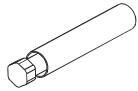


## QUICK INSTALLATION GUIDE

Backup Box-PLUS  
V02



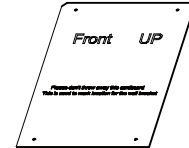
Backup Box-PLUS



M8 expansion screw X4

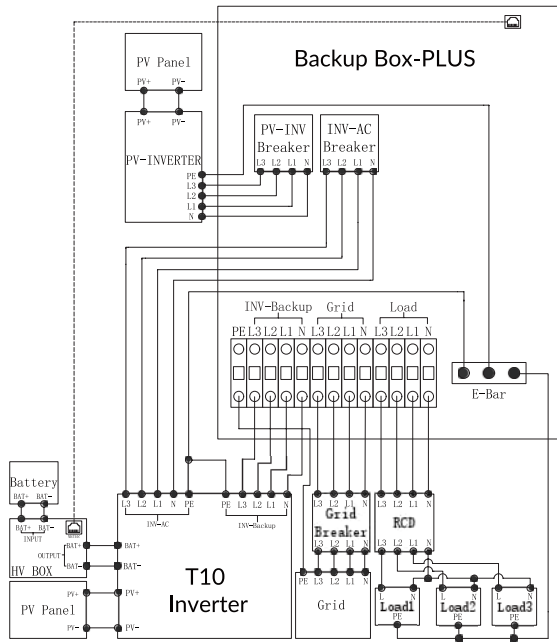


Quick installation guide X1



Positioning board x1

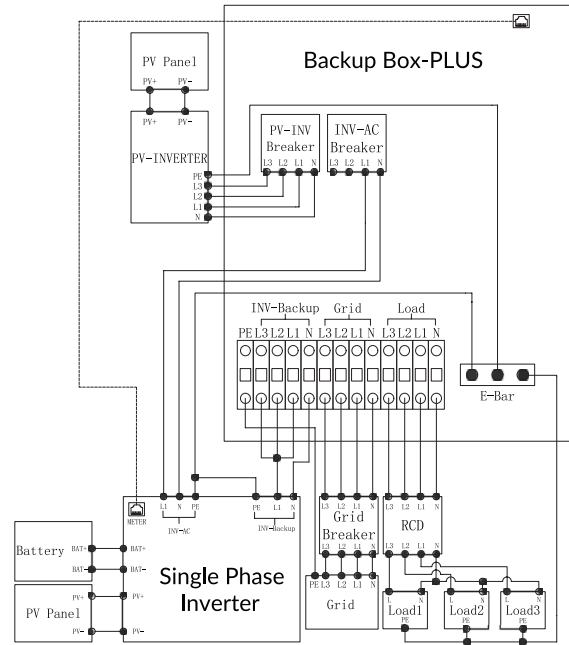
# System Wiring Diagram



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

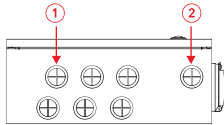


Please connect PE cable between Backup Box and the inverter. If the inverter does not have PE port, there is no need to connect PE cable.

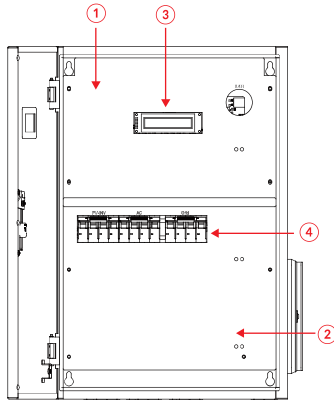
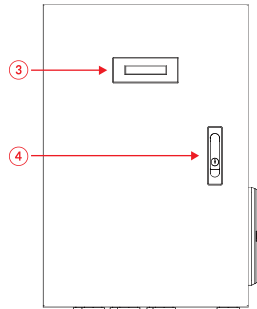


Backup Box-PLUS wiring diagram for single-phase inverter.

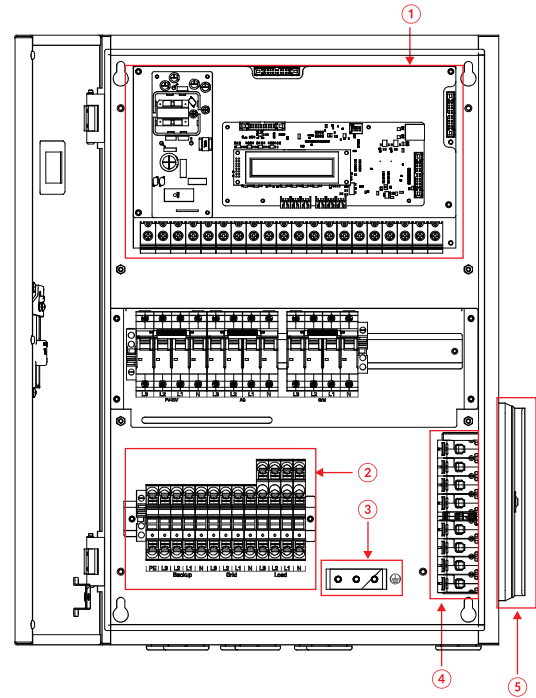
# Instruction



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



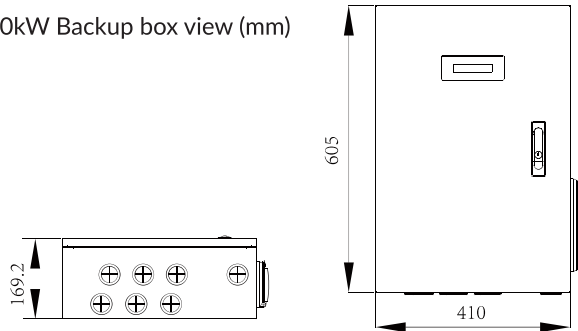
- ① Insulating plate
- ② Insulating plate
- ③ LCD Screen
- ④ Control switch



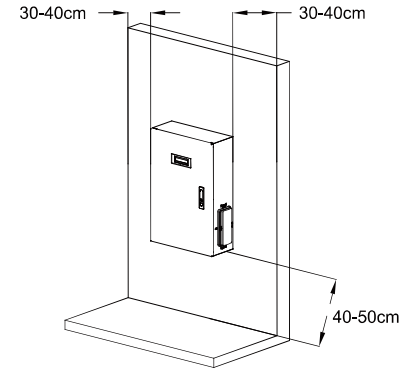
- ① Control panel
- ② Terminal block
- ③ Reserved grounding copper bar
- ④ Bypass switch
- ⑤ STW-10A

## Instruction

10kW Backup box view (mm)



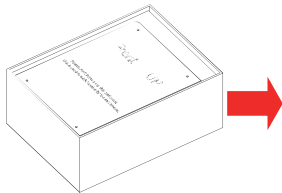
Minimum distance to adjacent objects:



## Installation

### Step 1

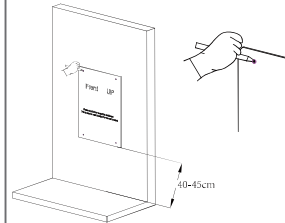
Take out the Backup Box-PLUS and accessories from the package.



**!** 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.

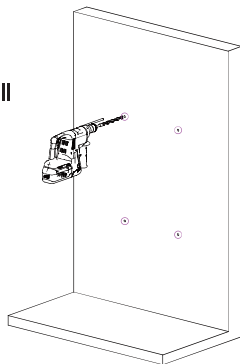


**!** Note: Please ensure that the cardboard is level to prevent the Backup Box-PLUS from tilting after installation.

## Installation

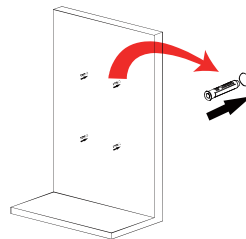
### Step 3

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



### Step 4

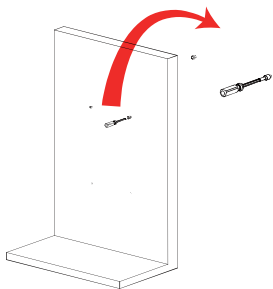
Take out the plastic expansion screws and vertically place the expansion tubes into the holes.



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

### Step 5

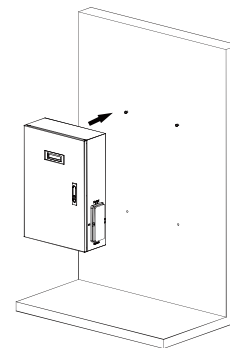
Lock the expansion screws into the two upper holes.



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.

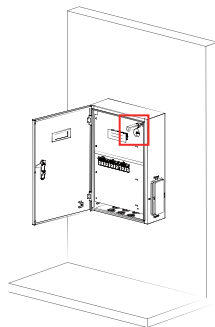


## Installation

### Step 7

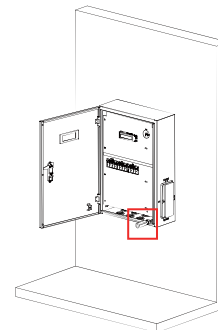
Use the key to open the upper cover, and use the SW10 sleeve to lock the two expansion screws above.

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



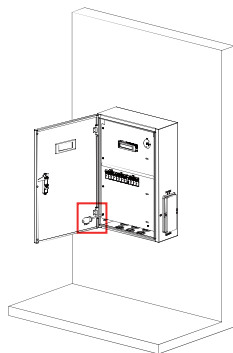
### Step 8

Lock the two expansion screws at the bottom.

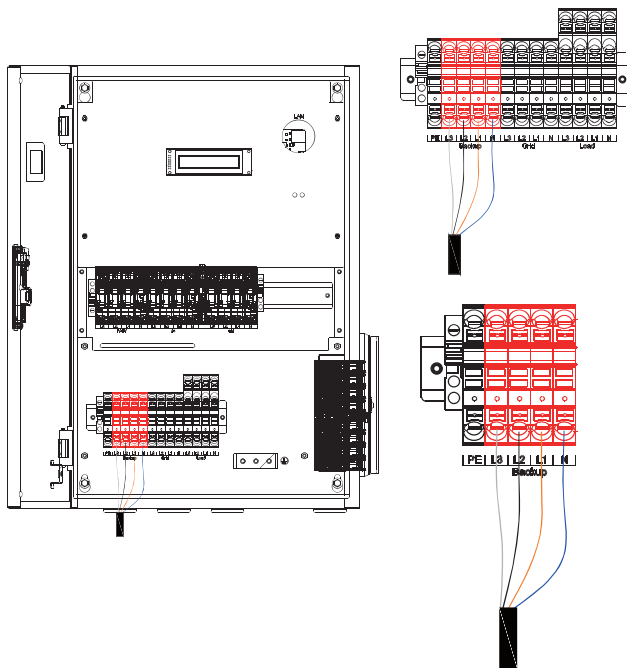


### Step 9

Use a Philips screwdriver to remove the insulation plate.

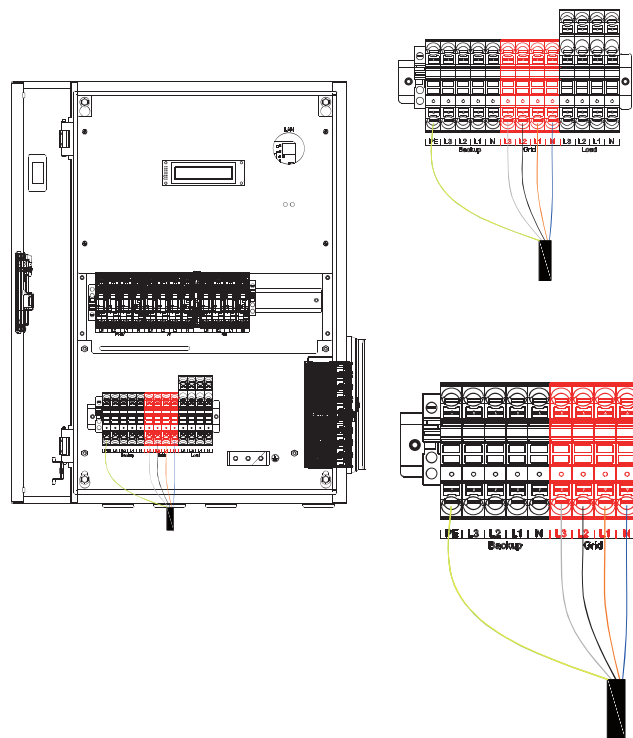


## Step 10 Connect the backup cables.



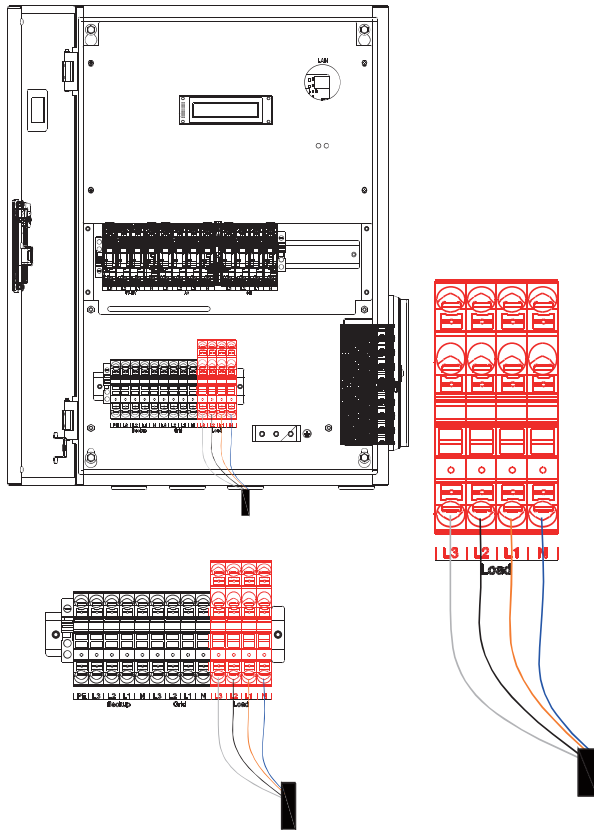
Note: When connecting cables, the wire harness must pass through the rubber plug at the bottom. The rubber plug should be cut with a knife along the middle cross.

## Step 11 Connect the grid cables.

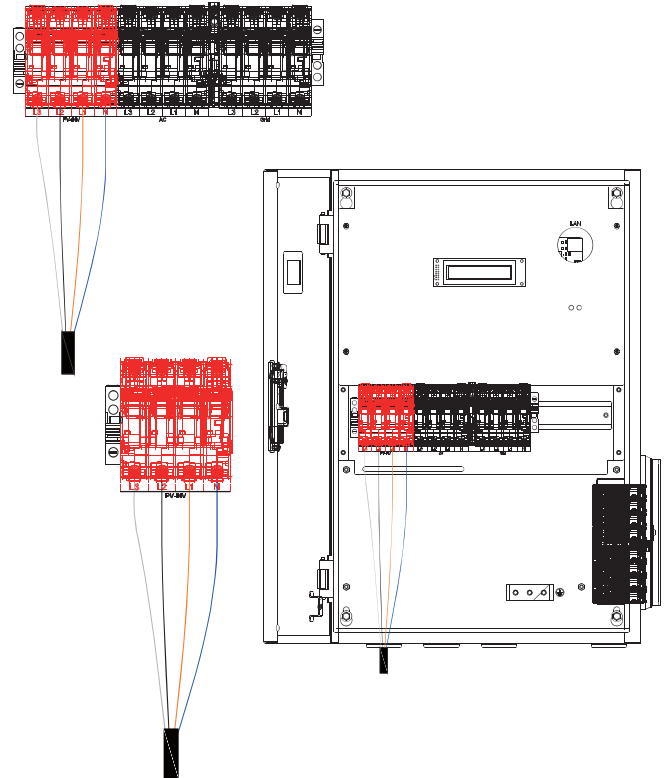


# Installation

## Step 12 Connect the Load cables.

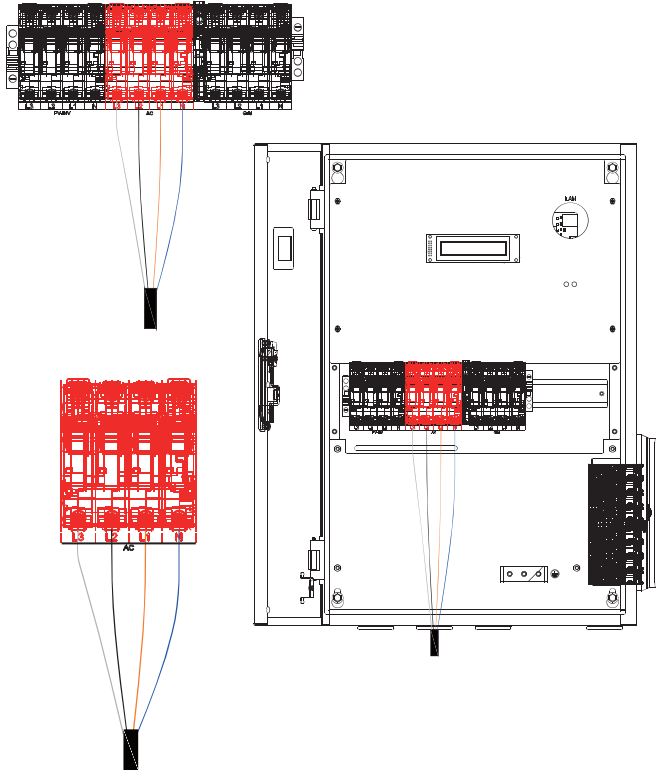


## Step 13 Connect the PV-INV cables.



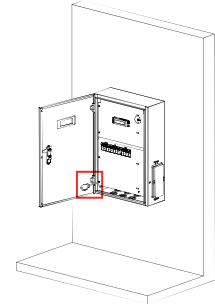
# Installation

## Step 14 Connect the AC cables.



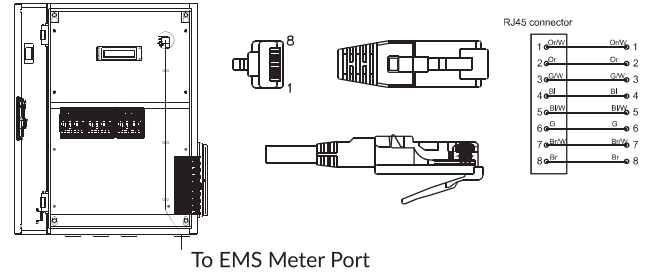
## Step 15

Install the insulation plate removed in step 10.



## Step 16

Connect the communication cables.

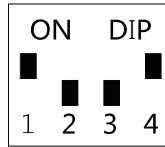


Note: The cable harness must be passed through the cable tie which is installed on the insulation plate. Then, tighten the cable tie.

## 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.

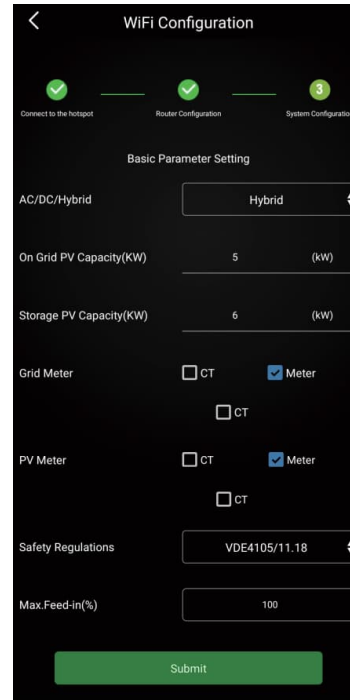
### Step 18

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.

The screenshot displays the 'List of Storage Systems' dashboard. The top navigation bar includes 'System Information', 'Power Diagram', 'Statistical Diagram', 'Profit Diagram', 'System Setup', 'Installation Record', 'Running Logs', 'Data Analysis', and 'Running Data'. The left sidebar contains navigation icons for home, list, details, settings, and security.

**System Data**

Registratr: ALB001021040024 S/N

System Status: Normal

- Normal** (19/13)
- Protection** (19/13)
- Fault** (19/13)
- Offline** (19/13)

ALB001021040024

- PV Panel**  
Nominal Power:10.0kW
- Inverter**  
Nominal Power:10.0kW
- Battery**  
Installed Capacity:16.4kWh  
Usable Capacity:15.6kWh
- System Model**  
SMILE-T10-HV-INV

System Status: Normal

Go to 1

**Energy Diagram** Real-time Power Graph

2021-09-13 23/14°C

2021-09-14 24/12°C

2021-09-15 26/13°C

Solar Module 0.7kWh

0.6kWh

0.1kWh

0kWh

1.2kWh/0kWh

0.4kWh

Feed-in 0kWh

Contact Us

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: System Information, Power Diagram, Statistical Diagram, Profit Diagram, **System Setup** (highlighted), Installation Record, Running Logs, Data Analysis, and Running Data. The left sidebar contains navigation icons for Home, Users, System, Settings, Alerts, and Security.

**System Data**

Registrati AE3100517019527 S/N

All 33413 Normal 177913 Protection 452 Fault 263 Offline 14745

● AE3100517019527

- PV Panel  
Nominal Power:14.2kW
- Inverter  
Nominal Power:10.0kW
- Battery  
Installed Capacity:22.9kWh  
Usable Capacity:20.6kWh
- System Model  
Storion-SMILE-T10

System Status: Normal

< 1 > Go to 1

**System Setup**

Basic Information >

Inverter Information >

Battery Information >

Meter Information >

Software Information >

Electricity Tariff Information >

Charging / Discharging Setting >

EV-Charger >

Generator Control >

Backup Box >

Enable Backup Box

L1 Priority

1

L2 Priority

2

L3 Priority

3

L1 Priority Triggering SOC Value

0

L2 Priority Triggering SOC Value

0

L3 Priority Triggering SOC Value

0

Save

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 (selected), Installation Record, Running Logs, Data Analysis, and Running Data. The left sidebar shows a navigation menu with icons for home, system data, and various system components. The main content area is titled "System Data" and shows the configuration for system AE3100517019527. The system status is "Normal". The Backup Box configuration is expanded, showing the following settings:

- Enable Backup Box
- L1 priority: 1
- L2 priority: 2
- L3 priority: 3
- L1 Priority Triggering SOC Value: 10
- L2 Priority Triggering SOC Value: 20
- L3 Priority Triggering SOC Value: 30

The interface also includes a "Save" button in the top right corner of the configuration area.

Configuration on AlphaCloud.

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

The screenshot displays the AlphaCloud configuration interface. At the top, there is a navigation bar with tabs for System Information, Power Diagram, Statistical Diagram, Profile, Running Logs, Data Analysis, and Running Data. A green notification box at the top center reads "Save Success".

The main content area is titled "System Data" and features a "Registratrak" field with the value "ALB001021040024" and a "S/N" dropdown. Below this, there are status indicators for "All", "Normal", "Protection", "Fault", and "Offline".

The left sidebar lists system components: PV Panel (Nominal Power: 10.0kW), Inverter (Nominal Power: 10.0kW), Battery (Installed Capacity: 16.4kWh, Usable Capacity: 15.6kWh), and System Model (SMILE-T10-HV-INV). The System Status is shown as "Normal".

The right sidebar contains a list of configuration sections: Basic Information, Inverter Information, Battery Information, Meter Information, Software Information, Electricity Tariff Information, Charging / Discharging Setting, EV-Charger, and Backup Box. The Backup Box section is expanded, showing a checked "Enable Backup Box" option and three priority settings:

Priority	Priority Value	Triggering SOC Value
L1 Priority	1	80
L2 Priority	2	85
L3 Priority	3	90

A "Save" button is located in the top right corner of the configuration area.

## 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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