

iSitePower-M V100R002C00
(MAP05A1, MAB05B1)

Quick Guide

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Date: 2021-12-20

Huawei Digital Power Technologies Co., Ltd.

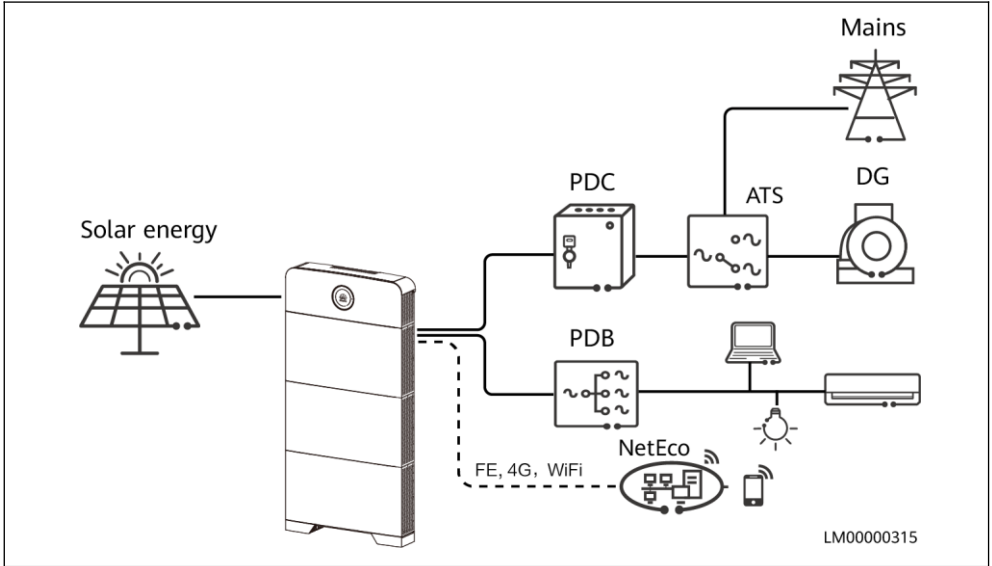


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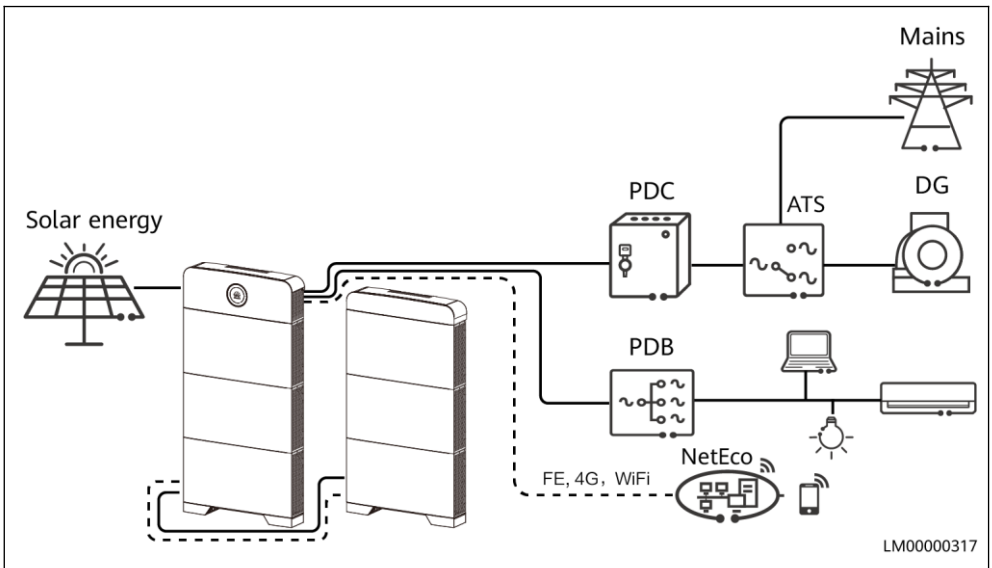
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1 System Description

Single Product System (Typical Scenario)



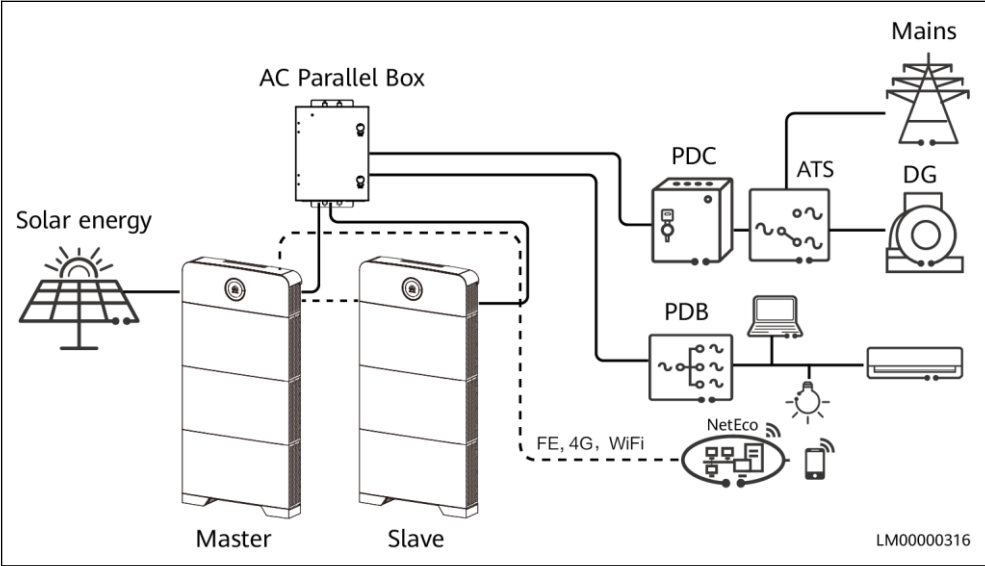
Single Product System (Capacity Expansion Scenario)



Parallel System

NOTICE

- A maximum of three power modules can be connected in parallel. The following figure shows two power modules in parallel.
- In parallel connection scenarios, the number of battery modules on the master and slave products must be the same.

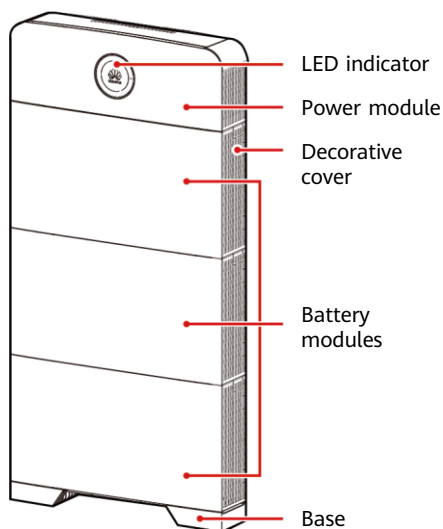


Scenario		Number of Power Modules	Number of Battery Modules
Two parallel products	Master	1	3
	Slave	1	3
Three parallel products	Master	1	3
	Slave 1	1	3
	Slave 2	1	3

2 Overview

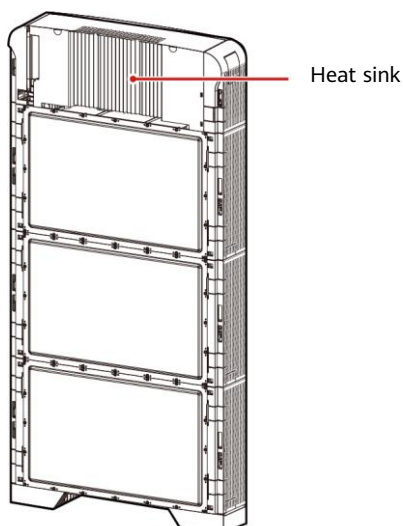
2.1 iSitePower-M

The iSitePower-M is a fuel-free hybrid power solution for areas with no or poor mains supply.



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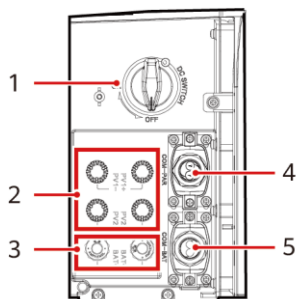
Note: The 15 kWh model is used as an example.



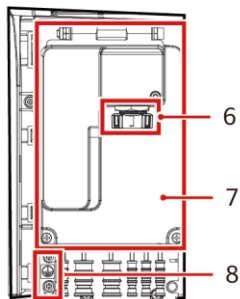
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2.2 Power Module

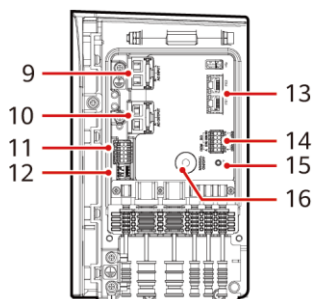
Left view



Right view



Right view (door opened)



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(1) PV maintenance switch (DC SWITCH)

(2) PV inputs

(3) Power parallel ports for battery modules

(4) COM-PAR port

(5) COM-BAT port

(6) Wireless backhaul module port

(7) Maintenance compartment door

(8) Ground point

(9) AC input

(10) AC output

(11) Reserved ports

(12) DIP switch

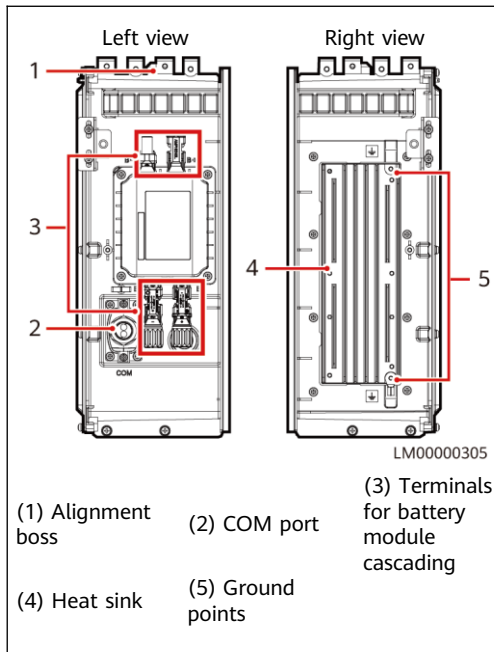
(13) FE ports

(14) COM port and dry contacts

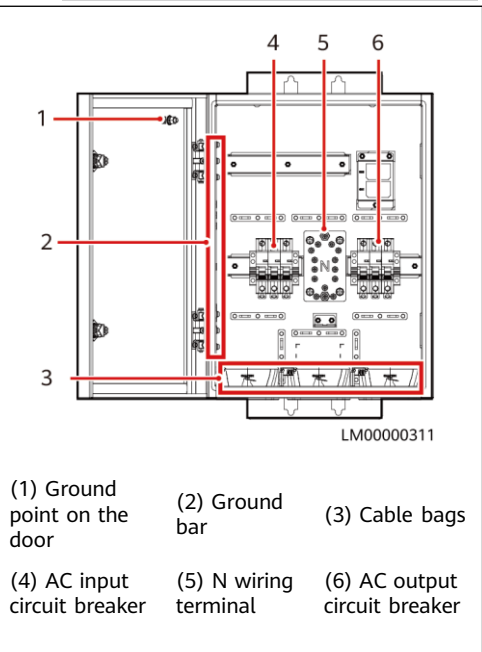
(15) WiFi button

(16) Manual ON/OFF switch

2.3 Battery Module

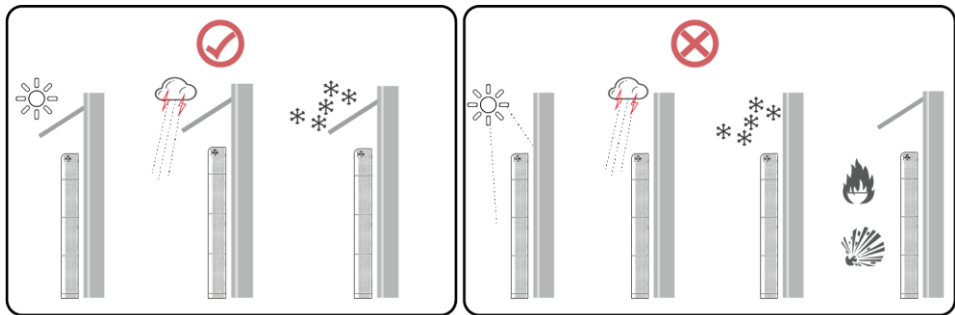


2.4 AC Parallel Box



3 Installation Preparations

3.1 Installation Environment Requirements



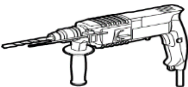
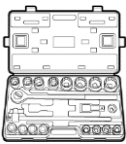
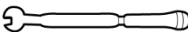
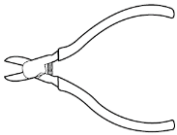
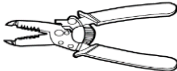
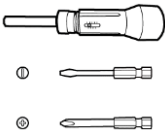



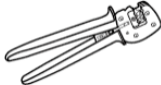





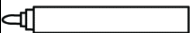
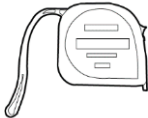

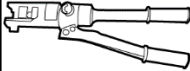
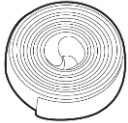





⚠ DANGER

If a battery module is dropped or violently impacted during installation, it may become faulty and cannot be used. Using a faulty module will cause safety risks such as cell leakage and electric shock.

3.2 Wall and Ground Requirements

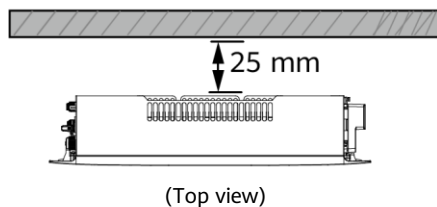
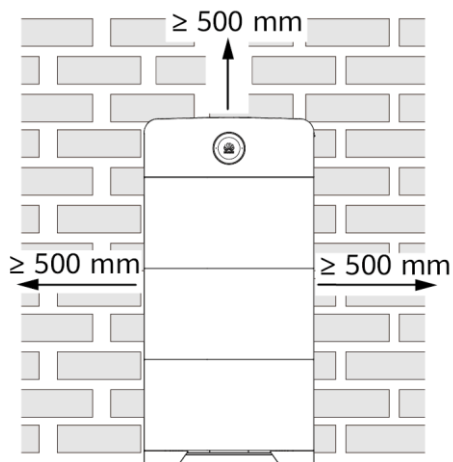
- The product can be mounted on a concrete wall or brick wall and cannot be mounted on a sandwich panel wall or a wooden wall.
- The bearing capacity of the ground must be greater than or equal to 500 kg/m².

3.3 Installation Tools

				
Hammer drill	Torque socket wrench	Torque wrench	Diagonal pliers	Wire strippers
				
Torque screwdriver	Rubber mallet	Utility knife	Cable cutter	Crimping tool (model: PV-CZM-CZM41100 (preferred)/CZM22100)
				
Cord end terminal crimper	Disassembly and Assembly Tool (model: PV-MS-HZ open-end wrench)	Cable tie	Vacuum cleaner	Multimeter (DC voltage measurement range ≥ 600 V DC)
				
Marker	Steel measuring tape	Level	Hydraulic pliers	Heat-shrink tubing
				
Heat gun	Safety gloves	Safety goggles	Anti-dust mask	Safety boots

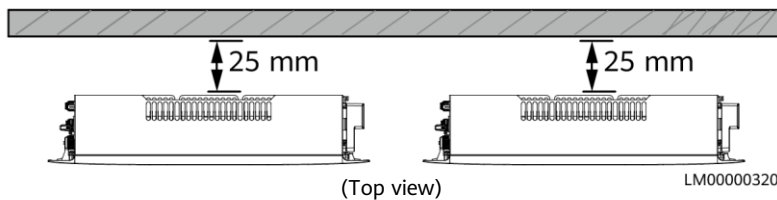
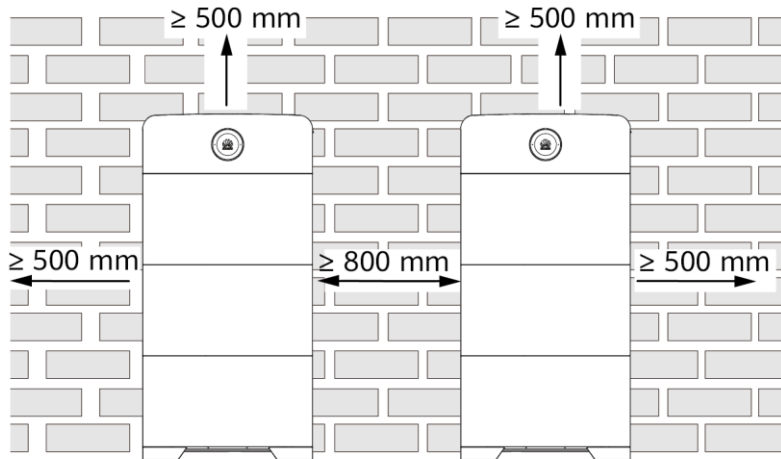
3.4 Installation Dimensions

Single Product Scenario



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Parallel Connection or Capacity Expansion Scenarios



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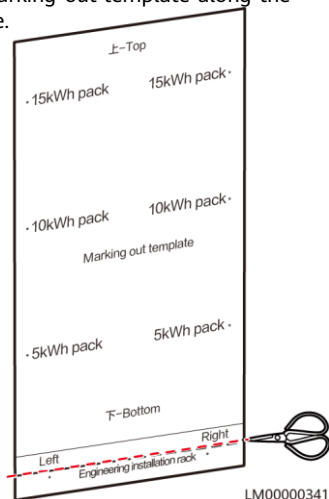
4 Installing a Mounting Bracket

Ground Mounting

NOTE

Two marking out templates are required for ground mounting. A small marking out template determines holes on the ground, and a large marking out template determines holes on the wall.

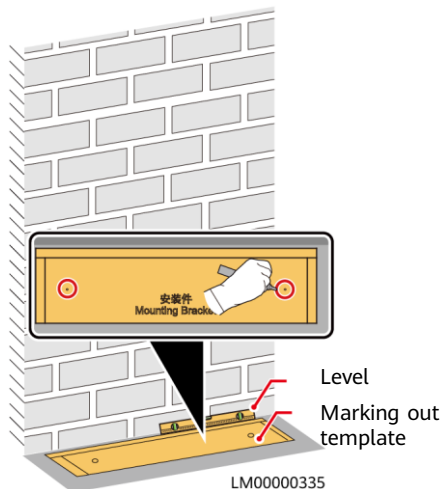
1. Cut the marking out template along the dotted line.



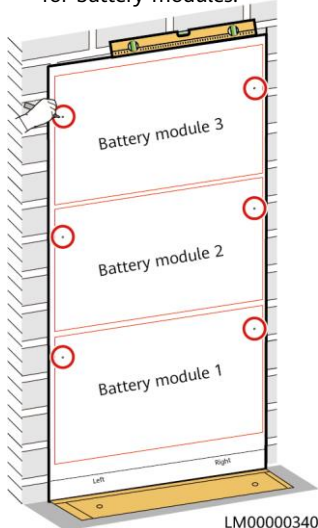
⚠ DANGER

The base must be secured to the ground using bolts. Otherwise, the device may tip over, causing personal injury or device damage.

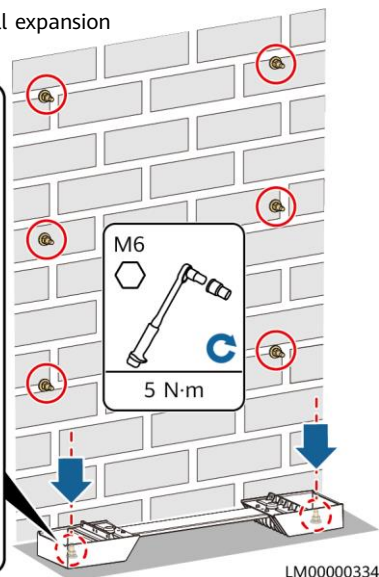
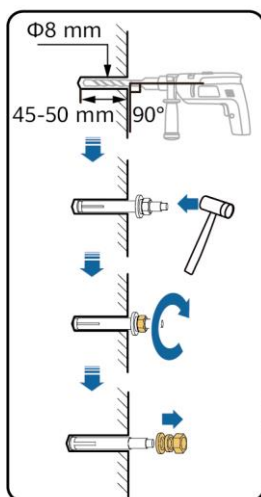
2. Mark mounting holes for the base.



3. Mark the mounting holes for battery modules.



4. Drill holes and install expansion bolts.



5 Installing Modules

5.1 Installing Battery Modules and Power Modules

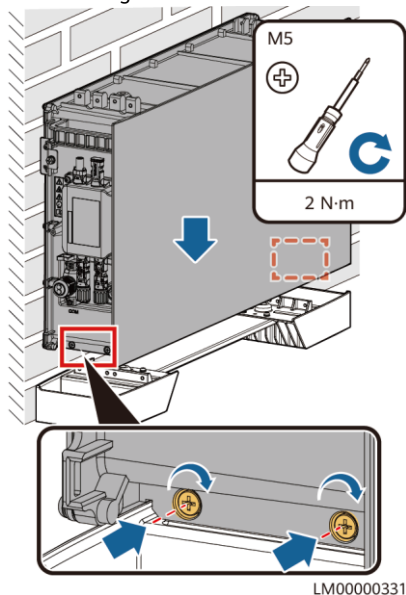
NOTICE

- Two persons are required to move a module.
- Battery modules must be secured to the wall.

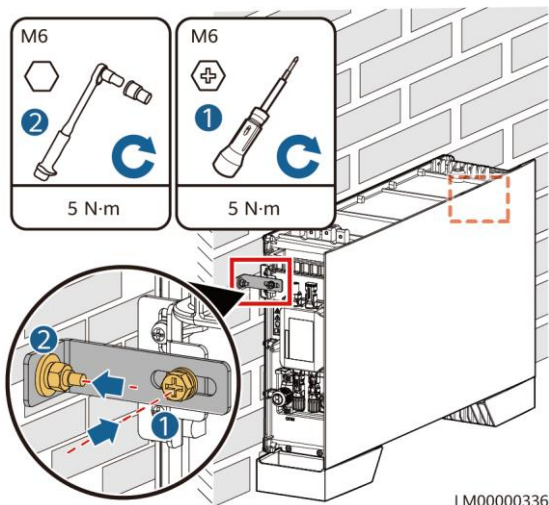
NOTE

This section describes how to install modules in the ground mounting scenario.

1. Install a battery module on the mounting base.



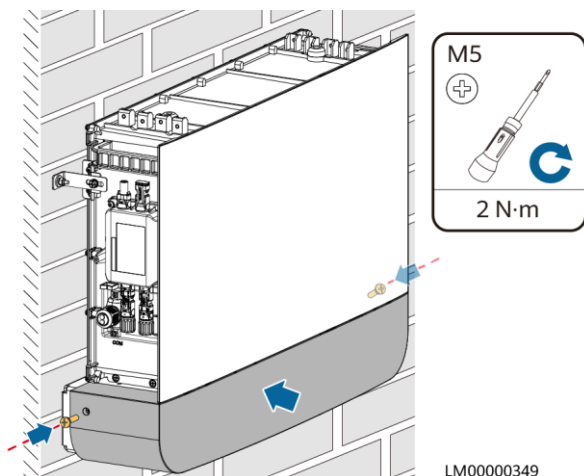
2. Secure the battery module to the wall.



3. Install a wall-mounting base cover.

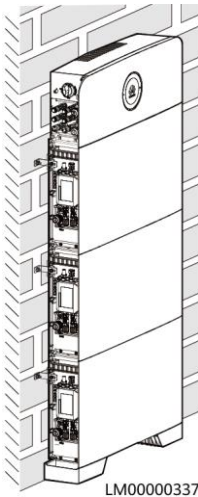
NOTICE

In the wall-mounting scenario, install battery modules before installing the wall-mounting base cover.



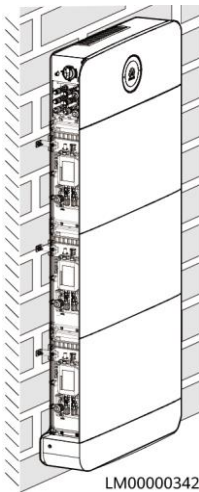
4. Install the remaining battery modules and power module from bottom to top. Each time a module is installed, tighten the screws on the left and right, and then secure it against the wall.

Ground mounting



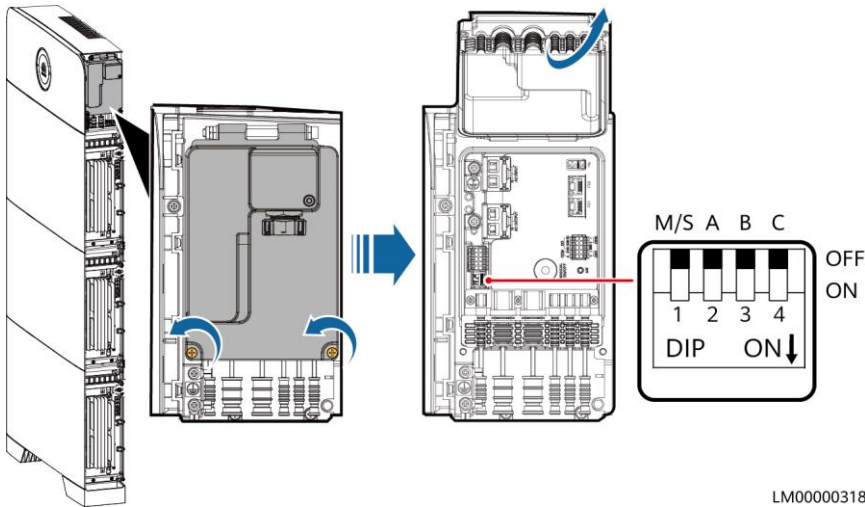
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Wall mounting



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5. Open the power module maintenance compartment and set the DIP switch address.



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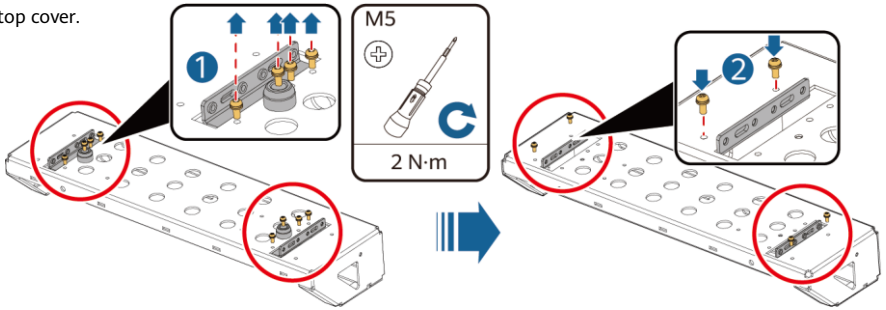
Scenario		DIP Switch Address	Pin 1 (M/S)	Pin 2 (A)	Pin 3 (B)	Pin 4 (C)
Single product		1	ON	OFF	OFF	OFF
Parallel products	Master	1	ON	OFF	OFF	OFF
	Slave 1	2	OFF	ON	OFF	OFF
	Slave 2	3	OFF	OFF	ON	OFF

5.2 (Optional) Installing Battery Modules for Capacity Expansion

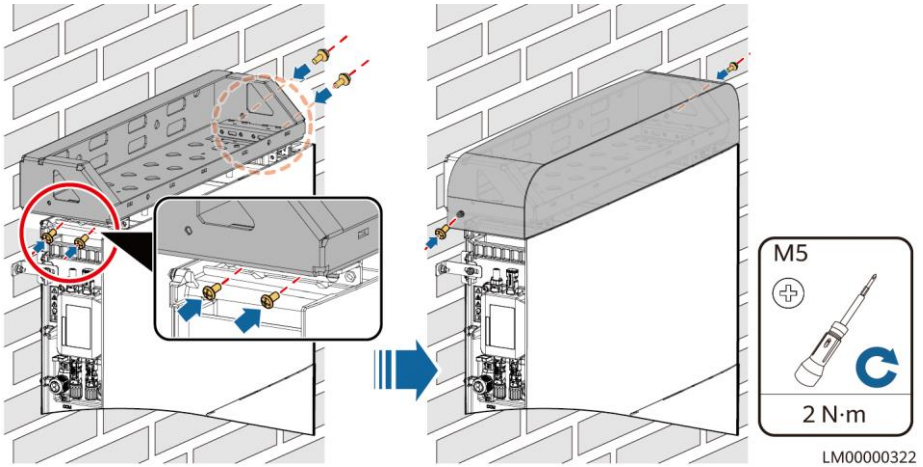
NOTICE

One bracket supports a maximum of three battery modules. If more than three battery modules are installed, an additional bracket is required.

1. Install the bracket and modules. For details, see chapters 3 and 4.1.
2. Remove the L-shaped plates from the top cover, rotate them by 180 degrees, and install them back on the top cover.

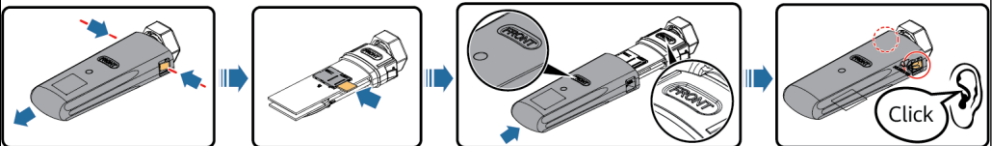


3. Install the top cover on the battery module.



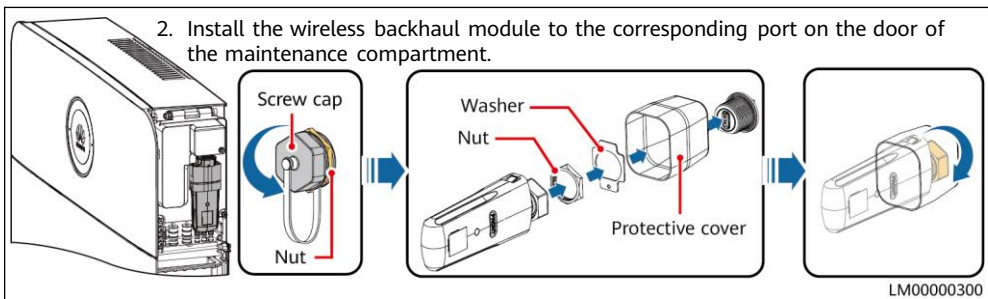
5.3 (Optional) Installing a Wireless Backhaul Module at the USB Port

1. Install a SIM card.



NOTICE

If you hear two clicks when installing a backhaul module, the module is properly installed. If the module is not properly installed, water may enter it.



6 Installing Cables

⚠ DANGER

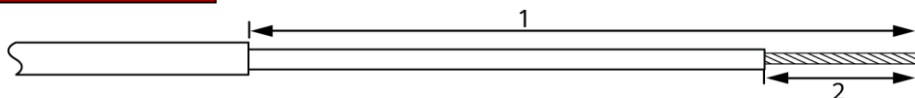
- Connect cables in accordance with local installation laws and regulations.
- Before connecting cables, ensure that the DC SWITCH on the power module and all the switches connected to the power module are set to OFF. Otherwise, the high voltage of the system may result in electric shocks.
- Do not touch the manual ON/OFF switch when installing cables.

6.1 Preparing Cables

Prepare cables of the required length based on the actual application scenario and device

No.	Cable	Type	Conductor Cross-Sectional Area Range	Outer Diameter
1	Solar input power cable	Common outdoor PV cable in the industry	4–6 mm ²	5.5–9 mm
2	AC input and output power cables	Outdoor three-core copper cable (L/N/PE)	4–6 mm ²	13.7–16.9 mm
3	Ground cable	Single-core outdoor copper cable	Main ground cable: 4–6 mm ² (same as the cross-sectional area of the AC input cable) Ground cable between battery modules (in capacity expansion scenarios): 6 mm ²	-
4	Dry contact signal cable	Outdoor shielded twisted pair cable (8 cores)	0.2–1 mm ²	6.3–7.5 mm

Stripping Length



Cable	1	2
PV input power cable	N/A	8–10 mm
AC input power cable	100 mm	PE wire: 7 mm; L/N wire: 17 mm
AC output power cable	75 mm	PE wire: 7 mm; L/N wire: 17 mm
Ground cable	N/A	7 mm

6.2 Installing Ground Cables

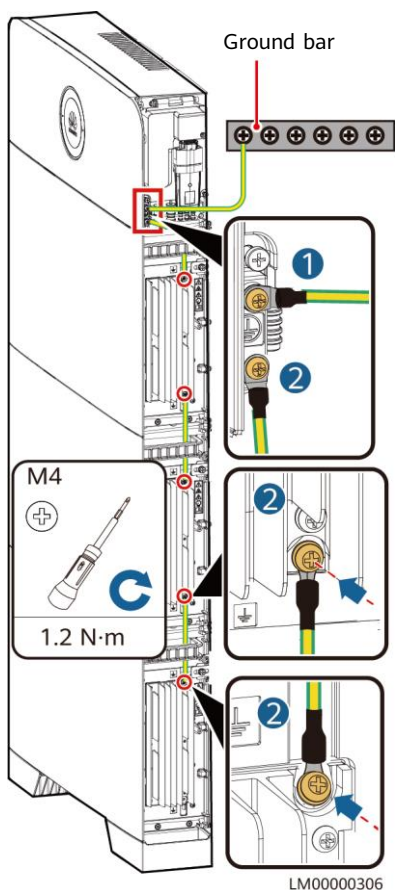
DANGER

- Ensure that the ground cables are installed securely. Inappropriate grounding may cause device damage and personal injury.
- Connect the ground point of the power module to the ground bar, and then connect equipotential cables between modules.

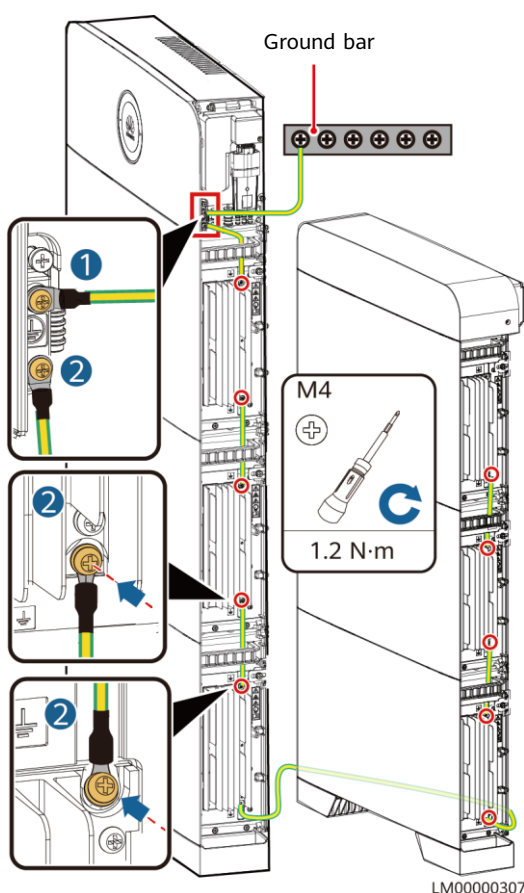
NOTICE

- In capacity expansion scenarios, cascading cables at the lower part must be be routed from the rear of the product.
- Cables outside the device must be routed through cable pipes.
- For details about how to prepare OT terminals, see the appendix.

Standard Scenario

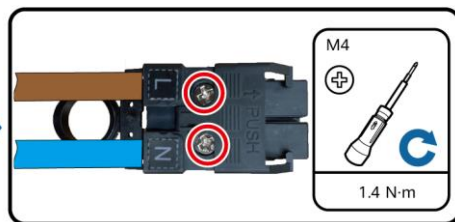
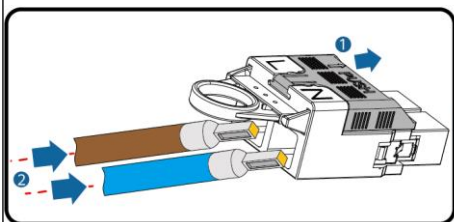


Capacity Expansion Scenario



6.3 Installing AC Input and Output Power Cables

1. Prepare cable terminals by referring to the appendix. Connect AC power cables to the terminal connectors.

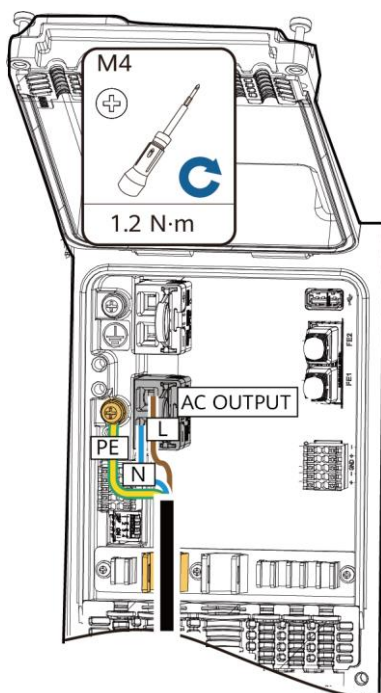


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⚠ DANGER

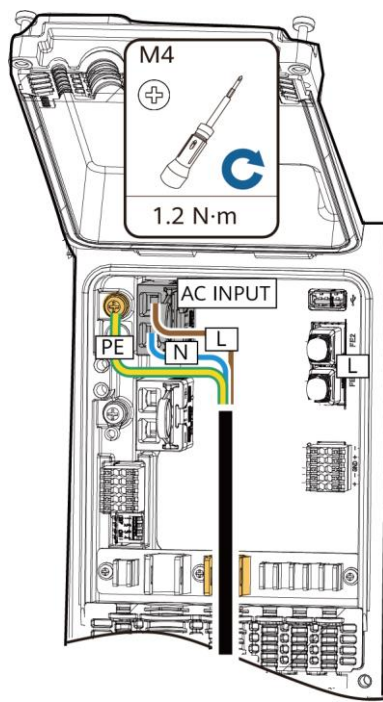
Before installing an AC input power cable, ensure that the upstream AC input switch is turned off and a prominent label indicating "Do not operate" is set.

2. Install the AC output power cable and secure the cable using cable clips.



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3. Install the AC input power cable and secure the cable using cable clips.



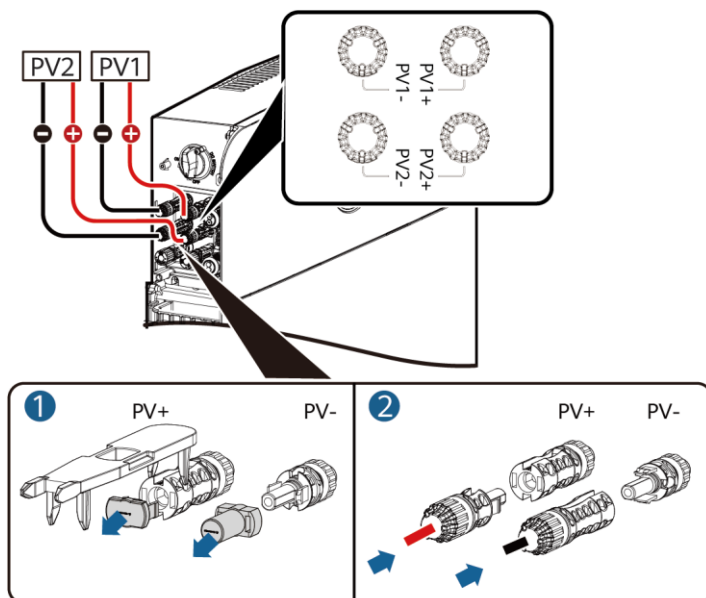
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6.4 Installing PV Input Power Cables

1. Use a wrench to remove the waterproof gland from the PV input terminal on the power module.
2. Install the PV input power cables.

NOTE

- Take the disassembly wrench out of the decorative cover.
- Prepare cable terminals by referring to the appendix.



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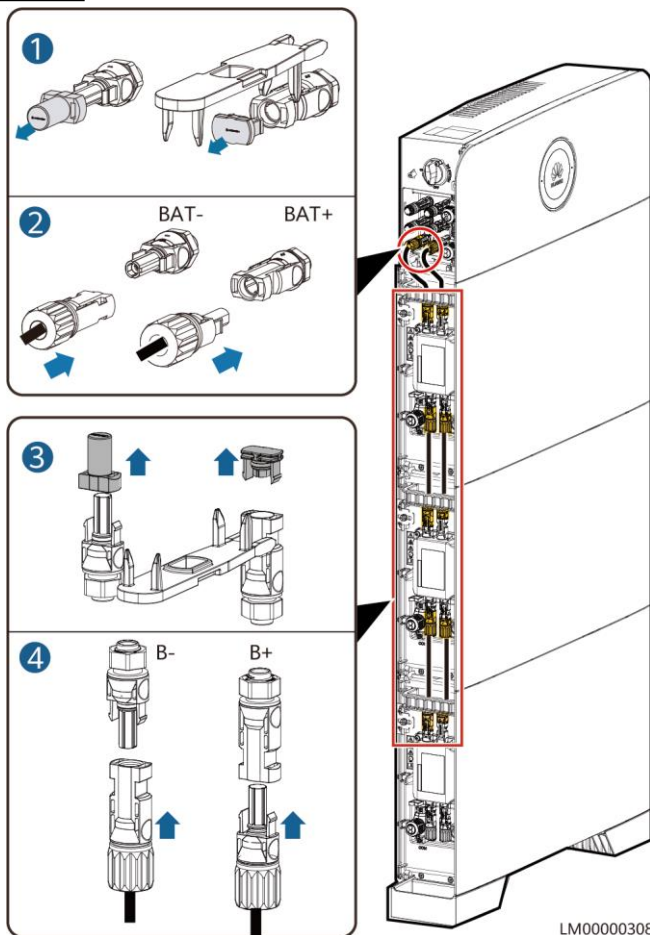
6.5 Installing Battery Module Power Cables

1. Use a wrench to remove the waterproof glands from the cascading terminals of the battery modules.
2. Install power cables for the battery modules.
3. Use a wrench to remove the waterproof gland from the power module.
4. Install power cables between the battery module and power module.

NOTE

Take the disassembly wrench out of the decorative cover.

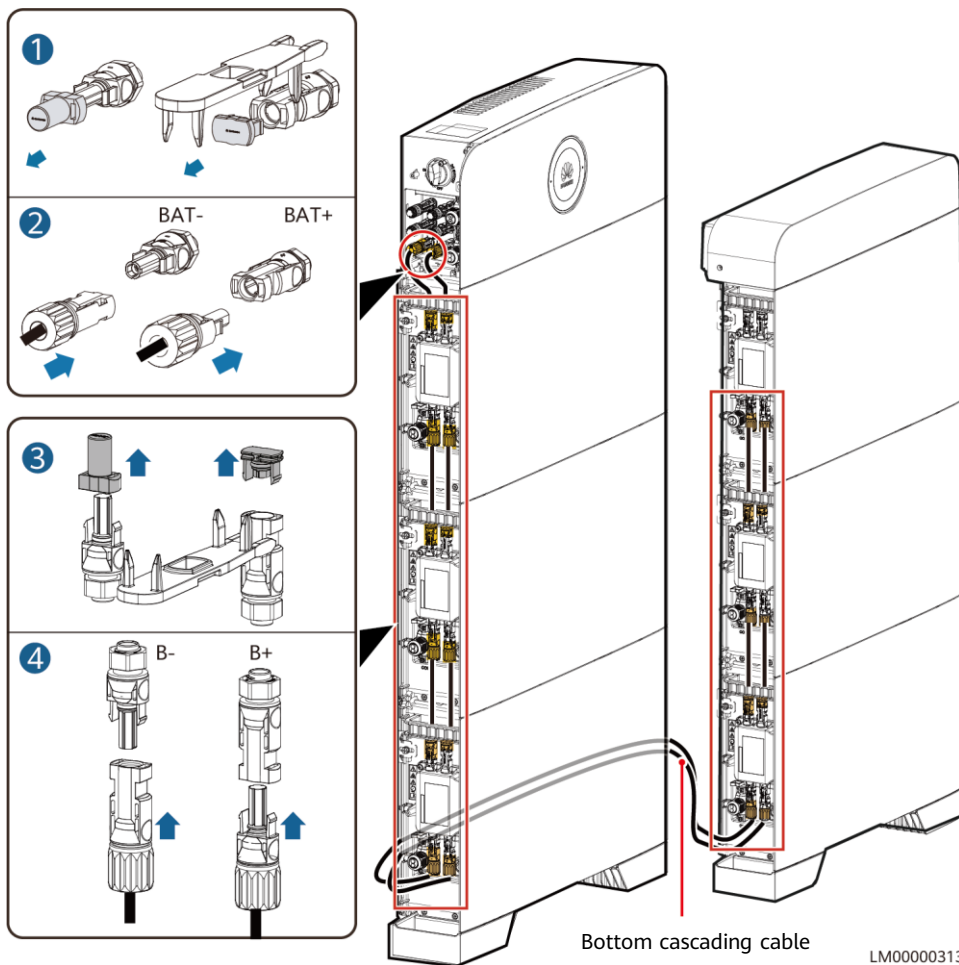
Standard Scenario



Capacity Expansion Scenario

NOTICE

- In capacity expansion scenarios, you need to separately purchase bottom cascading cables from Huawei Digital Power.
- In capacity expansion scenarios, cascading cables at the lower part must be routed from the rear of the product.
- Cables outside the device must be routed through cable pipes.



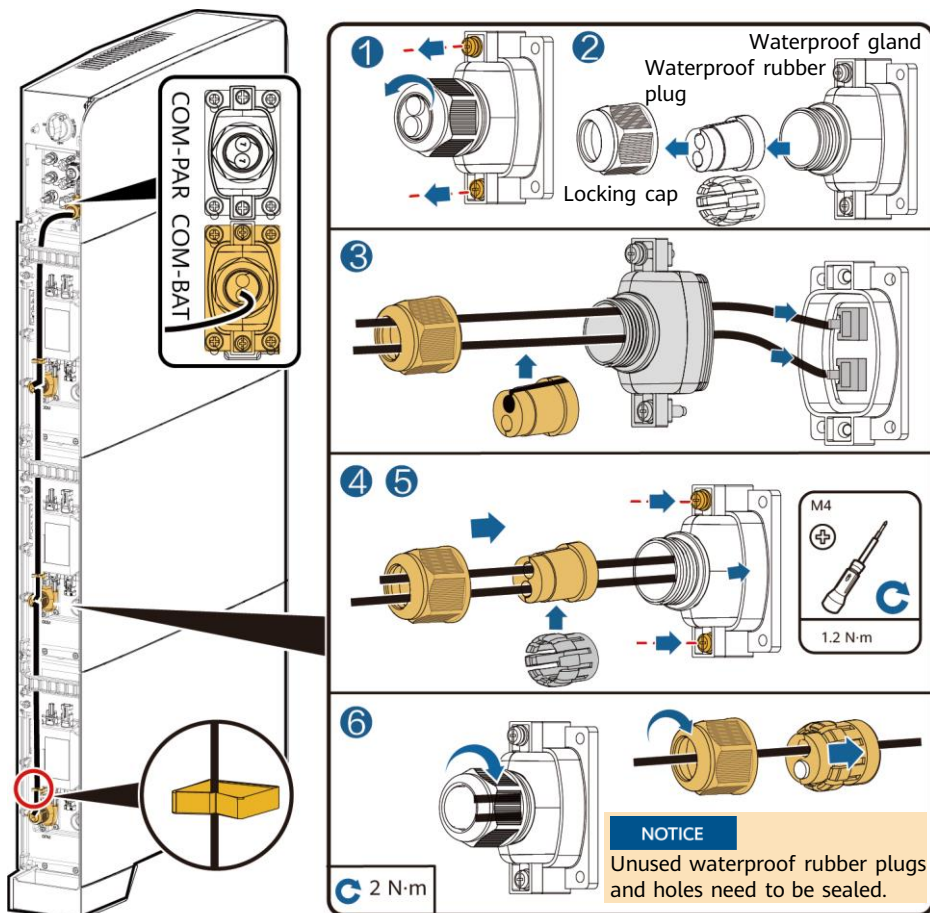
6.6 Installing Battery Module Signal Cables

NOTICE

When a communications terminal is connected to a single network cable, a waterproof rubber plug must be installed.

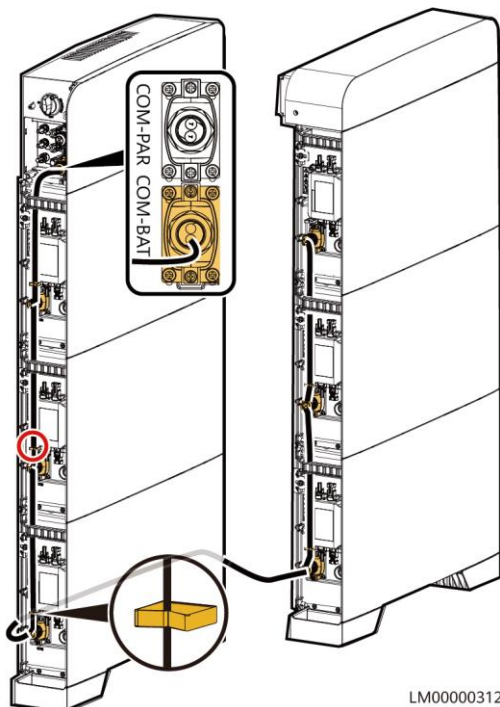
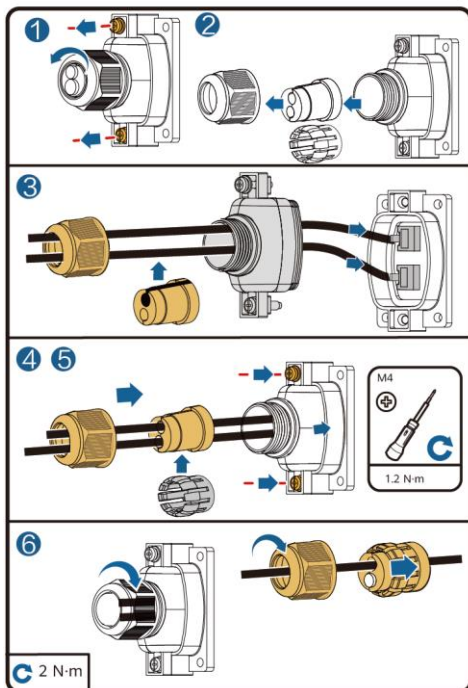
1. Remove the waterproof gland from the communications terminal of a battery module.
2. Remove the locking cap and waterproof rubber plug from the communications terminal housing.
3. Install a communications cable for the battery module.
4. Lock the communications terminal waterproof gland.
5. Reinstall the waterproof rubber plug.
6. Tighten the locking cap and secure the signal cable using cable clips.
7. Install communications cables for other battery modules in sequence.

Standard Scenario



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Capacity Expansion Scenario

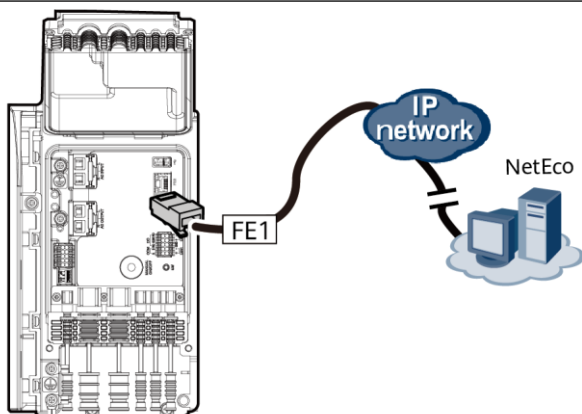


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NOTICE

- In capacity expansion scenarios, cascading cables at the lower part must be routed from the rear of the product.
- Cables outside the device must be routed through cable pipes.

6.7 Installing Power Module Communications Cable



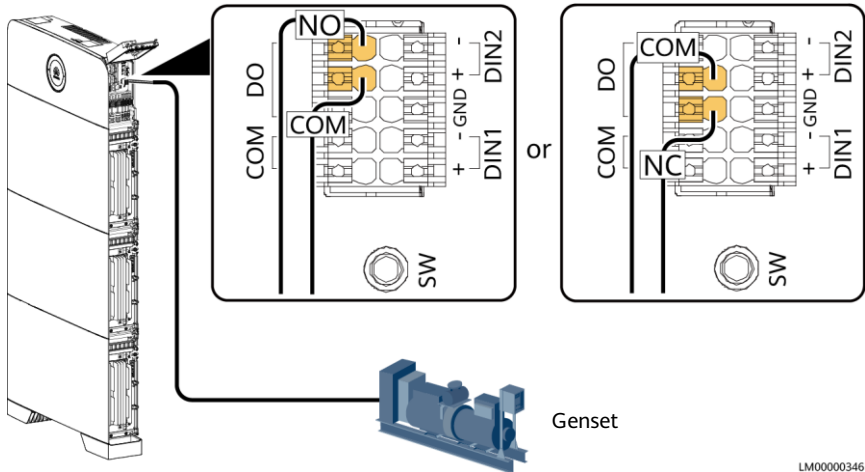
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6.8 Installing a Genset Control Signal Cable

NOTICE

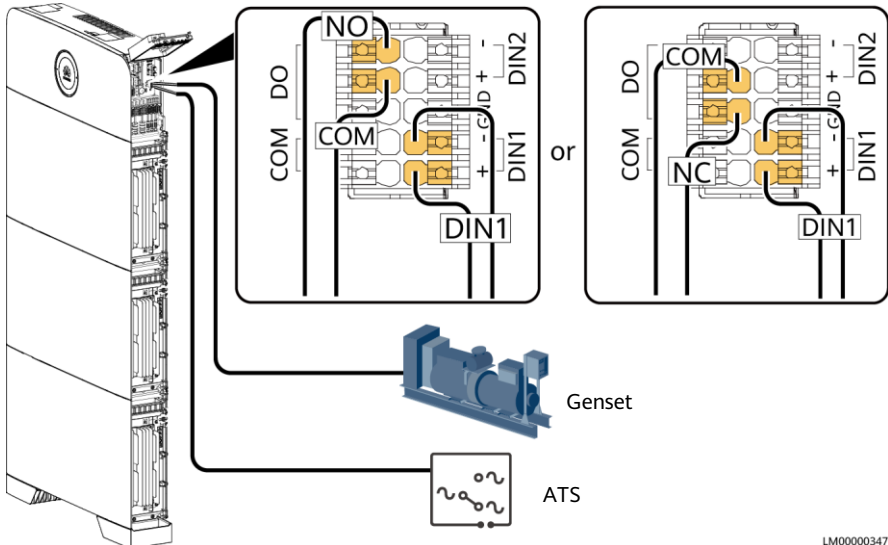
- For a generator set (genset) that starts when the dry contact is open, connect the signal cable to ports NO and COM. For a genset that starts when the dry contact is closed, connect the signal cable to ports NC and COM.
- In the genset + mains scenario, the ATS must support the mains detection function. Connect the mains detection cable of the ATS to the dry contact port DIN1.

Genset-Only Scenario



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Genset + Mains Scenario



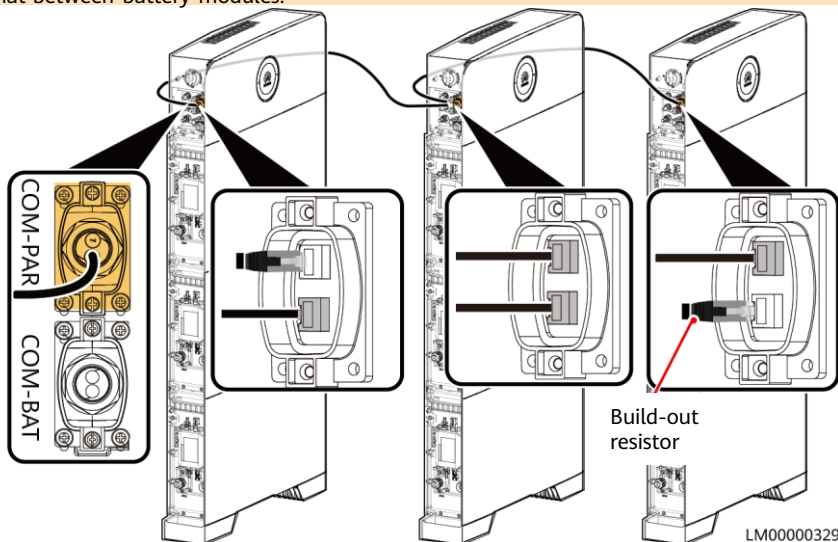
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7 (Optional) Parallel Connection Scenario

7.1 Installing Communications Cables Between Parallel Power Modules

NOTE

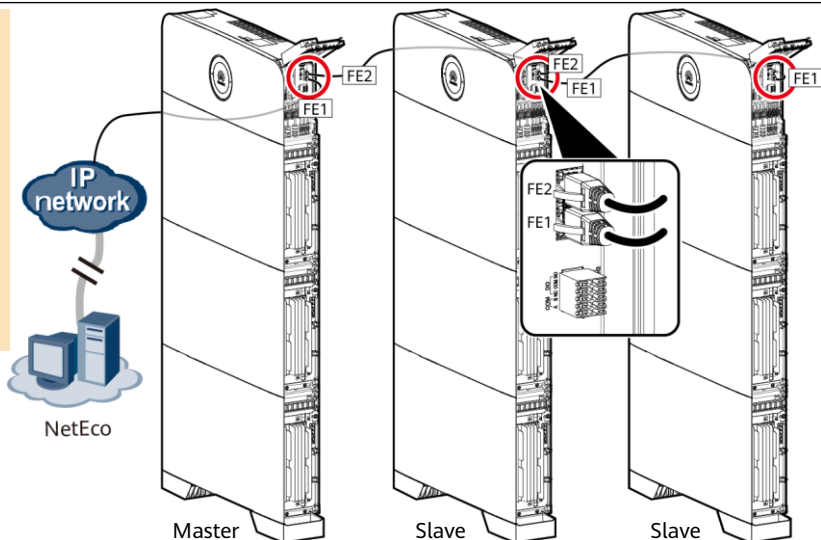
- When installing communications cables between parallel power modules, install build-out resistors at the first level and last level.
- The length of a single communications cable cannot exceed 3 m.
- The method of installing communications cables between power modules is the same as that between battery modules.



7.2 Installing Monitoring Communications Cables in a Parallel System

NOTICE

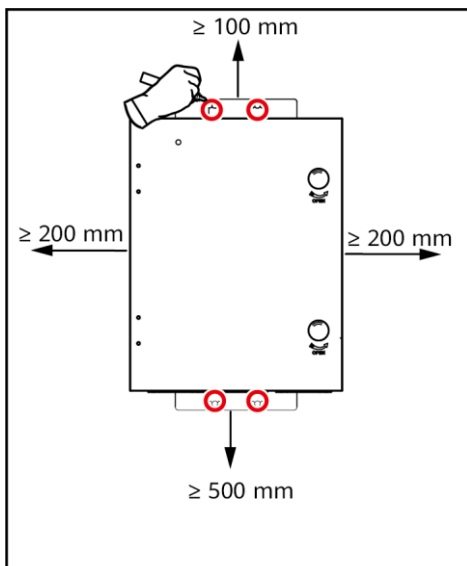
Only the FE ports with the same silk screen can be used for cascading between the master and slave devices and between slave devices.



7.3 Installing an AC Parallel Box

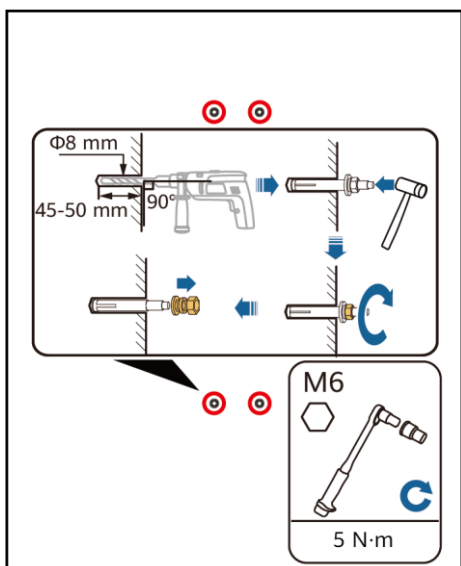
The AC parallel box is used for paralleling of power modules to increase the system power. A maximum of three power modules can be connected in parallel.

1. Mark mounting holes.



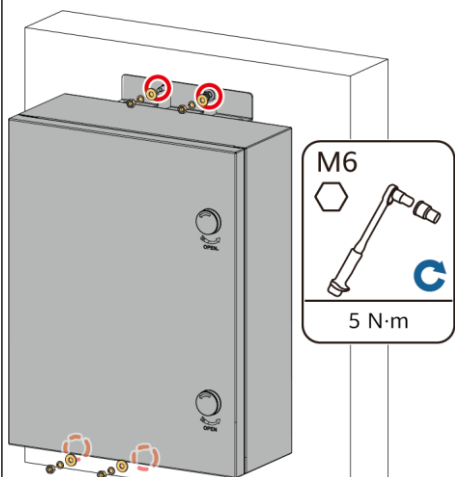
LM00000323

2. Install expansion bolts.



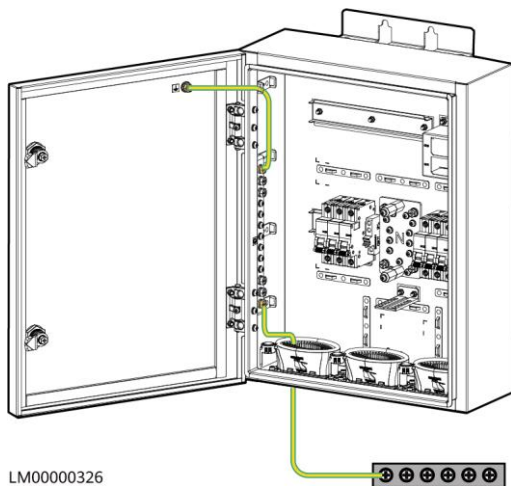
LM00000324

3. Install the AC parallel box on the wall.



LM00000325

4. Install a ground cable for the AC parallel box.



LM00000326

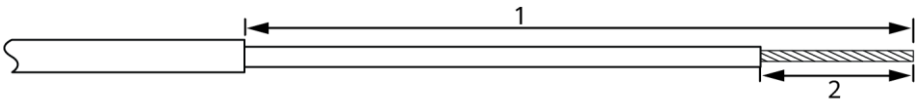
Ground bar

7.4 Preparing Cables

Prepare cables for the parallel box.

No.	Cable	Type	Conductor Cross-Sectional Area Range	Outer Diameter
1	AC input power cable from the mains input to the parallel box	Outdoor three-core copper cable (L/N/PE)	25 mm ²	16–26 mm
2	Cable from the parallel box to the AC input port of the iSitePower-M	Outdoor three-core copper cable (L/N/PE)	4–6 mm ²	13.7–16.9 mm
3	Cable from the AC output port of the iSitePower-M to the parallel box	Outdoor three-core copper cable (L/N/PE)	4–6 mm ²	13.7–16.9 mm
4	AC output power cable from the parallel box to the load	Outdoor three-core copper cable (L/N/PE)	25 mm ²	16–26 mm
5	Main ground cable of the parallel box	Outdoor single-core copper cable	25 mm ²	8–11 mm

Stripping Length



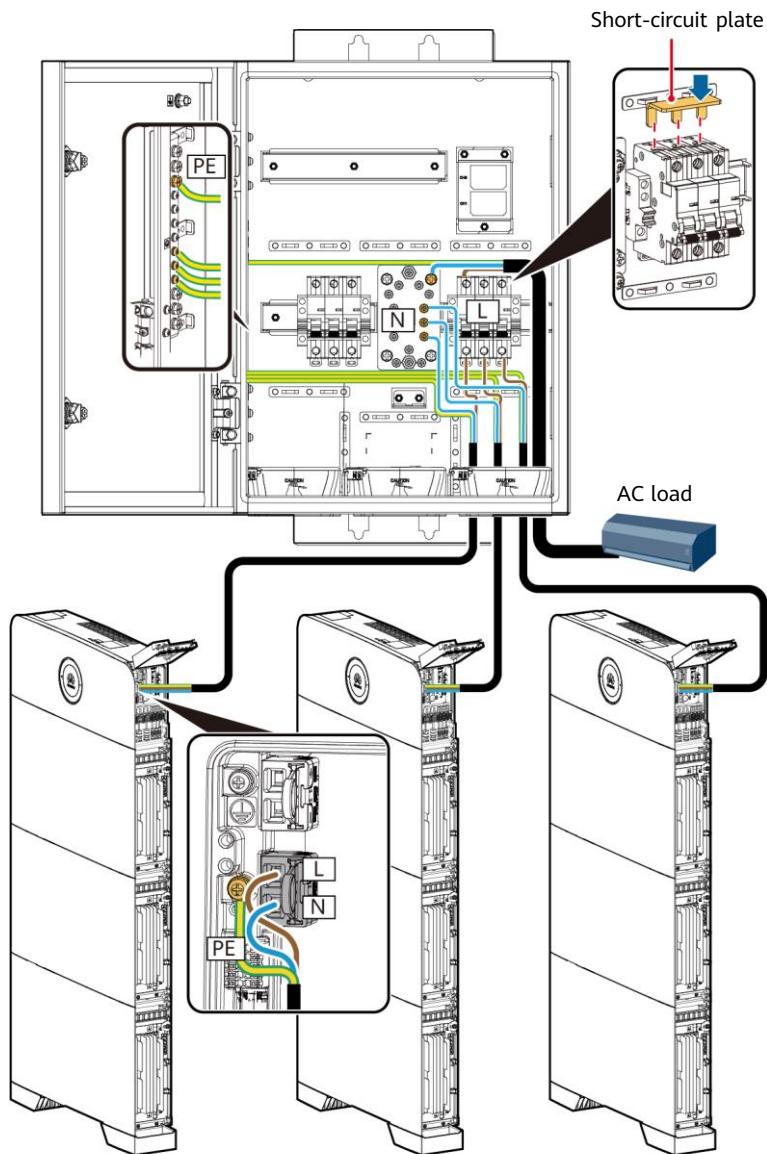
LM00000301

No.	Cable	1	2
1	AC input power cable from the mains input to the parallel box	L wire: 120 mm N wire: 120 mm PE wire: 140 mm	L wire: 16 mm N wire: 14 mm PE wire: 14 mm
2	Cable from the parallel box to the AC input port of the iSitePower-M	L wire: 410 mm N wire: 340 mm PE wire: 240 mm	L wire: 12 mm N wire: 7 mm PE wire: 7 mm
3	Cable from the AC output port of the iSitePower-M to the parallel box	L wire: 115 mm N wire: 220 mm PE wire: 370 mm	L wire: 12 mm N wire: 7 mm PE wire: 7 mm
4	AC output power cable from the parallel box to the load	L wire: 300 mm N wire: 325 mm PE wire: 580 mm	L wire: 16 mm N wire: 14 mm PE wire: 14 mm
5	Main ground cable of the parallel box	N/A	14 mm

7.5 Installing AC Output Power Cables in a Parallel System

NOTICE

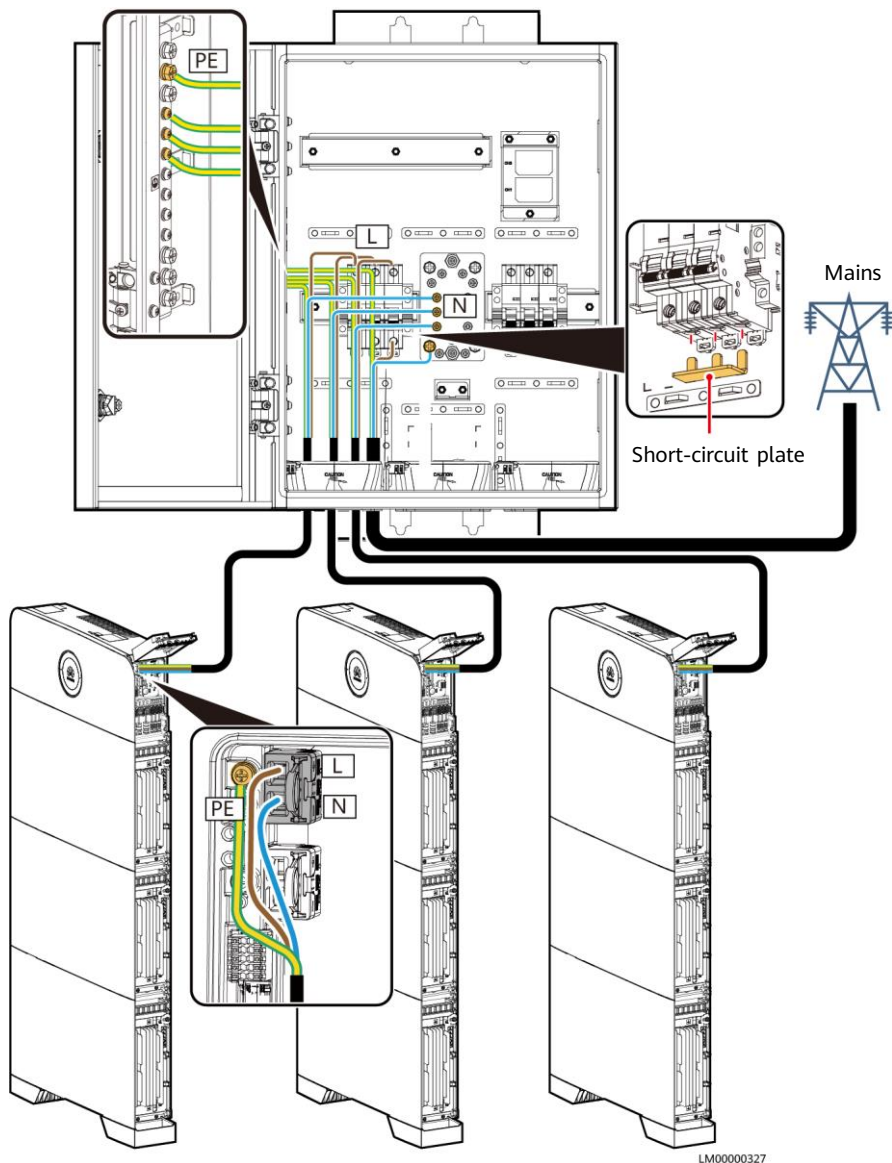
- Install a short-circuit plate for AC output circuit breakers.
- The three cables from the AC output circuit breakers to the power modules must be of the same length.



7.6 Installing AC Input Power Cables in a Parallel System

NOTICE

- Install a short-circuit plate for AC input circuit breakers.
- The three cables from the AC input circuit breakers to the power modules must be of the same length.



8 Verifying the Installation

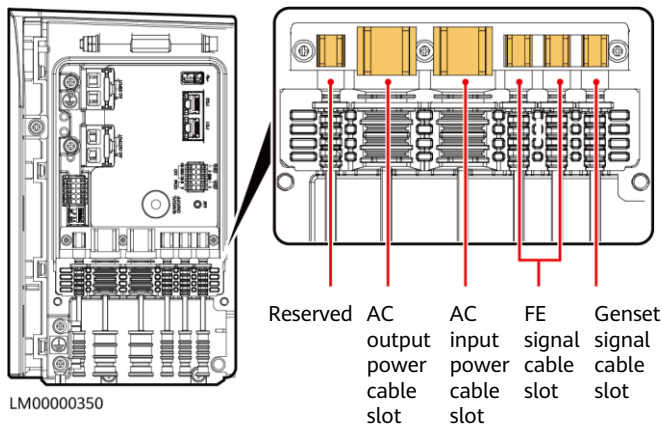
8.1 Verifying the Installation

No.	Expected Result
1	The installation is correct and reliable.
2	Cables are routed properly as required by the customer.
3	Cable ties are evenly spaced, and no sharp burrs are left at the cut points.
4	Power cables, signal cables, and ground cables are connected correctly and securely.
5	The DC SWITCH and all switches connected to the product are OFF.
6	Unused terminals and ports are covered by watertight caps.
7	The disassembly wrench is placed in the original position in the decorative cover.
8	The installation space is proper, and the installation environment is clean and tidy.

8.2 Arranging Cables

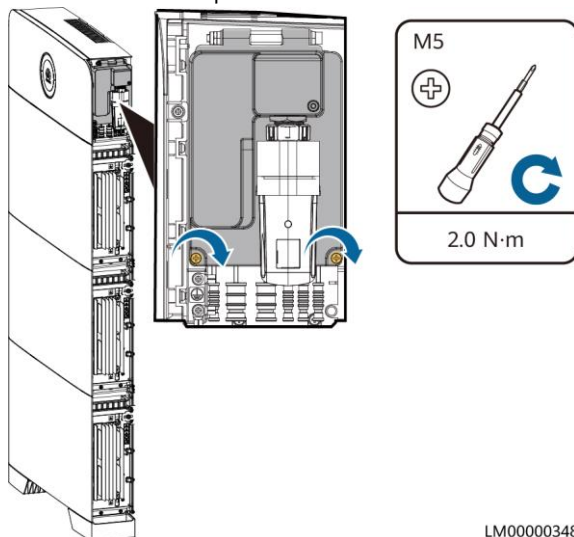
NOTICE

Check that the cables are correctly connected. Then fasten the cables to the corresponding cable slots.

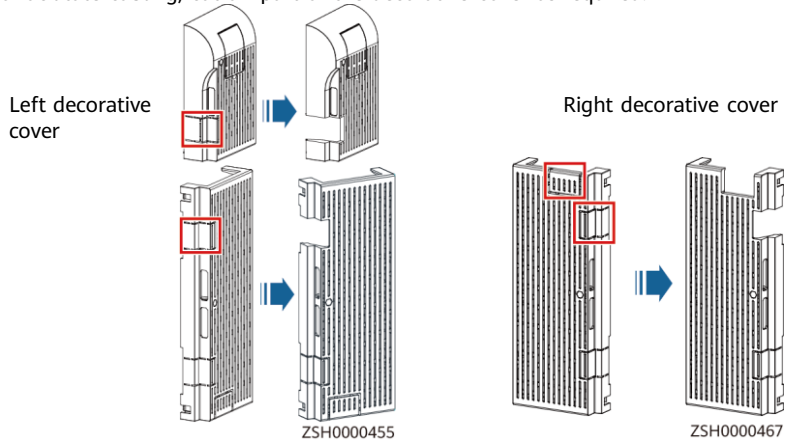


8.3 Subsequent Operations

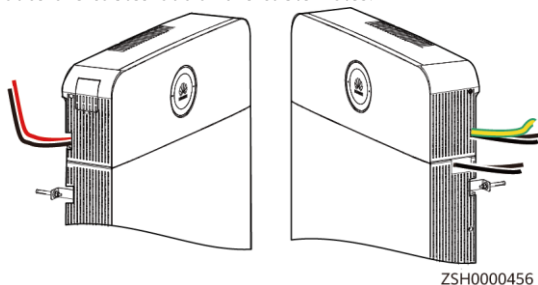
1. Close and lock the maintenance compartment door.



2. To facilitate cabling, cut off part of the decorative cover as required.



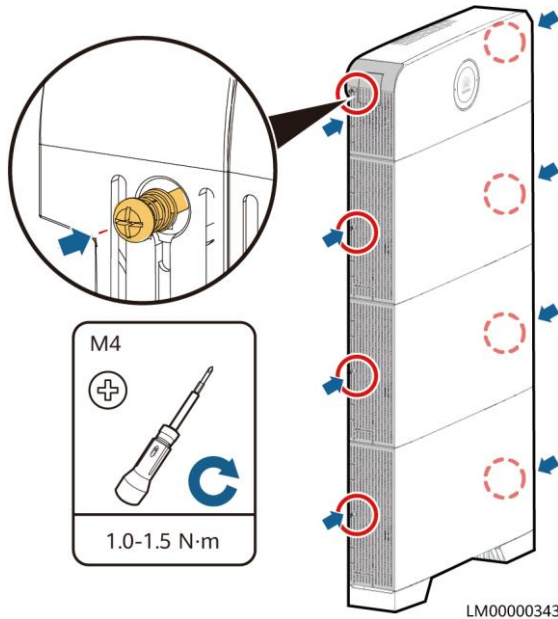
3. Route the cables out of the cable holes.



NOTICE

The outlet positions shown in the figure are for reference only. Select an appropriate cable outlet based on the actual cable thickness.

4. Tighten the screws.



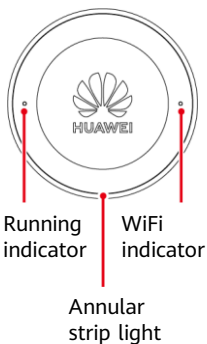
9 Power-On Commissioning

9.1 Powering On the System

NOTICE

- The product must be powered on within 24 hours after being unpacked. During maintenance, the power-off time cannot exceed 24 hours.
- If there is no AC input or no PV module is configured, press the manual ON/OFF switch first.

Set the DC SWITCH of the power module and the AC input switch to ON. After the initial installation and power-on, observe the indicators to check the running status.



Indicator	Status	Description
Running indicator	Steady on in green	The power system is running properly.
	Off	<ul style="list-style-type: none">• The power system is not running.• The power system is faulty.• The power system has no input current.
	Steady on in red	The power system is running properly, but an alarm is generated.
WiFi indicator	Off	The WiFi function is abnormal.
	Steady on in green	The WiFi function is normal.
Annular strip light	Steady on in green	Indicates the battery capacity and that the product is discharging.

9.2 Downloading and Installing the App

NOTICE

- The app supports only mobile phones running Android 8.0 or later.
- The app cannot be installed on a tablet or a device with the foldable screen or landscape screen.

Method 1: Search for **NetEco** in Huawei App Galley and download the latest installation package.

Method 2: Scan the QR code and download the latest installation package.



NetEco

9.3 New Site Deployment

Register an installer, commission the app, create a site, and perform other operations by referring to the *iSitePower-M App Quick Guide*. You can scan the QR code to obtain the *iSitePower-M App Quick Guide*.



10 Statement

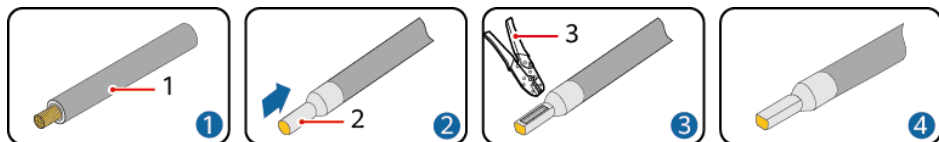
1. The information in this document is subject to change. Every effort has been made in the preparation of this document to ensure accuracy of the contents. All statements, information, and recommendations in this document do not constitute a warranty of any kind. You can download this document by scanning the QR code.
2. Before installing the device, read the user manual carefully to get familiar with product information and safety precautions.
3. Only certified electricians are allowed to operate the device. Operation personnel must wear proper personal protective equipment (PPE).
4. Before installing the device, check that the package contents are intact and complete against the packing list. If any item is missing or damaged, contact your dealer.
5. The device damage caused by the violation of instructions in this document is not covered under warranty.
6. The cable colors involved in this document are for reference only. Select cables in accordance with local cable specifications.



Appendix

Preparing Terminals

Preparing a Cord End Terminal



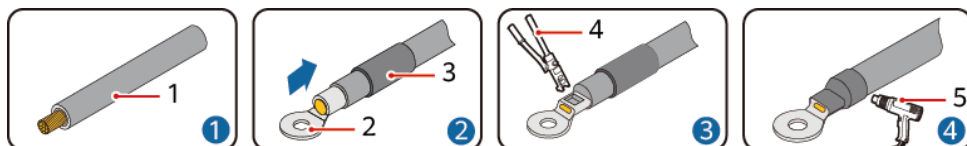
HD002C1001

(1) Cable

(2) Cord end terminal

(3) Crimping tool

Preparing an OT Terminal



HD002C1002

(1) Cable

(2) OT terminal

(3) Heat-shrink tubing

(4) Hydraulic pliers

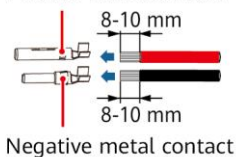
(5) Heat gun

Preparing PV Input Terminals

NOTICE

- A PV-CZM-41100 crimping tool is recommended.
- Ensure that the cable cannot be pulled out after being crimped.
- Use the wrench shown in the figure to tighten the locking nut. When the wrench slips during the tightening, the locking nut has been tightened.

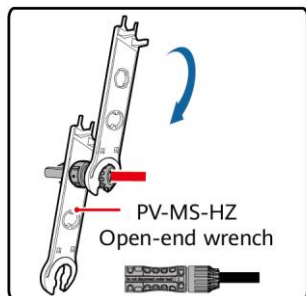
Positive metal contact



Negative metal contact



PV-CZM-41100 /
PV-CZM-22100



PV-MS-HZ
Open-end wrench

Positive connector



Negative connector



LM00000314

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