

Parallel System Solution

Introduction:

Inverter parallel allows you to expand your power plant capacity and combine all the inverters to act as a single system to power the loads together. It is allowed to connect up to 10 inverters parallelly in the same system.

Total plant capacity:

The total power plant capacity can be reached up to 330KW, the size of CTs used should be determined by the maximum power plant capacity.

RS485 cable splitter:

The RS485 cable splitter enables you to increase the RS485 network connection on an RS485 port. The RS485 cables wiring is as figure 2 below, connect two RS485 cables from two different inverter to a single RS485 port.

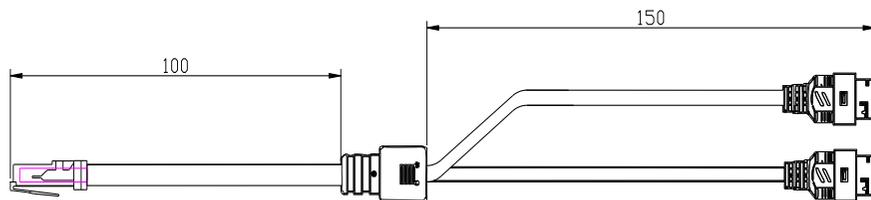


Figure 1: Ethernet cable splitter



Figure 2: Ethernet cable splitter and cable connection

eSolar O&M APP Connection:

1. Power on the inverters
2. Set the inverter RS485 addresses to be different from each other. (Set the RS485 address to any number between 1 and 10, nonrepeat.)
 - For Sununo/ Suntrio Plus series inverter: Set the address on the inverter LCD screen

Procedure: Setting > Communicate Set > RS485 Address

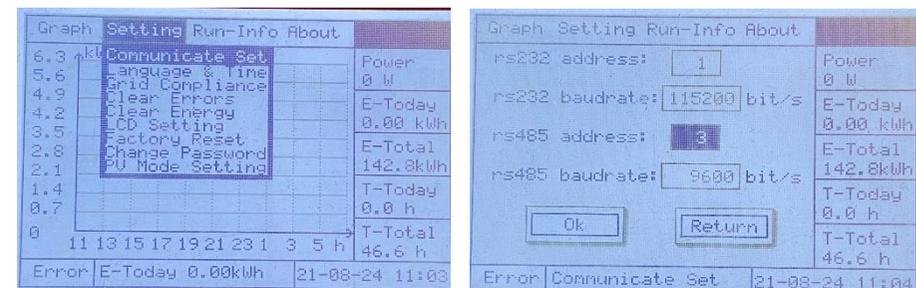


Figure 3: LCD screen display for choosing RS485 address

- For R5/ R6 series inverter: Set the address on the eSolar O&M APP
Install a communication module onto the inverter, and connect to eSolar O&M APP.
Procedure: Communication > RS485 setting > Address
After the RS485 address setting completed, disconnect the communication module

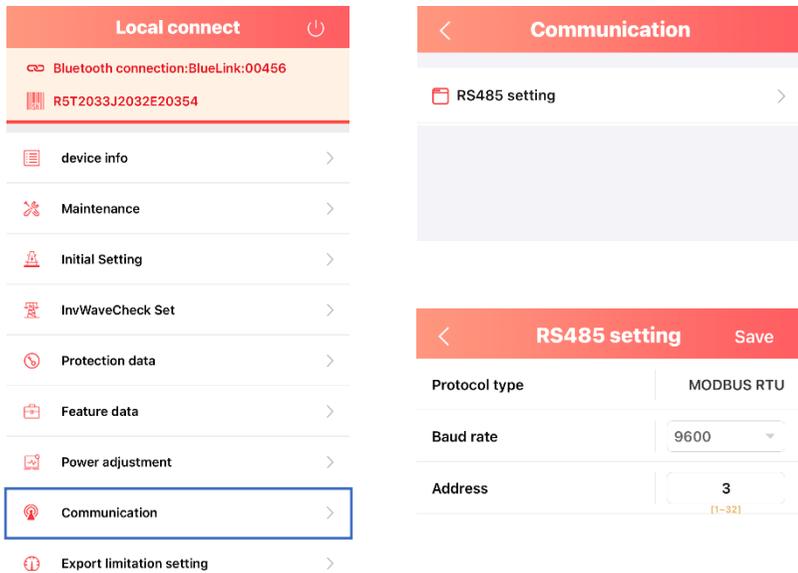


Figure 4: APP display for choosing RS485 address

3. Connect the RS485 cables and SEC module (as the parallel system wiring diagram)

4. Connect SEC module to eSolar O&M APP
Then you should see all the devices list connected parallelly.

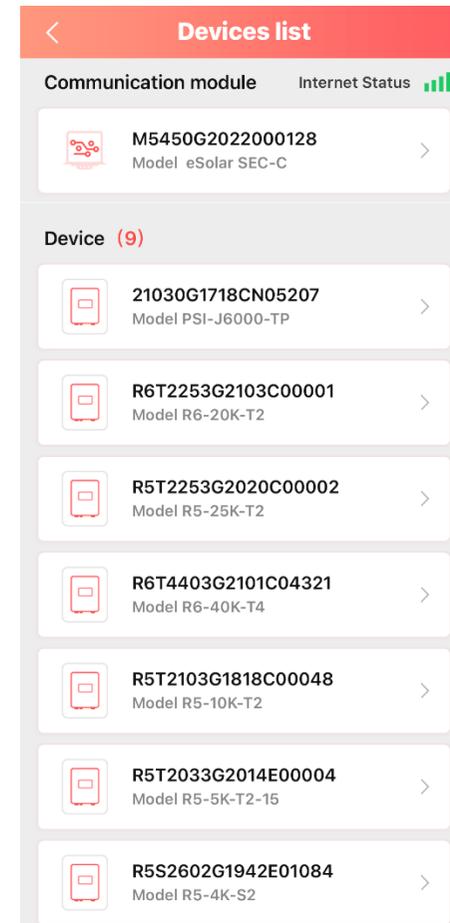
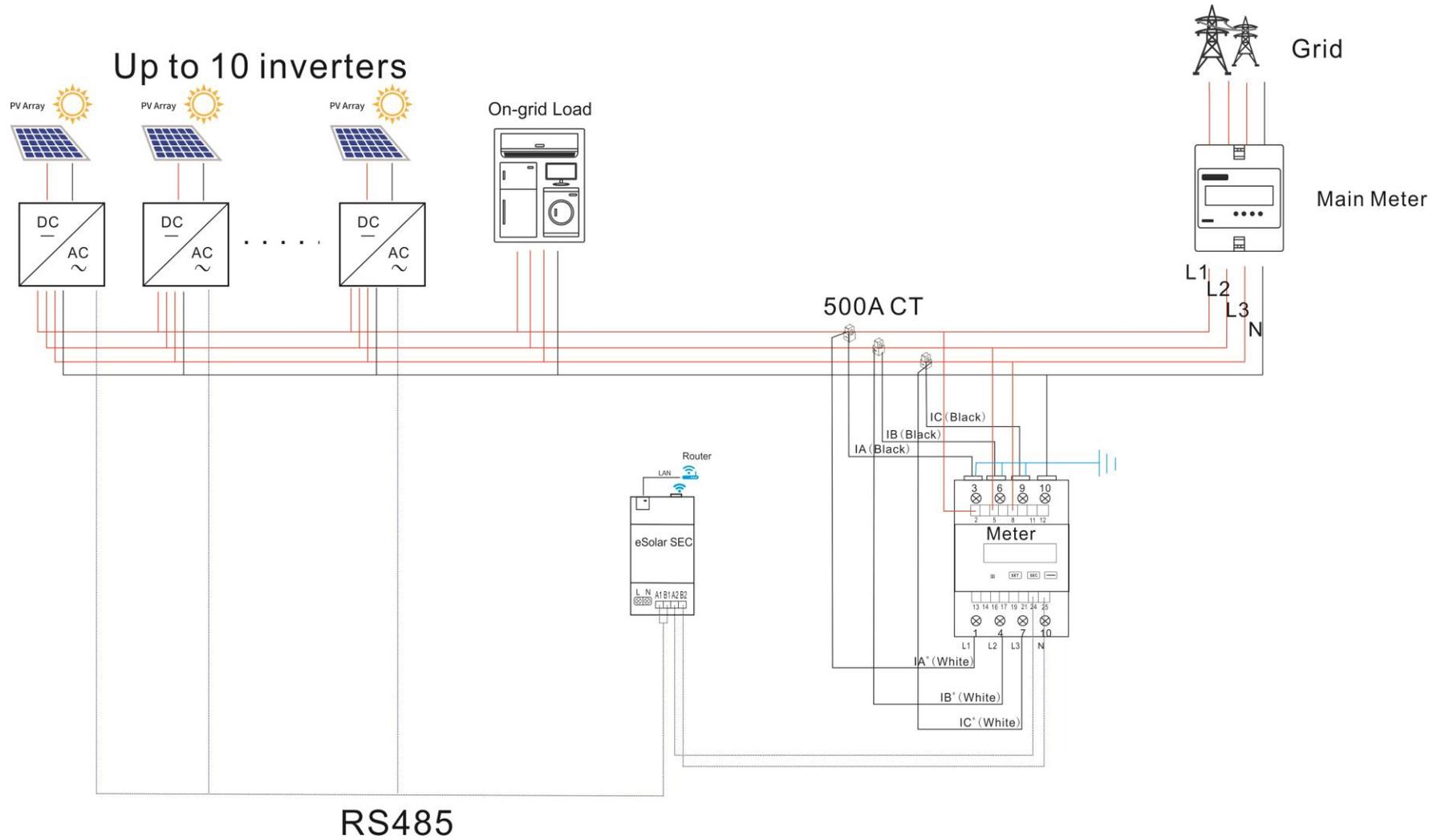


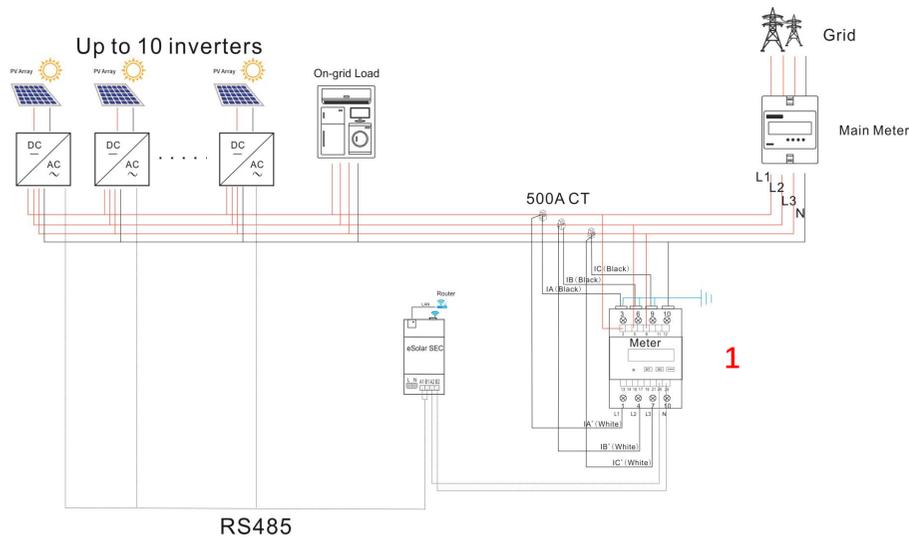
Figure 5: APP display for devices list

Parallel System Wiring:



Meter Address Setting

If one meter is connected to the system, the meter address should be set to 1.



Three phase meter address Settings (DTSU666)

Button	Description
SET	Confirmation or cursor shift (when input digits)
ESC	Exit
→	Add

Table 1 Button description of three meter

The setting methods for three-phase meter is as follows.

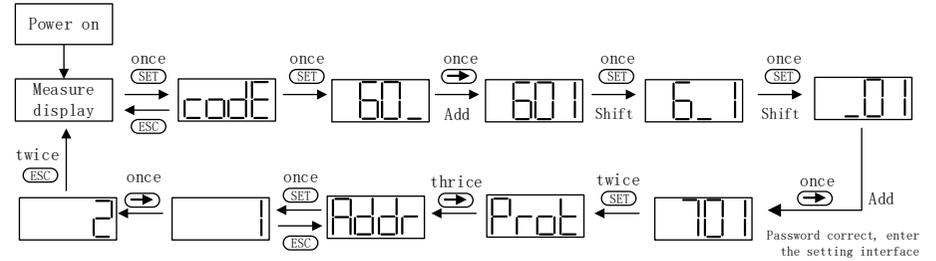


Fig. 4.19 Three phase meter address setting

- ① Power on the meter and enter the “Measure display” interface, then press **SET** button twice for entering password 701.
- ② Press **→** button once to adjust the value of the first digit, one increment per button pressing.
- ③ Pressing **SET** button once to shift to the second digit, same methods to adjust value as for the first digit, then adjust the third digit in a same way, set the default password into 701.
- ④ When the password entered correctly, press **SET** twice to enter the Port interface then press **→** for three times to enter address page, and press **SET** button once to start to set meter address.
- ⑤ Pressing **→** button to adjust the value of address, one increment per button pressing
- ⑥ After the address set successfully, press **ESC** button twice to exit to Measure display interface to get the meter work.

Export Limit Setting

Open eSolar O&M App, and connect all the devices to App.

1. Enter eSolar SEC interface
2. Select the gear icon at the top-right corner

The screenshot shows two screens from the eSolar O&M App. The left screen is titled 'Devices list' and shows a list of devices. The right screen is titled 'Communication module' and shows the configuration for a specific device.

Devices list

Communication module Internet Status

M5450G2022000128
Model eSolar SEC-C

Device (5)

R5S2602G1942E01084
Model R5-4K-S2
RS485 Addr 1

R6T2253G2103C00001
Model R6-25K-T2
RS485 Addr 2

R5T2103G1818C00048
Model R5-10K-T2
RS485 Addr 5

R5T2033G2014E00004
Model R5-5K-T2-15
RS485 Addr 6

R5S2602J2117E24666
Model R5-6K-S2
RS485 Addr 7

Meters (1)

Communication module

Module SN
M5450G2022000128

Model eSolar SEC-C
Product Code 000000000000049
Firmware Version v1.011
Hardware Version 1.100
Working Mode auto

WIFI

link up
mac addr F0:08:D1:7D:DB:30
IP 192.168.31.146
mask 255.255.255.0
gateway 192.168.31.1
router ssid SAJ_8F
router bssid 64:64:4A:2D:C0:16
router signal -58dBm

Ethernet

link up
mac addr F0:08:D1:7D:DB:33
IP 0.0.0.0
mask 0.0.0.0
gateway 0.0.0.0

3. Select Export limitation setting
4. Enter the export limit value

The screenshot shows two screens from the eSolar O&M App. The left screen is titled 'Communication module' and shows the configuration for a specific device. The right screen is titled 'Export limitation setting' and shows the configuration for the export limitation.

Communication module

Module mode setting
Wi-Fi configuration
Communication
network diagnosis
Export limitation setting
Factory setting
Restart module

Export limitation setting

Export limitation Turn ON
Setup type Total Power
50 %
[0-110]

Save