

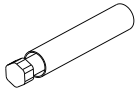
QUICK INSTALLATION GUIDE

Backup Box-PLUS
V02



Parting List

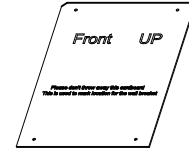
Backup Box-PLUS



M8 expansion screw X4

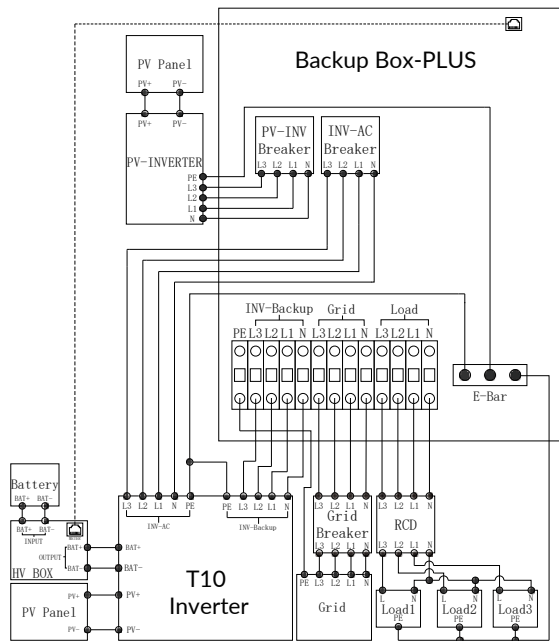


Quick installation guide X1



Positioning board x1

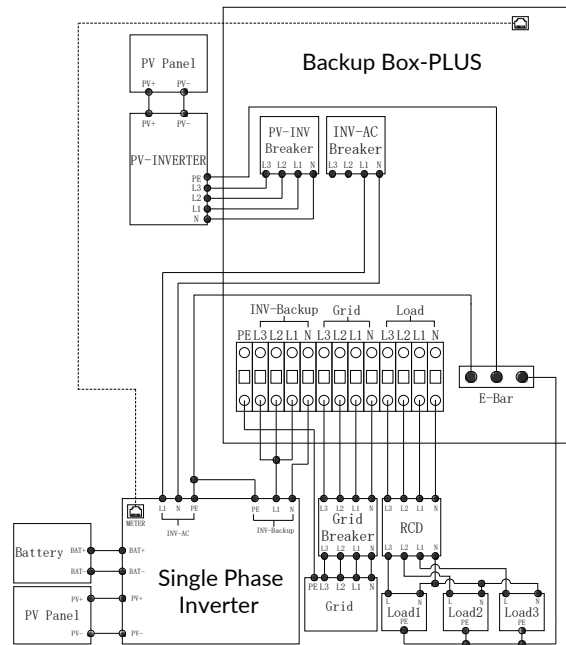
System Wiring Diagram



Backup Box-PLUS wiring diagram for three-phase inverter.

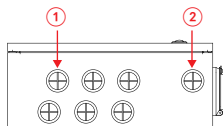


Please connect PE cable between Backup Box and the inverter. If the inverter does not have PE port, these is no need to connect PE cable.

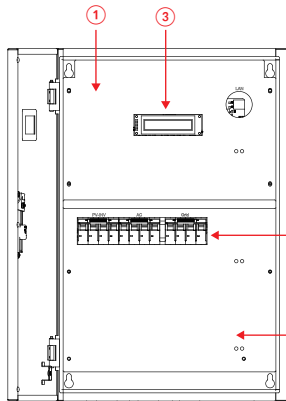
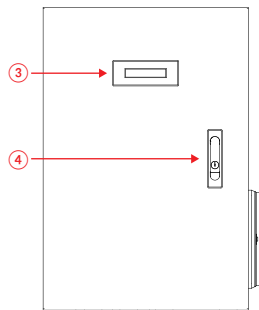


Backup Box-PLUS wiring diagram for single-phase inverter.

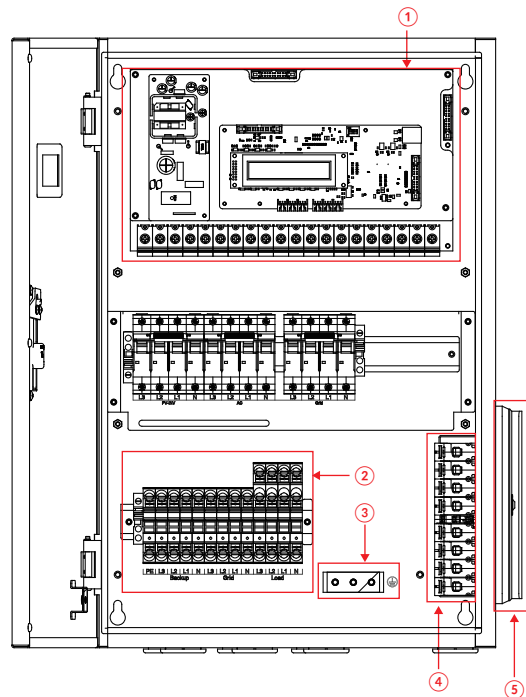
Instruction



- ① Power connection port
- ② Communication port
- ③ LCD Screen
- ④ Lock



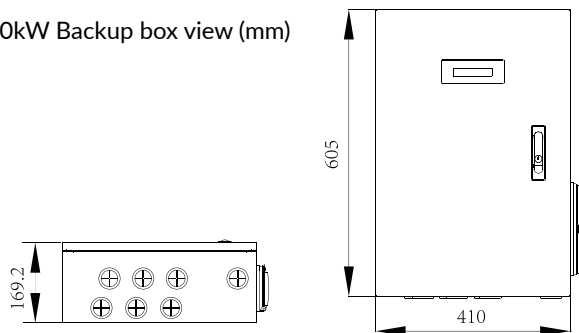
- ① Insulating plate
- ② Insulating plate
- ③ LCD Screen
- ④ Control switch



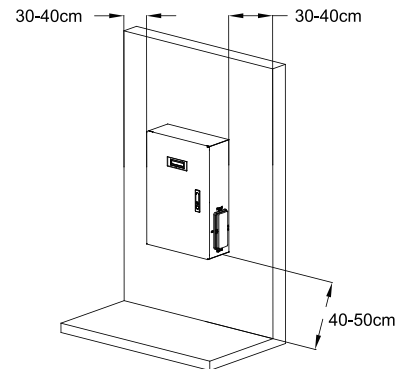
- ① Control panel
- ② Terminal block
- ③ Reserved grounding copper bar
- ④ Bypass switch
- ⑤ STW-10A

Instruction

10kW Backup box view (mm)



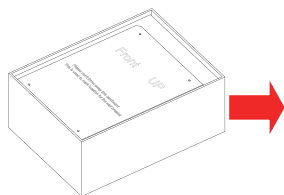
Minimum distance to
adjacent objects:



Installation

Step 1

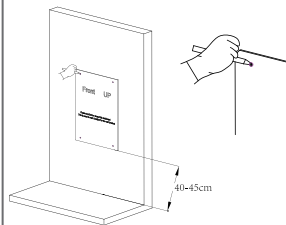
Take out the Backup Box-PLUS and accessories from the package.



Note: Please pay attention that the quantity of accessories is consistent with the details on the manual.

Step 2

Place the cardboard on the wall where the Backup Box-PLUS will be installed, and mark on the wall according to holes on the cardboard.

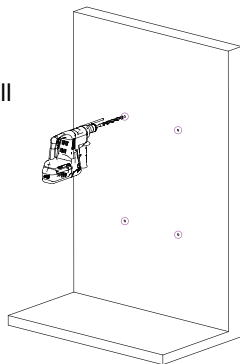


Note: Please ensure that the cardboard is level to prevent the Backup Box-PLUS from tilting after installation.

Installation

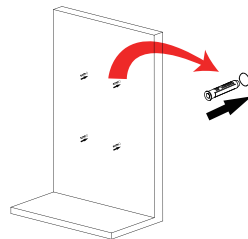
Step 3

Use the impact drill to drill holes according to the marks on the wall (Drill: M10, Depth: 70mm).



Step 4

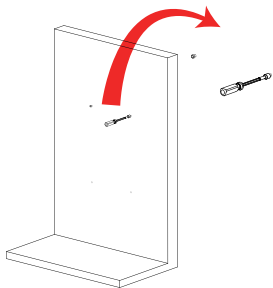
Take out the plastic expansion screws and vertically place the expansion tubes into the holes.



Note: The expansion tube should be completely buried in the hole and should not protrude from the wall.

Step 5

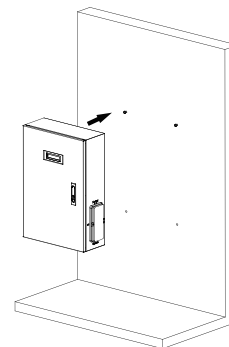
Lock the expansion screws into the two upper holes.



Note: Reserve a distance of 3-8mm between the bottom of the expansion screw and the wall to facilitate subsequent installation.

Step 6

Hang the Backup Box-PLUS on the installed expansion bolt.



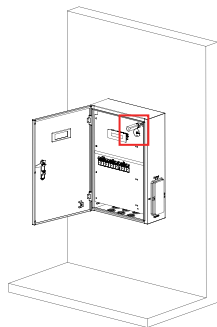
Installation

Step 7

Use the key to open the upper cover, and use the SW10 sleeve to lock the two expansion screws above.

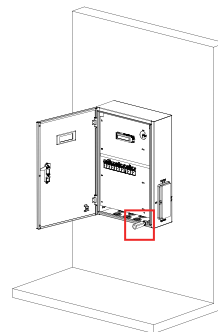


Note: The tool used in this step should be matched with the extension rod (about 20cm).



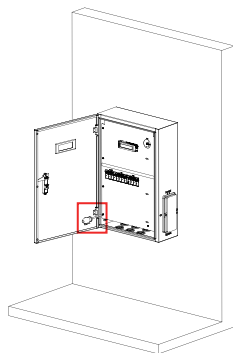
Step 8

Lock the two expansion screws at the bottom.

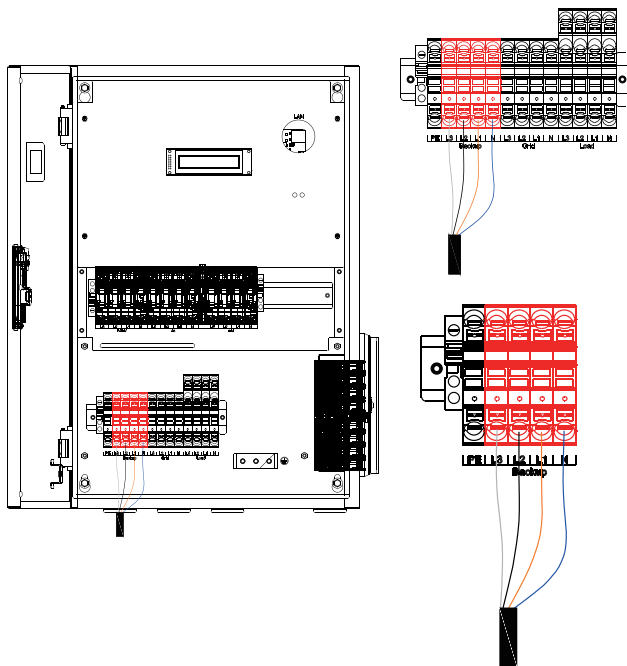


Step 9

Use a Philips screwdriver to remove the insulation plate.

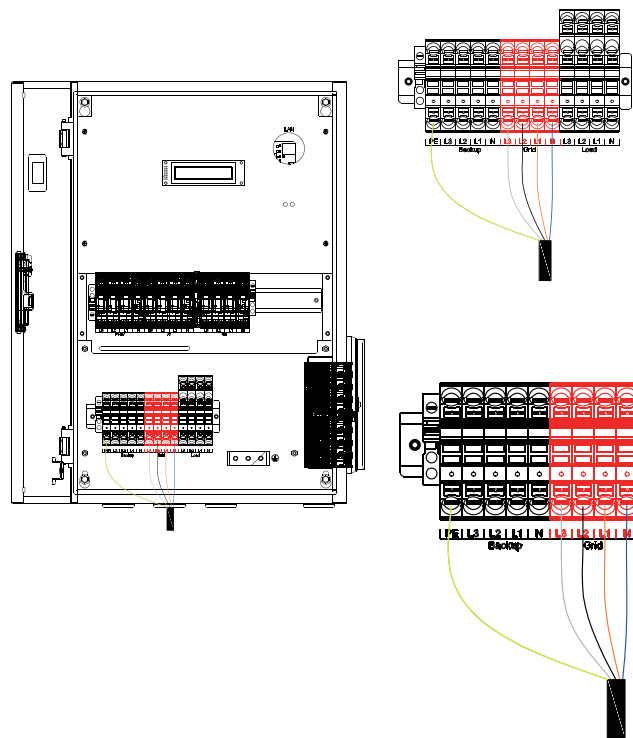


Step 10 Connect the backup cables.



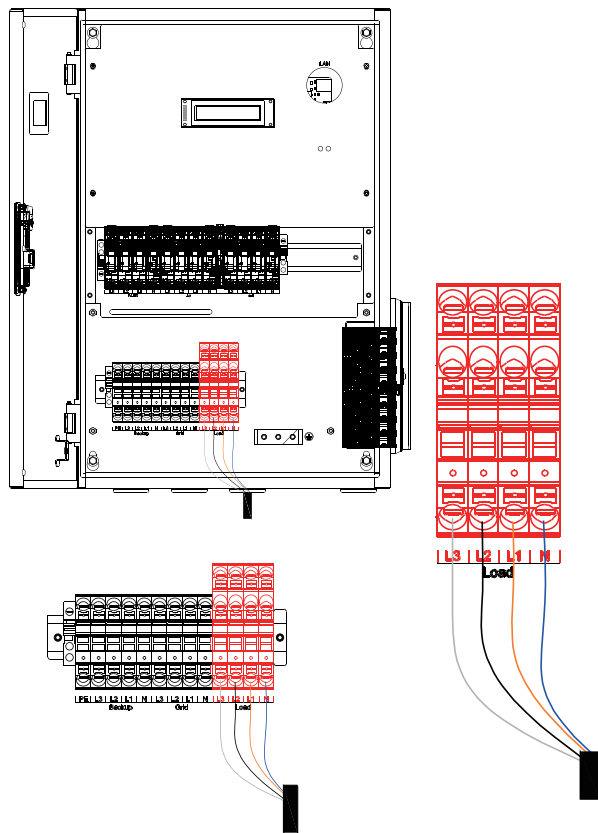
Note: When connecting cables, the wire harness must pass through the rubber plug at the bottom. The rubber plug should be cut with a knife along the middle cross.

Step 11 Connect the grid cables.

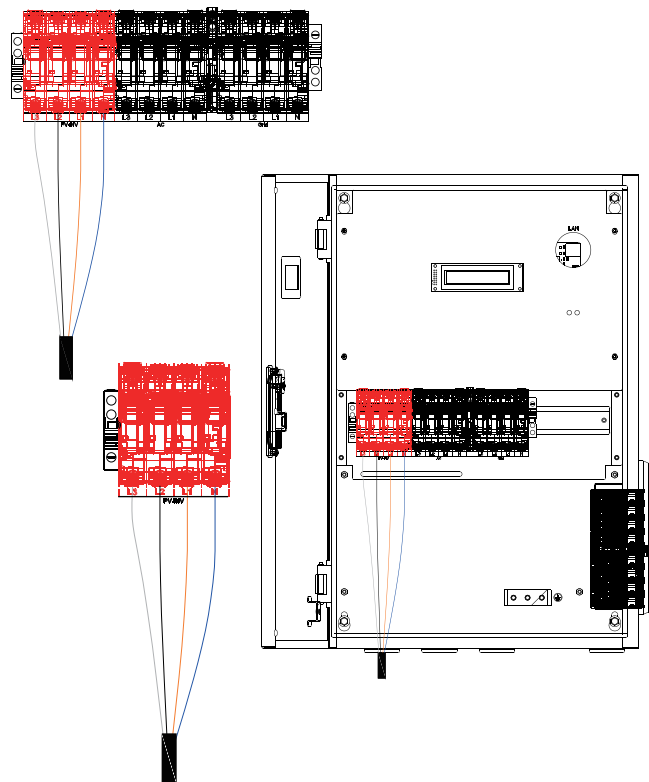


Installation

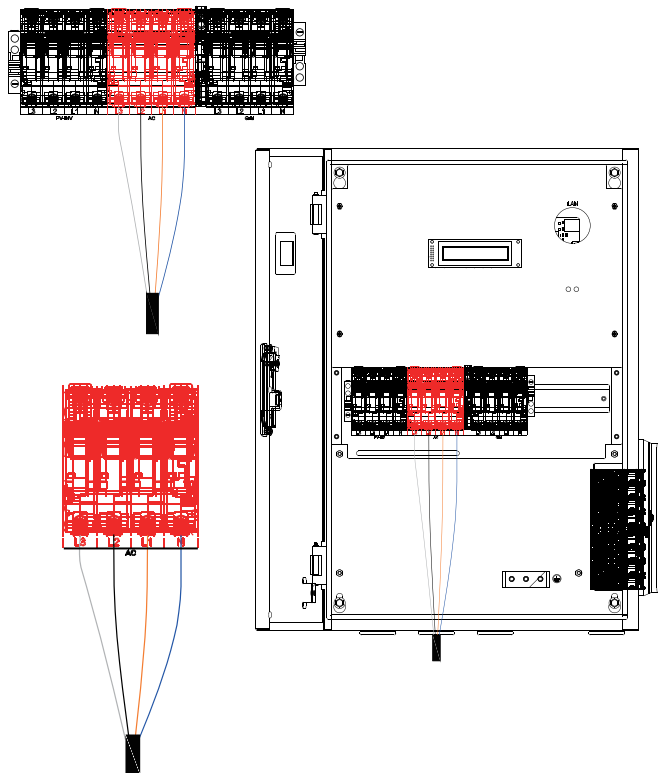
Step 12 Connect the Load cables.



Step 13 Connect the PV-INV cables.

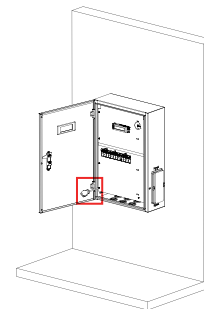


Step 14 Connect the AC cables.



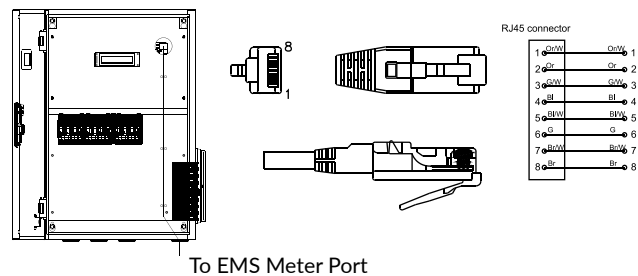
Step 15

Install the insulation plate removed in step 10.



Step 16

Connect the communication cables.

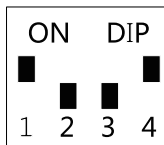


Note: The cable harness must be passed through the cable tie which is installed on the insulation plate. Then, tighten the cable tie.

Installation

Step 17

DIP Switch Configuration



DIP Switch	Description
1	Dial to "OFF" for three-phase system and "ON" for single-phase system.
2	Undefined
3	Undefined
4	Dial to "ON" for power recovery delay and "OFF" to turn off power recovery delay.

Step 18

After installation, close and lock the upper cover.



Note: Please keep the key properly.

Configuration

Configuration on AlphaAPP

Step 1

When the system mode is selected as DC, only tick "Meter" on the right of the "Grid Meter" .

When the system mode is selected as AC or Hybrid, tick both "Meter" on the right of the "Grid Meter" and "PV side meter".

Step 2

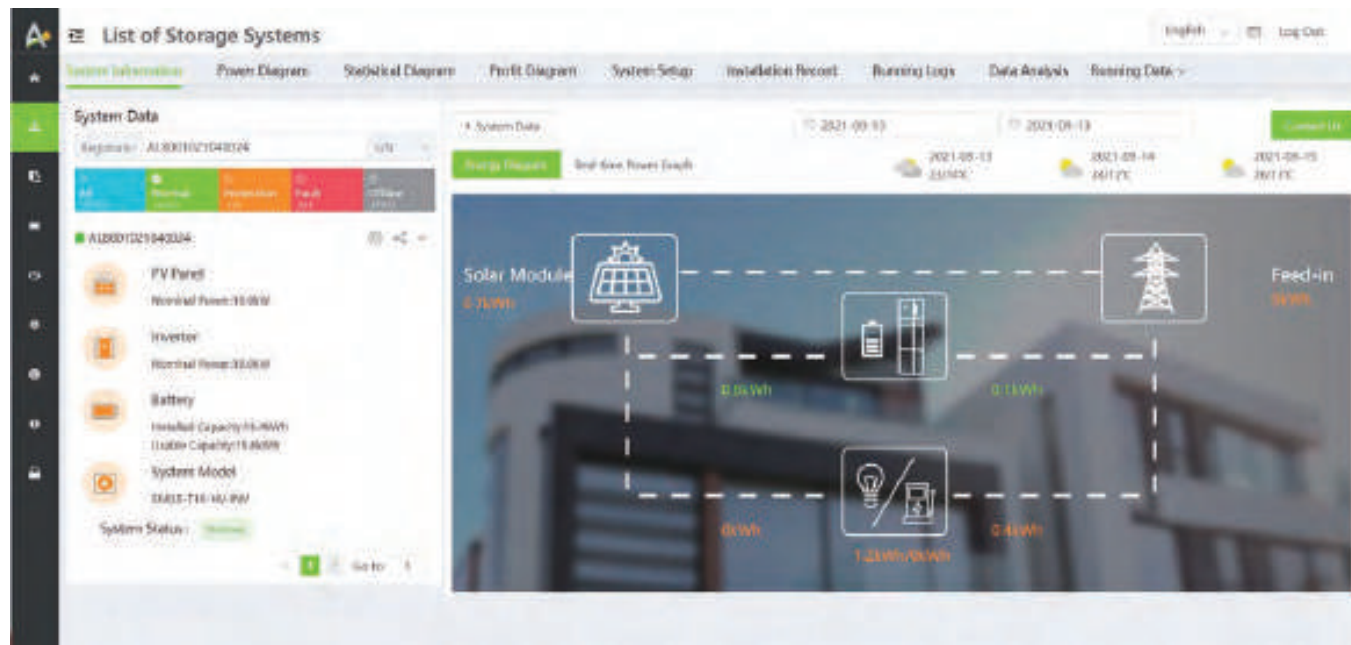
Click "Submit" and enter the "System information" page to check the meter model. The setting is successful if meter model is Backup-Box-PLUS.



Note: It is forbidden to tick CT to modify the ratio.

Configuration on AlphaCloud.


Step 1 Log in to <https://www.alphaess.com/>, and input the system SN to check the status of your system.




Configuration on AlphaCloud.

Step 2 When the system mode is selected as DC, click the button under the "Grid Meter" to make it green.
When the system mode is selected as AC or Hybrid, click the buttons under the "Grid Meter" and "PV side meter" to make both green.

Step 3 Click "Save" and wait till the page is refreshed.
When the "Meter Model" displays BackupBox-PLUS, the setting is successful.

Meter Information 

Grid Meter


Meter  CT

☐ CT

Meter CT Ratio

Meter Model


PV side meter

Meter  CT

☐ CT

Meter CT Ratio

Meter Model

 Note: It is forbidden to tick CT to modify the ratio.

Configuration on AlphaCloud.

Step 4 Please log in to the AlphaCloud page, select "System Setup", and click "Backup Box".

The screenshot displays the AlphaCloud System Setup interface. The top navigation bar includes tabs for System Information, Power Diagram, Statistical Diagram, Profit Diagram, **System Setup** (selected), Installation Record, Running Logs, Data Analysis, and Running Data. The left sidebar contains icons for home, system, and other functions. The main content area is divided into two panels. The left panel, titled "System Data", shows the system registration ID "AE3100517019527" and a status bar with indicators for Add, Normal, Protection, Fault, and Offline. Below this, the system components are listed: PV Panel (Nominal Power: 14.2kW), Inverter (Nominal Power: 10.0kW), Battery (Installed Capacity: 22.9kWh, Usable Capacity: 20.6kWh), and System Model (Storion SMILE-T10). The system status is "Normal". The right panel, titled "Basic Information", lists various system parameters: Basic Information, Inverter Information, Battery Information, Meter Information, Software Information, Electricity Tariff Information, Charging / Discharging Setting, EV-Charger, Generator Control, Backup Box, L1 Priority, L2 Priority, L3 Priority, L1 Priority Triggering SOC Value, L2 Priority Triggering SOC Value, and L3 Priority Triggering SOC Value. The "Backup Box" section is expanded, showing the "Enable Backup Box" checkbox and the "L1 Priority" dropdown menu.

Configuration on AlphaCloud.

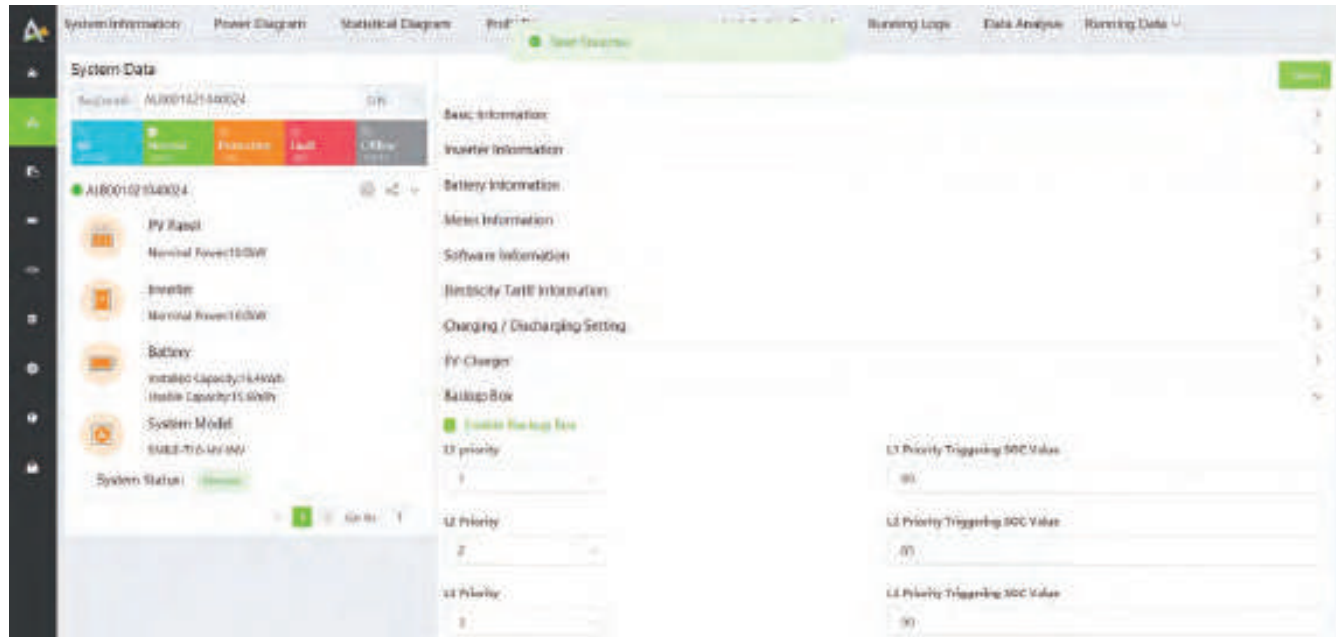
Step 5 Select "Enable Backup Box" and set different priorities and minimum SOC values for each phase.

The screenshot displays the AlphaCloud System Setup interface. The top navigation bar includes tabs for System Information, Power Diagram, Statistical Diagram, Profit Diagram, System Setup (active), Installation Record, Running Logs, Data Analysis, and Running Data. The left sidebar shows a tree view with System Data, PV Panel, Inverter, Battery, and System Model. The main content area is divided into two columns. The left column lists system components and their specifications: PV Panel (Nominal Power 14.2kW), Inverter (Nominal Power 10.0kW), Battery (Installed Capacity 22.9kWh, Usable Capacity 20.6kWh), and System Model (Storion-SMILE-T10). The right column contains a list of configuration items, including Basic Information, Inverter Information, Battery Information, Meter Information, Software Information, Electricity Tariff Information, Charging / Discharging Setting, EV-Charger, Generator Control, Backup Box, and System Status. The Backup Box section is expanded, showing a green checkbox labeled "Enable Backup Box" which is checked. Below this, there are three rows for L1, L2, and L3 priority settings. Each row has a dropdown menu for priority and a text input field for the minimum SOC value. The L1 priority is set to 1, L2 to 2, and L3 to 3. The corresponding minimum SOC values are 10, 20, and 30 respectively.

Priority	Minimum SOC Value
L1 Priority	10
L2 Priority	20
L3 Priority	30

Configuration on AlphaCloud.

Step 6 Complete all the setting steps above and click "Save" to enable the Backup Box function.



Specification

Model	Backup Box-PLUS
Phase	Three Phase
Communication	RS-485
Display	LCD
Operating Temperature	-10 °C ~ 50 °C
Humidity	15% ~ 85%
IP Protection	IP21
Dimension (W x D x H)	410 x 169 x 605 mm
Warranty	5 Years
Nominal Backup Power	10 kW
Grid Voltage Range	184 ~ 264.5 V (L-N)
Grid Frequency	50 Hz
Max. Output Current	3 X 63 A
Net Weight	25 kg



@AlphaEnergyStorageSystem



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@alpha_ess



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