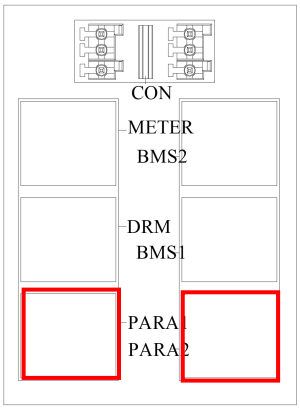
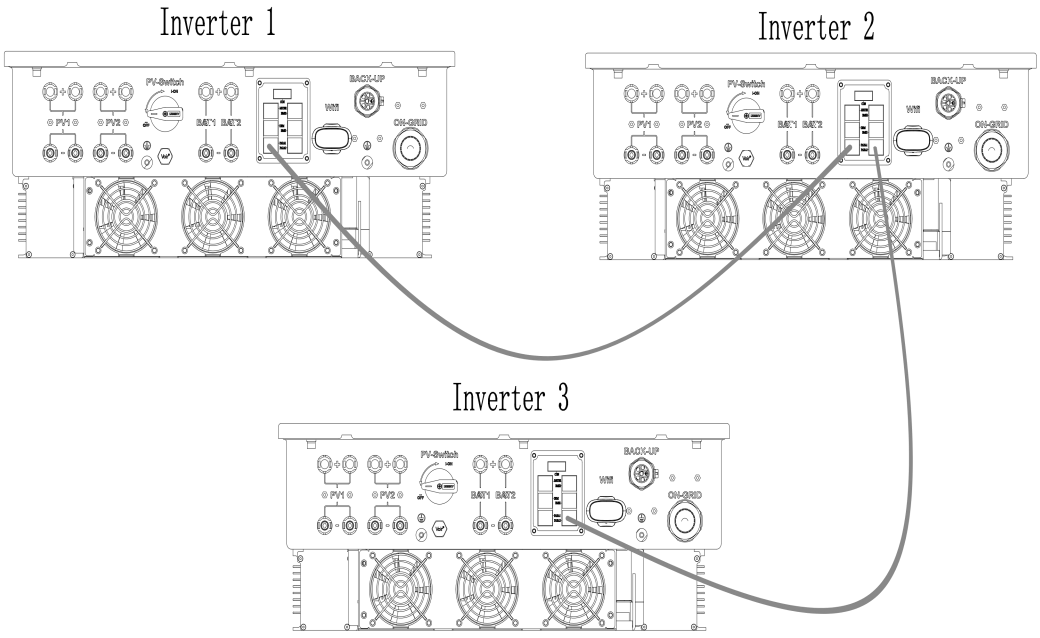
Isuna T-TH Parallel Operation

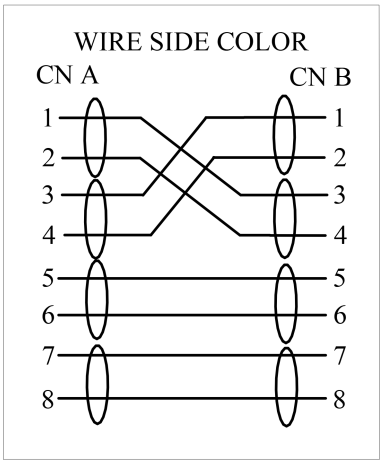
The following section describes the parallel operation of two Isuna 20000T models. For multi-parallel systems, reference to two parallel inverters is sufficient.

1 Parallel system communication connection

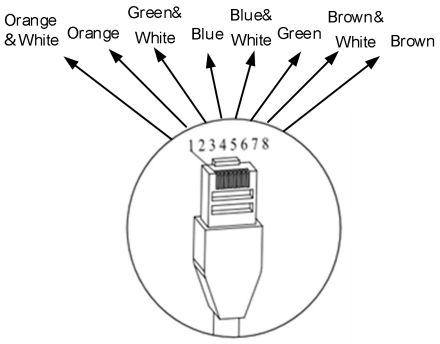




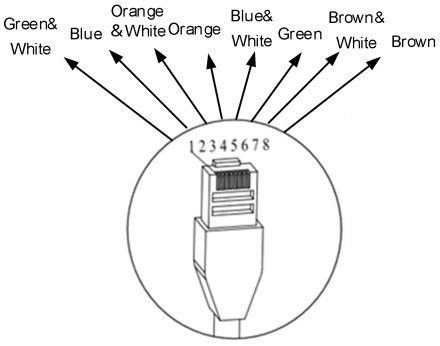
When connecting the parallel communication line, PARA1 is connected to PARA1, PARA2 is connected to PARA2, and one communication line is needed between two parallel inverters.



LINK1 port connection mode:



LINK2 port connection mode:



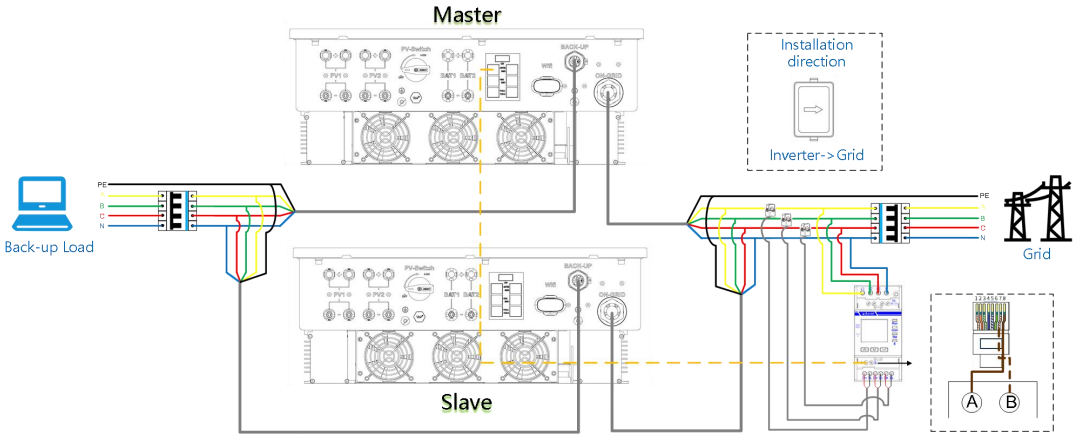
Also pay attention to the wire sequence of the two ends of the parallel communication line, the wire sequence in the above figure shall prevail. If ordinary network cable is used to connect, the parallel system will not be able to communicate normally.

Application note:

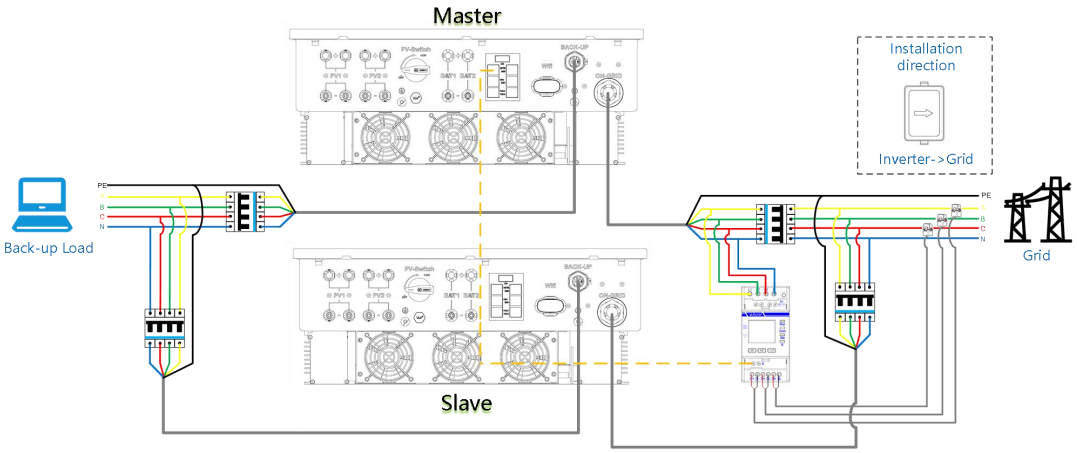
- Supports up to 6 inverters of the same model in parallel
- Ensure that each inverter is connected to the parallel communication line
- Inverter load side access to each device's BACK UP cable as far as possible to ensure equal length and specifications to be consistent and ensure that the circuit impedance is the same, the load current distribution to each inverter current is approximately equal
- Ensures that the load power is less than the maximum power of the parallel system

2 Electrical connection of the parallel system

2.1 Connects to the AC power grid and load cables



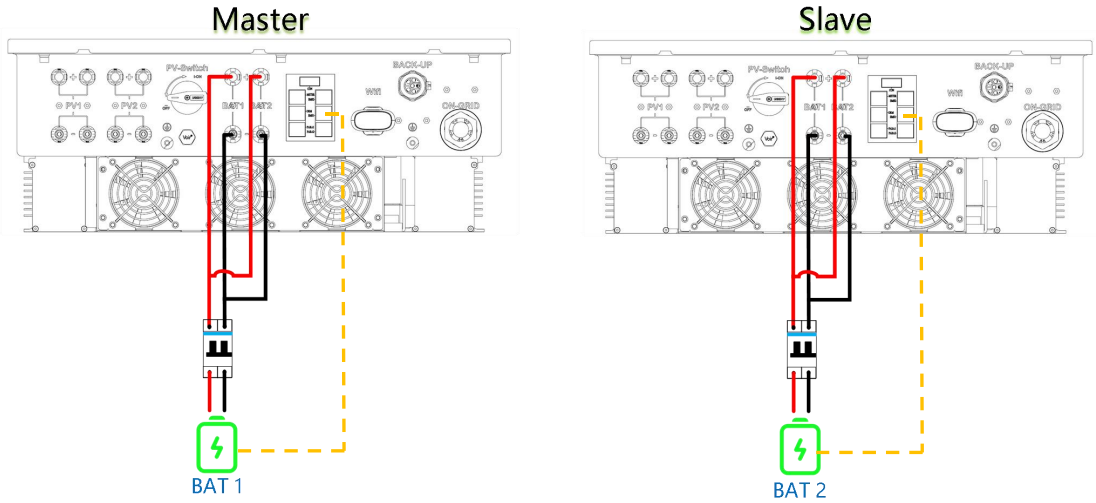
Recommended connection: grid/load controlled by one main breaker



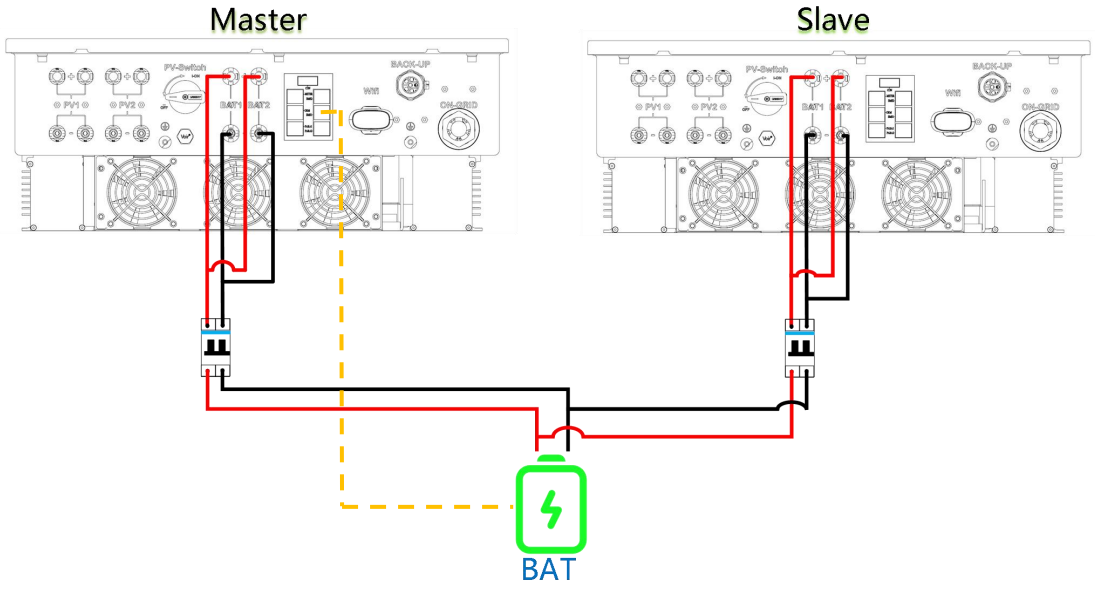
Unrecommended connection: If the current carrying capacity of the main circuit breaker is insufficient, you can refer to the above diagram for the connection, where each inverter grid/load is controlled separately by multiple circuit breakers. (In which the meter CT must be connected to the main grid)

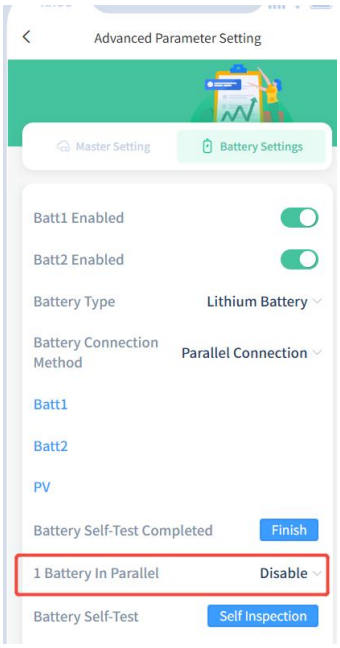
2.2 Battery cable wiring method

Type 1: Multi-battery, multi-parallel



Type 2: Single battery multi-parallel

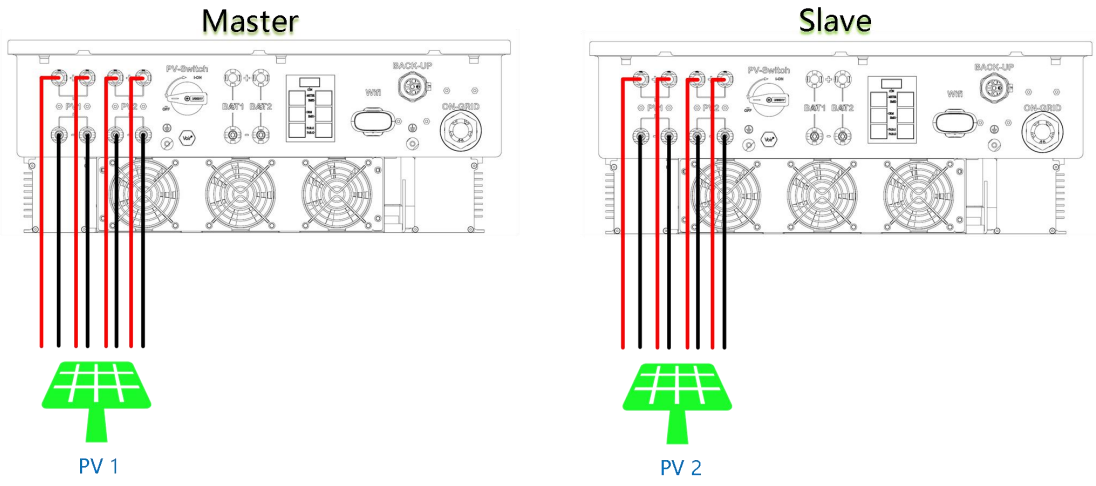




For single-cell multi-parallel operation, the BMS communication line must be connected to Unit 1 (main unit), and the single-cell multi-parallel option within the APP must be enabled.

2.3 PV cable wiring method

Type 1: Multi-PV multi-parallel



Type 2: Single PV multi-parallel

The current parallel system does not support multiple hybrid inverters connected in parallel to a single PV string.

3 APP parameter setting

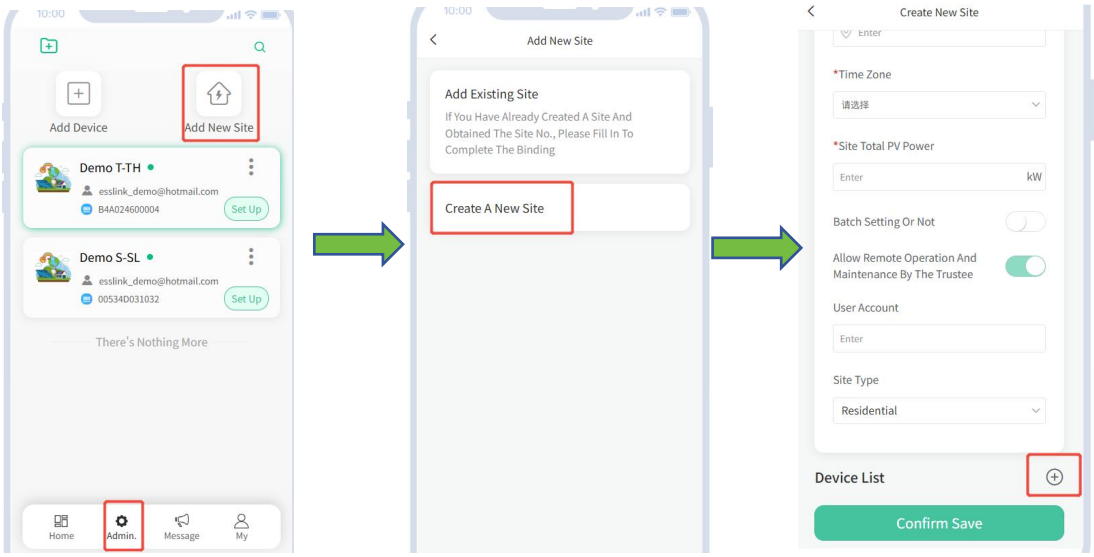
After the electrical connection and communication connection of the parallel system are completed and confirmed to be correct, close the grid switch, and when the power supply of the WIFI stick of each device of the parallel system is normal (the indicator light is on), log in the account on the APP (if the user is using it for the first time, the process of registering the account is referred to the end-user's operation instructions).

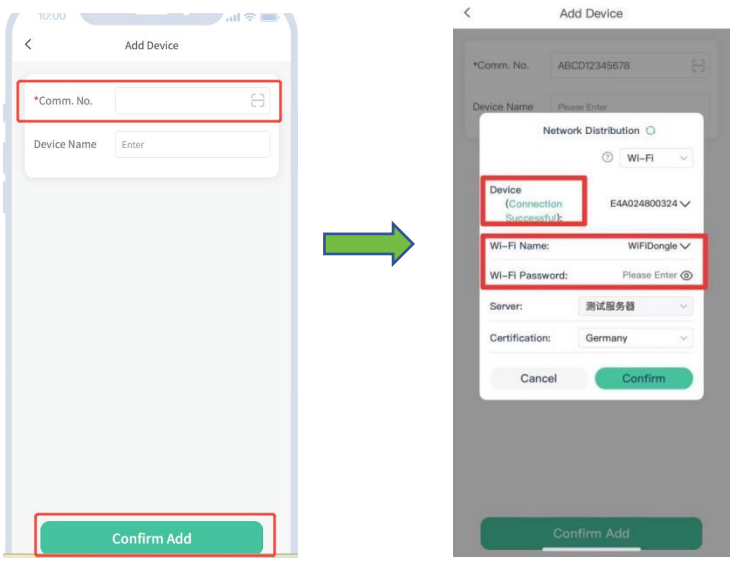
3.1 Inverter Distribution Network

Please refer to the end-user operating instructions.

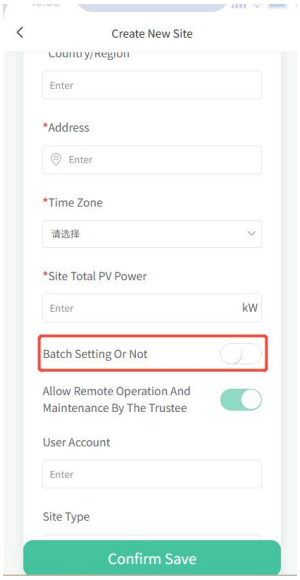
3.2 Parallel setting

Step 1: Admin -> Add New Site -> Create A New Site -> Add Device -> Fill in the device installation information (mobile phone needs to turn on location, Bluetooth and traffic).

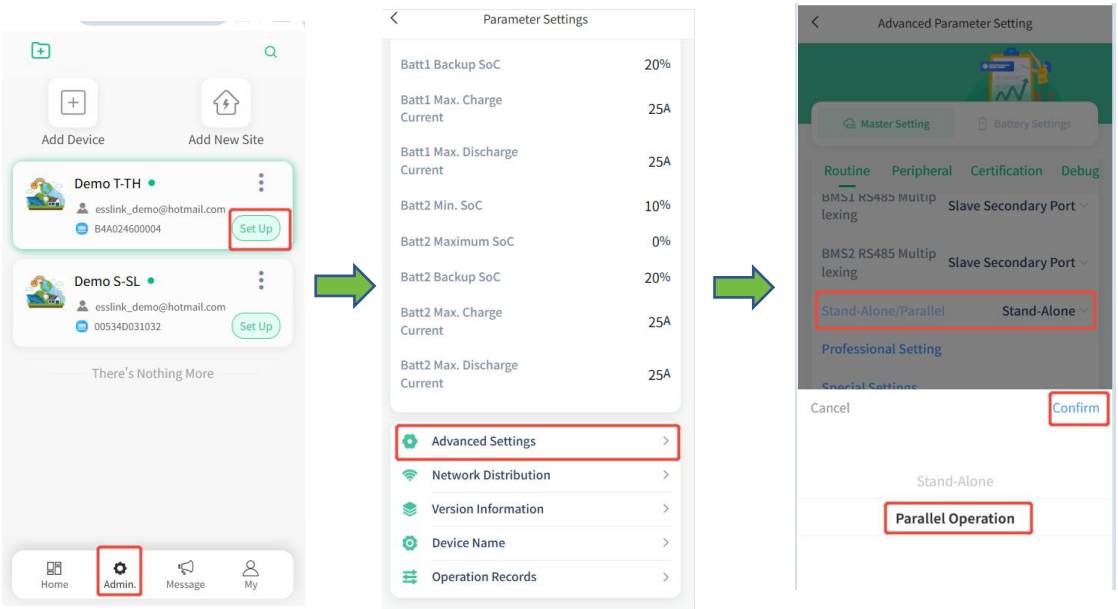


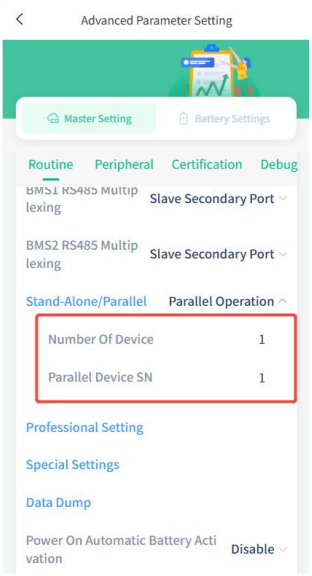


Note: When using multiple devices in parallel, you can add multiple devices under the same power station and enable the batch settings option in the power station.



Step 2: After all the devices of the parallel system have been added. **Click Admin -> Set up-> Advanced Settings -> Parameter Setting (set 'Host Setting' and 'Battery Setting' as needed) -> 'Stand-Alone or Parallel', fill in the quantity and number (No.1 is the master, No.2-N are the slaves).**



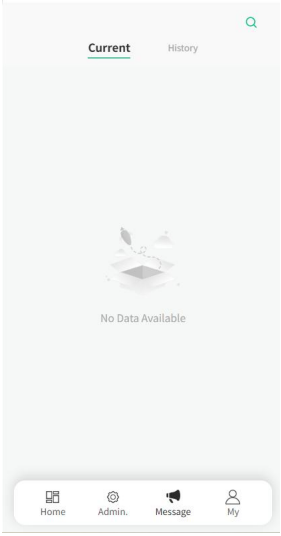


Step 3: After the main unit (Unit 1) is set up, return to My Devices to select the remaining inverters. Subsequent device parameters are set sequentially as in step 3 above.

Note: The settings of the host parameters of the slave (except for the battery DC parameters) should be consistent with those of the host, otherwise it will lead to

communication failure of the parallel system module. If enable batch settings for the power station, some settings can be set together.

Step 4: After all the equipment parameters of the parallel system are set, return to the home page and click to view the upper left corner of the alarm, if there is no parallel communication-related failure alarms, and the parallel system of the equipment communication connection is normal, then it can be used normally.

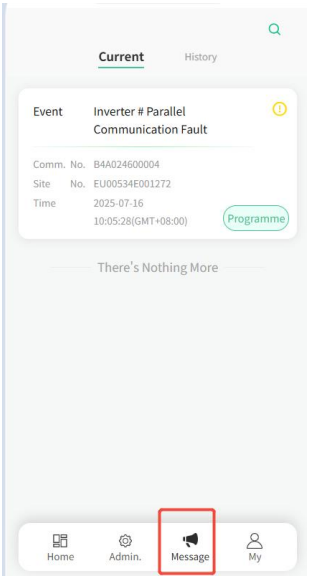


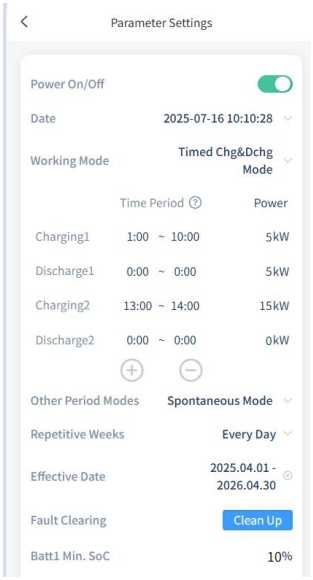
4 Parallel fault alarm and solution

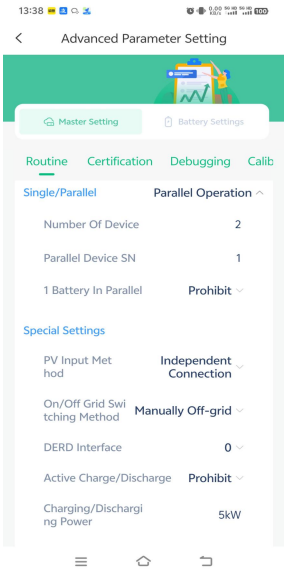
After the electrical connection and communication connection of the parallel system and the APP parameter setting of each device are completed, return to the home page to check the alarms. If there is a parallel inverter fault alarm, you can follow the steps below to check and confirm. If the following steps are still not resolved, please contact your dealer.

4.1 Parameter conflict in parallel module

Display parallel module parameter conflict, the reason is due to the parallel system alarm device and other equipment parameter settings are inconsistent, focus on checking the following parameter are consistent, the fault alarm automatically disappear after parameter settings are consistent.



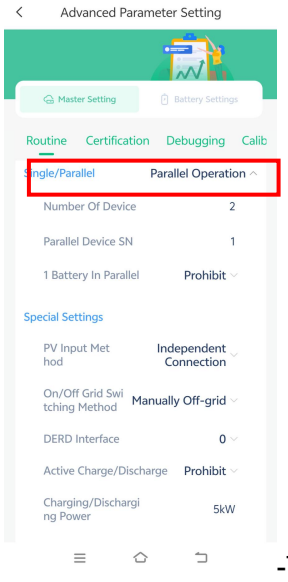




4.2 Parallel communication alarm and missing parallel module

If the display shows that the parallel module is missing, users can check whether the parallel cable of the device is omitted, whether the wiring sequence of the parallel cable is correct or whether the parallel module number is set to duplicate.

When parallel communication alarm is displayed, users can check whether the parallel cable wiring sequence is correct or the ‘single/parallel setup’ in APP is not switched to parallel (at this time, if it is a single inverter, it will show communication alarm).



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