

# S100 Energy Meter Commissioning Guide

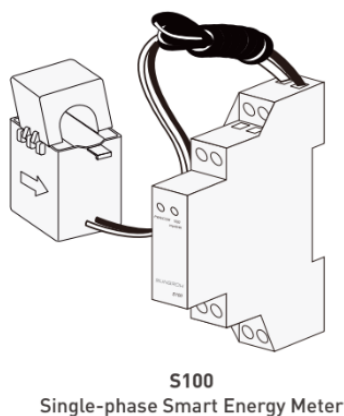
## Disclaimer

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.

S100 energy meter is a single-phase meter that allows to users to monitor consumption data and/or maintain export limitation. This document will discuss how to install, wire and commission the S100 smart meter with the Premium Crystal G2 series inverters.

## 1 Overview of Single-Phase Energy Meter

The Sungrow Premium Crystal G2 inverters provide a facility to control the export of the inverter as well as monitor consumption data through the addition of a Sungrow S100 energy meter. This is an optional accessory.



### Electrical Parameter

Nominal voltage	240 Vac
Input voltage range	180 Vac–286 Vac
Power consumption	< 2 W (10 VA)
Max. operating current	100 A
Grid frequency	50 Hz
Measurement accuracy	Class I
Interface and communication	RS485

### Environmental Condition

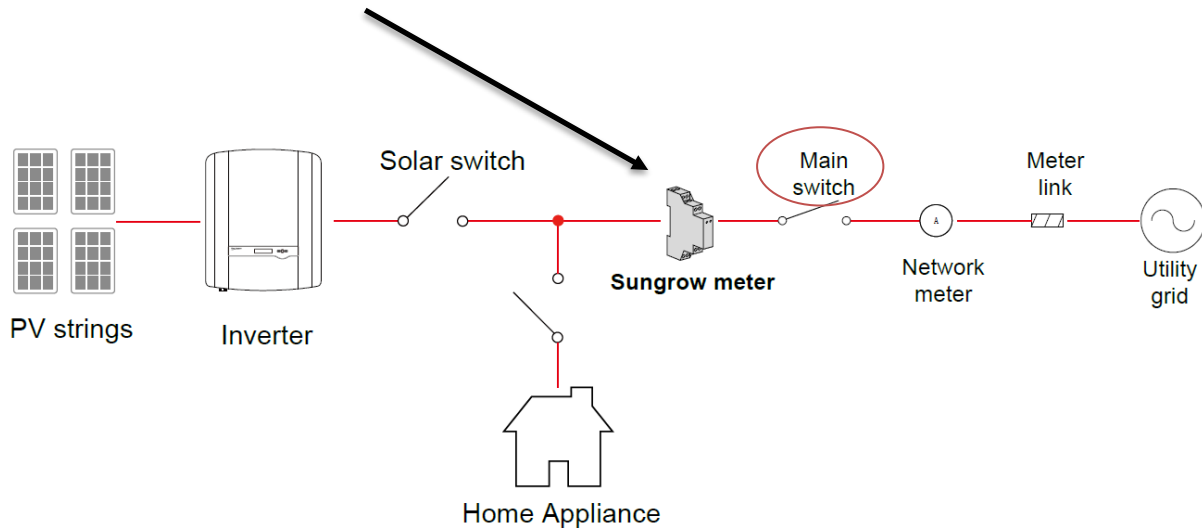
Ingress protection rating	IP20
Operating ambient temperature	-25°C to 75°C
Relative humidity	0–95 %

### Mechanical Data

Dimensions (W x H x D)	18 mm x 117 mm x 65 mm
Weight	0.2 kg
Installation	35 mm DIN-rail

## 2 Installing the Energy Meter

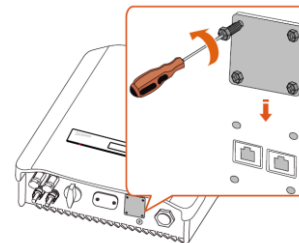
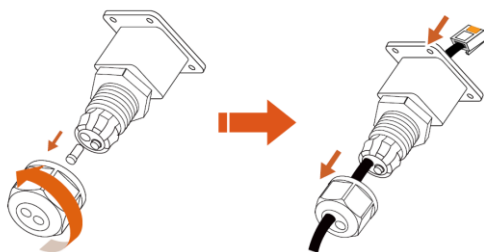
The Energy Meter must be installed at the main switch, the CT clamp must encapsulate all live conductors feeding the house, and the arrow on the CT must point towards the house.



### 2.1 Connection on the inverter side

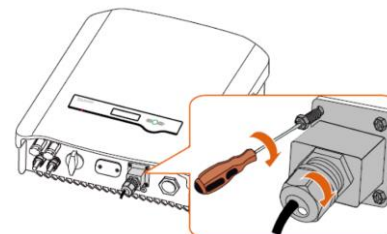
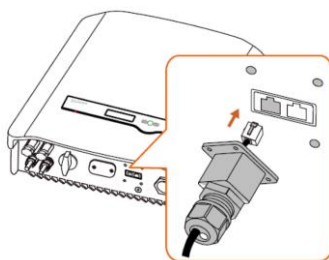
Run the RS485 cable through the supplied weatherproof shroud.

Remove the weatherproof plate from the bottom of the inverter.



Plug the RJ45 connector into the "Meter" terminal and screw the shroud to the inverter.

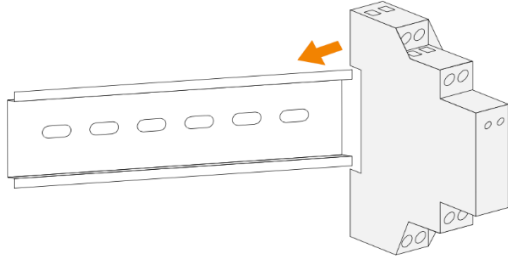
Tighten up the cable gland last.



## 2.2 Connection in the switchboard side

Clip the meter onto the Din rail (Never work on a live switchboard).

**Pay attention to the arrow** point towards the house.

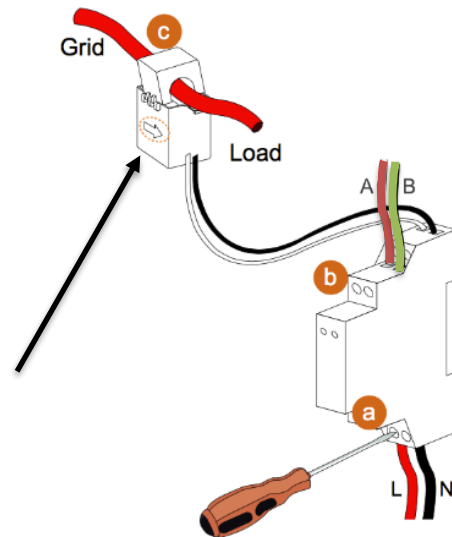


Connect the reference voltage from the main busbar - A

Connect the RS485 cable (ensure correct polarity) - B

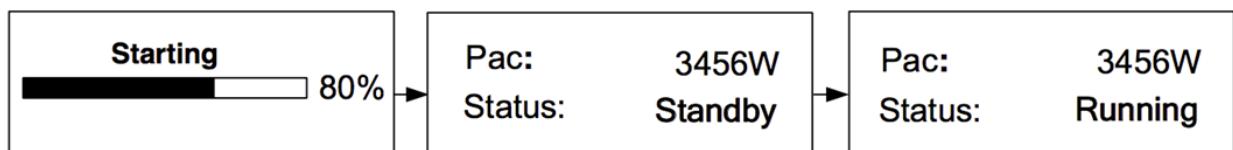
Clip the CT over the supply conductor(s) - C

**Note:** if you use your own cable, please make sure A - **Brown (Pin 8)** to terminal 2 and B - **Green (Pin 6)** to terminal 5 on the energy meter.



## 3 Commissioning

Switch the inverter on and allow to go through the initialization sequence. The meter will be detected automatically, and consumption data will be visible within 5-10 minutes on iSolarCloud.



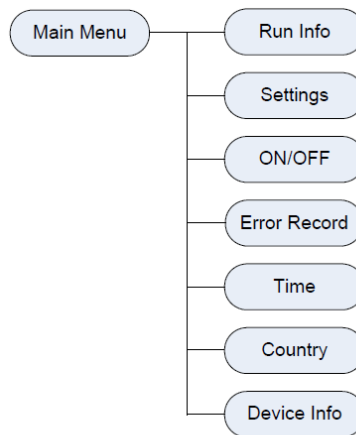
However, to enable export limitation, settings must be updated which can be done either through the screen or the iSolarCloud App.

### 3.1 Setting the Export Limit (On-Screen)

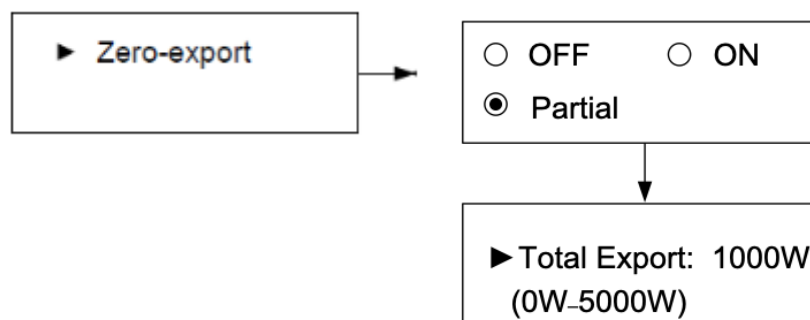
Once an Energy Meter has been installed, the export control can be set to:

- **OFF** – All of the power exported to grid
- **ON** – No power exported to the grid
- **PARTIAL** – Part of the export power will be exported.

The setting can be accessed in the ‘**Main Menu**’.



Select “**Settings**”, enter the password (**135**) and scroll to “**Zero-Export**” and enter.



Select the option and set the export limit power as required.

### 3.2 Setting the Export Limit (iSolarCloud)

The export settings can also be updated through **Local Access** of the iSolarCloud App. To use local access feature, connect to the SG-xxxx Wi-Fi and login locally as the admin through the WLAN option. To know more about local access login, please click on the link below:

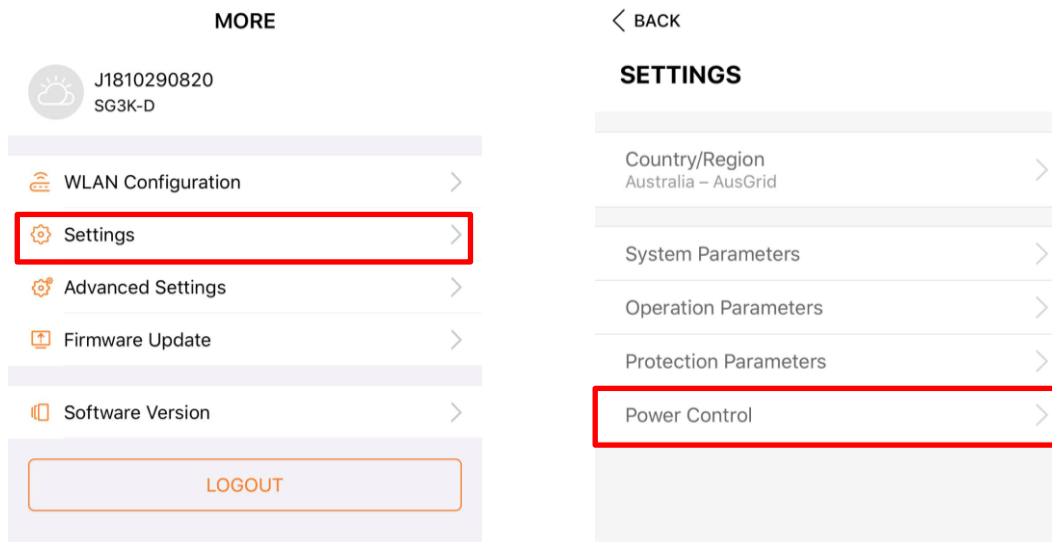
- [Local Access Methods](#)

Please note, the export settings can be set using the “**Feed-In Limitation**” option. For inverters with an older firmware, the settings can be set by following the same steps below and choosing “**Zero-Export**” instead of feed-in limitation.

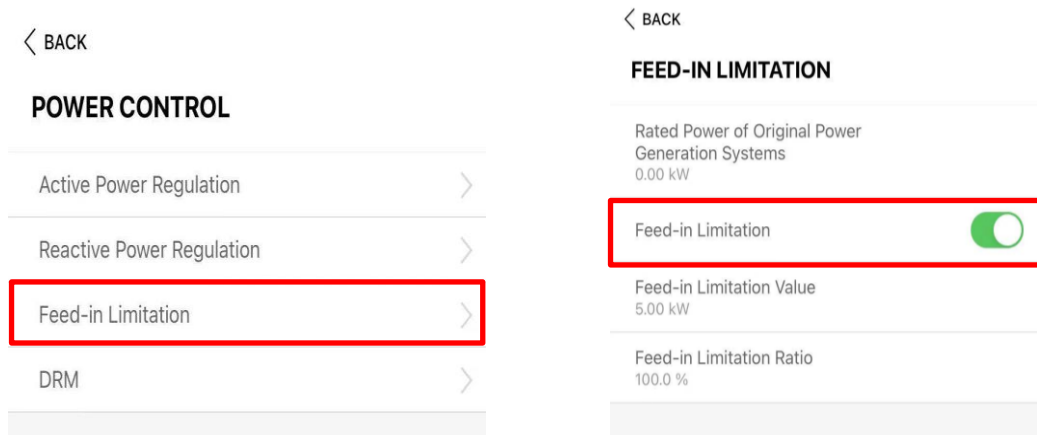
Refer to section 3.1 for settings definition else, a firmware upgrade can be done to update to the latest settings Please refer to the link below on how to upgrade the firmware locally.

- [Local Firmware Upgrade](#)

Once logged on to local access, click on “**More**” on the bottom right corner -> then select “**Settings**” and then **Power Control**.



Then choose **Feed-In Limitation** and **Enable** it to adjust the export limit percentage and ratio.



### Technical note:

When setting the percentage, **the export control will allow export to the ratio that you have set for the inverter.**

For example, if the inverter is a 5kW inverter, 100% = 5 kW, 50% = 2.5 kW export allowed.

If the issue persists, please take photos testing on site and contact Sungrow Service Department on 1800 786 476 or email to [service@sungrowpower.com.au](mailto:service@sungrowpower.com.au).