

GEN-LB-EU 3-6K Parallel System Installation Guidance



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1.Revision History

Version	Updated Date	Description
V01	2024/12/31	Initial version

2. Overview

2.1 Introduction

This document describes the parallel installation of GEN-LB-EU 3-6K.

2.2 Readers

This document is intended for:
Professional installation and maintenance service providers.

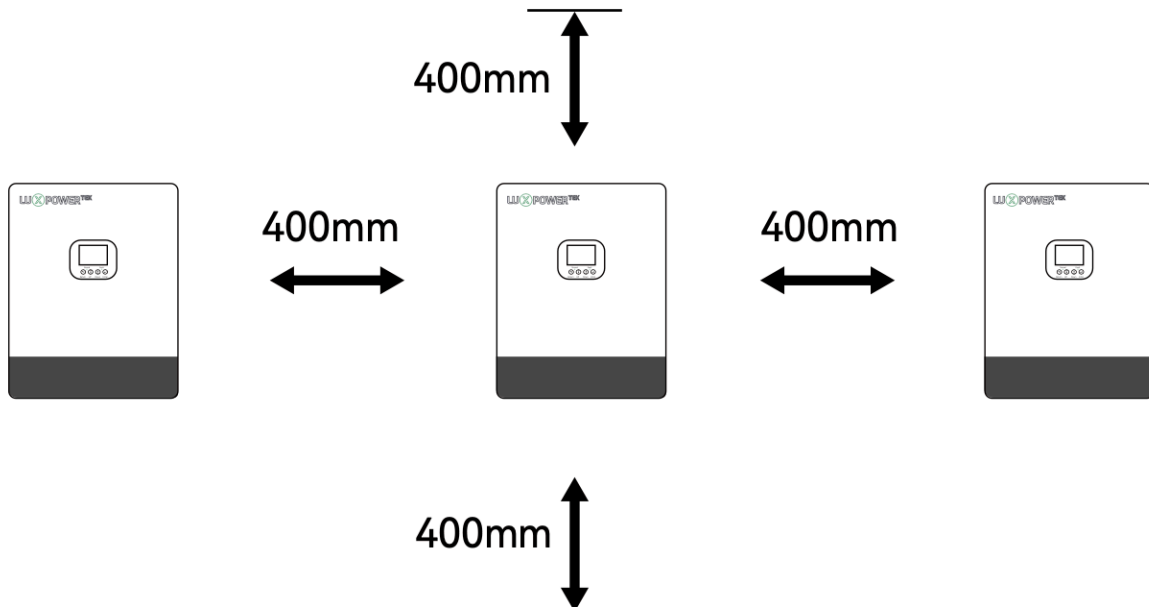
2.3 Feedback

If you have any questions or comments,
Please send us an email at: info@luxpowertek.com

3. Unit Installation

GEN series inverter supports up to 10 units to compose a single-phase parallel system and 2 or 3 units to compose a 3-phase system.

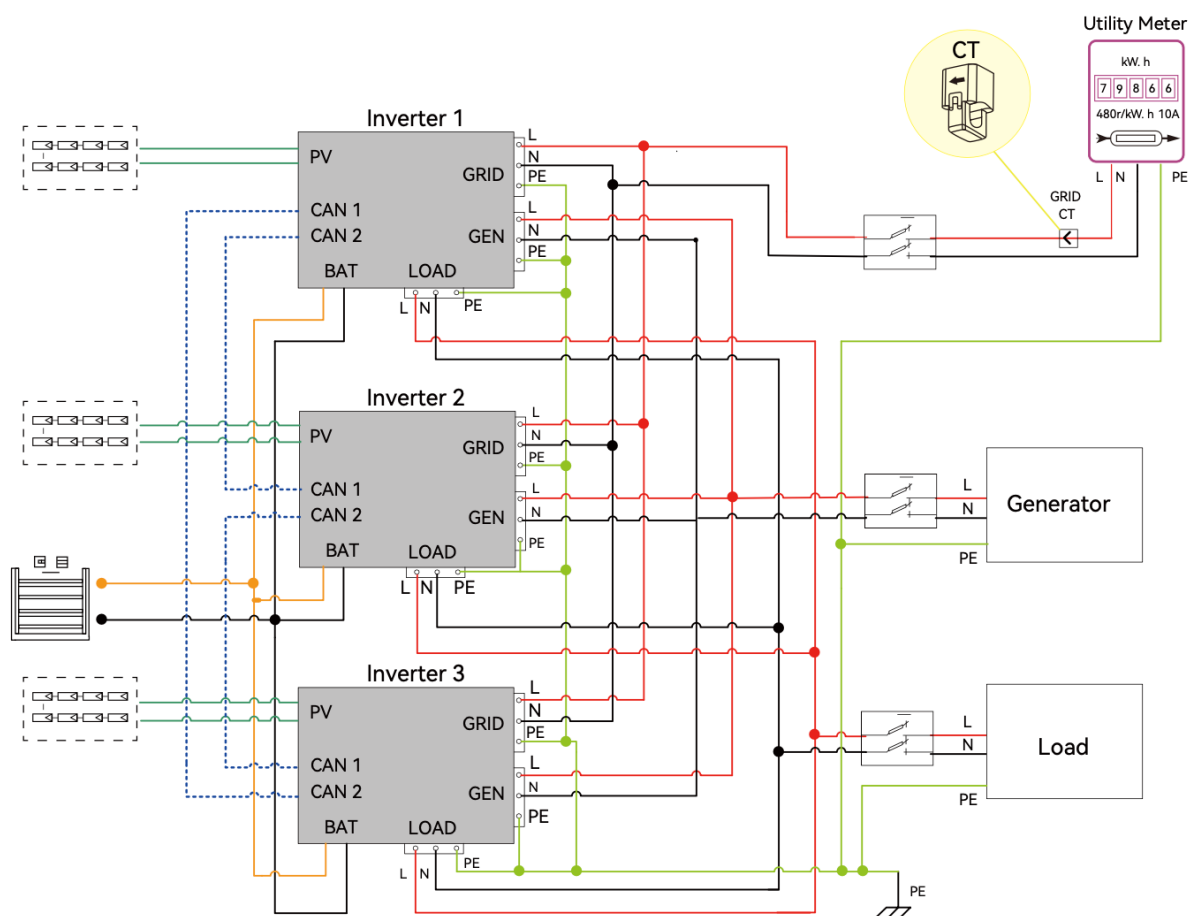
Please follow the User Manual to install inverters. Please make sure there are enough space around the inverter as the requirements below:



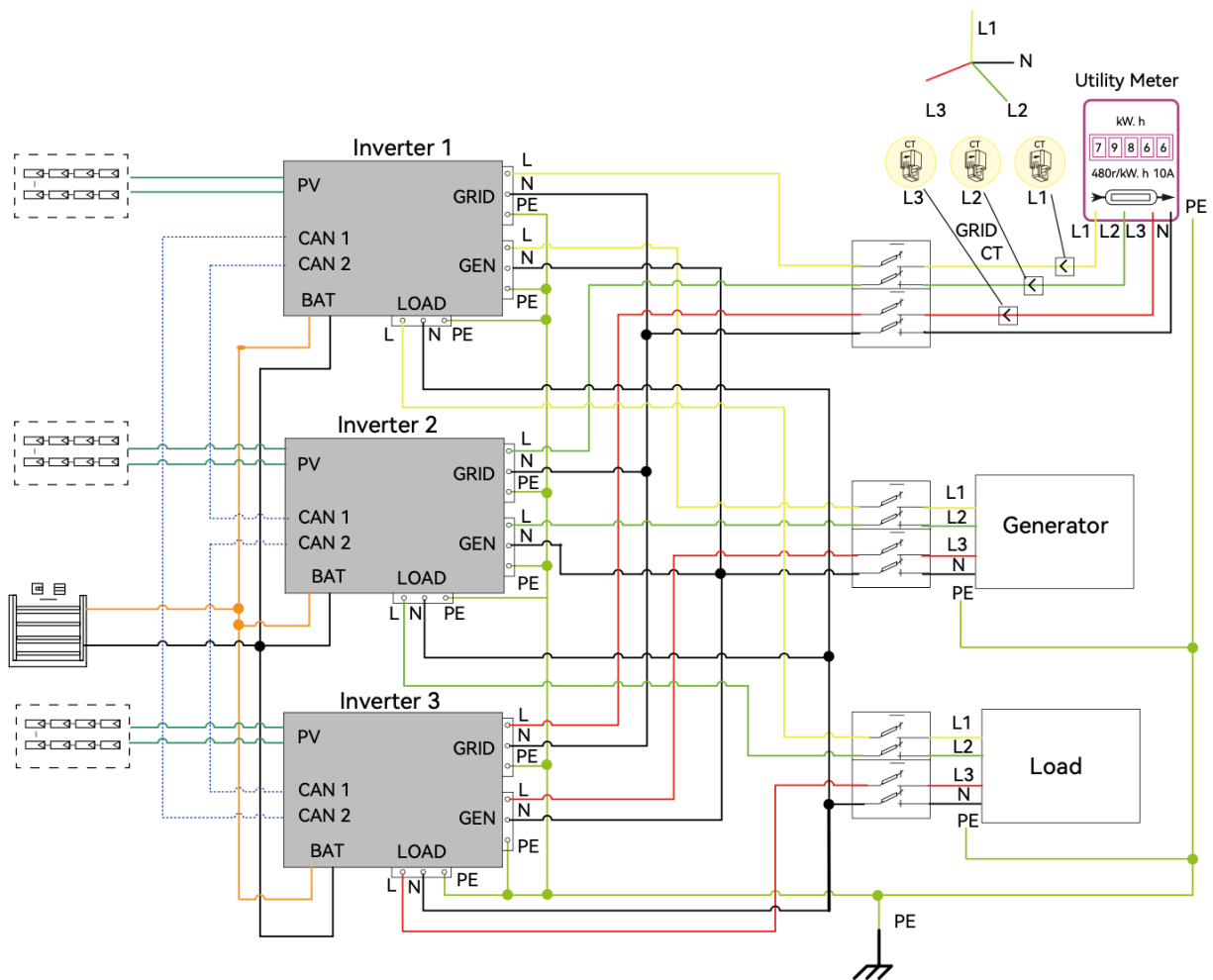
4. Parallel System Wiring

The wiring for AC input & output, GEN(if generator is required), N(Neutral) and PE(Protective Earthing) connection of each parallel system is as diagram below:

4.1 Single Phase parallel system

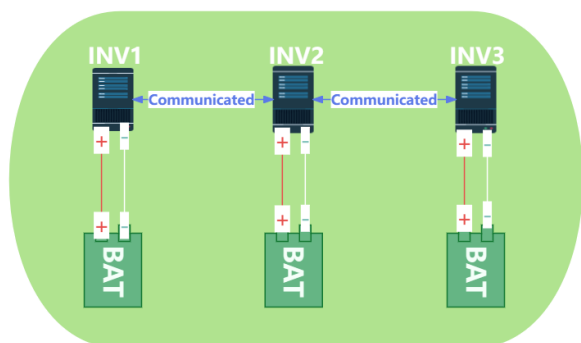


4.2 Three Phase parallel system

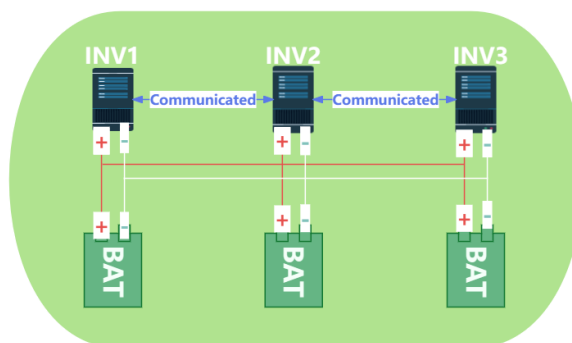


5. Battery Connection

Each inverter can have a separate battery bank connected to it, or users can parallel all batteries and connect the battery banks to each inverter. Considering the separated battery bank might has imbalance capacity risk, parallel battery bank is recommended.



Separated battery bank



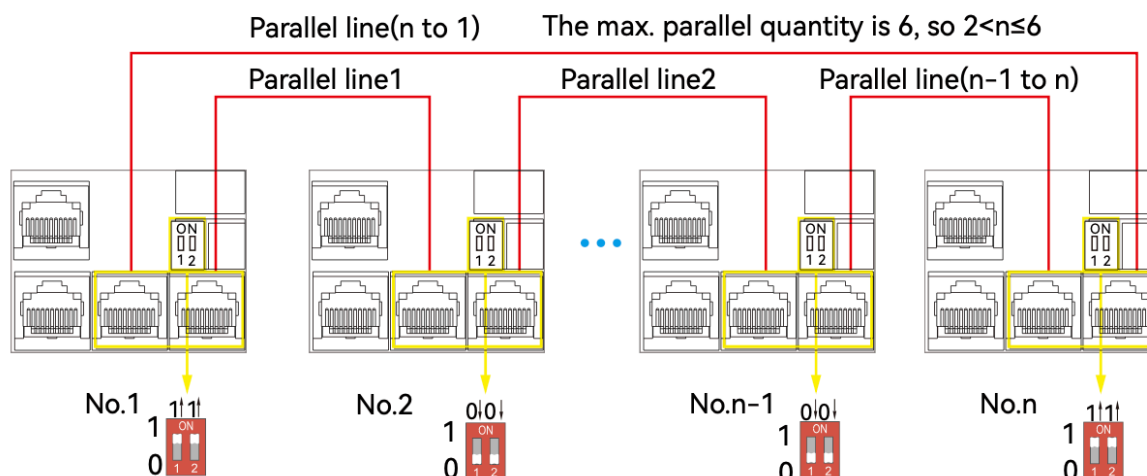
Parallel battery bank

Battery recommended capacity section as list below:

Unit QTY	2	3	4	5	6
Battery Capacity	400AH	600AH	800AH	1000AH	1200AH

6. Inverter Parallel Communication

Connect the inverters via the CAN cable through the interface (marked 4 in the diagram). If there are only 2 inverters, set both inverters' DIP switches to ON. If there are more than 2 inverters, set the DIP switches to ON for the first and last inverters connected by the data link, and OFF for the rest.



Note:

- 1) Make sure to use straight-through cables(Same color order in connectors).



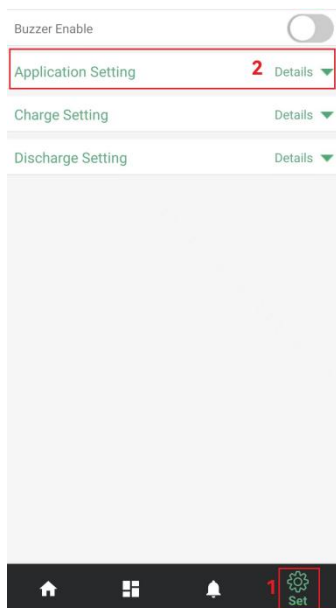
- 2) To ensure a steady communication, the cable length should be within 10 meters.

7. Settings configuration

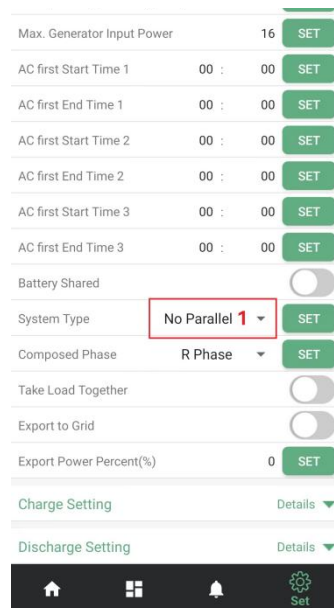
User can configure parallel system settings via APP, Web or LCD screen.

7.1 APP

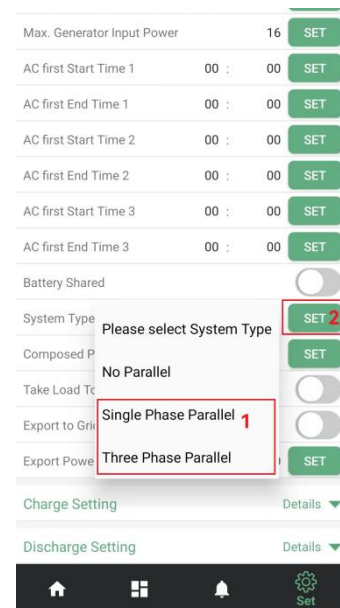
- 1) Enter set page and click Application Setting(1).
- 2) Select System Type(2) based on actual usage and click SET to confirm(3).



(1)



(2)



(3)

- 3) Select Composed Phase according to the inverter connection in parallel system, then click SET to confirm(4&5).

Max. Generator Input Power 16 SET

AC first Start Time 1 00 : 00 SET

AC first End Time 1 00 : 00 SET

AC first Start Time 2 00 : 00 SET

AC first End Time 2 00 : 00 SET

AC first Start Time 3 00 : 00 SET

AC first End Time 3 00 : 00 SET

Battery Shared ☐

System Type No Parallel SET

Composed Phase R Phase 1 SET

Take Load Together ☐

Export to Grid ☐

Export Power Percent(%) 0 SET

Charge Setting Details

Discharge Setting Details

Home App Store Notification Settings Set

(4)

Max. Generator Input Power 16 SET

AC first Start Time 1 00 : 00 SET

AC first End Time 1 00 : 00 SET

AC first Start Time 2 00 : 00 SET

AC first End Time 2 00 : 00 SET

AC first Start Time 3 00 : 00 SET

AC first End Time 3 00 : 00 SET

Battery Shared ☐

System Type No Parallel SET

Composed Phase Please select SET 2

Take Load Together ☐

Export to Grid ☐

Export Power Percent(%) 0 SET

Charge Setting Details

Discharge Setting Details

Home App Store Notification Settings Set

(5)

- 4) If system is using parallel battery bank, enable the Battery shared function and wait till the application informed “Set successfully” message(6&7), if it's separated battery bank, do not enable.

Max. Generator Input Power 16 SET

AC first Start Time 1 00 : 00 SET

AC first End Time 1 00 : 00 SET

AC first Start Time 2 00 : 00 SET

AC first End Time 2 00 : 00 SET

AC first Start Time 3 00 : 00 SET

AC first End Time 3 00 : 00 SET

Battery Shared ☒

System Type No Parallel SET

Composed Phase R Phase SET

Take Load Together ☐

Export to Grid ☐

Export Power Percent(%) 0 SET

Charge Setting Details

Discharge Setting Details

Home App Store Notification Settings Set

(6)

Max. Generator Input Power 16 SET

AC first Start Time 1 00 : 00 SET

AC first End Time 1 00 : 00 SET

AC first Start Time 2 00 : 00 SET

AC first End Time 2 00 : 00 SET

AC first Start Time 3 00 : 00 SET

AC first End Time 3 00 : 00 SET

Battery Shared ☒

System Type No Parallel SET

Composed Phase R Phase SET

Take Load Together ☐

Export to Grid ☐

Export Power Percent(%) 0 SET

Charge Setting Details

Discharge Setting Details

Home App Store Notification Settings Set

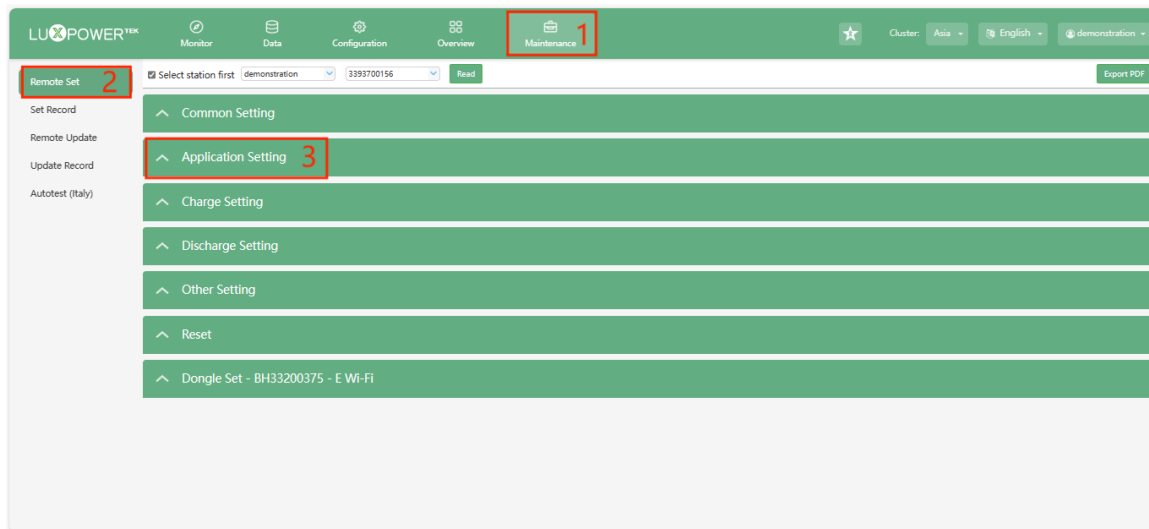
(7)

Note:

- For a single-phase parallel system, all inverters should be set to phase R.
- For 3 units 3-phase parallel system, the three inverters should be configured to phases R, S, and T, respectively.

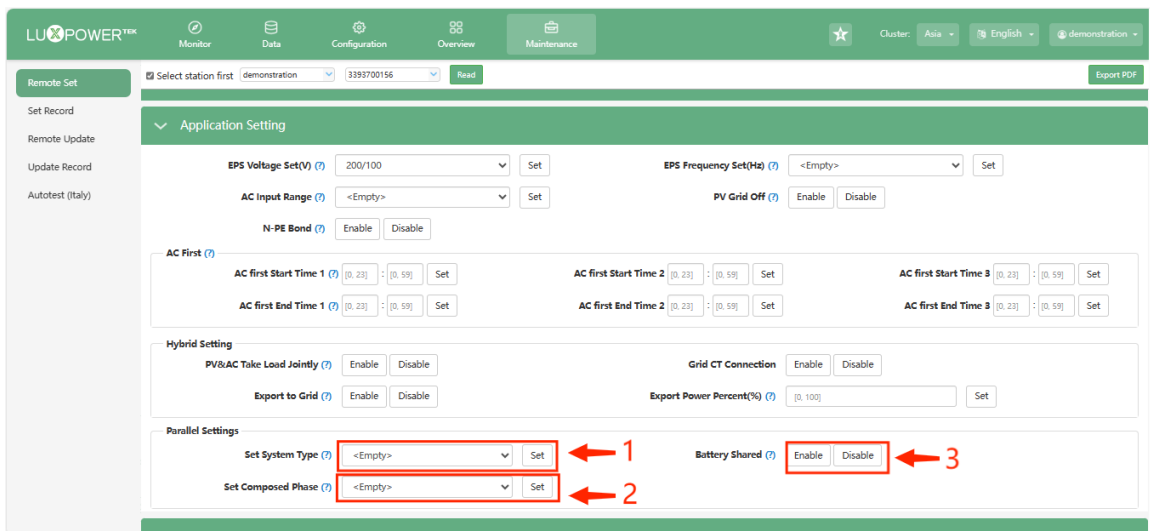
7.2 Web

- 1) Enter Maintenance page and found Parallel Settings in Application Setting column(8).



(8)

- 2) Set System Type and Composed Phase based on actual usage , if system is using parallel battery bank, enable the Battery shared function(9), if it's separated battery bank, do not enable.



(9)

Note:

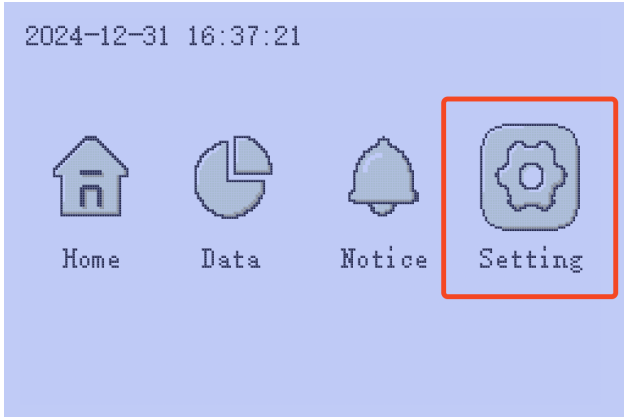
For a single-phase parallel system, all inverters should be set to phase R.

For 3 units 3-phase parallel system, the three inverters should be configured to phases R, S, and T, respectively.

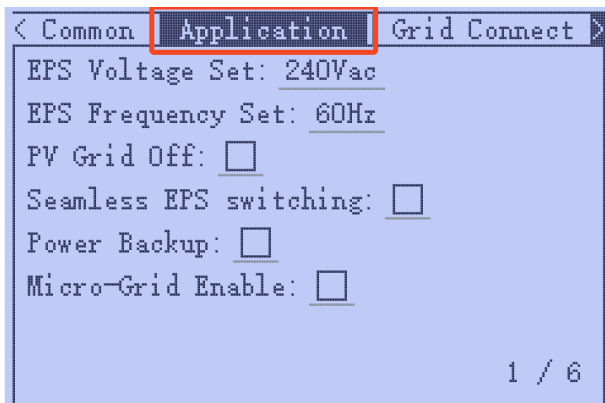
7.3 LCD

Basic LCD Operation

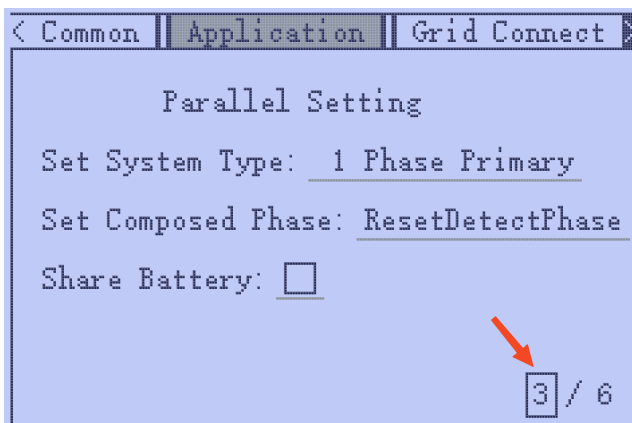
- 1) Press the Down button repeatedly to select the “Settings” icon, then click Enter to access it.



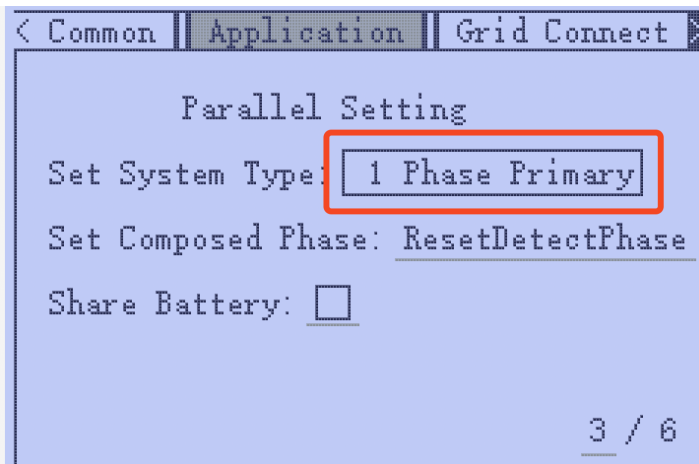
- 2) Press the Down button to enter the “Application” page, then click Enter to proceed.



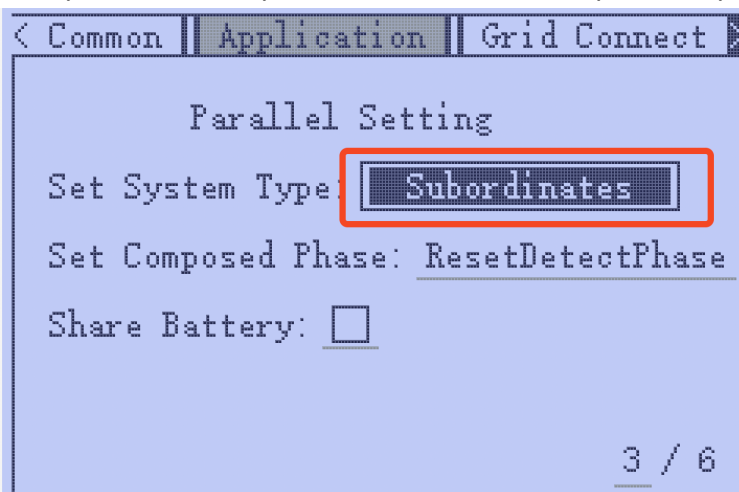
- 3) Press the Up button twice to navigate to the third page.



- 4) Press Enter button again to access the function settings of this page. Then, select the corresponding function and press Enter button to set it.



- 5) When setting the function, click Up or Down to select different options. Choose the wanted option and then press Enter button to complete the process.



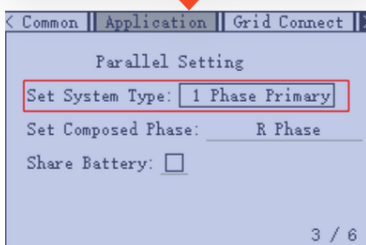
Single Phase parallel system

For the master setting, set "Set System Type" to "1 Phase Primary".

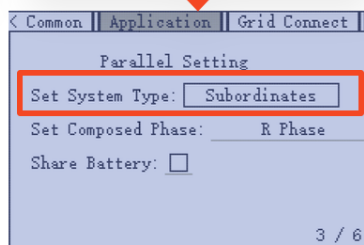
For the slave setting, set "Set System Type" to Subordinates".

"Set Composed Phase" all set to R Phase.

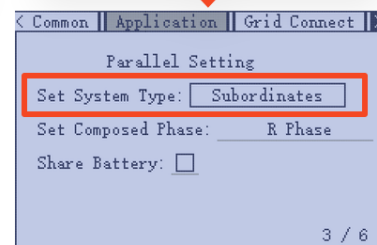
Master Setting



Slave Setting



Slave Setting

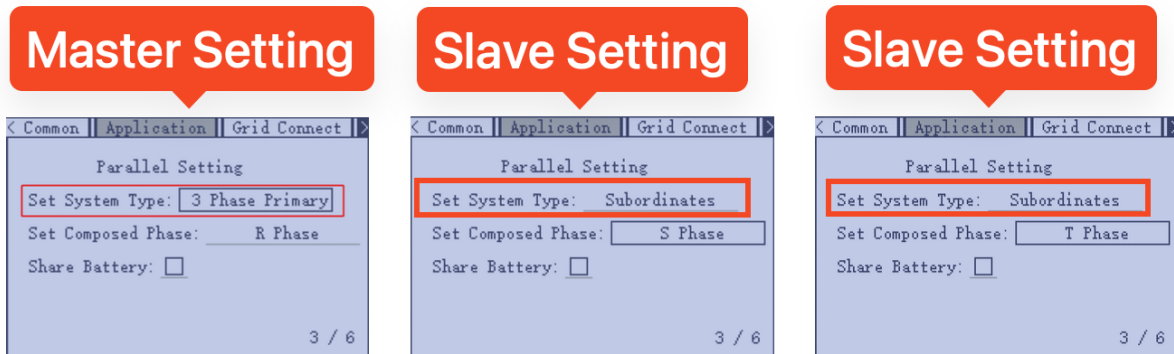


Three Phase parallel system

For the master setting, set “Set System Type” to “3 Phase Primary”.

For the slave setting, set “Set System Type” to Subordinates”.

The three inverters should be set to phases R, S, and T respectively.



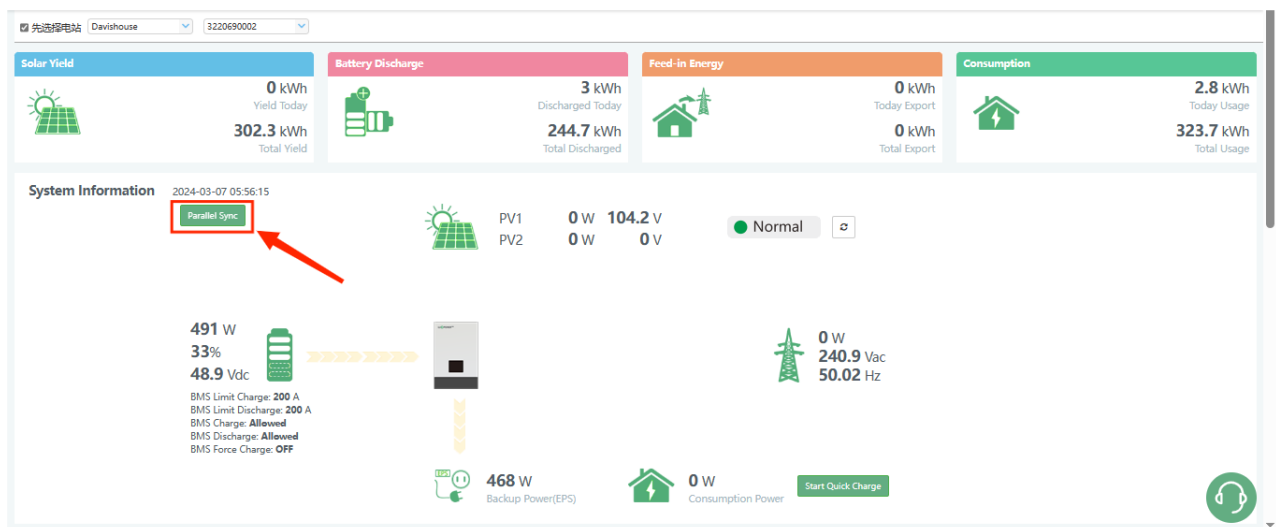
Note:

- For single phase parallel system, all inverter's phase should be in phase R;
- For 3units 3-phase parallel system, the three inverters should be set to phases R, S, and T respectively.
- For LCD phase settings, P1=R, P2=S, P3=T.

8. Parallel System Monitoring Setting

The default monitoring display mode is for single inverter, to monitoring the parallel system on Web & APP, user can configure display mode via Web.

1) If there is only one parallel system at the station, the user can click on 'Parallel Sync' to set the parallel system display mode. This button will appear when there are more than 1 unit but less than or equal to 6 inverters, and some inverters have not been added to the parallel display yet. After 30 seconds, this button will be hidden.



2) If the station has more than 6 units, user can configure the display mode as follows: Go to the Overview page, select Station Overview, input the user's station name and search for it. Then click on the searched Station name on the left to enter the device overview page.

Click Parallel on right to set inverter parallel display.

Select Parallel group and index for the inverter, then chose model as Parallel, then save settings.

After done settings, the parallel display settings will show at Parallel list and on home page will display parallel system information.