

# Sungrow HV Hybrid inverters – RS485 wiring quick guide for parallel connection

## 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.

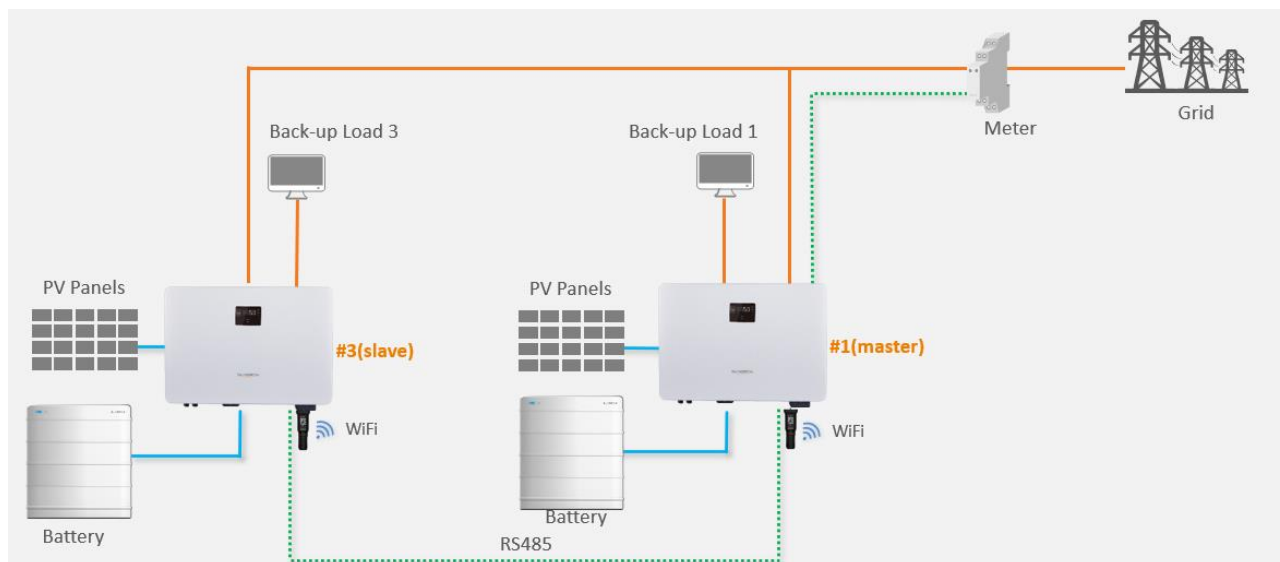
## Purpose of the RS485

The purpose of the RS485 wiring in Sungrow SH\*\*RS and SH\*\*RT inverters is to allow multiple inverters to be controlled from one energy meter.

As the single and 3-phase configurations are different, we will deal with each separately.

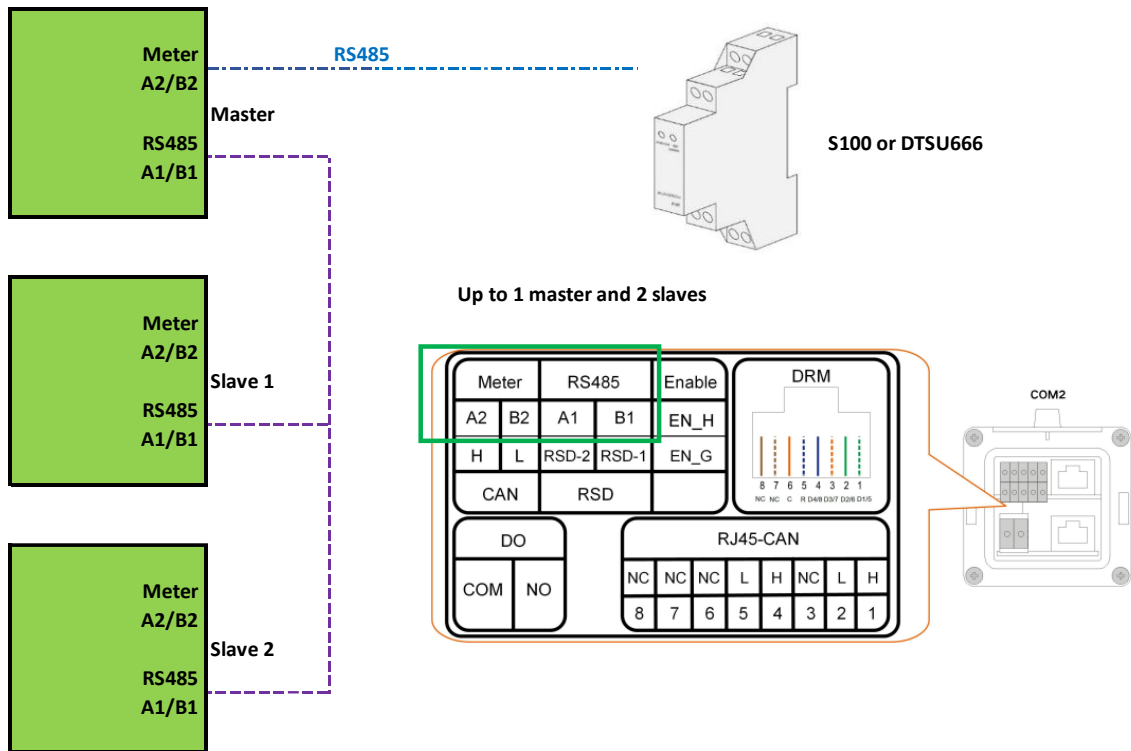
## Single-Phase Hybrid inverters:

The maximum number of single-phase hybrid inverters that can be connected in parallel is 3 (Three) - (One master and two slaves)



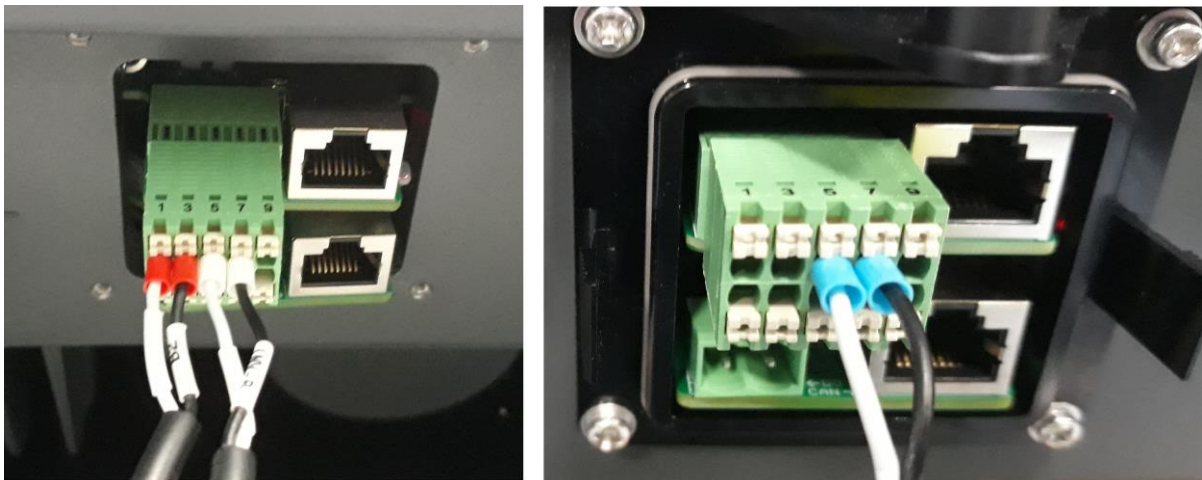
Picture 1 – Multiple single-phase inverters

The connection is done via the RS485 cable, and runs from meter to master, then to slave(s). (This is different from the 3-Phase configuration).



Picture 2 – RS485 Schematic Diagram

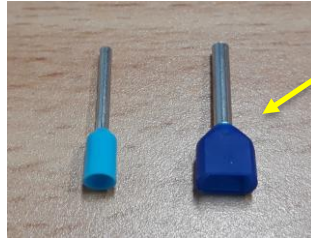
Note that Meter connects to A2/B2 (pins 1 & 3) in the master, and the master communicates with the slaves on A1/B1 (pins 5 & 7).



Picture 3 – Com connections of master (left) and Slave (right)

**Parallel RS485 connection:**

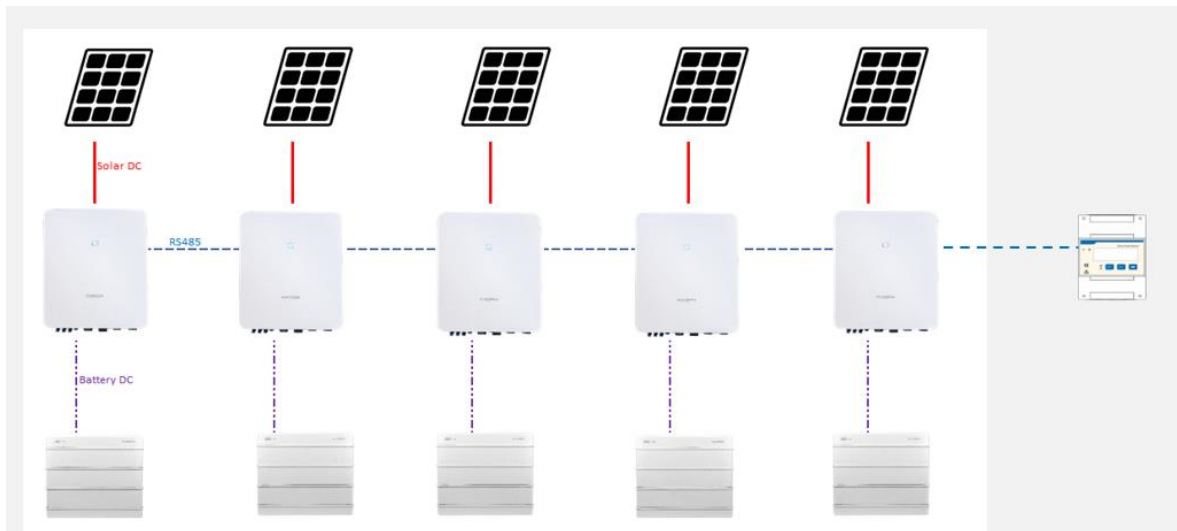
If connecting two RS485 cables in parallel, please use the provided Bootlace terminators.



Picture 4 – Single and double Bootlace

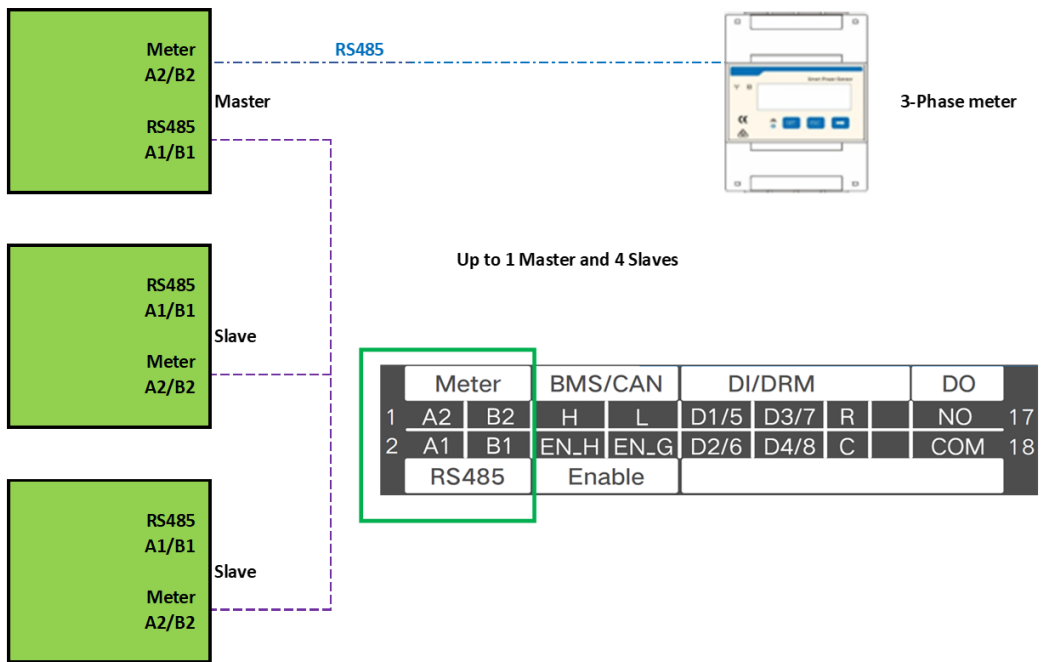
**Three-Phase Hybrid Inverters:**

The maximum number of 3-Phase Hybrid inverters that can be connected in parallel is 5 (five) – One Master, and up to Four slaves.



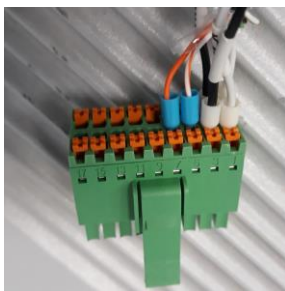
Picture 5 – Multiple 3-Phase Inverters

The connection is done via the RS485 in the Coms connector block(s) and runs from the meter to A2/B2 in the master, then from A1/B1 in the Master, to A2/B2 in the slave(s). (This is different from the single-phase configuration).



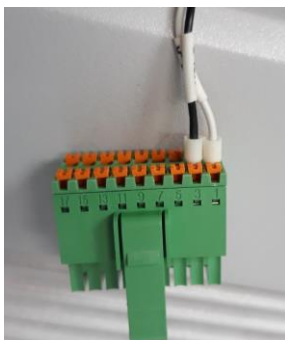
Picture 6 – RS485 Schematic Diagram

Meter RS485 connects to A2/B2 (pins 1 & 3 respectively), and parallel out on A1/B1 (from pins 2 & 4 respectively).



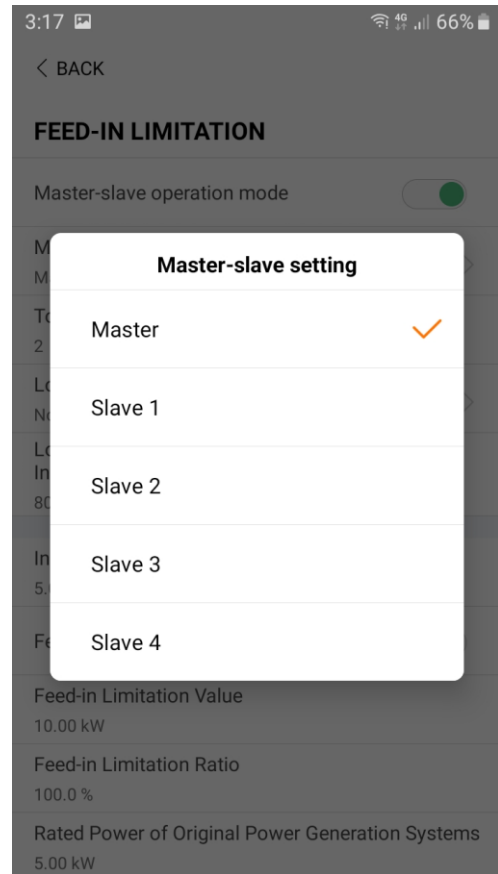
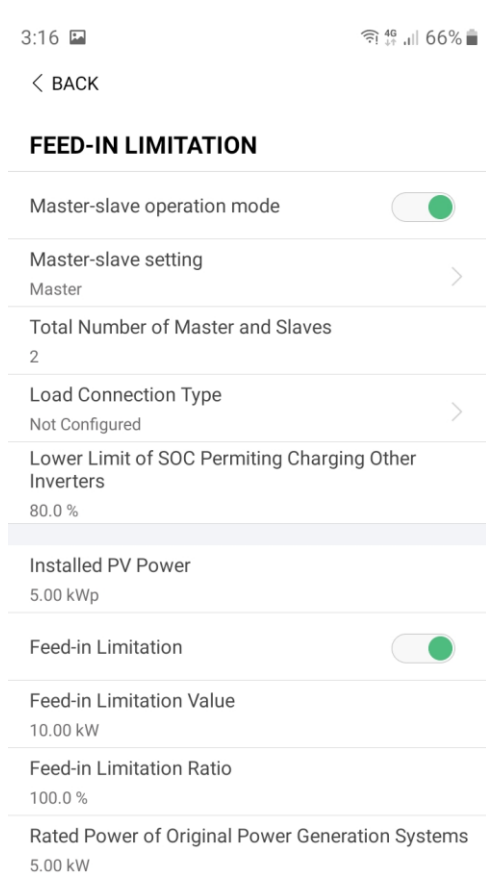
Picture 7 – Pin-outs of Mater Coms connector

Input to slaves connects on A2/B2 (1 & 3)



Picture 8 – Pin-outs of Slave(s) Coms connector

Ensure to set the correct master/slave configuration in each inverter settings via the iSolarCloud App.



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](mailto:service@sungrowpower.com.au), Monday- Friday 9am - 5pm (AEDT).