



# **Installation & Operation Manual**

## **Energy Storage System (ESS)**

### **Storion-SMILE-B3**



**V07**



## Imprint

### Germany

Alpha ESS Europe GmbH

Tel.: +49 (0)6103 459 160-1

E-mail: [europe@alpha-ess.de](mailto:europe@alpha-ess.de)

Website: [www.alpha-ess.de](http://www.alpha-ess.de)

Add.: Paul-Ehrlich-Straße 1a

63225 Langen

### China

Alpha ESS Co., Ltd.

Tel.: +86 (0)513 806 868 91

E-mail: [info@alpha-ess.com](mailto:info@alpha-ess.com)

Website: [www.alpha-ess.com](http://www.alpha-ess.com)

Add.: Jiu Hua Road 888, High-Tech Industrial Development Zone, Nantong City, 226300, Jiangsu Province

### Australia

Alpha ESS Australia Pty. Ltd.

Tel.: +61 1300 968 933

E-mail: [australia@alpha-ess.com](mailto:australia@alpha-ess.com)

Website: [www.alpha-ess.com.au](http://www.alpha-ess.com.au)

Add.: Suite 1, Level 1, 530 Botany Road, Alexandria, NSW

### Italy

Alpha ESS Italy S.r.l.

Tel.: +39 (0)599 239 50

E-mail: [info@alpha-ess.it](mailto:info@alpha-ess.it)

Web: <https://it.alpha-ess.com/>

Add: Via Loda,17-41013 Castelfranco Emilia (MO)

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## Copyright Declaration

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## Version Information

Version	Date	Contents
V01	Nov. 30 <sup>th</sup> , 2018	Newly compiled manual.
V02	Dec. 5 <sup>th</sup> , 2018	Modified the connection diagram of meters. Added the notice of external connection of backup and grid neutral line in Australia.
V03	Jan. 9 <sup>th</sup> , 2019	Modified side screen print and internal component layout.
V04	May 5 <sup>th</sup> 2019	Added instruction of installation location for AU Added battery expansion installation Added CT and meter mixed installation sequence Modified some details
V04.5	July 28 <sup>th</sup> , 2019	Added WIFI (Yilian) configuration Added server setting steps
V07	Aug. 8 <sup>th</sup> , 2019	Modified WIFI configuration

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# 1. Introduction

## 1.1 Introduction of System

SMILE-B3 is an AC coupled all-in-one battery energy storage system (BESS). It can help to achieve the optimal usage of renewable energy. SMILE-B3 can control the bi-directional flow of electric power, work under auto/manual & time-of-use (TOU) modes, charge/discharge the battery as per customer's setting. Under the auto mode, SMILE-B3 will store surplus renewable energy onto the battery and discharge battery to supply power to local loads when renewable energy is not enough. SMILE-B3 is equipped with 3 buttons, friendly human machine interaction system. More importantly SMILE-B3 is stable, safe, and reliable. The normal schematic is as shown in Figure 1.1:

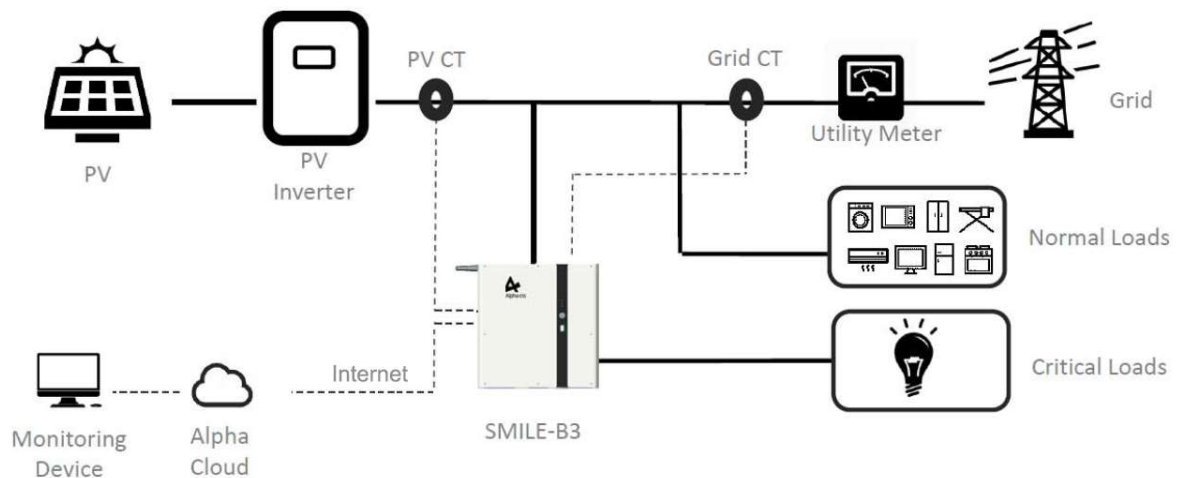


Figure 1.1 Storion-SMILE-B3 System with PV

**NOTE:** For the AC coupled system with PV, if only installing Grid CT, the system cannot display PV Inverter generated power, electric energy production etc.

If there is no PV, the schematic is as below:

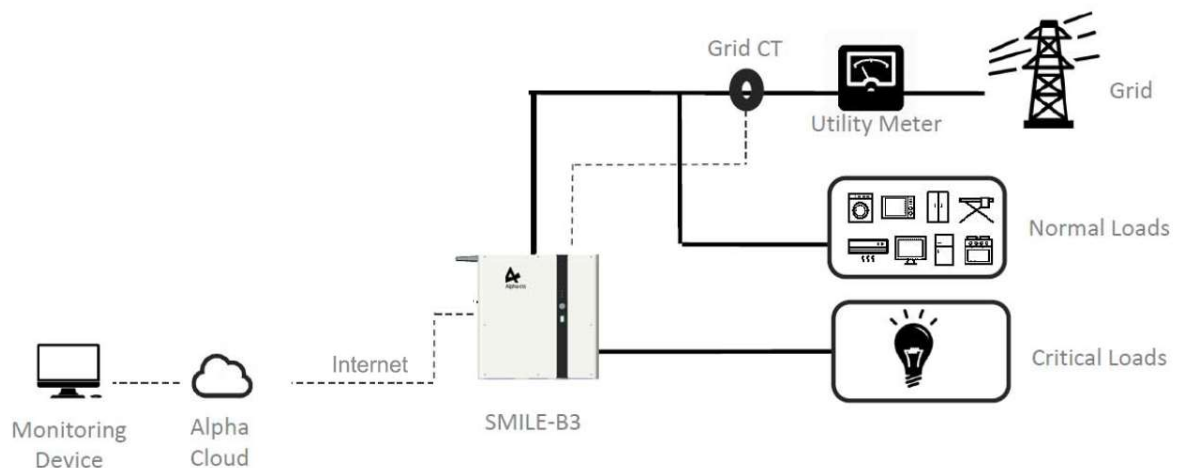


Figure 1.2 Storion-SMILE-B3 System without PV

## 1.2 General Precautions



### **Danger:**

#### **Danger to life due to high voltages of battery and electric shock.**

- Do not touch uninsulated cable termination.
- Do not touch the DC wires.
- Do not open the inverter and battery.
- Do not use wet cloth to wipe the system.
- Do not dispose of batteries in fire. The batteries may explode!
- Only qualified personnel who are equipped with the corresponding skills can install and debug the system. Before performing any work on the inverter or battery pack, please disconnect the inverter from all voltage sources as described in this document.



### **Warning**

#### **Risks of chemical burn electrolyte or toxic gases.**

**During standard operation, electrolyte won't leak from the battery pack as well as form of toxic gases. Even if the battery was handled with care, but if the battery pack is damaged or breaks down, electrolyte may leak or form toxic gases.**

- Do not install the system in temperature or humidity exceeding the permitted range.
- Please do not use wet hands to touch the system.
- Do not place heavy objects on the top of the system.
- Do not damage the system using sharp objects.
- Do not install or operate the system in the inflammable and explosive environment or high humidity environment.
- Do not install explosive gas and the battery pack in the area that containing highly flammable substance or gas.
- If the moisture penetrates the system (e.g. due to casing damage), please do not install or operate the system.
- When the system has connected the extended battery module, please do not move the system.
- Use strapping if necessary during transportation to prevent tipping.
- Storion-SMILE-B3 transport must be conducted by the manufacturer or professionals, these operations should be recorded and used.
- Certified ABC extinguishers with minimum capacity 2 kg must be carried during transportation.
- No smoking during unloading of vehicles and close to them.
- If you want to replace the battery module, please pack new dangerous packaging according to needs, pack them and let the supplier receive them.
- If contacting with the electrolyte, please wash affected area with water immediately, and consult a doctor immediately.



**Risk of injury by hoisting or falling system**

Inverters and batteries are heavy and can cause personal injury if the inverter or battery is improperly lifted or dropped during transport or when attached or removed from walls.

Lifting and transporting Storion-SMILE-B3 is conducted by more than 1 person.

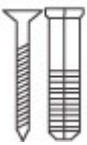

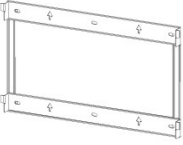

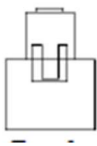

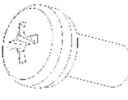

## 2. Installation

### 2.1 Parts List

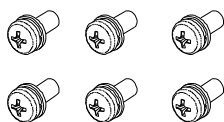
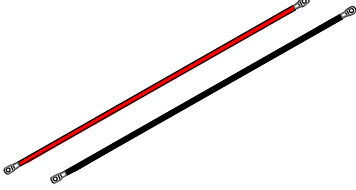
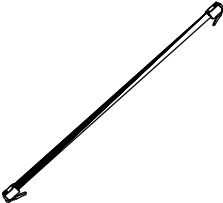
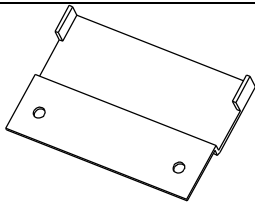
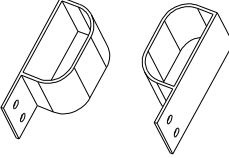
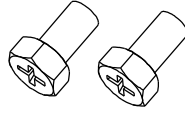
Check the following parts list for completeness.

AlphaESS provides a complete set of system for on-site customers, including:

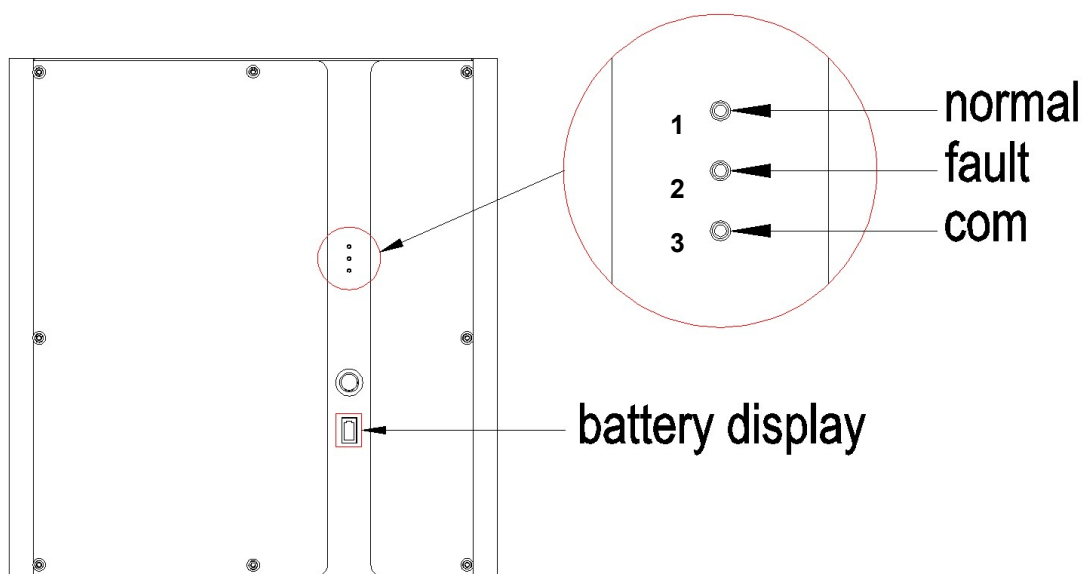
**Table 1 Parts List of B3**

Storion-SMILE-B3			
			
8 x M8*60	8 x M6 gasket	1 x installing support	8 x white plug
			
2 x CT (100A, 3000:1)	1x installation manual	4 x M4*12 screws	1 x WiFi module (optional)

**Table 2 Parts List of Battery Expansion Accessory Package**

Storion-SMILE-B3 Battery Expansion Accessories (Optional)		
		
6 x Screw M5*10	1 x Positive Power Line 2 x Negative Power Line	1 x Battery Communication Cable
		
1 x Position Limiter	2 x Stand Holder	2 x M6*10

## 2.2 System Appearance



**Figure 2.1 Storion-SMILE-B3 External View**

**Table 3 SMILE-B3 System LED Display**







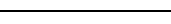
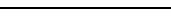






LED	Status	Description
normal		Normally on: Normal system operation
		Single flicker: system standby or self-inspection
		Extinguishing: out-of-order
fault		Extinguishing: fault-free
		Normally on: out-of-order
com		Normally on: Normal network connection
		Flicker: connecting to the server
		Extinguishing: un-connected network

Table 4 SMILE-B3 Battery LED Display

LED Outer Ring Light Flicker Status	SOC Status	Description
Standby: green light flicker 1s work: green light flicker 10s		SOC<5%
		5%=<SOC<25%
		25%=<SOC<50%
		50%=<SOC<75%
		75%=<SOC<95%
		SOC>95%

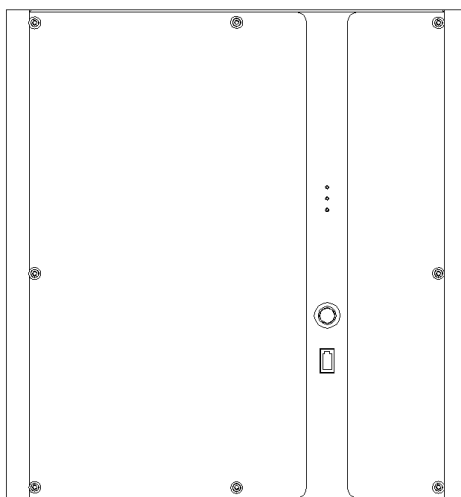
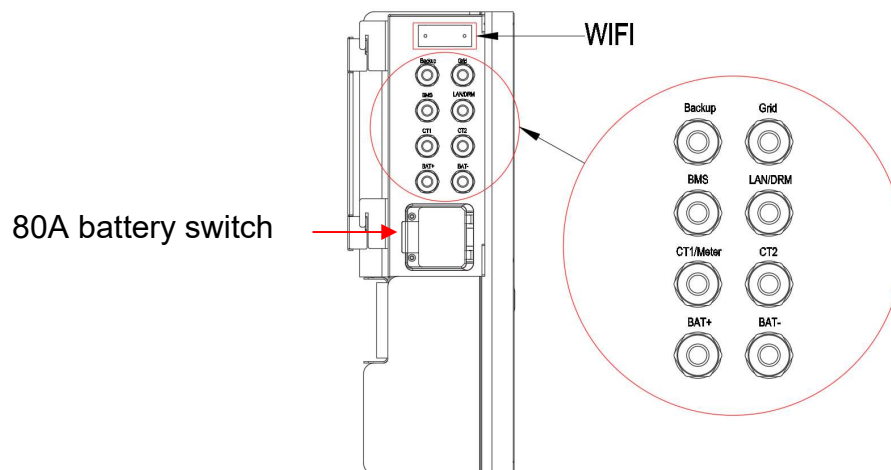
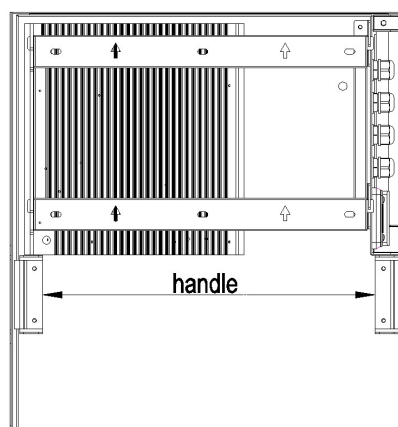


Figure 2.2 Storion-SMILE-B3 Front View


**Figure 2.3 Storion-SMILE-B3 Left View**
**Table 5 Ports Definition**

Name	Description
BMS	Additional battery BMS communicate cable connect
DRMs	DRED connect port (only for AU)
CT1	PV CT communicate cable
CT2	Grid CT communication cable
BAT+	Additional battery power positive cable connect
BAT-	Additional battery power negative cable connect
BACKUP	Critical load connect
GRID	Grid connect


**Figure 2.4 Storion-SMILE-B3 Rear View**

## 2.3 Limitation of Liability

AlphaESS shall not be liable directly or indirectly for any product damage or property loss caused by any of the following conditions.

The product has been modified, the design modification or the change of parts without the authorization of AlphaESS;

Non-AlphaESS technicians change, repair and serial number removing;

System design and installation fail to meet the standards and other relevant requirements;

Fail to observe local safety regulations;

Transportation damage (including paint scratches caused by friction in packaging during transportation). Once the container/package is unloaded and the damage is confirmed, claims shall be put forward directly to the transport or insurance company;

Fail to comply with any/all user manuals, installation guide and maintenance rules;

Improperness or misuse of equipment;

Insufficient equipment ventilation;

Product maintenance procedures do not follow acceptable standards;

Force majeure (violent or stormy weather, thunder and lightning, overvoltage, fire, etc.);

Any damage caused by external factors

## 2.4 System Installation

This manual introduces the basic steps how to install and set up Storion-SMILE-B3.

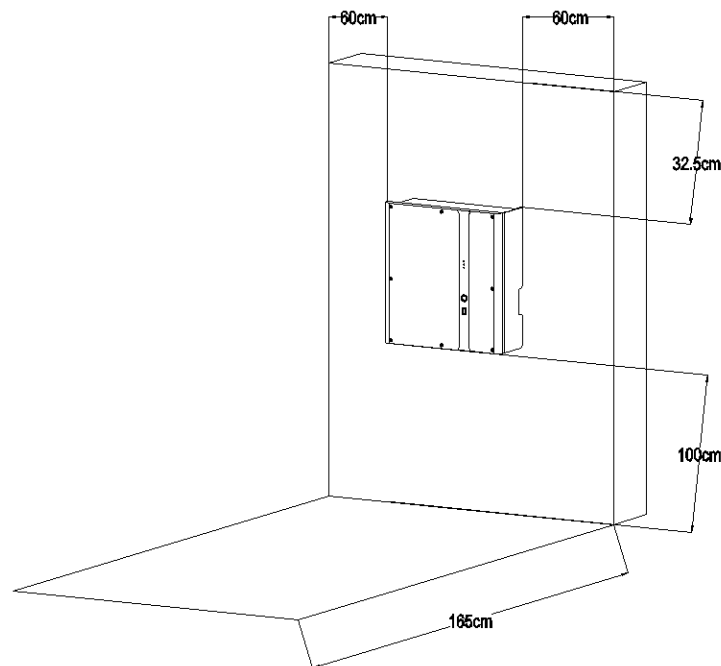
Observe the specified minimum distance of adjacent objects;

Minimum distance guarantee;

Sufficient heat dissipation;

The upper cover of the energy storage system has enough space to open;

Sufficient room for maintenance.



**Figure 2.5 Limit the Distance to an Adjacent Object**

### 2.4.1 Installation Site and Environment

The following sites are not allowed installation:

- a. wall cavities;
- b. on roofs not specifically deemed suitable;
- c. areas of access/egress;
- d. under stairways;
- e. under access walkways;
- f. sites where the freezing point is reached, like garages, carports or other places;
- g. sites with humidity and condensation is above 85%.
- h. Places with plenty of salt.
- i. Flooded areas.
- j. Earthquake areas-additional security measures are needed here.
- k. Places with altitude higher than 2,000 meters.

- l. Place with explosive gases.
- m. Place with direct sunlight.
- n. Place with the ambient temperature extremely variable.
- o. Places with highly flammable materials or gases.
- p. Wet rooms
- q. Places with potentially explosive gases.
- r. Wall loading installation must exceed 180 kg.

**Note: a ~ e rules are according to AS/NZS5139. If you install the system in Australia or New Zealand, you must follow these rules. If the installing place is not Australia or New Zealand and there are no these rules, you must not follow these rules**

## 2.4.2 Installation Tools

The following tools are required to install the equipment.



Wire  
Cutter



Cable clamp



Screw Driver  
Set



M5 Hexagon  
screwdriver or wrench



Percussion Drilling

**NOTE: Use properly insulated tools to prevent accidental electric shock or short circuits. If insulated tools are not available, cover the entire exposed metal surfaces of the available tools, except their tips, with electrical tape.**

### Safety Gear

It is recommended to wear the following safety gear when dealing with the battery pack



Insulated gloves



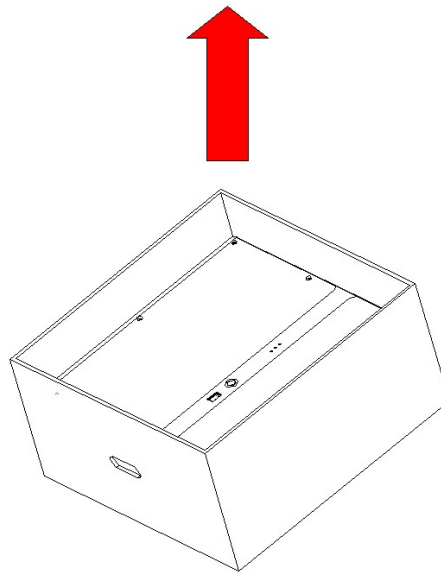
Safety goggles



Safety shoes

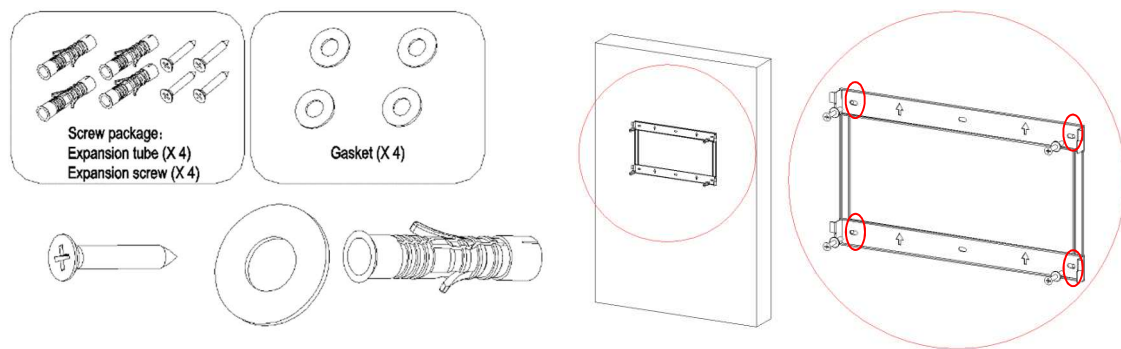


### 2.4.3 SMILE-B3 Installation



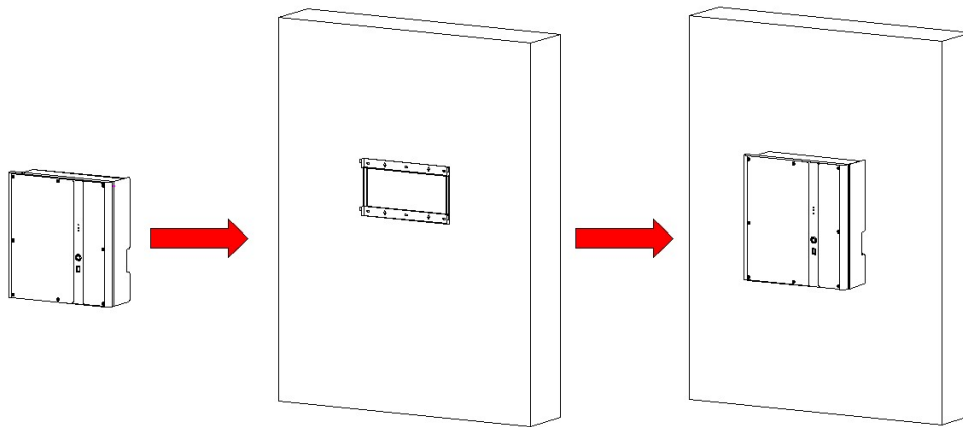
**Figure 2.6 Open Storion-SMILE-B3 Packaging**

Step 1: Take out Storion- SMILE-B3 from the packaging box, as shown in Figure 2.6.

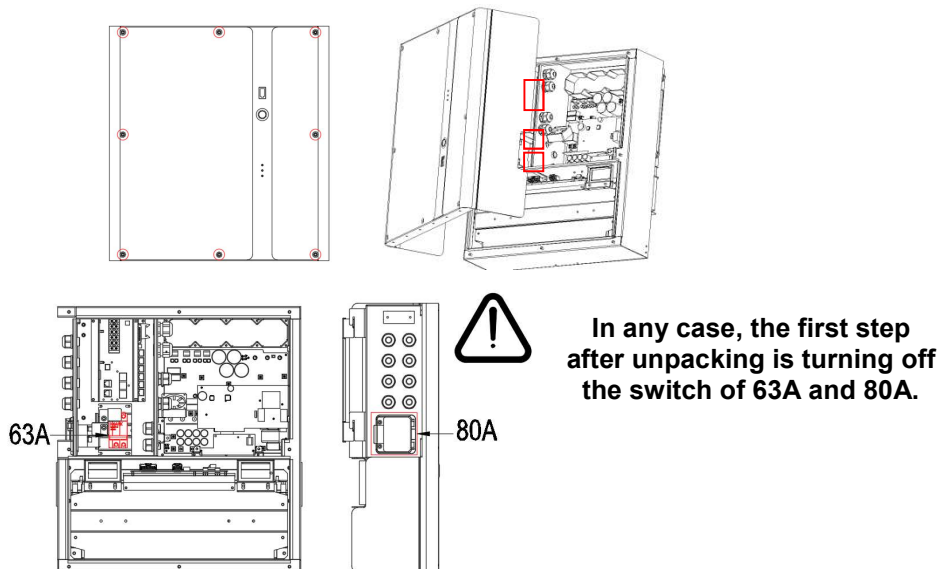


**Figure 2.7 Stand Positioning**

Step 2: first use the percussion drill (M10 drill) to drill holes in the wall with depth 65mm, then install and place the stand.(1. Insert the expansion pipe into the drilled hole. Then pass the tapping screw through the spacer and tighten it with the cross screwdriver), as shown in Figure 2.7.

**Figure 2.8 Box Fixation**

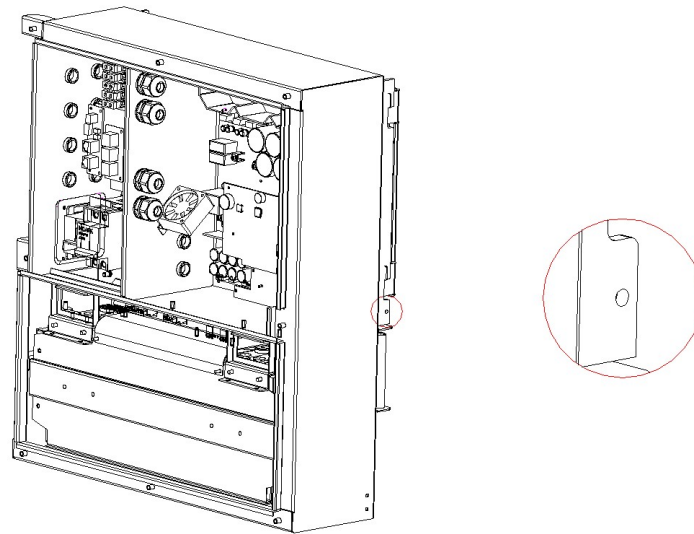
Step 3: install the box of Storion-SMILE-B3 (hold the two handles on the back of B3 and install the B3 box to the stand), as shown in Figure 2.8.

**Figure 2.9 Take Down Storion-SMILE-B3 Upper Cover Plate**

Step 4: Use the M5 internal hexagon wrench to unscrew the screws. After pulling out the connecting wire harness on the back of the upper cover plate, remove the B3 upper cover plate to prepare wiring, as shown in Figure 2.9.

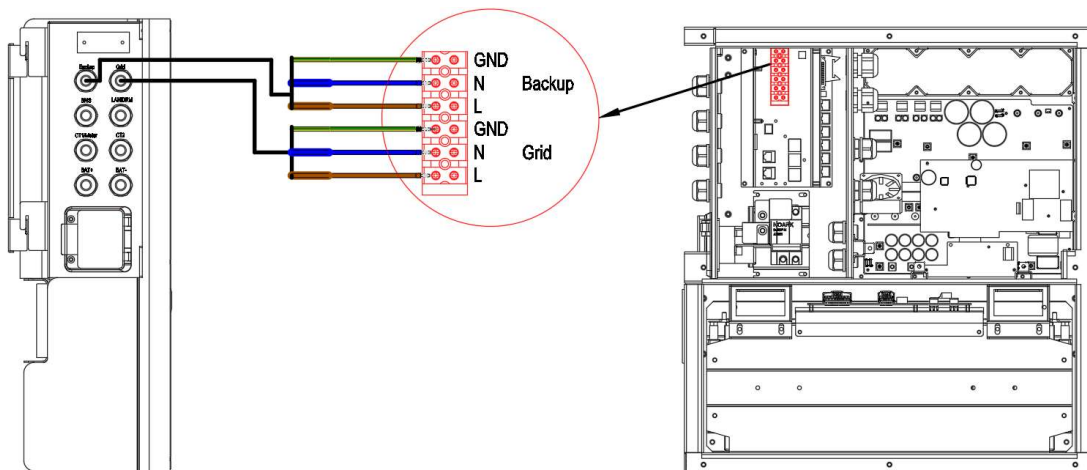


**Note: the internal 63A and the external 80A switch must be switched off to prevent short circuit.**



**Figure 2.10 Earthing Bonding Position**

Step 5: the earthing bonding position for Storion-SMILE-B3 is as shown in Figure 2.10, please use the M4\*12 screw.



**Figure 2.11 Backup and Grid Wire Harness Wiring**

Step 6: Connect Backup and Grid wire harness (to 6 pin terminal strip), as shown in Figure 2.11.



**Note:** in Australia, the neutral of backup and grid circuit should be externally connected on the neutral bar.

The suggested torque for the waterproof contact is 3.75 N.m±10%.

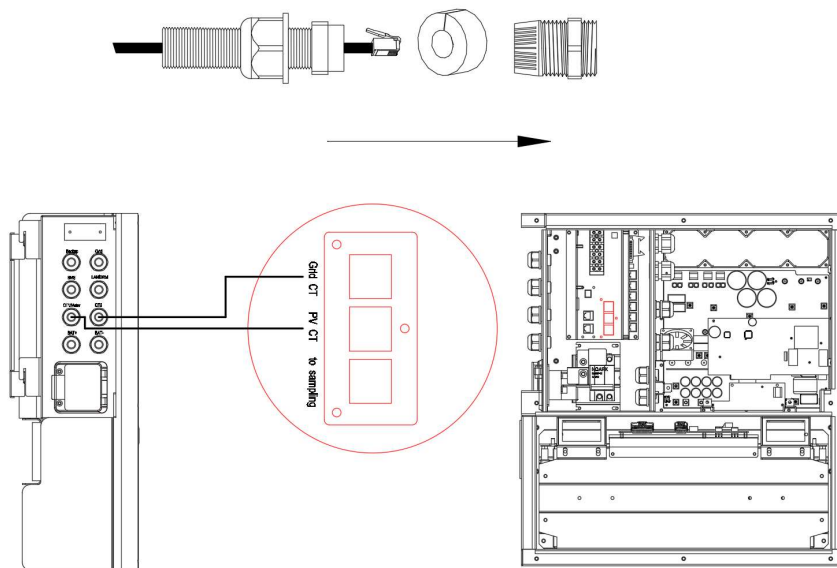


Figure 2.12 CT Wire Harness Wiring

Step 7: Complete for installing CT, as shown in Figure 2.12.



**Note:** CT communication wires can be connected directly through the silica gel ring of the M20 waterproof contact, no need to make the on-site network line. The maximum outer diameter of the network cable does not exceed 14mm.

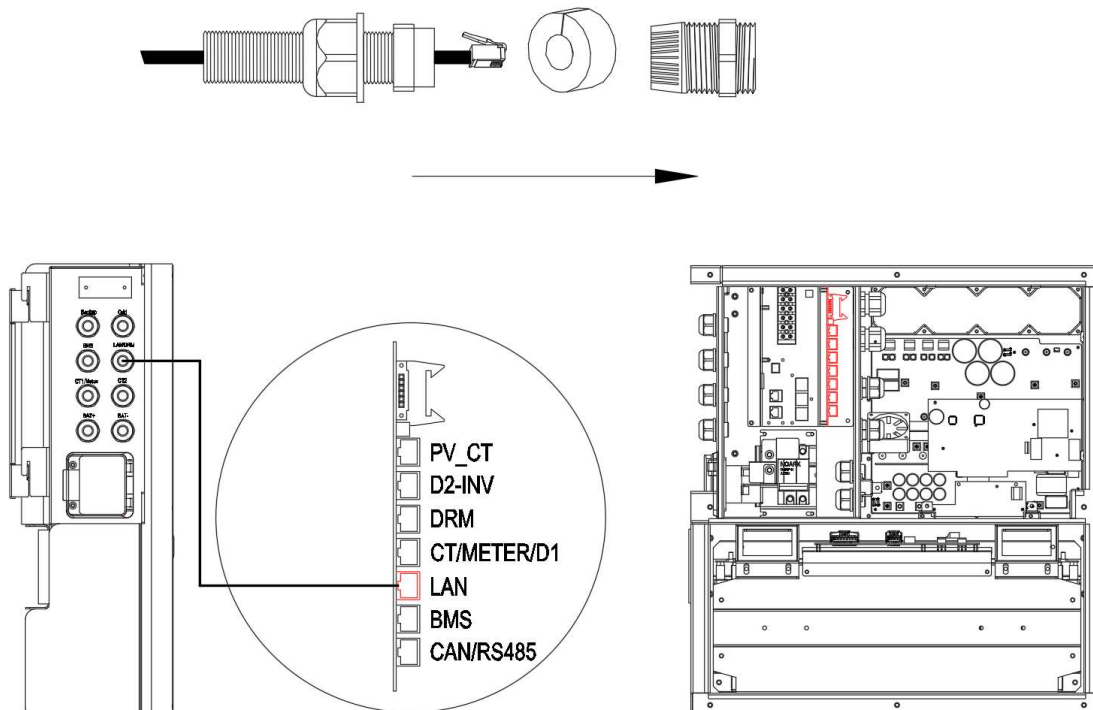


Figure 2.13 Ethernet Communication Cable Wiring

Step 8: Install ethernet communication cable, as shown in Figure 2.13. It won't be needed if using WiFi module.

**i** **Note:** The ethernet communication cable can be connected wiring directly through the silica gel ring of the M20 waterproof contact, no need to make the on-site network cable. The maximum outer diameter of the network cable does not exceed 14mm.

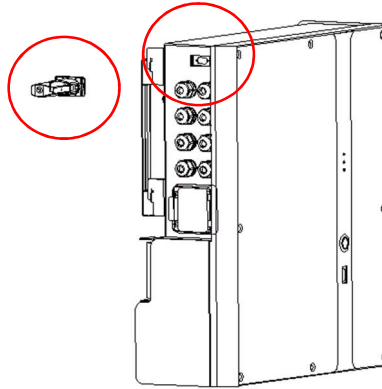


Figure 2.14 Install WiFi Module

**i** **Note:** If using WiFi module, open the cover plate of the side WiFi module, insert the WiFi module into the terminal port and then fix it with screws, as shown in Figure 2.14.

If you will install extrenal M4856-P for expansion, please goto section 2.4.4 directly.

Step 9: before re-covering the upper cover plate, please turn on the internal 63A switch.

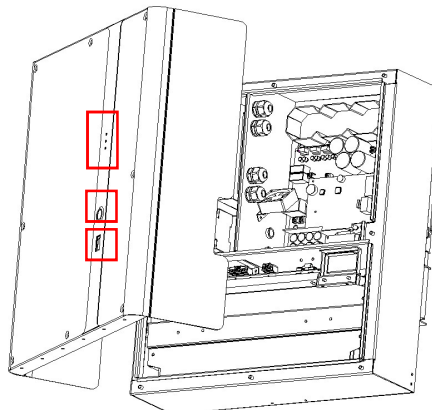


Figure 2.15 Re-cover the Upper Cover Plate

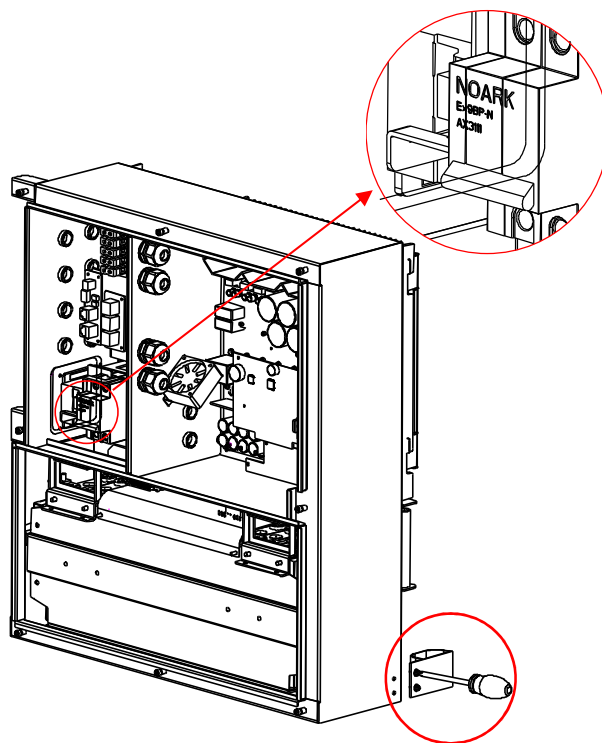
Step 10: the wiring is completed, please connect the wiring harness on the back of the upper cover plate. Then re-cover the B3 upper cover plate, use the M5 internal hexagonal wrench to tightly lock the upper cover screw, and then install the white plug, as shown in Figure 2.15.

**i** **Note:** the upper wiring harness from EMS shall be connected to the back upper part , the below wiring harness from BMS shall be connected to the back below part. Please pay attention to the positive and negative pole of the button switch wires.

The suggested torque is 2.6 N.m $\pm$ 10%. For capacity expansion, please refer to the accessory package attached for details.

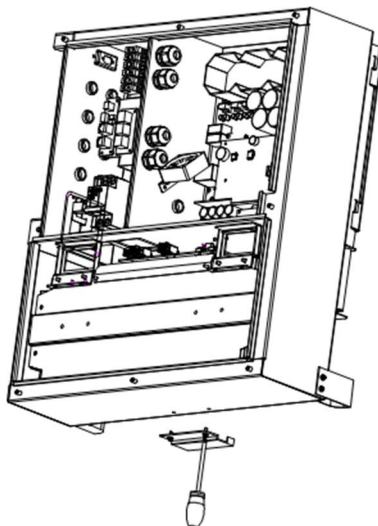
### 2.4.4 Battery Expansion

If you don't install external M4856-P battery for expansion, please ignore this section.



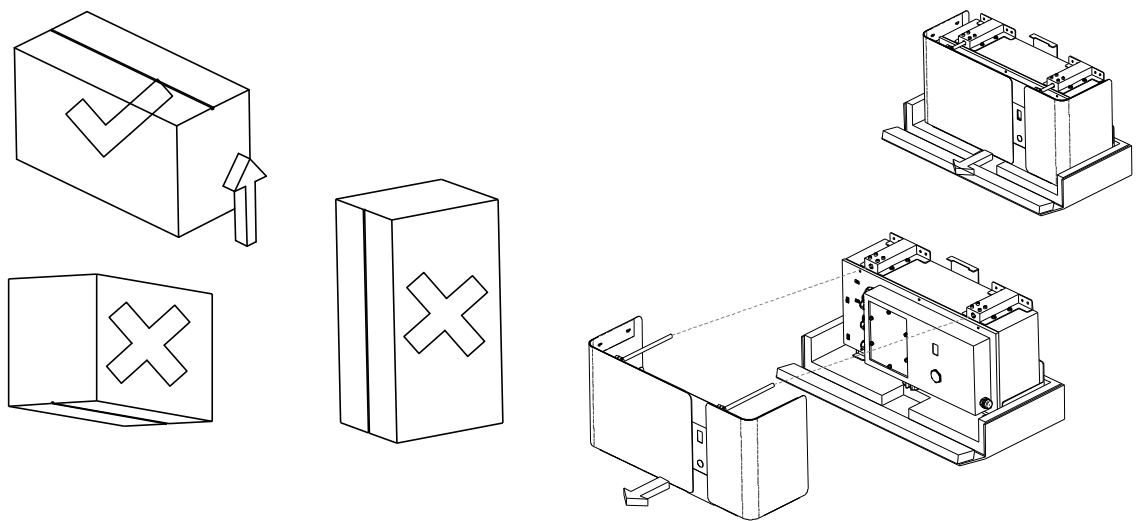
**Figure 2.16 Installing stand holders**

Step 1: Switch off the 63A DC breaker. Open the accessory package and install the two stand holders.



**Figure 2.17 Installing position limiter**

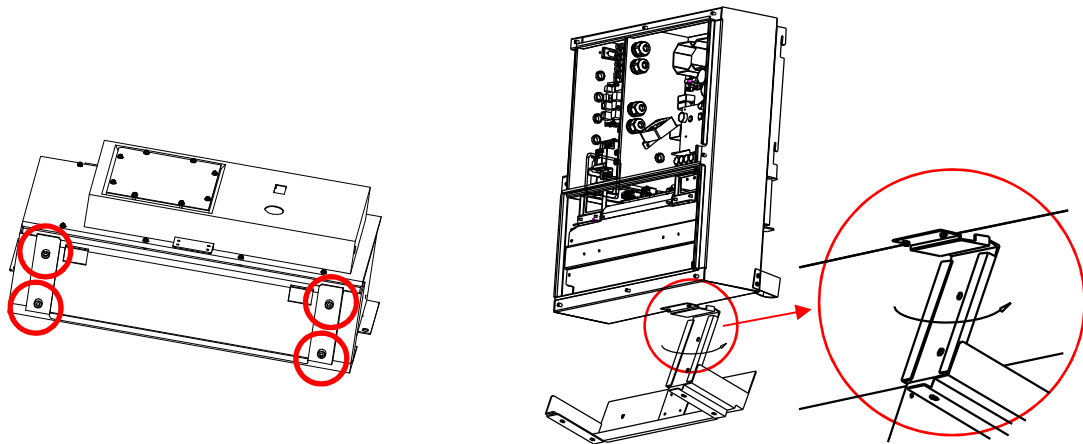
Step 2: Install the position limiter on the bottom as shown in Figure 2.17.



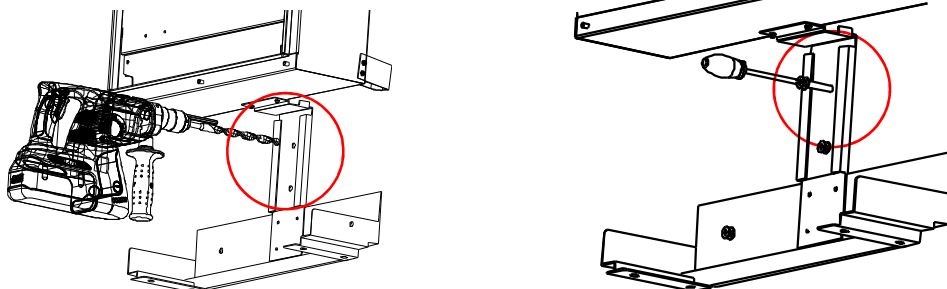
**Figure 2.18 Taking out the battery**

Step 3: Open the battery package. Pull off the buckle located in the middle of the bottom. Pull the top two guide rods to remove the front panel, as shown in Figure 2.18.

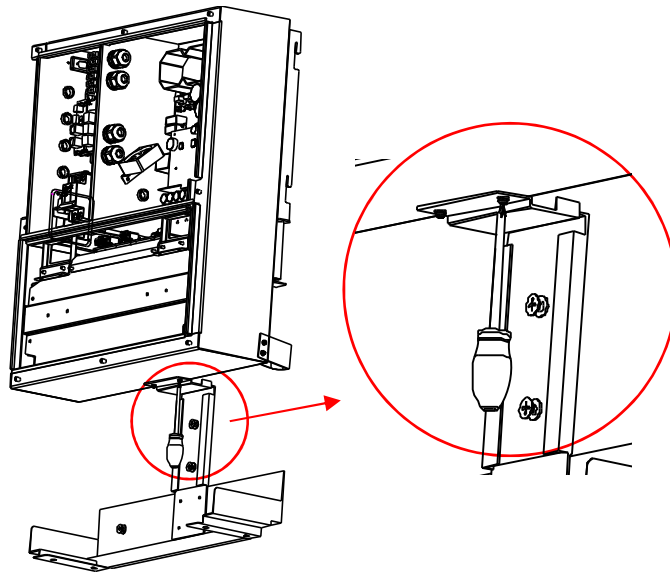
**NOTE:** The box must be placed in the direction of the label and only remove the packaging in upwards direction. Removing the packaging in other directions is wrong.



Step 4: Unscrew the four screws on the bottom of M4856-P. Place the battery holder near the position limiter.

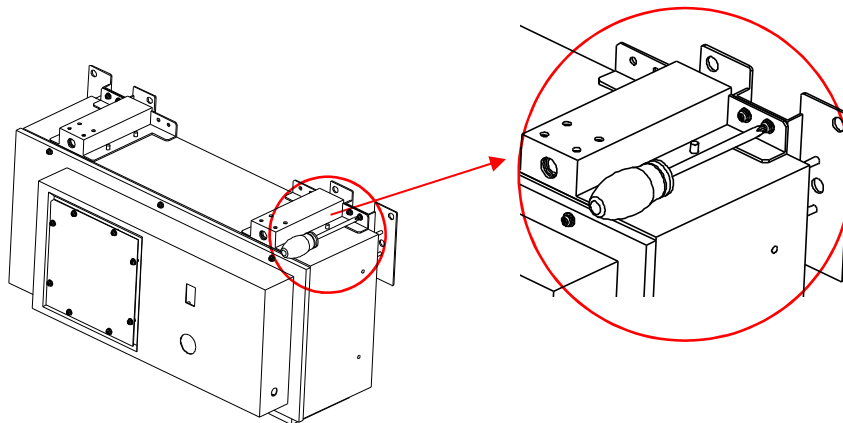


Step5: Drill in the holes of the battery holder. Insert the expansion pipe into the drilled hole. Then pass the tapping screw through the spacer and tighten it with the cross screwdriver

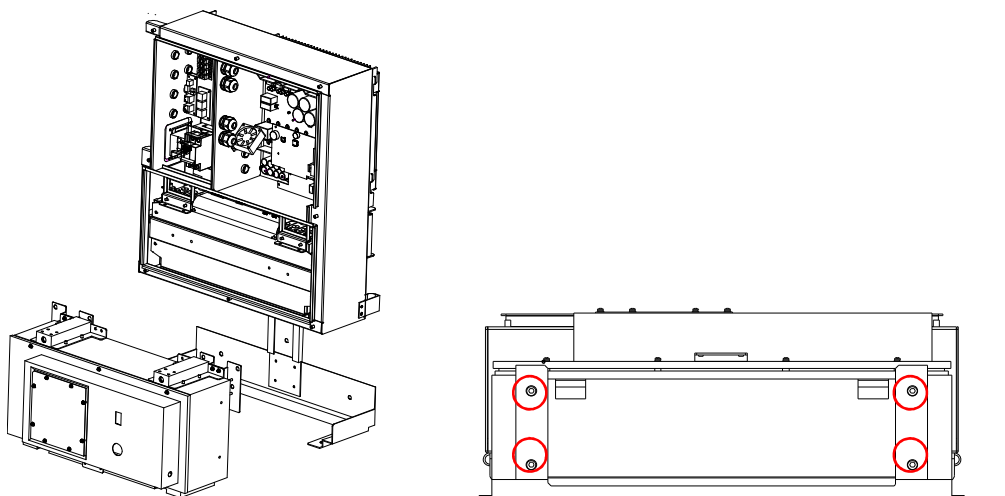


Step 6: Remove the position limiter

**NOTE: If the position limiter is not limited, SMILE-B3 can be not removed alone.**

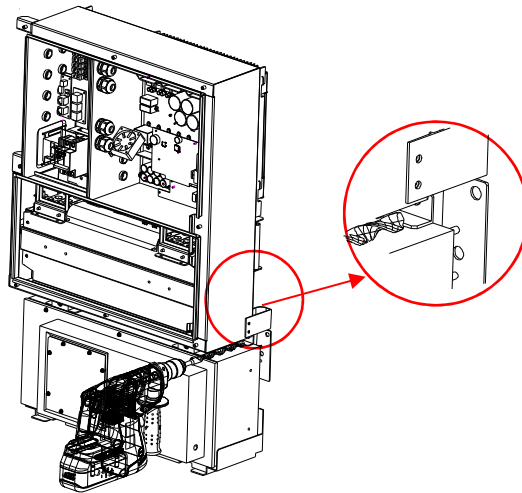


Step 7: Install the two battery brackets as the above directions.



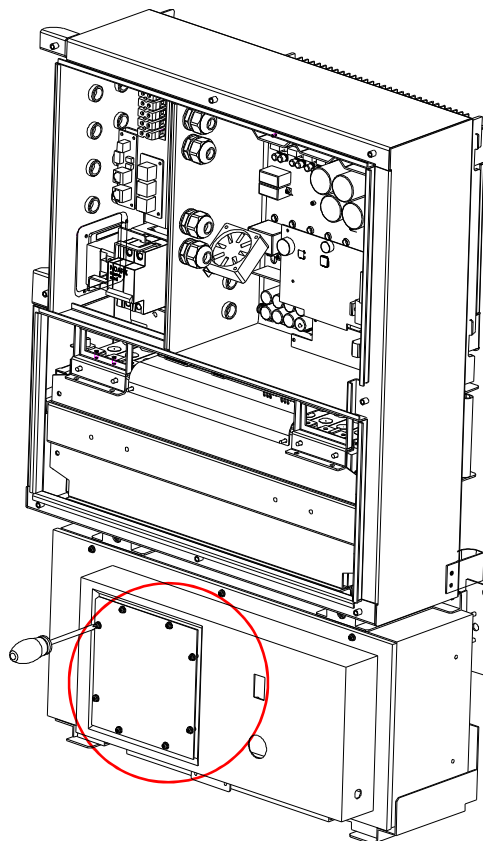
Step 8: Place the battery into the battery holder and fix it with four screws, which have been unscrewed in Step 4.



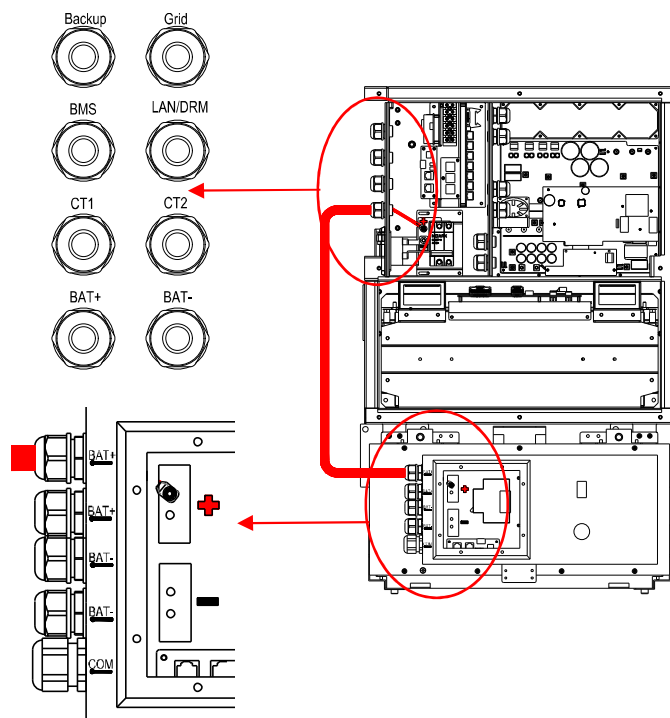


Step 9: Please drill holes directly on the wall at the marking positions of the brackets. Insert the expansion tube and pass the expansion screw through the gasket and lock with a screwdriver.

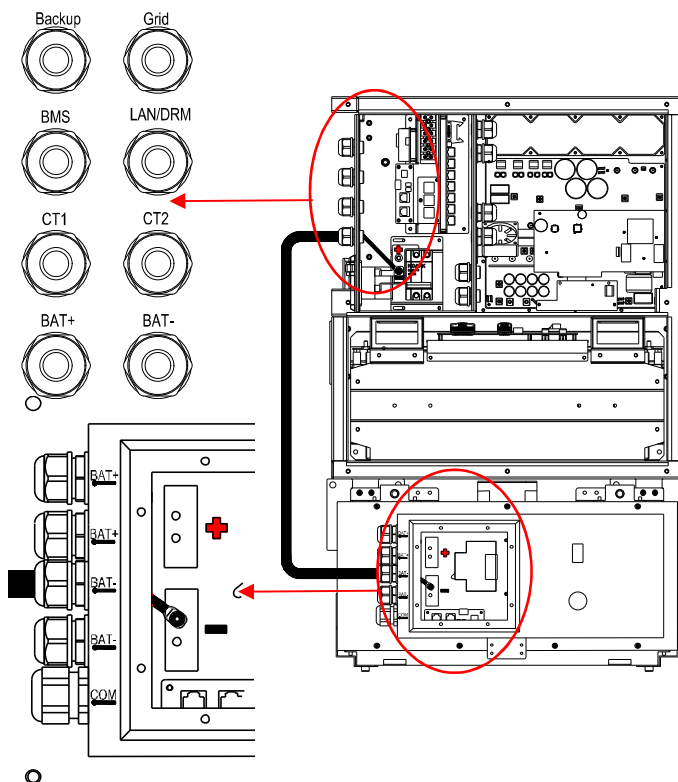
**NOTE: If the drill is not long enough, you can mark the hole positions before drilling.**



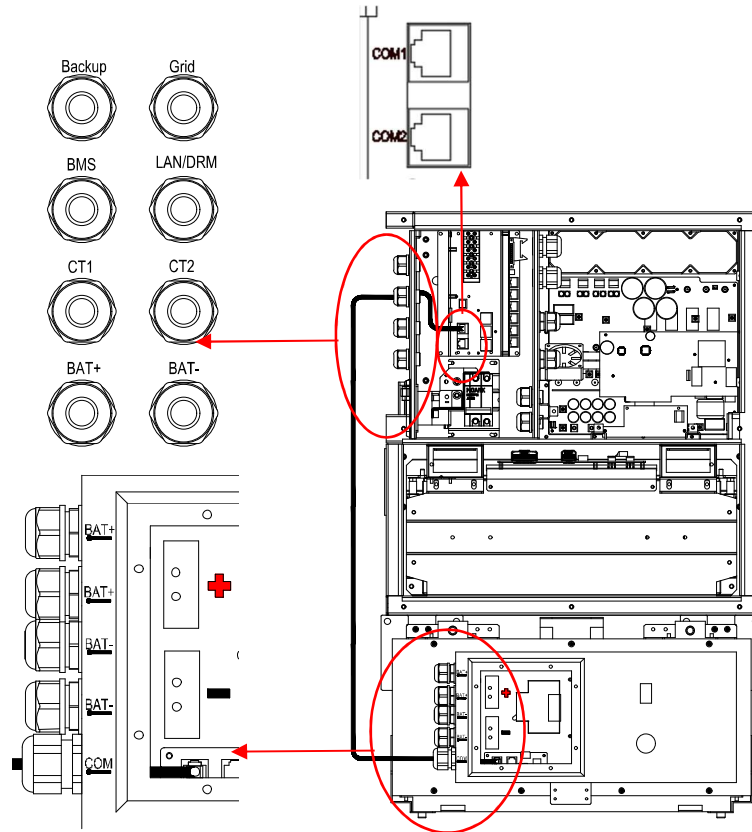
Step 10: Remove the maintenance cover before wiring.



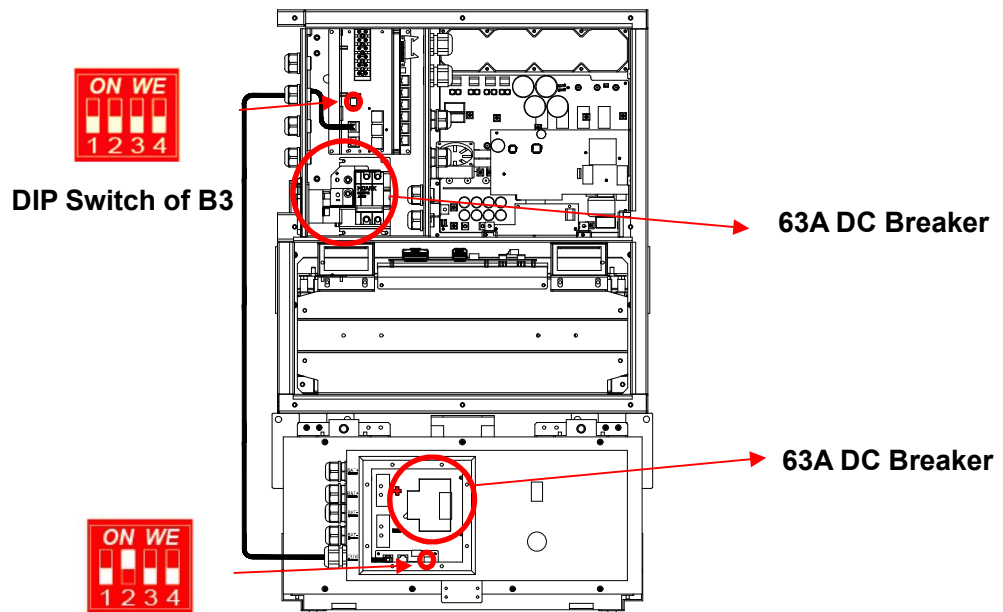
Step 11: Pass the red positive power cable through the two BAT+ waterproof rings. And fix it on the copper bars inside the battery and inverter.



Step 12: pass the black negative power cable through the two BAT+ waterproof rings. And fix it on the copper bars inside the battery and inverter.





Step 13: Pass the communication cable through the COM waterproof ring of BAT and BMS waterproof ring of INV. And insert it into the corresponding port (anyone of the two RJ45 port).



**DIP Switch of M4856-P**

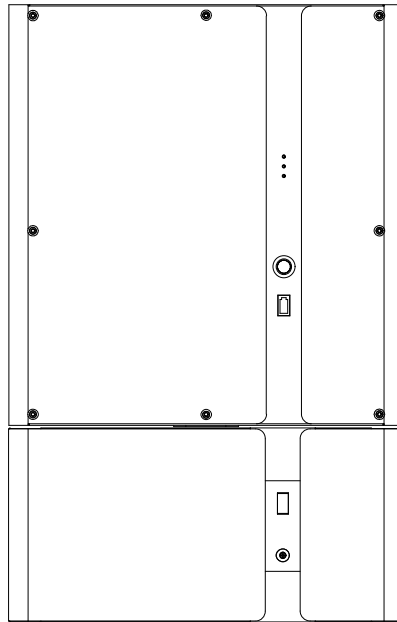
Step 14: If there is only one M4856-P to be connected, switch off the DIP2 in SMILE-B3 and switch on the DIP2 in M4856-P.

If there are more than two batteries to be connected, please refer to DIP switch configuration table as below:

Battery Position.	DIP 1	DIP 2	DIP 3	DIP 4	DIP Switch
<b>Non-bottom battery</b> (incl. B3-bat)	OFF	OFF	OFF	OFF	
<b>Bottom battery</b>	OFF	ON	OFF	OFF	

Bottom battery is the battery farthest from the inverter.

Step 15: Switch on the 63A DC breaker of SMILE-B3 and M4856-P, Fix the maintenance cover of the battery and recover the front panel.



Step 16: Please connect the wiring harness on the back of the upper cover plate of B3 and switch on the 80A DC breaker. Then re-cover the B3 upper cover plate, use the M5 internal hexagonal wrench to tightly lock the upper cover screw and insert the 8 white plugs.



**Note: the upper wiring harness from EMS shall be connected to the back upper part, the below wiring harness from BMS shall be connected to the back below part. Please pay attention to the positive and negative pole of the button switch wires.**

The suggested torque for B3 upper cover plate is 2.6 N.m±10%.

### 2.4.1 Electricity Meter Wiring

The power meter should be installed and connected in the distribution box. There are several types of power meters, available for CT, ADL-3000 or ACR10R.

**CT:** 100A, 1:3000

**ADL-3000:** Three-phase electricity meter (with or without CT)

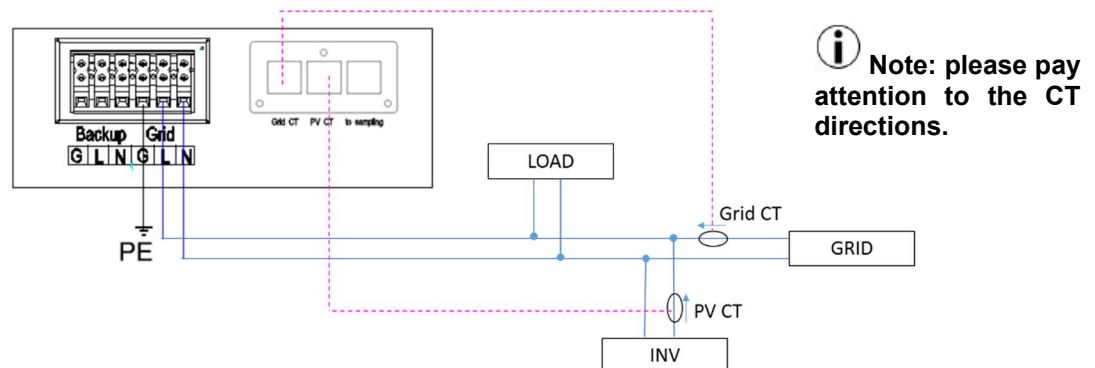
**ACR10R:** Three-phase CT electricity meter (with CT)

**Table 6 CT meter ratio and accuracy table**

Model	CT ratio	Accuracy
ADL3000-N/CT & 300A/5A CT	60	0.6 kWh
ADL3000-N/CT & 400A/5A CT	80	0.8 kWh
ADL3000-N/CT & 400A/1A CT	400	4.0 kWh
ACR10R-100A CT	100	1.0 kWh
ACR10R-120A CT	120	1.2 kWh

#### 2.4.5.1 CT

The CTs connection is as shown in Figure 2.19:



**Figure 2.19 CT Connection**

### 2.4.5.2 Electricity Meter ADL-3000 (if optional)

ADL-3000 connection (without CT, without Meterplug):

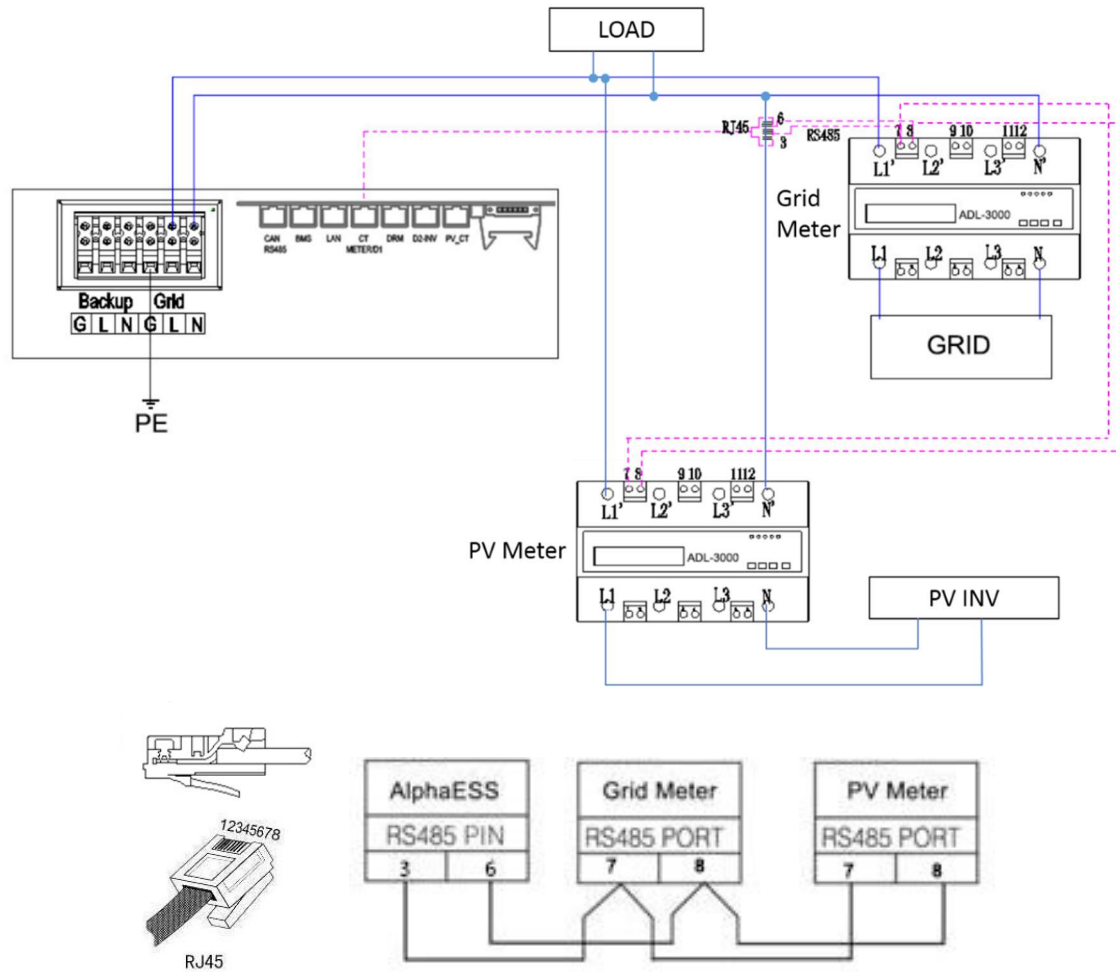


Figure 2.20 ADL-3000 connection (without CT, without meterplug)

**Note:** terminal 7, 8 connecting RJ-45 PIN 3, 6.

### ADL-3000 connection (without CT, with Meterplug)

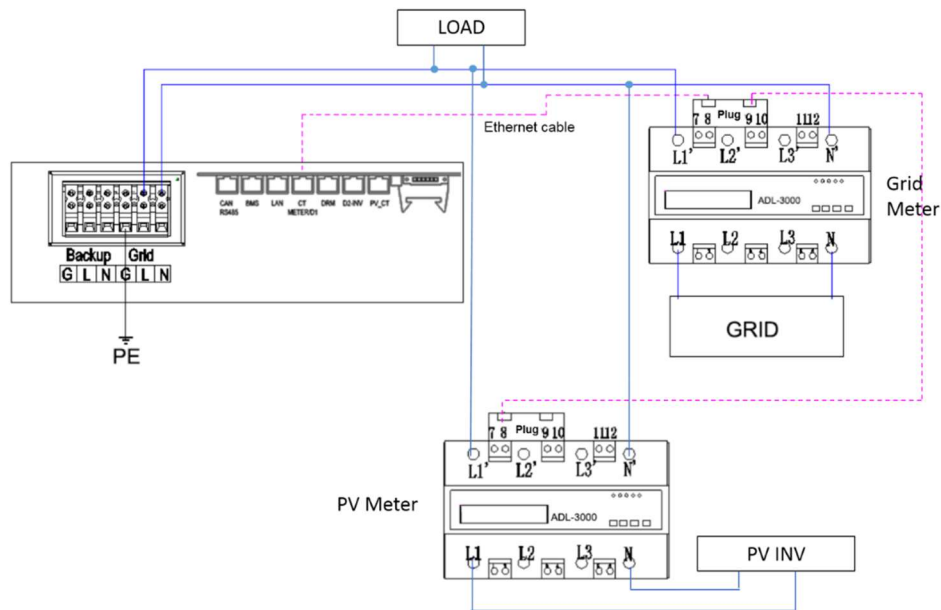


Figure 2.21 ADL-3000 connection (without CT, with meterplug)

### ADL-3000 connection (with CT, without Meterplug)

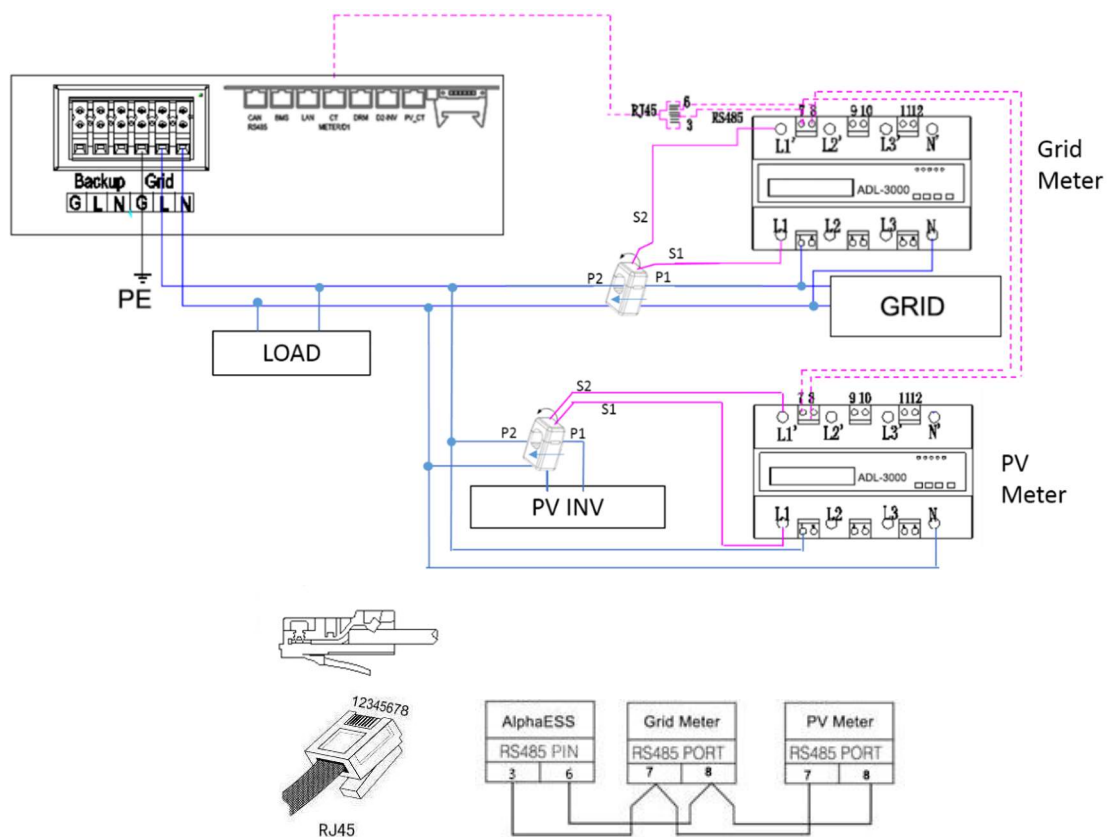


Figure 2.22 ADL-3000 Connection (with CT, without meterplug)

### ADL-3000 Connection (with CT and Meterplug):

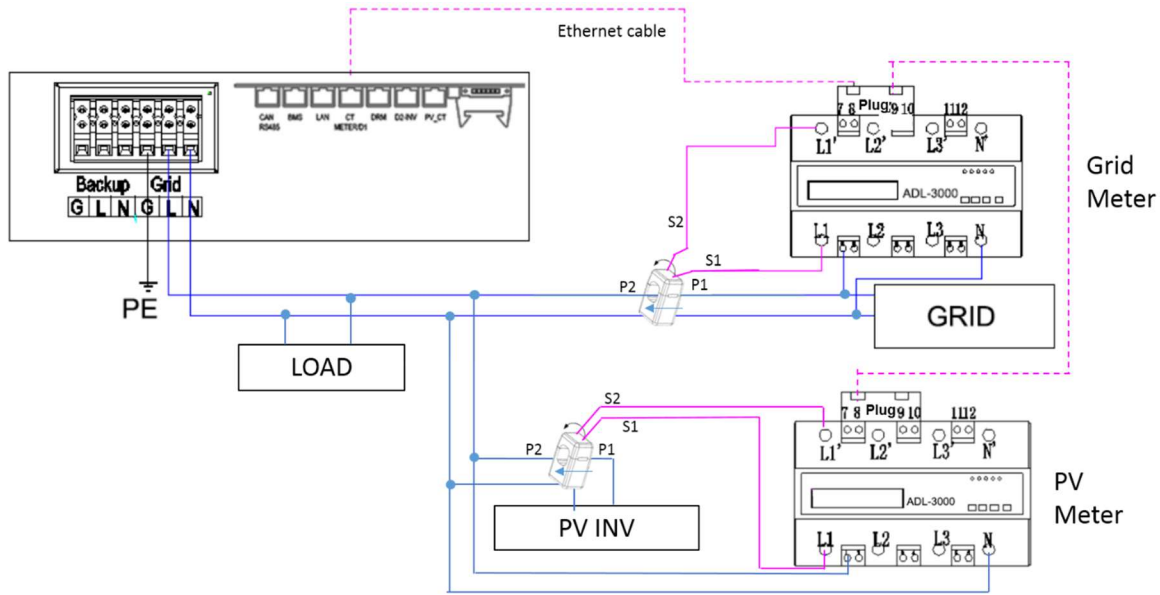


Figure 2.23 ADL-3000 Connection (with CT and meterplug)



Note: In AC system the both two meters' addresses should be set, please refer to 2.4.5.5.1.

### 2.4.5.3 Electricity meter ACR10R (if optional)

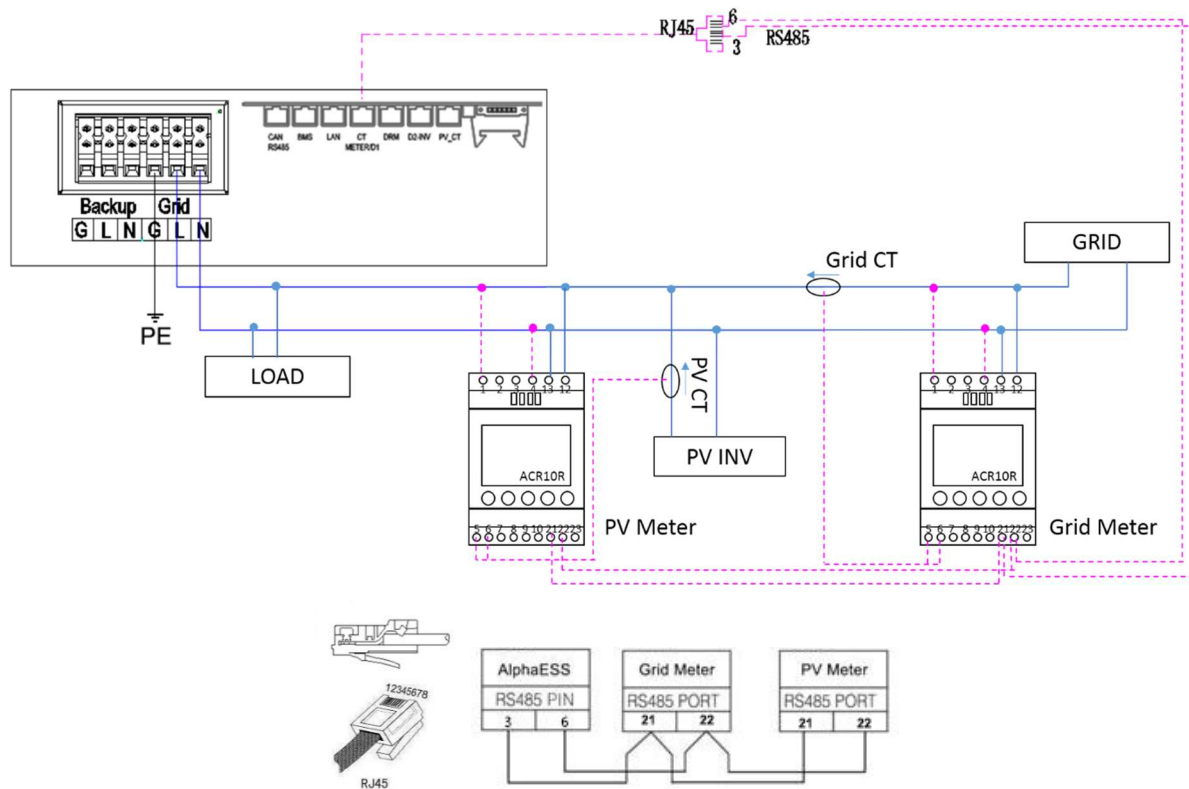


Figure 2.24 ACR10R Connection



**Note:** please pay attention to the CTs direction.

In AC system the both two meter addresses should be set, please refer to 2.4.5.5.2.

#### 2.4.5.4 Mixed Installtion of CT and Meter

A CT and a three-phase meter (ADL3000, ALD3000 with CT, ACR10R with CT) can be installed in the same system, the CT and the meter shall be installed according to the corresponding position, otherwise the system will run abnormally.

The initial setup is CT connection. If a meter is connected, after connecting, a relevant configuration work shall be carried out by **the installer** on AlphaCloud, please refer to 5.1.2.

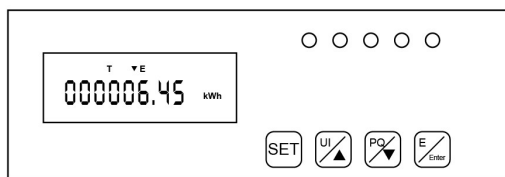
**NOTE:** This function is released in SMILE-B3 EMS firmware version V1.00.33 or above.

In AC system and the mixed installation of CT and meter situation, the meter address should be also set in the meter, please refer to 2.4.5.5.1 (ADL3000) and 2.4.5.5.2 (ACR10R).

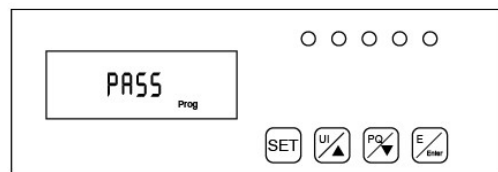
#### 2.4.5.5 Meter setting

##### 2.4.5.5.1 ADL3000

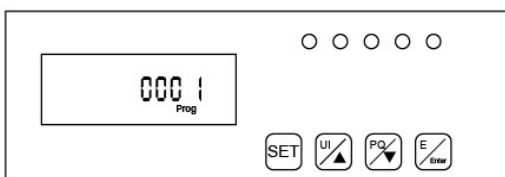
Step 1: The initial interface of the meter (normal working interface) is as shown below:



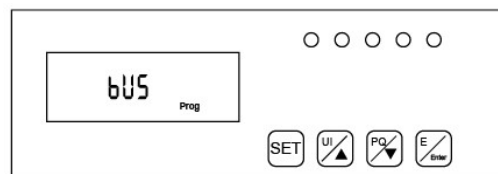
Step 2: Click the "SET" button to enter the password interface:



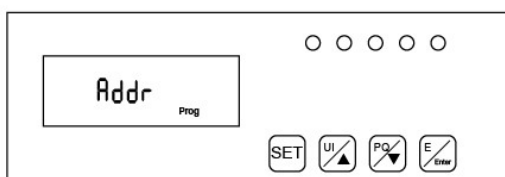
Step 3: Click the "Enter" button to enter the following interface, and press the up and down arrow keys to enter the password 0001;



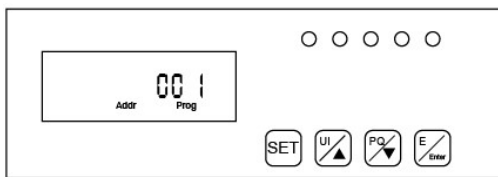
Step 4: Click the "Enter" button and the password input is completed.



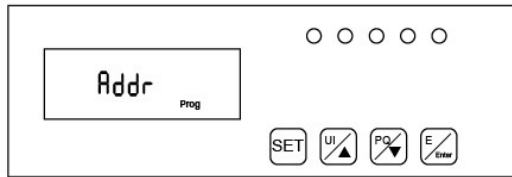
Step 5: Click the "Enter" button again to enter the address interface:



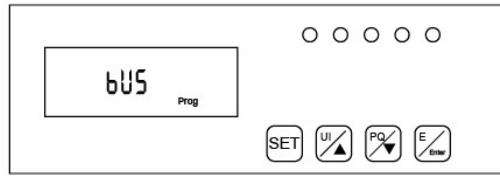
Step 6: Click the "Enter" button to enter the following interface, press the up and down arrow keys to set the meter address, the Grid meter (DC, AC and Hybrid system) address is set to 001, and the PV meter (AC and Hybrid system) address is set to 002.



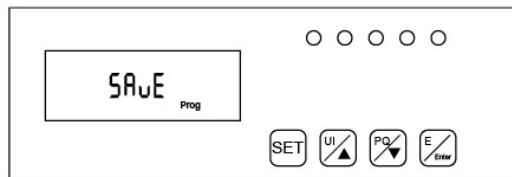
Step 7: Click the "Enter" button and the address setting is completed.



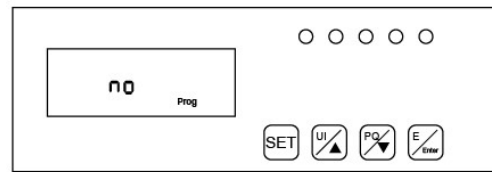
Step 8: Click the "SET" button to enter the following interface:



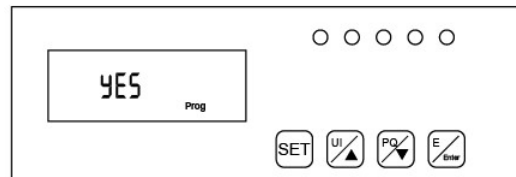
Step 9: Click the "SET" button again to enter the save interface:



Step 10: Click the "Enter" button to enter the following interface, press the up and down arrow keys, and set "no" to "YES" to save the configuration.

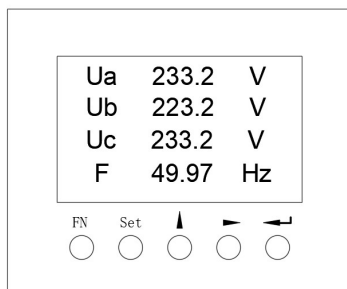


Step 11: Click the "Enter" button and the setting ends.

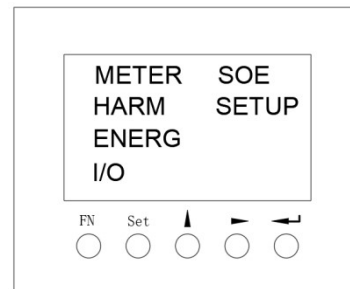


#### 2.4.5.5.2 ACR10R

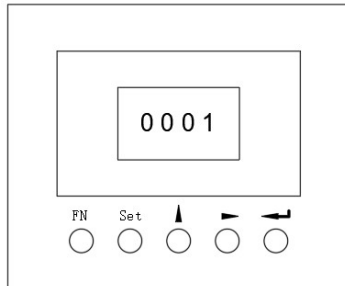
Step 1: This is the initial interface of the meter, click the "Set" button;



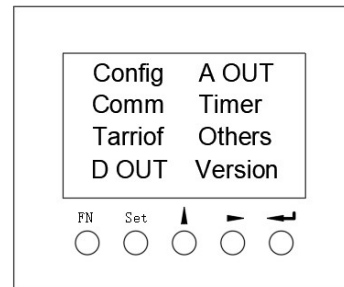
Step 2: Click the "SETUP" button;



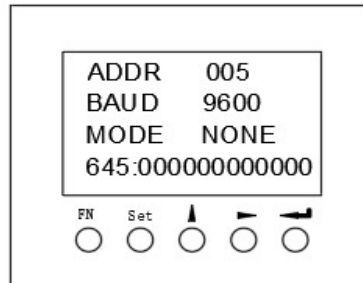
Step 3: On the password input interface, the code is "0001", confirm entering the setting interface;



Step 4: In the setting interface, select "Comm" option, enter the communication setting interface;



Step 5: Set the communication address and communication baud rate in the communication setting interface. When the meter is used as the Grid meter (DC, AC/Hybrid system), the address is set to "005". When it is used as the PV meter (AC/Hybrid system), the address is set to "006". The baud rate is set to 9600;



### 3. Operation

Please double check the following before operation.

1. SMILE-B3 is firmly fastened to the mounting bracket on the wall;
2. The polarity of battery wires is correct, battery wires are firmly connected;
3. 80A battery switch: OFF;
4. If PV is applied, the PV-INV switch: OFF
5. GRID / LOAD cables are firmly / correctly connected;
6. External grid AC switch is correctly connected between SMILE-B3 GRID port & GRID, AC circuit breaker: OFF;
7. If backup load is applied, external backup AC switch is correctly connected to SMILE-B3 Load port, AC circuit breaker: OFF;
8. AC contactor is correctly connected;
9. Please ensure that the communication cable has been correctly connected;

#### 3.1 Switch on

System shall be turned on in the correct sequence to avoid any damage.

Step 1: Turn on the external grid AC breaker;

Step 2: If PV is applied, turn on the PV-INV switch;

Step 3: Press the button on the battery until the battery LED lights;

Step 4: Turn on the 80A battery switch of B3 system;

Step 5: If backup load is applied, turn on the external backup AC breaker; if not, then keep it off.

#### 3.2 Switch off

Step 1: If backup load is applied, turn off the external backup AC breaker;

Step 2: Turn off the 80A battery switch of B3 system;

Step 3: Press the button on the battery until the battery LED off;

Step 4: Turn off the external grid AC breaker.

#### 3.3 Emergency Procedure

When the SMILE-B3 Battery energy storage system appears to be running abnormally you can turn off the grid connected main switch directly feeding the BESS and turn off all load switches within the BESS, turn off the battery switch at the same time. To prevent a potentially fatal personal injury, if you want to repair or open the machine after the power is switched off please measure the voltage at the input terminals with a suitably calibrated voltage tester.

Before working on this equipment, please confirm that there is no grid electric supply to the BESS!

The upper cover plate cannot be opened until the DC-link capacitance inside the battery modules discharges completely about 15 minutes later.

##### 3.3.1 Emergency Handling Plan

1. Disconnect the AC breaker.

2. Check the control power supply. If it is OK, return the power supply to find out the reason.
3. Please record every detail related to the fault, so AlphaESS can analyse and solve the fault. Any operation of equipment during a fault is strictly forbidden, please contact Alpha as soon as possible.
4. As battery cell contains little Oxygen inside and all cells have got explosion-proof valve, explosion hardly happens.
5. When the indicator light on the battery shows a red fault, check the fault type through the communication protocol, and contact our after-sales service personnel for advice.

### 3.3.2 Hazards

If the battery pack leaks electrolyte, avoid contact with the leaking liquid or gas. If one is exposed to the leaked substance, immediately perform the actions described below:

Inhalation: Evacuate the contaminated area, and seek medical attention.

Eye contact: Rinse eyes with running water for 5 minutes, and seek medical attention.

Contact with skin: Wash the affected area thoroughly with soap and water, and seek medical attention.

Ingestion: Induce vomiting, and seek medical attention.

### 3.3.3 Fire

If a fire breaks out in the place where the battery pack is installed, perform the following countermeasures:

#### Fire extinguishing media


Respirator is not required during normal operations.

Use Novel 1230, FM-200 or dioxide extinguisher for battery fire.

Use an ABC fire extinguisher, if the fire is not from battery and not spread to it yet.

#### Fire -fighting instructions

1. If fire occurs when charging batteries, if it is safe to do so, disconnect the battery pack circuit breaker to shut off the power to charge.
2. If the battery pack is not on fire yet, extinguish the fire before the battery pack catches fire.
3. If the battery pack is on fire, do not try to extinguish but evacuate people immediately.

 **There may be a possible explosion when batteries are heated above 150° C. When the battery pack is burning, it leaks poisonous gases. Do not approach.**

#### Effective ways to deal with accidents

On land: Place damaged battery into a segregated place and call local fire department or service engineer.

In water: Stay out of the water and don't touch anything if any part of the battery, inverter, or wiring is submerged.

Do not use submerged battery again and contact the service engineer

## 4. WiFi Module Configuration

Please install the WiFi module. Download and install the APP by scanning the QR code (Figure 4.1), and directly connect to Storion-SMILE-B3 by WiFi module.



Figure 4.1 AlphaESS-APP

Step 1: Open Alpha ESS APP, click the “Wi-Fi configuration” button and enter the WiFi configuration interface as shown in Figure 4.2.

Step 2: After that please check whether your mobile phone has connected to the system hotspot, as shown in Figure 4.3.

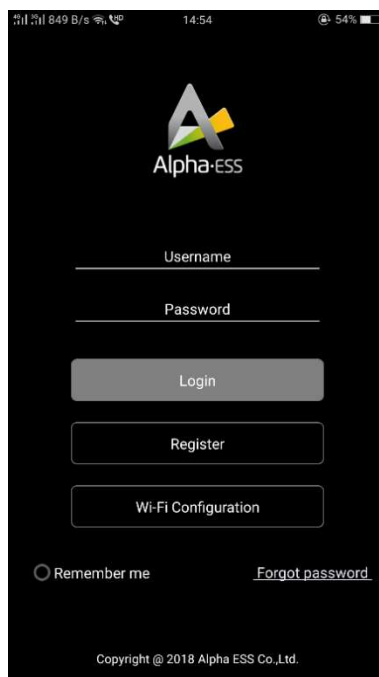


Figure 4.2 Network Setting

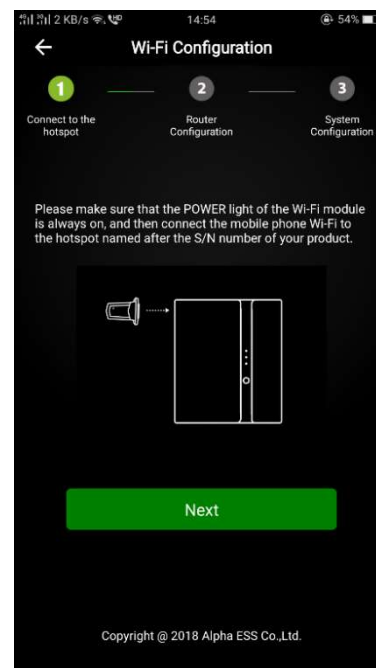
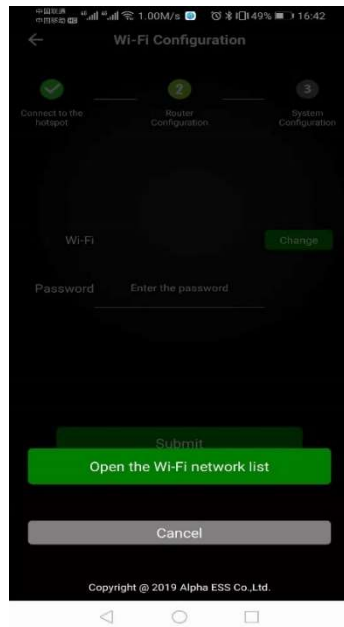
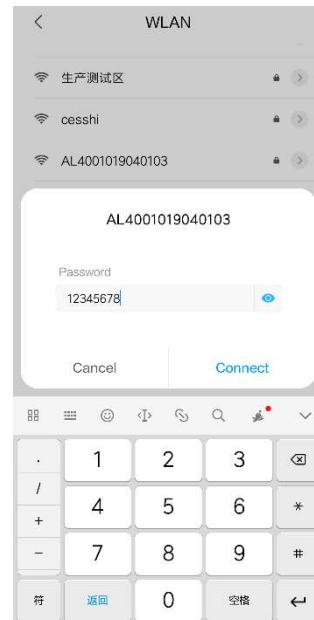


Figure 4.3 Hardware Connection

Step 3: if your mobile phone hasn't connected to the system hotspot, please open the Wi-Fi network list. Please find the hotspot named after the product SN in WLAN list and connect to it. If the Wi-Fi module is Yilian as shown in Figure 4.7, please enter the password **12345678**, otherwise please connect directly. After successful setting, please go back to APP and click "Next"



**Figure 4.4 Open WiFi network list**



**Figure 4.5 WLAN Password**



**Figure 4.6 ZLG WiFi module**



**Figure 4.7 Yilian WiFi module**

Step 4: enter the WiFi account and password and then save it, the configuration is successful, click "next", as shown in Figure 4.8 and Figure 4.9.

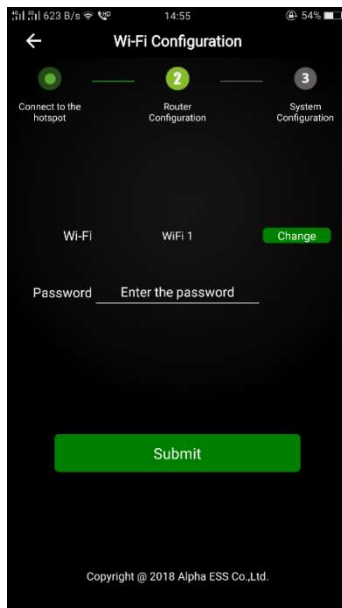


Figure 4.8 WiFi Setting

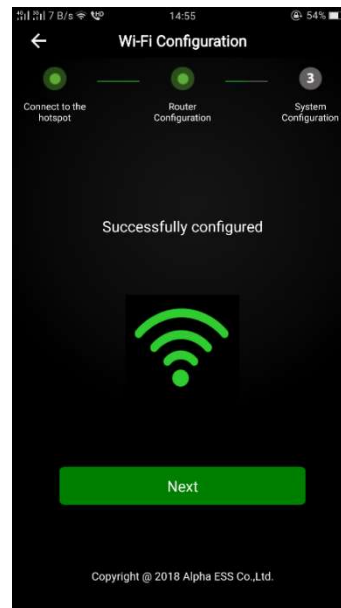


Figure 4.9 Configuration Success

Step 5: set the basic parameters, and you can see the details of equipment, click "submit" button, as shown in Figure 4.10 and Figure 4.11.

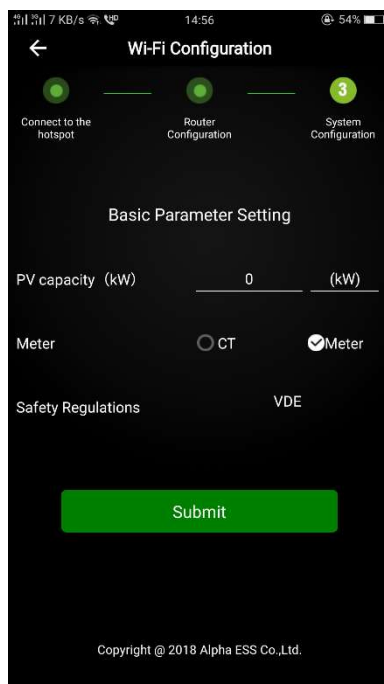


Figure 4.10 Basic Parameter Setting

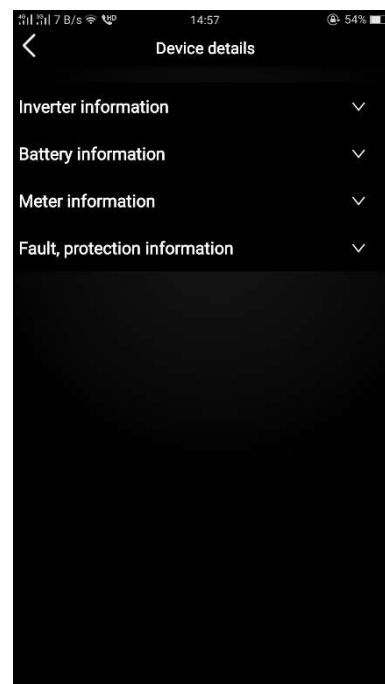


Figure 4.11 Equipment Details

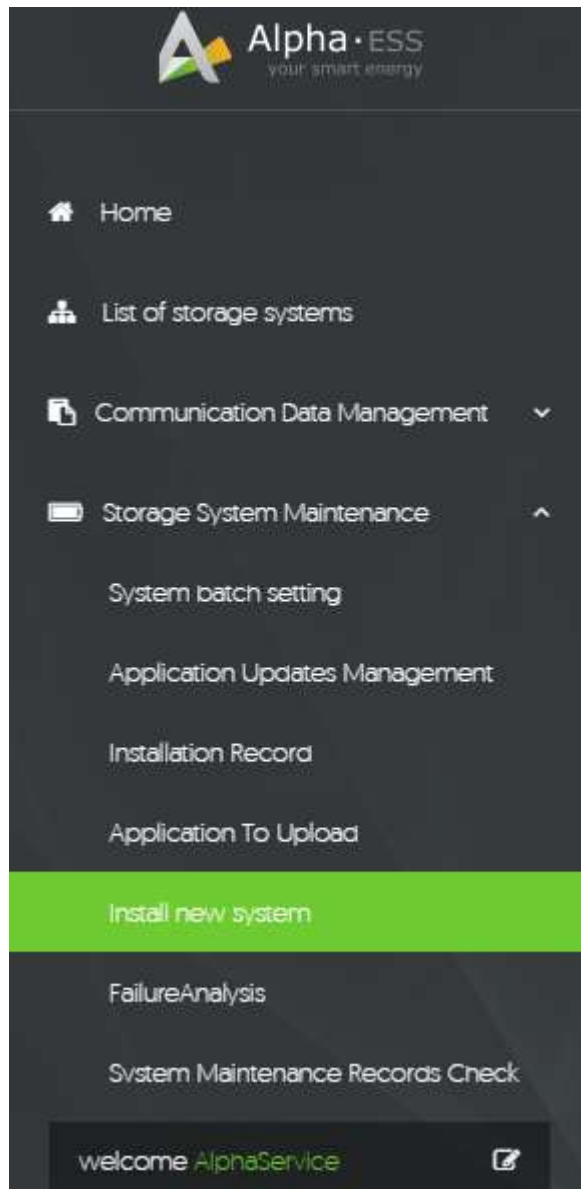


**Note:** If without registration, please register account according to the hint after downloading and installing App.



## 5. System Registration

Installers who haven't yet registered need to click "Register" to visit the registration page. Please refer to "AlphaCloud Online Monitoring Webserver Installers User Manual", which you can get from AlphaESS sales and get license number from relevant sales from Alpha ESS



Log in to your installer account and choose Storage System Maintenance> "Install new system" to register new system at Alpha ESS.

Storage System Maintenance English Logout

Install new system

* S/N	* Check Code	* License No.
<input type="text"/>	<input type="text"/>	<input type="text"/>
* Installation Date	* Client Full Name	* Contact Number
<input type="text"/>	<input type="text"/>	<input type="text"/>
* Contact address		
<input type="text"/>		
Remark		
<input type="text"/>		
Attachment		
<input type="button" value="选择文件"/> 未选择任何文件		

Enter the system S/N, check code, license, installation date, client name, contact number, contact address, and click the save button. The red \* in front of it is required. Click the Browse button to select the attachment you want to add.

## 5.1 System Setup in Monitoring

The system settings of the Storion-SMILE-B3 must be carried in the installer monitoring. To do this, follow the steps below:

Step 1: Please login in the installer account, click the list of storage systems and enter the SN.

### 5.1.1 Basic Information

Step 2: After selecting the correct system, enter System Setup interface. Enter in the "Basic Information" and input below information:

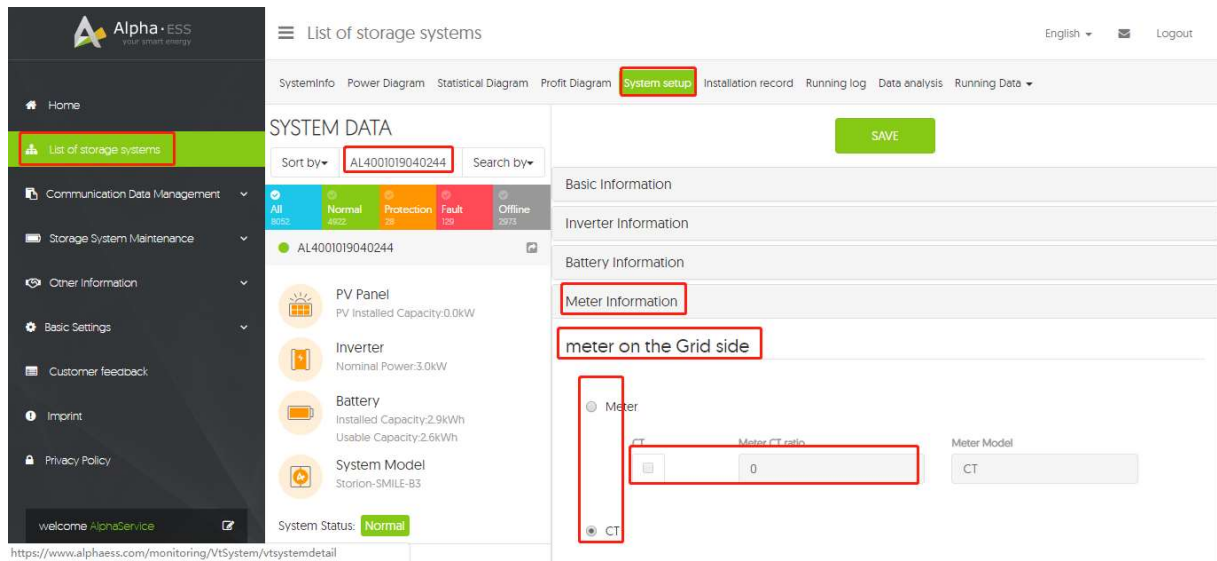
- Address,
- Zip code,
- Contact name,
- E-Mail address,
- Currencies and
- Telephone number.



**Note: Do not forget to click "Save" button!**

### 5.1.2 Meter Information

The initial setup is CT connection. If you use CTs, please ignore this section. Otherwise please find the "Meter Information" interface in the "System setup" menu.



**Figure 5.1 Interface of Meter Information on Server**

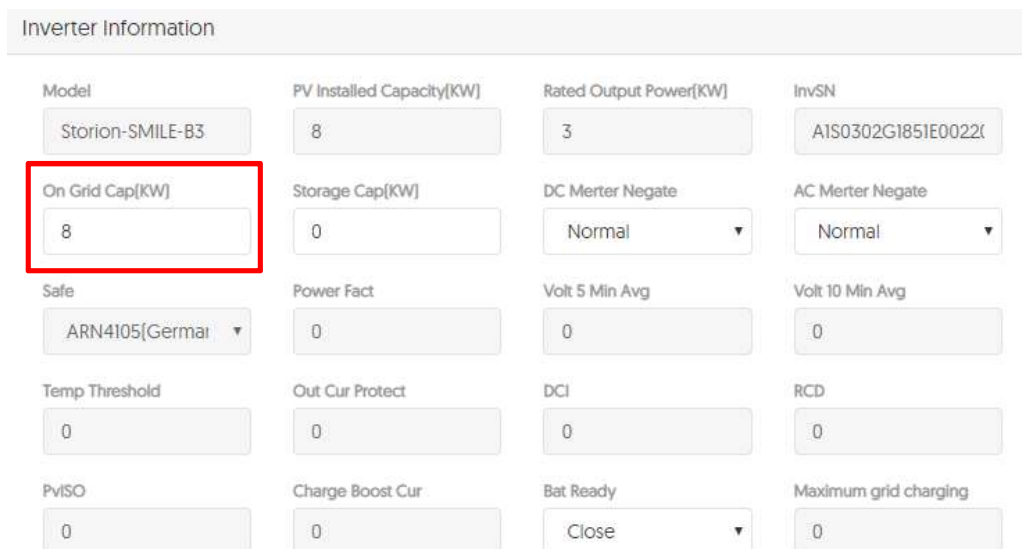
Step 3: Please select the meter information sub-menu and set the meter configuration. Choose the meter type used and, if necessary, the CT ratio for the grid meter and PV meter individually.

After that you must specify whether you have installed a CT or an electricity meter (ADL3000 or ACR10R) and in the case of electricity meters, please further select with or without CT were connected.

1. If a CT is installed, select directly the point "CT"
2. If a meter is installed, select the item "meter"
  - a) If a CT meter is installed, select in addition to the second point "CT" and set the CT ratio.

### 5.1.3 Inverter Information

Step 4: If PV modules are installed, please set the installed PV power, such as 8 kWp in “On Grid Cap (kW)” of “Inverter Information” interface



### 5.1.4 Other Information

Step 5: Finally, select the "Other Information" submenu and set the following parameter:

- ACDC mode: it should be AC mode
- Time zone
- Data upload frequency: SMILE-B3 has second level data, you can choose it as 10s data if you wish.

Other Information			
System Mode Normal ▼	Allow automatic updates Yes ▼	Update Config Time <input type="text"/>	ACDC AC ▼
Max. Feed in Rate 100	Meter Phase 0	EMS Set Function Mode ▼	BackupBox SN 0
SuperCableBox SN <input type="text"/>		Power source <input type="text"/>	Ems language English ▼
Time zone [UTC+01:00] Amsterdam, Berlin, Bern, Rome, St ▼		Firmware version number V1.02	Allow Sync Time Yes ▼
Data upload frequency 300[s] ▼			

## 6. On-line Monitoring

### 6.1 Account Registration

You can create a new account on our webserver for the normal monitoring. In addition, a part of our warranty is based on this connection to our webserver.

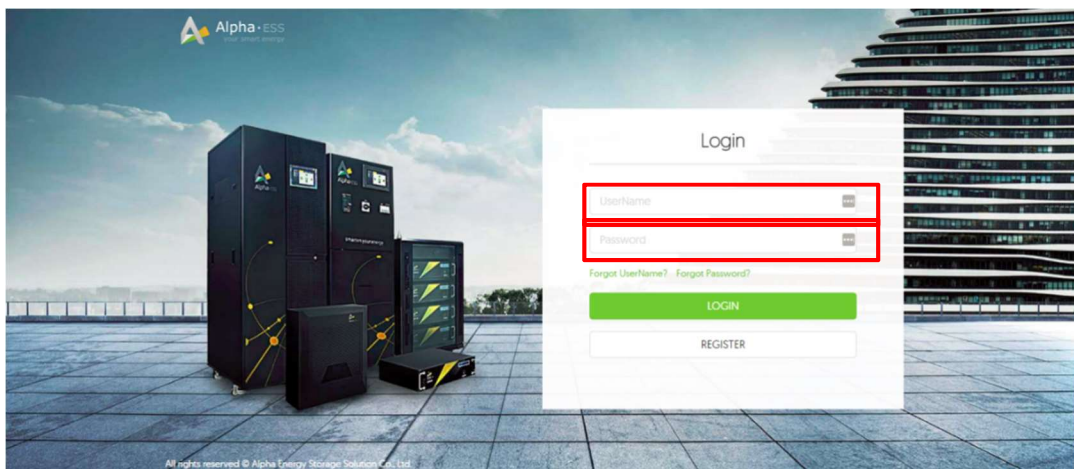
The data produced prior to registration can be synchronized to the webserver.

Please use the following steps:

Step 1: Open the portal: [www.alphaess.com](http://www.alphaess.com).

Step 2: Please fill in “Username”, “Password” and click “Login” if you have already registered.

If not, please register by filling in the following web form.



**Figure 6.1 Monitoring Login Interface**

Register

User Type  
End user

\* S/N

\* Username

\* Password \* Confirm Password

\* Country Province/State City

Address \* Zip Code

\* Language \* Contacts \* Contact Number  
English

\* E-mail

Time zone  
(UTC-12:00) International Date Line West

☒ Communicability upgrade?

☐ Read and accept <<Terms and Conditions>>

In this form, all fields with a red star are compulsory, and you can select the finally users or installation procedures.

**\*Serial number:** EMS serial number (please see the nameplate of the inverter)

**\*Username:** 5-15 letters / numbers



**Note:** User name cannot be changed anymore after creation.

**\*Password:** 5-15 letters / numbers / characters

More detailed information is available in the online monitoring Web server User manual, which can be downloaded from AlphaESS homepage.

**Figure 6.2 Account Registration Interface**