

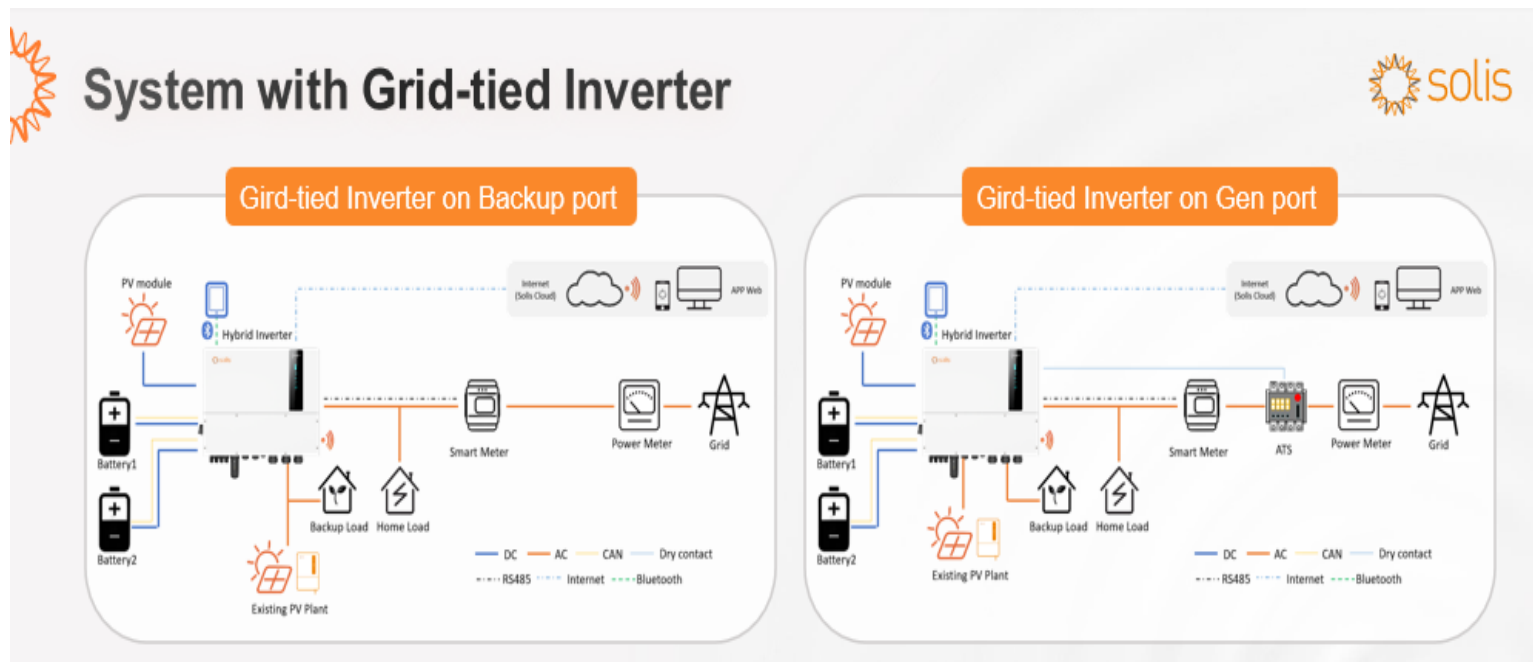
Solis Standard Operating Procedure

S6 50K - AC Coupling Setup Guide

1. Overview

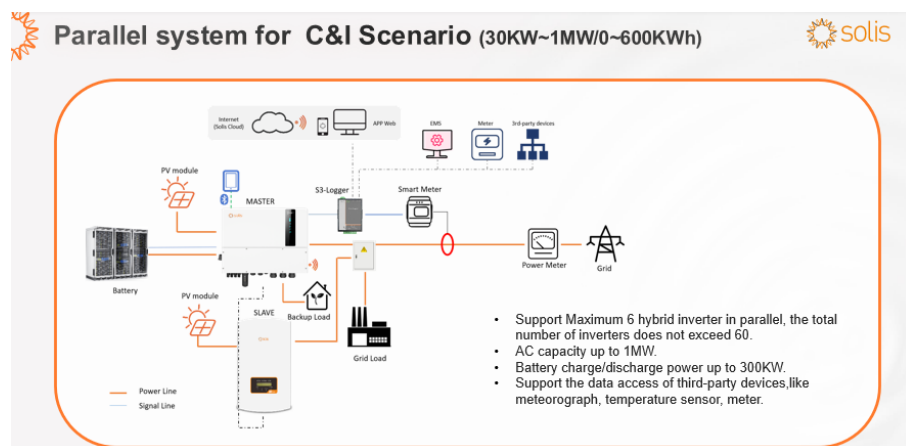
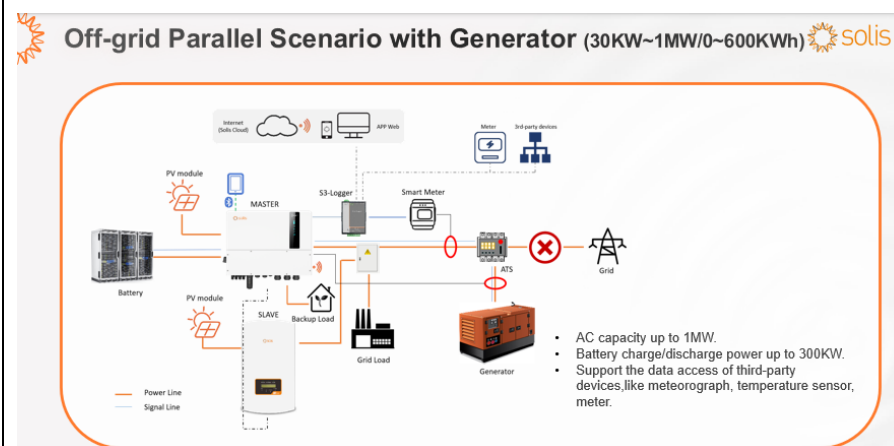
This document explains the process of AC Coupling when a Grid-Tied PV inverter is connected to either the backup output or the generator port of a S6 Solis Hybrid inverter as displayed in the diagrams below.

Inverters can be connected to the AC Backup port when a Generator is connected to the Generator port.



NOTE :

- Grid-tied inverter can be connected via AC-Gen port and AC-Backup port.
- With existing PV Plant connected to the system, it is recommended that : Grid-tied inverter power < rated AC power of S6 inverter.
- In on-grid scenario, when the third-party grid-connected inverter is connected, the system cannot control the output power of the third-party grid-tied inverter, so Feed-in limitation cannot be realized ;
- When connected in off-grid scenario, the third-party grid-tied inverter needs to set the correct grid code and has the function of over-frequency load shedding & under-frequency load rising, so that the system can adjust the frequency to control the output power of the grid-tied inverter.
- The Solis grid-connected inverter can be connected with Hybrid inverter in parallel . In order to realize Feed-in limitation, it is necessary to add EPM or S3-Logger devices.
- When the system is connected to the generator, it cannot be connected to the grid-tied inverter, because of a risk of damaging the generator

AC Coupled with No Generator**AC Coupled with Generator**

Step 1 - Logging into the Hybrid Inverter locally.

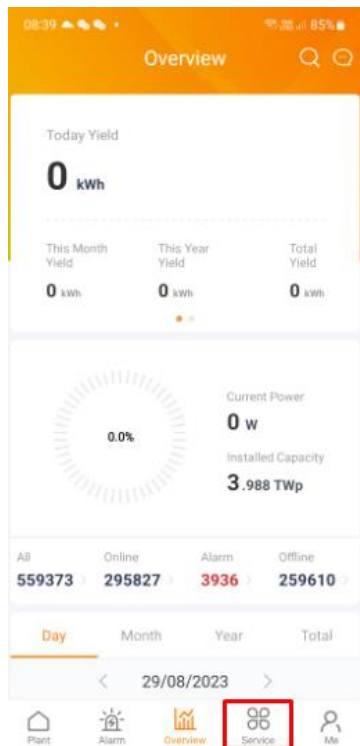
Step 2 – Hybrid Inverter Parameter Settings

Step 3 – Setting up the PV Grid-Tied Inverter

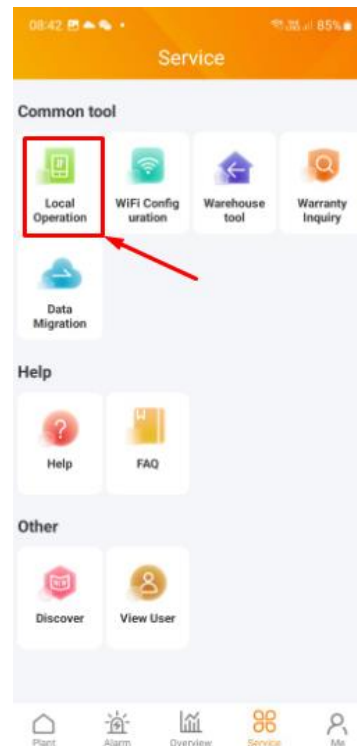
2. Method

Step 2.1: Login to Inverter


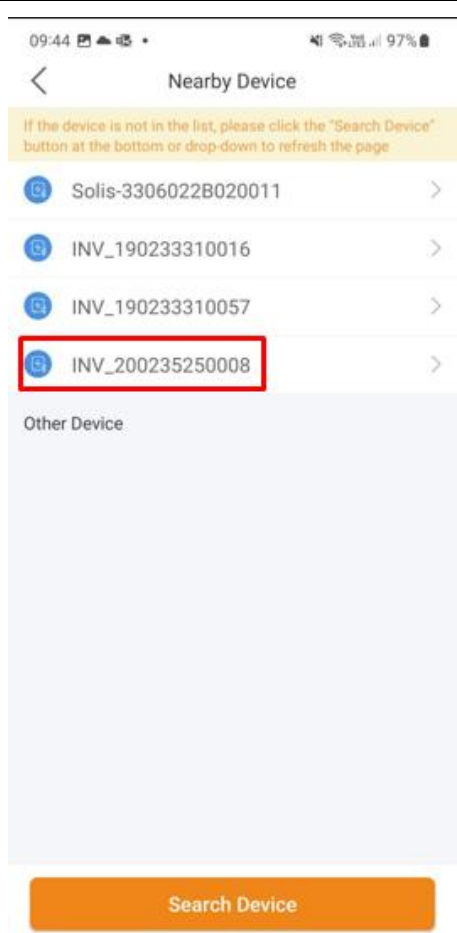
Open the Solis cloud App then click on the “Services” icon below



Step 2.2: Select Local Operation

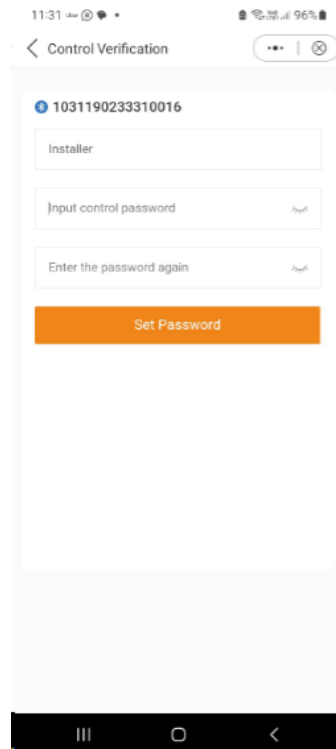


Step 2.4: Select Connect with Bluetooth

Step 2.4 Select Bluetooth connection	Step 2.5: Select the inverter by serial number.
 <p>The screenshot shows the 'Local Operation' app interface. At the top, there is a back arrow and the text 'Local Operation'. Below this is the section 'Select Connection Method'. There are two options: 'Connect With Bluetooth' (highlighted with a red box) and 'Connect With WiFi'. At the bottom, there is an illustration of solar panels and inverters.</p>	 <p>The screenshot shows the 'Nearby Device' app interface. At the top, there is a back arrow and the text 'Nearby Device'. Below this is a yellow warning box: 'If the device is not in the list, please click the "Search Device" button at the bottom or drop-down to refresh the page'. There is a list of inverters with their serial numbers: Solis-33060228020011, INV_190233310016, INV_190233310057, and INV_200235250008 (highlighted with a red box). Below the list is a section for 'Other Device' and a 'Search Device' button at the bottom.</p>

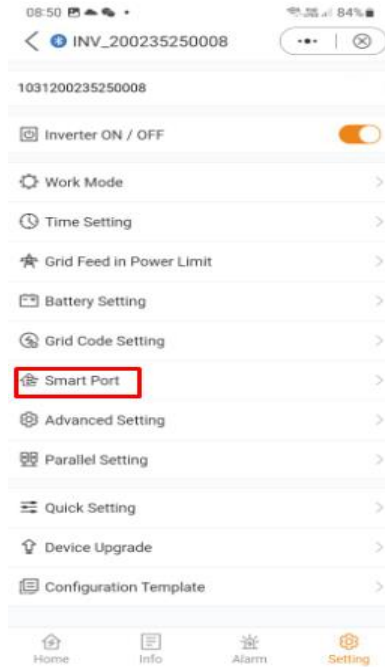
Step 2.6: log into the inverter

(First time user must create a password)

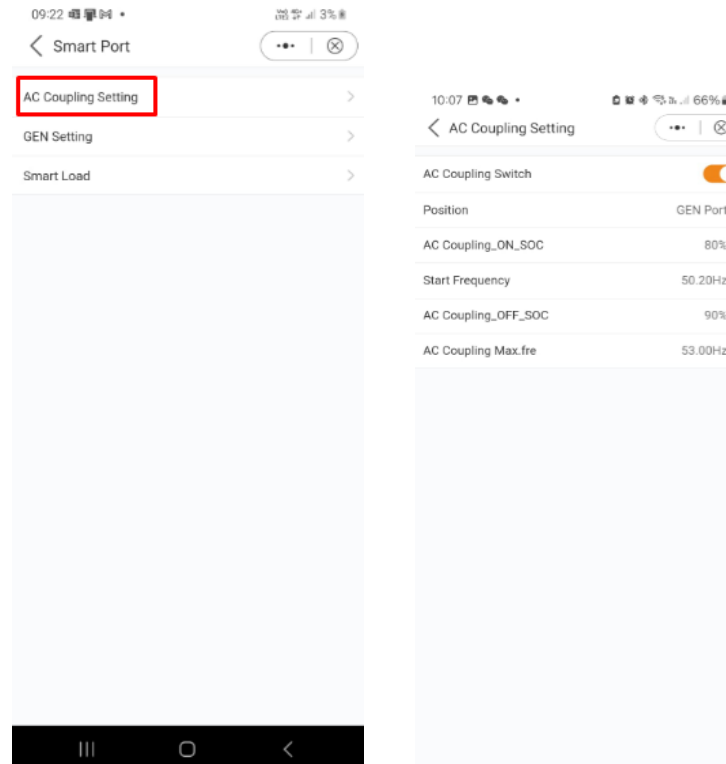


3. AC Coupling Settings on the S6-Hybrid Inverter

Step 3.1: Select the AC Couple Settings for Set up settings



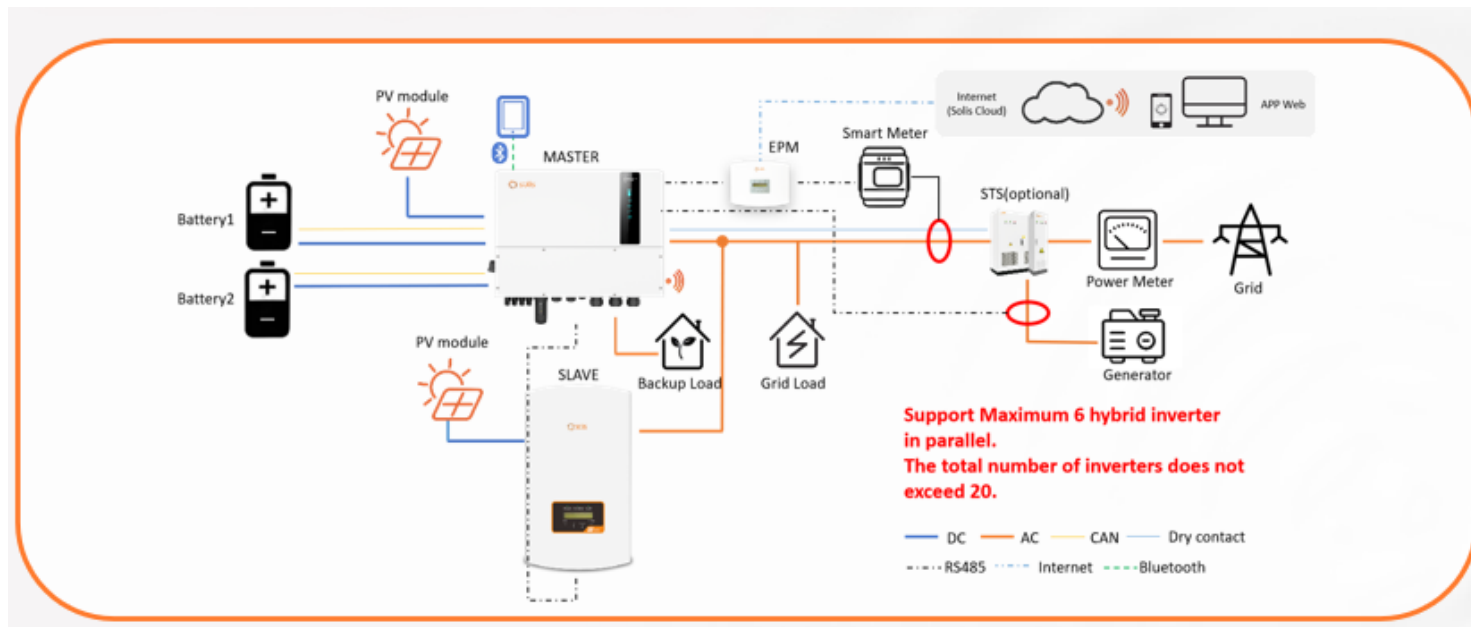
Step 3.2: Switch the AC Coupling switch setting on, as per below screenshot.



The **“GEN Port load open switch”** must also be switched on and can be found in Smart port setting under GEN settings

Parameter Settings

1. AC Coupling switch must be turned on.
2. Two positions for connecting the grid-tied inverter as possible depending on whether a generator is used or not.
 - a. Gen Port: Set the Gen Port position if the grid-tied inverter is installed on the inverter's generator port.
 - b. Backup Port: Set the Backup position when the grid-tied inverter is coupled to the inverter's backup output.
3. AC Coupling OFF SOC must be set to the required percentage.
4. AC Coupling Max value is the Stop value of 52.7Hz set on the battery inverter and must be set the same on the AC PV inverter.
Example: Start 51Hz and Stop 52.7Hz
5. The "GEN Port load open switch" must also be switched on and can be found in Smart port setting under GEN settings.



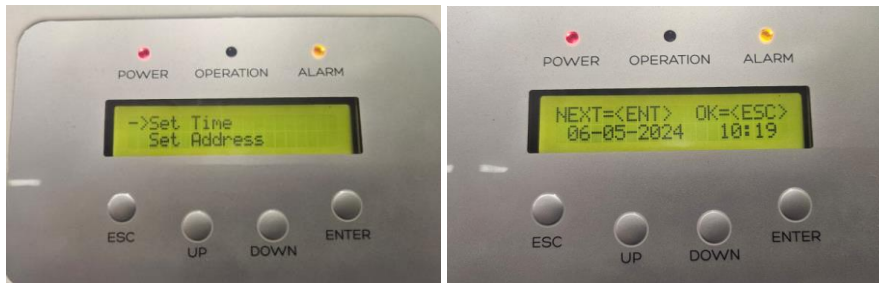
4. Settings on the PV Inverter

See Below images as reference on AC PV Inverter.

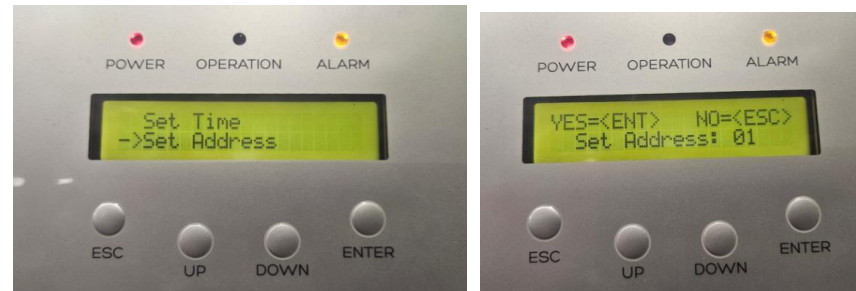
Go to Settings and then set the time and date as well as the Inverter address as shown below.



4.1: Set time and date



4.4: Set Inverter Address to 1



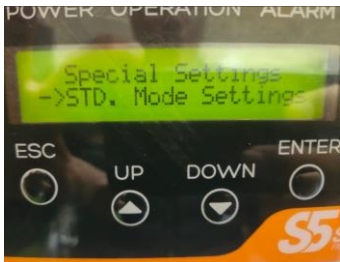
Frequency set up

Go to Advanced Settings Password is 0010
and follow below set up.

4.3: Enter Advanced Settings > Select Grid Standard



4.5: STD Mode Settings



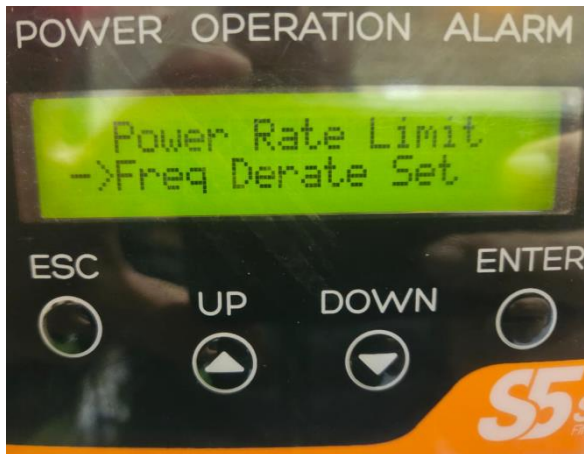
4.4: Select Grid Code: GEN 50



4.5: Mode 4



4.6: Freq Derate Set



4.7: Set the start and stop values.



4.7 External EPM 5G



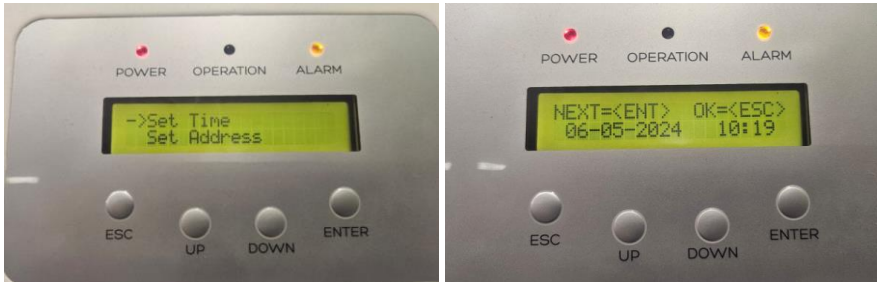
4.8 Failsafe Off



Once selected press **Enter** to save.

5. EPM Settings

5.1: Set time and date



5.2: Set Inverter Address to 1



Go to Advanced Settings Password is 0010
and follow below set up.



Password: 0010



5.3: Set the inverter Qty



5.4: Set the Back Flow Power to (0)



5.3: Set the Meter CT ratio- Note this ratio is calculated as secondary 1- so 150/5 CT is set to 30/1 on the EPM.



5.4: Set the Failsafe to (Stop)



5.3: Set the Back Flow Work Mode to (Average mode)



Check that the CT's are measuring a negative Watt reading with No solar production.
This would indicate that the CT's are in the correct position.



You can get this information from the **Information** tab on the EPM.

6. AC Coupling Test Example

The below diagram shows an monitoring example layout and operation of an AC coupled plant on Solis Cloud.

