ME-GSE-BMS15K 15kW BMS Control Module

ME-GSE-B5K 5kW Battery Unit

Quick Guide

File Version: 1.0

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xenterra

Update history

The form below contains the information of every update. The latest version contains all the updates of all former versions.

V1.0 (2024-08-19)

Initial release

Contents

Notice

- The information in this document is subject to change without notice. Every effort has been made in the preparation of this document to ensure accuracy of the contents, but all statements, information, and recommendations in this document do not constitute a warranty of any kind, express or implied.
- Before installing the device, please reads this guide carefully to get product information and safety precautions.
- Only qualified and trained electrical technicians are allowed to perform operations. Operators must wear personal protective equipment.
- Equipment damage caused by failure to follow the documentation is not covered by the equipment warranty.
- The cable colors shown in the electrical connection diagrams provided in this guide are for reference only. Select cables in accordance with local cable specifications (green-and-yellow cables are only used for protective earthing).

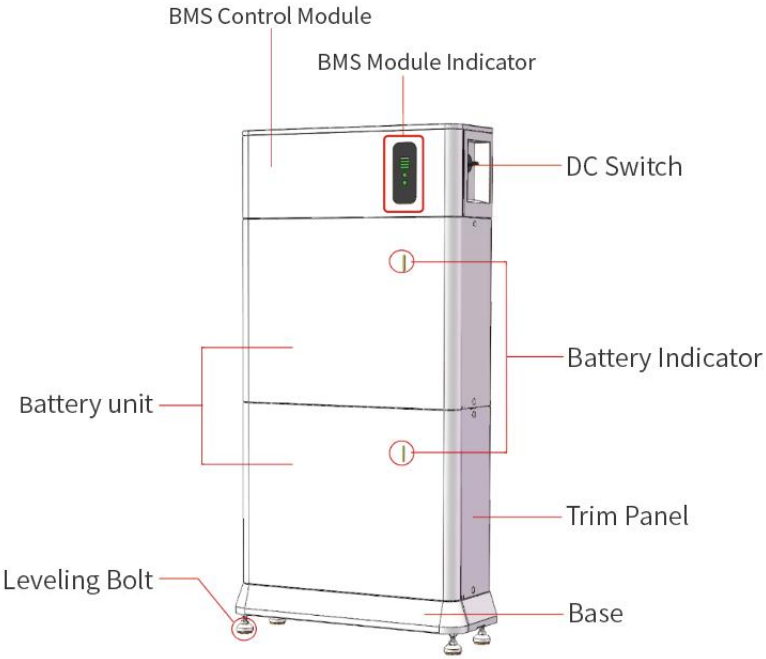
1. Product Introduction

ME-GSE-BMS15K BMS Control Module and ME-GSE-B5K Battery Unit are suitable for household family rooftop grid-tied or off-grid systems, which can be used as backup power for storing and releasing electricity according to the user's scenario demand.

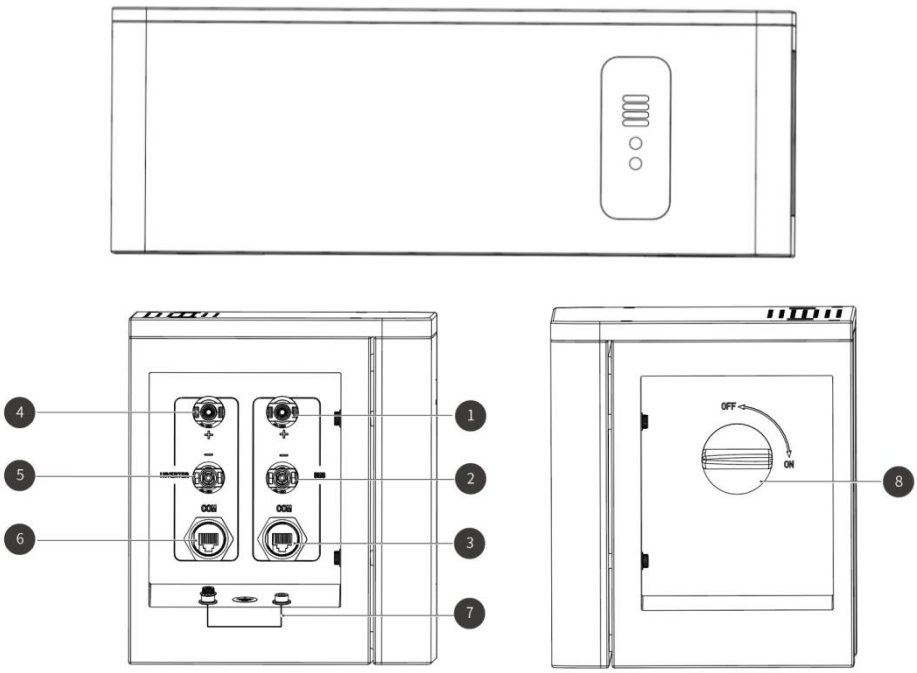
2. Component Description

2.1 Product appearance

Product appearance of BMS ME-GSE-BMS15K BMS Control Module and ME-GSE-B5K Battery Unit are as follows:



2.2 BMS Control Module



Component name			
1	DC input terminal (BAT-)	2	DC input terminal (BAT+)
3	BMS parallel communication terminal	4	DC output terminal (BAT-)
5	DC output terminal (BAT+)	6	BMS control communication terminal
7	Ground point	8	BAT DC SWITCH

3. Technical Parameters

ME-GSE-BMS15K 15kW BMS Control Module Technical Parameters		
Charge Mode	Discharge Mode	Other Parameters

Input Voltage Range	450~1100V d.c.	**Input Voltage Range**	230~876V d.c.	**Protection Degree**	IP65
Max. Input Current	20A	**Max. Input Current**	10A	**Operating Temperature Range**	-20°C~+60°C
Output Voltage Range	230~876V d.c.	**Output Voltage Range**	450~900V d.c.	**Protection Class**	I
Max. Output Current	10A	**Max. Output Current**	20A	**Weight**	14 kg

ME-GSE-B5K 5kW Battery Unit Technical Parameters			
Nominal Voltage	256V	**Maximum discharge current**	20A
Rated Energy	5.12kWh	**Maximum charge current**	10A
Rated capacity	20Ah	**Maximum discharge power**	5.12kW
Operation voltage range	224~280V	**Maximum charge power**	2.5kW
Battery type	LiFePO4	**Temperature**	-10°C~+50°C（Discharging）
Protection degree	IP65/IP66	**Protection Class**	I
Weight	49~50kg	**Storage Humidity**	≤70% RH
Operating Ambient Temperature		0°C~+50°C（Charging）/-10°C~+50°C（Discharging）	

4. Installation

4.1 Installation site and environment

The devices are an outdoor version and can be installed outdoors or indoors. When they are installed indoors, they must not be obstructed by the structure of the building, the furnishings or equipment of the room. The devices are naturally ventilated. Therefore, the installation location should be clean, dry and adequately ventilated. The installation location must allow free access for installation and maintenance and the front cover must not be obstructed.

Prohibited Installation Locations:

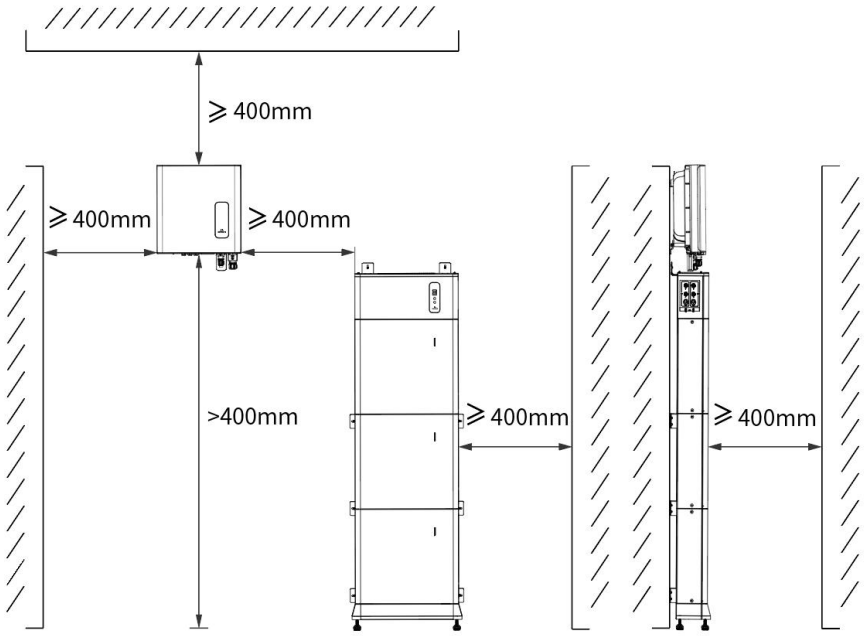
- Ceiling holes or wall holes;
- On roofs that are not particularly suitable;
- Under the exit/entrance area or stairs/passages;

- Locations where freezing temperatures can be reached, such as garages, carports or damp rooms and other locations.
- Locations where humidity and condensation rates exceed 90%.
- Locations where salt-rich and humid air can penetrate.
- Earthquake zones - additional safety measures are required.
- Sites above 4,000 meters above sea level.
- Locations with explosive atmospheres.
- Sites in direct sunlight or with extreme temperature fluctuations.
- Sites with flammable materials, gases, or explosive environments.
- Places where the load-bearing capacity of the equipment cannot be reached.

Limited Distance of Installation to Neighboring Objects:

To ensure proper heat dissipation and facilitate safe and easy maintenance, installation should maintain the following minimum clearance distances around the energy storage system:

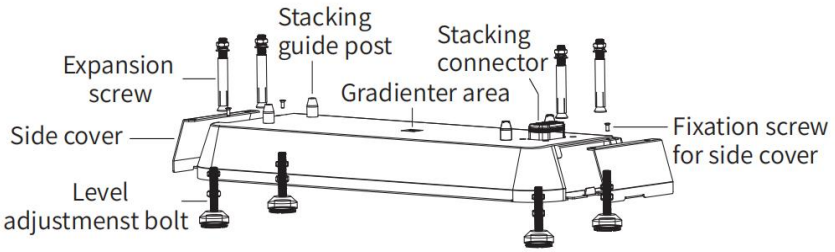
- Top: 400mm
- Front: 400mm
- Laterals: 400mm
- Mounting height of the inverter: ⩾400mm



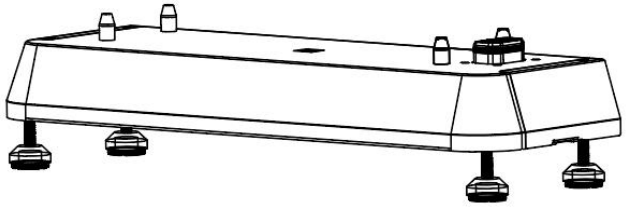
4.2 Installation of Base

Note: A BMS control module can be used with a maximum of 3 battery units and a minimum of 1 battery unit.

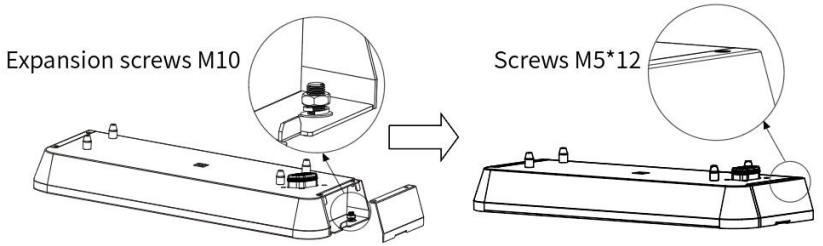
Step 1. Select the installation location and place the base in the installation area; install the device with level adjustment bolts or expansion screws;



Method ①:With the aid of a gradienter, install and adjust the level adjustment bolts;



Method ②:Secure the base with expansion screws and install side covers.



Step 2. Paste the positioning cardboard and drill holes

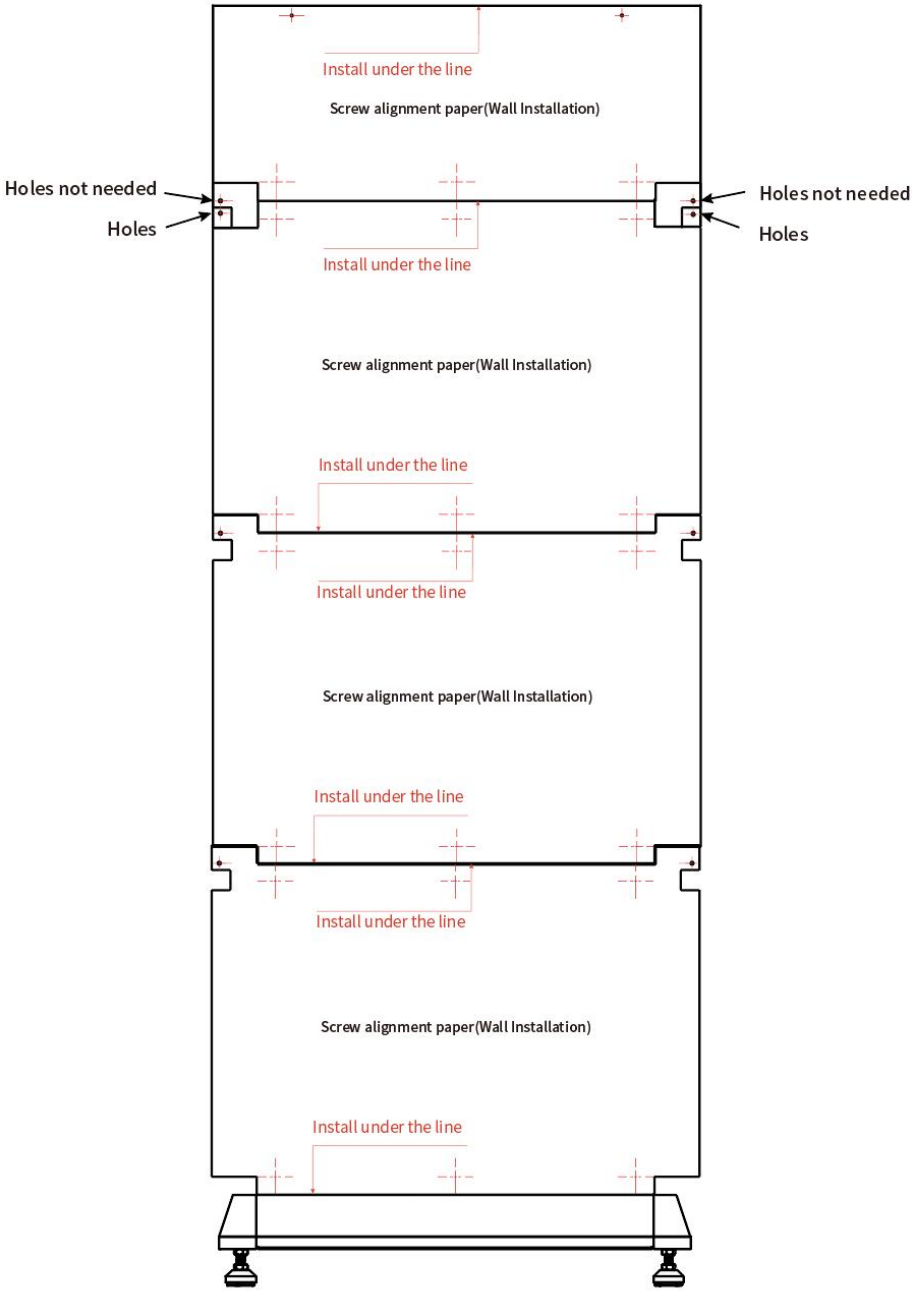
① Move the base to a suitable wall;

② Above the base, attach the wall-mounted positioning paper card to the wall;

③ Mark the black dot position on the wall according to the paper card with a pen;

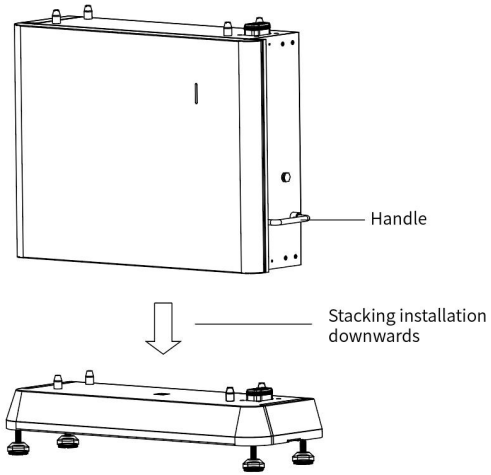
④ Tear off the paper card (pay attention to keeping the wall clean), drill a 4mm through-hole on the wall marking, and embed a plastic expansion tube;

Note: Wooden walls do not require pre-embedded plastic expansion pipes, they only need to be fixed with screws (M5*40mm).

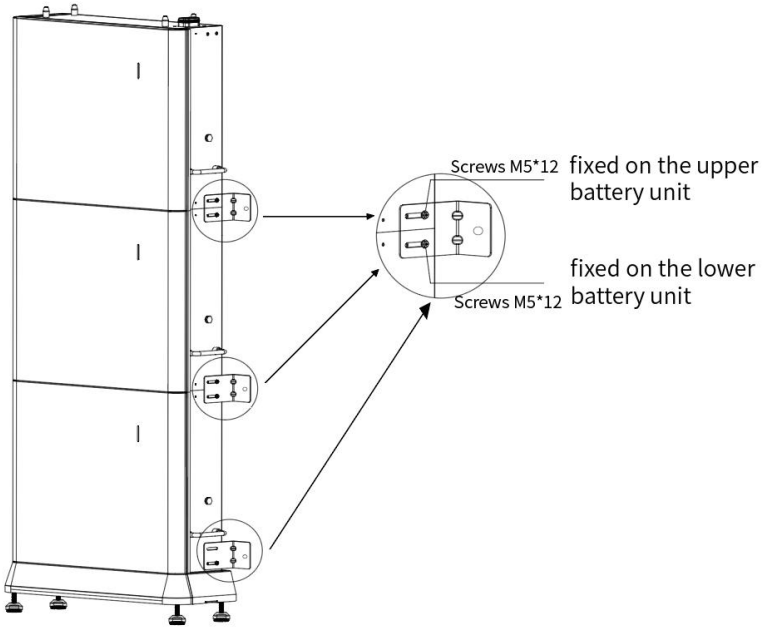

Install under the line
Screw alignment paper(Wall Installation)
Holes not needed
Holes
Holes not needed
Holes
Install under the line
Screw alignment paper(Wall Installation)
Install under the line
Install under the line
Screw alignment paper(Wall Installation)
Install under the line
Install under the line
Screw alignment paper(Wall Installation)
Install under the line

4.3 Installation of Battery Unit

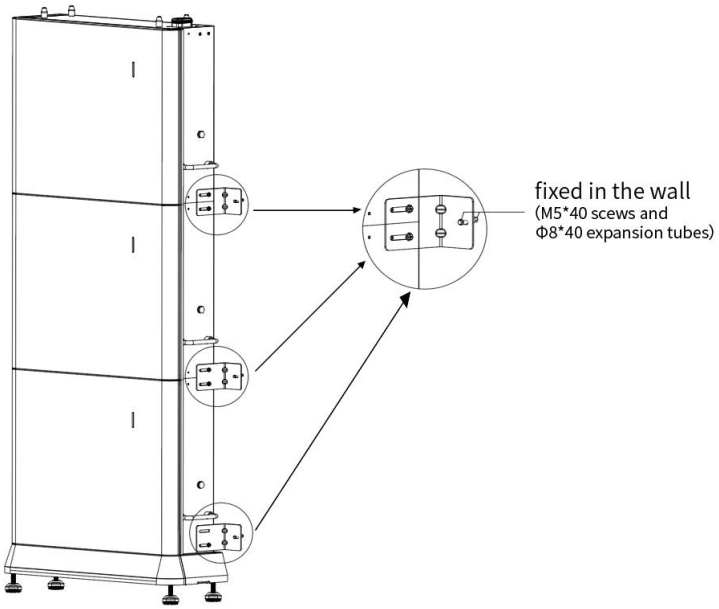
Step 1. Align the stacking guide posts and stacking connector to place the battery units on the base, make sure the battery units are stacked neatly with the base;



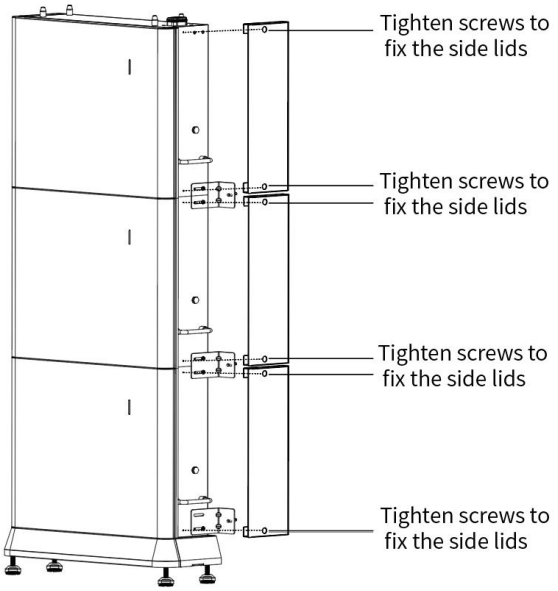
Step 2. Install the gaskets on the battery units, and stack the lower battery box with the upper battery box and fix them;



Step 3. Insert the screw into the expansion tube in Step 2, ensuring that the gasket is securely fastened to the wall;

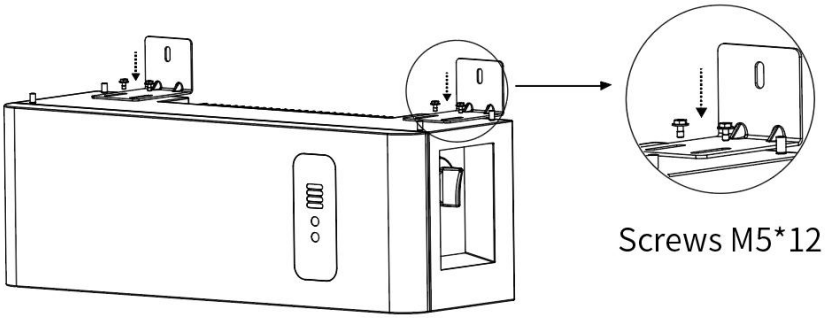


Step 4. Assemble the battery side lids to the battery units (same mounting steps for both sides of the battery units);

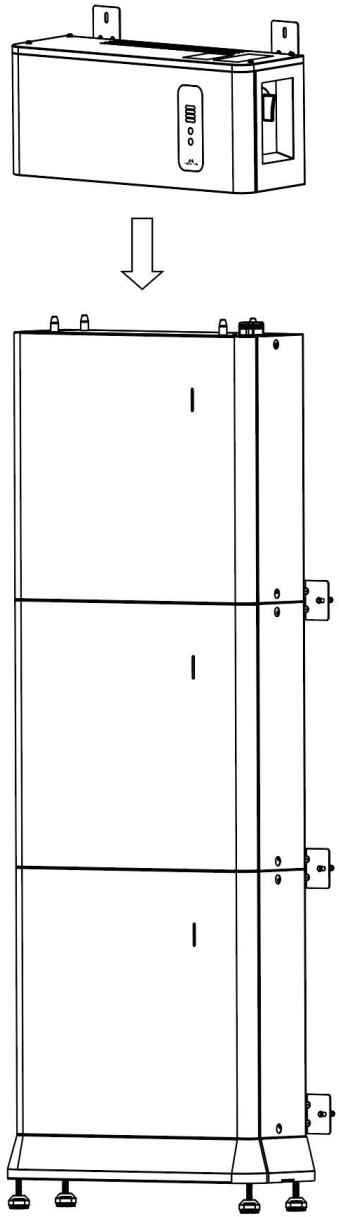


4.4 Installation of BMS Control Module

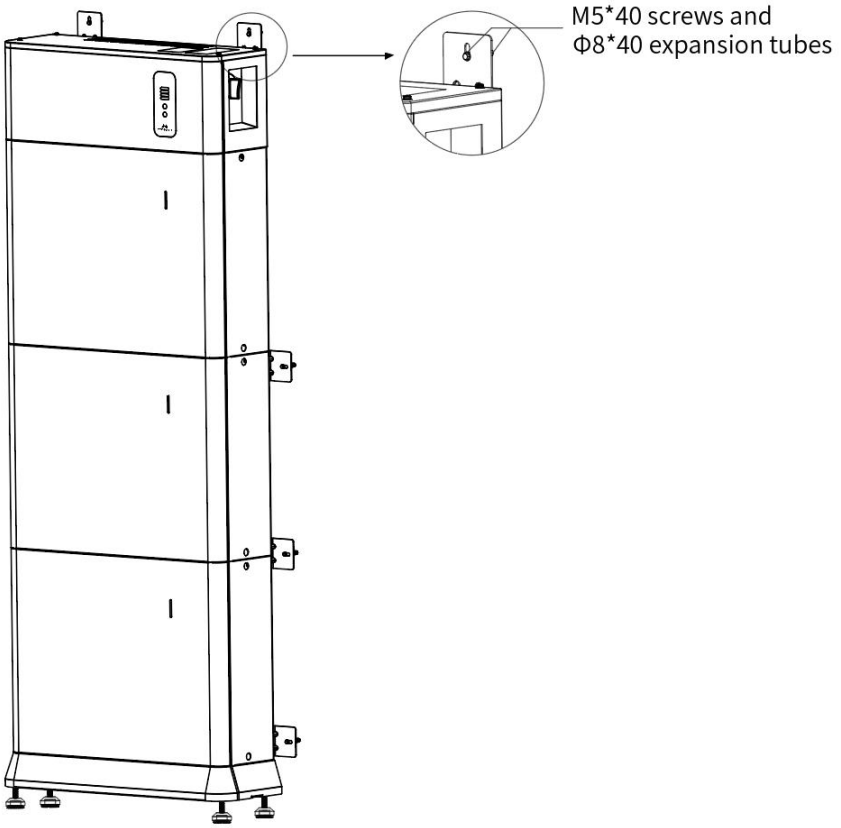
Step 1. Mount the gaskets on the BMS Control Module with screws;



Step 2. Position the BMS Control Module on the battery units，make sure the BMS Control Module is stacked neatly with battery units;



Step 3. Fix the gaskets to the wall with screws, and the installation is completed.



5. Electrical Connection

5.1 Cable Preparation

Cables prepared by users			
Cable	Type	Conductor cross sectional area	Outer diameter

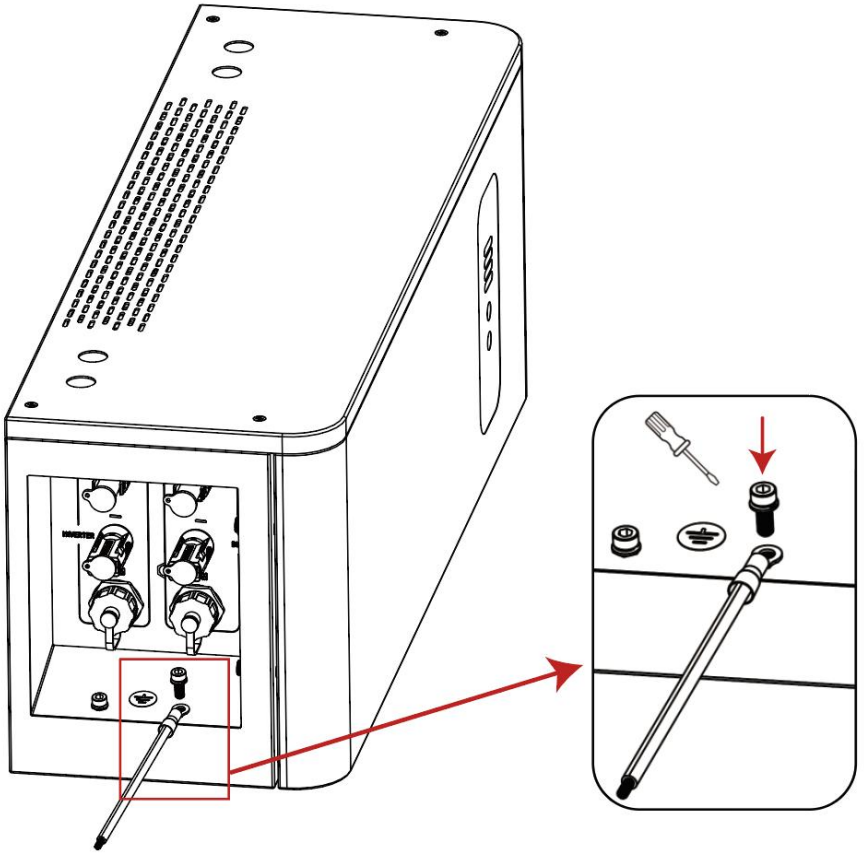
PE cable	Single-core outdoor copper cable	4mm² ~ 10mm²	-

5.2 Cable Connection

Step 1. Connecting PE Cables

① Remove the screw;

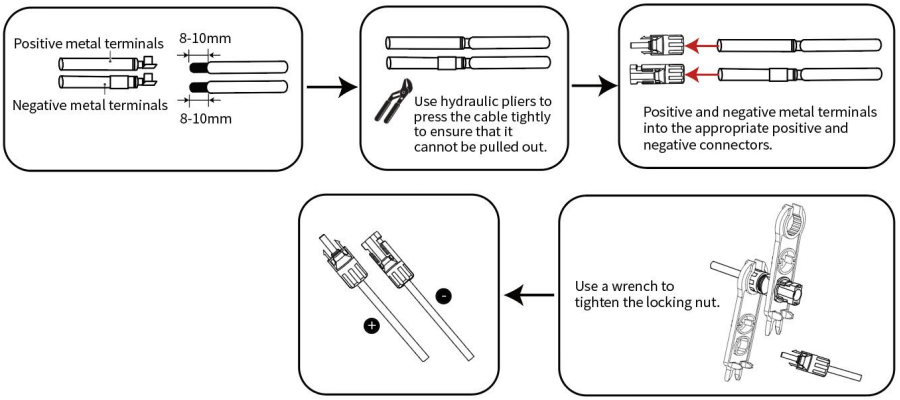
② Connect the PE Cable to the ground point and tighten the screw with a screwdriver.



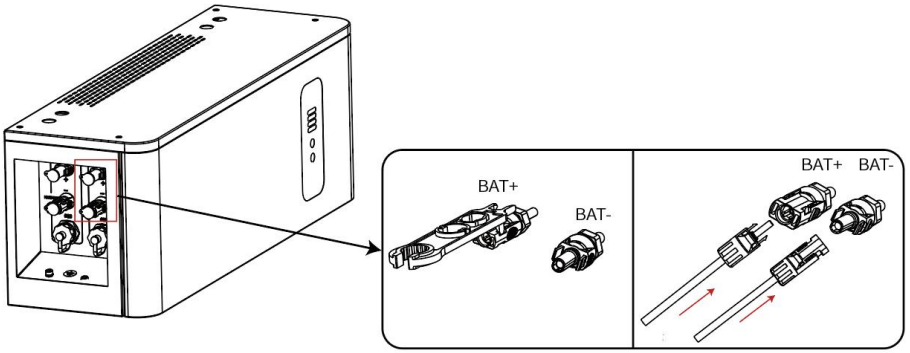
Step 2. Connecting PV Input Cables

① Assemble a DC connector

- Connect the positive and negative cables of the DC input cable to the positive and negative metal terminals respectively;
- Use hydraulic pliers to press the cables firmly onto the metal terminals, ensuring they cannot be accidentally pulled out;
- Insert the positive and negative metal terminals into the positive and negative connectors respectively;
- Use a wrench to tighten the lock nut until the wrench slips.



② Connecting PV Input Cables



6. Troubleshooting

6.1 Indicator light status

Description of LED indicators		
LED Name	Status	Description
 Operation light	Blinking green at long intervals (on for 1s and then off for 1s)	The device is operating.
	Blinking green at short intervals (on for 0.3s and then off for 0.3s)	The device is upgrading.
	Blinking yellow slowly	The device is on standby.
	Off/Flashing once every 5 seconds	The device is off.
 Malfunction Light	Steady red	Device failure.
	Off	No faults in the device.
 Grid light	Steady green	One light represents 25% SOC.
	Blinking green slowly	Device charging.
	Blinking red slowly	SOC is below 10%.
 All lights	Alternate flashing	Device start-up and initialization.
	Flashing quickly	Locating device.
Status light	Blinking green slowly	The device is operating.
	Steady red	Device failure.
	Flashing quickly	Locating device

7. Disposal of Electrical and Electronic Equipment

How to dispose of this product (electrical and electronic equipment waste). This symbol on the product or its documentation indicates that it should not be disposed of at the end of its life with other household waste. Since uncontrolled disposal of waste may be harmful to the environment or to human health, please separate it from other types of waste and recycle it responsibly.This allows sustainable reuse of material resources. Individuals may contact the distributor who sold the product or inquire with their city hall about where and how they can dispose of this product so that it is recycled in an environmentally friendly manner. Companies may contact their suppliers and consult the conditions of their sales contract. This product should not be disposed of with other commercial waste.

8. Technical Support

E-mail: hdltickets@hdlautomation.com

Website: https://www.hdlautomation.com

The contents of this document will be updated as the updates of product versions or other reasons.