# 3-Phase Hybrid Inverter Commissioning Guide

***Disclaimer***

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| Version | Revision History | Created by | Date |
|---|---|---|---|
| 1.0 | Issued for Approval | AU Service Team | 23th Nov 2020 |

This document only applies to Sungrow 3-phase hybrid inverters (including SH5.0RT and SH10RT). The information in this document may contain predictive statements including, without limitation, statements regarding the future financial and operating results, future product portfolio, new technology, etc. There are several factors that could cause actual results and developments to differ materially from those expressed or implied in the predictive statements. Therefore, such information is provided for reference purpose only and constitutes neither an offer nor an acceptance. Sungrow Power may change the information at any time without notice.



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## Contents





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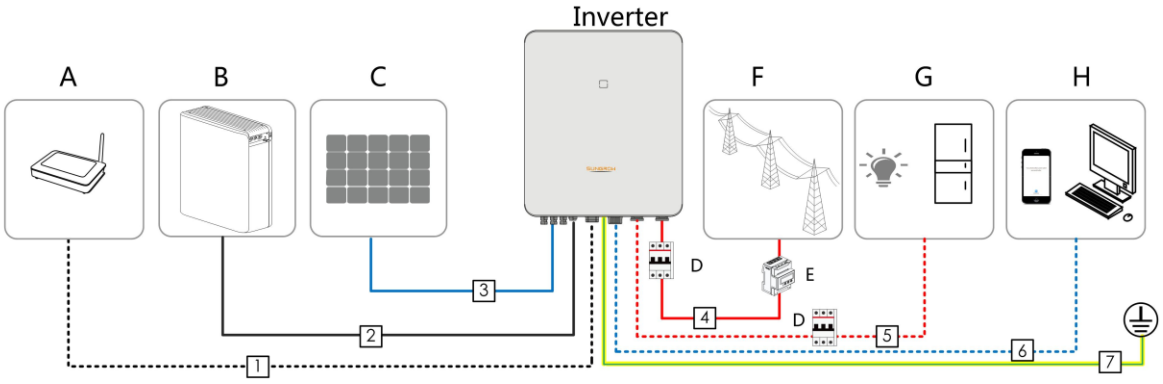
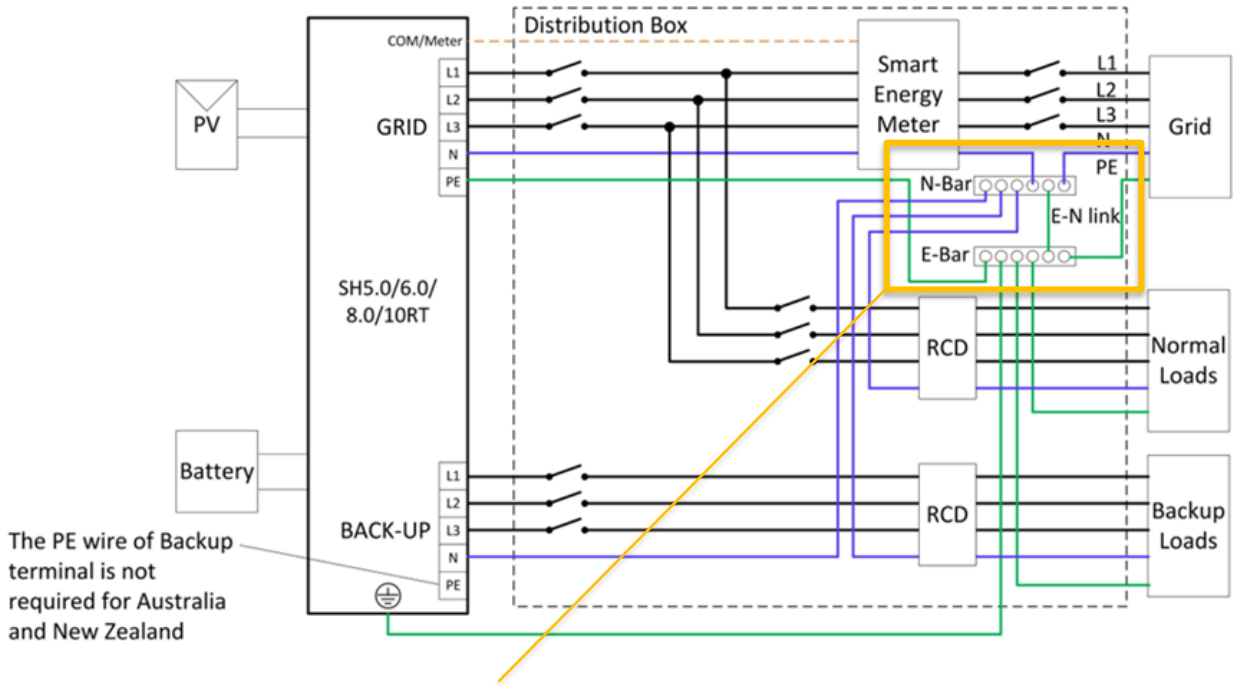
# 1. System Wiring

## 1.1 Overall System Wiring




## 1.2 Backup Circuit Wiring (Important!)

Ensure the AC wiring conforms to the user manual. Otherwise, any other wiring configuration may cause error 015 (Grounding cable fault).




**Both the Neutral and Earth connection from the Backup output must be connected to the Earth and Neutral bar in the main switchboard and must be connected to the M.E.N. link.**

RCD's must comply with AS/NZS3000.



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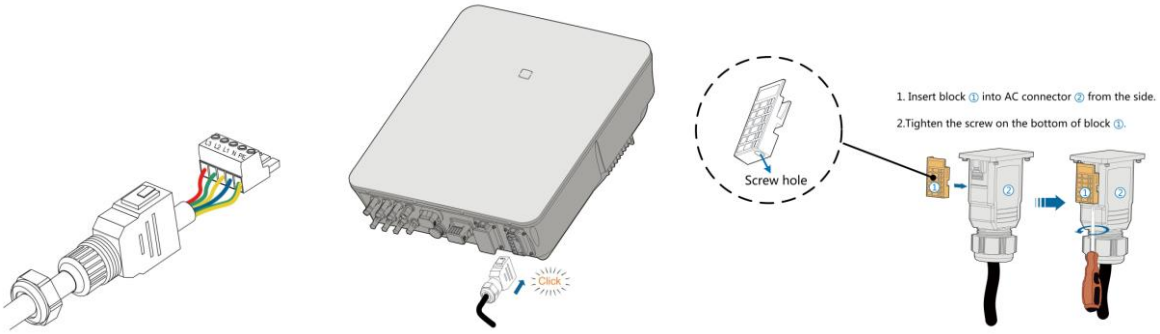
# 2. Installation steps

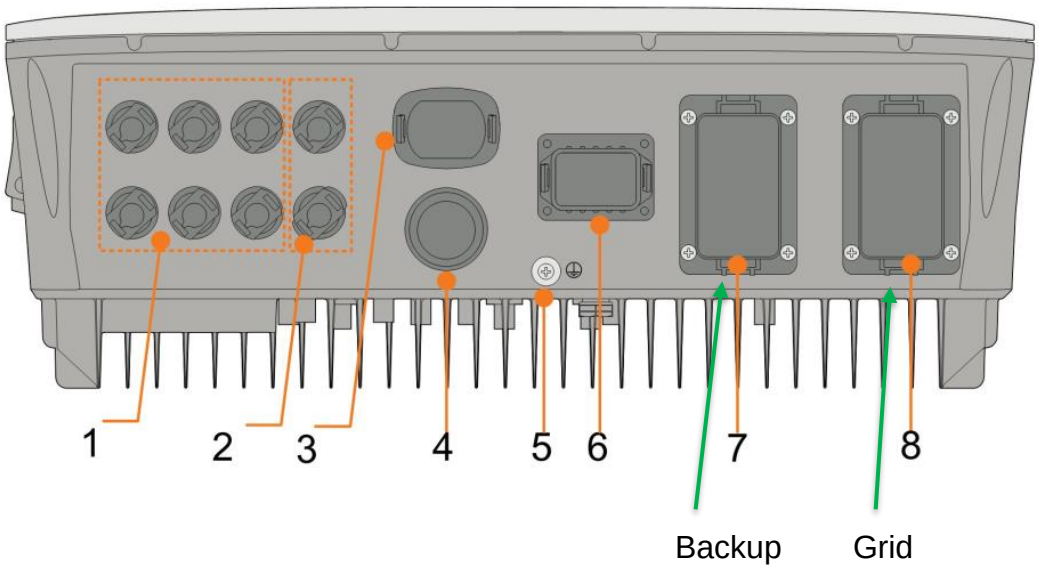
## 2.1. Connect AC grid

Strip the AC cable and connect to the AC Grid plug as per the above wiring diagram and click into place. Apply lock. (AC plugs are colour coded)




## 2.2. Connect Backup Circuit

Connect Backup AC in the same manner as the grid plug and click into the ‘Backup’ outlet.



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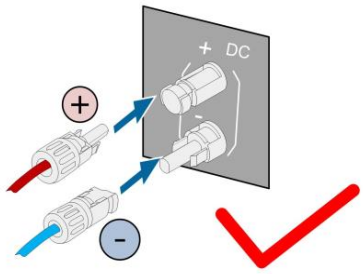
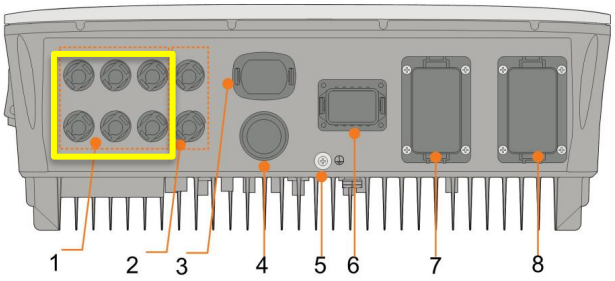
## 2.3. Connect PV DC Connector

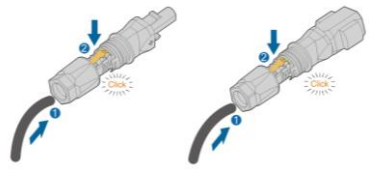
Connect PV DC to the MC4 connectors (Max 12.5A per string)

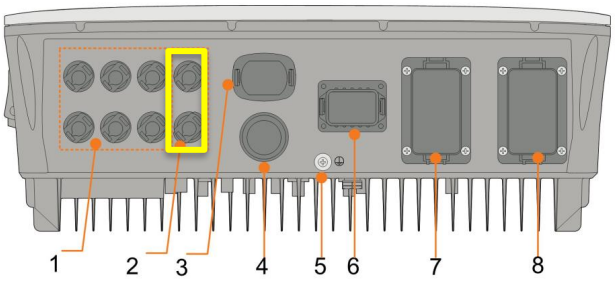



## 2.4. Connect Battery DC Connector

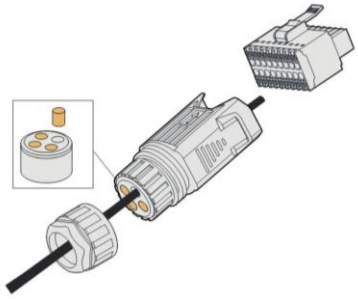
Connect Battery DC using the supplied Sunclix connectors and connect to the battery terminals (See specific instructions from battery manufacturers).

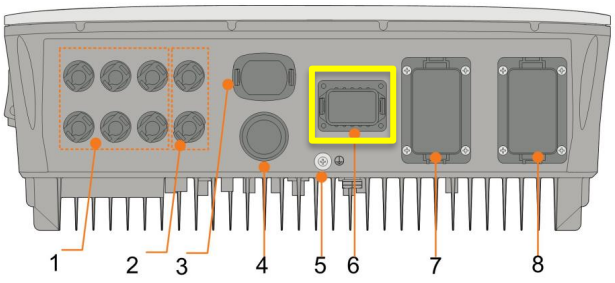





## 2.5. Connect Energy Meter

Connect Energy Meter and battery Com cables to the multiplug.





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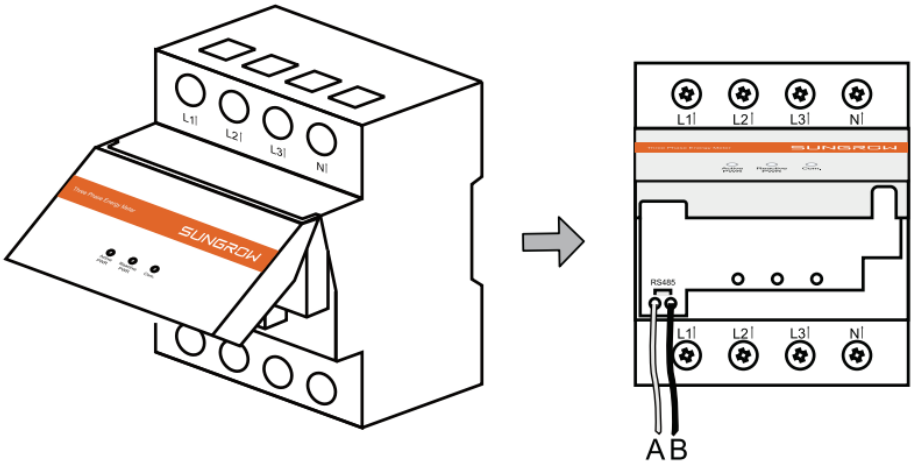
| | Meter | | BMS/CAN | | DI/DRM | | | | DO | |
|---|---|---|---|---|---|---|---|---|---|---|
| 1 | A2 | B2 | H | L | D1/5 | D3/7 | R | | NO | 17 |
| 2 | A1 | B1 | EN_H | EN_G | D2/6 | D4/8 | C | | COM | 18 |
| | RS485 | | Enable | | | | | | | |

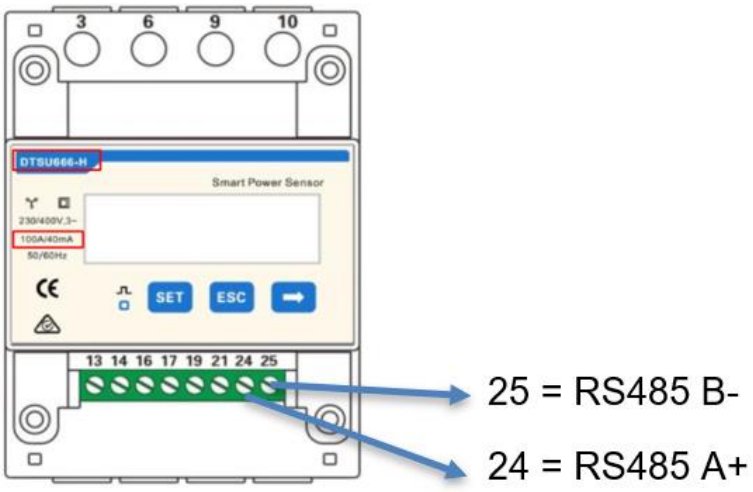
Energy meter connects to A2 (RS485+) and B2 (RS485-). Refer to battery guide for CAN connection

Energy meter RS485 connection (T65 and DTSU666):

**T65**:




**DTSU666**:



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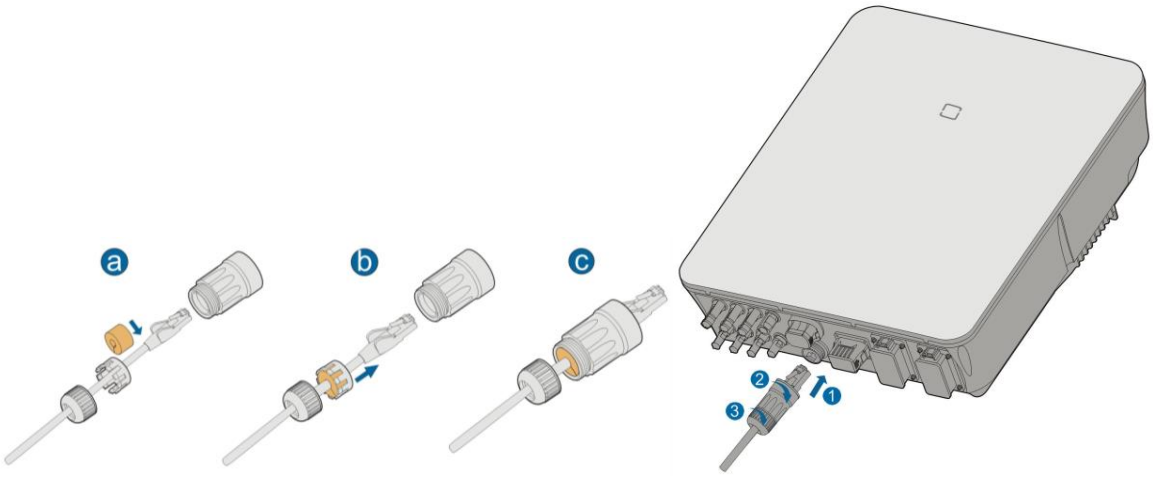
## 2.6 Communications Connection

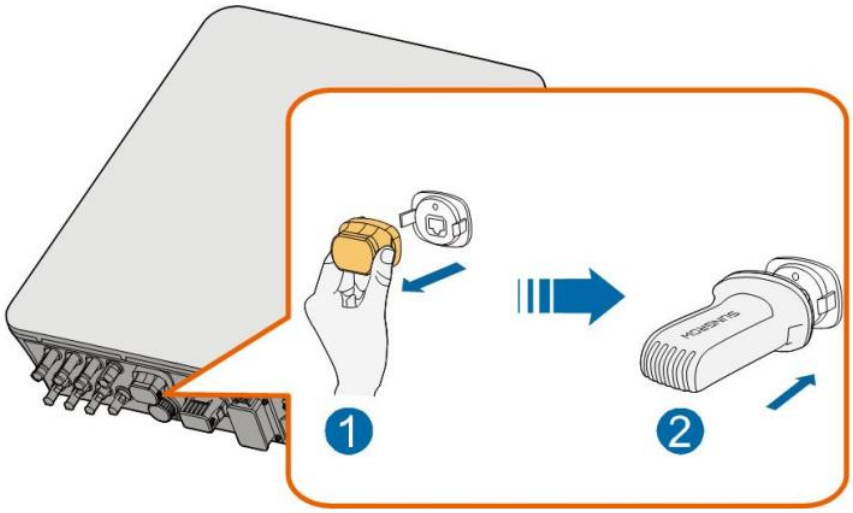
### 2.6.1 Ethernet connection (if used)

Plug into the ethernet port using the supplied weatherproof shroud and connect to end user's modem.




### 2.6.2. WiFi dongle Connection

Plug the dongle into the port.



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## 3. Commissioning

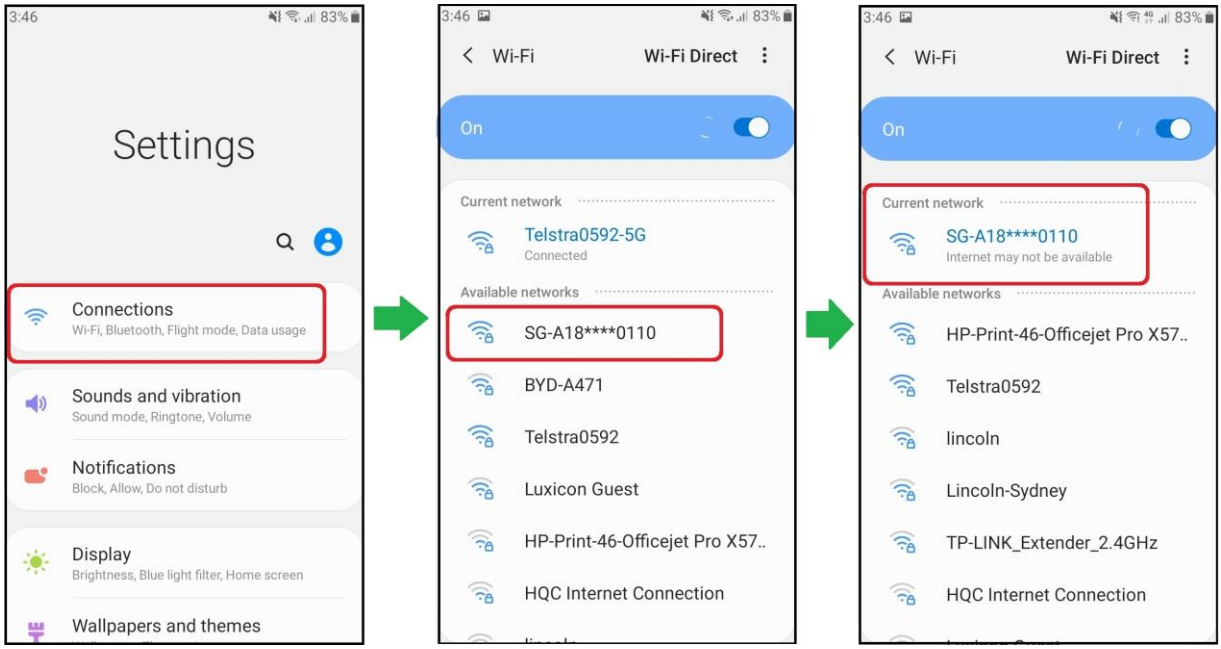
Once all the connections have been completed, commissioning is done via the iSolarCloud App.

**1. Switch on AC, DC and Battery.** Allow the inverter to cycle through its initial boot. Once the inverter is ready to commission, the blue LED will slowly pulse.

| LED indicator | LED state | Definition |
|---|---|---|
|  | ON | The inverter is running in the on/off-grid mode. |
| | Twinkling | The inverter is at standby or startup state (-without on/off-grid operation). |
|  | ON | The inverter is running in the mode instead of on/off-grid mode.<br>A system fault has occured. |
|  | OFF | Both the AC and DC sides are powered down. |

**2. Initialise and commission the inverter by using the iSolarCloud App.**

**a) Connecting to the dongle**: Go to the WiFi settings on your phone. Connect to the SG network. The dongle serial number is the password if required.



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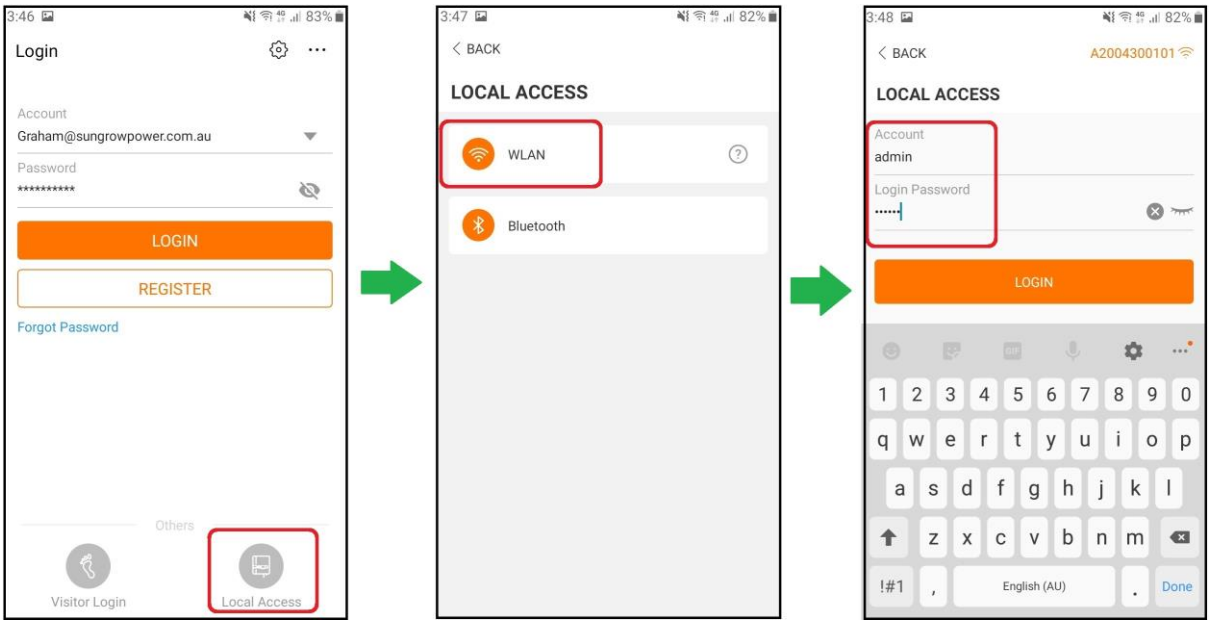
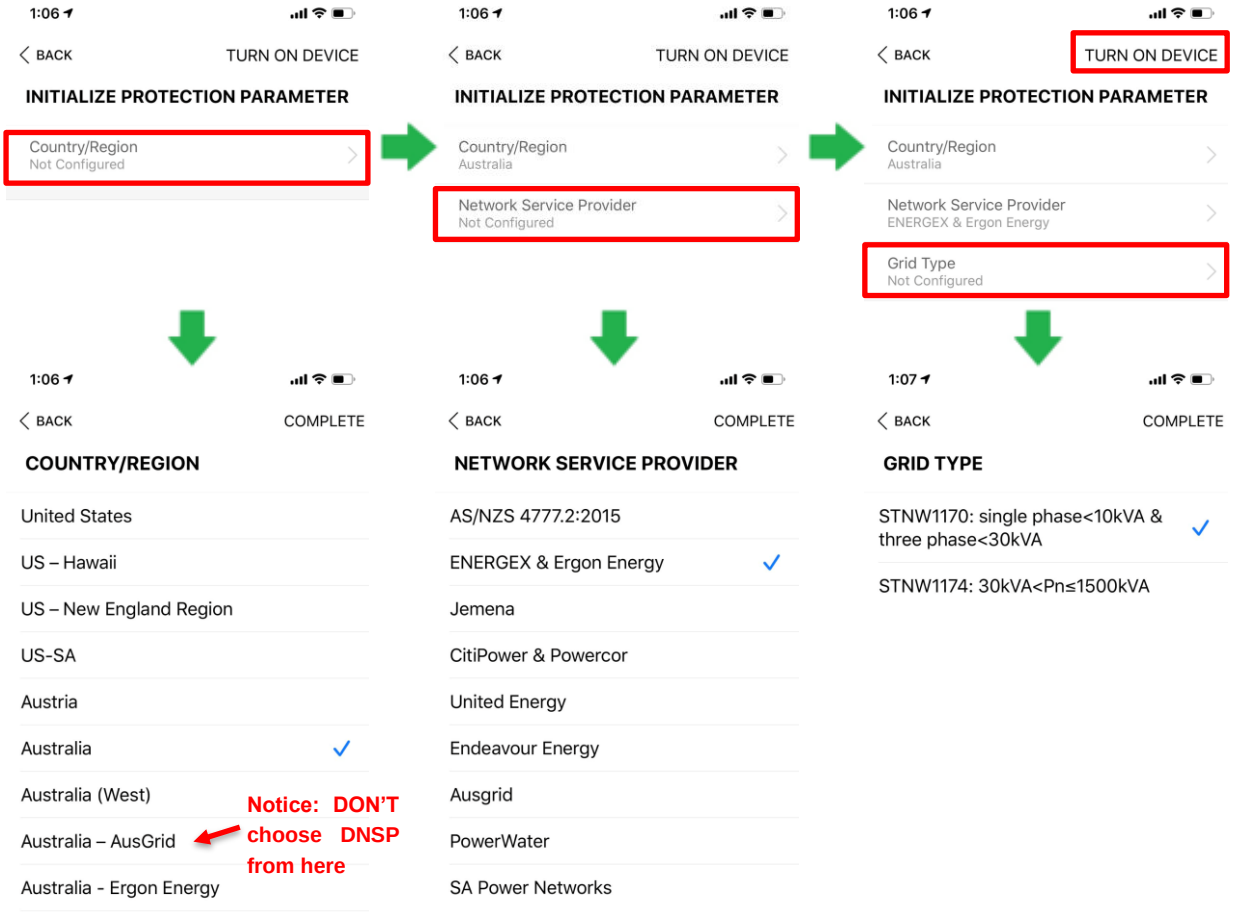
**b) Logging in to the Inverter**: Open the iSolarCloud App and use the local access feature. Log in as admin using WLAN (Please contact Sungrow for password).




**c) Set the county and grid code**: Select the country, DNSP and grid type.



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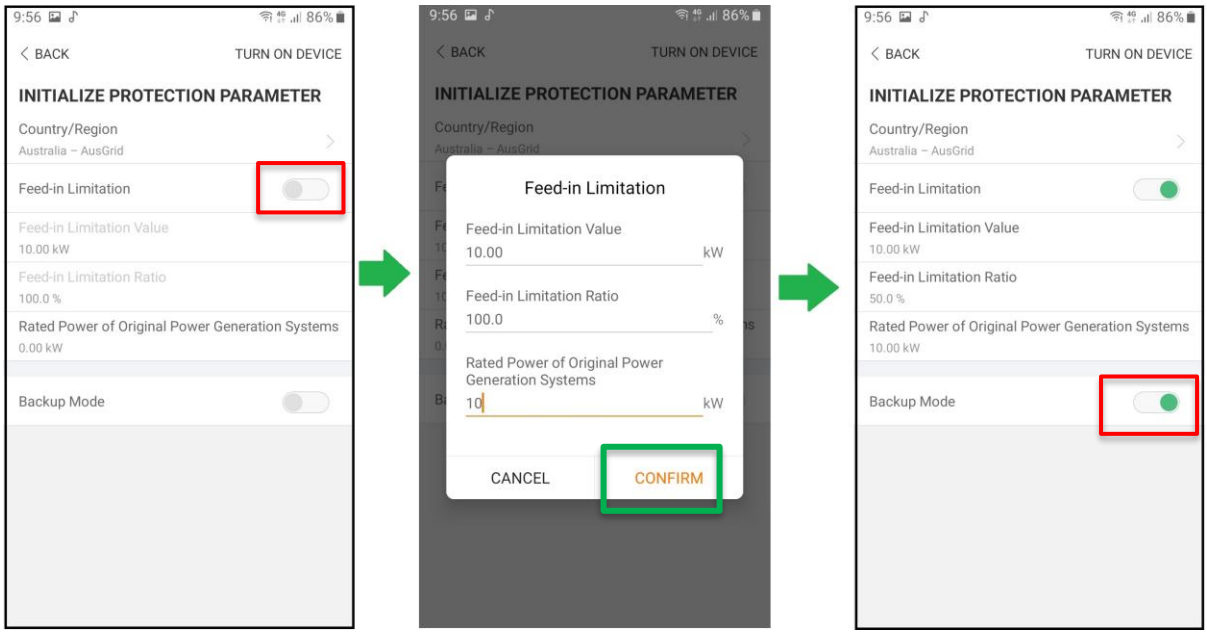
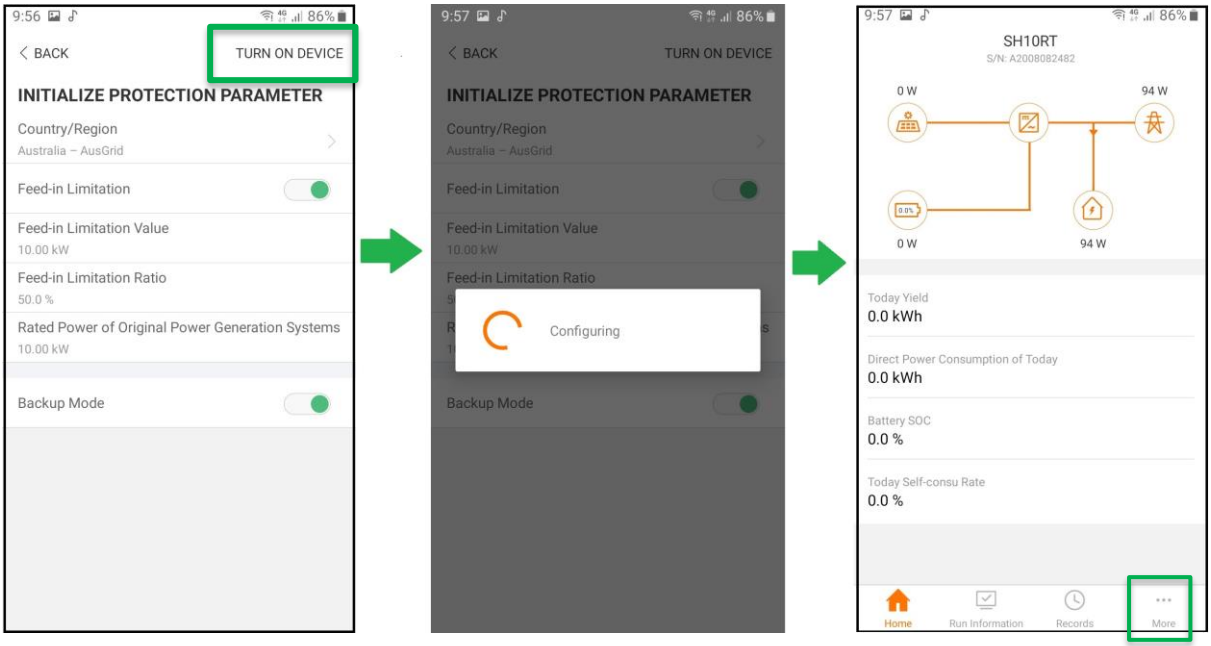
**d) Set the feed-in, Existing system and backup mode as required**: If required, enable the Feed-in limitation, and add all other generators that are also connected and confirm. Enable the Backup mode.




**e) Initialise the inverter**: Tap “TURN ON DEVICE” at top right corner and allow the inverter to initialise and complete the start-up procedure (may take a couple of minutes). Wait till the Blue LED goes on steadyIf any further settings are necessary, tap the “MORE” button bottom left. Continue by creating the iSolarCloud Plant.



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Sungrow recommend that the firmware be updated on all new installs as new firmware with increased functionality is released regularly.

Local Firmware Upgrade via iSolarCloud

Firmware Upgrade Tutorial

If there is any issue, please contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au, Monday- Friday 9am - 5pm (AEDT).



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