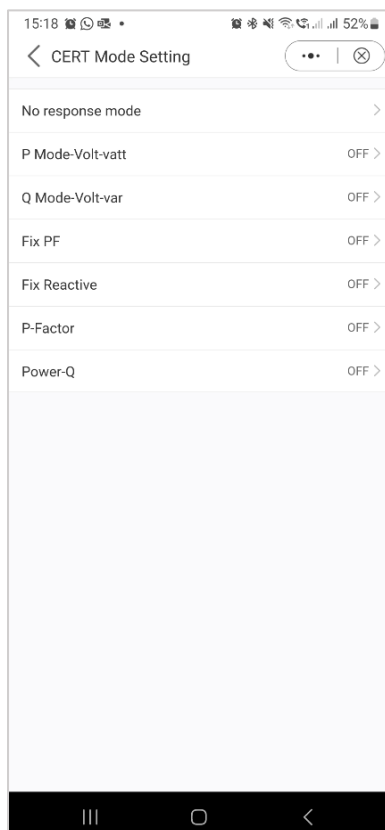
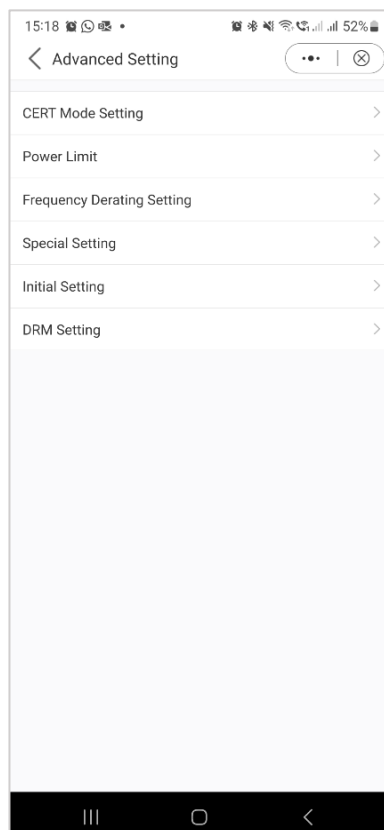
Grid Code Setting – Advanced Settings

Within the Advanced Settings, users gain insights into features such as power limitation, Frequency Derating Settings, and DRM (Dynamic Response Mechanism) settings. These advanced parameters offer fine-tuned control and customization options for optimizing the performance of the inverter system.



Grid Code Setting – Advanced Settings

CERT Mode Setting

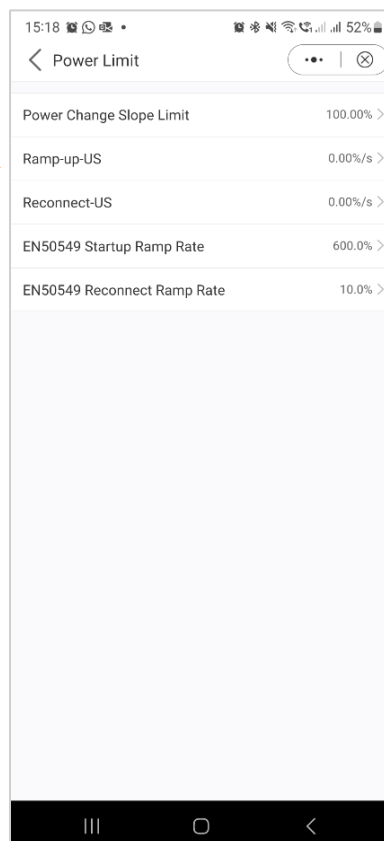
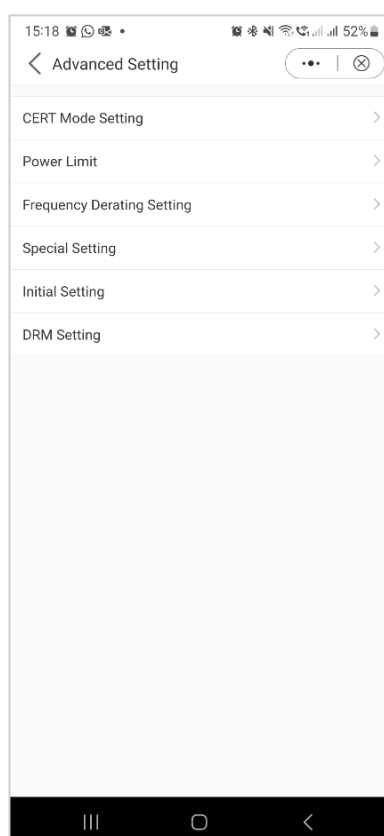


Certification mode is specified work modes for grid codes.



Grid Code Setting – Advanced Settings

Power Limit



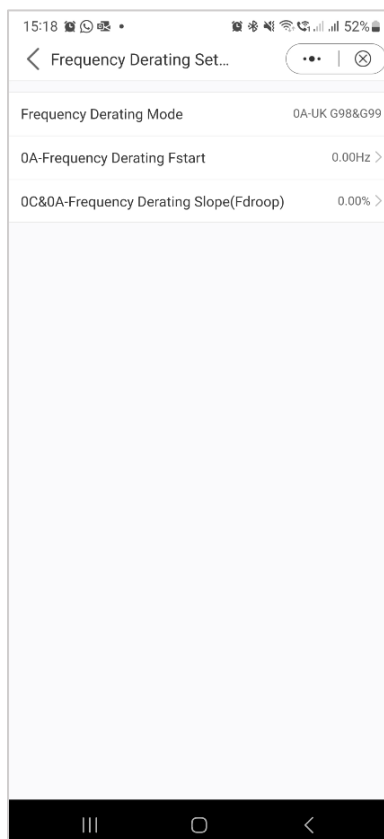
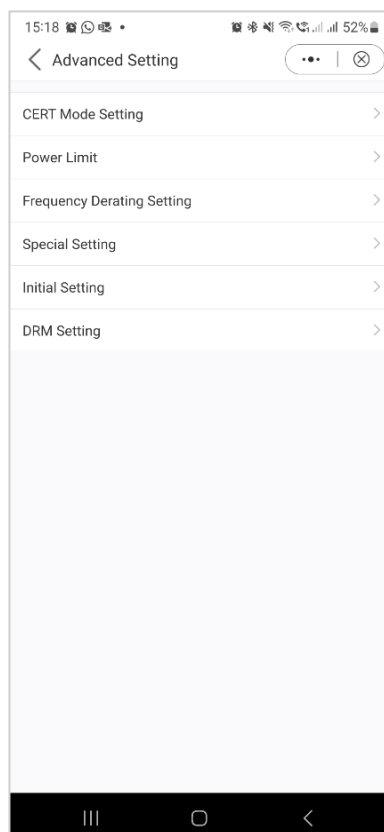
For further information about the Power Limit, see graph below.

功率限制 (Power Limit)	功率控制斜率	Power Control Slope	43424	U16	0.01	%/min		范围: 隐藏
	远程有功功率限制百分比	Remote active power percentage limit (Power control)	43425	U16	0.01	%		范围: 0%~110%
	功率变化斜率限制	Gradient Limit for Power Change	43222	U16	0.01	%		范围: 隐藏
	Ramp-up-US	Ramp-up-US	43429	U16	0.01	%/s		功率突增的变化斜率 (Wnor) 范围: 1%~100%
	Reconnect-US	Reconnect-US	43430	U16	0.01	%/s		连接和重连的变化斜率 (Wcon) 范围: 0.1~100%
	EN50549上电变化斜率限制	EN50549 Gradient Limit for Power-on	43224	U16	0.1	%		范围: 隐藏
	EN50549故障Trip重启后功率变化斜率	EN50549 Power Change Gradient after Fault Trip	43223	U16	0.1	%		范围: 隐藏



Grid Code Setting – Advanced Settings

Frequency Derating Setting

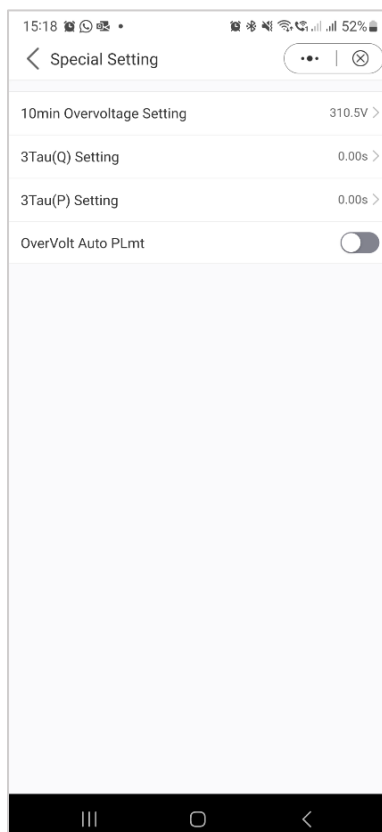
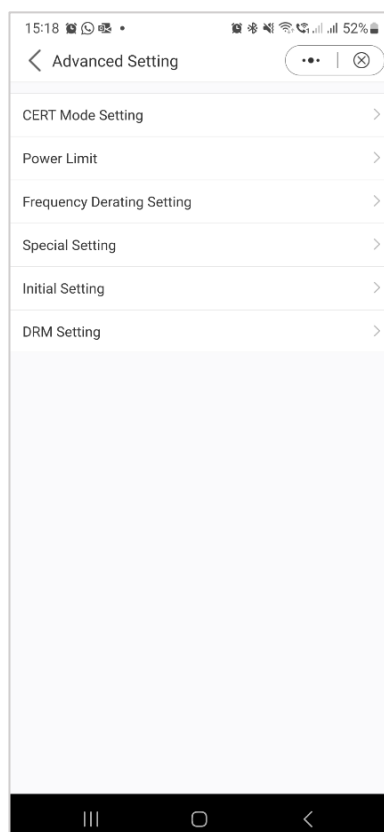


When the grid is in over frequency state, the output power of inverter will be decreased.



Grid Code Setting – Advanced Settings

Special Settings

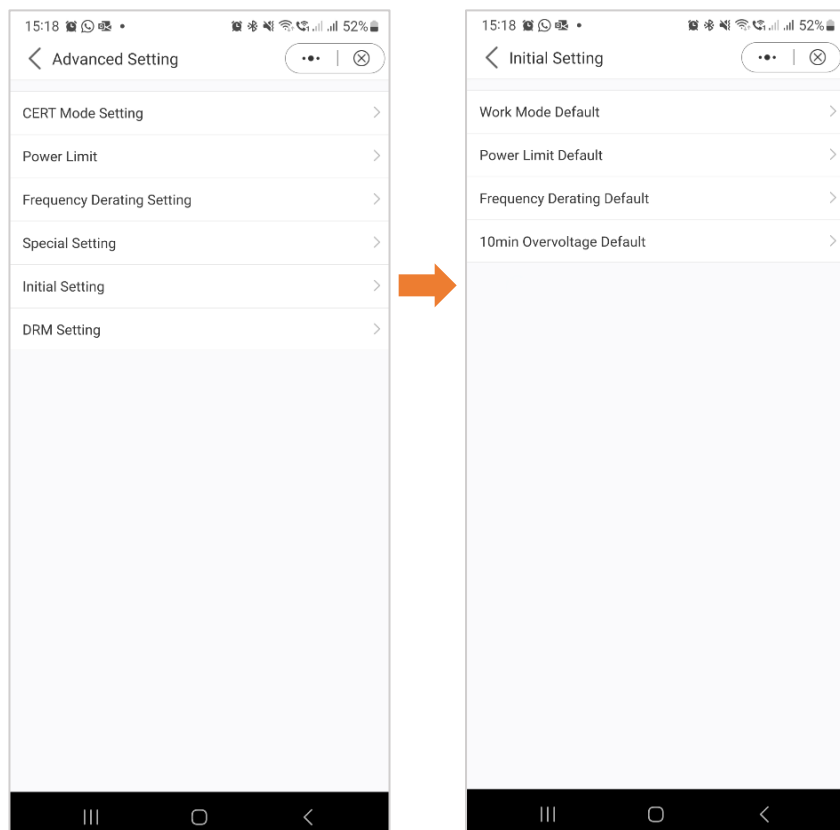


These settings are the normal protection parameters in assorted grid standards.



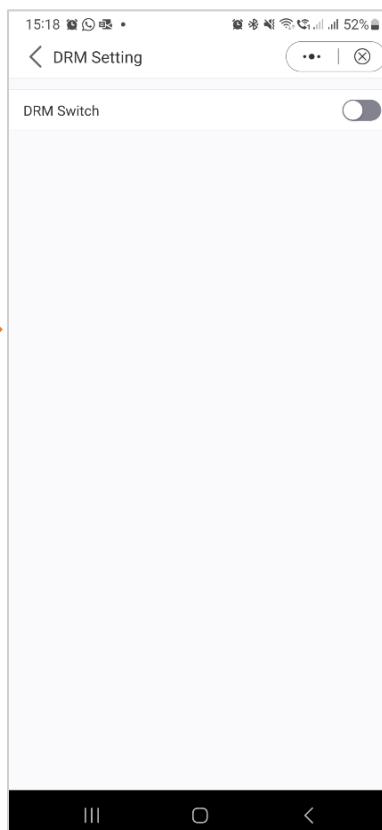
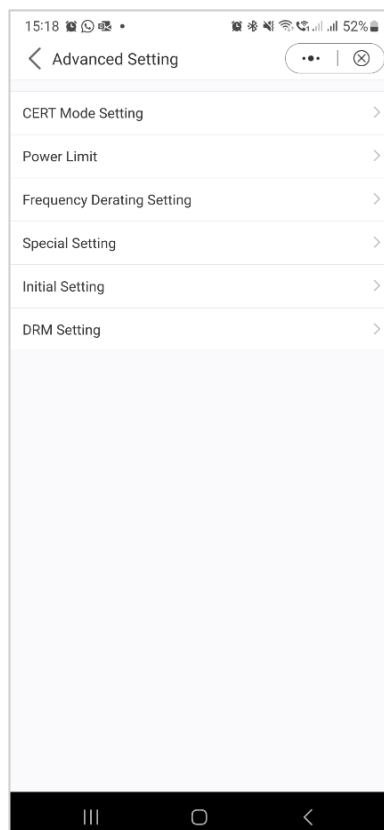
Grid Code Setting – Advanced Settings

Initial Settings



Grid Code Setting – Advanced Settings

DRM Settings



In this section, users have the ability to toggle the DRM (Dynamic Response Mechanism) Switch on or off. This control allows users to enable or disable the dynamic response mechanism, providing flexibility in managing the inverter's response to grid conditions.



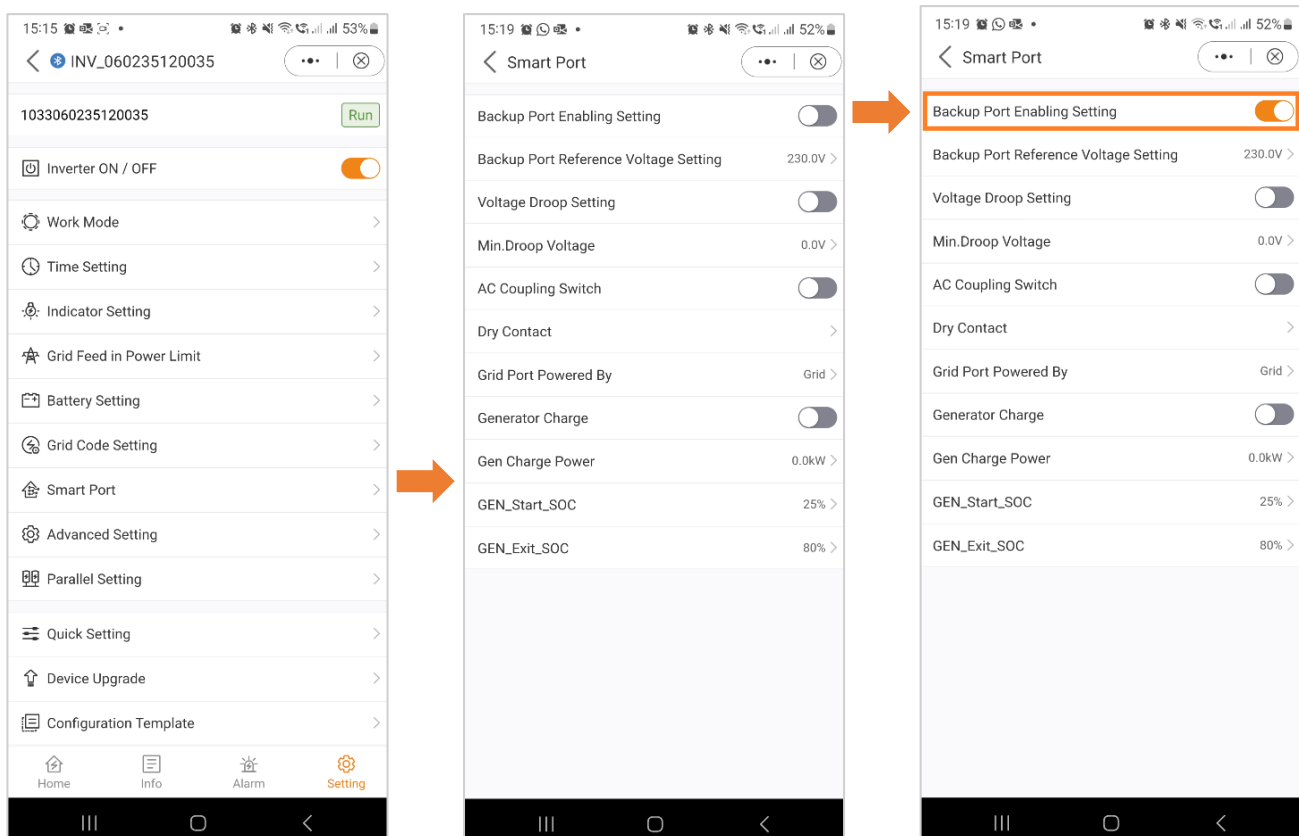
Settings

Smart Port Setting

Smart Port settings empower users to oversee backup port and generator settings. For detailed information about each specific setting, feel free to reach out to Solis Support for assistance.

Below example - Back Up Port

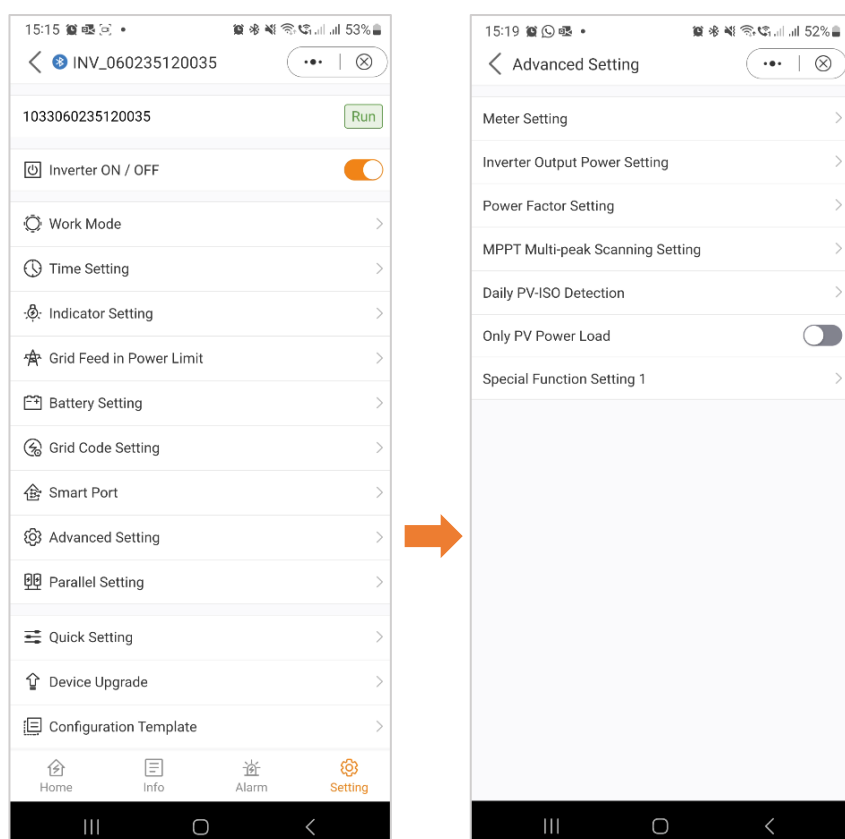
Enabling the backup port allows you to connect specific loads for backup power. It's important to note that Solis recommends against connecting the entire house to the backup port. The backup port is intended for emergency power use only. Refer to your inverter's datasheet for precise details on the maximum load that can be connected to the backup port.



Settings

Advanced Settings

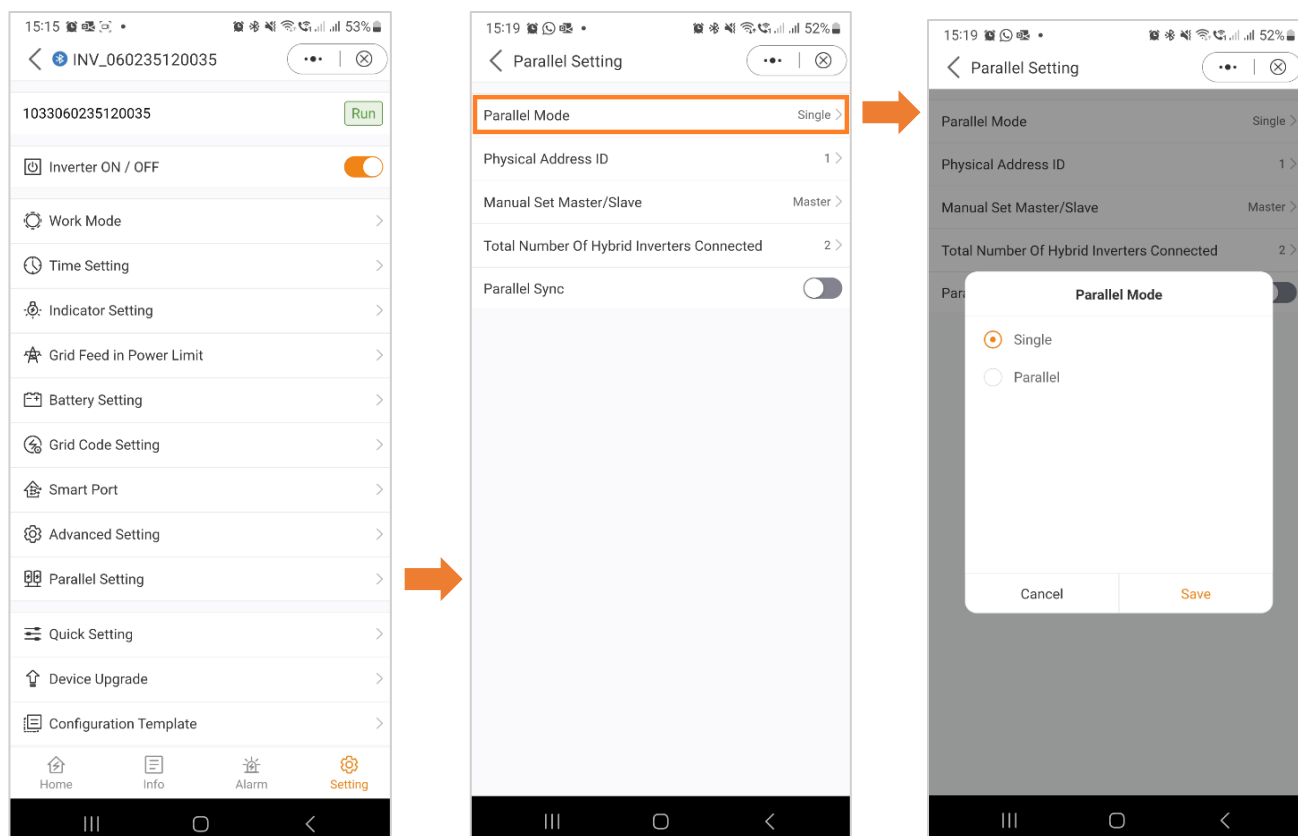
You have various options available within the advanced settings, as illustrated in the image below. For more detailed information about these settings, feel free to reach out to Solis Support for assistance.



Settings

Parallel Settings – Parallel Mode

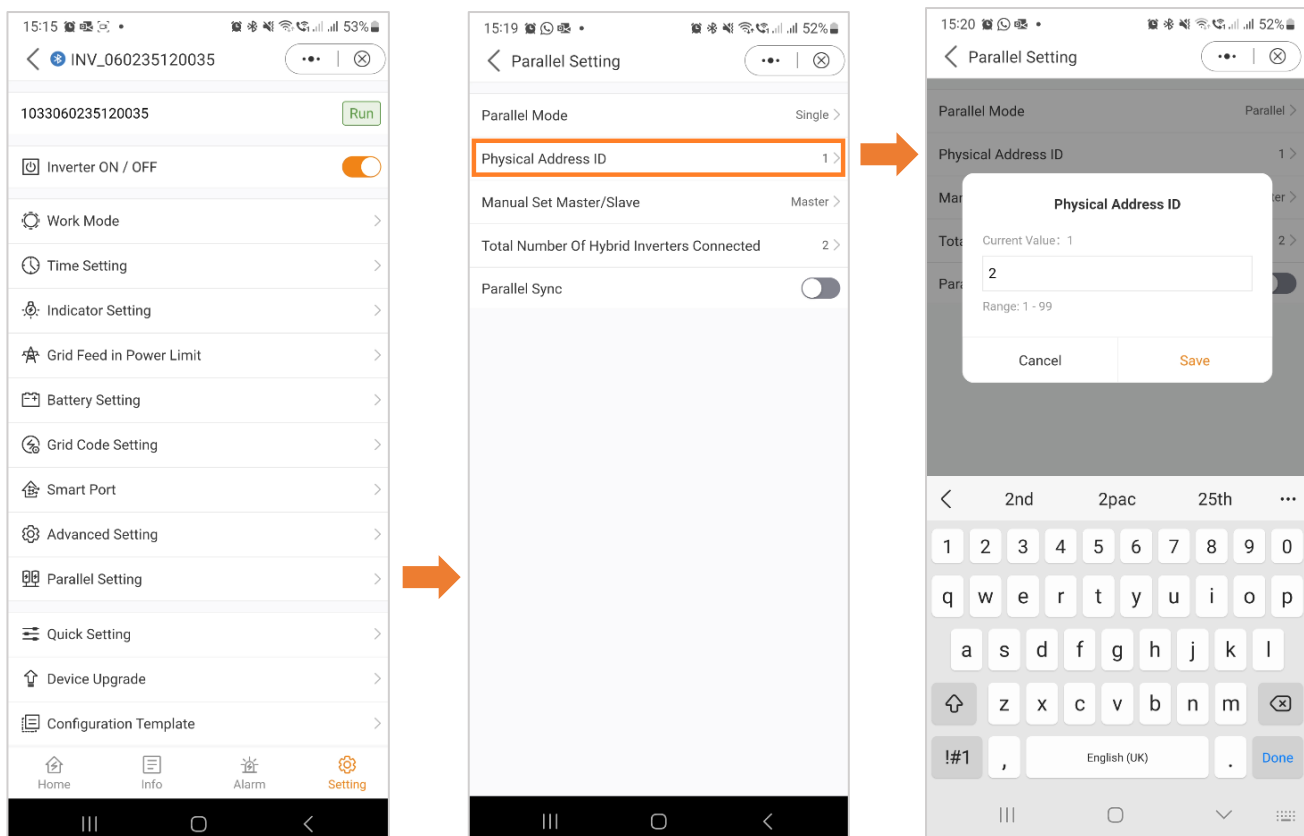
Please specify whether you have a single inverter in your setup or if you have multiple inverters connected in parallel.



Settings

Parallel Settings – Physical Address

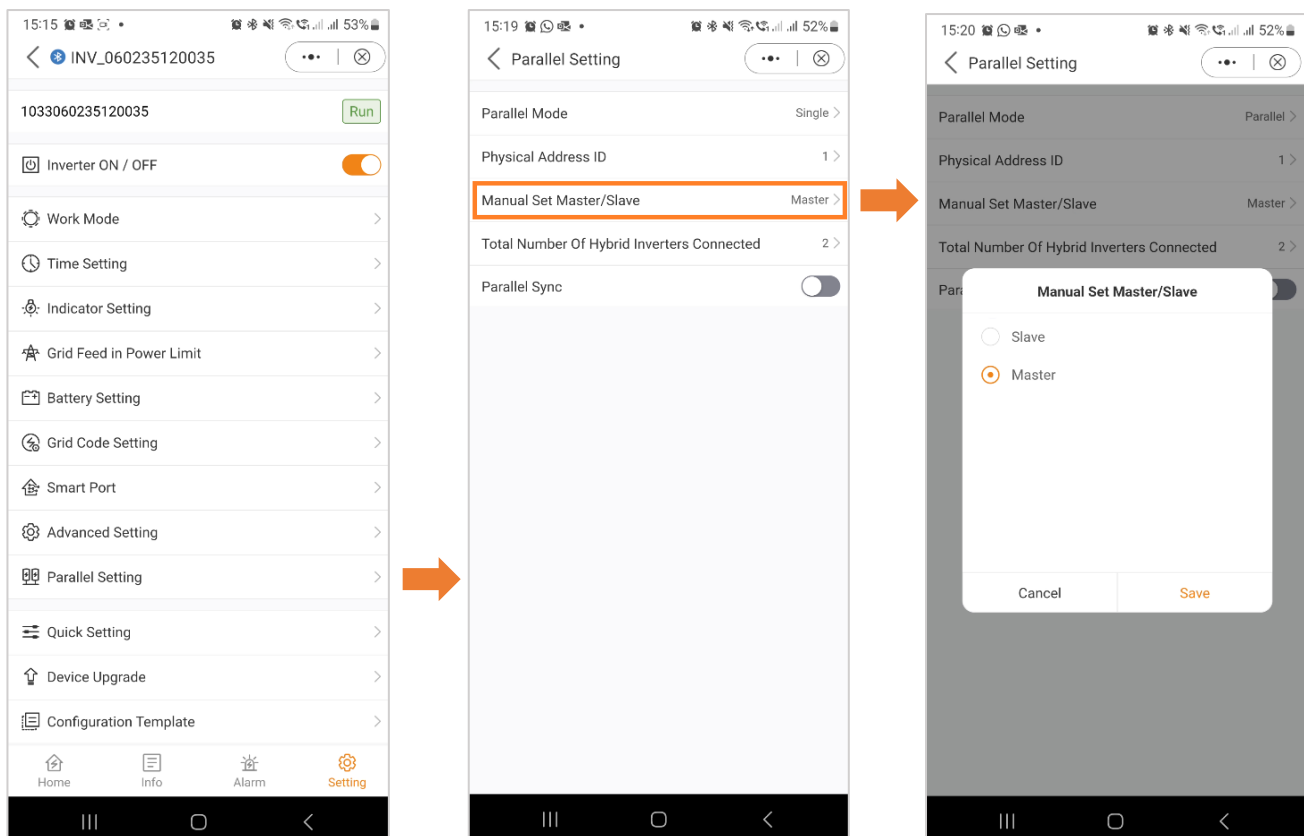
Assign each inverter a unique address. For a single inverter, set the address ID to 1. If you have multiple inverters, designate a distinct address for each, starting with the master inverter at address 1. Subsequent inverters should be assigned individual numerical addresses in sequential order.



Settings

Parallel Settings – Master/Slave

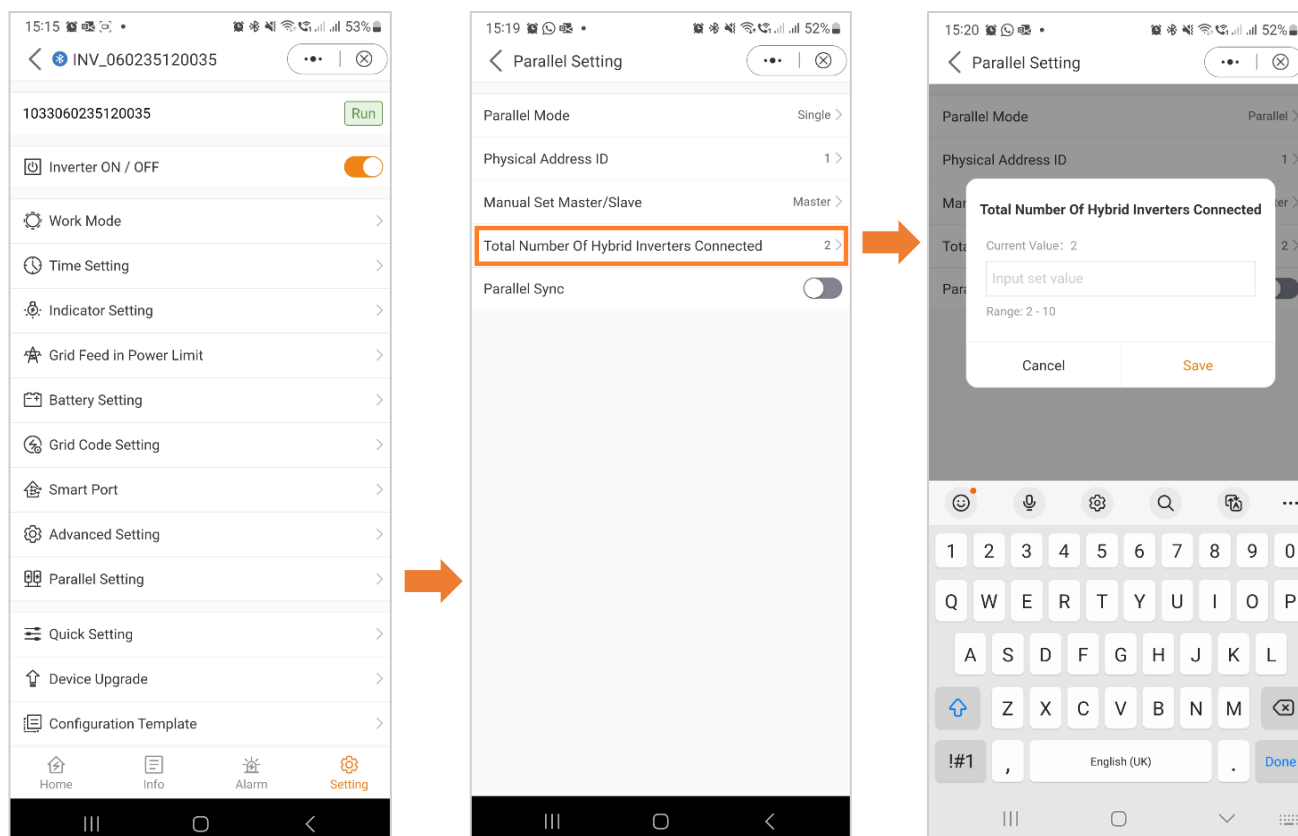
Specify whether the inverter functions as a master or a slave. In a system with a single inverter, designate it as the "master." For setups with multiple inverters connected in parallel, assign the inverter with address 1 as the master, and all other inverters should be configured as slaves.



Settings

Parallel Settings – Total number of Inverters Connected

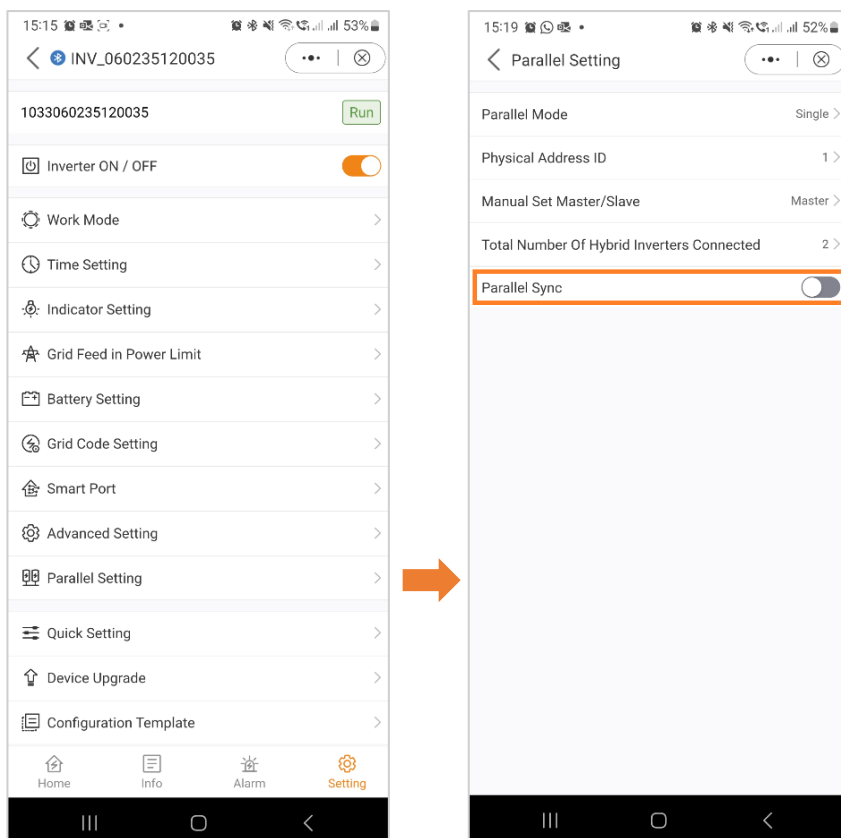
Indicate the total number of inverters connected in the system.



Settings

Parallel Settings – Parallel Sync

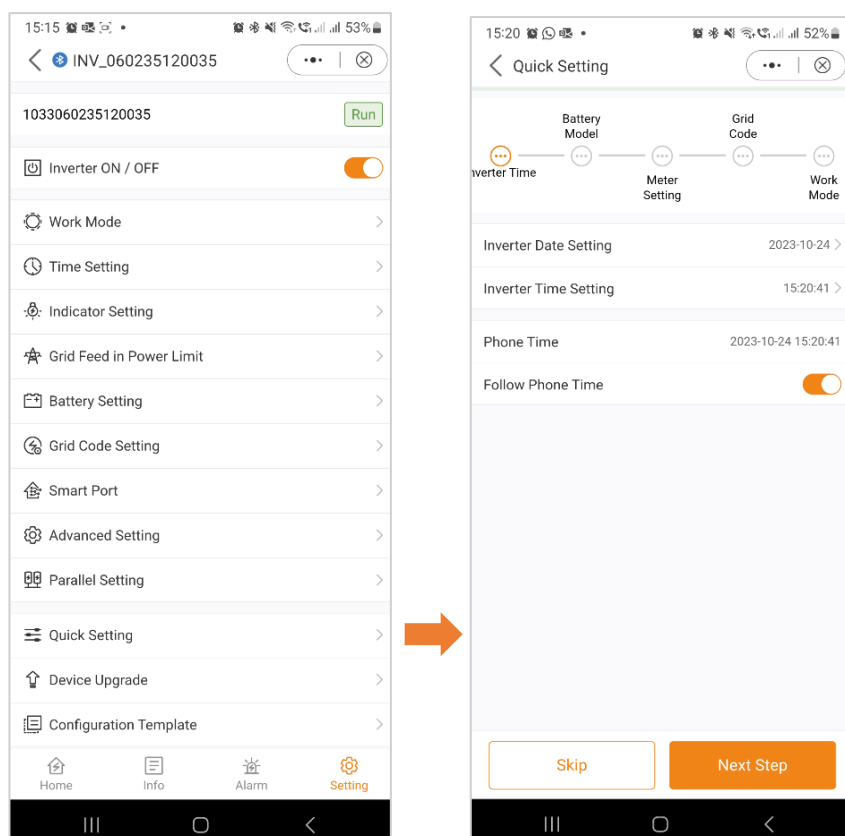
When "Parallel Sync" is activated, the system ensures that power is evenly synchronized across all connected inverters. This feature helps maintain a balanced distribution of power among multiple inverters, contributing to the overall stability and efficiency of the system. Before selected Parallel Sync, ensure you select all your setting first and then select it last.



Settings

Quick Settings

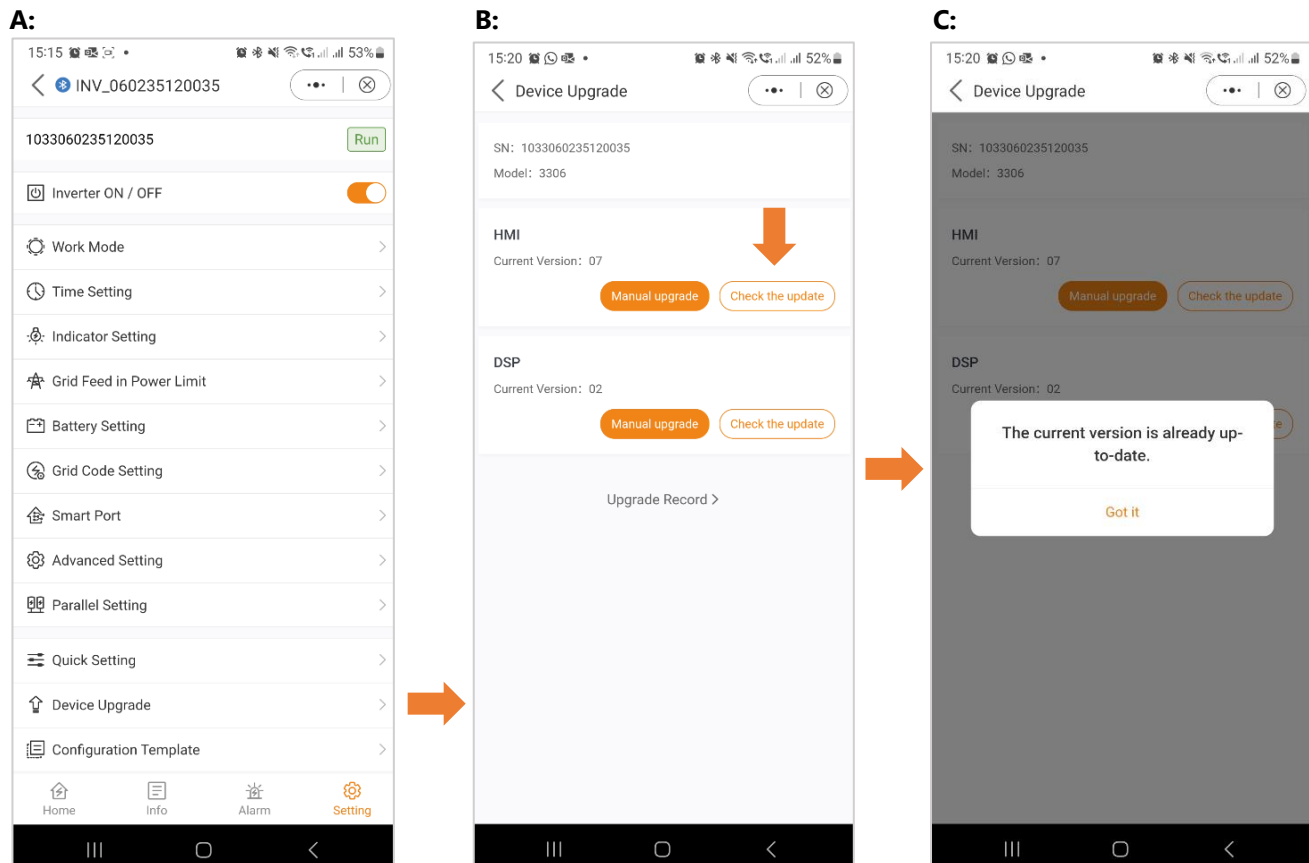
If you wish to revisit the quick settings, as explained in the section above, you have the option to do so here.



Settings

Device Upgrade

- General Settings Screen
- Upon selecting "Device Upgrade," you will be presented with a screen displaying the serial number of your device, its model, and the current firmware versions installed for HMI and DSP.
- When clicking "Check the Update," you will encounter a screen indicating the status of the firmware. In this instance, it shows that the firmware is up to date. If your inverter requires an update, the screen will display the latest firmware version available for installation on your device.



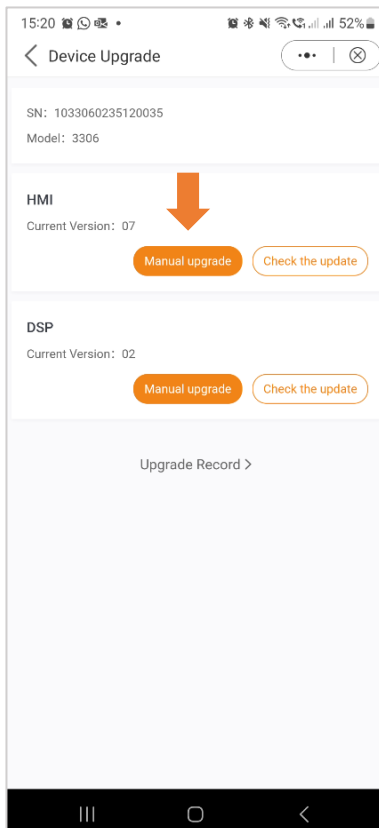


Settings

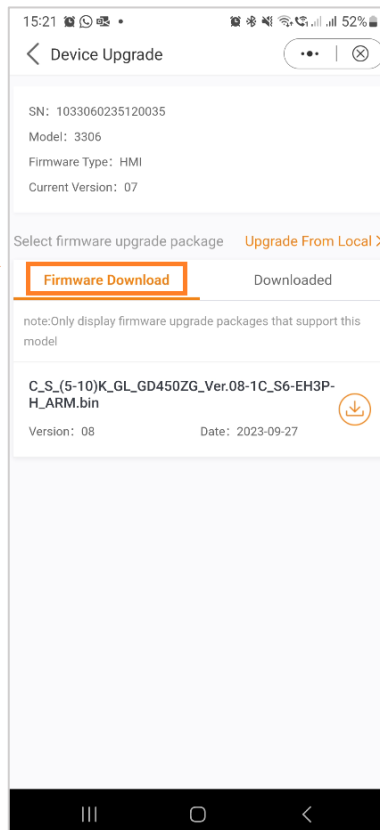
Device Upgrade

- D. You also have the option to perform a manual update. This becomes necessary, for instance, when there is no internet connection or if the remote update has failed.
- E. Upon choosing "Manual Upgrade," you will encounter a screen presenting the Firmware Download options. "Firmware Download" is what's available on the Soliscloud.
- F. On the adjacent tab, you will find the "Downloaded" firmware. Downloaded Firmware is what you have locally stored.

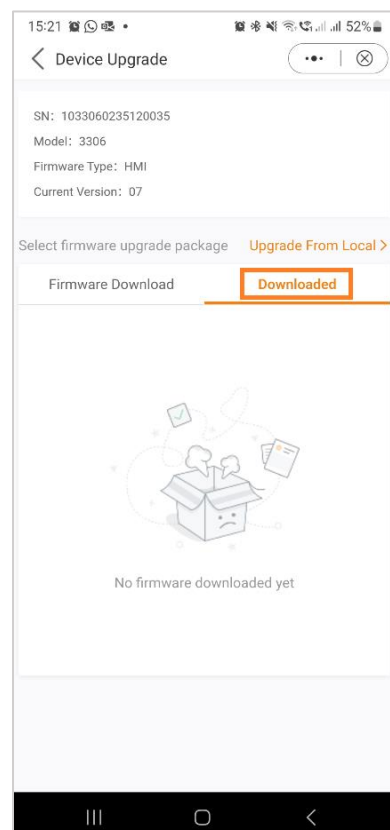
D:



E:



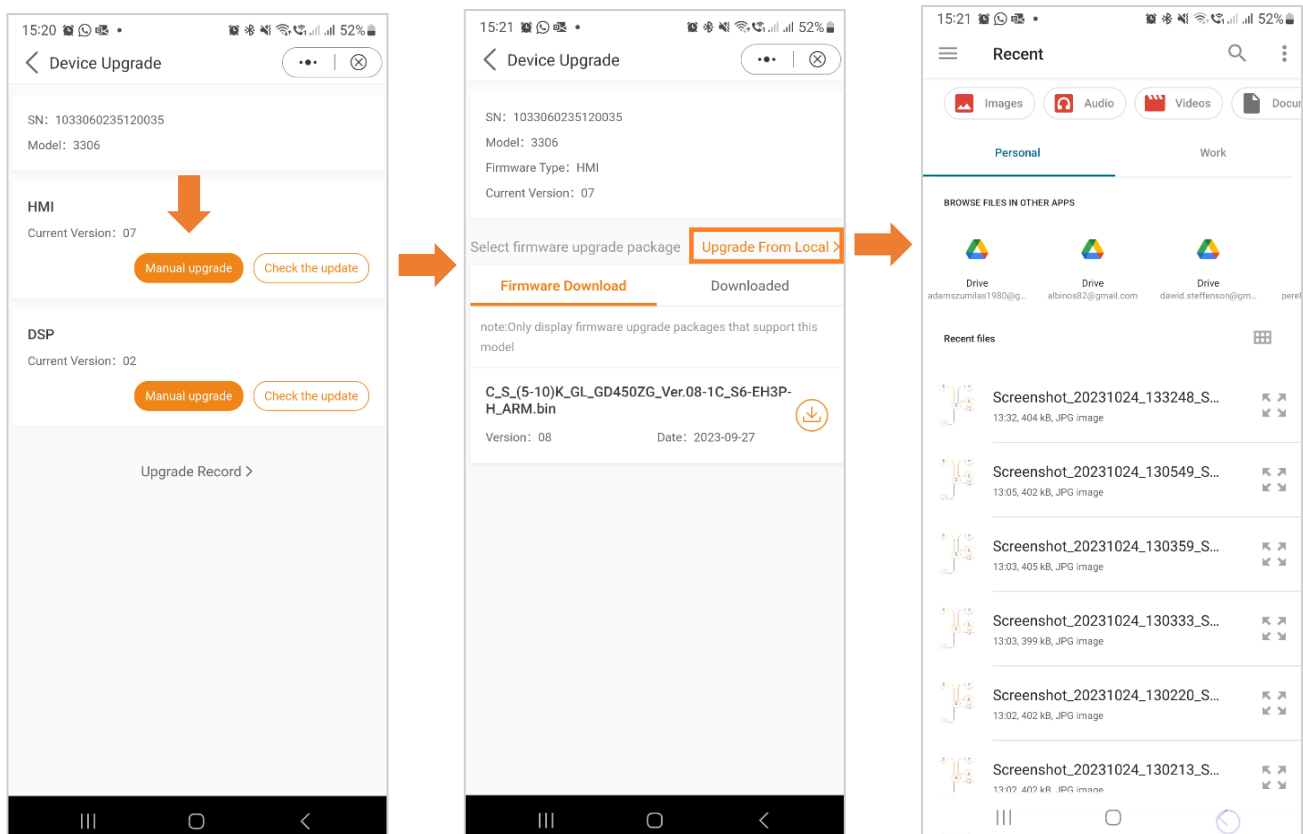
F:



Settings

Device Upgrade

If necessary, you have the option to select a firmware file from your local drive. For a local firmware update file, please reach out to your local Solis Support.



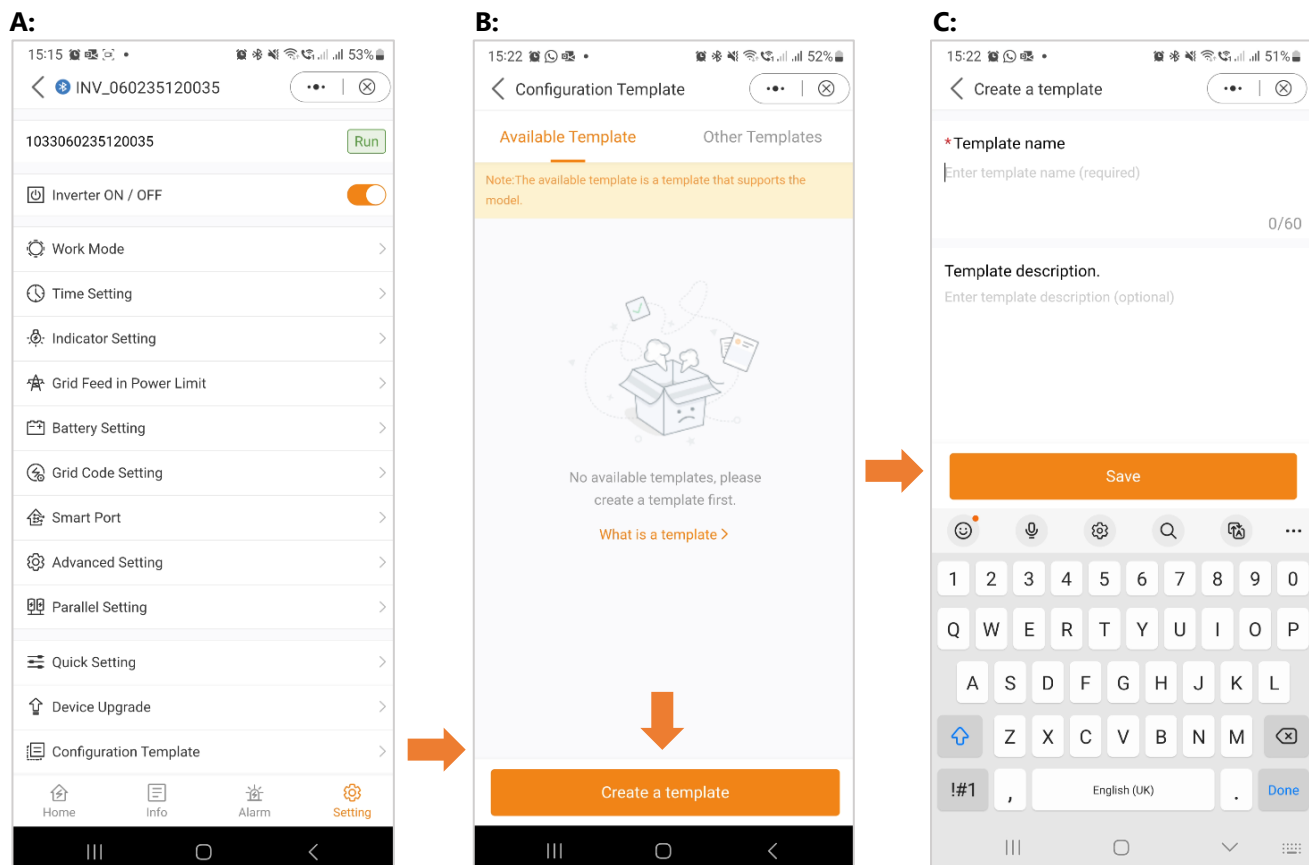
Settings

Configuration Template

With the application, users have the capability to create templates. These templates allow users to define parameters, including Work Mode, EPM settings, battery configurations, and other preferences. Once a template is saved, it can be effortlessly applied to other inverters on the same site.

To create a template, follow these instructions:

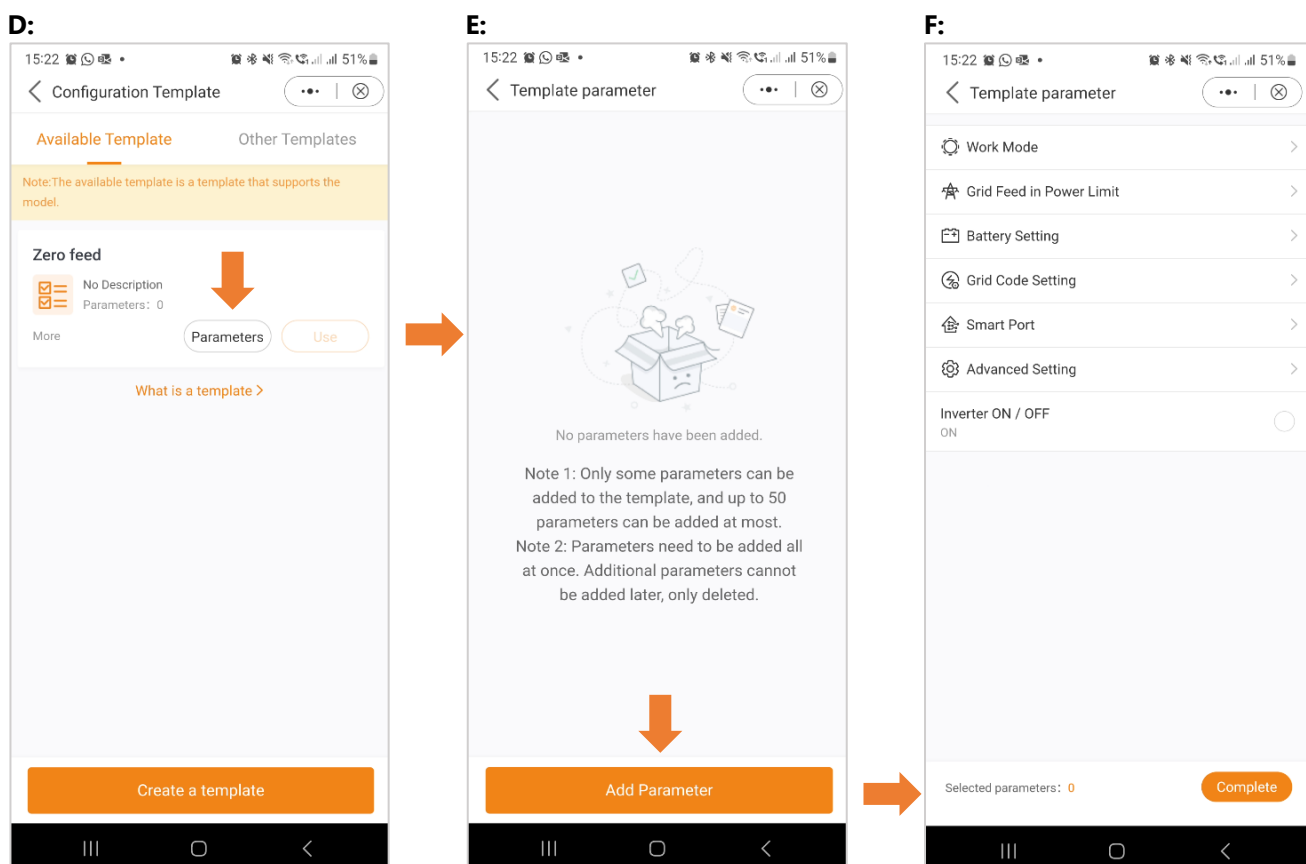
- Click on "Settings."
- Choose the option "Create a template."
- Select a name for your template. Press "Save" to confirm and save your template.



Settings

Configuration Template

- D. After saving the template, it will be visible in your list of available templates. However, you still need to set all the parameters for your template. To do this, click on "Parameters."
- E. As no parameters have been set yet, you need to add them. Click on "Add Parameters."
- F. Set each parameter according to your requirements. Once you have completed this process, click on "Complete." Your template is now ready to be used.

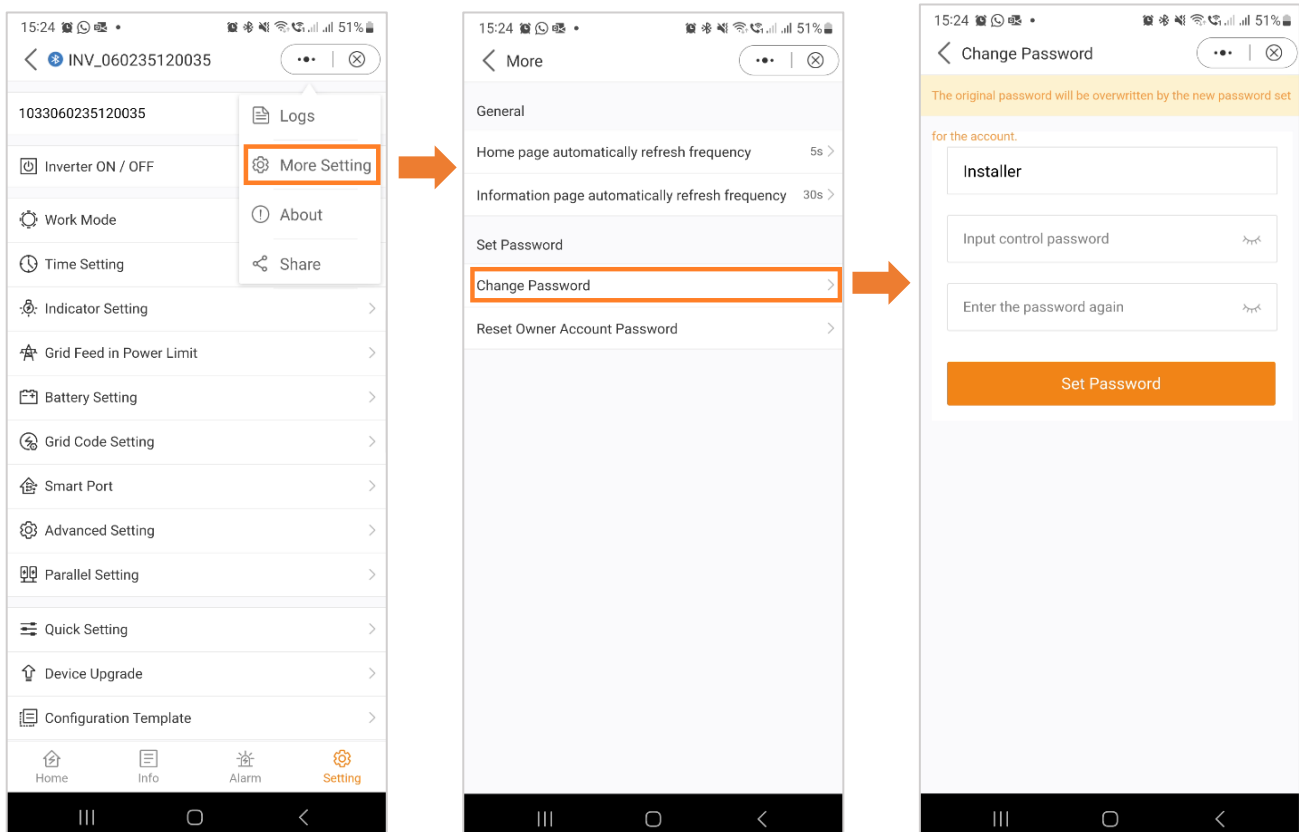


More Settings

Clicking on the three dots at the top right-hand corner of the screen provides you with various options, including the "More Settings" section. Here, you can set the refresh frequency, set a password, change the password, or reset the owner's password.

As an example, here's how to change your password:

1. Click on the three dots.
2. Select "More Settings."
3. Click on "Change Password."
4. Enter the new password.



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We hope that this information has been useful. For any further questions, please do not hesitate to contact the local Solis Customer Support.



Connect with Solis



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Stock Code: **300763.SZ**

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e: europesales@solisinverters.com   