

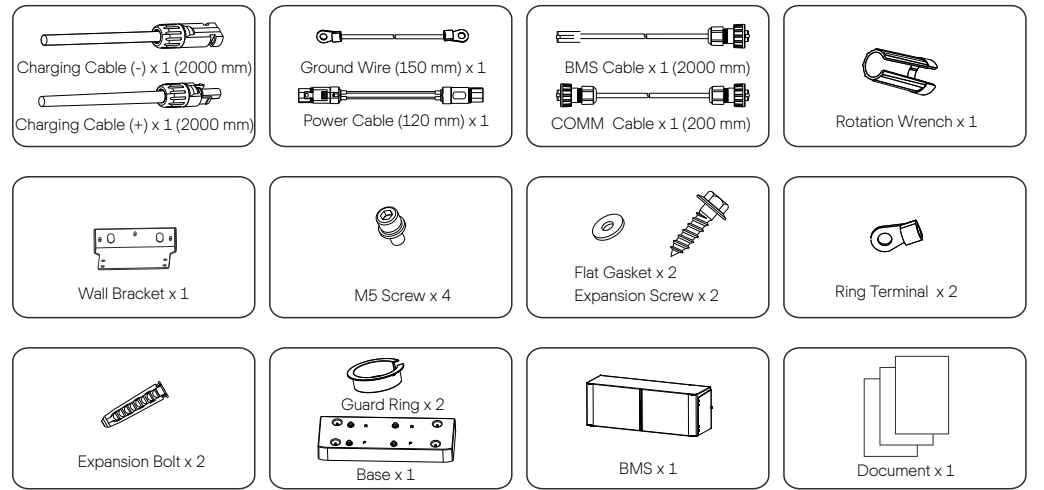
Quick Installation Guide

— Triple Power Lithium-ion Battery

1

Packing List (BMS)

Note: The Quick Installation Guide briefly describes required installation steps. If you have any questions, refer to the User Manual delivered with the BMS for more detailed information.



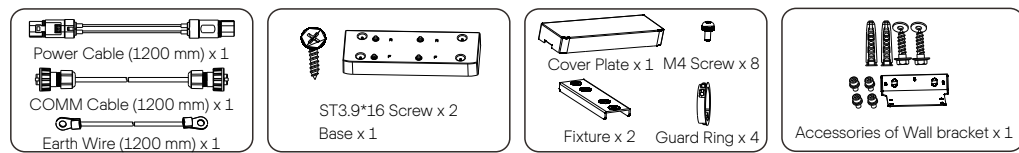
2

Packing List (Battery Module)

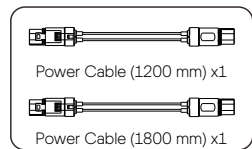
One Battery Module (HV10230 x 1):



Accessories (1) of three and four Battery Modules (HV10230 x 3/4):



Accessories (2) of three and four Battery Modules (HV10230 x 3/4):



Note: The two power cables need to be purchased separately

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Installation Prerequisites

Before installation, make sure that the installation site meets the following conditions:

- The building at least meet earthquake-resistant grade 6;
- The site shall be over 0.62 miles away from the sea, to avoid damage caused by salt water and humidity;
- The floor shall be flat;
- No inflammable and explosive goods are placed within at least of 3 ft;
- The ambience shall be shady and cool, away from heat sources and direct sunlight;
- The temperature and humidity remain at a constant level;
- The installation site requires less dust and dirt;
- There are no corrosive gases, including ammonia and acid vapor; and
- The same generation products are recommended to give priority to use.

In practice, the requirements of battery installation may be different due to environment and locations. In that case, follow up the exact requirements of the local laws and standards.

Note!

The Triple Power battery module is rated at IP65 and thus can be installed outdoors as well as indoors. However, if installed outdoors, the battery pack shall not be exposed to direct sunlight and moisture.

Note!

If the ambient temperature exceeds the operating range, the battery pack will stop running to protect itself. The optimal temperature range for operation is 59 /15 to 86 /30 . Frequent exposure to harsh temperatures may deteriorate its performance and lifetime.

Note!

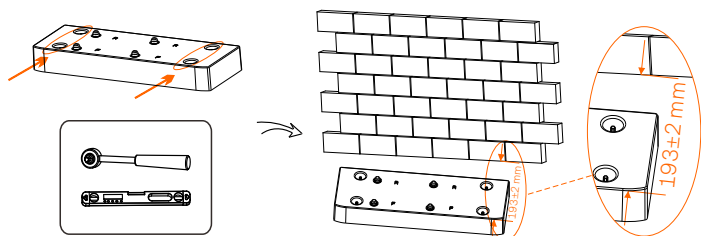
For the first installation, the interval among manufacture dates of battery modules shall not exceed 3 months.

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Installation Steps for BMS * 1 + Battery * 1

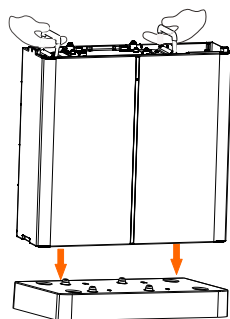
Before installation, please make sure the wall is strong enough to withstand the weight of Battery.

① Step 1: Locate the Base 193 ± 2 mm away from the wall, and adjust it with a torque wrench to ensure that it is parallel to the ground. A spirit level is required.

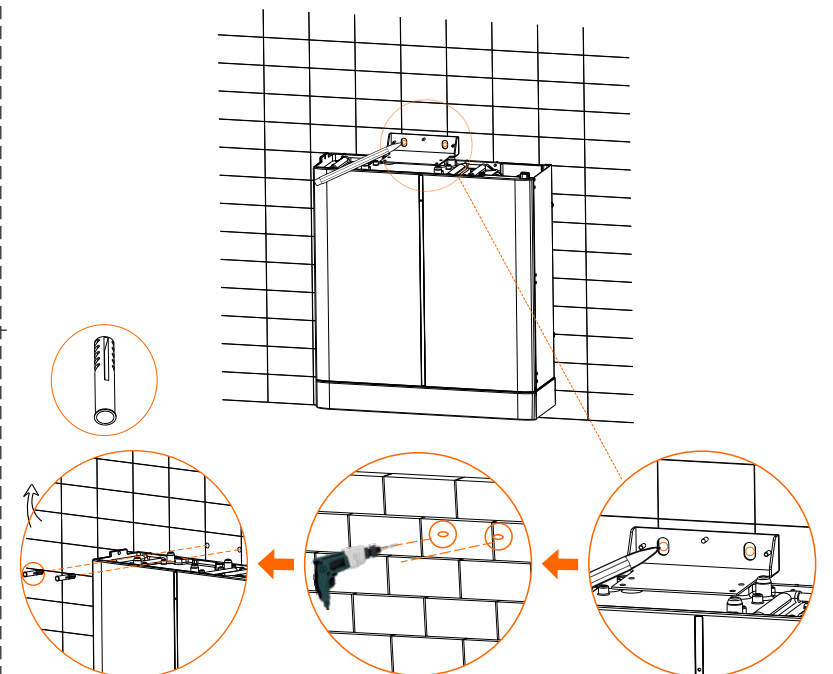


Note:
The letter "R" and "F" on the Base respectively indicate Rear and Front. Therefore, the side with "R" shall be against the wall.

② Step 2: Place a battery module on the base.



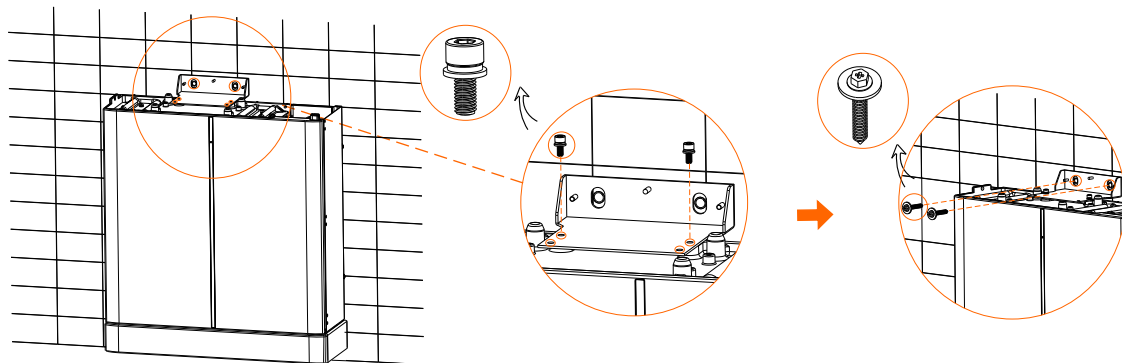
③ Step 3: Place the Wall Bracket, determine the position of holes, mark it with a pen, remove the Wall Bracket, and then drill the two holes (φ10 mm).
Step 4: Place Expansion Bolts into the holes.



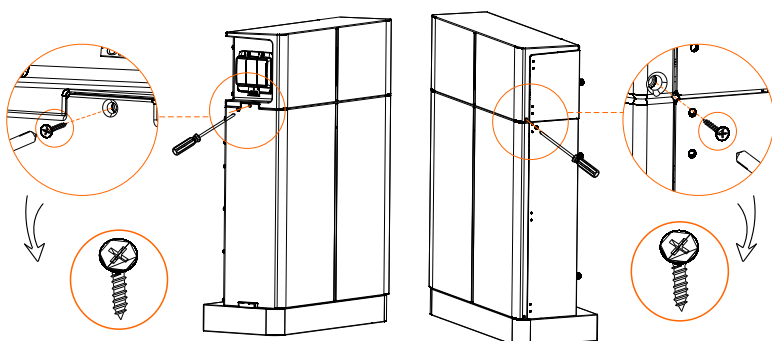
Note!

The Wall Bracket(s) must be installed to secure the battery module(s) connecting the cover or/and BMS.

④ Step 5: Secure the Wall Bracket to the battery using screws (2 X M5*10, torque: 2.2-2.5 N-m) and to the wall using Tapping Screws (2 X ST6*L55) and Flat Gaskets (2).



⑤ Step 6: Place BMS on the top of the battery module, and secure both left and right sides with M4 screws (2). See figure below.

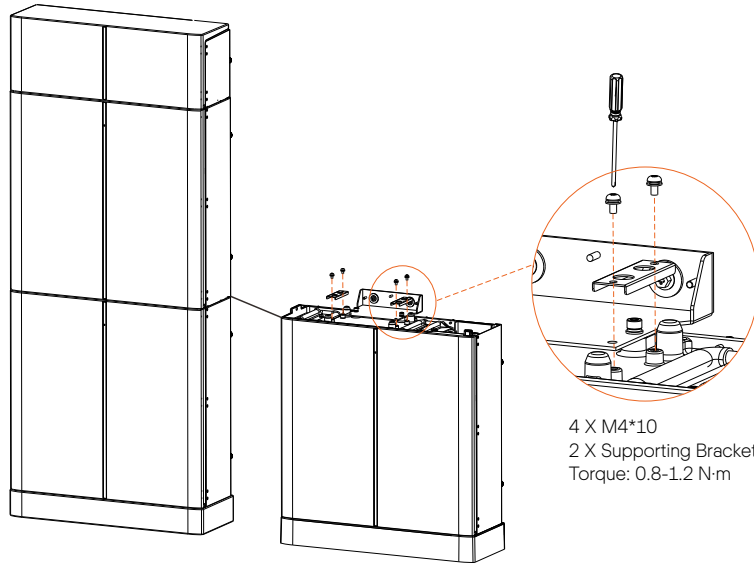


Note!

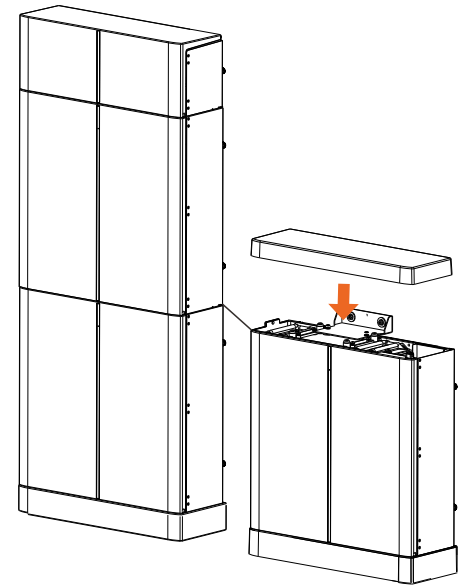
Don't forget to screw both left and right sides of batteries installed. The above steps also apply to place 2 batteries. For details, please refer to User Manual.

As for the installation steps for "Left: BMS + BAT x 2, Right: BAT x 1", please refer to the installation steps for "BMS x 1 + Battery x 1". After finishing the installation of BMS, two bases and three batteries, please follow the steps below to install the Cover.

Step 1: Secure supporting brackets using screws (4 X M4*10, torque: 0.8-1.2 N-m).



Step 2: Put the cover on the battery.

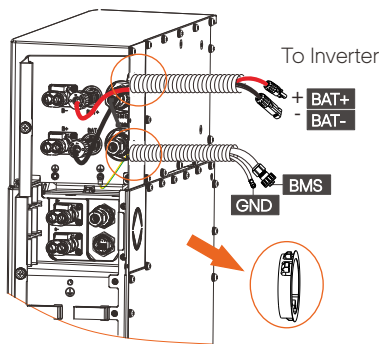


Note!

The above steps also apply to place 4 battery modules.

Connecting Cables to Inverter

BMS to Inverter:
BAT+ to BAT+ (A: 2 m),
BAT- to BAT- (B: 2 m),
BMS to BMS (D: 2 m)



Note: The two terminals here, connecting to inverter, are delivered with the inverter.

➤ Cable Connection Steps:

Note!

The connector connecting to inverter from BMS is delivered with the inverter, for details, please refer to the inverter's User Manual.

➤ Connecting the BMS Communication Cable

It is required for the BMS to communicate with the inverter for proper operation. Note that the BMS communication cable is shielded with steel tubes. The wire order of the communication cable is the same as the BMS communication cable.

Sequence	1	2	3	4	5	6	7	8
BMS	/	GND	/	BMS_H	BMS_L	/	A1	B1

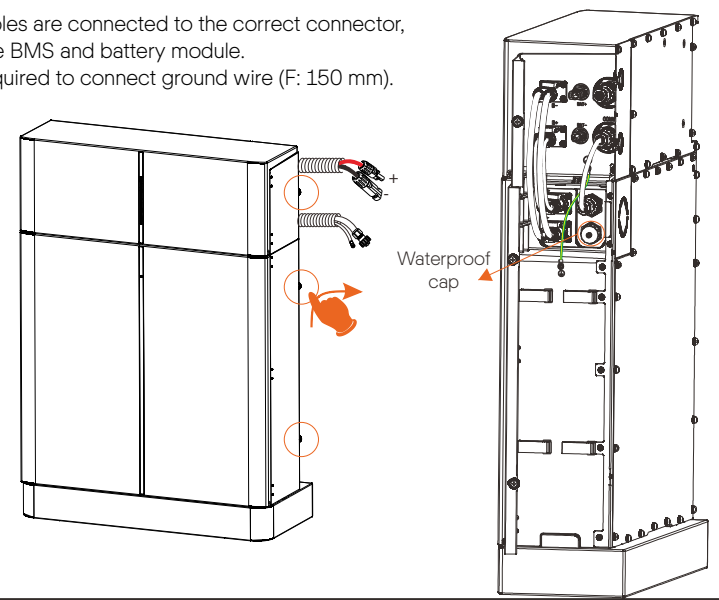
Connecting Cables to One Battery Module

Note!

Regardless of how many battery modules installed, please put a waterproof cap on the communication port of the unconnected port of battery module (see the circle in the following figures in the quick installation guide).

Ensure that both ends of the cables are connected to the correct connector, which are on the right side of the BMS and battery module. BMS and battery module are required to connect ground wire (F: 150 mm).

BMS to Battery1:
B+ to B+ (C: 1200 mm)
B- to B- (A1: 690 mm)
COMM to COM1 (E: 200 mm)



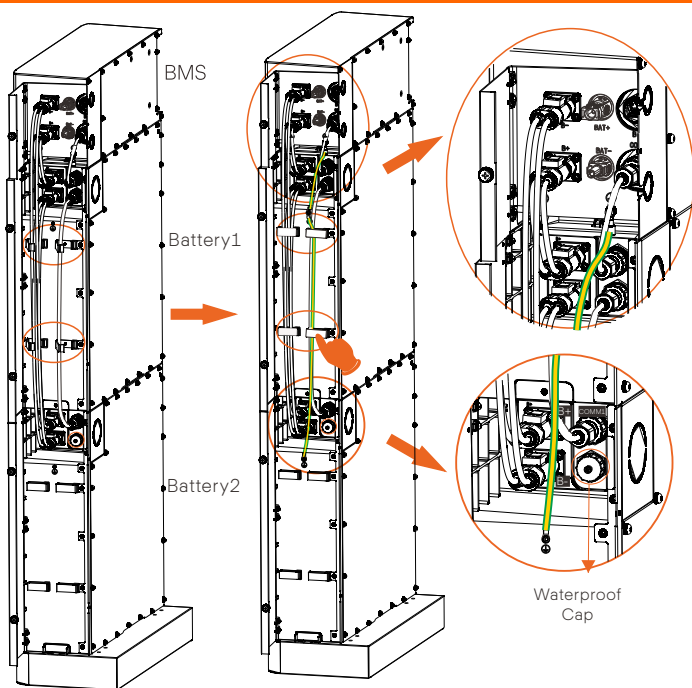
Connecting Cables to Two Battery Modules

Ground wires are required to be connected. (C1 (450 mm) is used for connecting two battery modules.)

BMS to Battery1: B+ to B+ (C: 120 mm); COMM to COM1 (E: 200 mm)

Battery1 to Battery2: B- to B+ (A1: 690 mm); COM2 to COM1 (B1: 600 mm)

Battery2 to BMS: B- to B- (A1: 690 mm)



Connecting Cables to Three Battery Modules

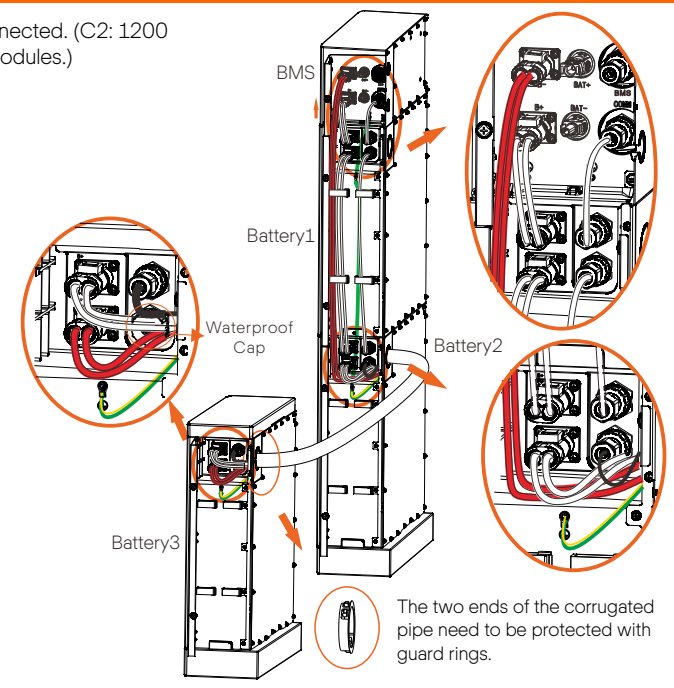
Ground wires are required to be connected. (C2: 1200 mm is used for connecting battery modules.)

BMS to Battery1:
B+ to B+ (C: 120 mm); COMM to COM1 (E: 200 mm);

BMS to Battery3:
B- to B- (B3: 1.8 m); Get the cables through corrugate pipe.

Battery1 to Battery2:
B- to B+ (A1: 690 mm); COM2 to COM1 (B1: 600 mm)

Battery2 to Battery3:
B- to B+ (A2: 1.2 m); COM2 to COM1 (B2: 1.2 m); Get the cables through corrugate pipe.



Connecting Cables to Four Battery Modules

BMS to Battery1:
B+ to B+ (C: 120 mm); COMM to COM1 (E: 200 mm);

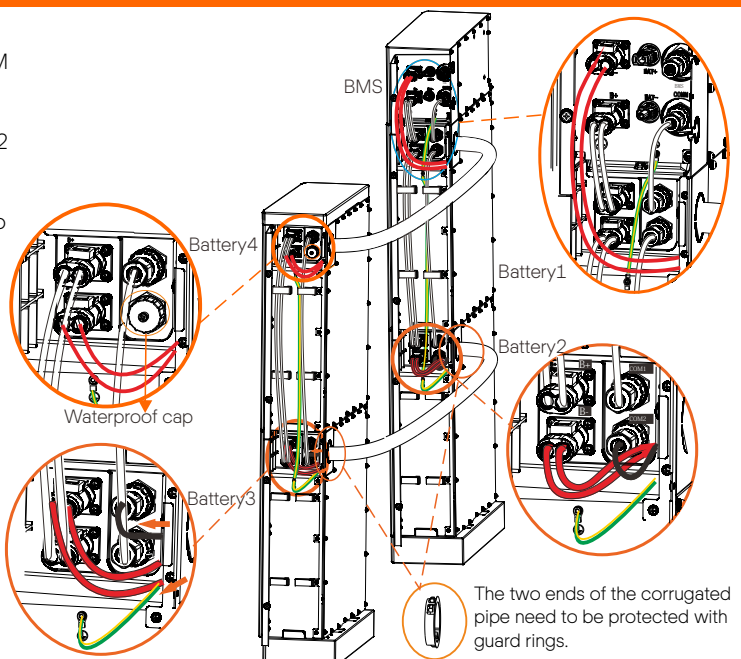
Battery1 to Battery2:
B- to B+ (A1: 690 mm); COM2 to COM1 (B1: 600 mm);

Battery2 to Battery3:
B- to B+ (A2: 1.2 m); COM2 to COM1 (B2: 1.2 m);

Battery3 to Battery4:
B- to B+ (A1: 690 mm) and COM2 to COM1 (B2: 1.2 m), get the cables through corrugate pipe;

Battery4 to BMS:
B- to B- (A3: 1.2 m), get the cable through corrugate pipe.

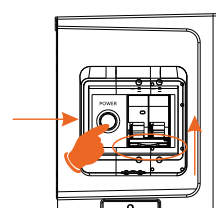
Note!
Ground wires are required to be connected.



Commissioning

Once all battery modules are installed, follow these steps to start the system:

- 1) Open the cover of the BMS;
- 2) Move the circuit breaker switch to "ON";
- 3) Press and hold the POWER button for more than 1s to start the T-BAT system; and
- 4) Turn on the AC breaker of inverter.



Black Start: Press the POWER button and hold it for 20 sec; release the button after the four SOC indicators flash blue alternately. But, we do not recommend the use of Black Start as it may cause the port to be charged, resulting in an electric shock.

- If the batteries have not been used for more than 9 months, these batteries must be charged to at least SOC 50 % each time.
- For the first installation, the interval among manufacture dates of battery modules shall not exceed 3 months.
- If a battery is replaced or added for capacity expansion, each battery's SOC should be consistent. The max. SOC difference should be between $\pm 5\%$.
- If users want to increase their battery system capacity, please ensure that the SOC of the existing system capacity is about 40%. The manufacture date of the new battery shall not exceed 6 months; in case of exceeding 6 months, please charge the new battery to around 40%.