3-phase Hybrids-FAQ

How to set parameters for parallel mode on 3-phase Hybrid inverters

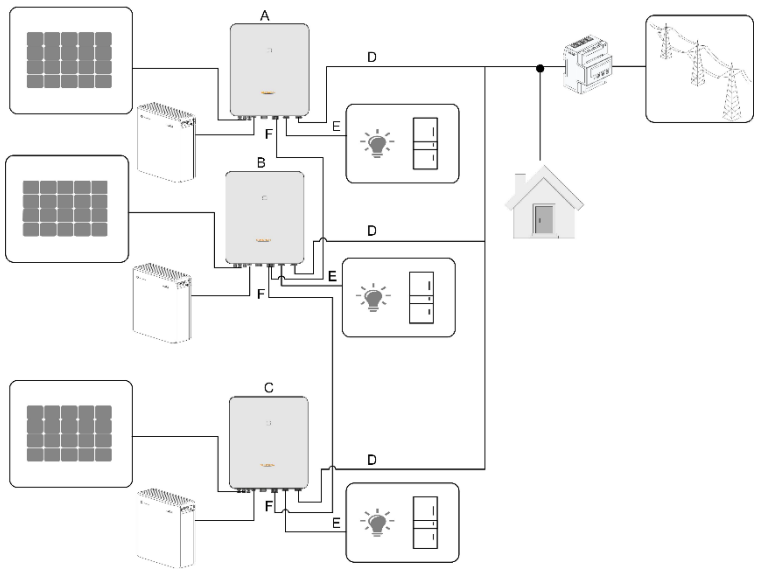
Applicable to: SHxxRT series

1. How to set the parallel mode of SHxxRT three-phase hybrid inverters
   First, connect the system power line and communication line as shown in the following figure. In addition, please pay attention to the following matters:

> Only the inverter GRID terminal can be connected in parallel, the BACK-UP terminal and the battery terminal cannot be connected together, they should be connected to the off-grid load and the battery respectively. The Backup loads of each inverter should not exceed its nominal power.

In an on-grid parallel system, the master inverter collects information from Smart Energy Meter and slave inverter and performs the energy management including:

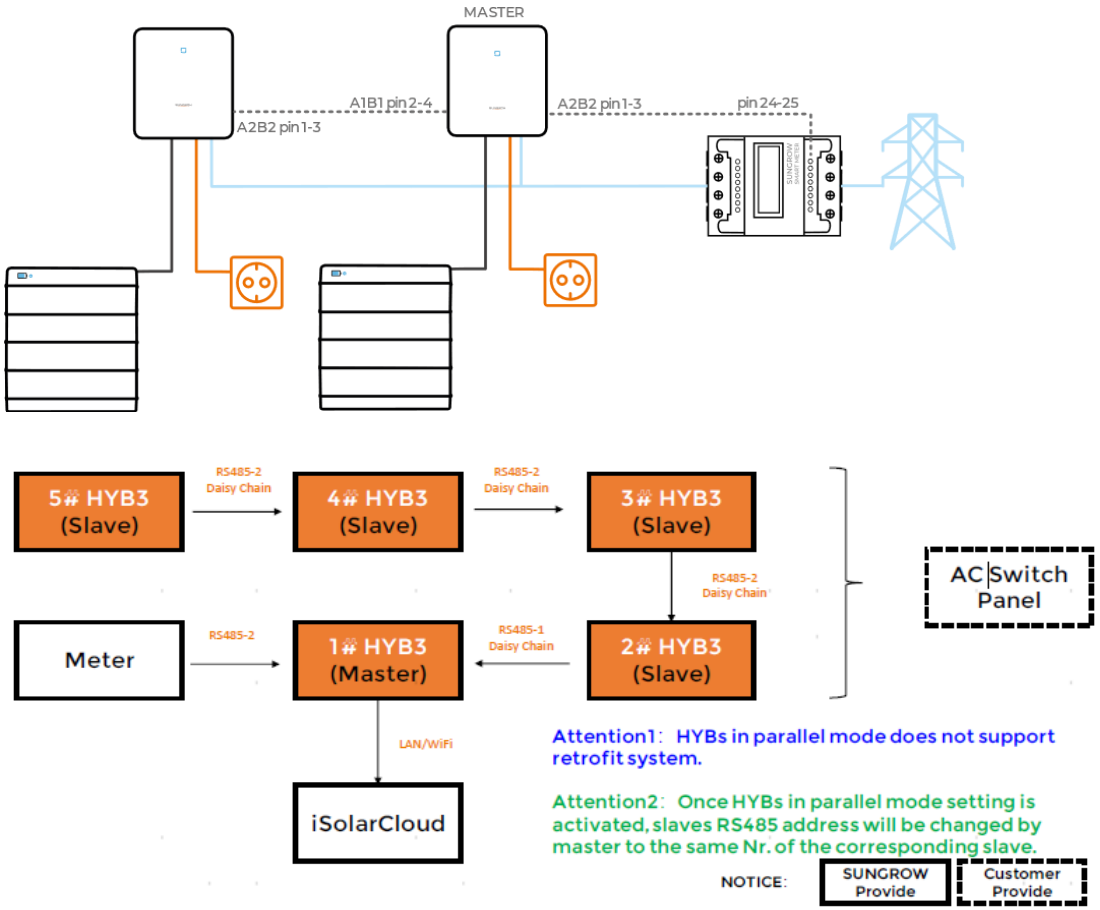
- Feed-in power control.
- Battery charge / discharge
- Maximum power limitation



(A) Master (B) Slave 1 (C) Slave 2

(D) GRID (E) BACK-UP (F) RS485

The following schematic shows how to connect the communication cables between the energy meter and the master and slave inverter daisy chain.



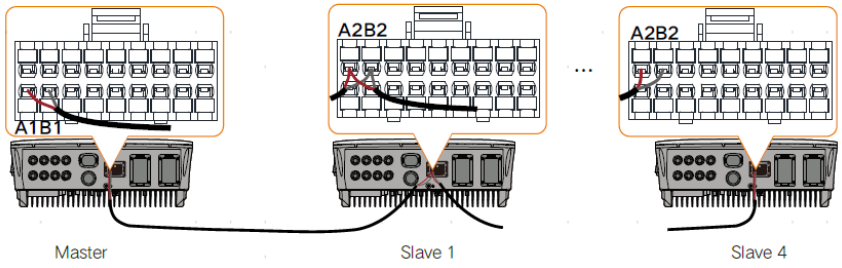
Communication diagram in parallel mode

- Pin tags will not change
- Master HYB3:
  - A1B1 for HYB3 daisy chain
  - A2B2 for the smart meter
  - Battery LG Chem is not supported, since A1B1 is occupied.
- Slave HYB3:
  - A2B2 for HYB3 daisy chain
  - A1B1 for LG Chem Battery

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

Inverter parallel

Maximum five hybrid inverters with the same type can be connected in parallel.



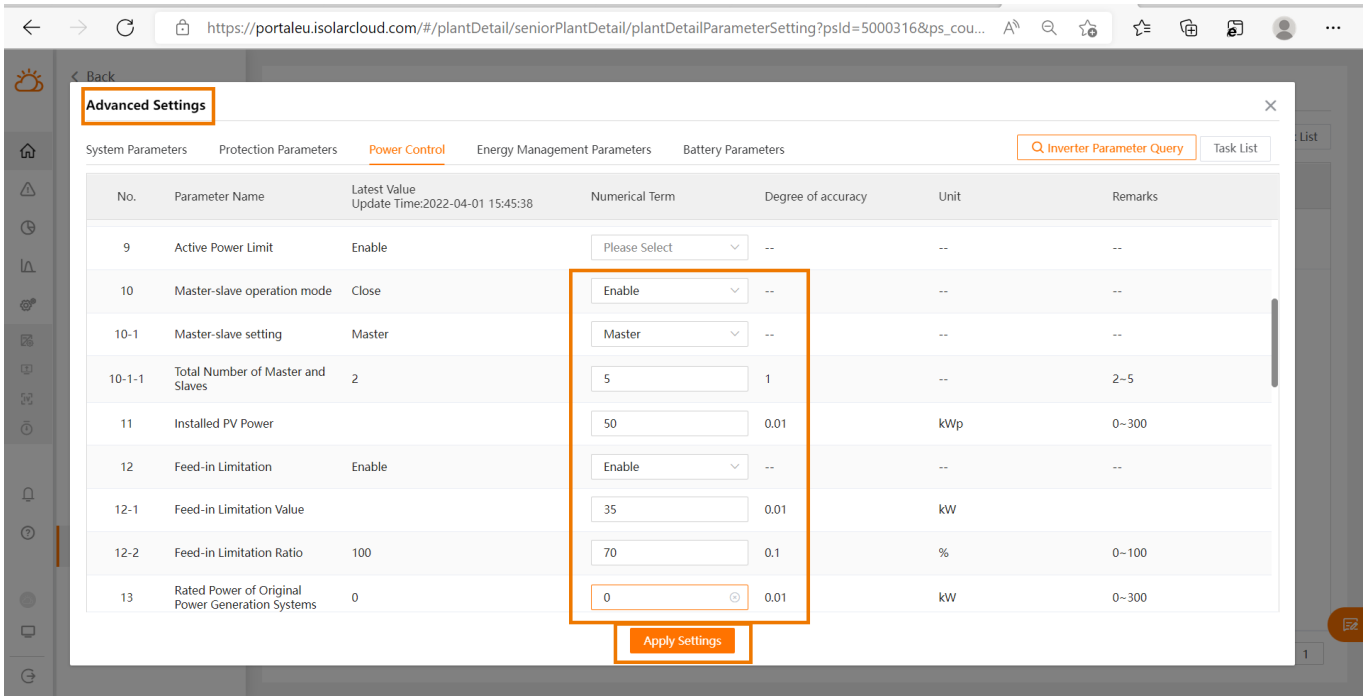
- HYB3 Master is defective or there is a problem with the daisy chain connection
    - HYB3 Slaves will stop running
    - Master-Slave Mode for the HYB3 Slaves needs to be disabled, also the dynamic feed-in limitation will be abnormal because there is no smart meter connected to one of the HYB3 Slaves.
- One of HYB3 Slaves is defective or there is a problem with the daisy chain connection
    - HYB3 Master will stop running
    - Master Slave Mode for the HYB3 Master and other HYB3 slave needs to be disabled, also the dynamic feed-in limitation will be abnormal because there is no smart meter connected to one of the HYB3s.

Slave Parameter settings of multi-parallel PV & storage system

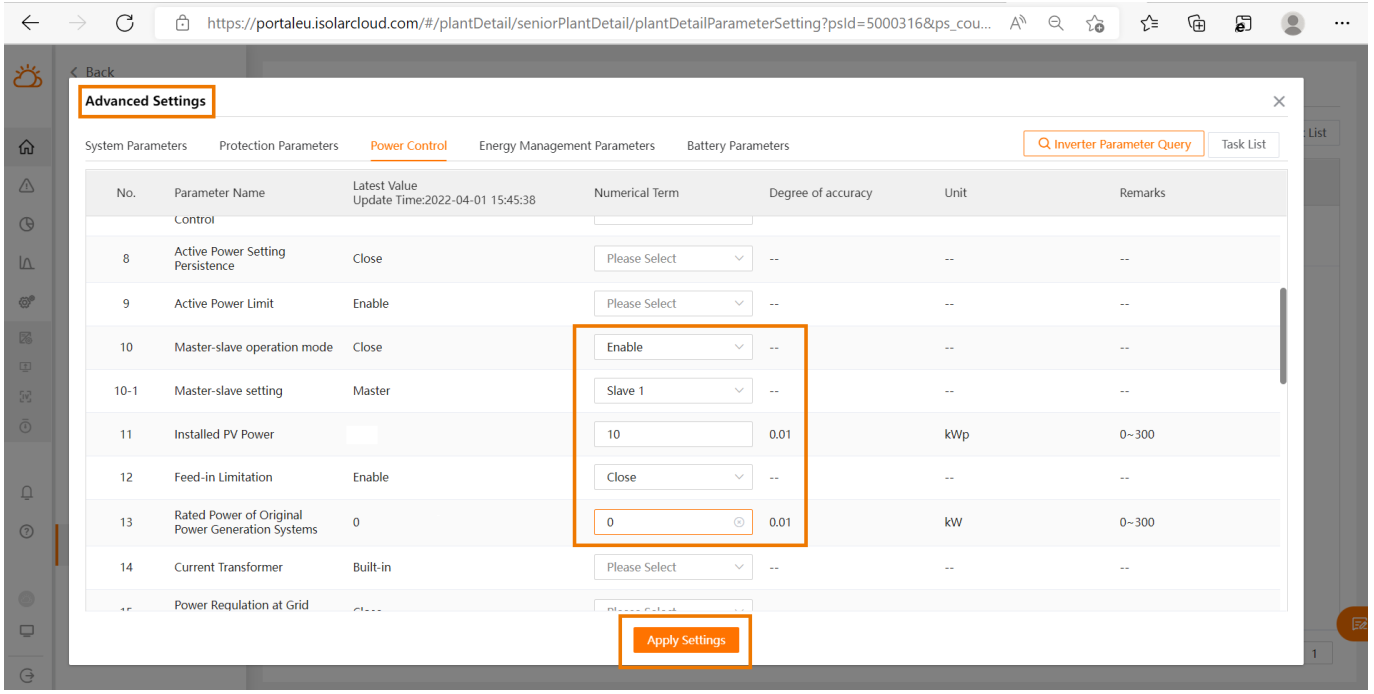
- **Take 5 HYB3s in parallel mode for example**

	Master	Slave1	Slave2	Slave3	Slave4	APP Local Access	APP Remote Access	Web
1. Master-slave operation mode	On					√	√	√
1.1 Master-slave setting	Master	Slave1	Slave2	Slave3	Slave4			
1.2Total Number of Master and Slaves	5	-	-	-	-			
2. Installed PV Power	Entire Plant installed PV Power (kWp)	Keep in default	Keep in default	Keep in default	Keep in default			
3. Feed-in Limitation	On	Off	Off	Off	Off			
3.1 Feed-in Limitation Value	Entire Plant Feed-in power (kW) (be equal to 'Feed-in Limitation Ratio')	-	-	-	-			
3.2 Feed-in Limitation Ratio	Feed-in % of Installed PV Power (%) (be equal to 'Feed-in Limitation Value')	-	-	-	-			
4. Rated Power of Original Power Generation Systems	0							

For example: 5 HYB3s are added, the total installed PV power for this 5 HYB3s is 50kWp. Feed-in limitation is 70%.



Master parameter setting



Slave 1 parameter setting

2. Parallel connection and parameter setting of single-phase PV & storage system

Click here

For further information, please download the user manual here.

This manual is intended for professional technicians who are responsible for installation, operation, maintenance and troubleshooting of inverters, and users who need to check inverter parameters. The inverter must only be installed by professional technicians.
The professional technician is required to meet the following requirements:

- Know electronic, electrical wiring and mechanical expertise, and be familiar with electrical and mechanical schematics.
- Have received professional training related to the installation, commissioning and troubleshooting of electrical equipment.
- Be able to quickly respond to hazards or emergencies that occur during installation, commissioning and troubleshooting.
- Be familiar with local standards and relevant safety regulations of electrical systems.
- Read this manual thoroughly and understand the safety instructions related to operations.

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