1. About This Guide

1.1 Purpose

This guide describes Anker SOLIX X1 in terms of unboxing, product overview, installation, electrical connections, commissioning, screen and light guide, maintenance, customer service, system information, and safety guidelines.
Anker SOLIX X1 includes one or more power modules and battery modules.

• A power module can support up to six battery modules.

Model	Product Name	Shortened Form
X1-P6K-S	Anker SOLIX X1 Power Module	Power module
X1-B5-H0	Anker SOLIX X1 Battery Module	Battery module

1.2 Intended Audience

This guide is intended for:

• Sales engineers
• System engineers
• Technical support engineers

2. Unboxing

2.1 Check Before Installation

Check the Outer Packing

Before unpacking the equipment, check the outer packing for damage, such as holes and cracks, and check the equipment model. If any damage is found or the model is not what you requested, do not unpack the equipment and contact the supplier as soon as possible.

Check Deliverables

After unpacking the equipment, check that the deliverables are intact and complete, and free from any obvious damage. The deliverables may vary due to batch variations. Please refer to the packing list for the actual packaged items. If any item is missing or damaged, contact the supplier.

2.2 In the Power Module Box

No.	Item	Specifications	Amount
1	Power Module	X1-P6K-S	1
2	WLAN Dongle	DG-WF-H	1
3	Heat Shrink Tubing	Black Caliber: 8 mm Length: 25 mm	1
4	Module Interlocker	38×17×2.5 mm	2
5	Wall Mount Bracket	575×65×26 mm	1
6	Floor Mounting Base	For Floor Mounting 670×150×75 mm	1
7	Left Side Cover	133×24.5×335 mm	1
8	Right Side Cover	133×24.5×335 mm	1
9	Male Dust Cap	Black 10.6×7.6×3.8 mm	1
10	Female Dust Cap	Black 19.3×25×8.3 mm	1
11	3-Pin Terminal Block Connector	7.5×11.75×19.2 mm	2
12	2-Pin Terminal Block Connector	5×11.75×19.2 mm	1
13	AC Connector	Off-White 3 Pins 76.7 mm	1

14	AC Connector	Black 3 Pins 76.7 mm	1
15	RJ45 Connector with 2×120Ω Resistors	8 Pins Black	1
16	RJ45 Connector	8 Pins	3
17	Insulated Tube Terminal (COM)	For Signal Cables (0.2-0.35 mm^2)	12
18	Insulated Tube Terminal (Meter)	For Meter Signal Cables (0.2-0.5 mm^2)	2
19	Insulated Tube Terminal (AC)	Length: 19.5 mm For AC Cables (6 mm^2)	7
20	Ring Terminal	RNB5.5-5	1
21	Self-Tapping Screw with Plastic Anchor	M6×50 mm	2
22	Wedge Shim	118 × 40 × 7 mm	1
23	Bolt	M5×14 mm	7
24	Flat Washer	M12	3
25	Packing List	/	2
26	Quick Installation Guide	/	1
27	Inspection Report	/	1
28	Positioning Card	/	1
29	Safety Instructions	/	1

2.3 In the Battery Module Box

No.	Item	Specifications	Amount
1	Battery Module	X1-B5-H0	1
2	Rubber Plug	For Side Cover	2
3	RJ45 Signal Cable	Black	1
4	Module Interlocker	38 × 17 × 2.5 mm	2
5	Side Cover	Black 360 × 117.4 × 21.8 mm	2
6	Negative DC Power Cable	Length: 130 mm 8 mm^2 Black	1
7	Positive DC Power Cable	Length: 130 mm 8 mm^2 Red	1
8	GND Cable	6 mm^2 Yellow/Green	1
9	Wall Mount Bracket	575 × 65 × 26 mm	1
10	Bolt	M5×14 mm	7
11	Self-Tapping Screw with Plastic Anchor	M6×50 mm	2
12	Packing List	/	1
13	Inspection Report	/	1
14	Safety Instructions	/	1

2.4 Optional Accessories and Service Parts

The following accessories must be ordered separately. Some service parts, such as the side covers and wall mount brackets, can be replaced during field installation in accordance with the instructions provided in this guide.

Wall-Mount Kit

No.	Item	Specifications	Amount
1	Bracket Holder	155.5×65×240 mm	2
2	Baseplate	670×150×51.5 mm	1
3	Left Baseplate Baffle	143.5×24×50 mm	1
4	Right Baseplate Baffle	143.5×24×50 mm	1
5	Screw	M8×70 mm	4
6	Screw	M4×10 mm	8

Top Cover Kit

No.	Item	Specifications	Amount
1	Battery Module Top Cover	670×150×51.5 mm	1
2	Top Cover Baffle	145.6×50.5×10 mm	2
3	Module Interlocker	38×17×2.5 mm	2
4	Screw	M4×10 mm	8
5	Screw	M5×14 mm	6

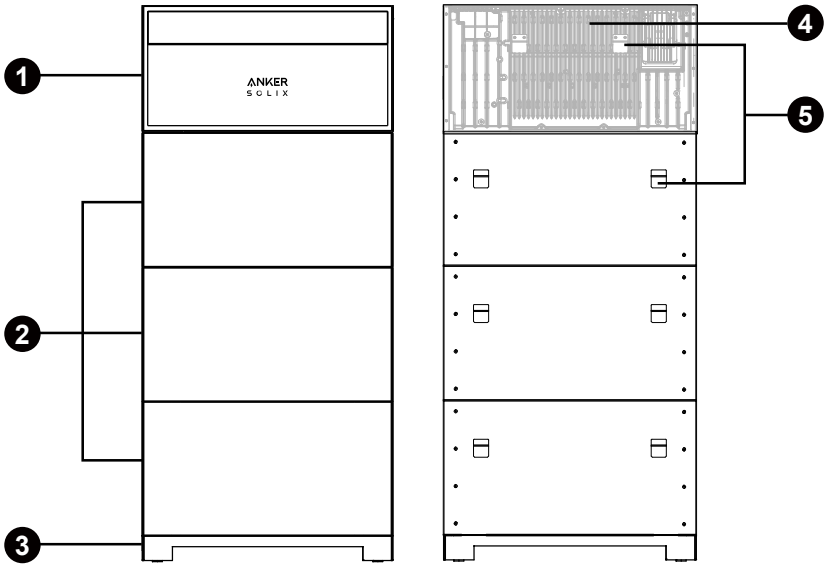
2nd Column Battery Module Accessory Kit

No.	Item	Specifications	Amount
1	RJ45 Connector	8 Pins	2
2	Positive DC Power Connector	For 8 mm^2 Cable	2
3	Negative DC Power Connector	For 8 mm^2 Cable	2
4	Ring Terminal	RNB5.5-5	2
5	Heat Shrink Tubing	Black Caliber: 8 mm Length: 25 mm	2
6	Screw	M5×14 mm	2

3. At a Glance

3.1 Anker SOLIX X1

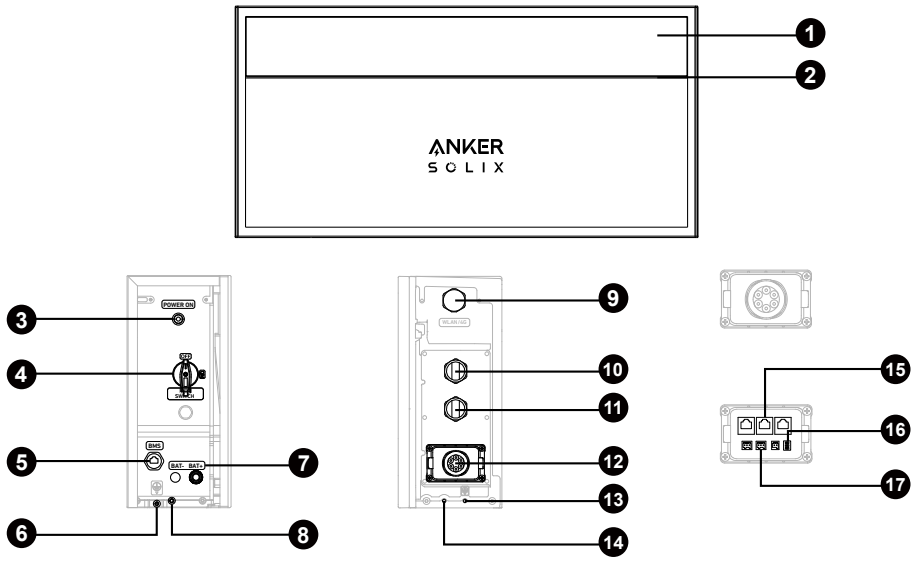
Figure: Appearance of the Anker SOLIX X1.



1. Power module
2. Battery modules
3. Floor mounting base (for floor mounting)
   - Use the baseplate for wall mounting.
4. Heat sink
5. Wall-mount cleats

3.2 Power Module

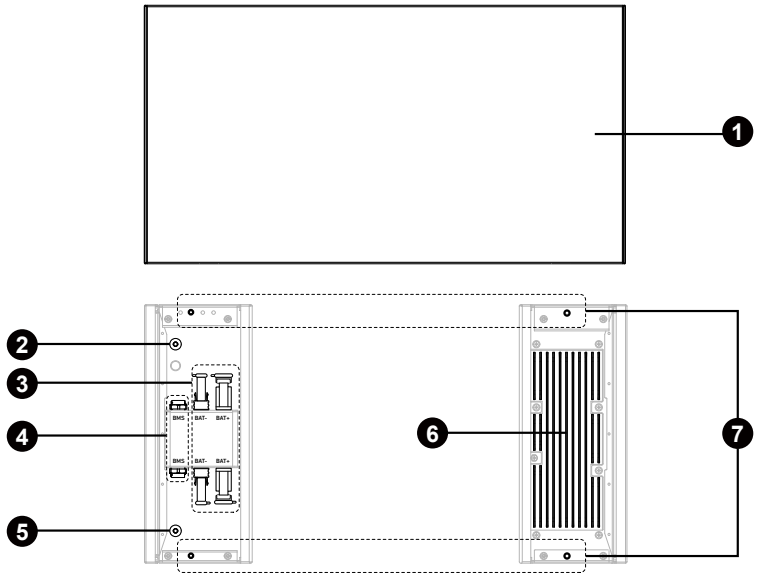
Figure: Appearance of the power module.



1. LED screen
2. Status light
3. Black start button
4. BAT switch
5. BMS port
6. Internal ground point
7. DC power ports (BAT+ / BAT–)
8. Screw hole for locking modules
9. WLAN / 4G port
10. AC grid port
11. AC backup port
12. Wiring compartment cover
13. External ground point
14. Screw hole for locking modules
15. COM ports (DRM / PCS_COM2 / PCS_COM1)
16. DIP switches
17. COM terminals (NC1 / NC2 / Meter)

3.3 Battery Module

Figure: Appearance of the battery module.



1. Battery module
2. Internal ground point
3. DC power ports (BAT+ / BAT–)
4. BMS ports
5. Internal ground point
6. Heat sink
7. Screw holes for locking modules

4. Pre-Installation

4.1 Select an Installation Site

1. Environment Requirements:

- Do not place the modules near a wall facing the maximum sunlight direction (usually south for the northern hemisphere, or north for the southern hemisphere) or in an area exposed to direct sunlight, fire, or explosive materials.
- Ensure the site is protected from potential hazards such as floods.
- The maximum operating altitude is 4,000 m.
- Do not install equipment in living spaces or habitable areas of dwelling units, such as living rooms.
- Do not install the equipment outdoors in salt-affected areas to prevent corrosion. These areas typically include regions within 300 (± 50) meters of the coast or prone to sea breezes*. In such areas, install the equipment indoors or in a sheltered location.

  *Note: Regions prone to sea breezes may vary depending on weather conditions (e.g., typhoons, monsoons) and terrain features (e.g., dams, hills).

2. Load-Bearing Requirements:

The power and battery modules can be installed on either the floor or wall, while the backup controller is exclusively wall-mountable.

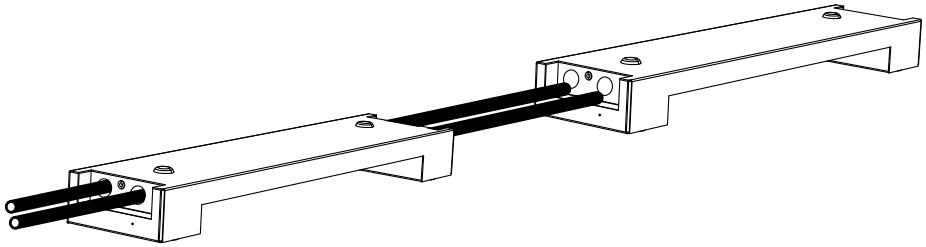
- **Concrete / Masonry:** Minimum strength requirements are 18 MPa for concrete, 12 MPa for clay brick, and 11 MPa for masonry. Use the self-tapping screws with plastic anchors (M6×50 mm) and expansion bolts (M8×70 mm) to fully embed them into the wall. Prior to mounting, inspect the surface and avoid using weak compositions.
- **Blocking / Wood Studs:** Mount the modules directly onto the wood studs, which should be spaced 508 mm / 20 in, 406 mm / 16 in, or 304 mm / 12 in apart. Use the self-tapping screws (M6×50 mm, included) to fully embed them into the studs.
- **Other Types of Walls:** Verify that the selected walls meet the load bearing requirements and choose appropriate screws. For wall mounting, choose a wall capable of supporting the full weight of the equipment.
  - Power module: 20 kg
  - Battery module: 51 kg

4.2 Plan Conduit Run

1. Plan a short and efficient conduit run. When connecting two columns of modules, it is recommended to follow the instructions below.

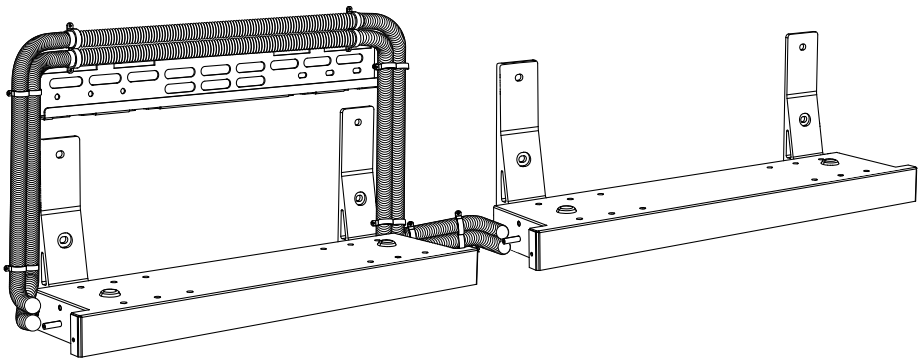
For **floor mounting**, route cables into the second column from the inside of the floor mounting base in the first column.

Figure: Conduit run for floor mounting.



For **wall mounting**, route cables from the back of the first column into the second column.

Figure: Conduit run for wall mounting.

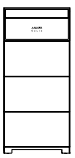
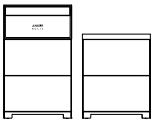


4.3 Measure the Distance

Reserve sufficient space for heat dissipation and safety isolation. Follow the dimensions below to measure the distance between system components.

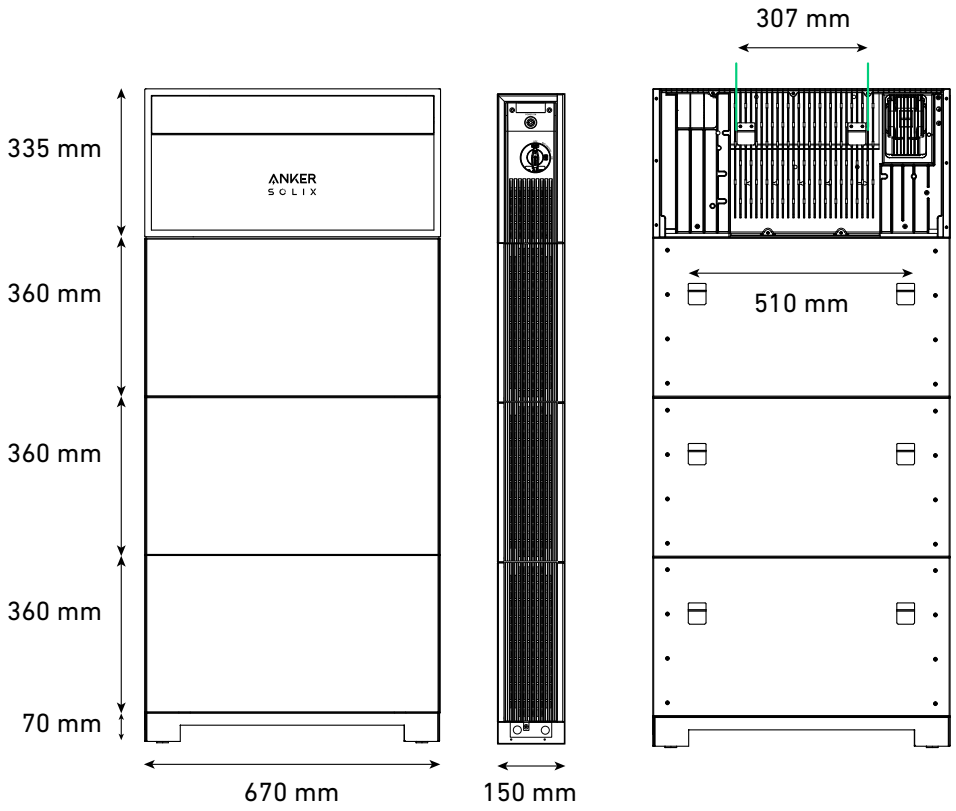
Stacking

Stack no more than one power module and three battery modules per column.

Anker SOLIX X1						
Battery Module	×1	×2	×3	×4	×5	×6
Energy Capacity	5 kWh	10 kWh	15 kWh	20 kWh	25 kWh	30 kWh
System Model	X1-P6K-B05-S	X1-P6K-B10-S	X1-P6K-B15-S	X1-P6K-B20-S	X1-P6K-B25-S	X1-P6K-B30-S

Equipment Dimensions

Figure: Dimensions of Anker SOLIX X1.



Installation Clearance

Ensure sufficient spacing for cabling, heat dissipation, and safety isolation.

Minimum clearance from the wall on both sides	300 mm
Minimum clearance from the ceiling	500 mm
Clearance between side-by-side modules	300 mm to 600 mm
Minimum clearance in front of the modules	500 mm
Minimum clearance from any heat source (hot water system, gas heater or the like)	1 m

Figure: Installation space for floor-mounted modules.

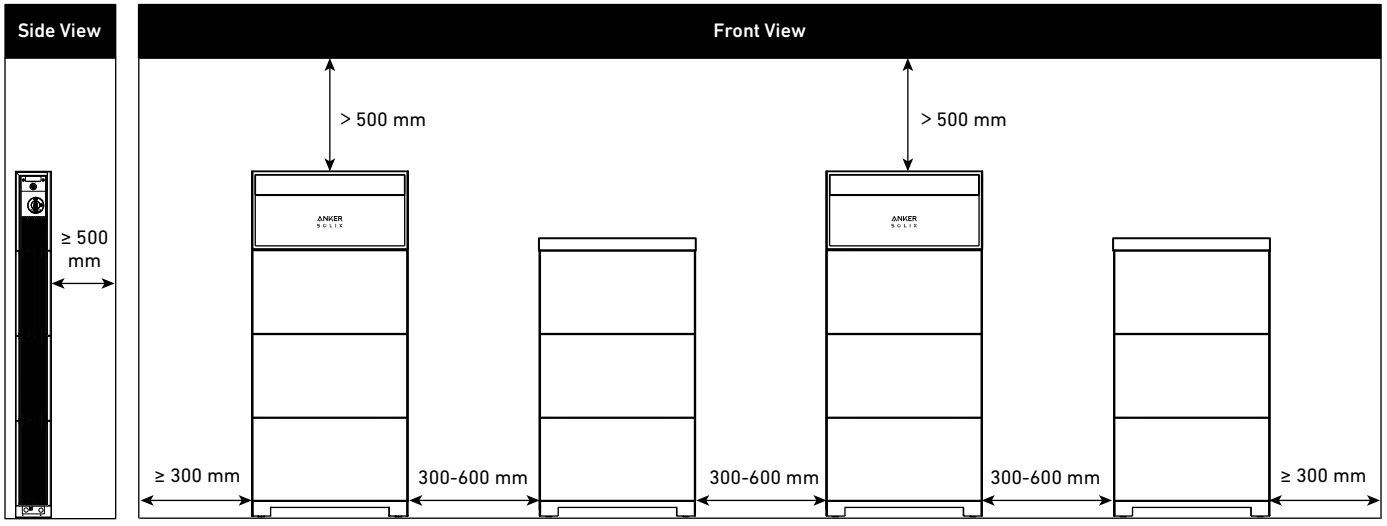
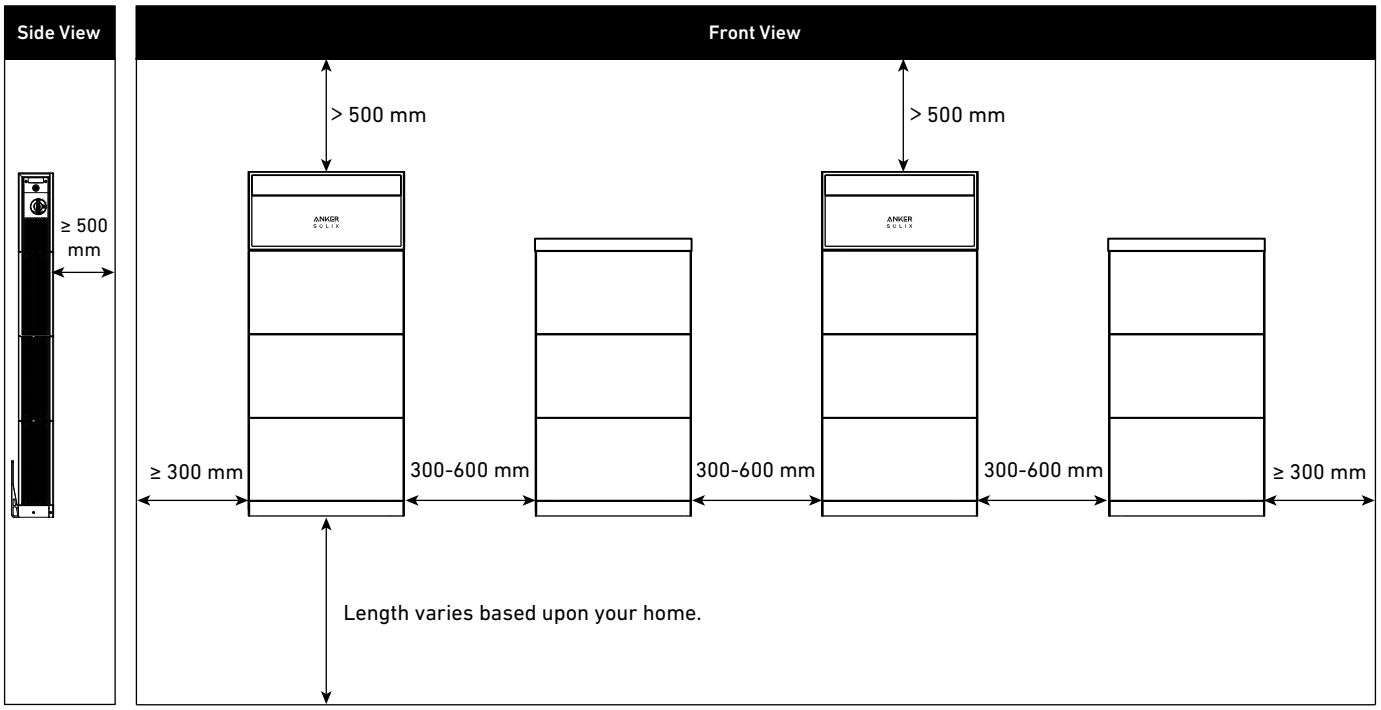


Figure: Installation space for wall-mounted modules.



Maximum Length of Signal Cable

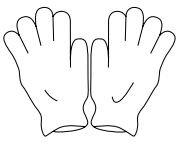
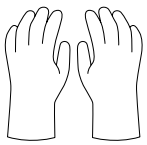
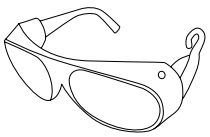
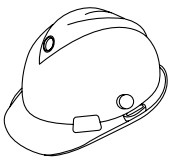
Data Exchange Between Devices	Maximum Length of Signal Cable
Power Module to Power Module	30 m

4.4 Prepare Tools and Supplies

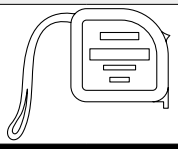
The following tools and supplies are not included in the package. Ensure that you have them ready before proceeding with the installation and electrical connections.

Required Tools

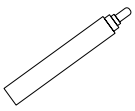
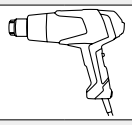
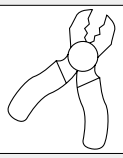
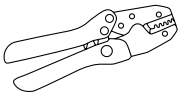
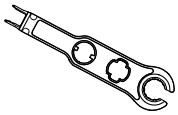
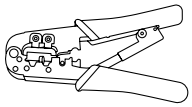
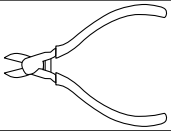
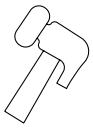
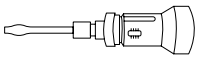
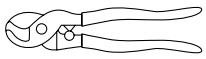
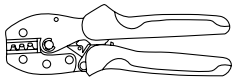
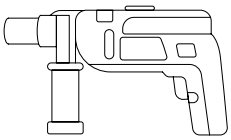
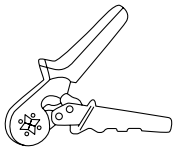
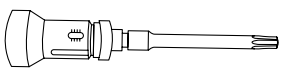
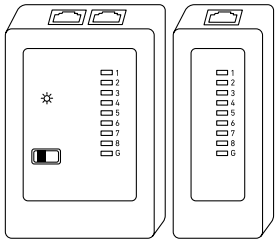
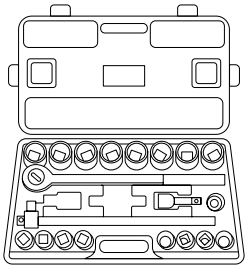
Use appropriate personal protective equipment (PPE) and follow safe electrical work practices.

Personal Protective Equipment	
Protective Gloves	Insulated Gloves
	
Dust Mask	Safety Goggles
	
Protective Footwear	Safety Hat
	

Measuring Instruments

Level	Metal Tape Measure
	

Installation and Wiring Tools

Marker	Heat Gun
	
Wire Strippers	OT Terminal Crimper
	
Disassembly Tool	RJ45 Crimping Tool
	
Pliers	Rubber Mallet
	
Flathead Screwdriver	Cable Cutter
	
Solar Crimping Tool	Power Drill
	 Drill Bit: 8 mm
Tube Terminal Crimper	No.1 Phillips Screwdriver
	
Cable Tester	Torque Wrench
	 Cross Socket Bits: PH1 / PZ1 (M4), PH2 / PZ2 (M5) Hex Socket: 10 mm (M6), 13 mm (M8)

Required Supplies

- Cable conduits: depending on local electrical requirements.
- Prepare cables in compliance with relevant local codes. All cables are rated minimum 90°C.

Function	Required Supplies	Specifications
Connection between two columns of modules	GND cable	Yellow/green, 6 mm^2, minimum 600 V rated, copper
	Positive DC power cable	Red, 8 mm^2, minimum 600 V rated, copper
	Negative DC power cable	Black, 8 mm^2, minimum 600 V rated, copper
	RJ45 signal cable	Cat 5 or higher, 5-6 mm in diameter, 8-conductor, shielded (recommended)
	Cable conduit	For wall-mount installation: flexible metal conduits, inner diameter of 15 mm, outer diameter of 20 mm, 304 stainless steel For floor-mount installation: rigid metal conduits, inner diameter of 20 mm, outer diameter of 25 mm, 304 stainless steel
Connection from the power module to the WLAN dongle	Signal cable	Cat 5 or higher, 5-6 mm in diameter, 8-conductor, shielded (recommended)
Connection from the power module to the AC grid / backup loads	3-conductor power cable	• Outer diameter: 7-12.5 mm • L1 conductor: Brown, 6 mm^2, minimum 300 V rated, copper • L2 conductor: Blue, 6 mm^2, minimum 300 V rated, copper • GND conductor: Yellow/green, 6 mm^2, minimum 300 V rated, copper
Connection from the power module to the power sensors	Signal cable	Outer diameter: 5±0.5 mm Conductor cross-sectional area: 0.2-0.35 mm^2
Connection from the power module to the DRED	Signal cable	Cat 5 or higher, 5-6 mm in diameter, 8-conductor, shielded (recommended)
Connection between power modules	Signal cable	Cat 5 or higher, 5-6 mm in diameter, 8-conductor, shielded (recommended)

5. Installation

You can mount the modules on a floor mounting base or to the wall. The procedures describe the installation of one power module and six battery modules (power module and three battery modules in the first column; another three battery modules in the second column) as an example.

- We suggest leaving a minimum of 300 mm of workspace on either side of the equipment.
- Parallel cables between two support bases of model X1-P6K-B20-S, X1-P6K-B25-S, X1-P6K-B30-S shall be installed in troughs or protected by a metallic cable duct or conduit. The metallic cable duct or conduit, provided that that metallic parts are connected with the equipotential bonding system and comply with IEC 62477-1 clause 4.4.4.2.2.

5.1 Floor Mounting

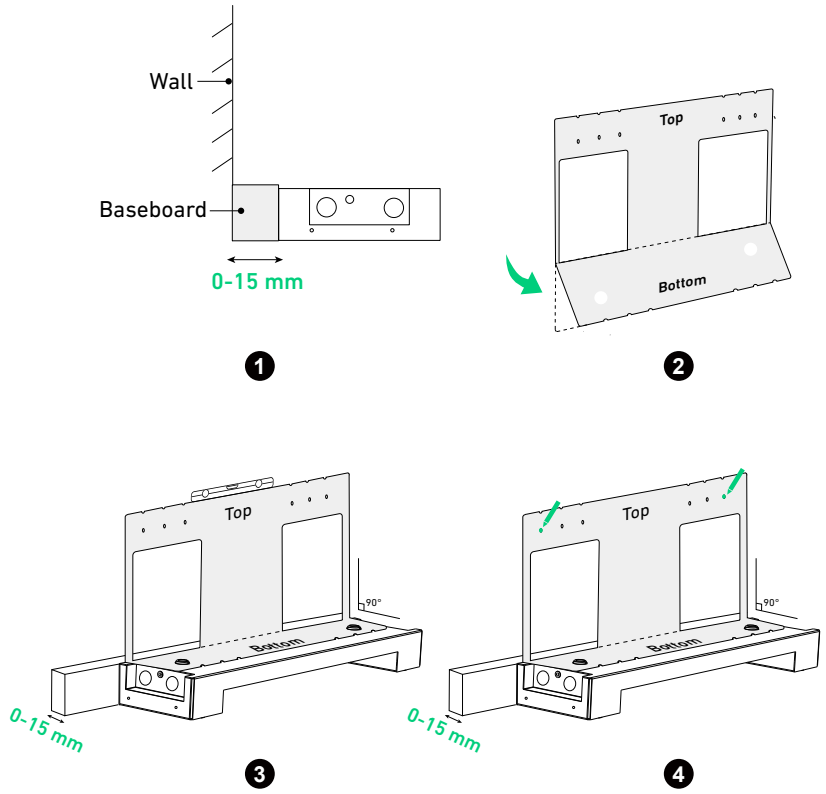
Step 1: Mark pilot holes for the first module.

If there is no baseboard or the baseboard is no more than 15 mm thick, follow these steps.

❶ Position the floor mounting base on a level surface against the wall or the baseboard.
❷ Fold the positioning card (included with the power module package) along the crease.
❸ Align the card with the top of the floor mounting base and use a level to ensure it is horizontal.
❹ Select and mark a hole on each side based on the wall conditions to secure the first module.

If anchoring to a wall with studs, select position A for studs spaced 508 mm apart, position B for studs spaced 406 mm apart, or position C for studs spaced 304 mm apart.

Figure: Mark pilot holes for the first module if the baseboard is 0-15 mm thick.

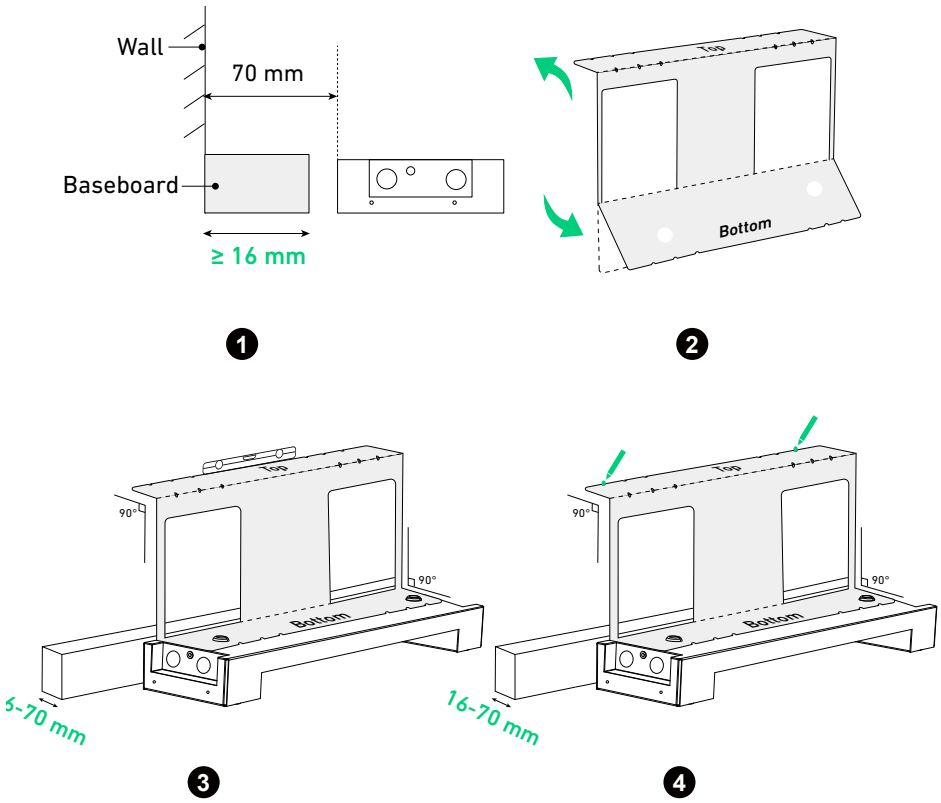


<u>If the baseboard is between 16 and 70 mm thick, follow these steps to mark pilot holes for the first module.</u>

1. Keep a distance of 70 mm between the floor mounting base and the wall surface.
2. Fold the positioning card (included with the power module package) along the top and bottom creases.
3. Align the card with the top of the floor mounting base and use a level to ensure it is horizontal.
4. Select and mark a hole on each side based on the wall conditions to secure the first module.

If anchoring to a wall with studs, select position A for studs spaced 508 mm apart, position B for studs spaced 406 mm apart, or position C for studs spaced 304 mm apart.

Figure: Mark pilot holes for the first module if the baseboard is 16-70 mm thick.



Step 2: Mark pilot holes for the remaining modules.

❶ Unfold the positioning card and align the bottom row of holes with the marked holes. Choose and mark a hole on each side at the top for the second module.

❷ Repeat the previous step to mark any remaining pilot holes as necessary.

Figure: Mark pilot holes for the remaining modules.

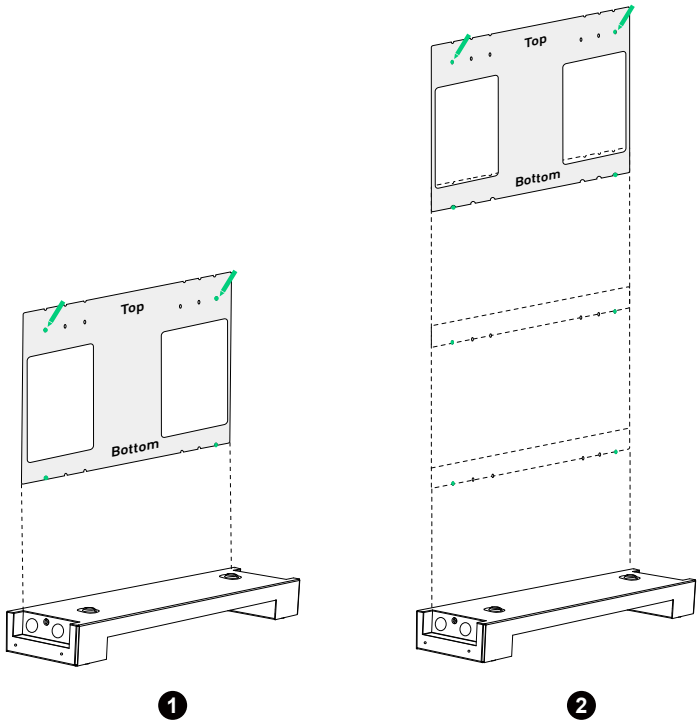
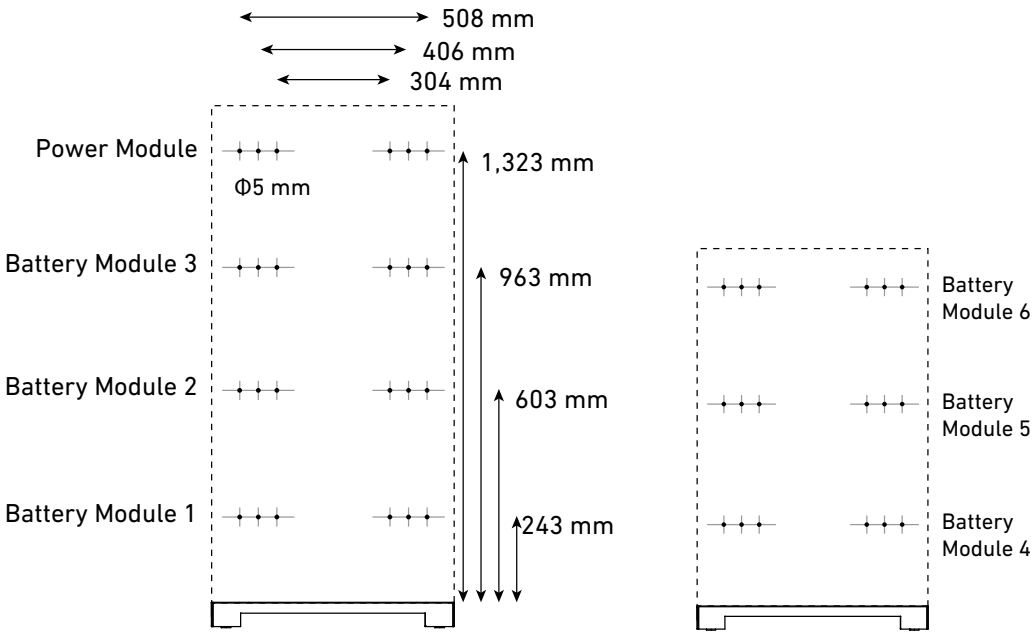


Figure: Dimensions of pilot holes.



Step 3: Attach mount brackets to the wall.

❶ Drill the marked pilot holes in the wall. Make sure the drill bit is aligned with the center of the holes.

❷ Insert the plastic anchors (M6×50 mm, included) into the pilot holes. Make sure the anchors are flush with the wall.

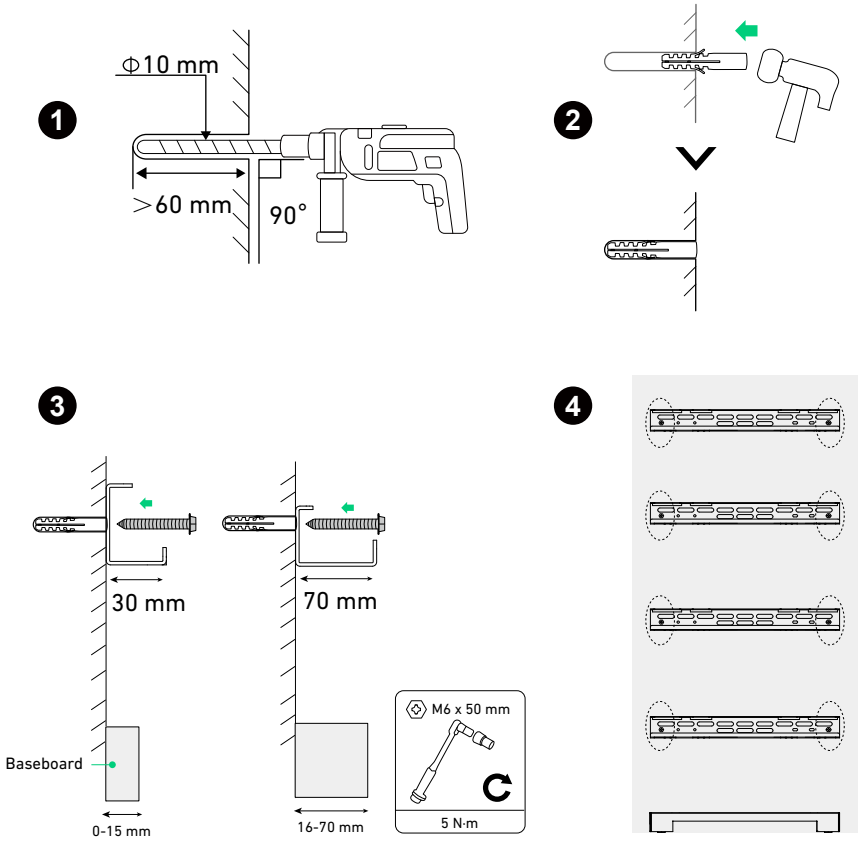
❸ Check the baseboard and position the mount bracket properly against the wall. Tighten the self-tapping screws (M6×50 mm, included with the anchors) to secure the mount bracket.

- If there is no baseboard or the baseboard is no more than 15 mm thick, position the wide bar of the mount bracket against the wall.
- If the baseboard is between 16 and 70 mm thick, position the narrow bar of the mount bracket against the wall.

❹ Repeat steps 1 to 3 to install all of the mount brackets onto the wall.

- After drilling, clean up any shavings that have accumulated inside or outside the equipment.
- In the case of a wall with studs, use the self-tapping screws (M6×50 mm) in lieu of the plastic anchors and screws (M6×50 mm).

Figure: Install mount brackets.

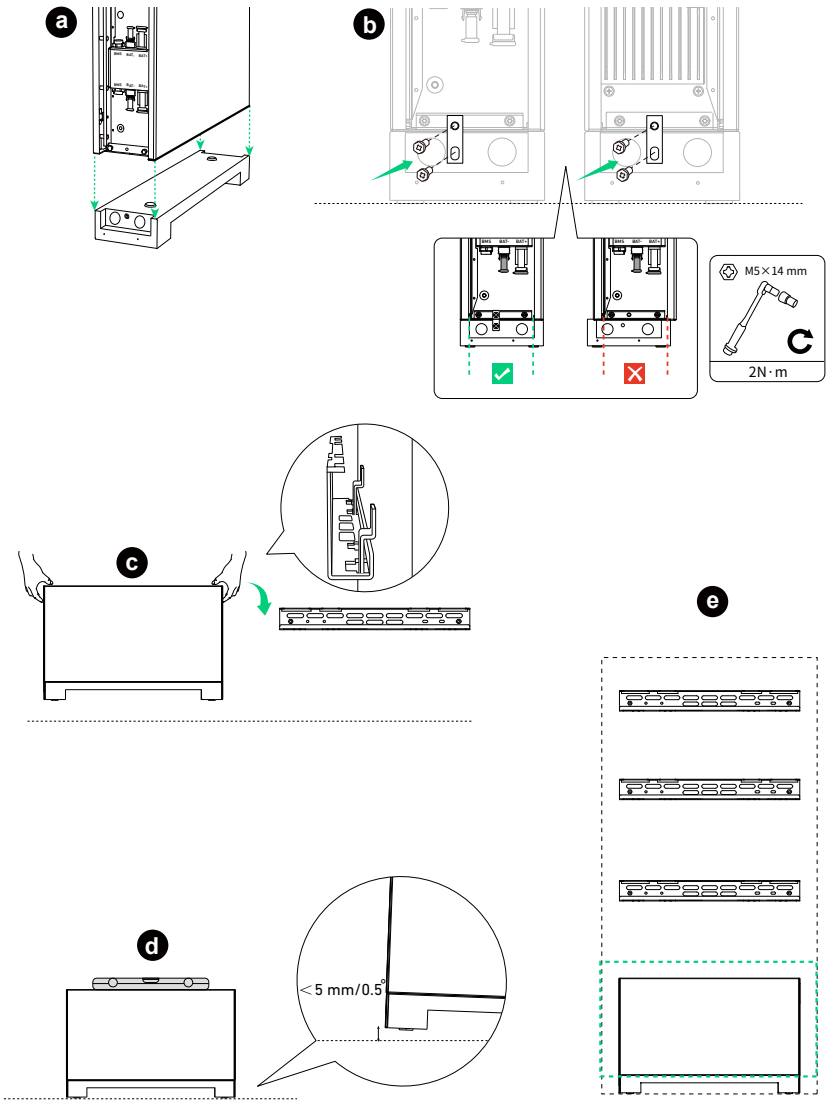


Step 4: Mount modules onto the brackets.

1. To ensure proper alignment, fasten the floor mounting base to the first battery module before hanging them onto the mount bracket.

- When securing the module interlockers, make sure that the inner edges of the floor mounting base and all the modules are aligned within a tolerance of 1 mm.
- Ensure that the first battery module and floor mounting base are level within a tolerance of +/– 0.5° horizontally. Use the included shims to fill in any gaps if necessary.

Figure: Mount the first battery module and floor mounting base.



❷ Mount the remaining modules from bottom to top. After installing a module, tighten the module interlockers using the included screws (M5×14 mm), and then mount the next module.

Figure: Mount the second and third battery modules.

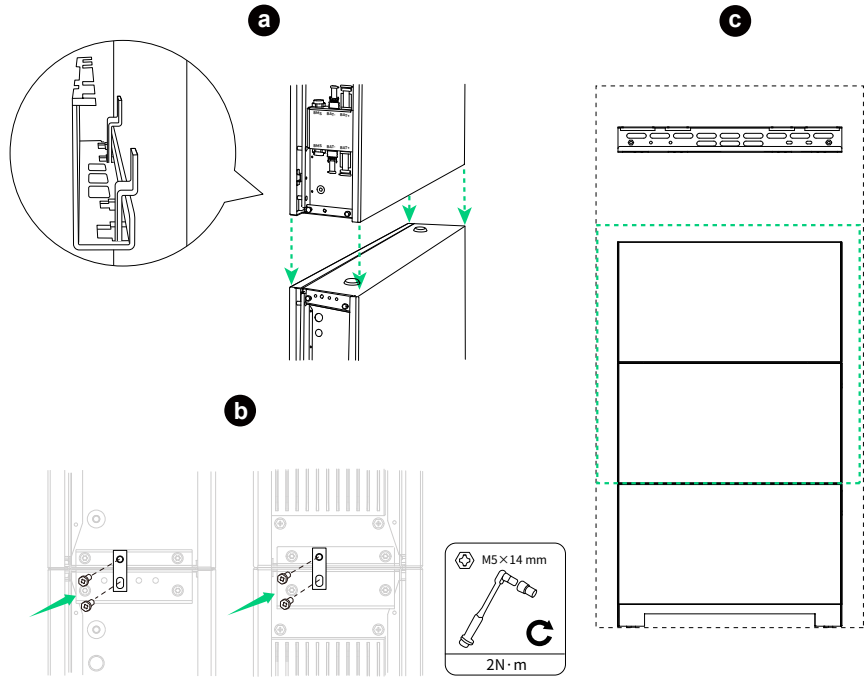
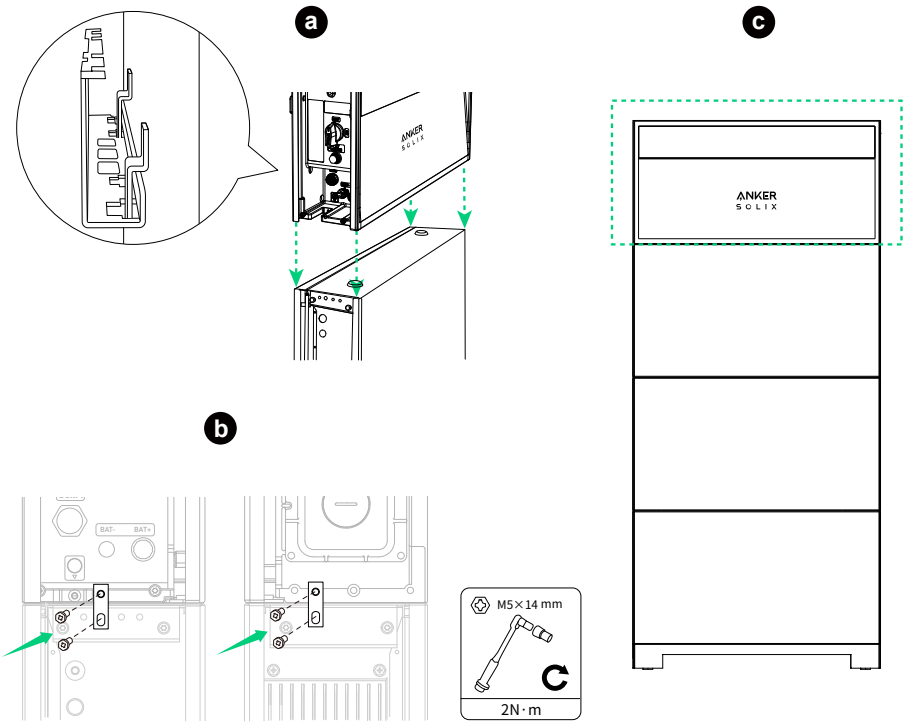
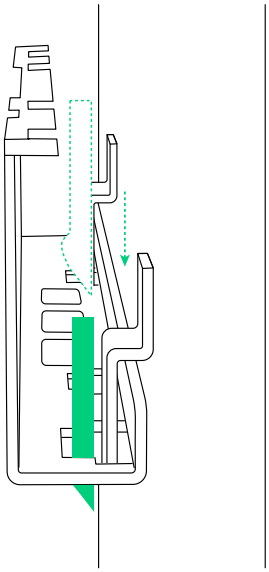


Figure: Mount the power module.

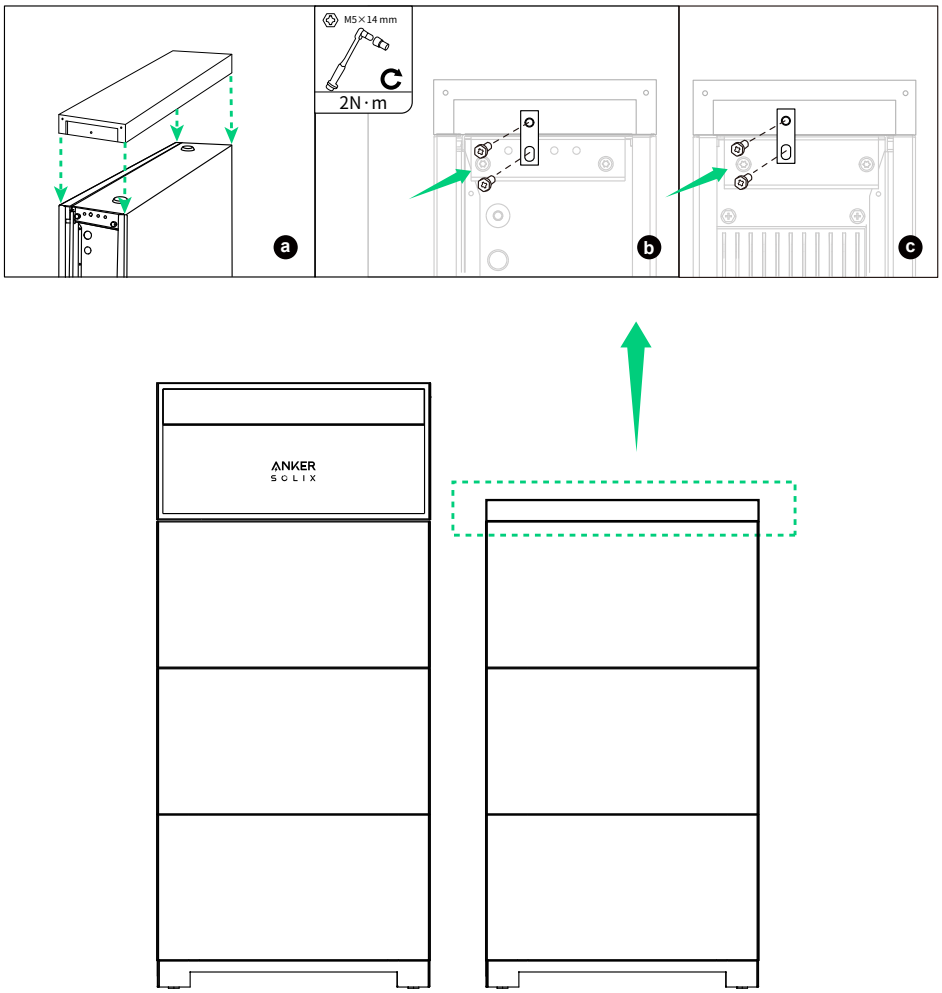


If necessary, insert the included wedge shim into the power module's mount bracket to ensure stability.

Figure: Insert the wedge shim.



❸ When adding the second column, attach the top cover to the top battery module using the screws (M5×14 mm, included).
Figure: Install the top cover for the second column.



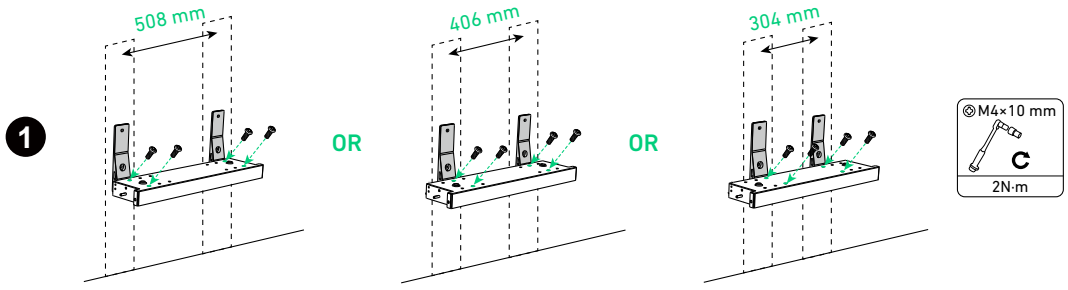
5.2 Wall Mounting

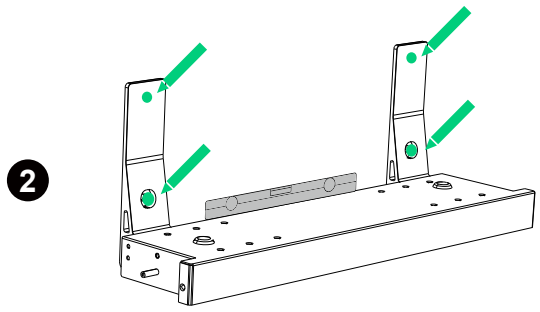
Step 1: Install the baseplate and bracket holders.

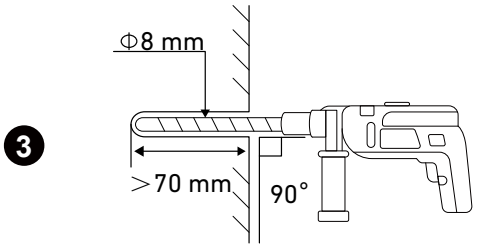
❶ To secure the baseplate and bracket holders, select a set of screw holes based on the wall conditions and tighten the screws (M4x10mm, included).
❷ Position the baseplate and bracket holders on the wall, ensuring that they are level, and mark four pilot holes.
❸ Drill the marked pilot holes in the wall. Make sure the drill bit is aligned with the center of the holes.
❹ Insert the expansion bolts (M8×70 mm, included) into the pilot holes and remove the washers and nuts.
❺ Align the bolts with the corresponding screw holes of the bracket holders, and screw the washers and nuts into the bolts.

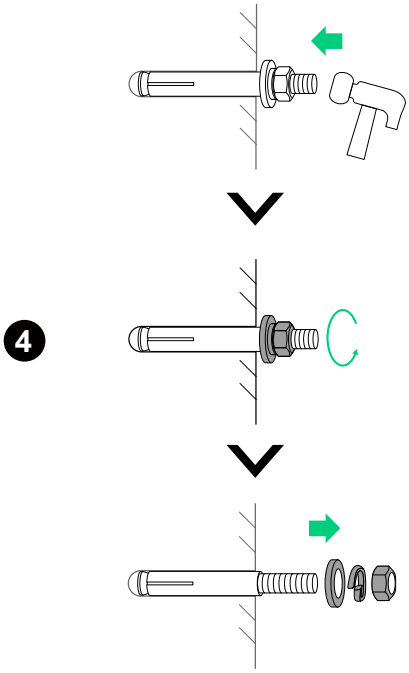
If anchoring to a wall with studs, use the self-tapping screws (M8×70 mm) instead of the expansion bolts (M8×70 mm).

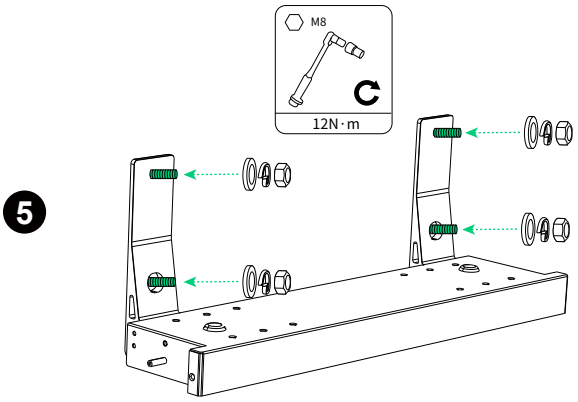
Figure: Install the baseplate and bracket holders on the wall.











Step 2: Mark pilot holes on the wall.

1. Fold the positioning card (included with the power module package) along the bottom crease.
2. Align the card with the top of the floor mounting base and use a level to ensure it is horizontal.
3. Select and mark a hole on each side based on the wall conditions to secure the first module.

If anchoring to a wall with studs, select position A for studs spaced 508 mm apart, position B for studs spaced 406 mm apart, or position C for studs spaced 304 mm apart.

4. Unfold the positioning card and align the bottom row of holes with the marked holes. Choose and mark a hole on each side at the top for the second module.
5. Repeat the previous step to mark any remaining pilot holes as necessary.

Figure: Mark pilot holes on the wall.

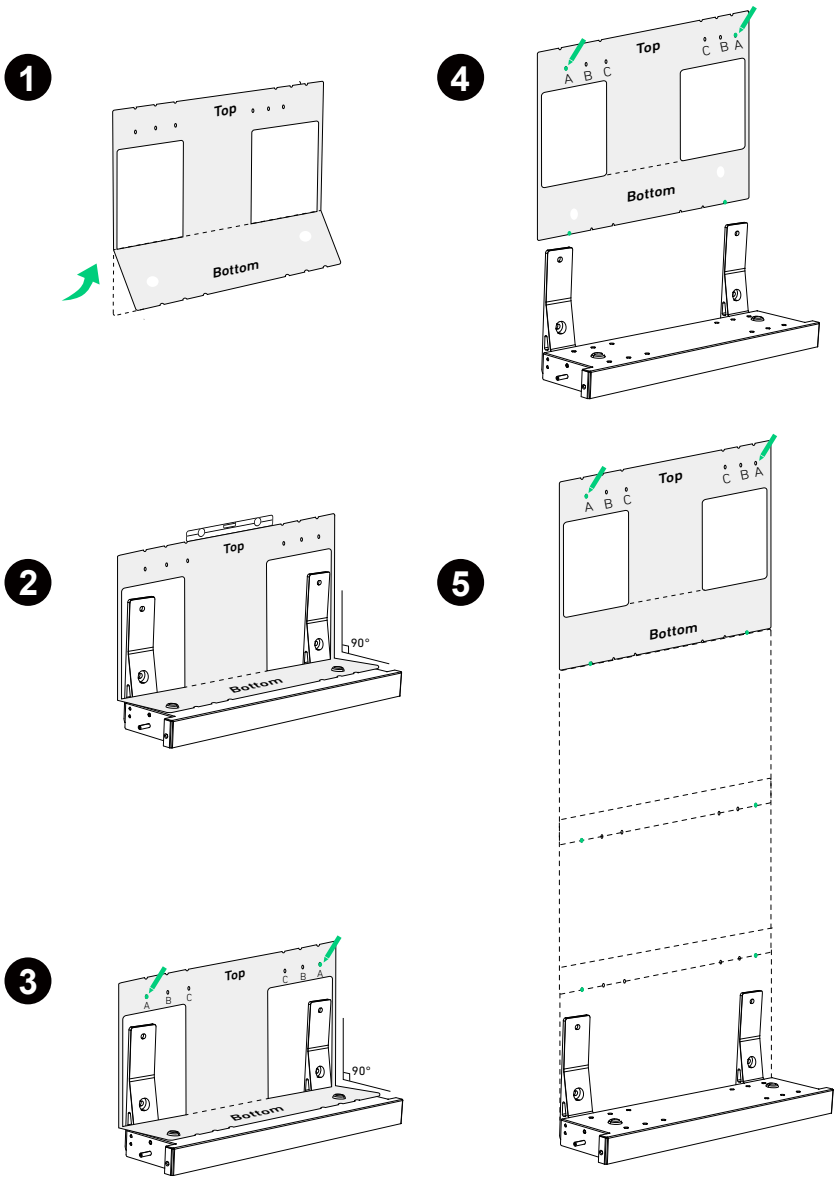
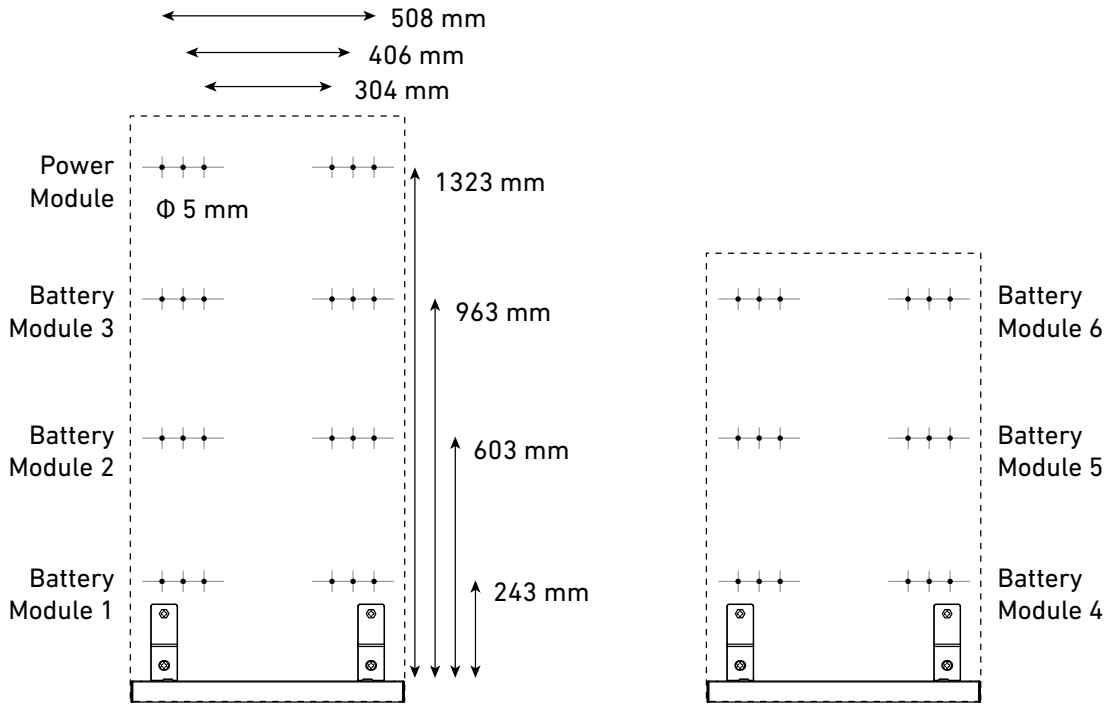


Figure: Dimensions of pilot holes.

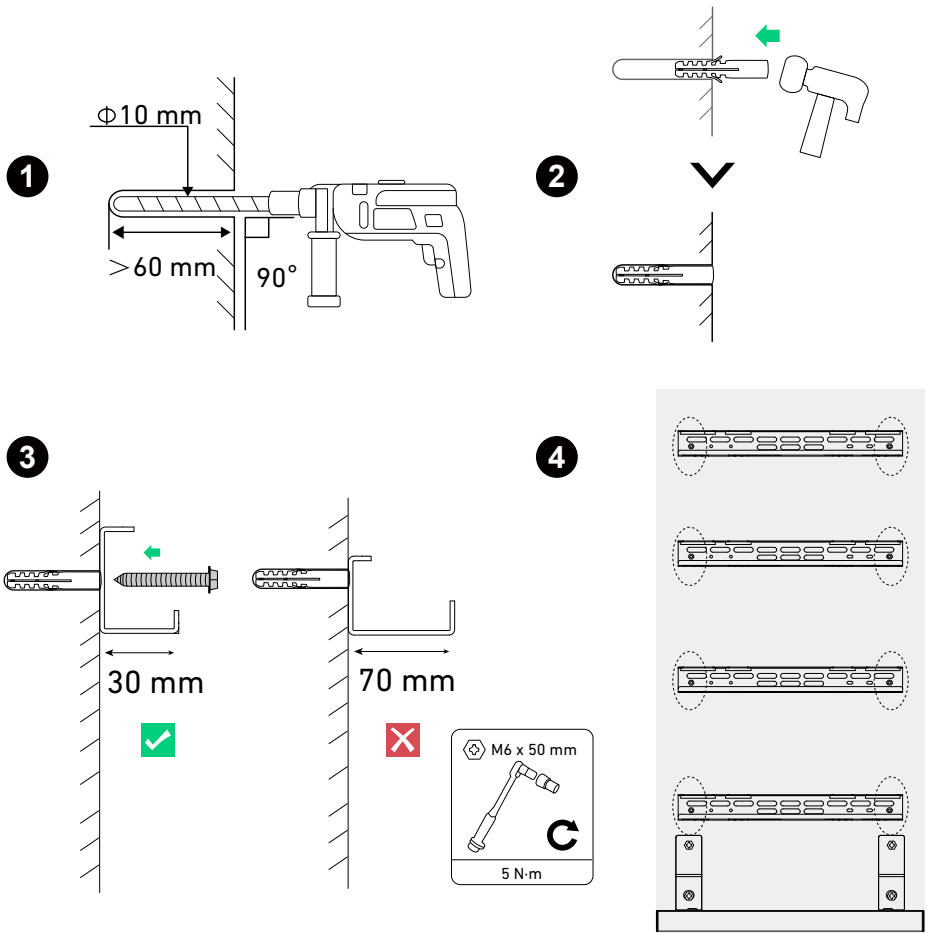


Step 3: Attach mount brackets to the wall.

1. Drill the marked pilot holes in the wall. Make sure the drill bit is aligned with the center of the holes.
2. Insert the plastic anchors (M6×50 mm, included) into the pilot holes. Make sure the anchors are flush with the wall.
3. Align the anchors with the corresponding slots of the mount bracket. Verify that the mount bracket is level and its wide bar is placed against the wall.
4. Tighten the self-tapping screws (M6×50 mm, included with the anchors) to secure the mount bracket.
5. Repeat the above steps to install all of the mount brackets onto the wall.

After drilling, clean up any shavings that have accumulated inside or outside the equipment.

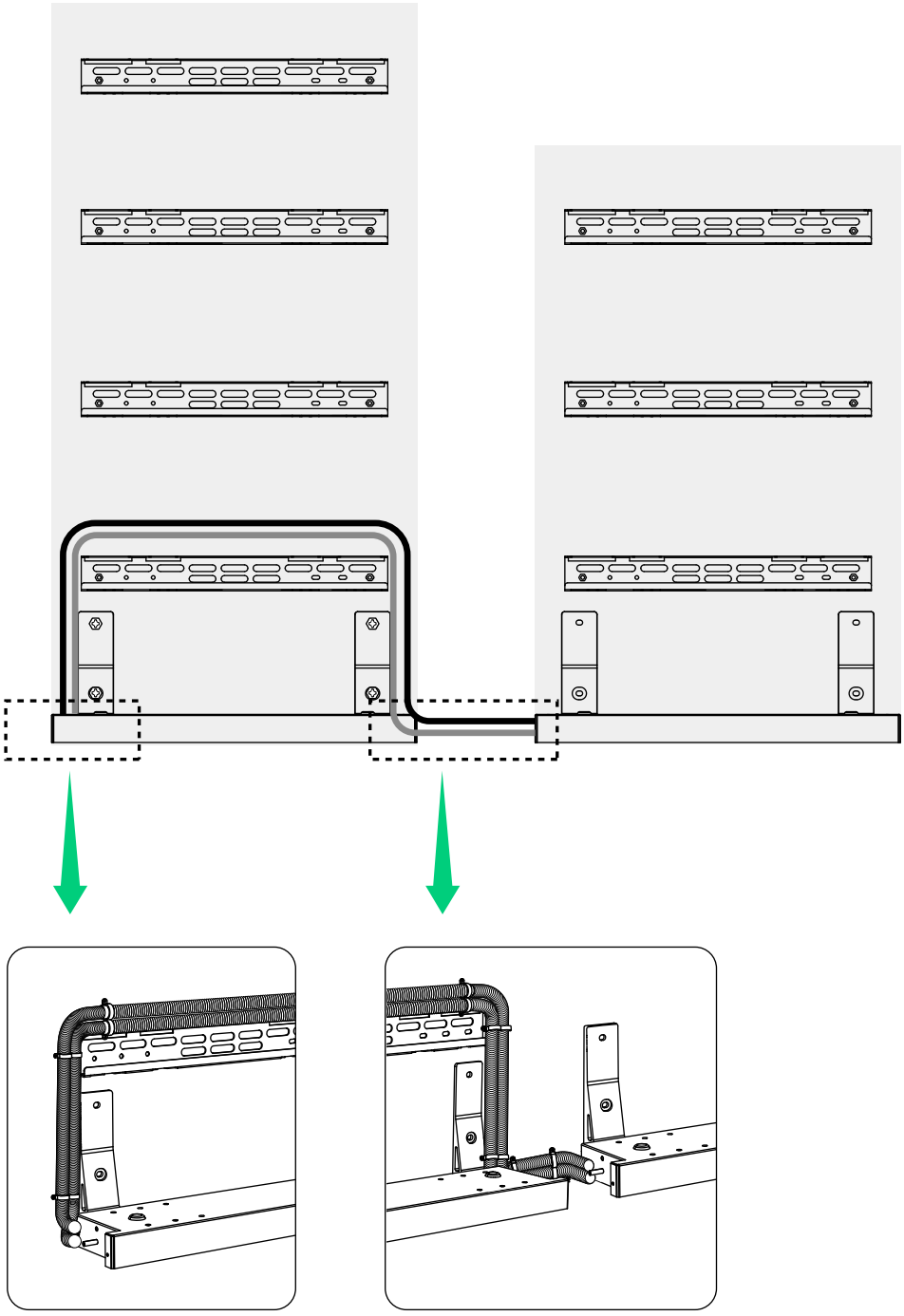
Figure: Attach mount brackets to the wall.



(For two columns only) Step 4: Install conduits.

- If installing only one column, skip this step.
- If installing two columns, run conduits from the back of the first column to the second column.

Figure: Install conduits when adding a second column.

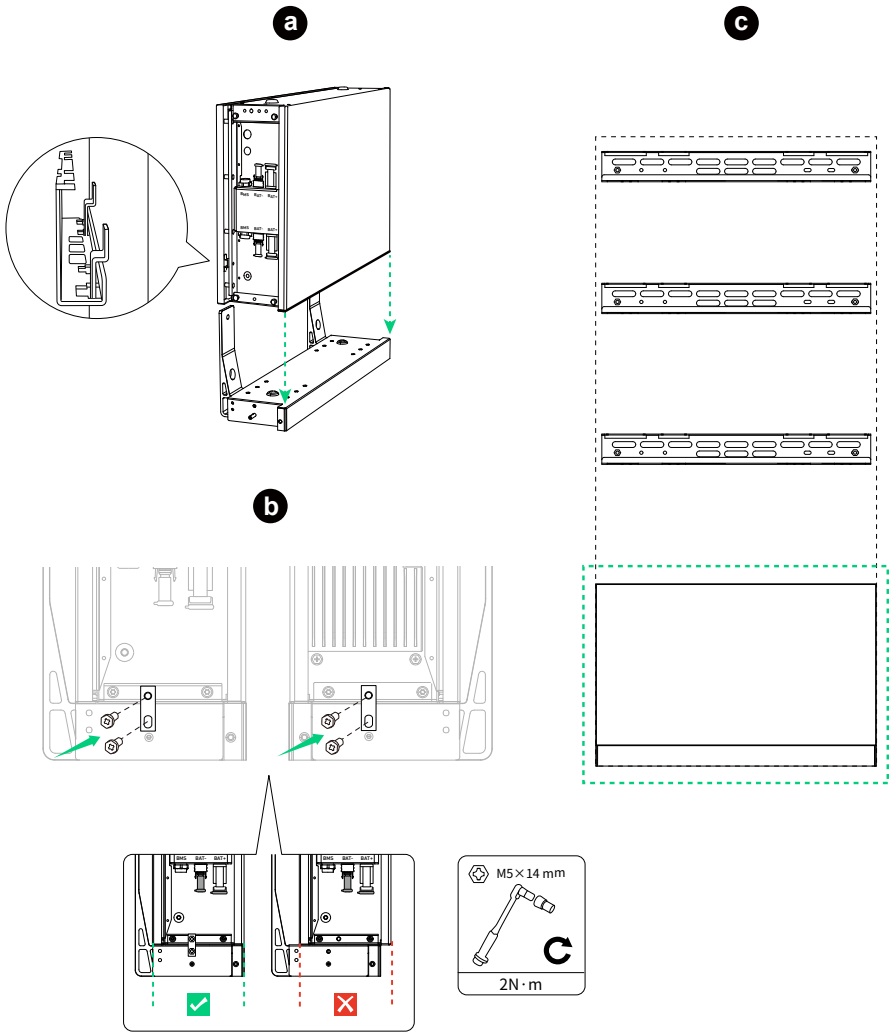


Step 5: Mount modules onto the brackets.

❶ Hang the first battery module onto the mount bracket and fasten the module to the baseplate.

When securing the module interlockers, make sure that the inner edges of the baseplate and all the modules are aligned within a tolerance of 1 mm.

Figure: Mount the first battery module.



❷ Mount the remaining modules from bottom to top. After installing a module, tighten the module interlockers using the screws (M5×14 mm, included), and then mount the next module.

Figure: Mount the second and third battery modules.

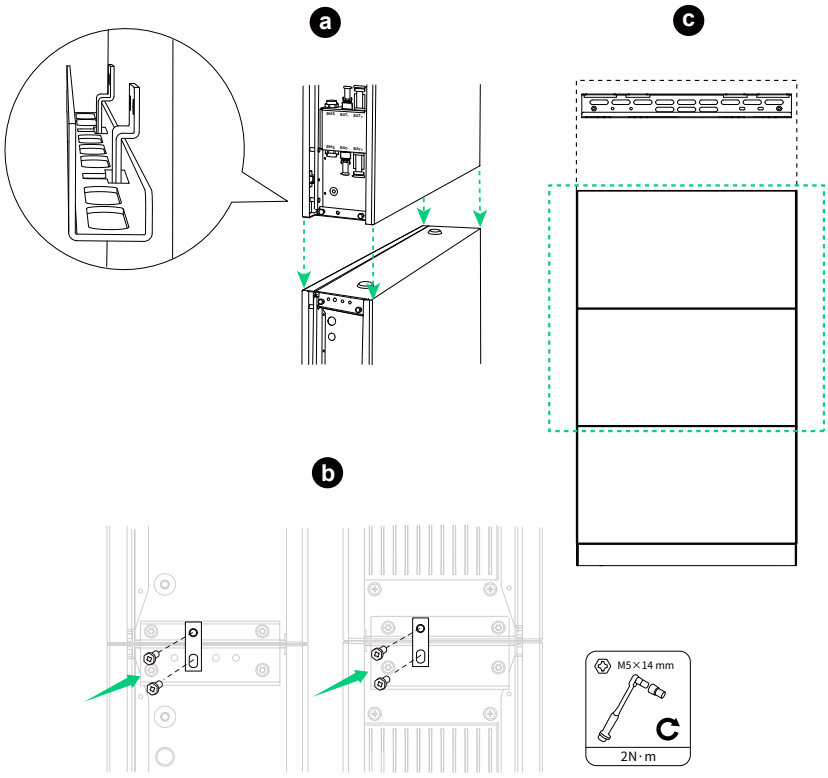
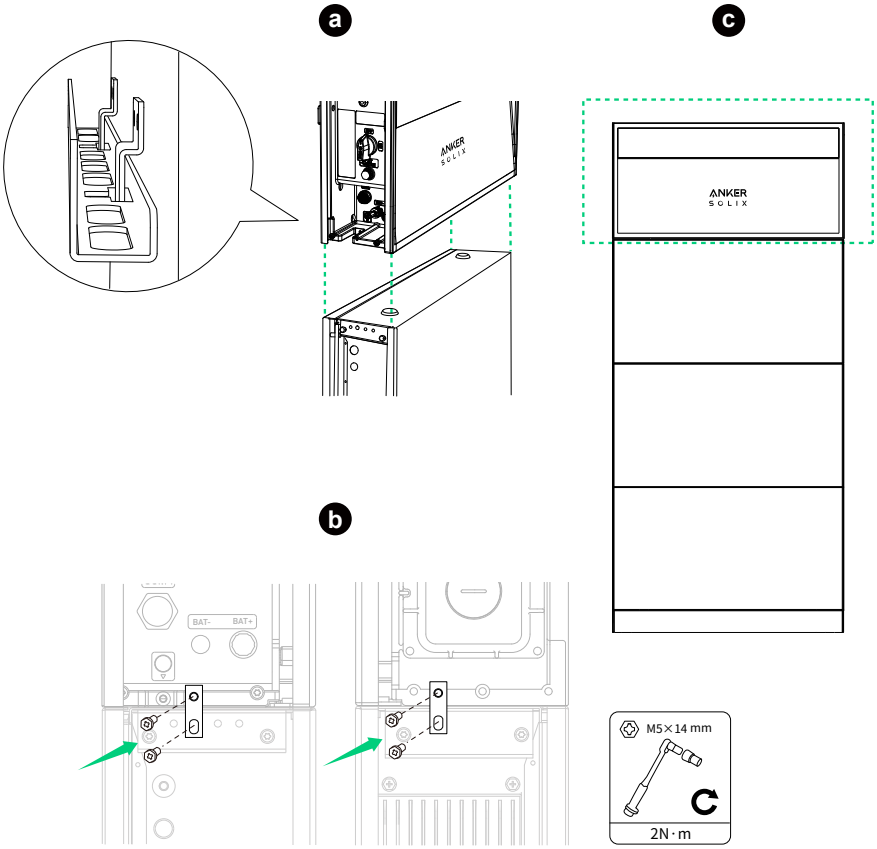
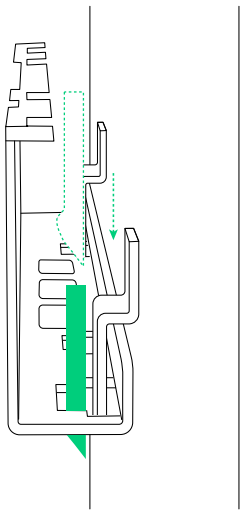


Figure: Mount the power module.



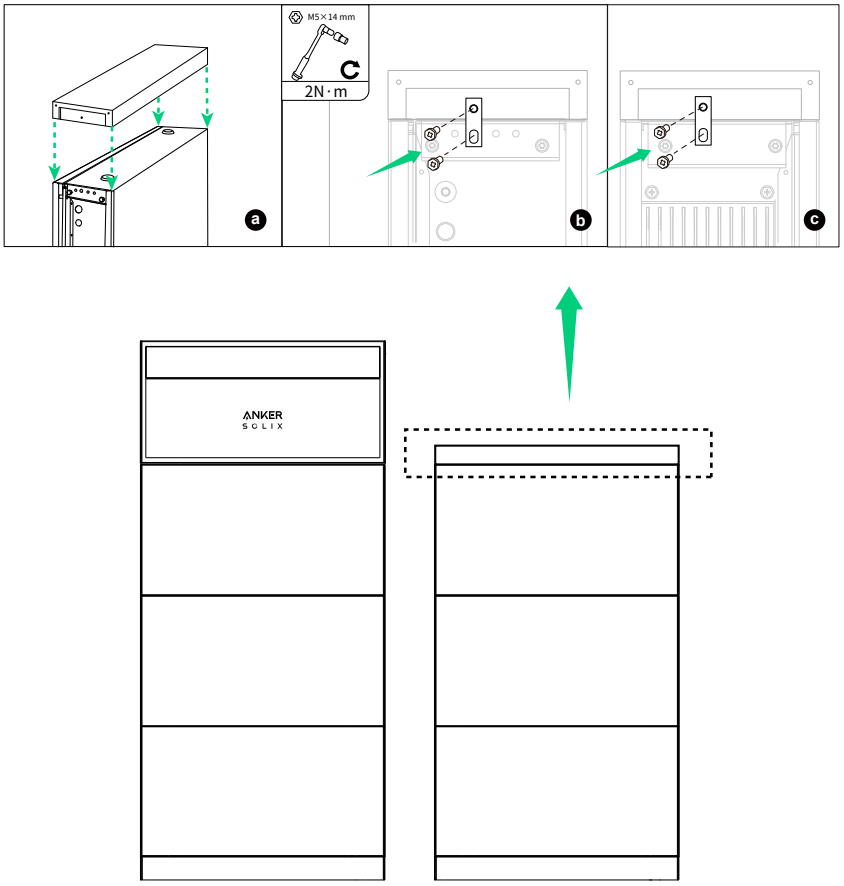
If necessary, insert the included wedge shim into the power module's mount bracket to ensure stability.

Figure: Insert the wedge shim.



❸ When adding the second column, attach the top cover to the top battery module using the screws (M5×14 mm, included).

Figure: Install the top cover to the second column.



6. Electrical Connections

- Before connecting cables, ensure the BAT switch on the power module is off.
- Depending on local requirements, the wiring can be installed through conduits or cable glands.
- Anker SOLIX X1 is only compatible with the specified power sensors (Model: SDM230-Modbus V1, DTSU666).
- The inverter has not been tested to AS/NZS 4777.2:2020 for multiple inverter combinations so combinations should not be used or external devices should be used in accordance with the requirements of AS/NZS 4777.1.

For the wiring diagrams, refer to *"Appendix A. System Wiring Diagrams"*.

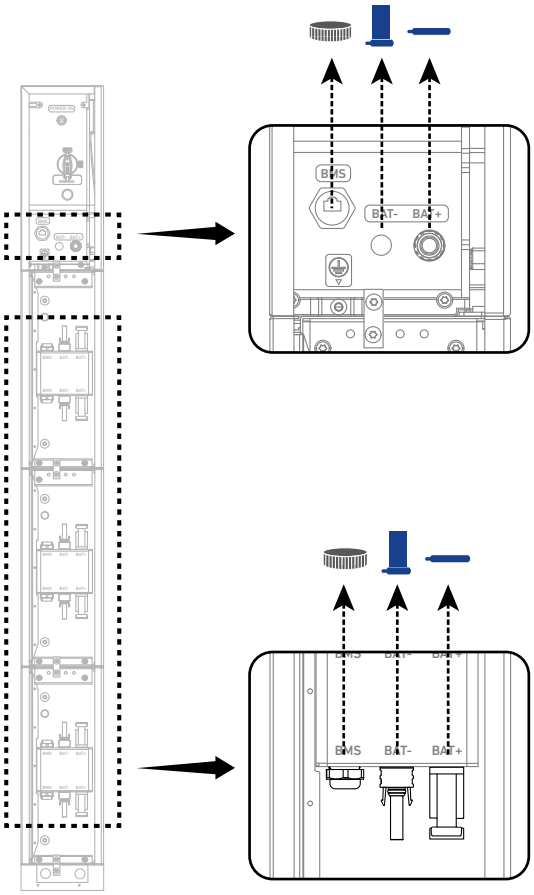
6.1 Internal Connections

Connect One Column of Modules

To connect one column, which generally consists of a power module and a maximum of three battery modules, follow the steps below.

1. Remove the dustproof plugs from all the modules' BMS ports and power ports (BAT+ and BAT-).

Figure: Remove dustproof plugs from modules.



2. Connect a GND cable from the power module to the external ground point.

❶ Strip the insulation layer of a GND cable (6 mm^2, yellow/green, not included).

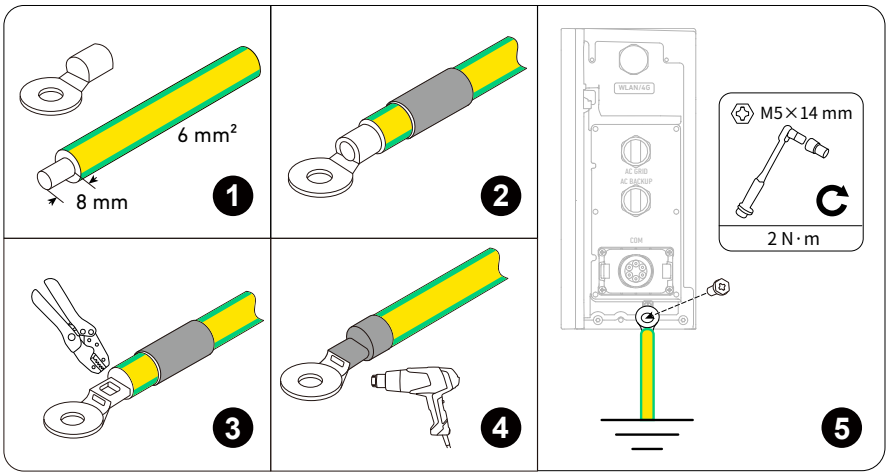
❷ Insert a heat shrink tubing (included) and a ring terminal (included) into the GND cable.

❸ Crimp the ring terminal onto the GND cable.

❹ Wrap the wire crimping area with the heat shrink tubing using a heat gun.

❺ On the right side of the power module, secure the GND cable's ring terminal using the screw (M5×14 mm, included).

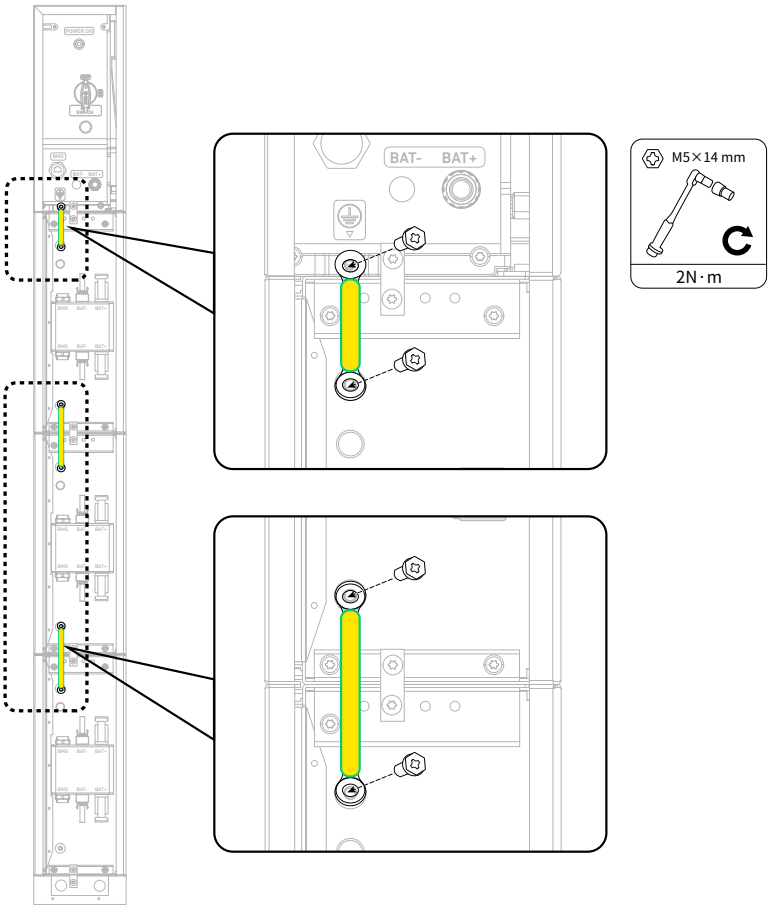
Figure: Connect to the external ground point.



3. Connect the GND cables between the modules.

Secure the GND cables (6 mm^2, yellow/green, included) using the screws (M5×14 mm, included).

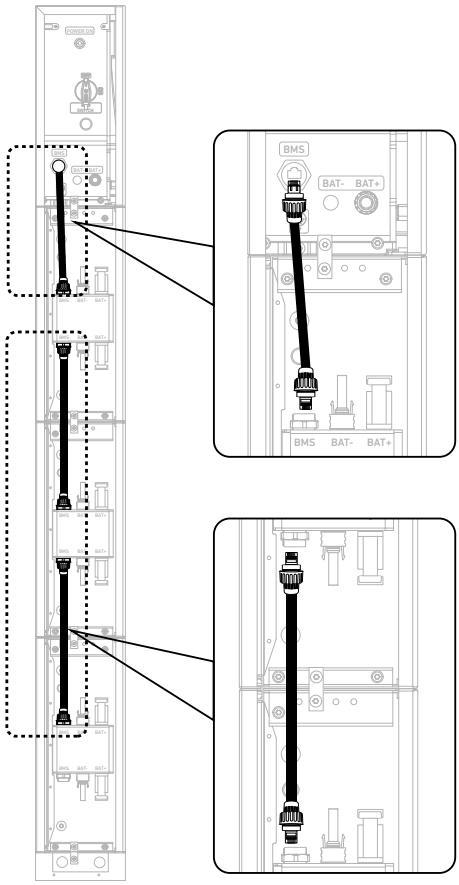
Figure: Connect GND cables between modules.



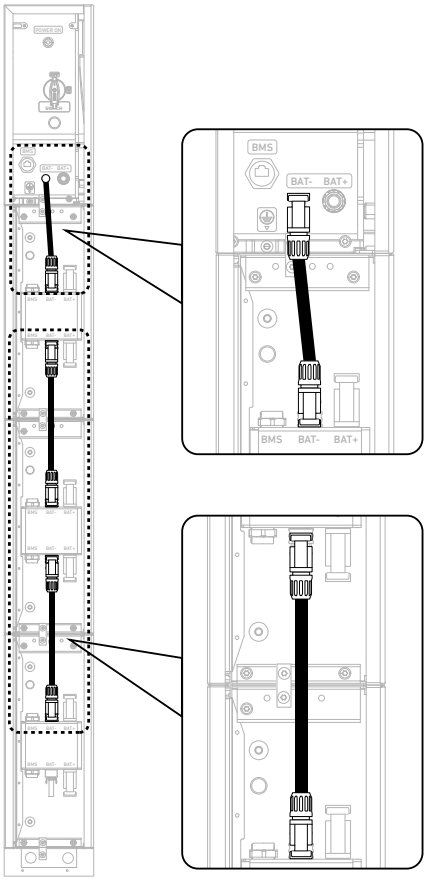
4. Connect the RJ45 signal cables between the modules.

Loosen the locking caps, insert the RJ45 signal cables (black, included) into the BMS ports, and rotate the locking caps to secure.

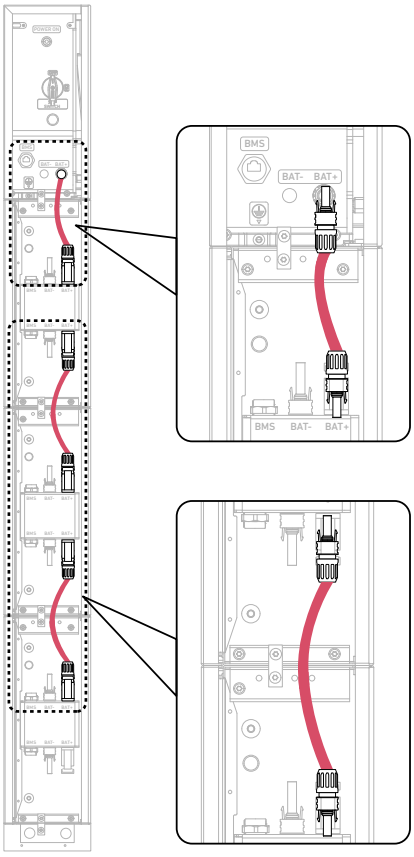
Figure: Connect RJ45 signal cables between modules.



5. Connect the negative DC power cables between the modules.
Insert the negative DC power cables (black, included) into the modules' negative power ports (BAT-).
Figure: Connect negative DC power cables between modules.

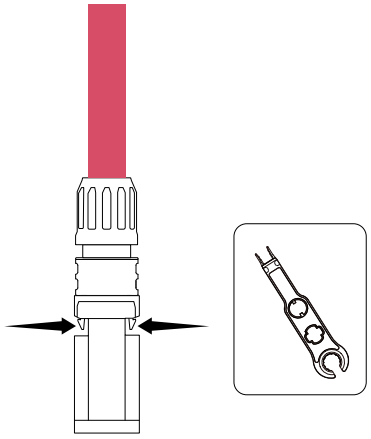


6. Connect the positive DC power cables between the modules.
Insert the positive DC power cables (red, included) into the modules' positive power ports (BAT+).
Figure: Connect positive DC power cables between modules.



Use a disassembly tool (not included) to remove the connected DC power cables.

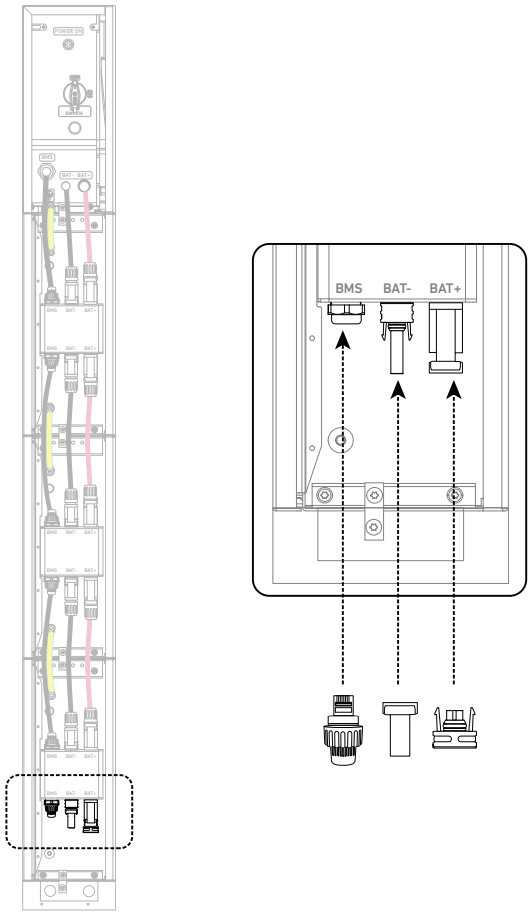
Figure: Disconnect the DC power cables.



7. Seal unused ports.

On the bottom battery module, insert an RJ45 connector (with 2×120Ω terminating resistor, included) into the BMS port, a female dustproof cap (included) into the negative DC power port (BAT-), and a male dustproof cap (included) into the positive DC power port (BAT+).

Figure: Seal unused ports.



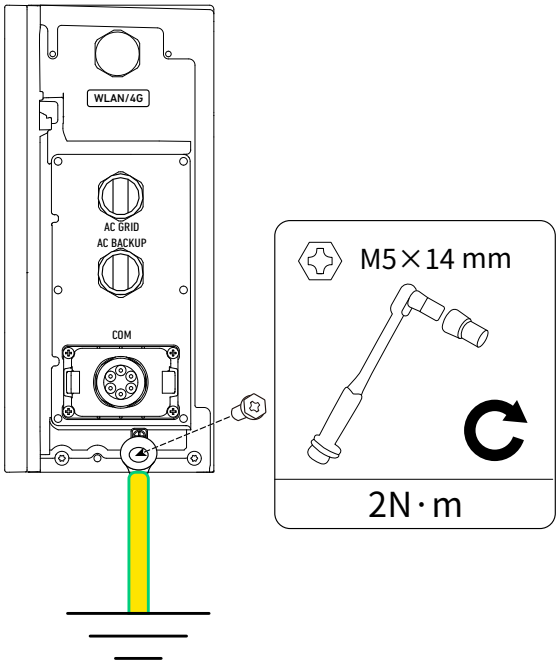
Connect Two Columns of Modules

To connect two columns, which generally consist of a power module and over three battery modules, follow the steps below.

1. Connect a GND cable from the power module to the external ground point.

Refer to “Connect One Column of Modules” for detailed instructions.

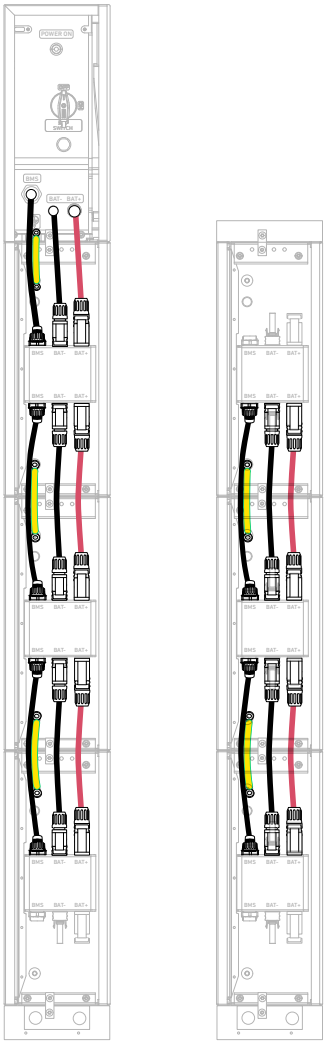
Figure: Connect to the external ground point.



2. Connect the GND, RJ45 signal, and DC power cables between vertically adjacent modules.

Refer to “Connect One Column of Modules” for detailed instructions.

Figure: Connect cables between adjacent modules.



3. Connect cables between the bottom modules.

① Thread cables through conduits.

Floor-Mounted Modules

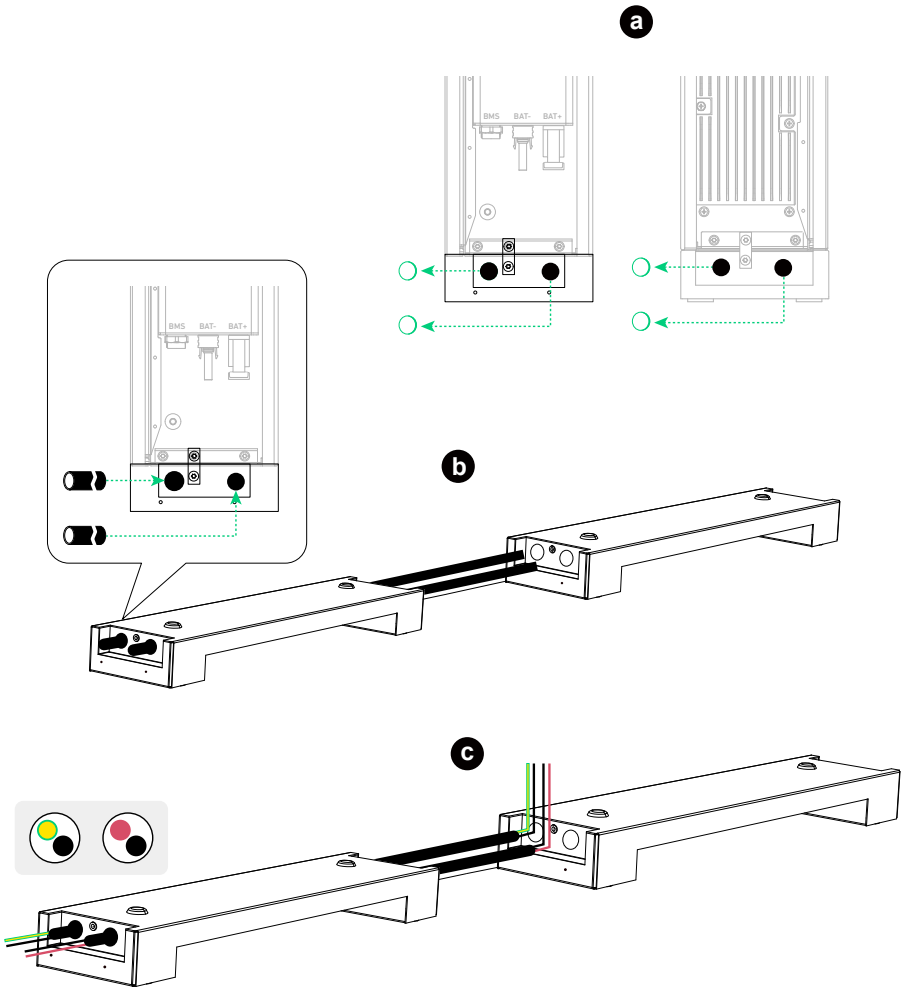
ⓐ Remove the cable knockouts from the floor mounting base in the first column.

ⓑ Insert two cable conduits (not included) into the openings. Use rigid metal conduits with an inner diameter of 3/4 in (20 mm) and an outer diameter of 1 in (25 mm), made of 304 stainless steel.

ⓒ Thread a GND cable (6 mm^2, yellow/green, not included) and a signal cable (Cat 5 or higher, 5-6 mm in diameter, not included, shielding recommended) through the cable conduit near the wall.

Thread the positive DC power cable (8 mm^2, red, not included) and negative DC power cable (8 mm^2, black, not included) through the outward cable conduit.

Figure: Thread cables through conduits for floor mounting.

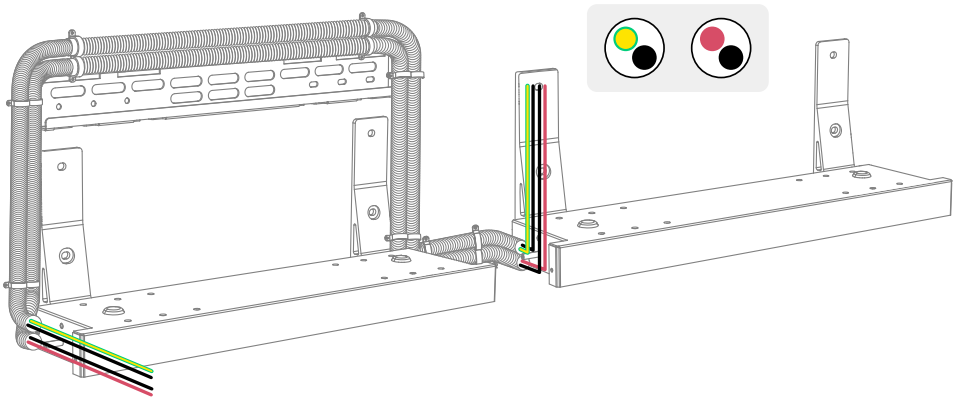


Wall-Mounted Modules

Thread a GND cable (6 mm^2, yellow/green, not included) and a signal cable (Cat 5 or higher, 5-6 mm in diameter, not included; shielding recommended) through the upper conduit.

Thread the positive DC power cable (8 mm^2, red, not included) and negative DC power cable (8 mm^2, black, not included) through the lower conduit.

Figure: Thread cables through conduits for wall mounting.



② Assemble the GND cable and RJ45 signal cable.

To assemble the GND cable:

ⓐ Strip the insulation layers from both ends.

ⓑ Insert the heat shrink tubing (included) and ring terminals (included).

ⓒ Crimp the ring terminals onto the GND cable.

ⓓ Wrap the crimping area with the heat shrink tubing using a heat gun.

To assemble the RJ45 signal cable:

ⓐ Insert the signal cable into the RJ45 cable glands, and strip the insulation layers from both ends.

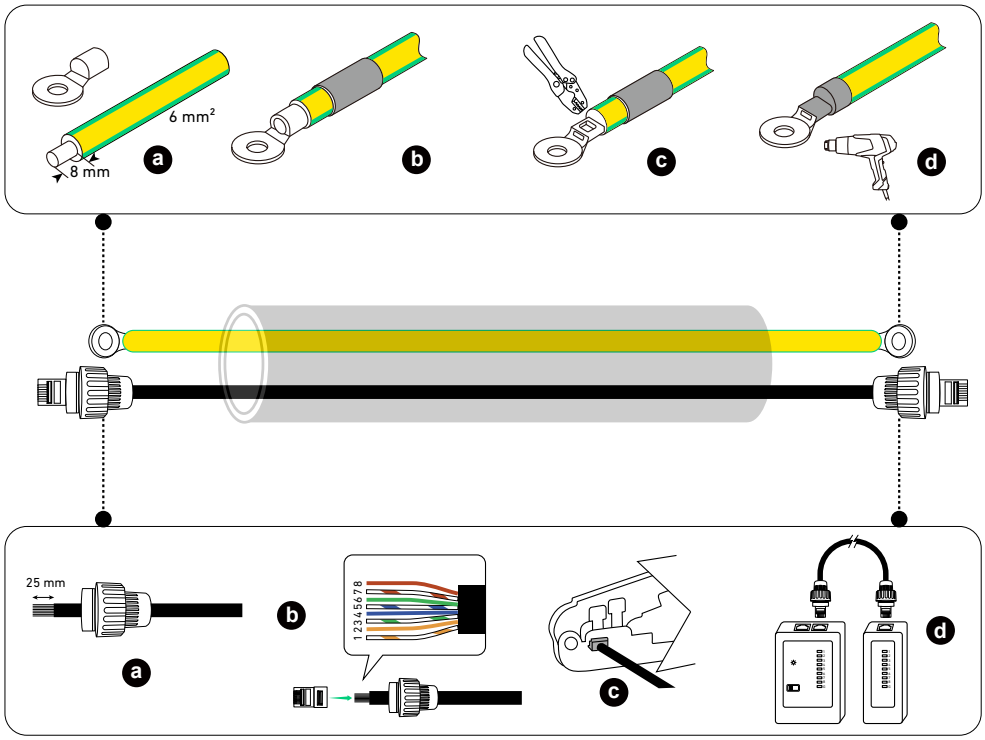
ⓑ Insert the wires into the RJ45 connectors (included) in the EIA/TIA 568B order.

From Bottom to Top (Clip Faces Away)								
Pin	1	2	3	4	5	6	7	8
Wire Color	Orange-white	Orange	Green-white	Blue	Blue-white	Green	Brown-white	Brown

ⓒ Crimp the RJ45 connectors using the RJ45 crimping tool.

ⓓ Use a cable tester to verify proper wiring and continuity.

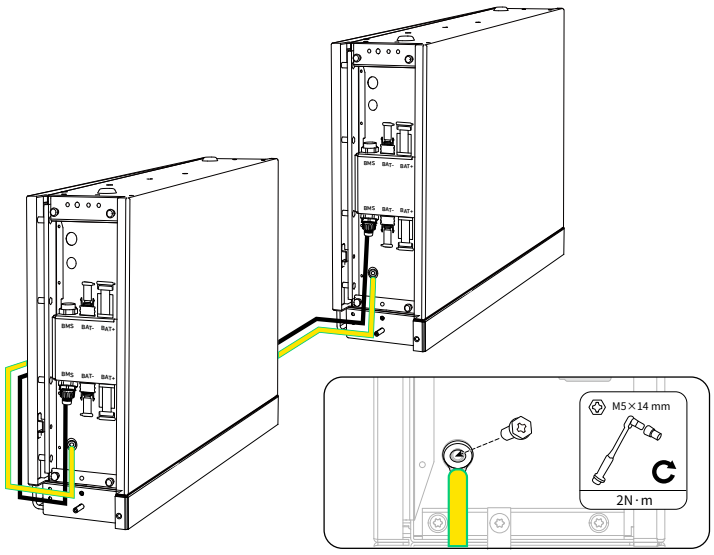
Figure: Assemble the GND cable and RJ45 signal cable.



③ Install the GND cable and RJ45 signal cable.

On the bottom battery modules in both columns, connect the GND cable to the ground points and the RJ45 signal cable to the BMS ports.

Figure: Install the GND cable and RJ45 signal cable.



④ Assemble the positive and negative DC power cables.

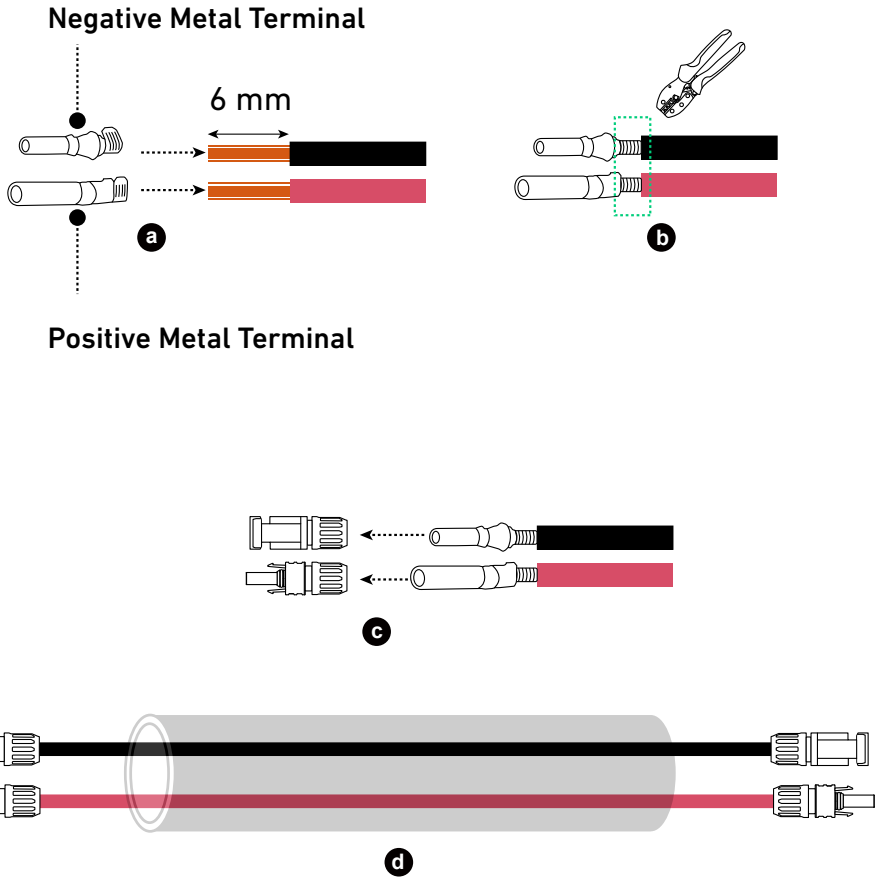
ⓐ Strip the insulation layers from both ends.

ⓑ Crimp the positive and negative metal terminals (included) onto the corresponding cables. Make sure the terminals are securely attached and cannot be pulled out.

ⓒ Insert the positive and negative metal terminals into the corresponding DC power connectors. You should hear a click when they are properly connected.

ⓓ Tighten the locking nuts to secure the connection.

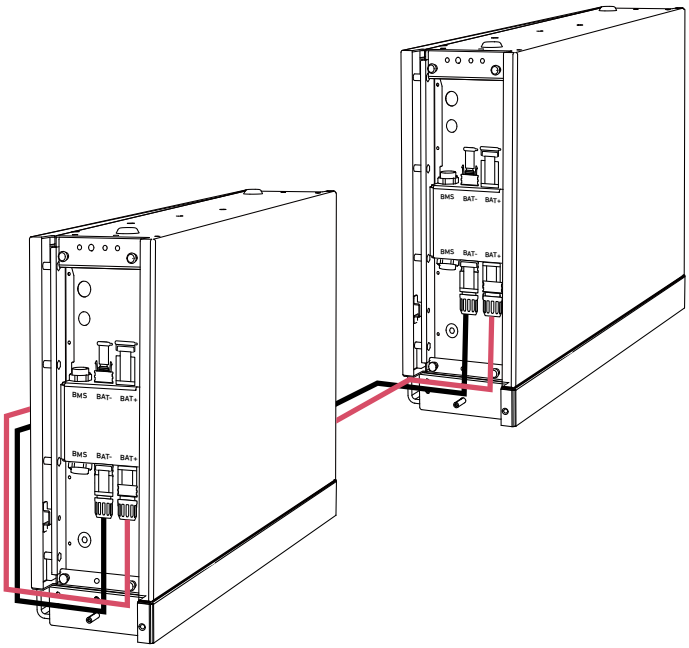
Figure: Assemble the DC power cables.



⑤ Install the positive and negative DC power cables.

On the bottom battery modules in both columns, connect the negative DC power cables (black) to the negative power ports (BAT-) and the positive DC power cables (red) to the positive power ports (BAT+).

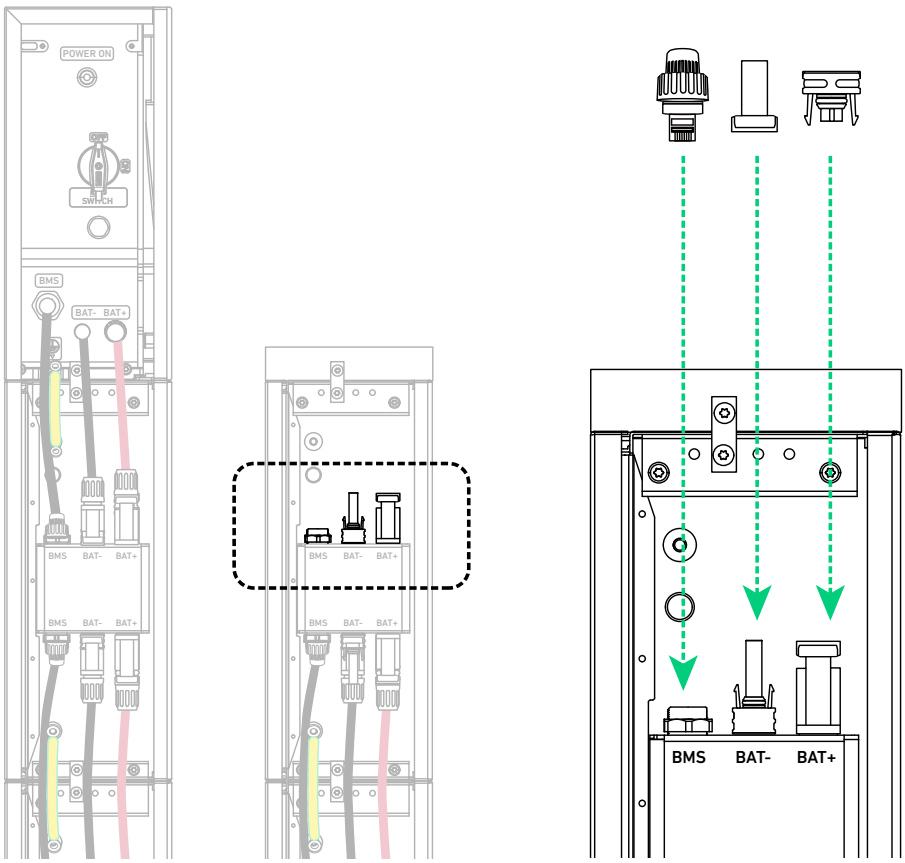
Figure: Install the DC power cables.



4. Seal unused ports.

On the top battery module in the second column, insert an RJ45 connector (with 2×120Ω terminating resistor, included) into the BMS port, a female dustproof cap (included) into the negative DC power port (BAT-), and a male dustproof cap (included) into the positive DC power port (BAT+).

Figure: Seal unused ports.



6.2 External Connections

The following steps detail how to connect the power module to different external devices.

Residual Current Monitoring Device

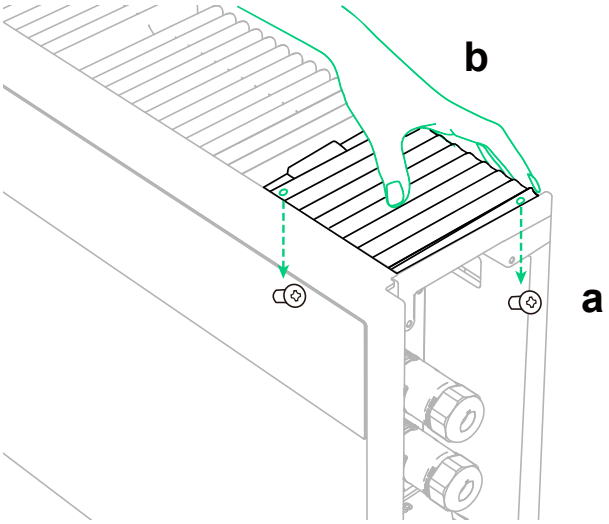
The power module includes an integrated universal current-sensitive residual current monitoring unit. This unit will disconnect the power module from the mains power immediately if a fault current with a value exceeding the limit is detected.

If an external Residual Current Device (RCD) is mandatory, the switch must be triggered at a residual current of 30 mA (recommended), or it can be set to other values according to local regulations. For example, in Australia, the power module can use an additional 30mA (type B) RCD in installations.

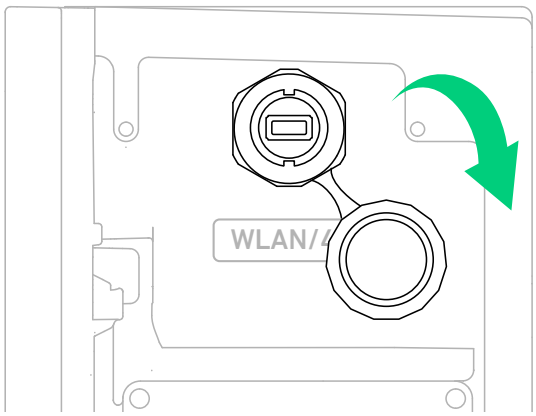
However, if an external RCD (type B recommended) is mandatory, the switch must be triggered at a residual current of 30 mA (recommended). Local standards may allow for the use of RCDs with other specifications.

Connect to the Internet

❶ Remove the panel from the upper right of the power module. Keep the two screws (M3×8 mm) for later reinstallation.



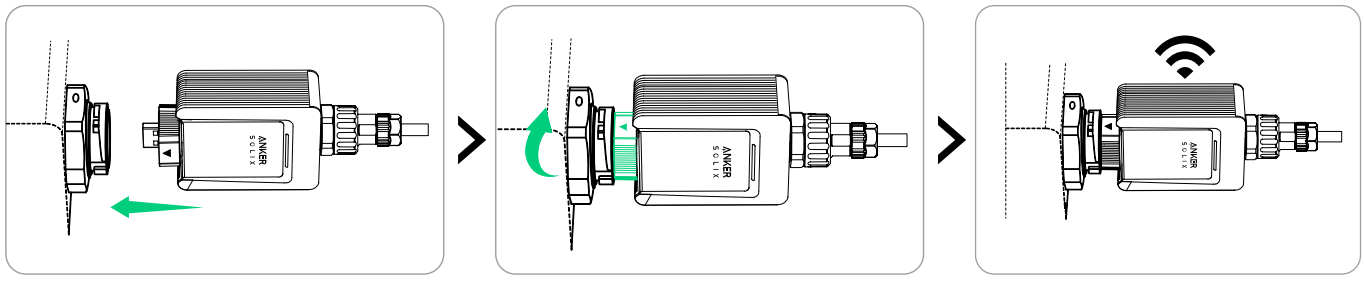
❷ Open the WLAN/4G port cover on the right side of the power module.



❸ Install the appropriate dongle according to the networking methods.

Option 1: Connect via Wi-Fi.

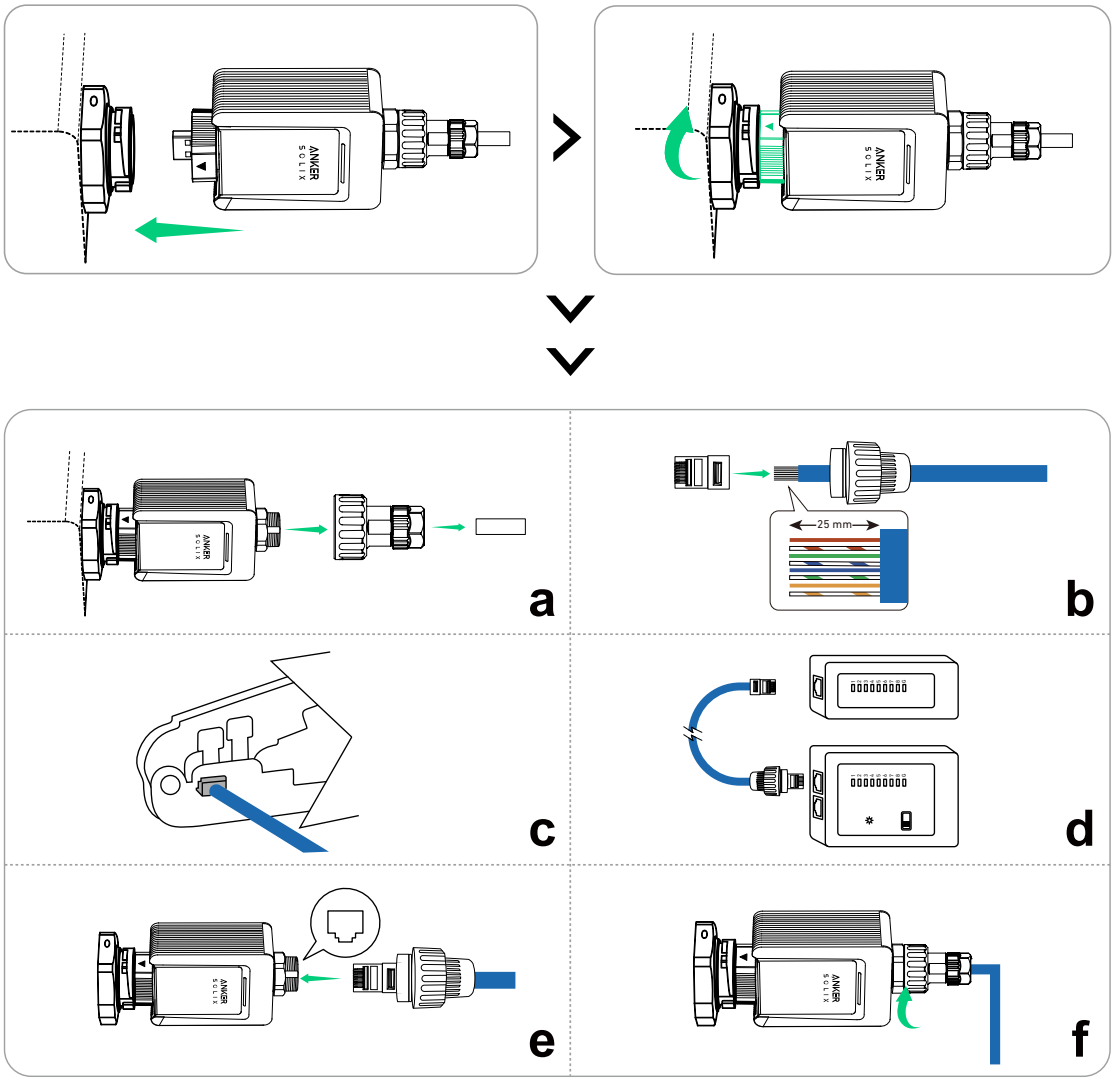
Insert the WLAN dongle (DG-WF-H, included) into the WLAN/4G port.



Option 2: Connect via Ethernet.

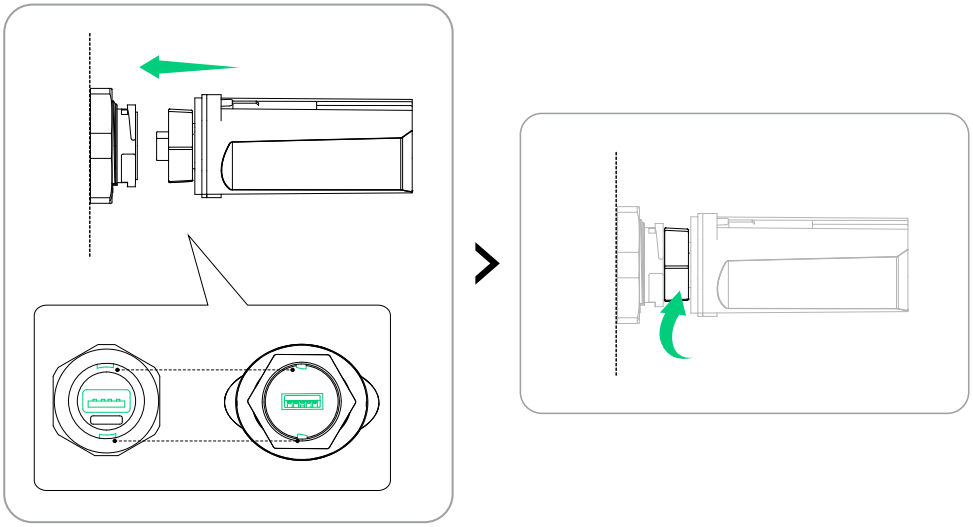
Plug an Ethernet cable (Cat 5 or higher, 5-6 mm in diameter, not included, shielding recommended) into the WLAN dongle (DG-WF-H, included).

From Bottom to Top (Clip Faces Away):								
Pin	1	2	3	4	5	6	7	8
Wire Color	Orange-White	Orange	Green-White	Blue	Blue-White	Green	Brown-White	Brown

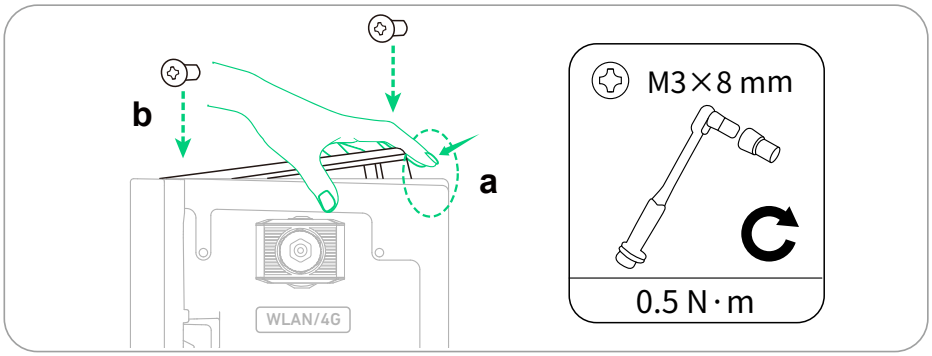


Option 3: Connect via 4G.

Insert the Mobile dongle (VCB-5106L6-WB-AK, not included) into the WLAN/4G port.



❹ Press the back of the panel to reinstall it, and then tighten the screws (M3×8 mm).



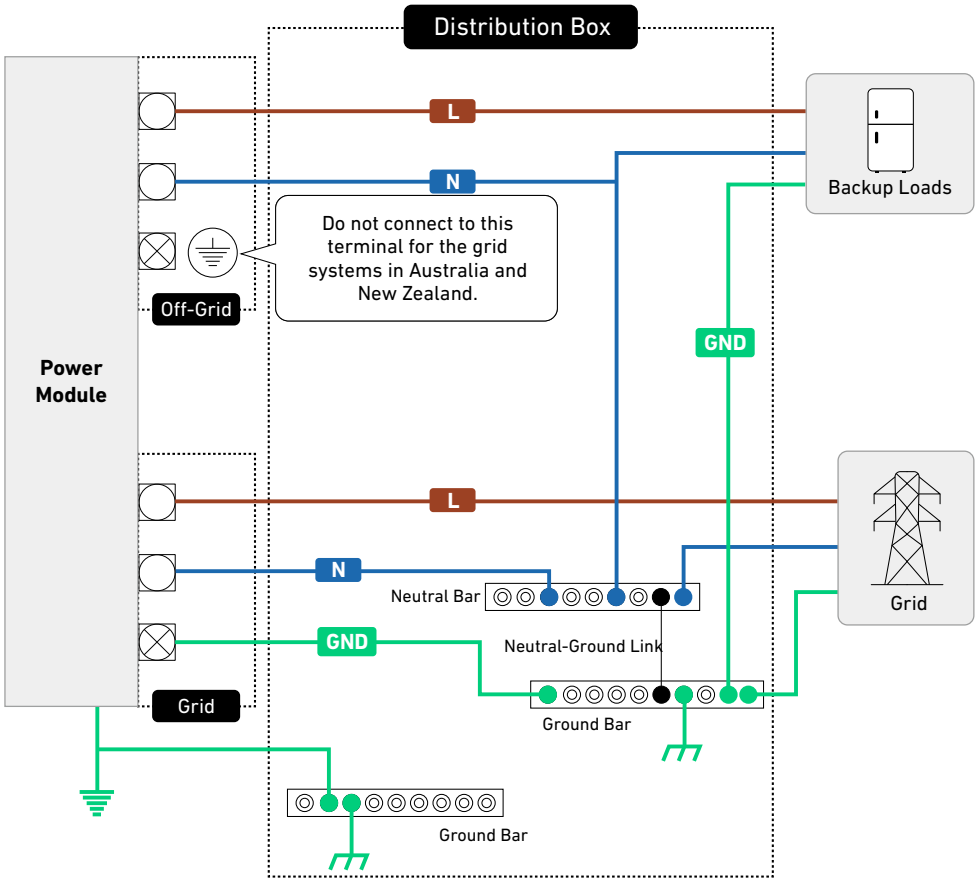
❺ After installing the dongle, configure the Internet settings in the Anker SOLIX Professional app. For detailed instructions, refer to “Step 2: Configure System Network”.

Connect to the Grid and Backup Loads

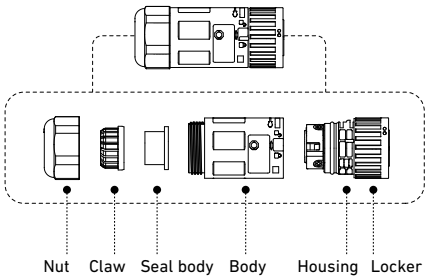
Connect the power module to the grid and the backup loads.

- The power module uses the AC backup port as the off-grid port, which is separate from the grid-interactive port (AC grid port).
- In Australia and New Zealand, a Neutral-Ground link must be created between the neutral bar and the ground bar in the distribution box. Do not connect the GND (PE) conductor of the AC backup port to the ground bar.

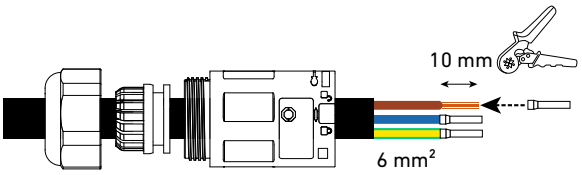
Figure: Electrical connections between the power module and the grid / backup loads (Australia / New Zealand).



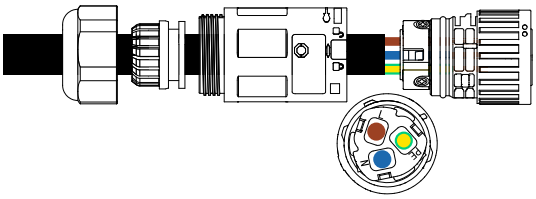
❶ Disassemble an AC connector (included).



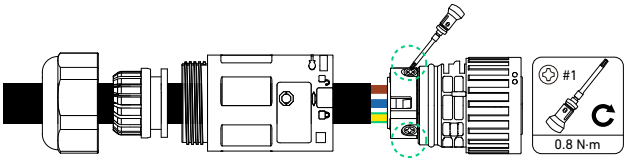
❷ Route the 3-conductor cable (6 mm^2, not included) through the nut, claw, seal body, and body. Strip the insulation layers from the conductors, and insert and crimp the tube terminals.



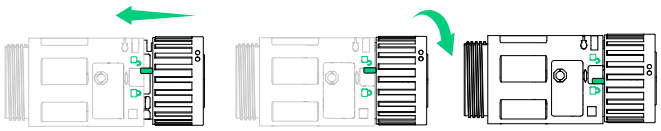
❸ Connect the L (brown), N (blue), and GND (yellow/green) conductors to the sockets labelled L, N, and PE (GND) respectively.



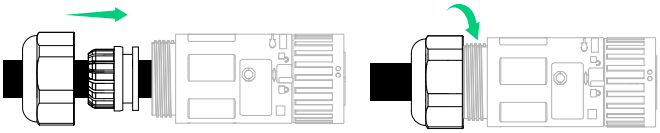
❹ Tighten the three screws on the housing with a No.1 Phillips screwdriver.



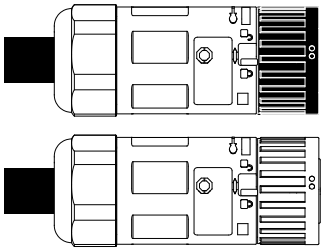
❺ Align the locker and the body as illustrated, and rotate the locker until you hear a click.



❻ Tighten the nut to secure the cable.

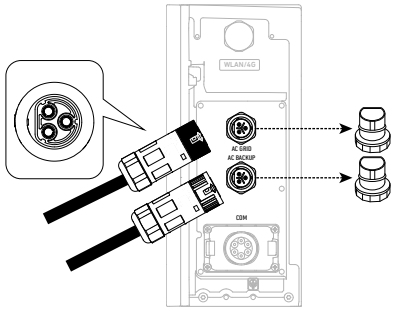


❼ Repeat steps one to six to assemble the other AC connector (included).

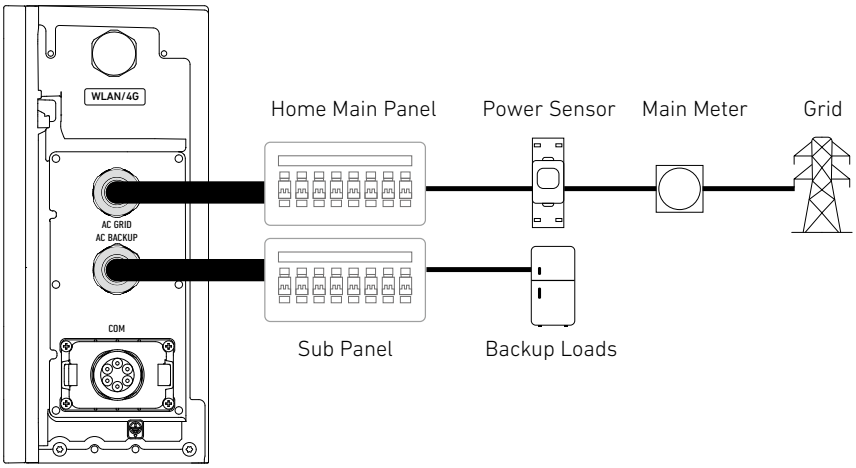


❽ Remove the dustproof covers from the AC ports. Then, attach the AC grid connector (with a black locker) to the AC grid port, and connect the AC backup connector (with an off-white locker) to the AC backup port.
Rotate the locker in the locking direction to tighten the connectors.

- You will hear a "click" when the connectors are in place.
- Slightly pull back the connectors to check whether they are securely installed.

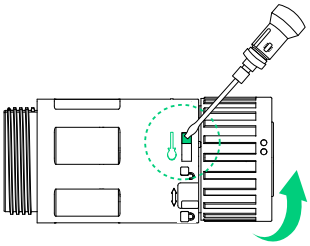


❾ Connect the AC grid connector to the home main panel, and the AC backup connector to the sub panel.
Figure: Connect to the grid and backup loads.



To disassemble the AC connector, depress the buckle and turn the body to the unlocking icon.

Figure: Disassemble the AC connector.



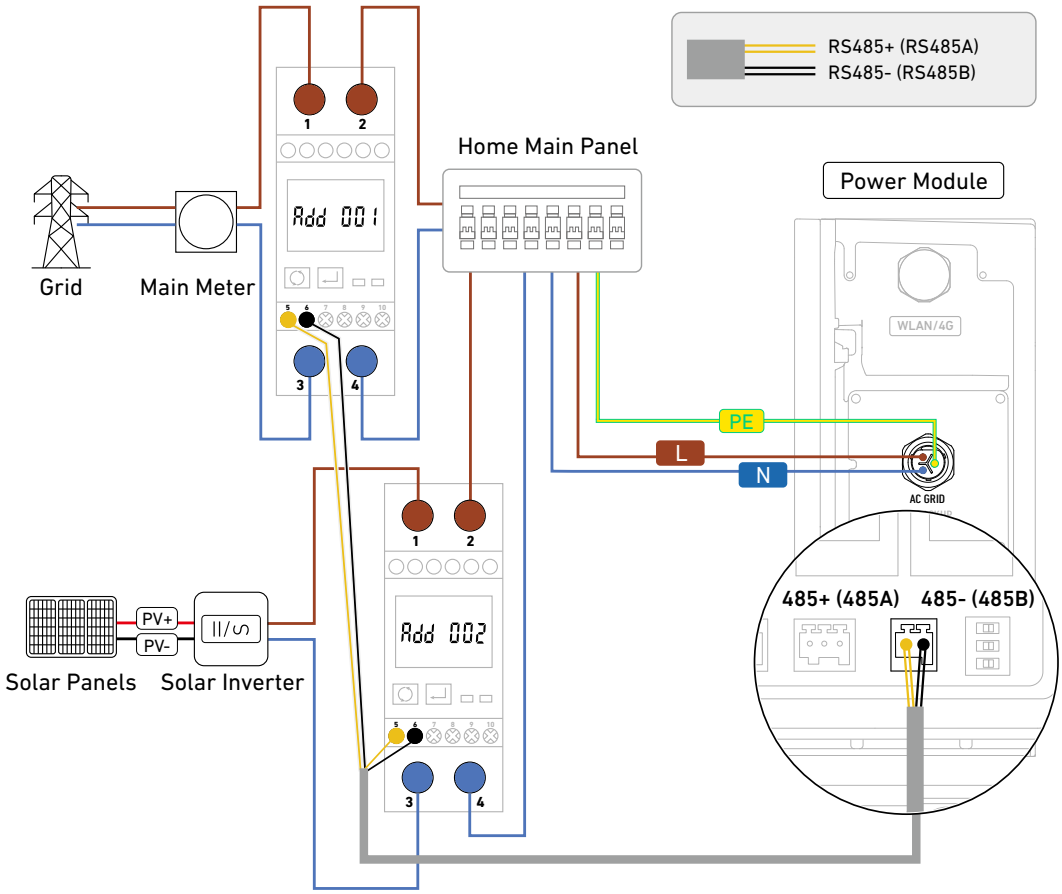
Connect to Power Sensors

Connect the power module to the power sensors on both the grid side and the solar panel side.

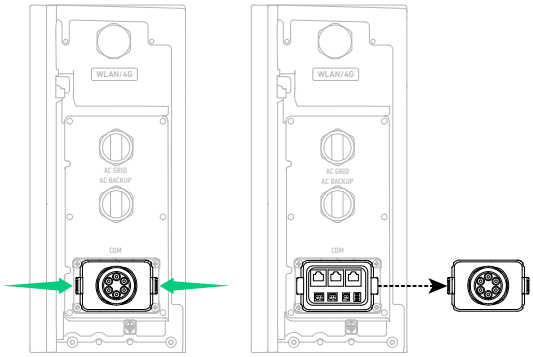
- The Anker SOLIX X1's anti-reverse flow measures include real-time power monitoring through communication between the power module and the power sensors (Model: SDM230-Modbus V1, DTSU666), with software and hardware interventions to prevent power from feeding back into the grid.
- Software approaches adjust discharge currents, while hardware solutions involve shutting down and disconnecting from the grid. In the event of communication failures, the power module will automatically shut down and disconnect from the grid until normal operations can be safely resumed.

Single-Phase Connection

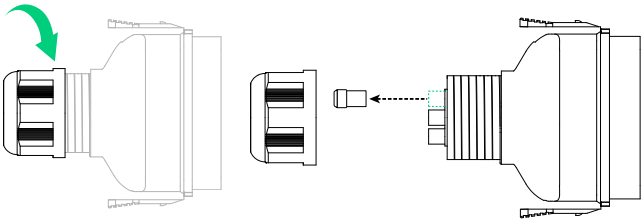
Figure: Single-phase wiring diagram.



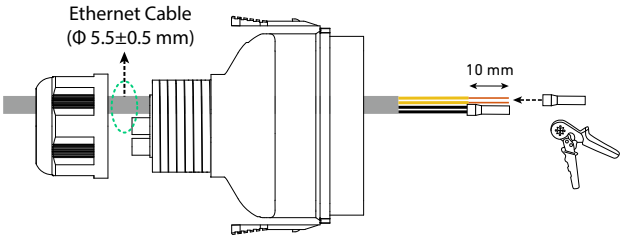
Component	Terminal	Definition	Wire Size	Strip Length	Tube Terminal
Power module	485+	RS485 differential signal+	Outer diameter of 5.5±0.5 mm, conductor cross-sectional area of 0.2-0.35 mm^2, not included	10 mm	For one conductor (0.2-0.35 mm^2), red, included
	485-	RS485 differential signal–			
Power sensor (SDM230-Modbus V1)	5	RS485 differential signal+			For one conductor (0.2-0.35 mm^2), red, included For two conductors (0.2-0.5 mm^2), yellow, included
	6	RS485 differential signal–			



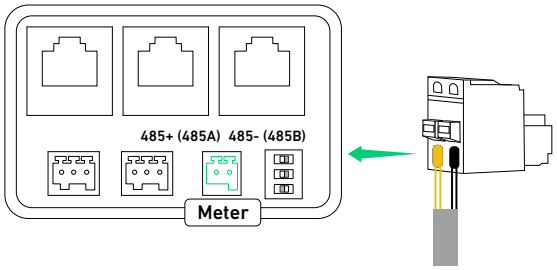
❶ Remove the wiring compartment cover by pressing the clips on both sides.



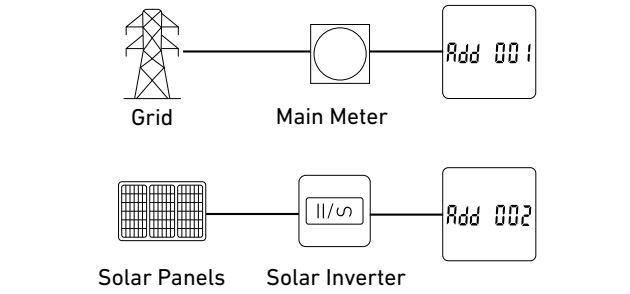
❷ Remove the wiring compartment cover by pressing the clips on both sides.

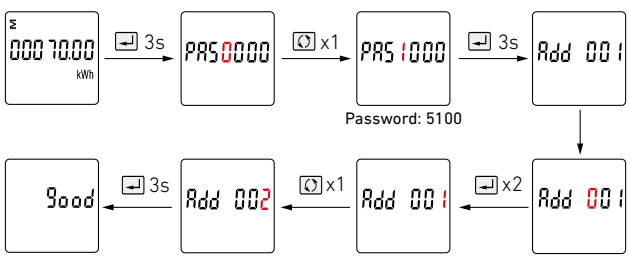


❸ Crimp one tube terminal (for 0.2-0.35 mm^2 conductor, included) onto the 485+ (485A) conductors, and the other tube terminal onto the 485- (485B) conductors.



❹ Insert the tube terminals into the 2-pin terminal block connector (included), and plug it into the terminal block socket labelled Meter.

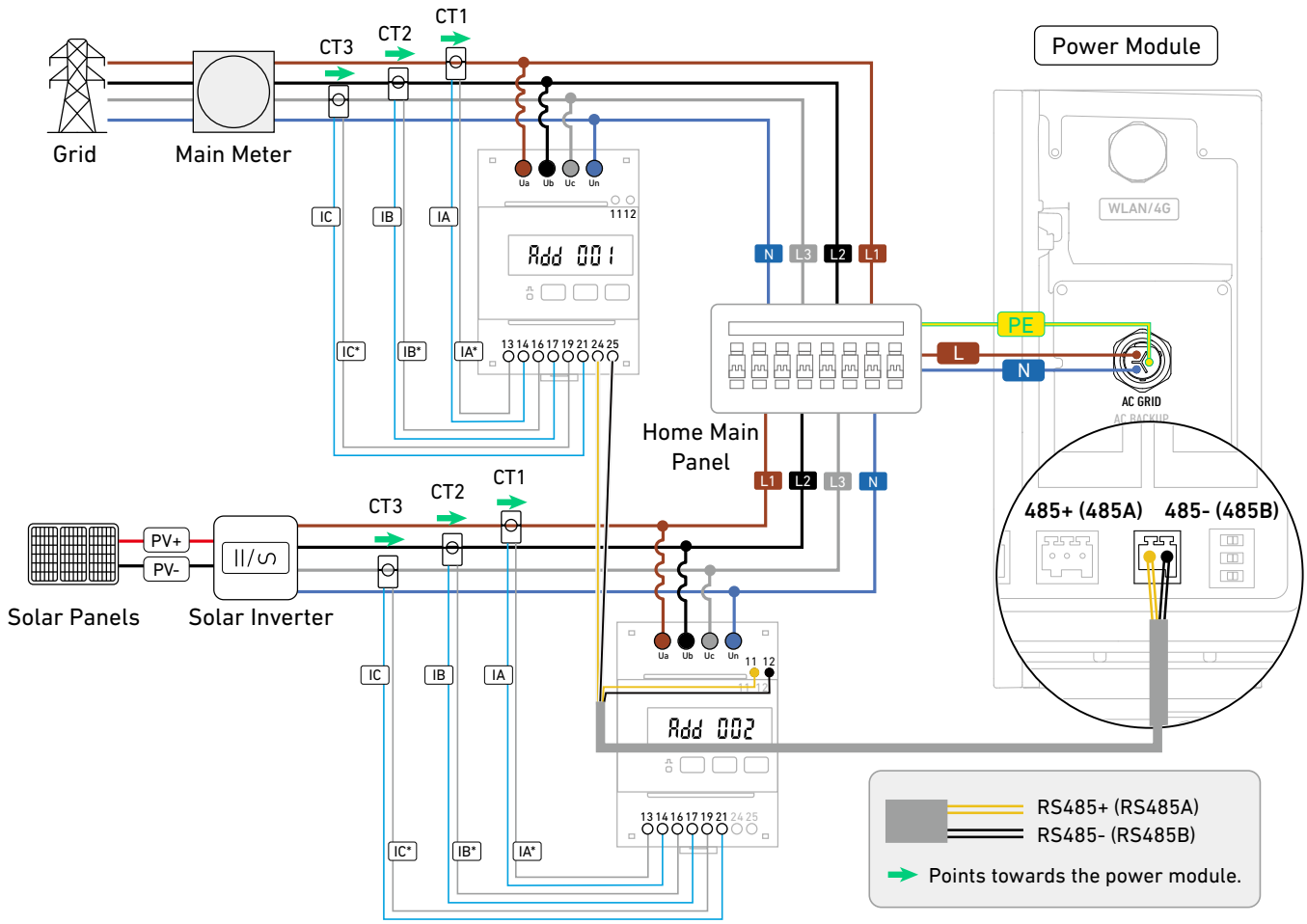




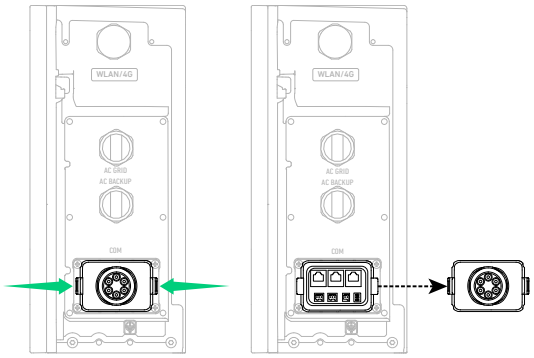
❺ Set the communication address of the power sensors (SDM230-Modbus V1).
Power sensor on the grid side: Add 001
Power sensor on the solar panel side: Add 002

Three-Phase Connection

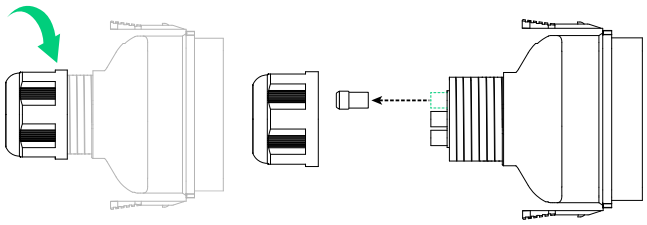
Figure: Three-phase wiring diagram.



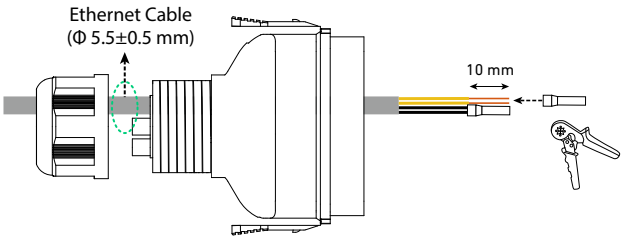
Component	Terminal	Definition	Wire Size	Strip Length	Tube Terminal
Power module	485+	RS485 differential signal+	Outer diameter of 5.5±0.5 mm, conductor cross-sectional area of 0.2-0.35 mm^2, not included	10 mm	For one conductor (0.2-0.35 mm^2), red, included
	485-	RS485 differential signal–			
Power sensor (DTSU666)	24	RS485 differential signal+ for address 1			For one conductor (0.2-0.35 mm^2), red, included For two conductors (0.2-0.5 mm^2), yellow, included
	25	RS485 differential signal– for address 1			
	11	RS485 differential signal+ for address 2			
	12	RS485 differential signal– for address 2			



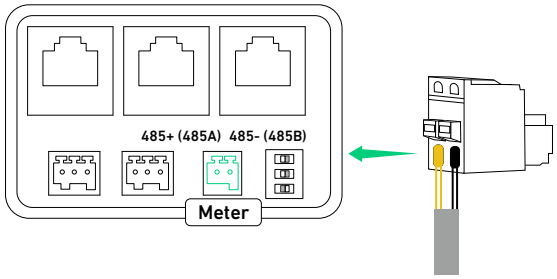
❶ Remove the wiring compartment cover by pressing the clips on both sides.



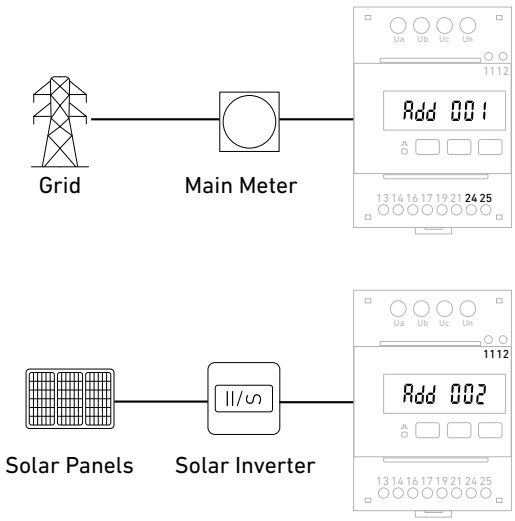
❷ Rotate to remove the locking cap from the wiring compartment cover. Then take out a waterproof plug.



❸ Crimp one tube terminal (for 0.2-0.35 mm^2 conductor, included) onto the 485+ (485A) conductors, and the other tube terminal onto the 485- (485B) conductors.



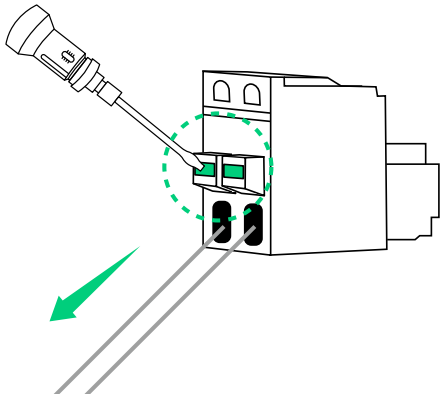
❹ Insert the tube terminals into the 2-pin terminal block connector (included), and plug it into the terminal block socket labelled Meter.



❺ Connect the power module to the terminals 24 and 25 of the grid-side power sensor, and to the terminals 11 and 12 of the solar-side power sensor. This will ensure that the communication address is correctly established. If not, please reset the address by checking the power sensor manual.
Power sensor on the grid side: Add 001
Power sensor on the solar panel side: Add 002

To disconnect a conductor, press the tab and pull the conductor out.

Figure: Disconnect the conductor.



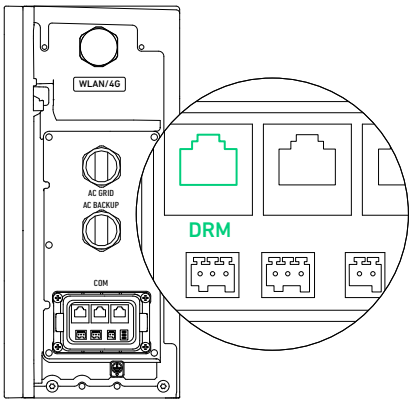
Connect to the Demand Response Enabling Device (DRED)

Connect the power module to the Demand Response Enabling Device (DRED).

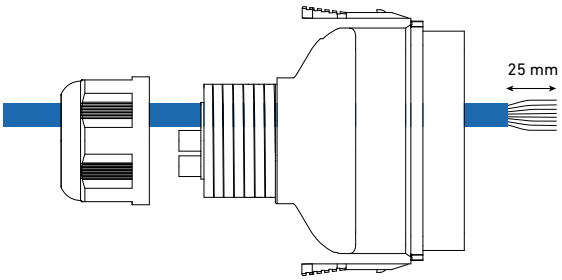
❶ Identify the terminals to connect based on the table below.

Terminal	Pin	Definition
DRM	1	DRM1/5
	2	DRM2/6
	3	DRM3/7
	4	DRM4/8
	5	DRM REF
	6	DRM COM
	7	/
	8	/

Figure: DRM port of the power module.

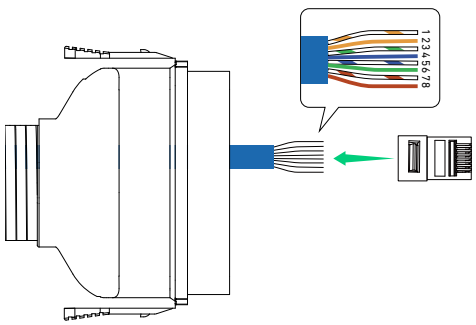


❷ Route a signal cable (Cat 5 or higher, 5-6 mm in diameter, not included; shielding recommended) through the locking cap and wiring compartment cover. Then, strip the insulation layer.

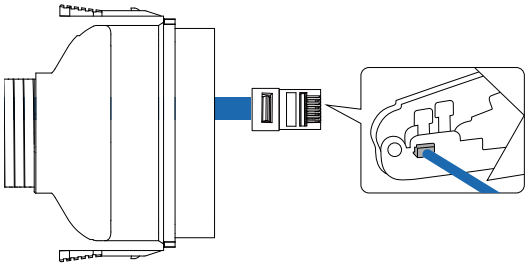


❸ Insert the wires into the RJ45 connector (included) in the EIA/TIA 568B order. From left to right (when the clip is facing away from you):

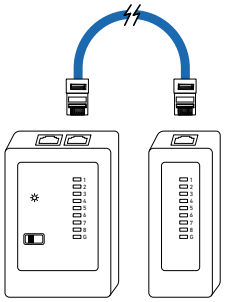
Pin	1	2	3	4	5	6	7	8
Wire Color	Orange-white	Orange	Green-white	Blue	Blue-white	Green	Brown-white	Brown



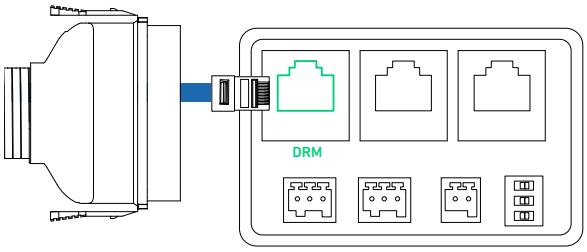
❹ Crimp the RJ45 connector using a crimping tool. Ensure that the pins click in place.



❺ Use a cable tester to verify proper wiring and continuity.

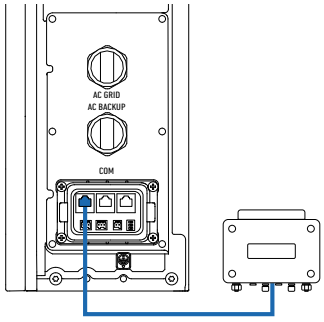


❻ Insert the signal cable into the DRM port of the power module.



❼ Connect the other end of the signal cable to the Demand Response Enabling Device (DRED).

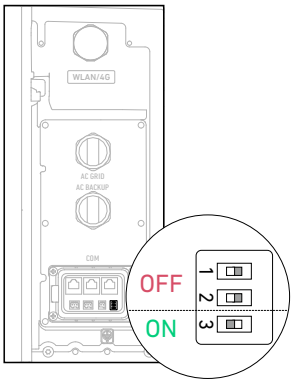
Figure: Connect to the DRED.



Adjust DIP Switches

When installing a single power module, set DIP switches 1 and 2 off and DIP switch 3 on.

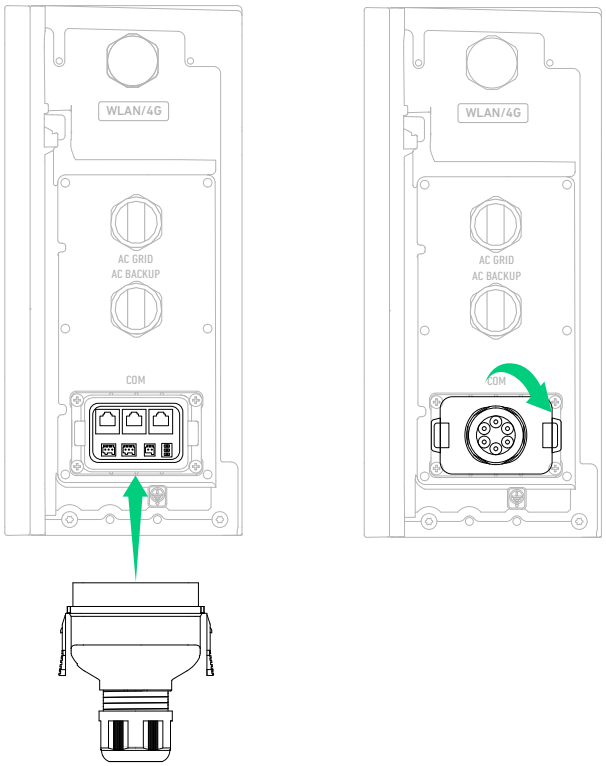
Figure: Adjust DIP switches.



Reinstall the Wiring Compartment Cover

Plug the cover into the wiring compartment and secure it by turning the locking cap.

Figure: Reinstall the wiring compartment cover.

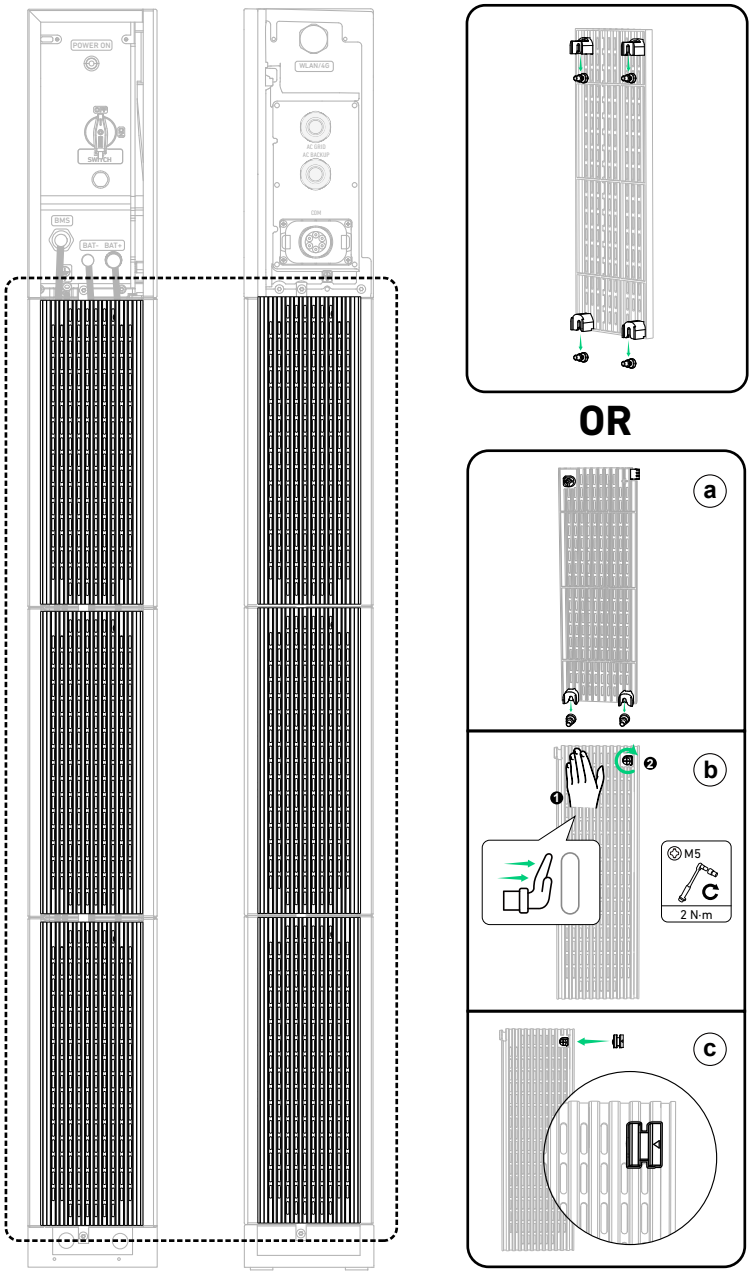


6.3 Complete Connections

1. Install the side covers* to the battery modules from the bottom up.

*The side covers may vary due to batch variations.

Figure: Install side covers to battery modules.



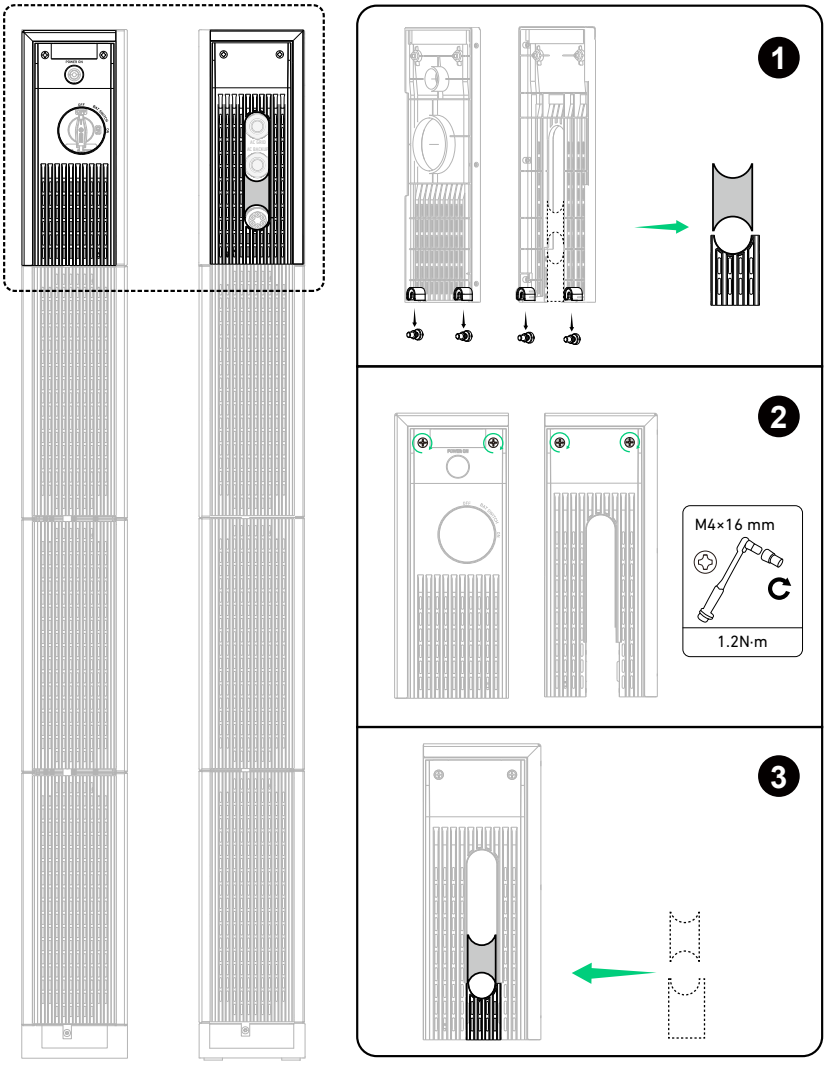
2. Install the side covers to the power module.

❶ Remove the separators from the right side cover. Align the side cover clips with the groove of the power module, and push the covers down to click in place.

❷ Fasten the screws (M4×16 mm) on the top.

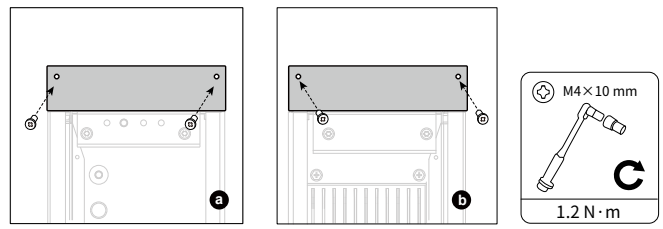
❸ Attach the separators to the slot of the right side cover.

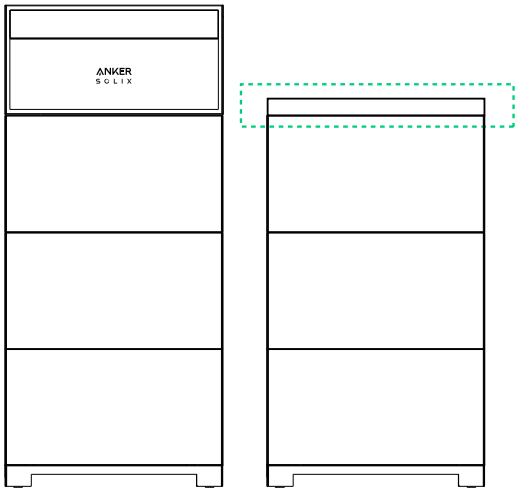
Figure: Install side covers to the power module.



3. Install the top cover baffles when installing two columns of modules.

Figure: Install the top cover baffles.





4. Install the base baffles when installing two columns of modules.

Wall-Mounted Modules

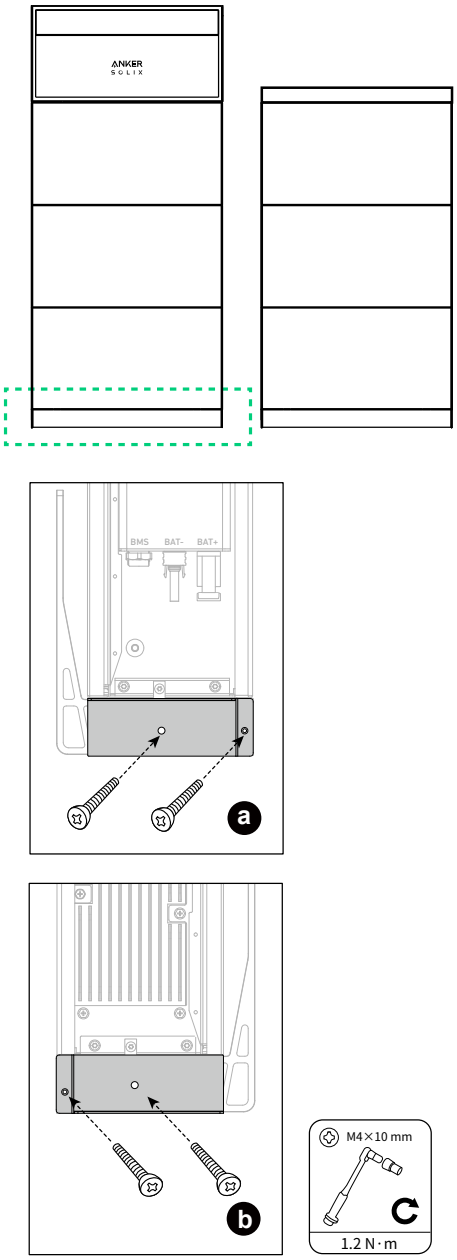


Figure: Install the base baffles for wall mounting.

Floor-Mounted Modules

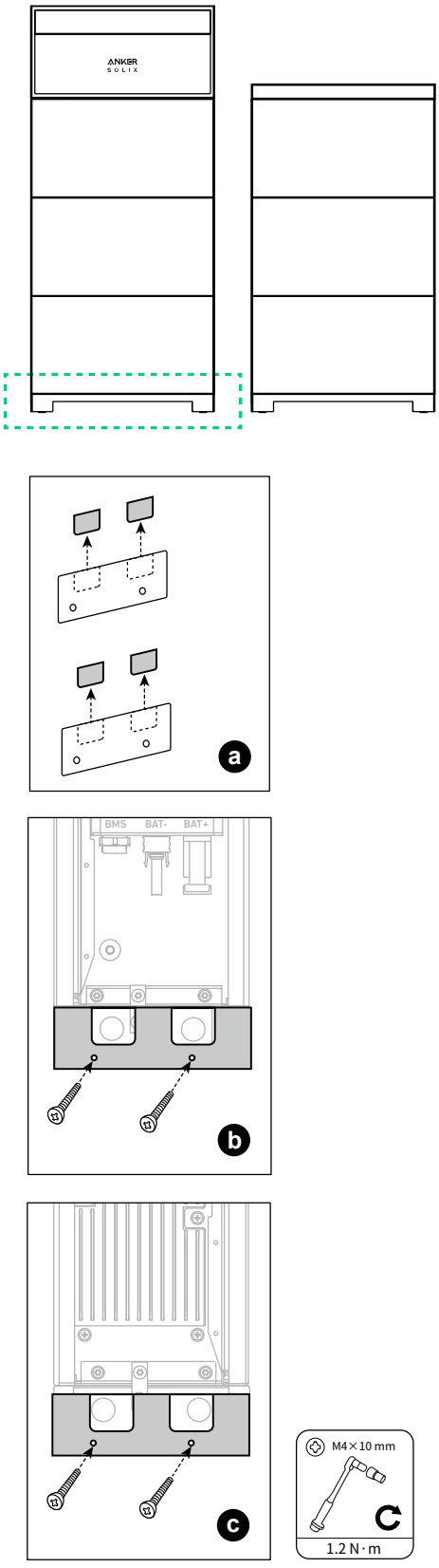
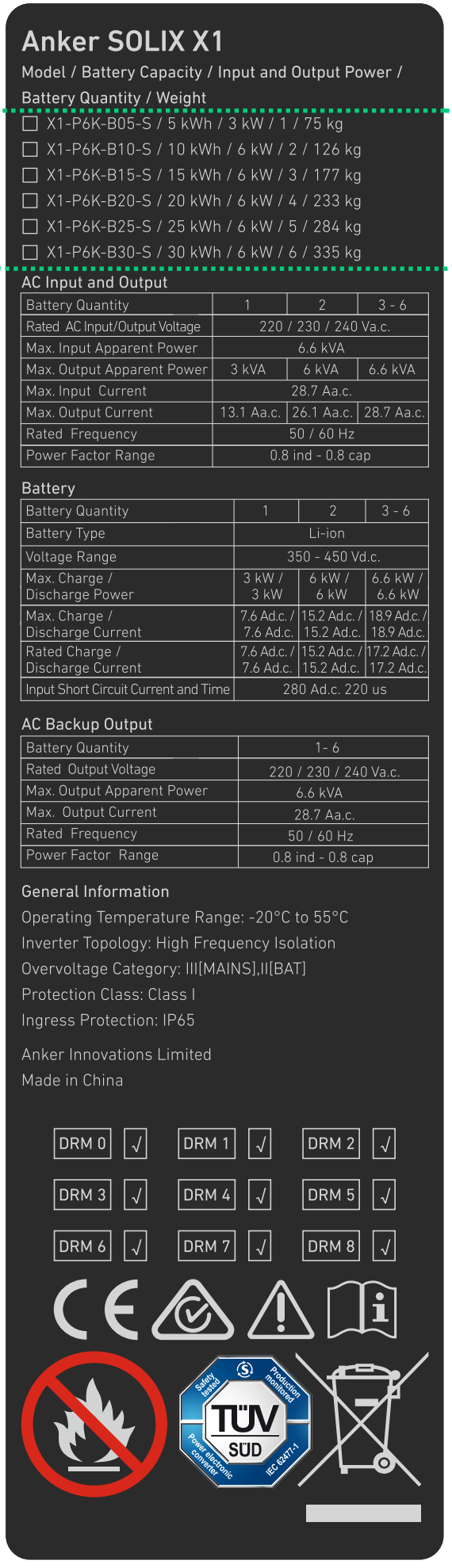


Figure: Install the base baffles for floor mounting.

5. Select and mark the correct system model on the power module's label.



Anker SOLIX X1

Model / Battery Capacity / Input and Output Power / Battery Quantity / Weight

- ☐ X1-P6K-B05-S / 5 kWh / 3 kW / 1 / 75 kg
- ☐ X1-P6K-B10-S / 10 kWh / 6 kW / 2 / 126 kg
- ☐ X1-P6K-B15-S / 15 kWh / 6 kW / 3 / 177 kg
- ☐ X1-P6K-B20-S / 20 kWh / 6 kW / 4 / 233 kg
- ☐ X1-P6K-B25-S / 25 kWh / 6 kW / 5 / 284 kg
- ☐ X1-P6K-B30-S / 30 kWh / 6 kW / 6 / 335 kg

AC Input and Output

Battery Quantity	1	2	3 - 6
Rated AC Input/Output Voltage	220 / 230 / 240 Va.c.		
Max. Input Apparent Power	6.6 kVA		
Max. Output Apparent Power	3 kVA	6 kVA	6.6 kVA
Max. Input Current	28.7 Aa.c.		
Max. Output Current	13.1 Aa.c.	26.1 Aa.c.	28.7 Aa.c.
Rated Frequency	50 / 60 Hz		
Power Factor Range	0.8 ind - 0.8 cap		

Battery

Battery Quantity	1	2	3 - 6
Battery Type	Li-ion		
Voltage Range	350 - 450 Vd.c.		
Max. Charge / Discharge Power	3 kW / 3 kW	6 kW / 6 kW	6.6 kW / 6.6 kW
Max. Charge / Discharge Current	7.6 Ad.c. / 7.6 Ad.c.	15.2 Ad.c. / 15.2 Ad.c.	18.9 Ad.c. / 18.9 Ad.c.
Rated Charge / Discharge Current	7.6 Ad.c. / 7.6 Ad.c.	15.2 Ad.c. / 15.2 Ad.c.	17.2 Ad.c. / 17.2 Ad.c.
Input Short Circuit Current and Time	280 Ad.c. 220 us		

AC Backup Output

Battery Quantity	1- 6
Rated Output Voltage	220 / 230 / 240 Va.c.
Max. Output Apparent Power	6.6 kVA
Max. Output Current	28.7 Aa.c.
Rated Frequency	50 / 60 Hz
Power Factor Range	0.8 ind - 0.8 cap

General Information

Operating Temperature Range: -20°C to 55°C
Inverter Topology: High Frequency Isolation
Overvoltage Category: III[MAINS],II[BAT]
Protection Class: Class I
Ingress Protection: IP65

Anker Innovations Limited
Made in China

DRM 0 √ DRM 1 √ DRM 2 √
DRM 3 √ DRM 4 √ DRM 5 √
DRM 6 √ DRM 7 √ DRM 8 √

7. Commissioning the System

7.1 Verify Hardware Installation

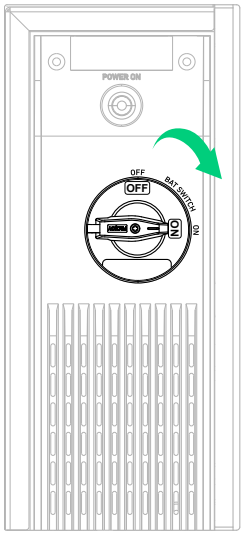
Item	Acceptance Criteria
Installation	The installation is correct and reliable. The installation space is proper, and the installation environment is clean and tidy.
Cable routing	The DC power cables, grounding cables, and signal cables are connected correctly, securely, and reliably. Cables are routed properly.
Terminals and ports	Unused terminals and ports are locked by waterproof or dustproof caps.
Switch	The BAT switch and the panel breaker connected to the power module are off.

7.2 Power On the System

Power on the system before commissioning in the Anker SOLIX Professional app.

1. Toggle the BAT switch of the power module to ON. The power module should be connected to AC power.
2. Turn on the panel breaker connected to the power module.

Figure: Turn on the power module.



7.3 Use the Anker SOLIX Professional App

The UI images shown are for illustration only and may not match the actual display, which can vary depending on the software version.

Download and Install the App

The Anker SOLIX Professional app will guide you through the commissioning process.

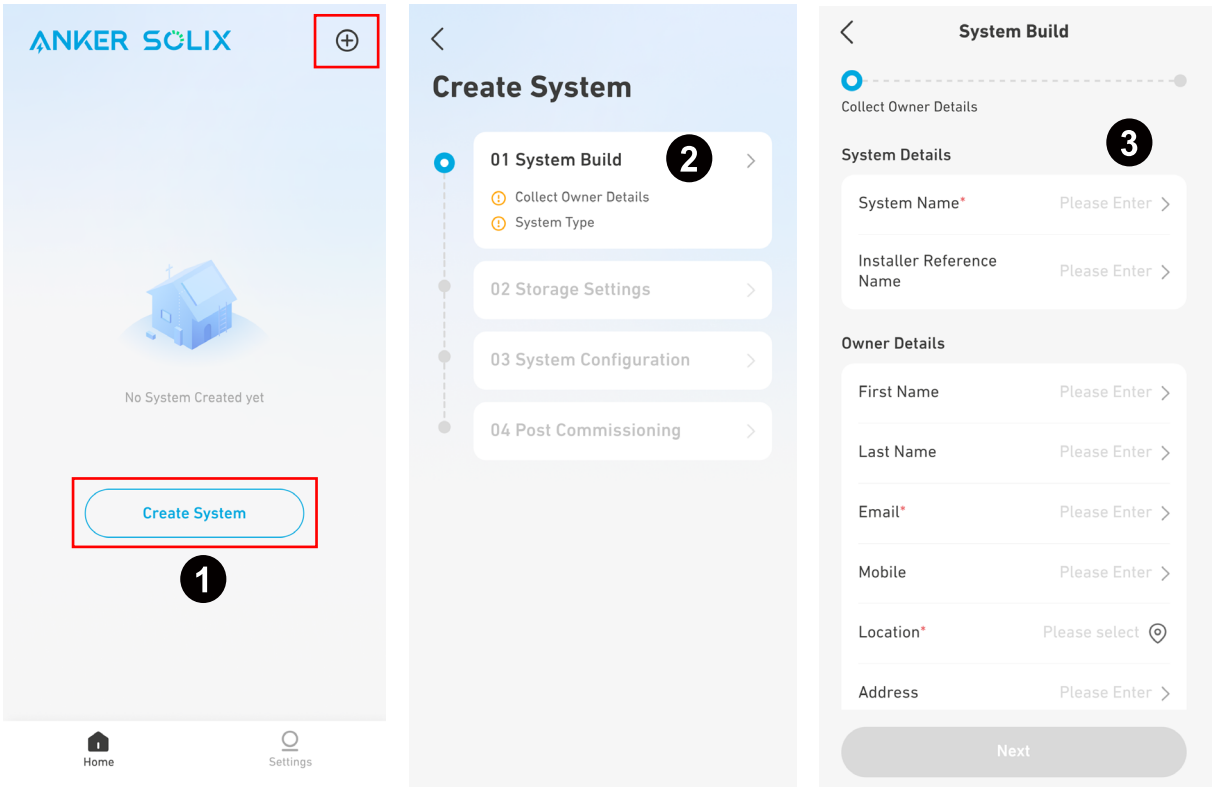
1. Download the **Anker SOLIX Professional** app from the App Store (iOS devices) or Google Play (Android devices).

2. Log into the app using the installer's account. Please check your email to get the account name and initial password.

Build System

Step 1: Collect Owner Details

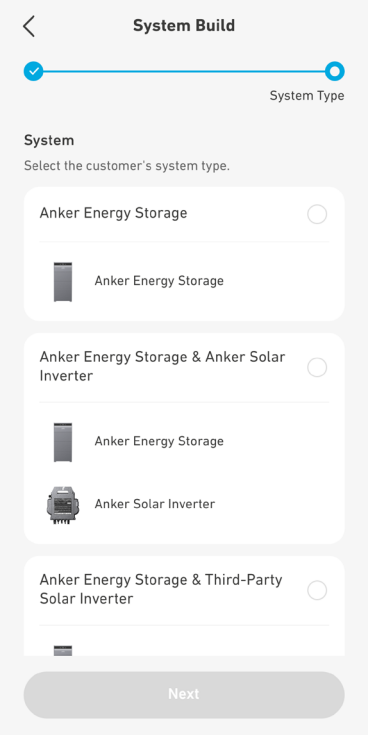
❶ On the Home screen, tap **Create System** or the **+** icon on the top right.
❷ Go to **Build System**.
❸ Input the system and owner information.



Step 2: Select System Type

Select the appropriate system type.

System Type	Does System Include Solar Inverter	Inverter Brand
Anker Energy Storage	No	/
Anker Energy Storage & Anker Solar Inverter	Yes	Anker SOLIX
Anker Energy Storage & Third-Party Solar Inverter	Yes	Others

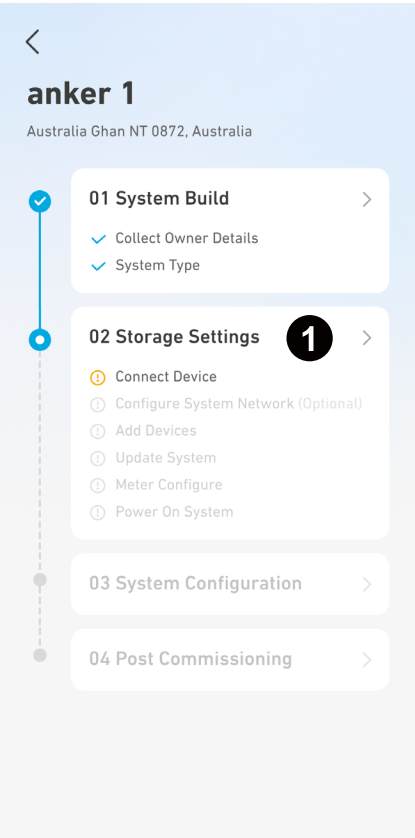


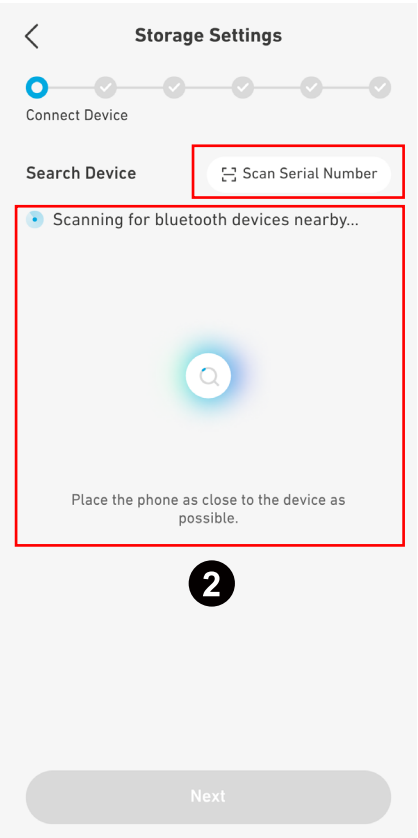
Configure Storage

Step 1: Connect Device

Connect the power module to the Anker SOLIX Professional app via Bluetooth.

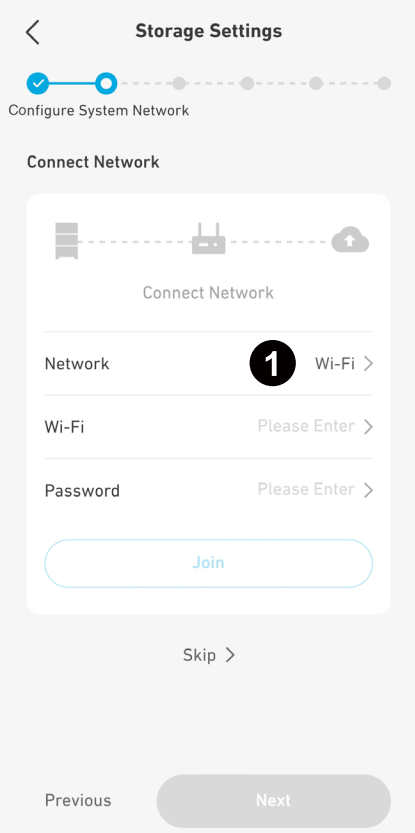
1. Go to Storage Settings.
2. Select the power module from the Bluetooth device list or scan the barcode on the power module's label. Then enter the password located below the barcode.

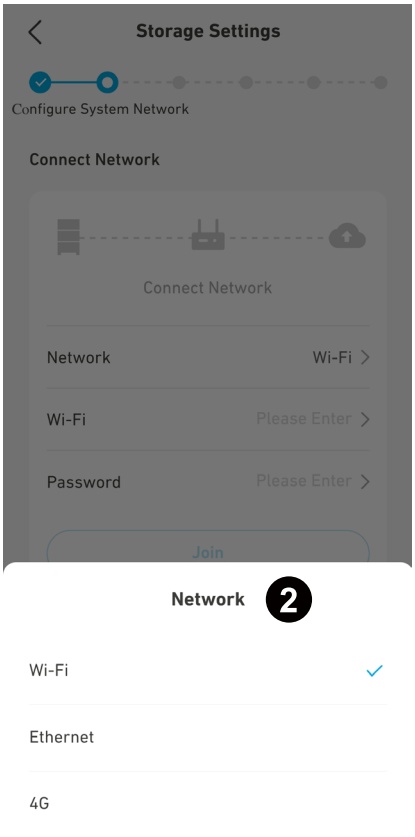




Step 2: Configure System Network

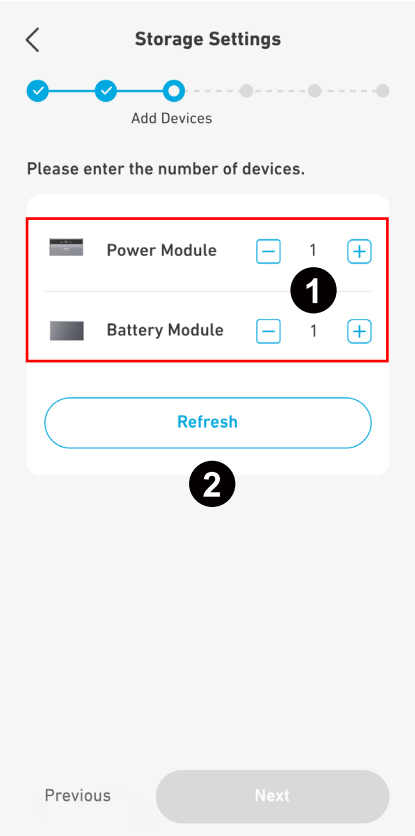
Configure the Internet connection using Wi-Fi, Ethernet, or 4G.

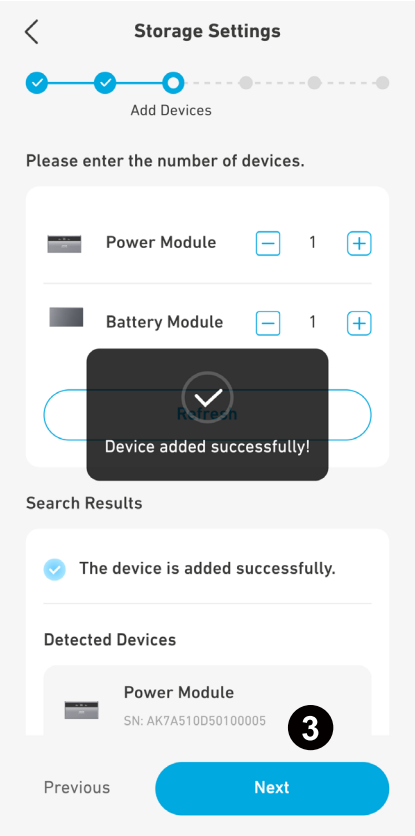




Step 3: Add Devices

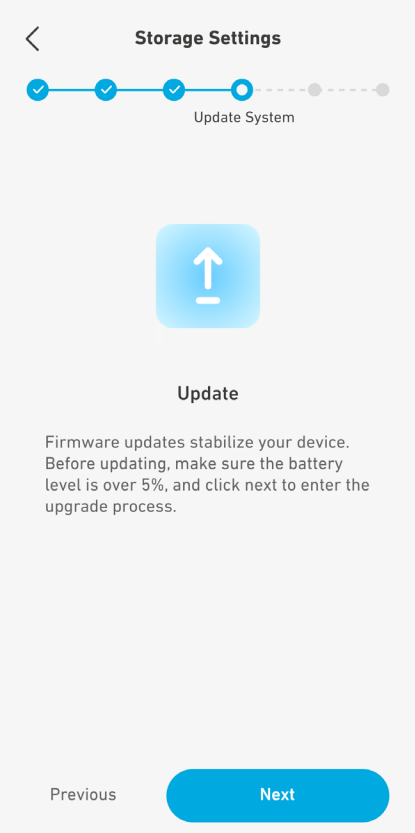
❶ Manually input the numbers of the power modules and battery modules.
❷ Tap **Refresh** to search for the devices automatically.
❸ Select **Next** to move on when you see the message "Device added successfully." If the detected numbers do not match the input numbers, change the input numbers and tap **Refresh** again.





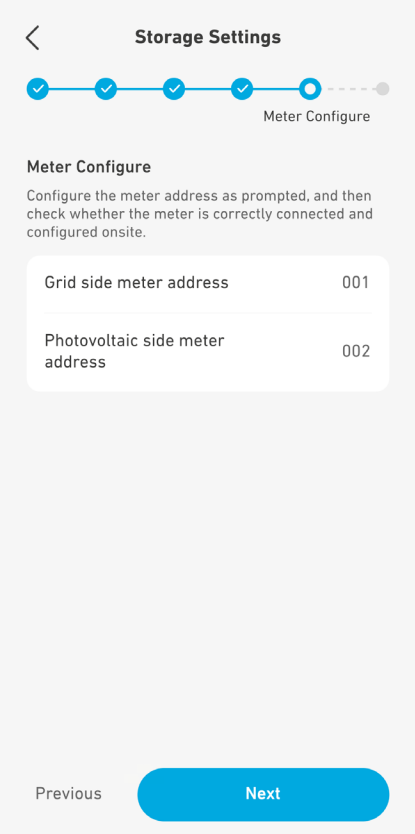
Step 4: Update System

Update the system firmware to the latest version.



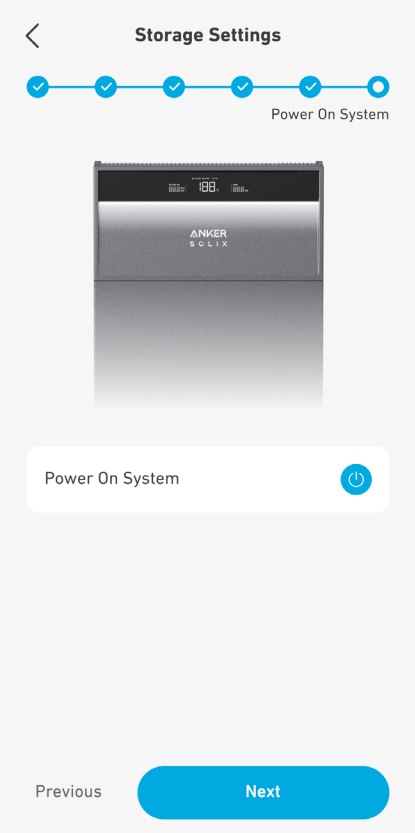
Step 5: Configure Meter

Configure the meter address, and then check whether the meters are correctly connected and configured onsite.



Step 6: Power On System

Tap to power on the system, and tap **Next**. If the system is already on, tap **Next** directly.



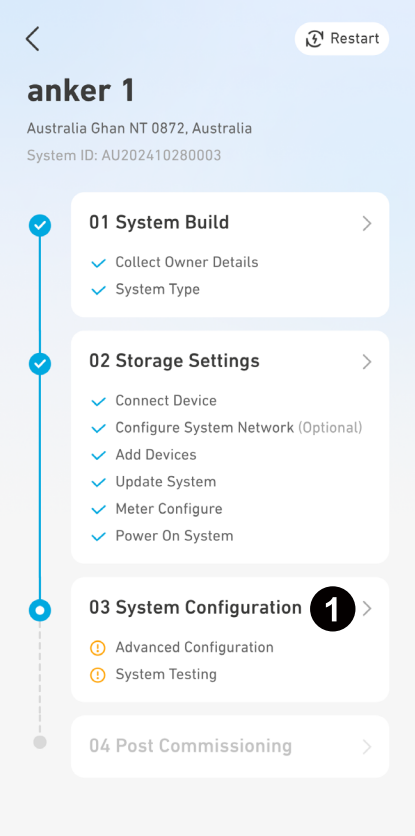
Configure System

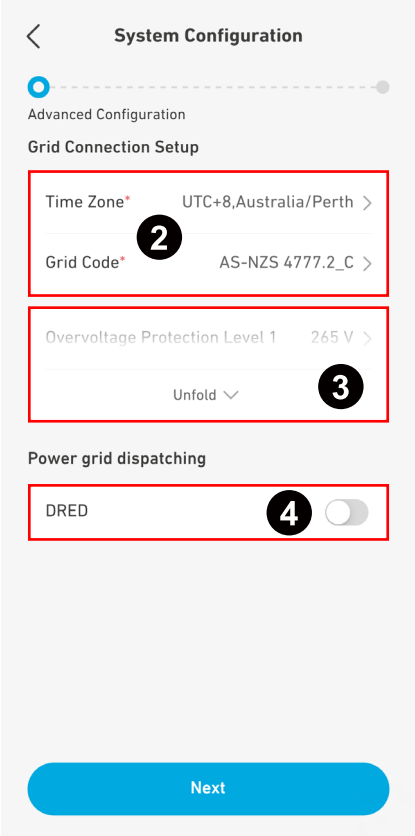
Step 1: Advanced Configuration

❶ Tap **System Configuration**.
❷ Select a grid code and time zone.
When the time zone is set to Australia, select the applicable grid code. Please contact your electricity grid operator for which region to use.

Grid Code	Region
AS-NZS 4777.2_A	Australia A
AS-NZS 4777.2_B	Australia B
AS-NZS 4777.2_C	Australia C
AS-NZS 4777.2_NZ	Australia and New Zealand

❸ Set parameters for the selected grid code.
❹ Note that the **DRED** (Australia only) toggle switch is off by default. If the power module is connected to a DRED, turn on the DRED toggle switch.

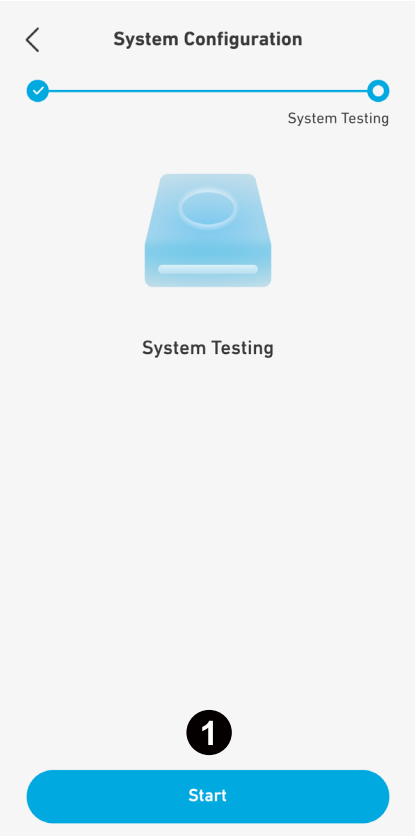


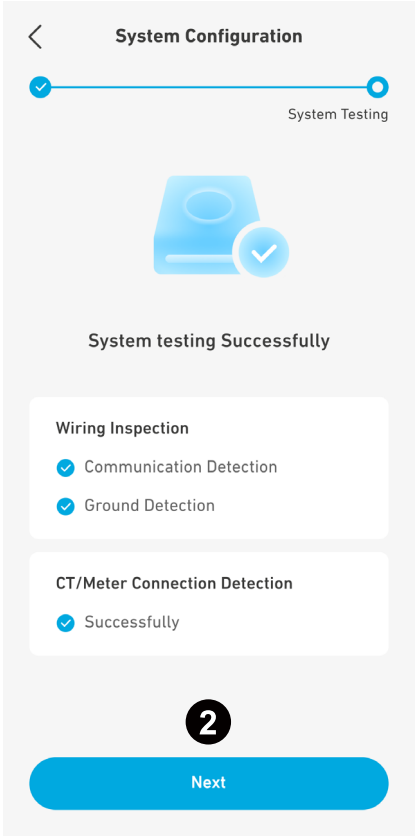


Step 2: Perform System Test

❶ Select **Start** to perform the system test. This involves testing the wiring, CT/meter connections, and both on-grid and off-grid functions.

❷ If system testing is successful, tap **Next** to proceed. If system testing fails, follow the on-screen troubleshooting instructions and tap **Retry**.

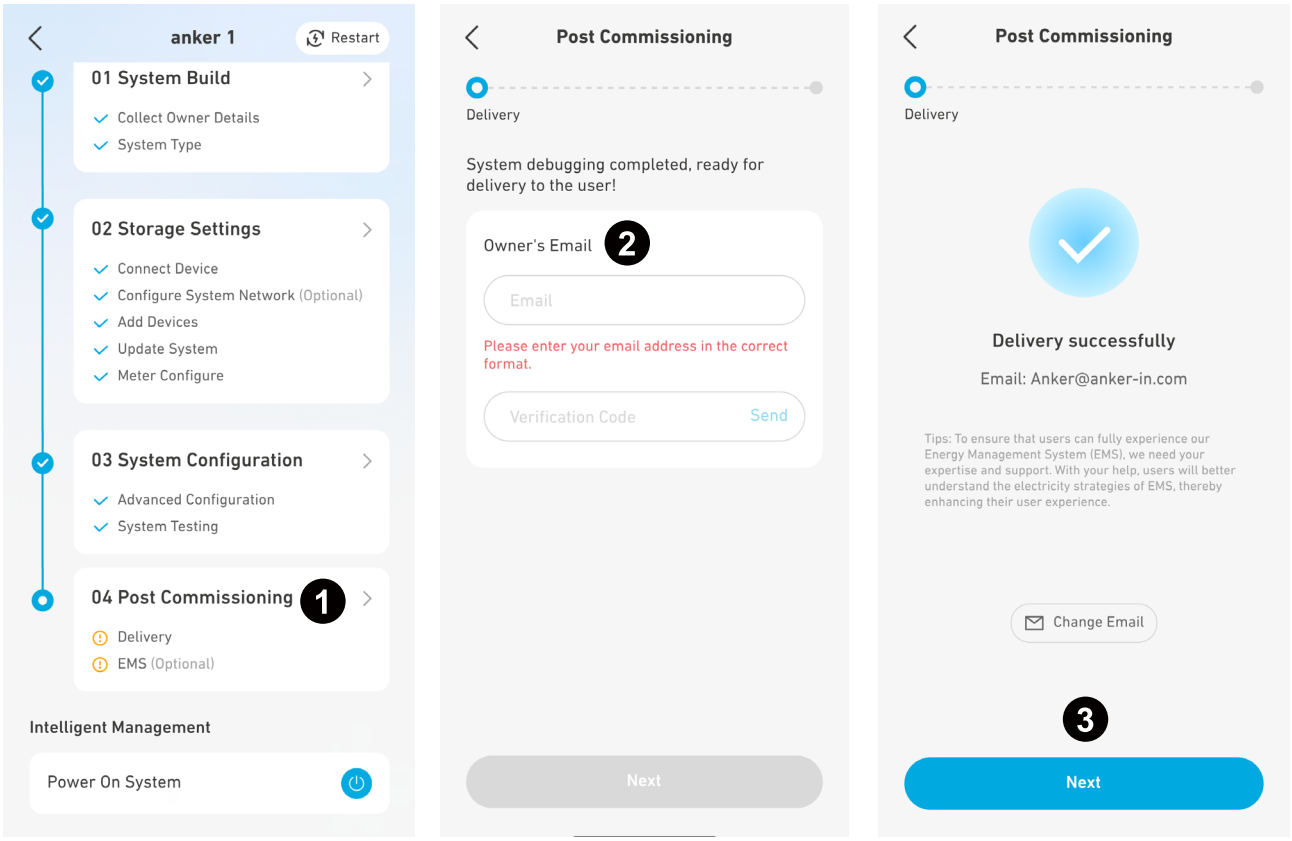




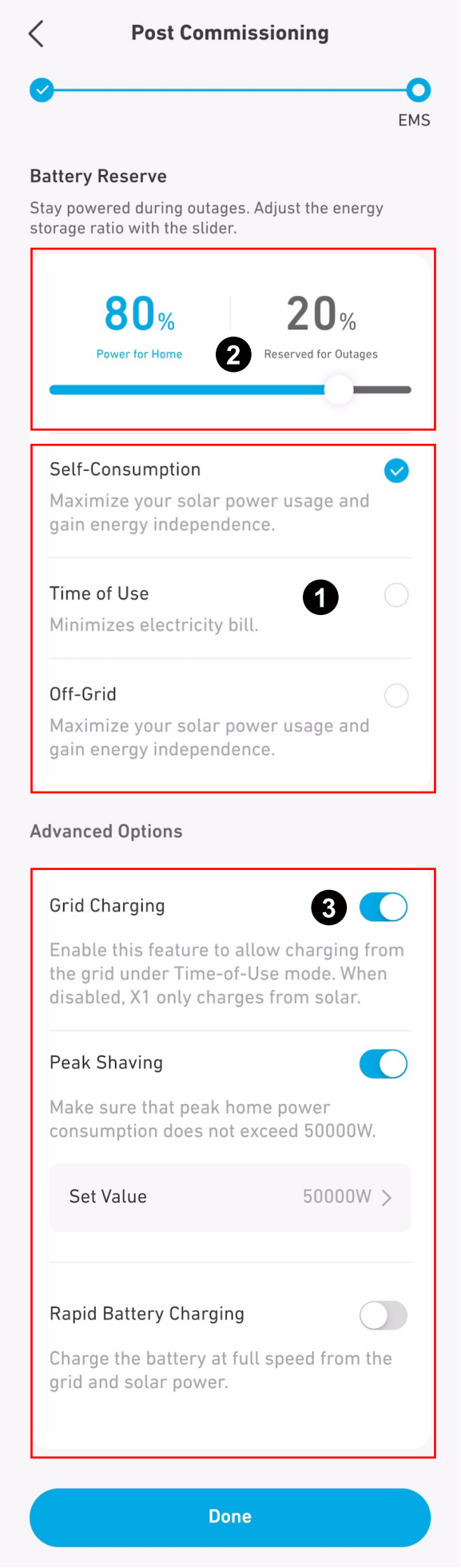
Post Commissioning

Step 1: Delivery

❶ Tap **Post Commissioning**.
❷ Enter the owner's e-mail and the verification code.
❸ The owner account is created once you see the prompt "Delivery successful." Tap **Next** to proceed.



Step 2: Customize Power Mode



❶ Choose one power mode from the following.

- **Self-Consumption:** Maximize the use of solar power and reduce grid power consumption.
- **Time of Use:** The battery will charge when electricity prices are low and discharge when they're high.
- **Off-Grid*:** Power your home with solar power and stored battery energy when the grid goes down.

* Anker SOLIX X1's off-grid mode is incompatible with the Sunlight Backup mode of the Enphase microinverter. Disable Sunlight Backup mode before using Anker SOLIX X1 off-grid.

❷ Set backup reserve by adjusting the slider.

- To allow more capacity for Self Consumption mode or Time of Use mode, set a lower reserve percentage.
- To reserve more energy for use during an outage, set a higher reserve percentage.

❸ Select advanced options.

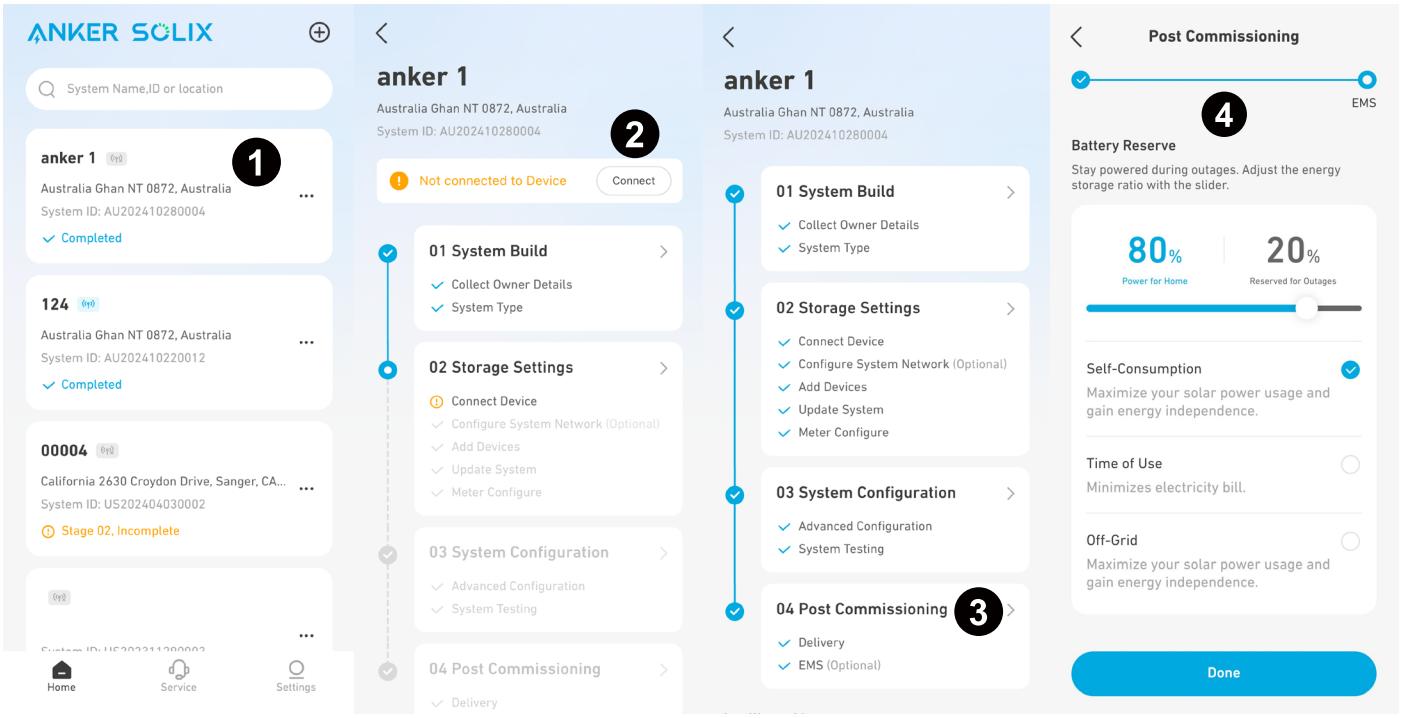
- **Grid Charging:** This feature is only available when grid charging is permitted. Enable the feature to charge the battery modules from the grid for backup reserve and for daily use in Time of Use mode. Disable the feature to charge the battery modules solely from solar power.
- **Peak Shaving:** Set the peak power to prevent tripping or an increase in grid charges (in some areas).
- **Rapid Battery Charging:** Charge the battery modules at full speed using both grid and solar power.

Manage System

View and Modify System Settings

To view and modify system settings after commissioning, follow these steps:

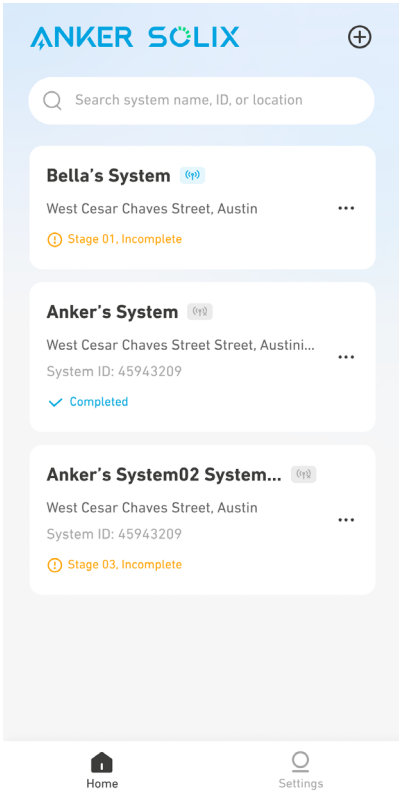
1. Tap the system name from the list on the home screen.
2. If the power module is disconnected from the app, reconnect via Bluetooth. Enter the password located under the power module's barcode.
3. Select the items you want to view or modify.
4. Make the necessary changes to the system settings.



Check Commissioning Status

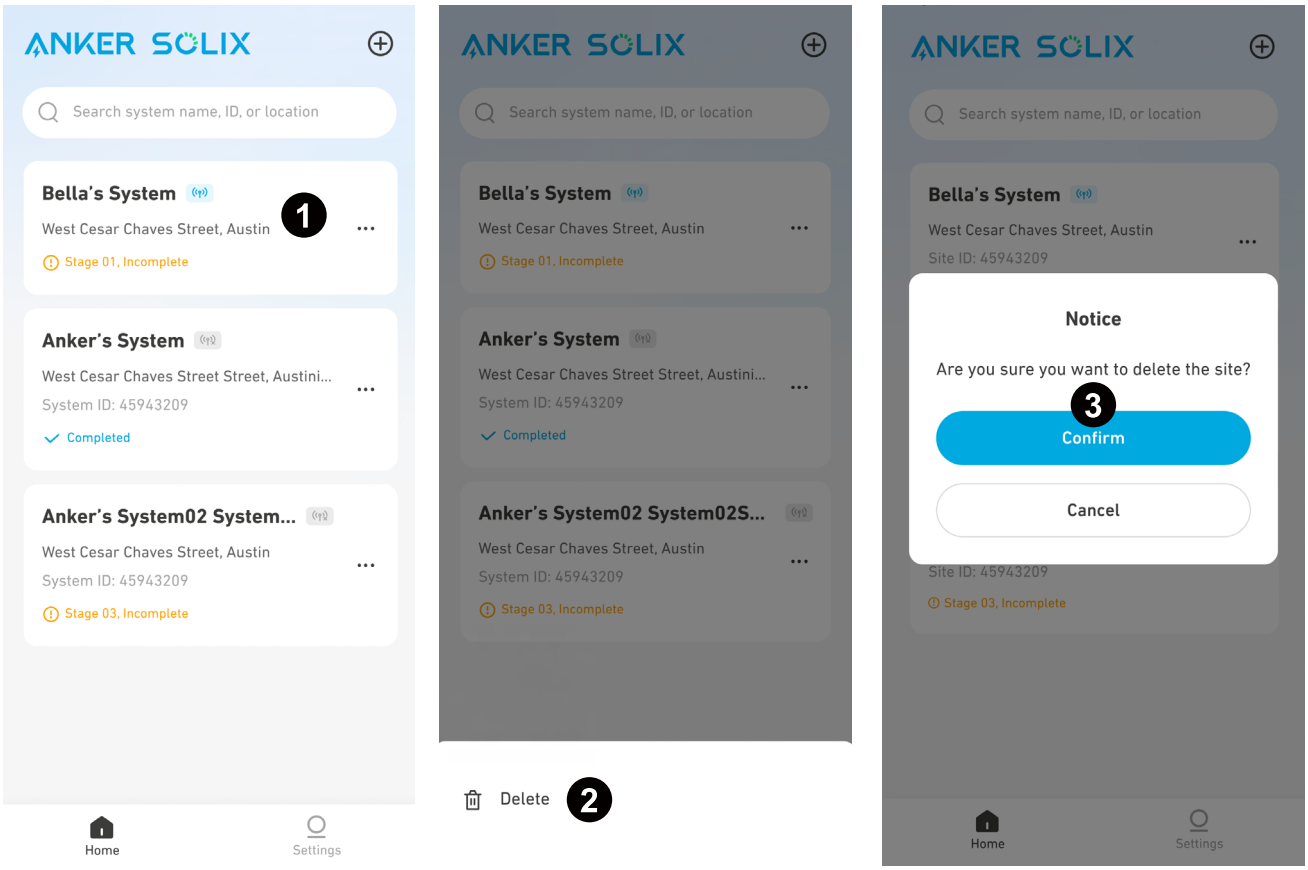
Check the commissioning status under the system name on the home screen.

- **Incomplete:** Tap the corresponding system name to continue with the commissioning process.
- **Completed:** The system commissioning has been completed.



Delete System

Delete a system that has not completed commissioning.

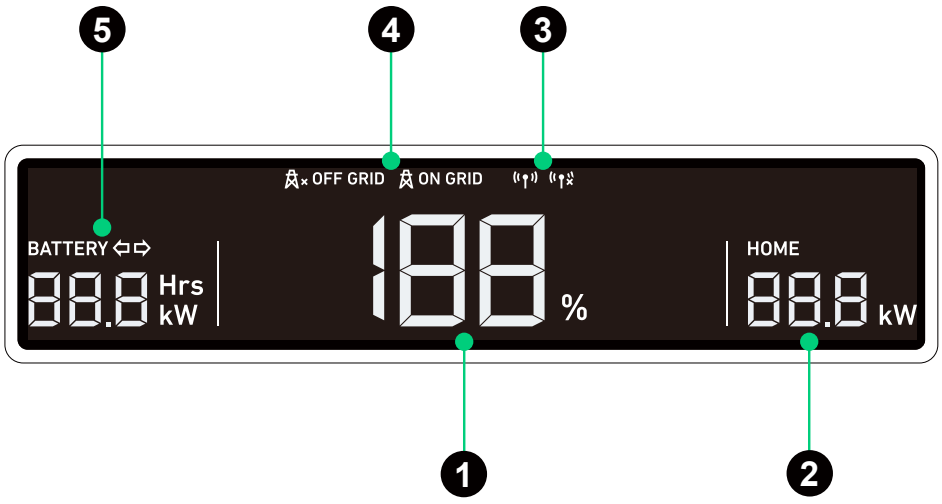


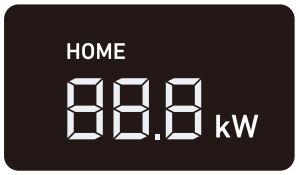
After commissioning, please inform the owner that the equipment can only be turned off using the Anker app until grid connection approval is granted. Once approval is complete, the equipment can be turned on and off using the Anker app.

8. Screen and Light Guide

8.1 LED Screen Guide

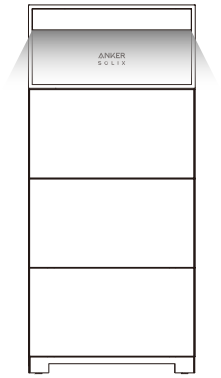
The LED screen will show you the status of the system. When multiple power modules are connected in parallel, only one of them will display the overall status.



❶ **Battery**		Overall battery level
❷ **Home Loads**		Home load power
❸ **Internet**		Connected to the Internet
		Disconnected from the Internet
❹ **Grid**		On-grid
		Off-grid
❺ **Energy Storage**		Battery power
		Estimated time for battery to deplete
		Recharging
		Discharging
		Standby

8.2 Status Light Indication

The power module's light bar will indicate the system status.



Light Bar	Status
Flashing white once, and then steady white	Powered on
Flashing white	Configuring or connecting to the Internet
Steady white	On-Grid mode
Steady blue	Off-Grid mode
Flashing blue	Battery low in Off-Grid mode
Flashing red	Malfunction warning
Flashing white in sequence	Firmware upgrading

9. System Maintenance

9.1 Power Off the System

To power off the system:

1. Press the black start button on the power module for 8 seconds.
2. Turn off the panel breaker connected to the power module.
3. Toggle the BAT switch on the power module to OFF.

After the system powers off, residual electricity and heat may still cause electric shocks and burns. Wait for at least 6 minutes after powering off the system before performing any operations.
Only qualified professionals or trained personnel are allowed to operate and maintain the equipment.
To force a startup of the power module, press the black start button for 3 seconds. To force a shutdown of the power module, press the same button for 8 seconds.

9.2 Routine Maintenance

To ensure the battery modules operate properly for an extended period, it is recommended to perform routine maintenance.

Power off the system before cleaning it, connecting cables, and ensuring grounding reliability.

Check Item	Check Method	Maintenance Interval
System cleanliness	Check periodically that the heat sinks are free from obstacles and dust.	Once every 6 to 12 months
System running status	1. Check that the battery is not damaged or deformed. 2. Check that the battery does not produce abnormal sound during operation. 3. Check that the battery parameters are correctly set when the battery is running.	Once every 6 months
Electrical connection	1. Check that cables are securely fastened. 2. Check that cables are intact, specifically ensuring the parts touching the metallic surface are not scratched. 3. Check that unused terminals and ports are secured by waterproof or dustproof caps.	The first inspection is 6 months after the initial commissioning. Afterward, the interval can be 6 to 12 months.
Grounding reliability	Check that ground cables are securely connected.	The first inspection is 6 months after the initial commissioning. Afterward, the interval can be 6 to 12 months.
Firmware version	Check that the firmware is updated to the latest version via the app.	Once every 6 months

9.3 Troubleshooting

Once a system fault is detected, you will receive push notifications via the Anker SOLIX Professional app, web platform, or email.

Please refer to the notifications for troubleshooting measures. If you require further assistance, please contact Anker Customer Service.

10. Customer Service

support@anker.com

(AU) +61 1800 929 112

10-Year Limited Warranty (X1-P6K-S, X1-B5-H0)
Please visit ankersolix.com/warranty for full warranty details.

11. System Information

11.1 Nameplates

Figure: Nameplate (Battery Module).

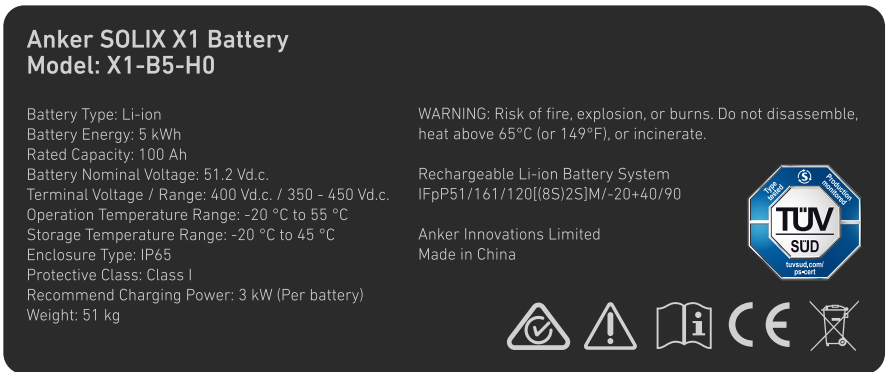


Figure: Nameplate (Anker SOLIX X1).

Anker SOLIX X1

Model / Battery Capacity / Input and Output Power / Battery Quantity / Weight

- ☐ X1-P6K-B05-S / 5 kWh / 3 kW / 1 / 75 kg
- ☐ X1-P6K-B10-S / 10 kWh / 6 kW / 2 / 126 kg
- ☐ X1-P6K-B15-S / 15 kWh / 6 kW / 3 / 177 kg
- ☐ X1-P6K-B20-S / 20 kWh / 6 kW / 4 / 233 kg
- ☐ X1-P6K-B25-S / 25 kWh / 6 kW / 5 / 284 kg
- ☐ X1-P6K-B30-S / 30 kWh / 6 kW / 6 / 335 kg

AC Input and Output

Battery Quantity	1	2	3 - 6
Rated AC Input/Output Voltage	220 / 230 / 240 Va.c.		
Max. Input Apparent Power	6.6 kVA		
Max. Output Apparent Power	3 kVA	6 kVA	6.6 kVA
Max. Input Current	28.7 Aa.c.		
Max. Output Current	13.1 Aa.c.	26.1 Aa.c.	28.7 Aa.c.
Rated Frequency	50 / 60 Hz		
Power Factor Range	0.8 ind - 0.8 cap		

Battery

Battery Quantity	1	2	3 - 6
Battery Type	Li-ion		
Voltage Range	350 - 450 Vd.c.		
Max. Charge / Discharge Power	3 kW / 3 kW	6 kW / 6 kW	6.6 kW / 6.6 kW
Max. Charge / Discharge Current	7.6 Ad.c. / 7.6 Ad.c.	15.2 Ad.c. / 15.2 Ad.c.	18.9 Ad.c. / 18.9 Ad.c.
Rated Charge / Discharge Current	7.6 Ad.c. / 7.6 Ad.c.	15.2 Ad.c. / 15.2 Ad.c.	17.2 Ad.c. / 17.2 Ad.c.
Input Short Circuit Current and Time	280 Ad.c. 220 us		

AC Backup Output

Battery Quantity	1- 6
Rated Output Voltage	220 / 230 / 240 Va.c.
Max. Output Apparent Power	6.6 kVA
Max. Output Current	28.7 Aa.c.
Rated Frequency	50 / 60 Hz
Power Factor Range	0.8 ind - 0.8 cap

General Information

Operating Temperature Range: -20°C to 55°C

Inverter Topology: High Frequency Isolation

Overvoltage Category: III[MAINS],II[BAT]

Protection Class: Class I

Ingress Protection: IP65

Anker Innovations Limited

Made in China

DRM 0 √ DRM 1 √ DRM 2 √

DRM 3 √ DRM 4 √ DRM 5 √

DRM 6 √ DRM 7 √ DRM 8 √

11.2 Specifications

Specifications are subject to change without notice.

Anker SOLIX X1

System Model	X1-P6K-B05-S	X1-P6K-B10-S	X1-P6K-B15-S	X1-P6K-B20-S	X1-P6K-B25-S	X1-P6K-B30-S
Battery						
Battery Type	Li-ion (LFP)					
Battery Energy Capacity	5 kWh	10 kWh	15 kWh	20 kWh	25 kWh	30 kWh
Number of Battery Modules	1	2	3	4	5	6
AC Output (On-Grid)						
Rated Output Power	3 kW	6 kW	6.6 kW			
Maximum Output Apparent Power	3 kVA	6 kVA	6.6 kVA			
Rated Output Voltage	220 / 230 / 240 VAC					
Rated Frequency	50 / 60 Hz					
Power Factor	~1 (+/- 0.8)					
THDI (@Rated Power)	< 3 %					
AC Output (Off-Grid)						
Rated Output Power	3 kW	6 kW	6.6 kW [1]			
Peak Output Apparent Power (Duration) [2]	4.5 kVA (10 s)	9 kVA (10 s)	12 kVA (10 s)			
Maximum Units in Parallel	6					
Rated Output Voltage	220 / 230 / 240 VAC					
Frequency Range	50 / 60 Hz					
THDU (@Linear Load)	< 3 %					
Switch Time	< 10 ms					
Efficiency						
Round Trip Efficiency	Up to 90.2 % [3]					
Connectivity						
Internet Connectivity	Wi-Fi, Bluetooth, Ethernet, 4G (Option)					
Others						
Weight	75 kg	126 kg	177 kg	233 kg	284 kg	335 kg
Dimension (W x H x D)	670 × 765 × 150 mm	670 × 1125 × 150 mm	670 × 1485 × 150 mm	670 × 1125 × 150 mm, 670 × 841.5 × 150 mm	670 × 1485 × 150 mm, 670 × 841.5 × 150 mm	670 × 1485 × 150 mm, 670 × 1201.5 × 150 mm
Noise	< 35 dB (Ambient Temperature < 40 °C) < 40 dB (Ambient Temperature > 40 °C)					
Mounting Option	Ground or Wall [4]					
Operation Temperature	-20 °C to 55 °C [5]					
Relative Humidity	5 % to 95 % RH					
Maximum Operating Altitude	Up to 4,000 m, power derating from 2,000 m [6]					
Assembly Ingress Rating	IP65					
Warranty	10 Years Limited [7]					
Grid Connection Certifications	Australia: AS/NZS 4777.2					

Safety	IEC 62477-1, IEC 62619, IEC 62040-1, VDE 2510-50
EMC	RF: EN 300 328, EN 301 489-1, EN 301 489-17 Health: EN 50665:2017, EN IEC 62311 EMC: EN IEC 61000-6-3, EN IEC 61000-6-2

[1] Power output will be derated to 6 kW once the ambient temperature exceeds 45 °C.

[2] Ambient temperature of 10 °C to 55 °C with a State of Charge (SOC) greater than 35 %.

[3] AC to Battery to AC, at the ambient temperature of 25 °C.

[4] Additional components are needed for wall installation.

[5] Power derating follows a derating curve of a 5/10 kWh system between 45 °C and 55 °C.

[6] 2,000 m maximum for Australia models.

[7] Refer to warranty terms for details.

For application of AS/NZS 4777.2:2020 standard, the nominal voltage is 230 Va.c., nominal frequency is 50 Hz, and the power factor ranges from 0.8 inductive (under-excited) to 0.8 capacitive (over-excited).

WLAN Dongle (DG-WF-H)

Compatible Device	
Anker SOLIX X1 Power Module	X1-P6K-S X1-H3.68K-S, X1-H4.6K-S, X1-H5K-S, X1-H6K-S X1-H5K-T, X1-H8K-T, X1-H10K-T, X1-H12K-T
Backup Controller	Backup Controller 200-H
WLAN	
Standard	2.4 GHz 802.11b/g/n Compatible
Security	802.11i (WPA, WPA2)
Data Rate	Up to 150 Mbps (Theoretical Value)
Antenna	Built-in, Supports One Transmitter and One Receiver Path (1T1R)
Ethernet	
Standard	IEEE 802.3 for 10BaseT IEEE 802.3u for 100BaseTX
Speed	10/100 Mbps, Auto MDI/MDIX
Bluetooth	
Standard	Bluetooth v4.2 BLE
Range	10 m / 33 ft
Speed	1 Mbps (Theoretical Value)
Interface	
RS-485	One Port
Input Voltage	8 Vd.c.
Environment	
Operating Temperature	-40°C to 70°C
Storage Temperature	-40°C to 85°C
Humidity	5% to 95% Non-Condensing
Connector	
Pin 1	V+
Pin 2	RS-485 B (D-)
Pin 3	RS-485 A (D+)
Pin 4	GND
Mechanical	
Dimensions (W x H x D)	102 × 50 × 35 mm

Enclosure	Plastic
Assembly Ingress Rating	IP65

Power Sensor (SDM230-Modbus V1, DTSU666)

Model	SDM230-Modbus V1	DTSU666	
Power Supply			
Grid Connection Type	1P2W	3P4W	
Frequency	50 / 60 Hz		
Nominal Voltage	230 V	3 × 220 / 380 V...3 × 240 / 415 V	
Measurement Range			
Current Measuring Range	0 to 100 A	0 to 100 A	0 to 250 A
Voltage Range	176 to 276 Va.c.	3 × 57.7 / 100 V...3 × 288 / 500 V	
Accuracy			
Voltage Accuracy	0.5 %	Class B (Class 1)	
Current Accuracy	0.5 %		
Power Accuracy	1 %		
Frequency Accuracy	0.2 %		
General			
Dimensions (W x H x D)	100 × 36 × 63 mm	100 × 72 × 65.5 mm	
Weight	0.2 kg	0.3 kg	
Storage Temperature	-40°C to 70°C		
Operating Temperature	-25°C to 55°C		
Relative Humidity	0 to 95%		
Ingress Protection Rating	IP51		
Installation Method	DIN Rail 35 mm		
Communication			
Interface	RS485		
Baud Rate	1200 / 2400 / 4800 / 9600 / 19200 / 38400 bps	1200 / 2400 / 4800 / 9600 / 19200 / 38400 / 115200 bps	
Protocol	Modbus RTU		
Others			
Accessories	/	3 CT 100A / 40mA (6 m)	3 CT 250A / 50mA (6 m)

12. Safety Information

12.1 IMPORTANT SAFETY INSTRUCTIONS

Symbol	Description
	**Caution** Indicates a low-risk hazard. Failure to avoid this hazard could result in minor or moderate injury.
	**Warning** Indicates a hazard with a moderate level of risk. Failure to avoid this hazard could result in death or serious injury.

DANGER	**Danger** Indicates a highly risky hazard. Failure to avoid this hazard could result in death or serious injury.
	**Refer to Operating Instructions** Indicates that users should refer to operating or installation instructions before proceeding.
	**Risk of Electric Shock from Stored Energy** Indicates discharge time is 6 minutes from de-energization.
	**Risk of Electric Shock** Indicates components that present risk of electrical shock.
	**Caution, Hot Surface** Indicates that equipment surfaces may be hot and pose a burn risk.

General Information

SAVE THESE INSTRUCTIONS - This document contains important instructions that must be followed during installation, use, and maintenance.

CAUTION Read instructions carefully before performing any operation on the equipment.

Do not make any changes or create settings that are not described in this document. If physical injury, loss of data, or damage is caused by failure to follow instructions, the warranty does not apply.

Battery Safety

General Instructions Regarding Removal and Installation of Batteries:

- When replacing batteries, replace with the same type and number of batteries or battery modules.
- Do not dispose of batteries in a fire. The batteries may explode.
- Do not open or damage batteries. Released electrolytes may be toxic and are harmful to skin and eyes.
- A battery can present a risk of electrical shock and high short-circuit current. The following precautions should be observed when working on batteries:
  a) Remove watches, rings, or other metal objects.
  b) Use tools with insulated handles.
  c) Wear rubber gloves and boots.
  d) Do not lay tools or metal parts on top of batteries.
  e) Disconnect the charging source prior to connecting or disconnecting battery terminals.
  f) Determine if the battery is inadvertently grounded. If inadvertently grounded, remove the source from the ground. Contact with any part of a grounded battery can result in electrical shock. The likelihood of such shock can be reduced if such grounds are removed during installation and maintenance (applicable to equipment and remote battery supplies not having a grounded supply circuit).

WARNING: A BATTERY CAN PRESENT A RISK OF ELECTRICAL SHOCK, BURN FROM HIGH SHORT CIRCUIT CURRENT, FIRE OR EXPLOSION FROM VENTED GASES. OBSERVE PROPER PRECAUTIONS.
WHEN REPLACING BATTERIES USE THE SAME NUMBER AND THE FOLLOWING TYPE BATTERIES LiFePO4.
PROPER DISPOSAL OF BATTERIES IS REQUIRED. REFER TO YOUR LOCAL CODES FOR DISPOSAL REQUIREMENTS.

WARNING:

- Replacing a battery with an incorrect type may nullify safeguards and create danger;
- Disposal of the battery/equipment in a fire, a hot oven, or another source of significant heat, or by mechanically crushing or cutting the battery/equipment may result in an explosion;
- Leaving the battery/equipment in an extremely hot environment may result in an explosion or leakage of flammable liquids or gases;
- Subjecting the battery/equipment to extremely low air pressure may result in an explosion or leakage of flammable liquids or gases.

Personal Safety

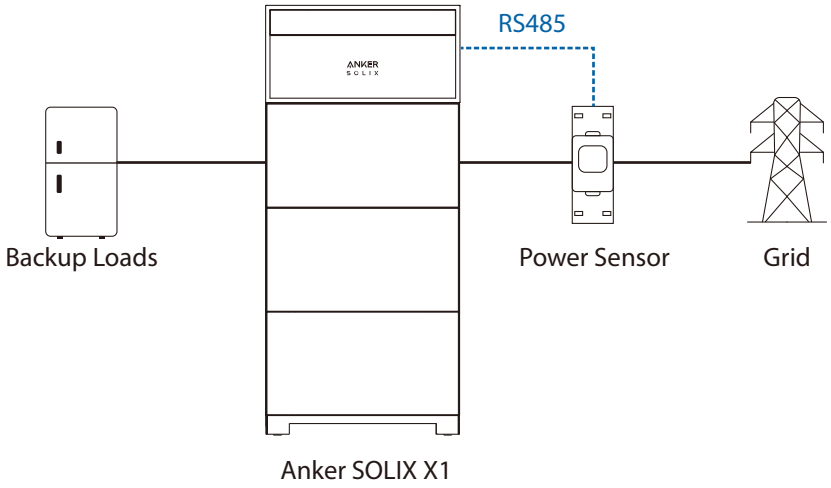
WARNING	To reduce the risk of burns, do not touch the equipment surfaces as they may be hot.
WARNING	Never touch the enclosure of an operating device.

- Ensure that power is off during installation. Do not install or remove a cable with power on.
- Non-standard and improper operations on the energized equipment may cause fire, electric shocks, or explosion, resulting in property damage, personal injury, or even death.
- Before operations, remove conductive objects such as watches, bracelets, bangles, rings, and necklaces to prevent electric shocks.
- During operations, use dedicated insulated tools to prevent electric shocks or short circuits.
- Do not direct contact or contact with other conductors, or indirect contact with power supply equipment through damp objects.
- Do not power on the equipment until it have been installed or confirmed by a professional.
- Only qualified professionals or trained personnel are allowed to install, operate, and maintain the equipment.
- If there is a probability of personal injury or equipment damage during operations on the equipment, immediately stop the operation, report the case to the supervisor, and take feasible protective measures.
- Do not touch the energized equipment, as the enclosure is hot.

Electrical Safety

CAUTION	Do not disconnect under load.
WARNING	Use conductors with insulation rated for at least 90 °C .
DANGER	Risk of electric shock from stored energy. Wait at least 6 minutes after disconnecting all sources of supply before accessing.
DANGER	Start maintaining the device at least 6 minutes after the device disconnects from all external power supplies.

- Before installation, ensure that the equipment is intact. Otherwise, electric shocks or fires may occur.
- Non-standard and improper operations may result in fire or electric shocks.
- Prevent foreign matter from entering the equipment during operations.
- Do not route cables behind the air intake and exhaust vents of the equipment.
- For the equipment that needs to be grounded, install the ground cables first when installing the equipment and remove the ground cables last when removing the equipment.
- Before installing or removing power cables, the equipment and its switches must be disconnected.
- Do not damage the grounding conductors.
- The equipment terminals are used for electrical connections only.
- Ensure that all electrical connections comply with local electrical standards.
- Obtain approval from the local electric utility company before using the equipment in grid-tied mode.
- Ensure that the cables you prepared meet local regulations.
- The maximum operating temperature for the included cables is 105°C.
- Use dedicated insulated tools when performing high-voltage operations.
- Before making electrical connections, switch off the disconnector on the upstream device to cut off the power supply if people may come into contact with energized components.
- Before connecting a power cable, check that the label on the power cable is correct.
- If the equipment has multiple inputs, disconnect all the inputs before operating the equipment.
- The inverter may be connected single-phase, a storage unit and a balancing device must be used to ensure that the requirements of maximum permissible unbalance ≤ 4.6kVA according to 5.5.2 of VDE-AR-N 4100 are met and a registration with the grid operators the final installation.
- Prevention of Countercurrent and Balance of System:



Environmental Requirements

- Do not expose the equipment to flammable or explosive gas or smoke. Do not perform any operation on the equipment in such environments.
- Do not store any flammable or explosive materials near the equipment.
- Install the equipment in an area far away from liquids and in a well ventilated environment.
- Do not install equipment in living spaces or habitable areas of dwelling units, such as living rooms.
- Natural disasters, such as floods, debris flows, earthquakes, and typhoons, can cause damage to equipment due to force majeure.
- To prevent fire due to high temperature, ensure that the ventilation vents or heat dissipation system are not blocked when the equipment is running.

Mechanical Safety

- Do not drill holes into the equipment.
- Wear goggles and protective gloves when drilling holes.
- When moving the equipment by hand, wear protective gloves to prevent injuries.
- Clean up any debris that may have accumulated within or around the equipment after drilling.
- Be cautious to avoid injury when moving heavy objects.

Commissioning

When the equipment is powered on for the first time, ensure that professional personnel set parameters correctly. Incorrect settings may result in inconsistency with local certification and affect the normal operation of the equipment.

Maintenance and Replacement

WARNING	Disconnect all sources of supply before servicing.
WARNING	Replace only with the same ratings and type of fuse.
WARNING	Disconnect supply before changing fuse.
DANGER	Only certified professionals are allowed to install and maintain the battery and external power supplies. Establish secure earth connections to mitigate high touch current before connecting to the power supply.

- High voltage generated by the equipment during operation may cause an electric shock, which could result in death, serious injury, or serious property damage.
- Prior to maintenance, power off the equipment and strictly comply with the safety precautions in this user guide and relevant documents.
- After powering off the equipment, wait at least 6 minutes before disassembling any cables or components.
- Maintain the equipment with proper tools, testing equipment, and sufficient knowledge of this document.
- Turn off the equipment switches when maintaining the electric devices or power distribution devices connected to the equipment.

- Place temporary warning signs or erect fences to prevent unauthorized access to the maintenance site.
- If the equipment is faulty, contact your supplier.
- The equipment can be powered on only after all faults are rectified. Failing to do so may escalate faults or damage the equipment.

12.2 Notice

UK PSTI Statement

Hereby, Anker Innovations Limited declares that this equipment is in compliance with the Product Security and Telecommunications Infrastructure (Security Requirements for Relevant Connectable Products) Regulations 2023. The full text of the Statement of Compliance is available at the following website: https://www.anker.com/uk/psti-related

Declaration of Conformity

Hereby, Anker Innovations Limited declares that this equipment is in compliance with Directives 2014/30/EU & 2011/65/EU. The full text of the EU declaration of conformity is available at the following internet address: https://support.anker.com/s/articleRecommend?otherType=Anker_EN_Extemal_Manual_and_Download&secondType=doc

License Holder: Anker Innovations Limited

The following importer is the responsible party (contract for EU matters):
Anker Innovations Deutschland GmbH | Georg-Muche-Strasse 3, 80807 Munich, Germany
The following importer is the responsible party (contract for UK matters):
Anker Technology (UK) Limited | GNR8, 49 Clarendon Road, Watford, Hertfordshire, WD17 1HP, United Kingdom

Not permitted on aircraft.

This symbol means the product must not be discarded as household waste, and should be delivered to an appropriate collection facility for recycling. Proper disposal and recycling helps protect natural resources, human health, and the environment. For more information on the disposal and recycling of this product, contact your local municipality, disposal service, or the shop where you bought this product.

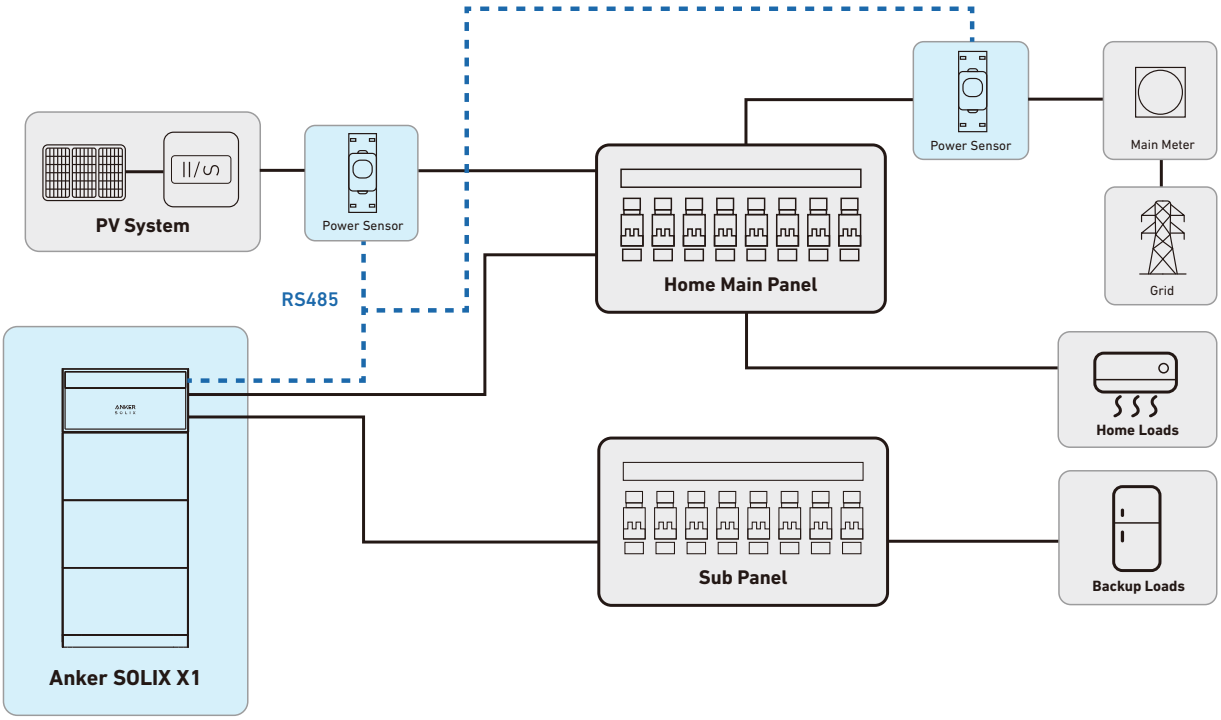
This symbol indicates "separate collection" for all batteries and accumulators. Danger of explosion if battery is incorrectly replaced. To reduce risk of fire, explosion or leakage of flammable liquid/gas, don't disassemble, crush, puncture, short external contacts, expose to temperature above 60°C (140°F), sunshine or like, expose to extremely low air pressure or dispose of in fire or water. Replace only with specified batteries.

Anker Innovations Limited I Unit 56, 8th Floor, Tower 2, Admiralty Centre, 18 Harcourt Road, Hong Kong

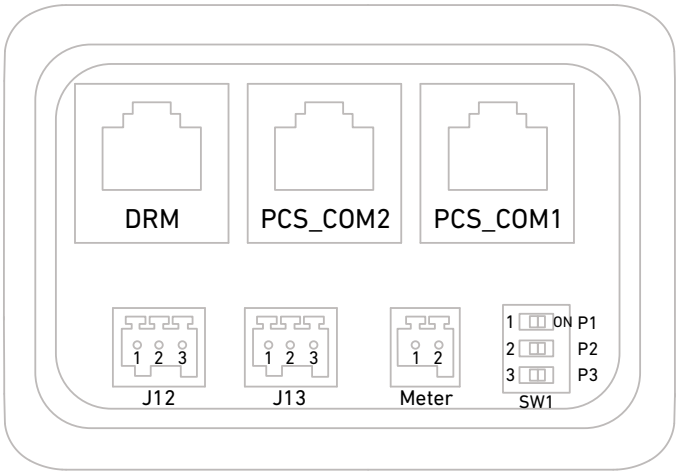
13. Appendices

Appendix A. System Wiring Diagrams

This diagram shows the primary system for partial home backup. In this system, Anker SOLIX X1 stores energy from the grid or solar and powers selected loads during a grid outage.



Appendix B. Communication Ports and Terminals



Symbol		Description
DRM		
1	DRM1/5	Communication with the Demand Response Enabling Device (DRED)
2	DRM2/6	
3	DRM3/7	
4	DRM4/8	
5	DRM_REF	
6	DRM_COM	
7	/	
8	/	
PCS_COM2		
1	RS485-_PCS	Cascaded connection of power modules
2	RS485+_PCS	
3	OffGrid_SELV	
4	GND	
5	50Hz_Sync	
6	GND	
7	CANa-	
8	CANa+	
PCS_COM1		
1	RS485-_PCS	Cascaded connection of power modules
2	RS485+_PCS	
3	OffGrid_SELV	
4	GND	
5	50Hz_Sync	
6	GND	
7	CANa-	
8	CANa+	
J12		
1	NC1	Reserved for future use
2	/	
3	NO1	
J13		
1	NC2	Reserved for future use
2	/	
3	NO2	
Meter		
1	RS485+_meter	Communication with power sensors
2	RS485-_meter	
SW1		
1	P1	/
2	P2	
3	P3	

Appendix C. Revision Log

Changes between document releases are cumulative. The latest document release includes all changes made in previous releases.

Revision	Date	Description
V1	2024-12-06	Initial Release