

3-Phase Inverter iSolarCloud Commissioning Guide

Disclaimer

The material in this document has been prepared by Sungrow Australia Group Pty. Ltd. ABN 76 168 258 679 and is intended as a guideline to assist solar installers for troubleshooting. It is not a statement or advice on any of the Electrical or Solar Industry standards or guidelines. Please observe all OH&S regulations when working on Sungrow equipment.

The 3-phase grid-connected inverters range does not have a screen and needs to be configured using the iSolarCloud App. This document explains the steps of commissioning the inverter (**5kW to 20kW range**) and mentions how to set other major parameters using the local access function of the iSolarCloud App.

Step 1: Local Login

Login to the inverter locally by clicking “**Local Access**” under “**More**” or on the bottom right of the home page and select the “**Bluetooth**” connection option.

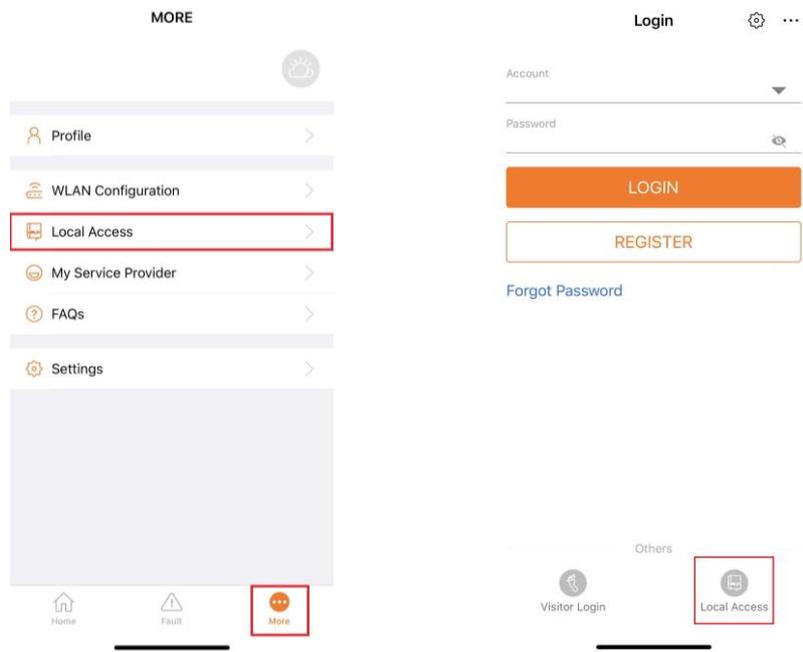


Figure 1 Local Access Login

A list of nearby inverters will appear. Simply select the **SN of the inverter** you wish to commission. Once selected and connected, the SN will be visible on the top right with a tick next to it. You can then proceed to login as the **“admin”**. Please contact Sungrow Service Department for the password.

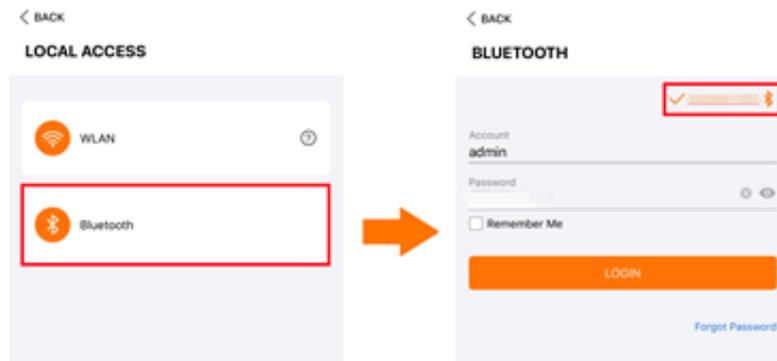


Figure 2 Bluetooth Login

Step 2: Initial Configuration

Once logged in via Bluetooth for the first time, the **“Initial Protection Parameter”** option will appear. Here, the country can be set to **“Australia”**. Selecting Australia will set the protection parameters according to the AS/NZS 4777 standard. *

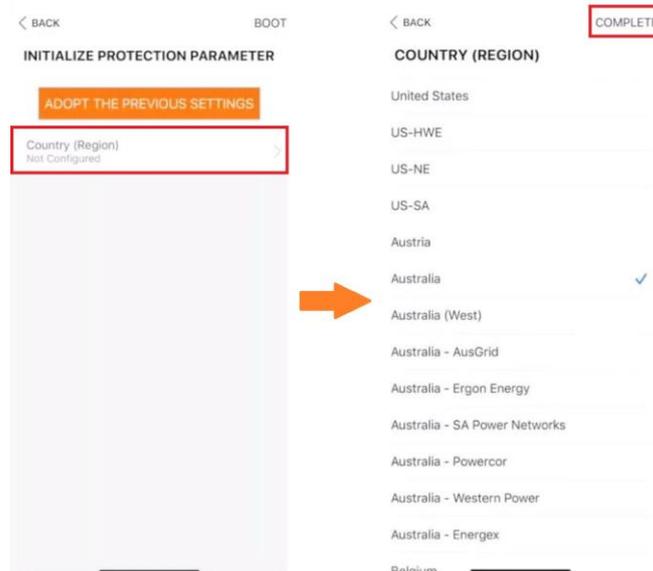


Figure 3 Initial Configuration

****Please note that the specific grid settings are currently unavailable.***

After selecting the country, press **“Boot”** to finalise the initial protection parameter. Once booted, the app will redirect to the homepage of local login where the inverter’s performance can be viewed. All the other settings can be configured under the **“More”** tab.

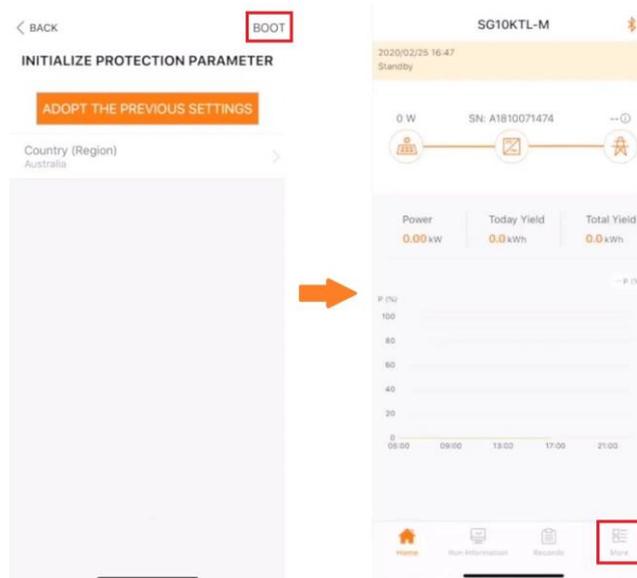


Figure 4 Home Page

Step 3: Date and Time Settings

Date and Time can be configured under **“System Parameters”**.

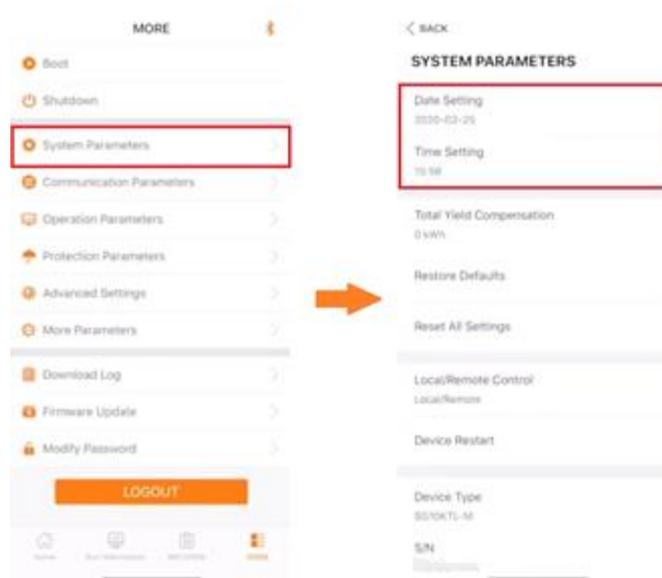


Figure 5 Date and Time

Step 4: Protection Parameters

To set the relevant grid protection parameters, click on “Protection Parameters”.

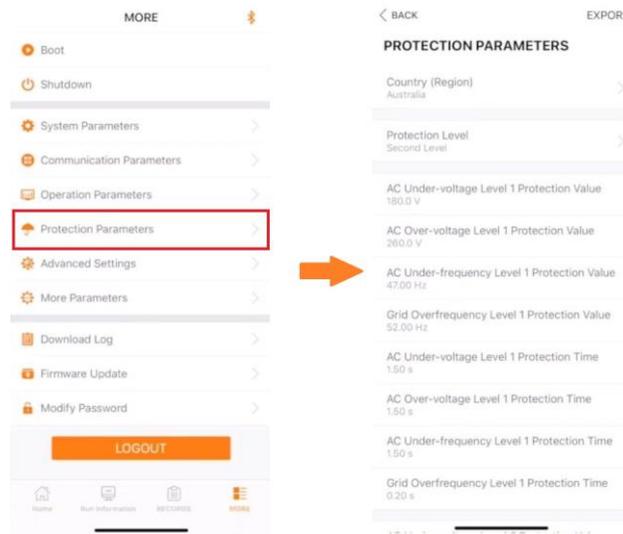


Figure 6 Protection Parameters

Please refer to the following images for the relevant protection parameters.

Grid company Code	Company
AG	AusGrid, NSW
EE	Ergon Energy, QLD
EG	Energex, QLD
PN	SA Power Networks, SA
PC	Powercor, VIC
WP	Western Power, WA

Figure 7 Grid Code

Parameter	Default	AG	EE	EG	PN	PC	WP
Over-voltage							
1-V _{max} (V)	260.0	260.0	260.0	260.0	260.0	260.0	260.0
1-Time (s)	2.0	1.80	1.80	1.80	1.80	1.80	1.80
2-V _{max} (V)	265.0	265.0	265.0	265.0	265.0	265.0	265.0
2-Time (s)	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Under-voltage							
1-V _{min} (V)	180.0	200.0	180.0	180.0	180.0	180.0	180.0
1-Time (s)	2.0	1.80	1.80	1.80	1.80	1.80	1.80
2-V _{min} (V)	180.0	200.0	180.0	180.0	180.0	180.0	180.0
2-Time (s)	2.0	1.80	1.80	1.80	1.80	1.80	1.80
Over-frequency							
1-F _{max} (Hz)	52.00	52.00	52.00	52.00	52.00	52.00	51.50
1-Time (s)	0.20	0.20	0.20	0.20	0.20	0.20	0.20
2-F _{max} (Hz)	52.00	52.00	52.00	52.00	52.00	52.00	51.50
2-Time (s)	0.20	0.20	0.20	0.20	0.20	0.20	0.20
Under-frequency*							
1-F _{min} (Hz)	47.00	48.00	47.00	47.00	47.00	47.00	47.00
1-Time (s)	1.50	1.50	1.50	1.50	1.50	1.50	1.50
2-F _{min} (Hz)	47.00	48.00	47.00	47.00	47.00	47.00	47.00
2-Time (s)	1.50	1.50	1.50	1.50	1.50	1.50	1.50

Figure 8 Grid Parameters**

****Please refer to the relevant DNSP for the upto date standards**

Step 5: Power Factor [Pf] / Reactive Power Control [Q(u)]

The Volt-Var and pf settings can be configured through “Active and Reactive Power” under “Operation Parameters”. To adjust the setting, click on “Reactive Adjusting Switch”.

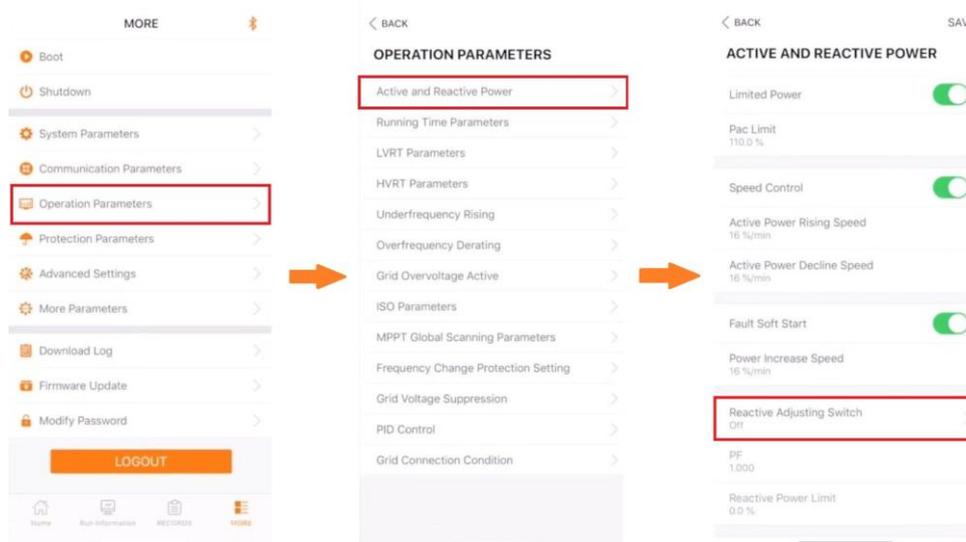


Figure 9 Active and Reactive Power

Select “Pf” for a certain power factor or “Q(u)” to adjust the Volt-Var settings. The different voltage and reactive power ratio can be entered according to the local DNSP’s requirement.

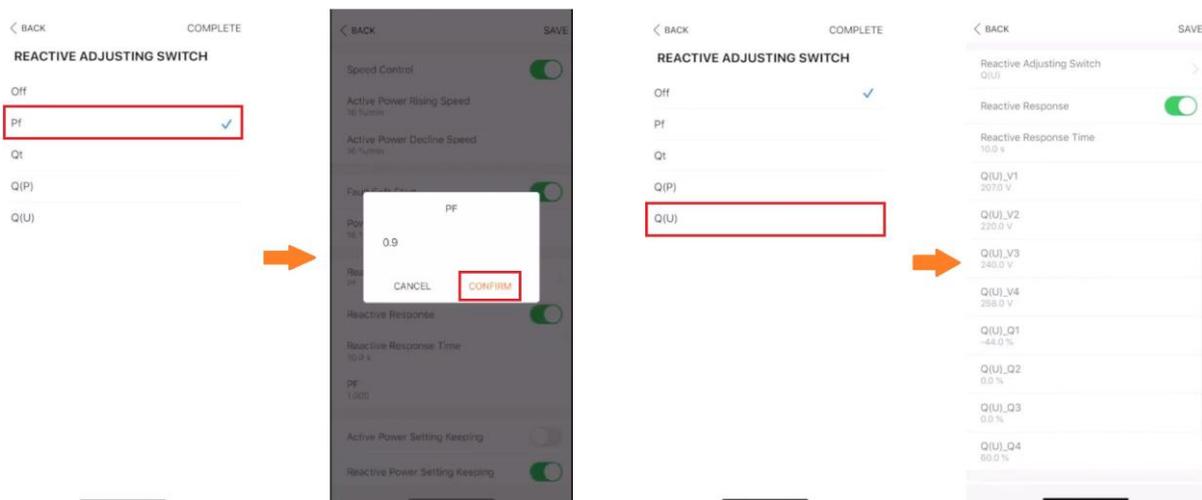


Figure 10 Reactive Adjusting Switch

Step 6: 10-Min Overvoltage Setting

The 10-min over-voltage setting can be adjusted under “**Advanced Settings**”.

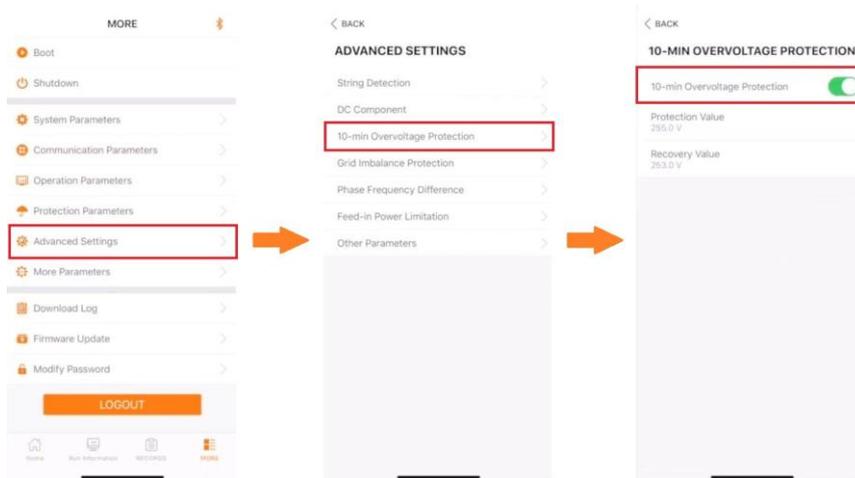


Figure 11 10-Min Overvoltage Protection

The protection level can be adjusted and set according to the local DNSP’s requirement.

Step 7: Feed-In Limitation and CT Ratio

If the inverter needs to be export limited, it can be set using “**Feed-in Limitation**” under “**Advanced Parameters**” . ***

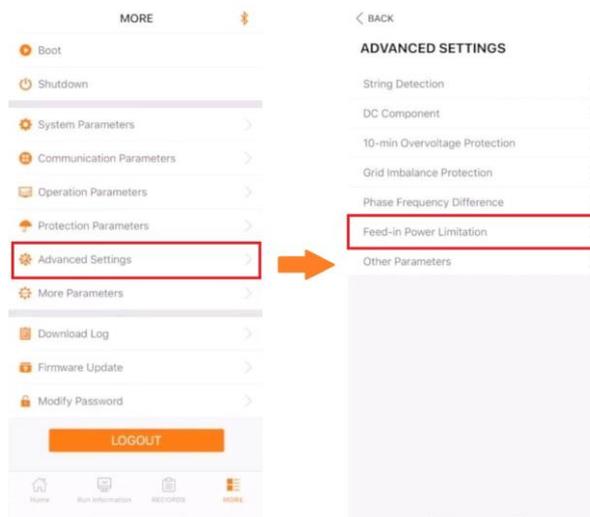


Figure 12 Feed-In Limitation

***If a Sungrow Smart Meter has been installed for just consumption monitoring purposes, the Feed-In Limitation Setting must be enabled for the inverter to detect the meter. Click [here](#) for more information.

The feed -in limitation value is the export limit amount and the feed-in limitation ratio is the ratio of the allowed limit to the total rating of the inverter. ****

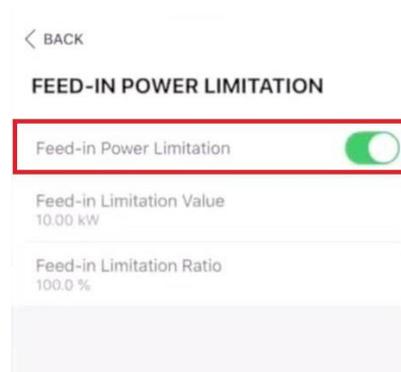


Figure 13 Feed-In Settings

**** For example, if a 10kW inverter needs to be export limited to 5kW, the Feed-In limitation Value = 5kW and the Feed-In Limitation Ratio = 50%.

If a DTSD1352-C meter with external CTs has been used (SG15/20KTL-M), the CT ratio settings will appear under “**Feed-In Limitation**” settings and can be set accordingly.

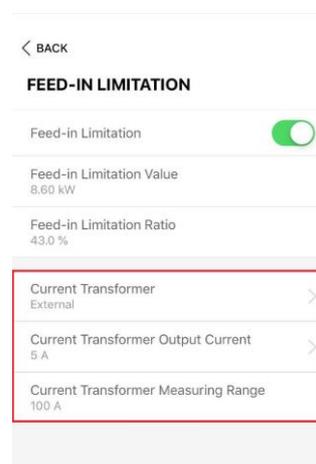


Figure 14 CT Ratio

If the issue persists after following above procedures, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to service@sungrowpower.com.au.