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Low Voltage Battery

Quick Installation Guide

LB-6D-G3

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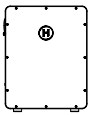
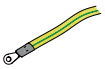
1 General Declaration

- This quick installation guide is subject to change due to product updates or other reasons.
- Read this quick installation guide carefully before installation to learn about product features and safety precautions.
- Only qualified personnel are allowed to install, operate, and maintain the equipment.
- Installers should be familiar with local laws and regulations and follow them when performing all tasks.
- Installers must use insulated tools and wear personal protective equipment (PPE).
- Check the deliverables for the correct model, complete contents, and intact appearance. Contact the manufacturer if any damage is found or any component is missing.
- As required by local regulations, an overcurrent protection and isolation device should be installed between the inverter and the battery. The cable needs to be prepared by the installer.
- Before installation, ensure that the battery is turned off, and any associated circuit breakers and disconnect switches are turned off.

	Do not dispose of the device as household waste.		Observe the documentation.
	Hoymiles Power Electronics Inc. hereby declares that Hoymiles Battery (model: LB-6D-G3) is in compliance with the essential requirements and other relevant provisions of directives 2014/30/EU, 2011/65/EU, (EU)2015/863, and the EU Battery Regulation (EU)2023/1542. The original EU Declaration of Conformity may be found at https://www.hoymiles.com/.		

2 Packing List

Standard —For Floor-standing Installation

 Battery*1	 L-Shape Bracket*2	 Levelling Feet*4	 RJ45 Connector*2	 Power Cable*2 1.5 m, 25 mm²/6 AWG
*  Communication Cable*2	 Ground Cable *1 1 m, 6 mm²/10 AWG	 M8 Expansion Screw M8*80*2	 M8 Pan Head Screw M8*16*2	 M5 Pan Head Screw M5*14*4
 M4 Pan Head Screw M4*10*1	 Lifting Handle*4	 Positioning Board*1	 Installation Guide*1	 Certificate Card*1

Note:

- *Two communication cables are available in different lengths. The 1 m cable is used for battery parallel connections.*

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The 1.5 m cable is used to connect the battery to the inverter.

- *If you want to use a communication cable prepared by yourself, the PIN of the cable end connected to the inverter should only reserve 4 (CAN1H) and 5 (CAN1L).*

Terminal	Definition							
	1	2	3	4	5	6	7	8
12345678 COM IN	485-1A-PCS	485-1B-PCS	485-2A-IN	CAN1H	CAN1L	485-2B-IN	DI	GND1
12345678 COM OUT	NC	NC	485-2A-IN	NC	NC	485-2B-IN	DO	GND2

Optional —For Wall-mounting Installation



Mounting Bracket*2

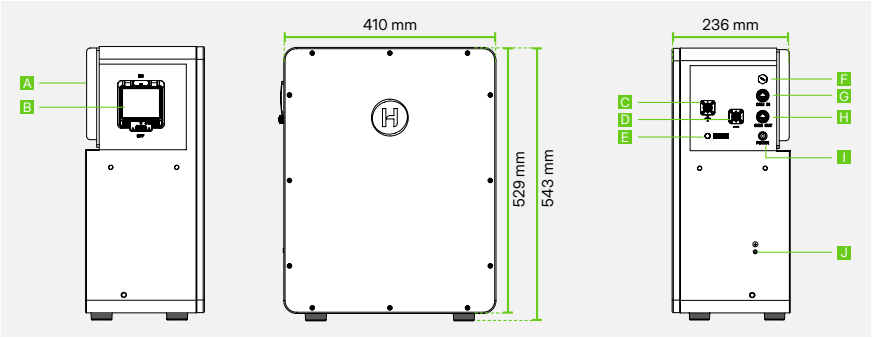


M8 Expansion Screw
M8*80*4



M8 Pan Head Screw
M8*16*2

3 Appearance and Dimensions



No.	Description	No.	Description
A	Radiator	F	Relief Valve
B	DC Circuit Breaker	G	COM IN
C	Positive Terminal	H	COM OUT
D	Negative Terminal	I	Power Button
E	LED Indicator  Status SOC	J	Grounding Terminal

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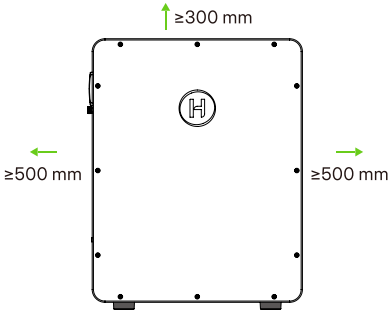
4 Pre-Installation

Environmental Requirements

Category	Requirement
Recommended storage temperature	15°C to 35°C
Relative humidity	10% to 95% (non-condensing)
Altitude	≤ 2000 m
Ventilation	Good ventilation and heat dissipation are required.
Clearance	Keep away from doors, windows, and other batteries.
Hazards	Keep away from heat sources, corrosive chemicals, and highly flammable materials or gases.

Clearance Requirements

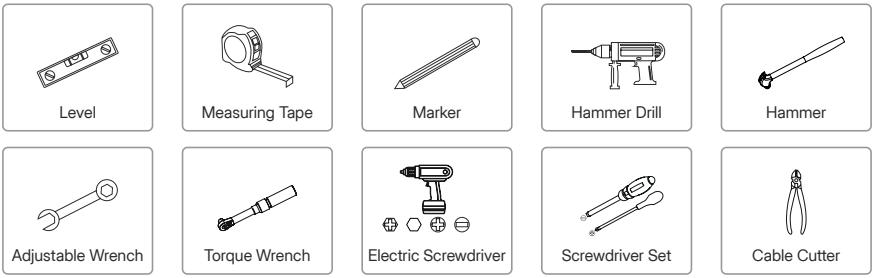
Note: *The actual installation clearances should be determined based on the local installation standards.*



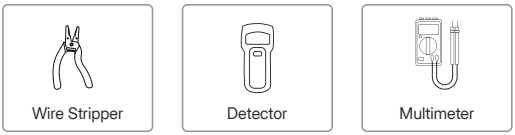
Required Tools and Materials

The following tools are recommended in the installation process, and other auxiliary tools can also be used if necessary.

Tools



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Personal Protective Equipment (PPE)

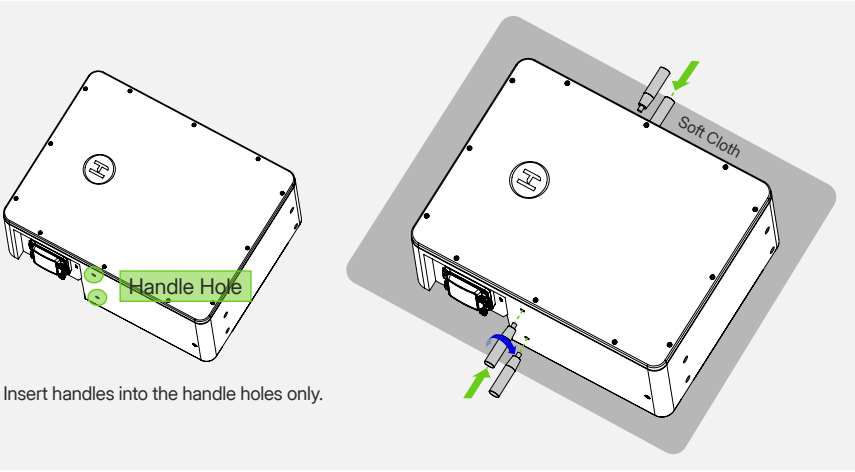


Installing Lifting Handles

Warning: *The battery is heavy. Use lifting handles and at least two people to prevent injury!*

Step 1: Install two lifting handles on the left side and two lifting handles on the right side of the battery.

Step 2: Ensure all lifting handles are securely fastened before lifting.



Notice: *After positioning the battery, remove the lifting handles, use two handle holes to install the L-shape brackets, and reinstall screws in the two unused holes.*

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5 Mechanical Installation

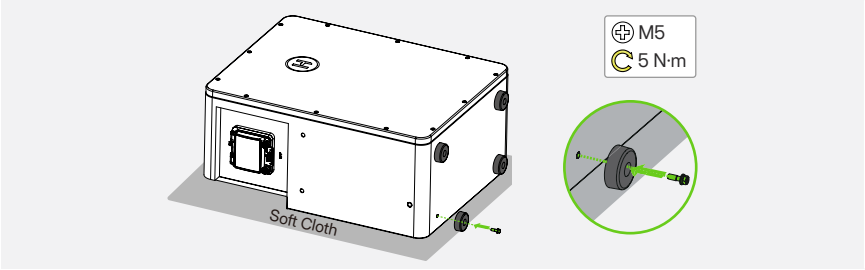
5.1 Floor-Standing Installation

Warning: *Use a detector to make sure there are no electrical cables or water pipes behind the drilling area.*

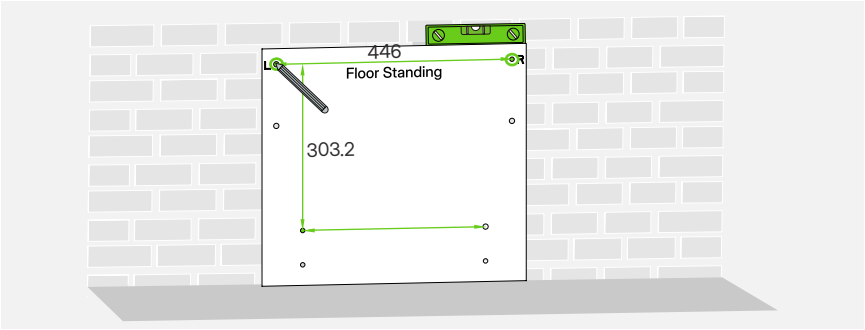
Step 1: Install the levelling feet.

a. Remove the four nylon sealing plugs from the bottom of the battery.

b. Install the levelling feet into the exposed holes and tighten them with M5 screws.



Step 2: Place the Positioning Board against the wall and mark the drilling positions.



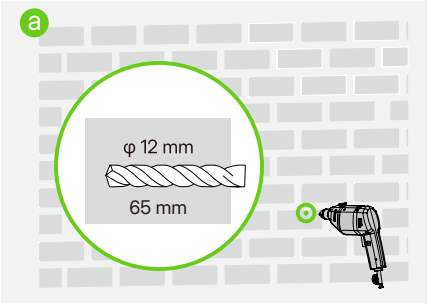
Step 3: Drill holes for the L-shaped brackets.

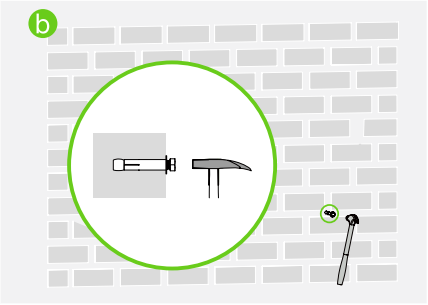
a. Drill two holes, each 12 mm in diameter and 65 mm deep.

b. Hammer the expansion bolts into the holes until the washers are flush with the surface.

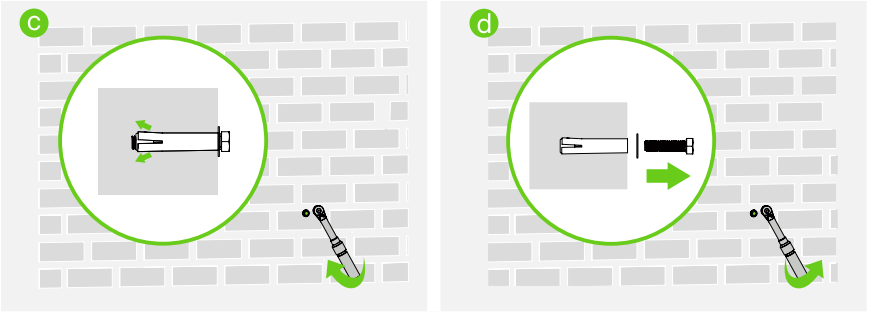
c. Fasten each bolt clockwise until the sleeve expands and grips the wall firmly.

d. After the sleeve expands, unscrew and remove the washer, bolt, and nut.





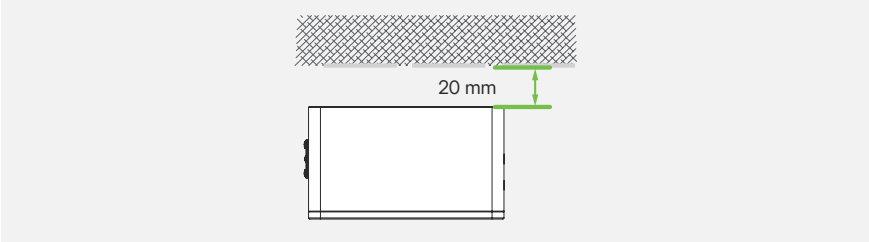
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Step 4: Position the battery.

a. Hold the lifting handles and place the battery on level ground (0°–3°).

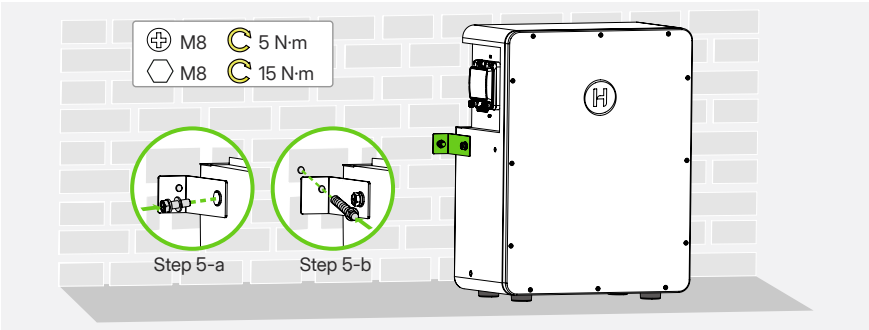
b. Make sure the battery is parallel to the wall and 20 mm away from the wall.



Step 5: Secure the battery.

a. Install the two L-shaped brackets onto the battery and secure them with M8 screws.

b. Use expansion bolts to secure the brackets to the wall.

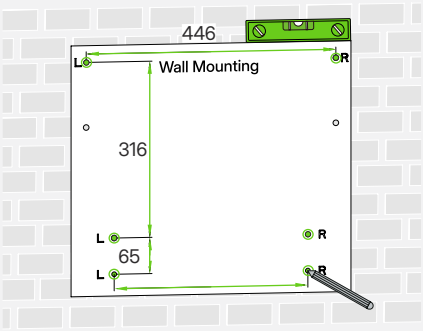


5.2 (Optional) Wall-mounting Installation

Warning:

- *Use a detector to make sure there are no electrical cables or water pipes behind the drilling area.*
- *Install the product only on a load-bearing reinforced concrete wall.*

Step 1: Place the Positioning Board against the wall and mark the drilling positions.



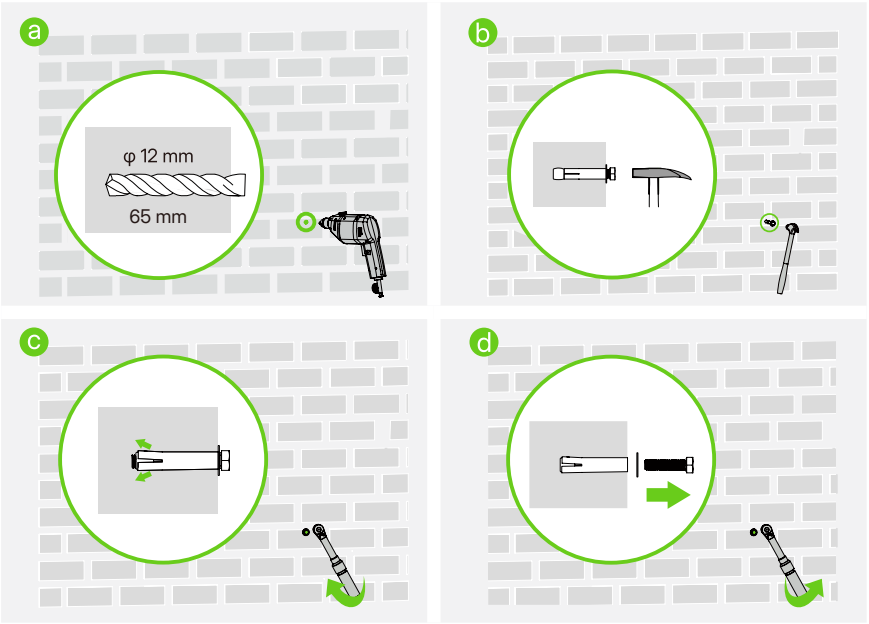
Step 2: **Drill mounting holes for the brackets.**

a. Drill six holes, each 12 mm in diameter and 65 mm deep.

b. Hammer the expansion bolts into the holes until the washers are flush with the surface.

c. Fasten each bolt clockwise until the sleeve expands and grips the wall firmly.

d. After the sleeve expands, unscrew and remove the washer, bolt, and nut.



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Step 3: Attach the mounting brackets.

a. Align the two mounting brackets with the installed wall sleeves.

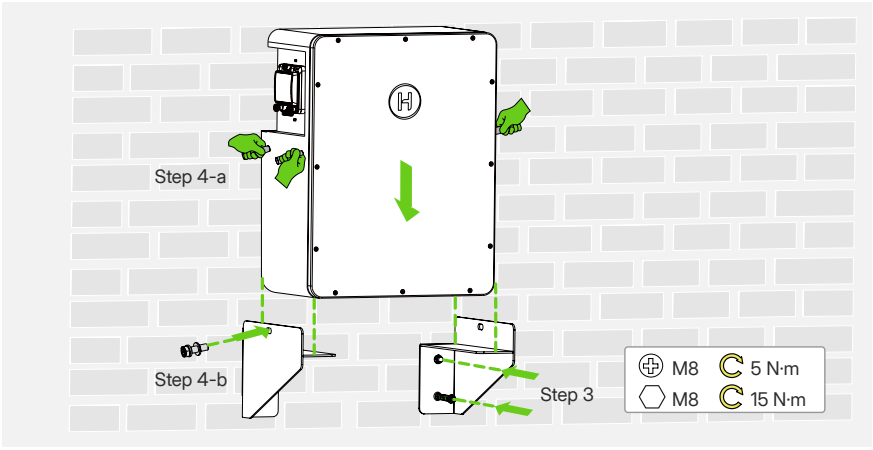
b. Place the washers and nuts onto the expansion bolts, then insert the bolts through the mounting brackets and into the sleeves.

c. Tighten the nuts to fasten the mounting brackets.

Step 4: Mount the battery.

a. Hold the lifting handles and lift the battery onto the mounting brackets.

b. Secure the battery to the mounting brackets using two M8 screws.

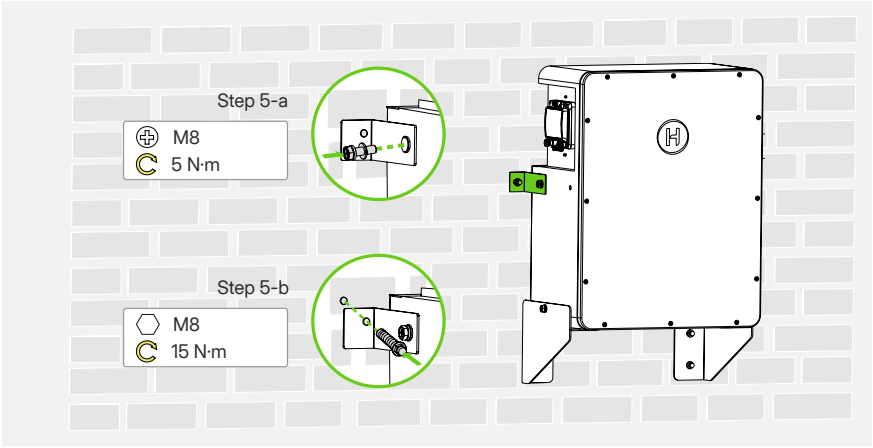


Step 5: Secure the battery to the wall.

a. Install the two L-shaped brackets onto the battery and secure them using M8 screws.

Notice: *Make sure the bracket mounting holes are fully aligned with the drilled holes in the wall.*

b. Use expansion bolts to secure the L-shaped brackets firmly to the wall.



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6 Electrical Connection

Warning:

- *Before making any electrical connections, ensure that all circuit breakers are turned off and all power supplies are disconnected.*
- *The maximum charging or discharging current of a single battery is 60 A.*
- *When two or more batteries are connected in parallel, they must be connected through a busbar. Use a copper busbar that meets the specifications listed below. Always comply with local laws and regulations.*

Number of Batteries	Rated Current (A)	Width (mm)	Thickness (mm)
2	120	15	2
3	180	19	3
4	240	25	3
5	300	20	5
6	360	25	5
7	420	30	5
8	480	35	5
9	540	42	5
10	600	48	5
11	660	52	5
12	720	60	5
13	780	40	10
14	840	45	10
15	900	50	10
16	960	60	10

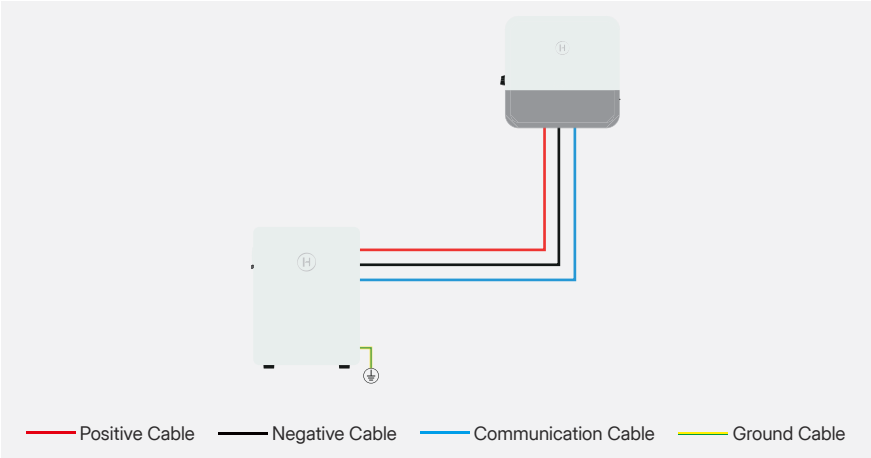
Note: *The LB-6D-G3 series supports up to 16 batteries connected in parallel.*

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6.1 Single-inverter System

6.1.1 Single Battery System

Diagram



Procedure

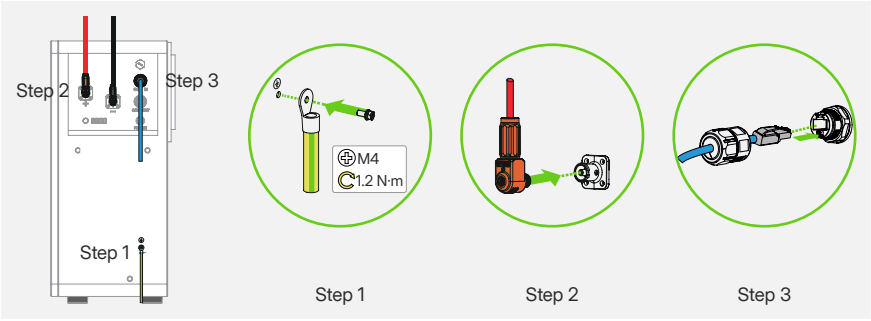
Step 1: Connect the ground cable.

Step 2: Connect one end of the power cables to the battery terminals and the other end to the inverter.

Step 3: Connect the communication cable.

a. Take the 1.5 m communication cable.

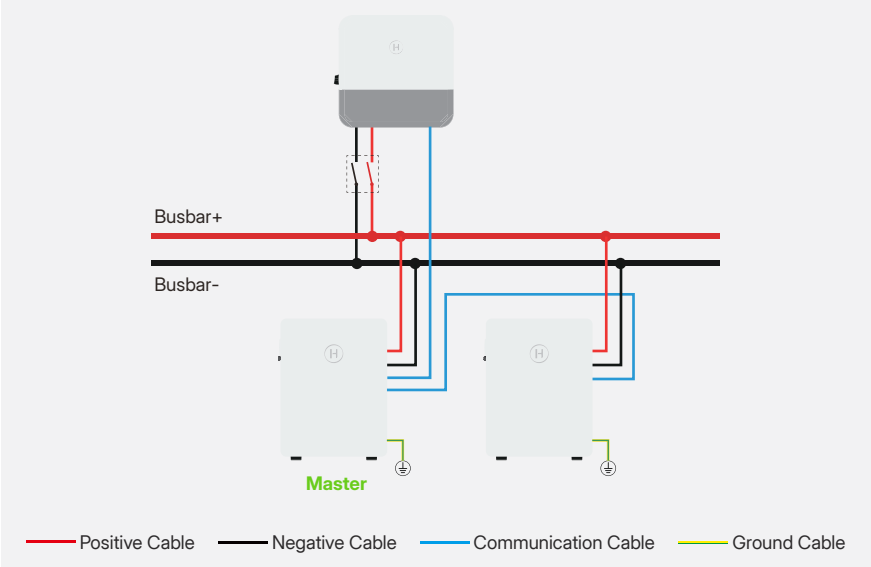
b. Plug one end marked INV to the inverter communication port and the other end marked BAT to the master battery COM IN port.



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6.1.2 Multi-battery System

Diagram



Procedure

Step 1: Connect the ground cable.

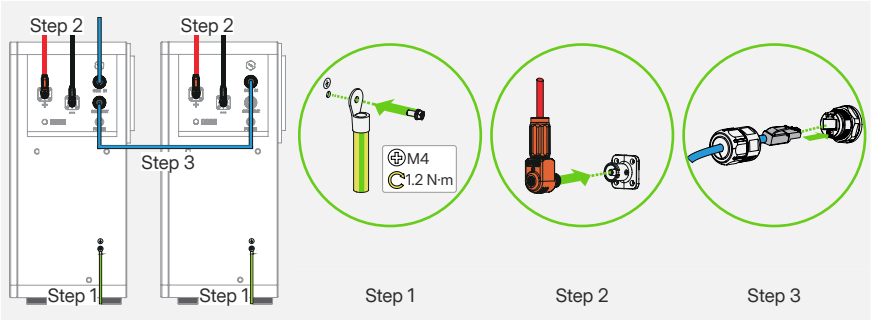
Step 2: Connect the battery positive terminal to the busbar (+) and the negative terminal to the busbar (–).

Step 3: Connect the communication cables.

a. Take the 1.5 m communication cable and plug one end marked INV to the inverter communication port and the other end marked BAT to the master battery COM IN port.

b. Take the 1.0 m communication cable and plug one end marked COM OUT to the master battery COM OUT port and the other end marked COM IN to the slave battery COM IN port.

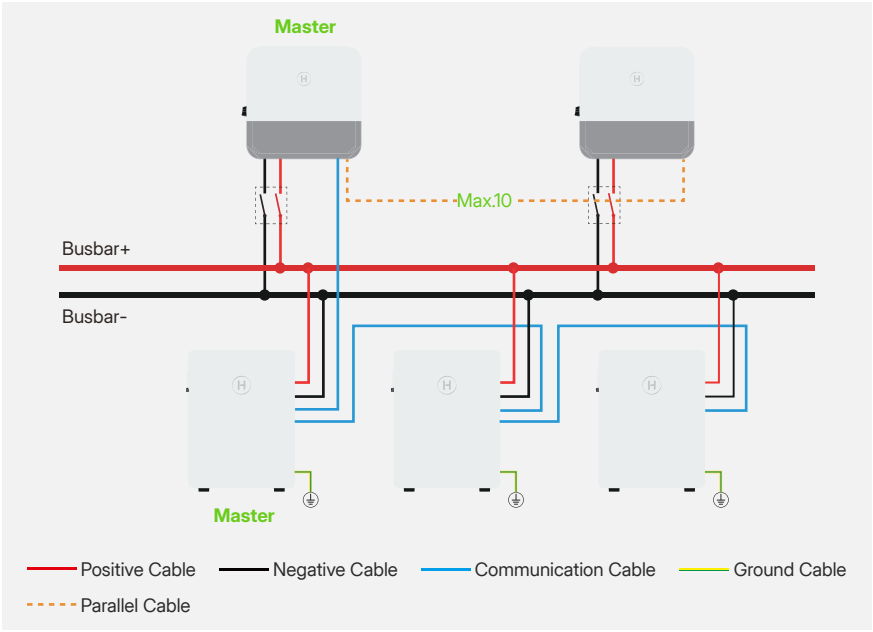
c. Repeat until all slave batteries are connected.



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6.2 Multi-inverter System

Diagram



Procedure

Step 1: Connect the ground cable.

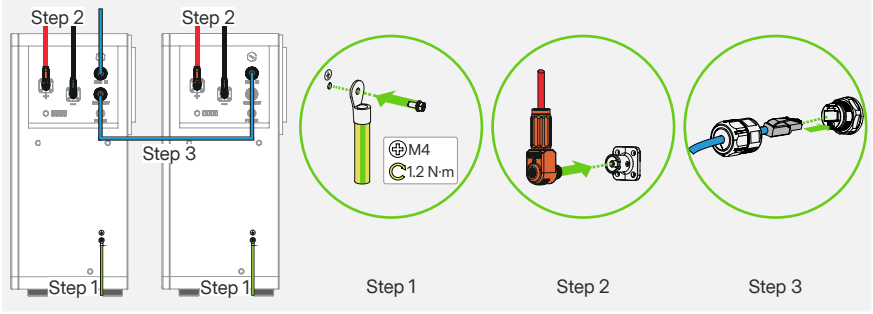
Step 2: Connect the battery positive terminal to the busbar (+) and the negative terminal to the busbar (–).

Step 3: Connect the communication cables.

a. Take the 1.5 m communication cable and plug one end marked INV to the inverter communication port and the other end marked BAT to the master battery COM IN port.

b. Take the 1.0 m communication cable and plug one end marked COM OUT to the master battery COM OUT port and the other end marked COM IN to the slave battery COM IN port.

c. Repeat until all slave batteries are connected.



7 System Commissioning

7.1 System Power-on

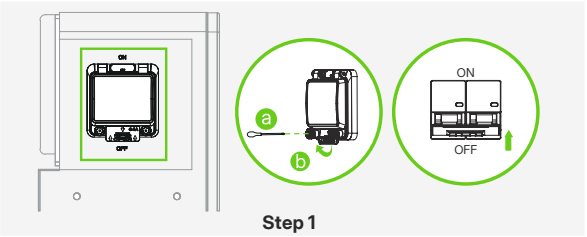
Step 1: Turn on the DC circuit breaker.

a. Loosen the screws to open the protection cover.

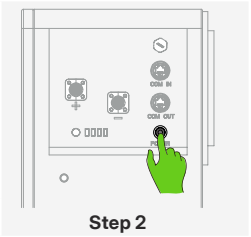
b. Push the breaker handle from **OFF** to **ON**.

Step 2: Press the **POWER** button for 3 seconds.

- For a single-battery system, press the POWER button on that battery.
- For a parallel system, press the POWER button on the master battery.



Step 1



Step 2

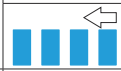
Note: If you need to power off the system,

Step 1: Press and hold the POWER button for 3 seconds.

- *For a single-battery system, press the POWER button on that battery.*
- *For a parallel system, press the POWER button on the master battery.*

Step 2: Turn off all DC circuit breakers.

7.2 LED Indicators

Indicator		Indicator Status	Battery Status
Status		Solid blue	• The battery works normally. • The battery is in standby.
		Solid red	A fault occurs.
SOC		1/4 LED on	SOC is 0-25%.
		2/4 LEDs on	SOC is 25%-50%.
		3/4 LEDs on	SOC is 50%-75%.
		All LEDs on	SOC is 75%-100%.
		Flashing blue in a rightward sequence	The battery is charging.
		Flashing blue in a leftward sequence	The battery is discharging.
All		Status indicator solid blue, SOC indicators flashing blue (0.5 s gap)	• The battery is in precharge. • The battery is in self-check. • The battery is being upgraded.
		Status indicator solid red, SOC indicators flashing blue (0.5 s gap)	Communication failure occurs.
		Off	The battery is turned off.

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