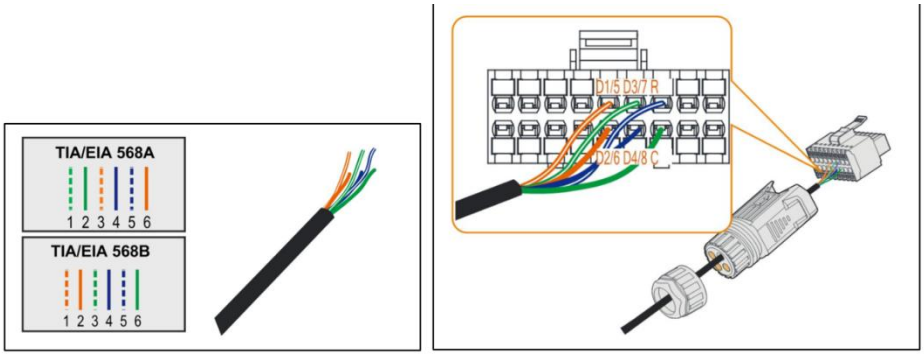
3-phase Hybrids-FAQ

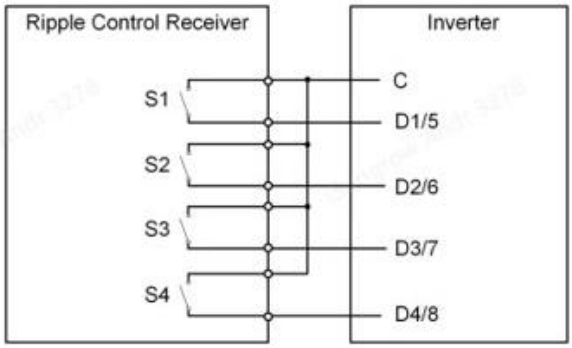
How can the Ripple Control Receiver be connected to the 3-phase Hybrid in parallel or retrofit mode?

Applicable to: SHxxRT series

Below you see how to connect the Ripple Control Receiver signal to the hybrid using a CAT5 cable.



In particular, here is how the cable is wired to the communication connector of the hybrid.



S-1	S2	S3	S4	Switch Operation on External RCR	Output power (in % of the Rated output power)
0	0	0	0	None	100 % (configurable according to need)
1	0	0	0	Close S1	100 %
0	1	0	0	Close S2	60 %
0	0	1	0	Close S3	30 %
1	1	0	0	Close S1 and S2	0 % (disconnect from grid)

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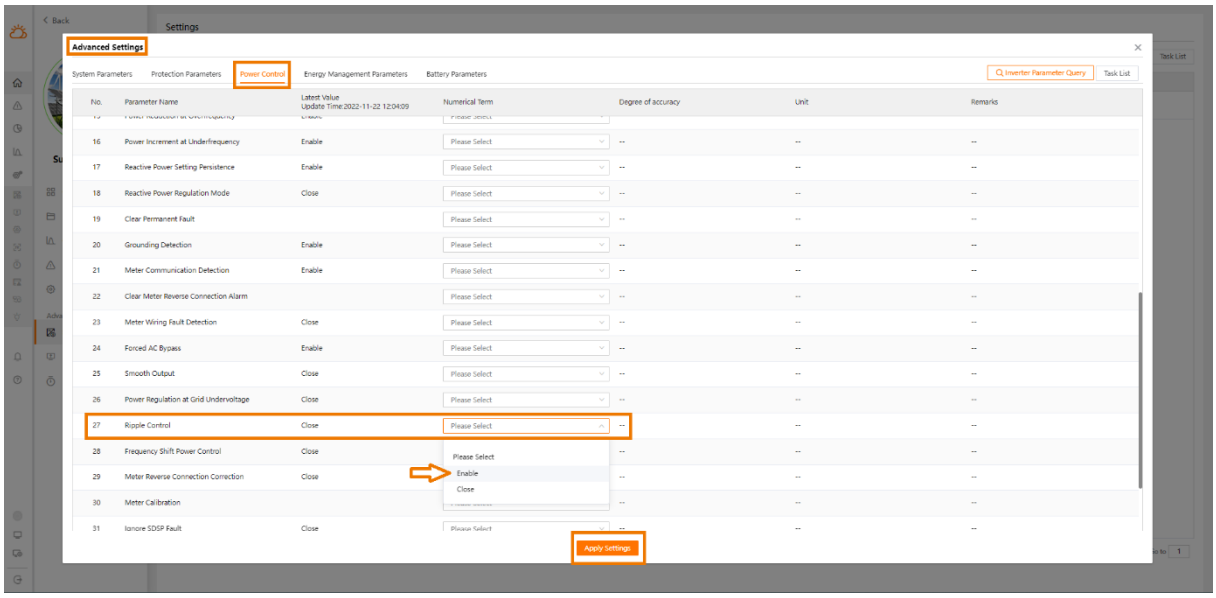
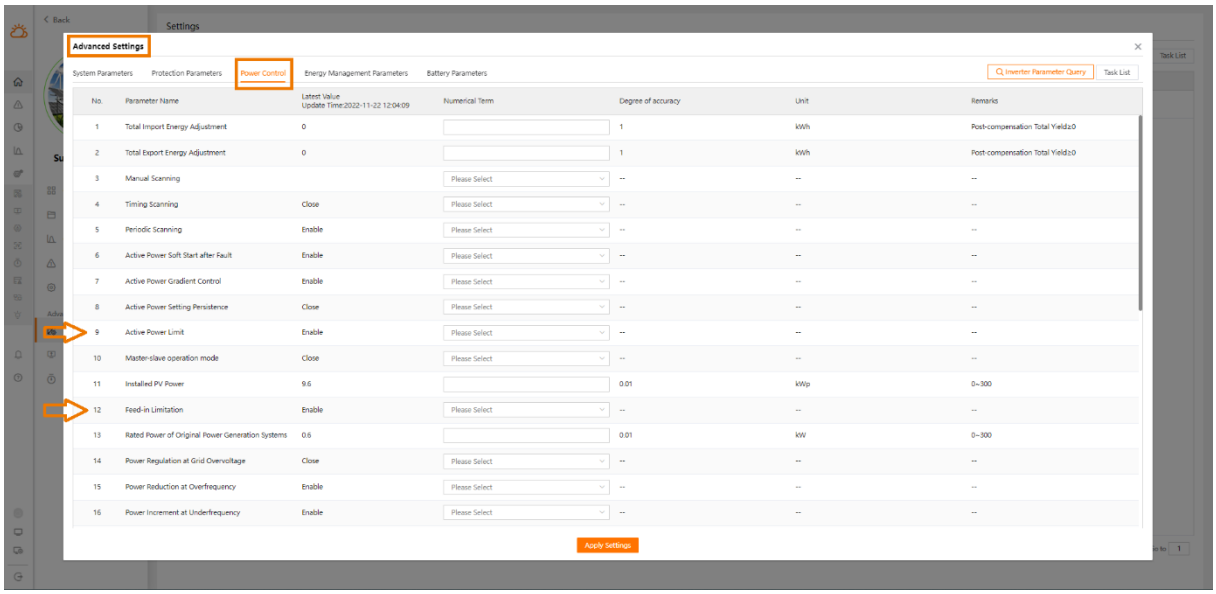
Make sure to turn on the Ripple Control receiver settings in the advanced parameters on the web portal of the 3-phase Hybrid.

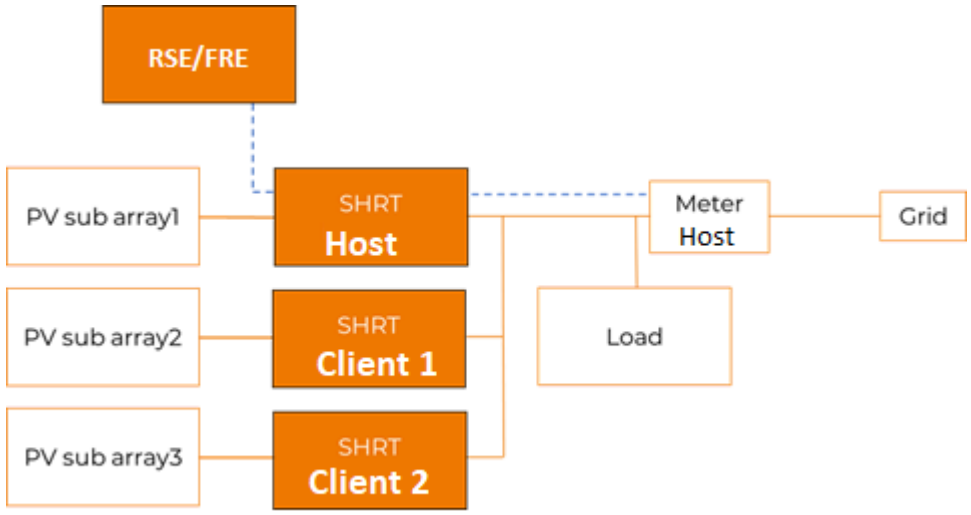


Note: You might have to disable Active Power Limitation and Feed-In Limitation to ensure the proper function of the ripple control receiver.

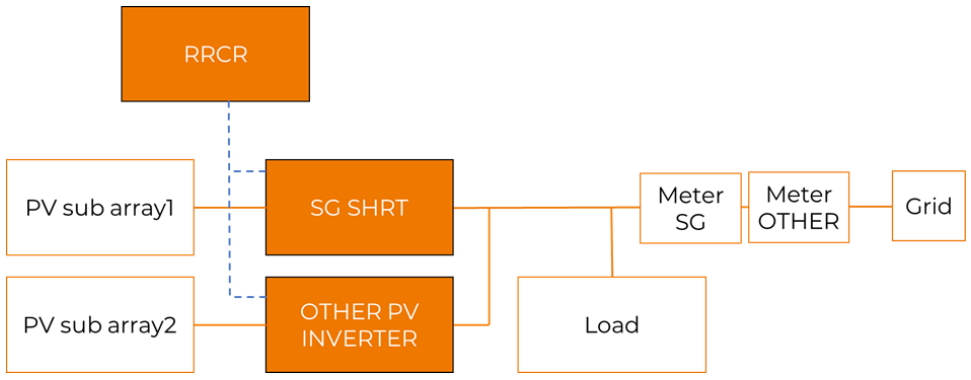


With the ripple control receiver, multiple 3-phase Hybrid can be connected in parallel (up to 5). Please note that Ripple Control Receiver and NA-Protection use the same pin in the communication connector on the hybrid, so NA-Protection will have to be provided separately with external centralized NS Protection solution whenever needed.

The Ripple Control Receiver must be connected only to the Host inverter and not to the Client inverter. An additional de-coupling module might be necessary to ensure a proper operation of the ripple control receiver.



With Ripple Control Receiver it is possible to connect the 3-phase Hybrid with any other PV inverter in parallel. The signal wire, however, must be split in order to connect with both inverters (blue dotted line in the schematic below)



When a signal for power reduction will come from the Ripple Control Receiver, both the 3-phase Hybrid and the other PV inverter will reduce the power by the amount required. So, for example if there is a requirement for 60% power, both inverters will reduce their feed-in power to 60% of the nominal power.

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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