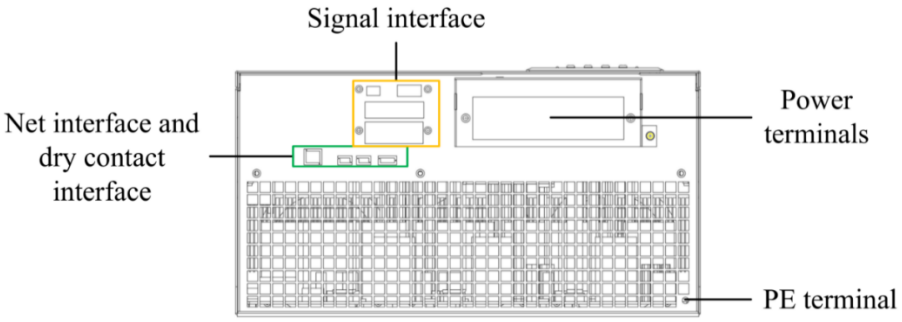
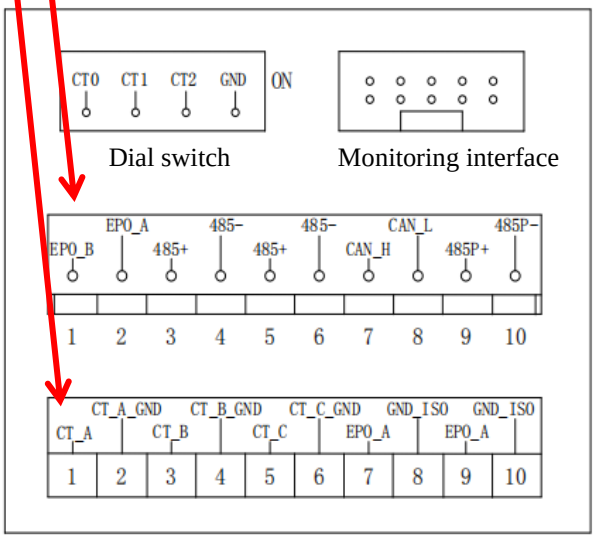
Multiple wall-mount AHF parallel guidance

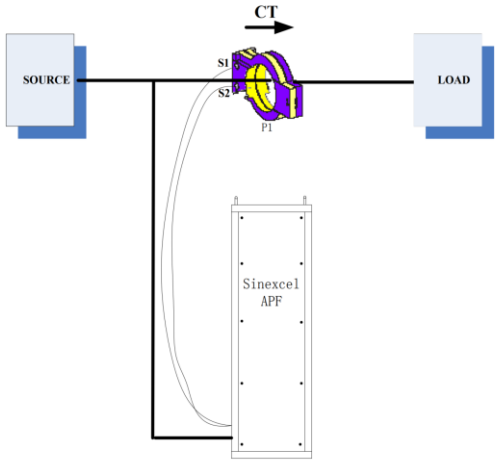
1. Parallel wiring

- Power and signal interface distribution





- The power cables of multiple AHF are connected in parallel to the grid.
- The connection of CT secondary polarity and module is series wiring.
- CT installation introduction: As shown in the picture below, CT has directions. P1 and P2 must face right directions. It is very important because AHF cannot work normally when CT direction is wrong, so pay attention to its direction when installing CT.



- There are 2 kinds of CT installation locations: 1) load side, 2) supply side. They have different wiring diagrams which are shown in Figure1 and Figure2. Meanwhile, they have corresponding settings in the 4.3 inches monitor. When you choose load side CT location, make sure you have set the CT location right in the monitor.

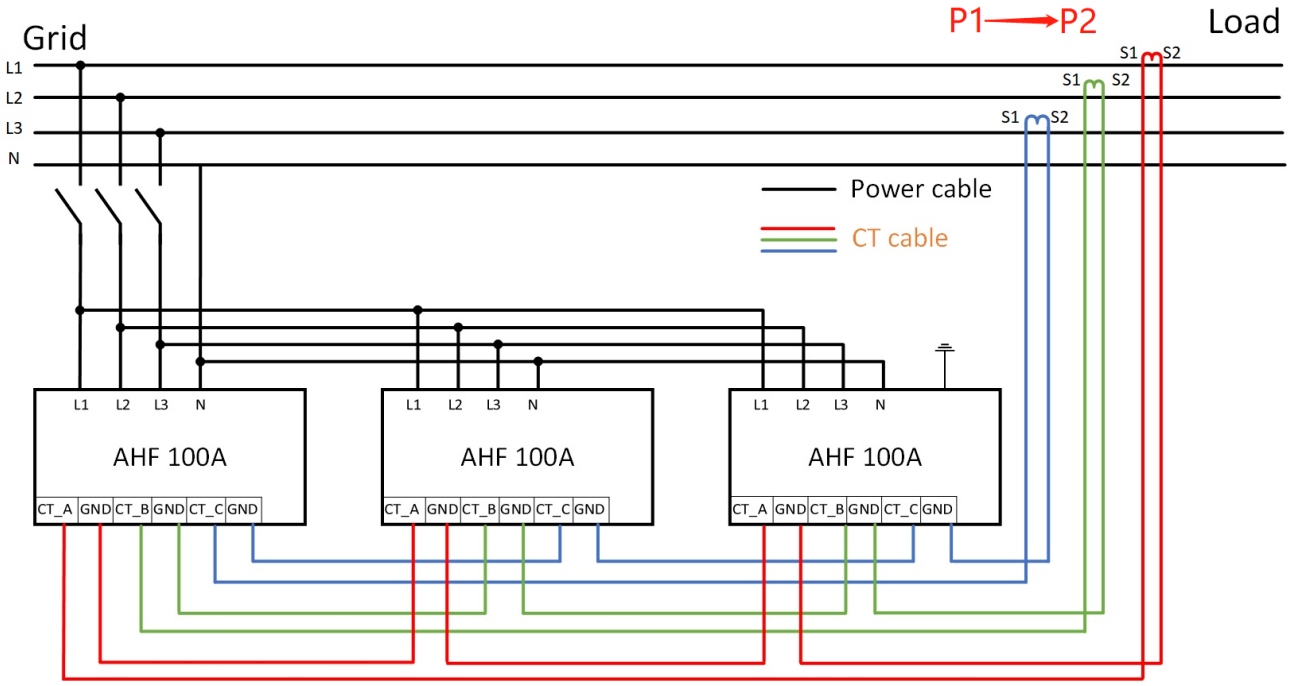


Figure1 Load side

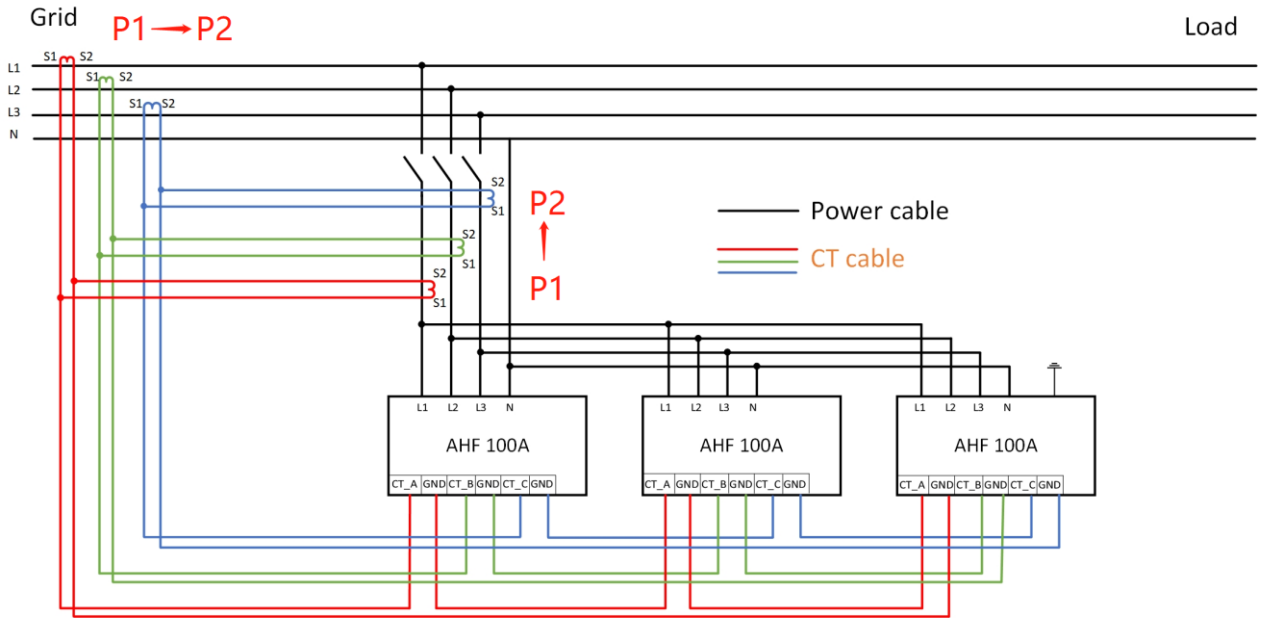
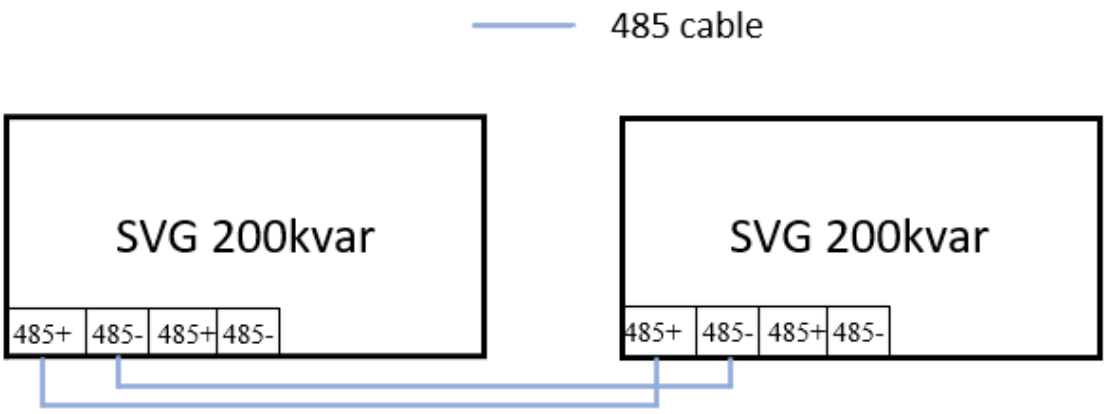


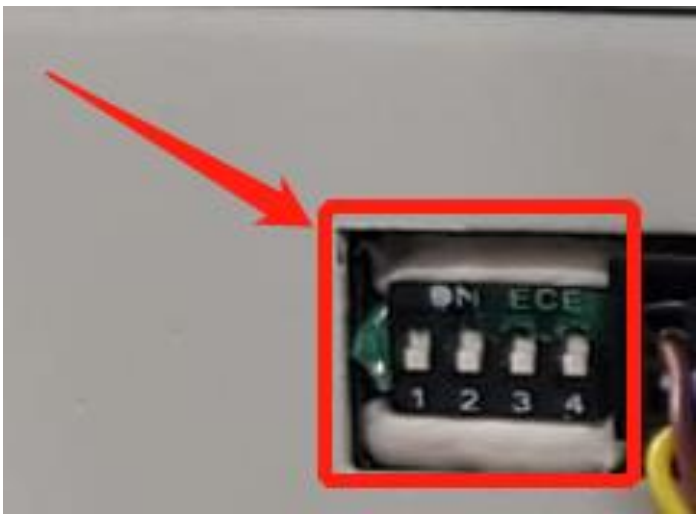
Figure2 Supply side

- When CT is installed at source side, user at least needs to use two groups of CTs (6CTs, in 3-phase 4-wire system). Two groups of CTs are installed on phase cable (source side) and power cable (AHF side) and they are connected in parallel.
- 485 wiring. In the back of our module, there are 3 sets of 485 communication port: 485+ and 485-, 485+ and 485- and 485P+ and 485P-. These 3 sets of 485 is of the same function.
- When to parallel 2 modules, connect the 485+ on 2 modules with 485 cables, and also connect the 485+ on 2 modules with 485 cables like the picture below. And user could choose the 485 port left to do the modbus communication with their device.



2. Dial switch setting

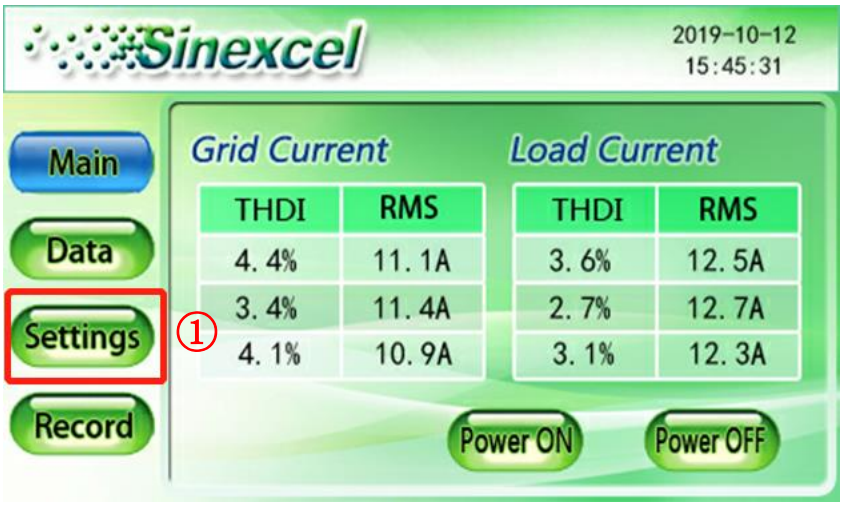
- For the communication between multiple rack-mount AHF, dial switch setting is essential, because AHF recognize each other by their dial switch setting.
- But for the communication between multiple wall-mount AHF, AHF cannot recognize each other by dial switch setting, and they can only do it by the monitor setting, which will be shown next chapter.
- So dial switch on all AHF need to be set to ‘0 0 0 0 ’ like the picture below.



3. Monitor setting

The last step is to set local address and CT location in each monitor. The address setting is in monitor parameter settings and the CT location is in system parameter settings.

1) Total capacity setting
   When multiple wall-mount AHF parallel, the total capacity should be set as the total capacity of all AHF. For example, when 3 100A AHF parallel, the total capacity should be set as 300. And every single AHF of them should set total capacity as 300A. Total capacity setting can be found in ‘Settings-- system parameter settings’. Follow the steps shown in the picture below to set total capacity.


Sinexcel
2019-10-12
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Main
Data
Settings
Record
①
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3. 6%
12. 5A
3. 4%
11. 4A
2. 7%
12. 7A
4. 1%
10. 9A
3. 1%
12. 3A
Power ON
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Main
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Data
Settings
Alarm
③
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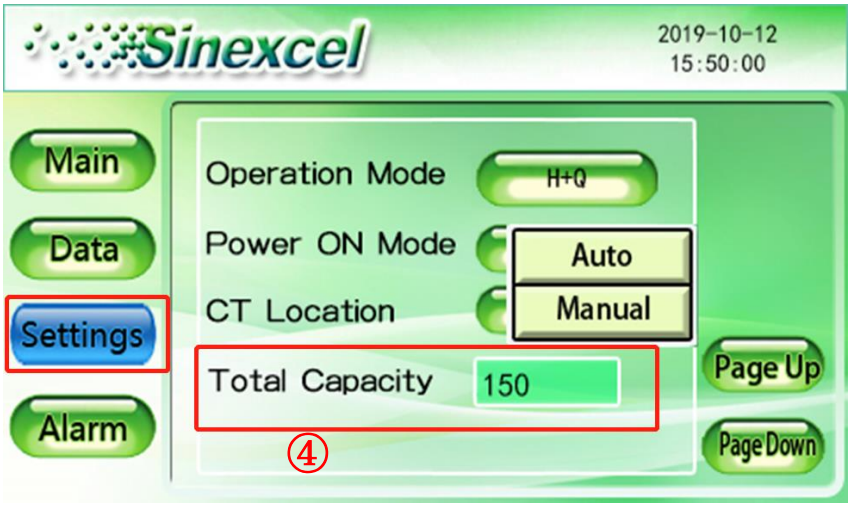
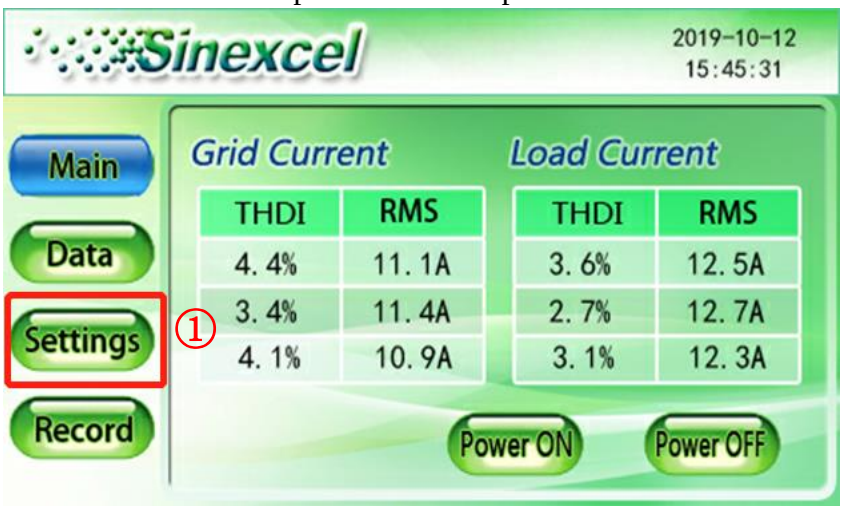
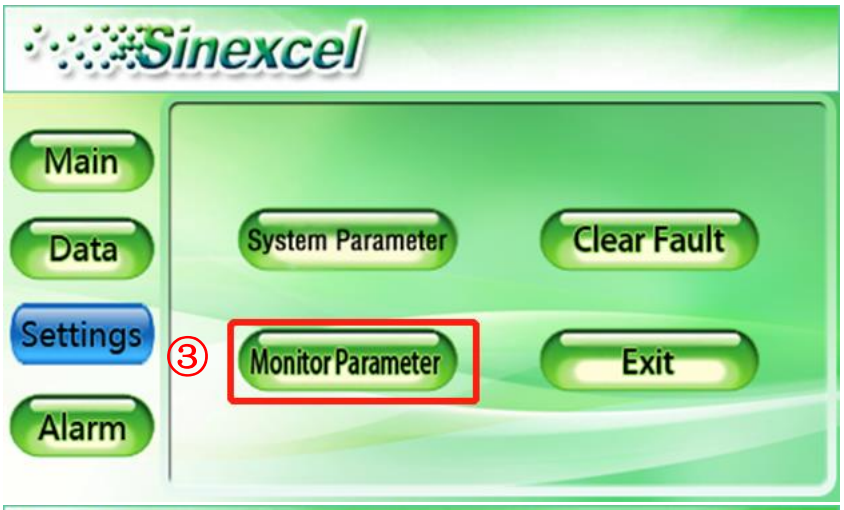
Clear Fault
Monitor Parameter
Exit



2) Local address setting

Follow the four steps shown in the pictures below and find local address setting.

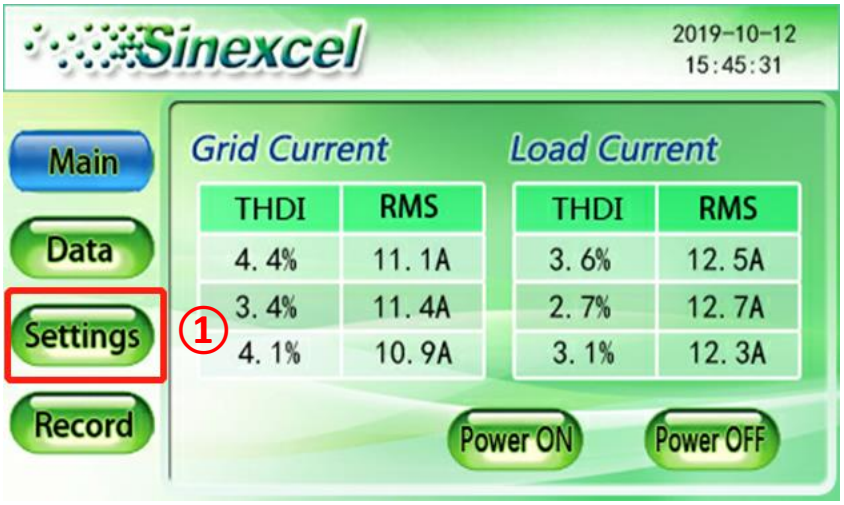




Set the address in order. For example, the address of the first AHF is 1, the second is 2, and the third is 3, etc.

3) CT location setting

- When CT is install on load side, AHF monitor 'CT location' should set on load side.
- When CT is install on supply side, AHF monitor 'CT location' should set on supply side.
- Follow the four steps shown in the pictures below and find CT location setting.



The CT location setting depends on the CT installation location on site. Make sure to find out where the CT location is and then do the settings in the monitor correctly.