

GOODWE



Quick Installation Guide

Rechargeable Lithium Ion Battery System

Lynx Home FH Series US

(LX F9.6-30 | LX F12.8-30 | LX F16.0-30 | LX F19.2-30)

V1.1-2023-10-31

General Disclaimer

- The information in this user manual is subject to change due to product updates or other reasons. This guide cannot replace the product labels or the safety precautions in the user manual unless otherwise specified. All descriptions in the manual are for guidance only.
- Before installations, read through the quick installation guide. For additional information, please see the user manual.
- All installations should be performed by trained and knowledgeable technicians who are familiar with local standards and safety regulations.
- Check the deliverables for correct model, complete contents, and intact appearance. Contact after sales service if any damage is found or any component is missing.
- Use insulating tools and wear personal protective equipment (PPE) when operating the equipment to ensure personal safety. Wear anti-static gloves, cloths, and wrist strips when touching electron devices to protect the equipment from damage.
- Strictly follow the installation, operation, and configuration instructions in this guide and relative user manual. The manufacturer shall not be liable for equipment damage or personal injury if you do not follow the instructions. For more warranty details, please visit: <https://en.goodwe.com/warranty>.

Safety Disclaimer

Instructions during Installation

- The battery system is a high voltage system. High voltage exists when the equipment is running. Please keep Power Off before any operations to avoid danger. Strictly follow all safety precautions outlined in this manual and safety labels on the equipment during the operation.
- The inverter used with the battery shall be approved by the battery manufacturer. The approved list of batteries and the matched inverter can be obtained through the official website.
- Do not disassemble, modify, or replace any part of the battery or the power control unit without official authorization from the manufacturer. Otherwise, it will cause electrical shock or damages to the equipment, which shall not be borne by the manufacturer.
- Do not hit, pull, drag, squeeze or step on the equipment or put the battery into fire. Otherwise, the battery will be exploded.
- Do not place the battery in a high temperature environment. Make sure that there is no heat source near the battery and no direct sunlight. When the ambient temperature exceeds 60 °C, it will cause a fire.
- Do not use the battery or the power control unit if it is defective, broken, or damaged. The damaged battery may leak electrolyte.
- To protect the battery pack and its components from damage during transportation, please ensure that the transportation personnel are professionally trained. All operations during the transportation have to be recorded. The equipment shall be kept in balance, thus avoiding falling down.
- The battery equipment is heavy. Please equip the corresponding personnel according to its weight, so that the equipment does not exceed the weight range of the human body can carry, and smash the personnel.
- Contact after-sale service immediately if the battery is not able to be started. Otherwise, the battery might be damaged permanently.
- Do not move the battery system if it is connected with external battery modules. Contact after-sale service if the battery shall be replaced or added.

Emergency Measures

Battery Electrolyte Leakage













If the battery module leaks electrolyte, avoid contact with the leaking liquid or gas. The electrolyte is corrosive. It will cause skin irritation or chemical burn to the operator. Anyone contacts the leaked substance accidentally has to do as following:

- **Breath in the leaked substance:** Evacuate from the polluted area, and seek immediate medical assistance.
- **Eye contact:** Rinse your eyes for at least 15 minutes with clean water and seek immediate medical assistance.
- **Skin contact:** Thoroughly wash the touch area with soap and clean water, and seek immediate medical assistance.
- **Ingestion:** Induce vomiting, and seek immediate medical assistance.

Fire

- The battery may explode when the ambient temperature exceeds 150°C. Poisonous and hazardous gas may be released if the battery is on fire.
- In the event of a fire, please make sure that the carbon dioxide extinguisher or Novac1230 or FM-200 is nearby.
- The fire cannot be put out by water or ABC dry powder extinguisher. Firefighters are required to wear full protective clothing and self-contained breathing apparatus.

Label Description

	Potential risks exist. Wear proper personnel protective equipment before any operations.		Install the equipment away from fire sources.
	HIGH VOLTAGE HAZARD High voltage exists during the equipment's running. Ensure the equipment is power off before any operations.		Keep the equipment away from children.
	Operate the equipment properly to avoid explosion danger.		It is forbidden to dismantle the equipment personally.
	The equipment contains corrosive electrolytes. In case of a leak in the equipment, avoid contact the leaked liquid or gas.		Do not short-circuit the positive and negative pole of the equipment. Otherwise it may cause damage to the cables.
	Batteries contain flammable materials, beware of fire.		Grounding point.
	Read through the user manual before any operations.		SGS marking for United States and Canada

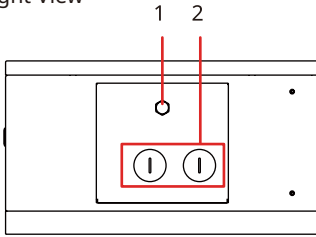
Check Before Power ON

No.	Check Item
1	The battery is firmly installed in a clean place where is well-ventilated and easy to operate.
2	The PE cable, power cable, communication cable, and the terminal resistors are connected correctly and securely.
3	Cable ties are intact, routed properly and evenly.
4	Unused ports and terminals are sealed.

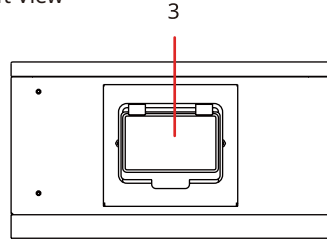
02 Product Introduction

Parts Introduction (PCU)

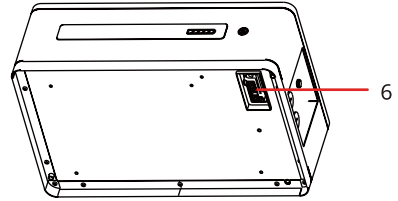
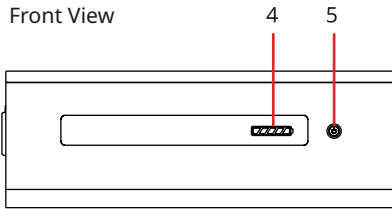
Right View



Left View

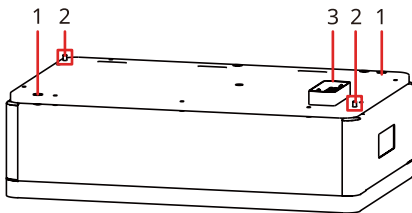


Front View

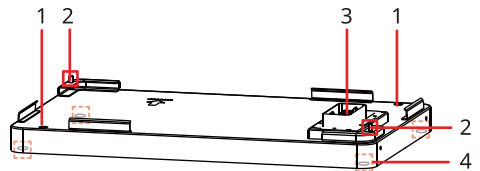


- | | | |
|----------------------|--------------------------|--------------------------|
| 1. Ventilation Valve | 2. Cable Hole | 3. Circuit Breaker |
| 4. SOC Indicator | 5. Multi-function Button | 6. Rectangular Connector |

Parts Introduction (Battery)

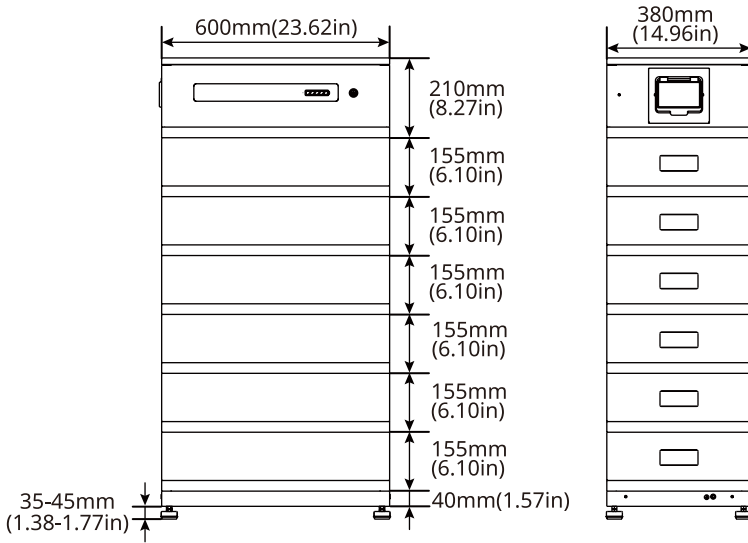


Parts Introduction (Battery Base)



- | | | |
|------------------------------------|--------------------|--------------------------|
| 1. Limiting hole | 2. positioning pin | 3. Rectangular Connector |
| 4. Adjustable feet installing hole | | |

Dimensions



03 Battery System Installation

Deliverables (PCU)



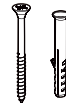
x 1



x 1



x 1



x 6



x 1



x 4



x 6



x 6



x 4



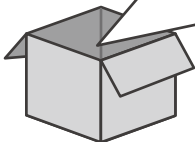
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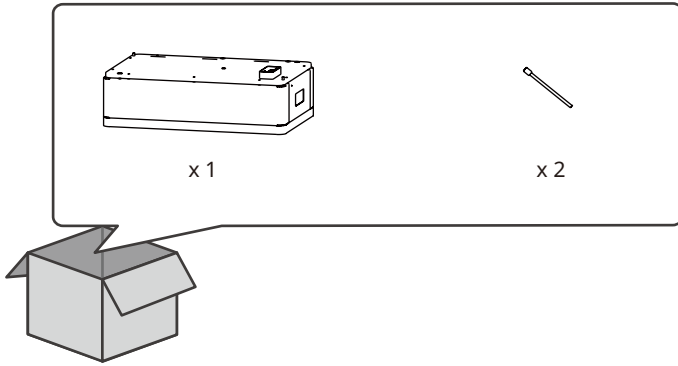
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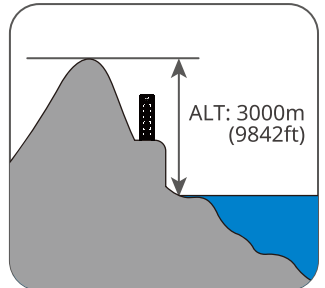
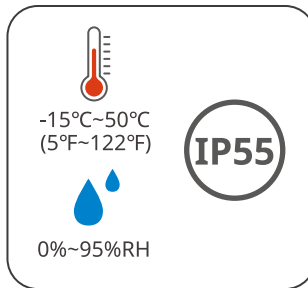
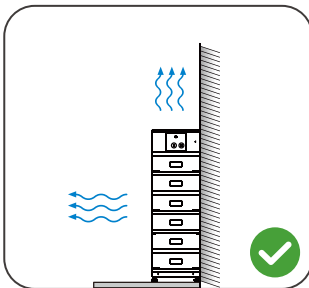
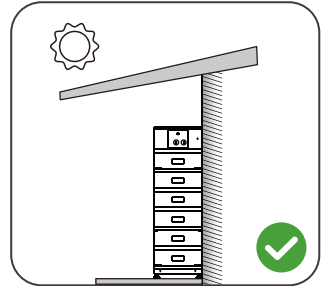
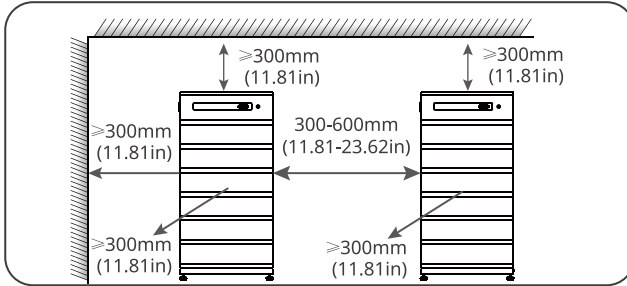
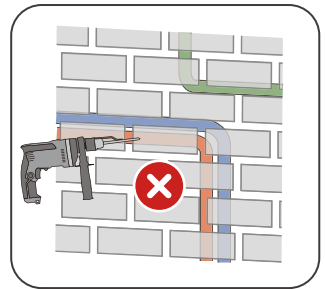
x 2



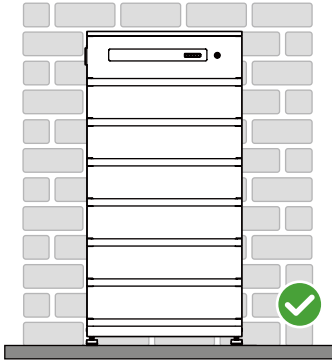
Deliverables (Battery Module)



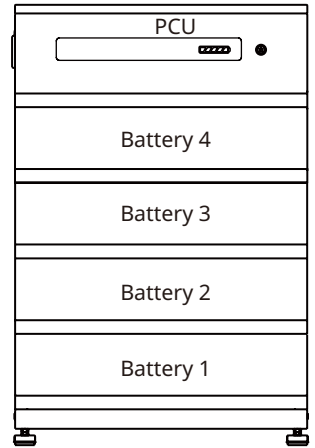
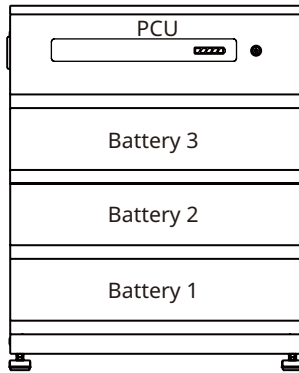
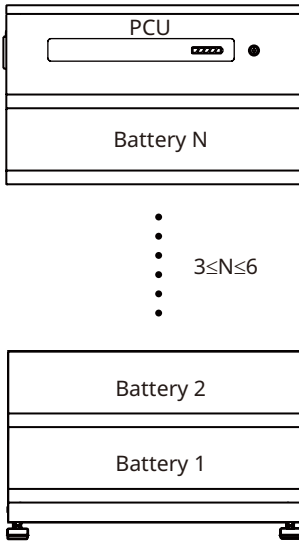
Space Requirements



Angle Requirements

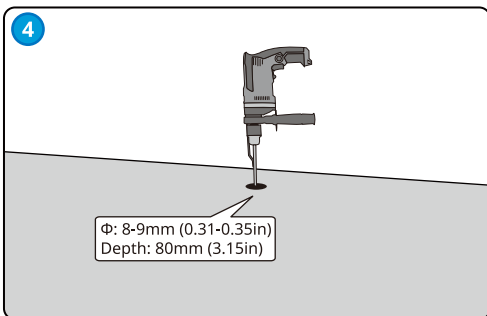
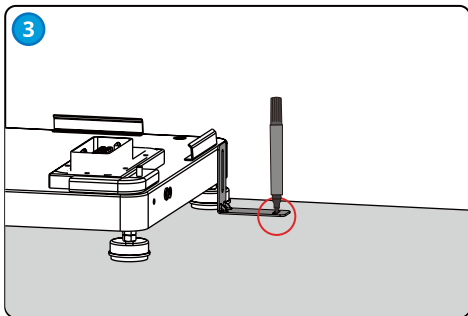
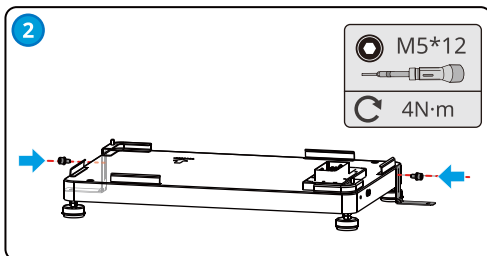
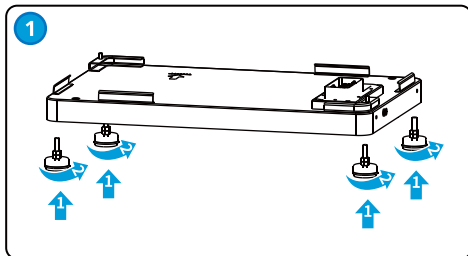
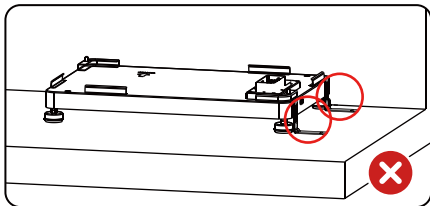
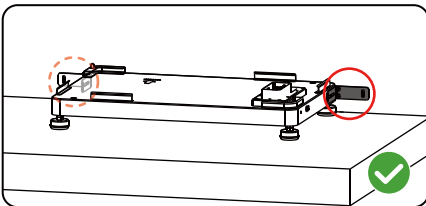
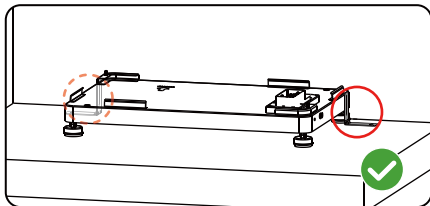


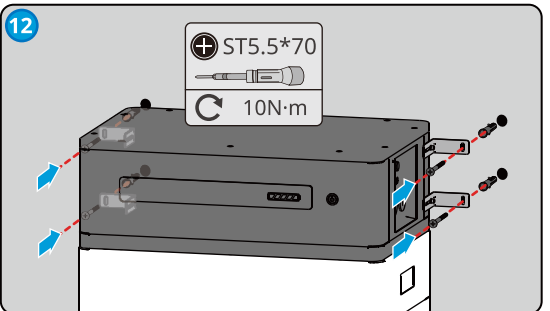
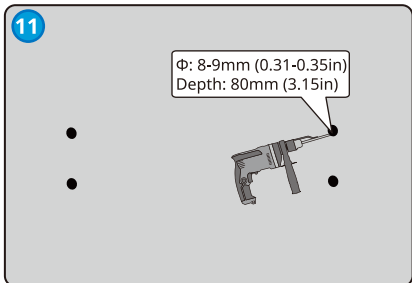
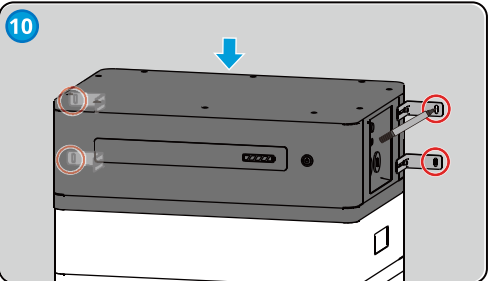
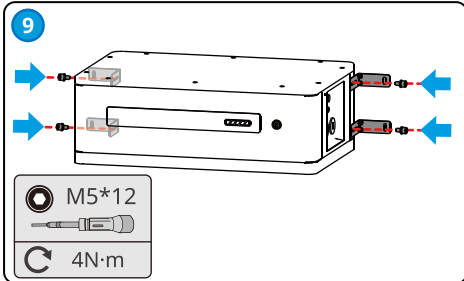
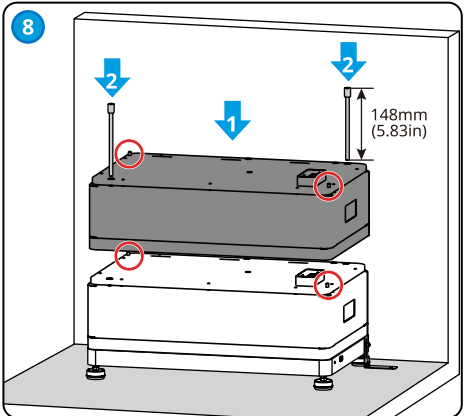
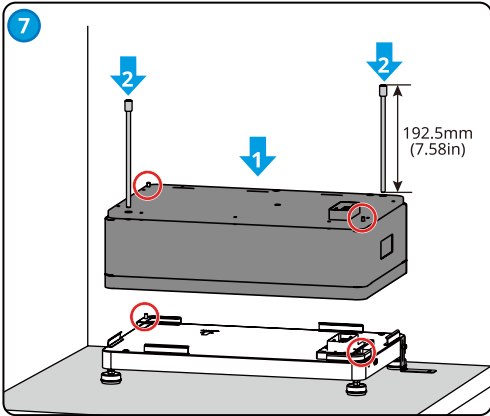
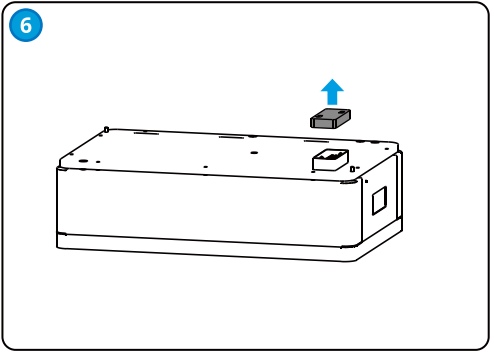
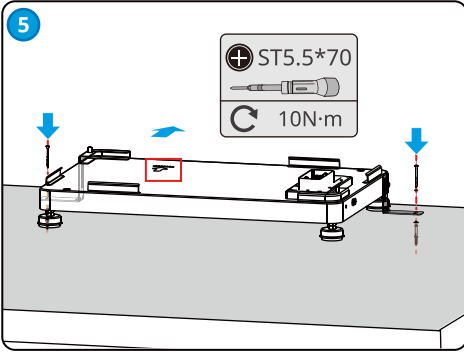
Battery Quantity Requirements

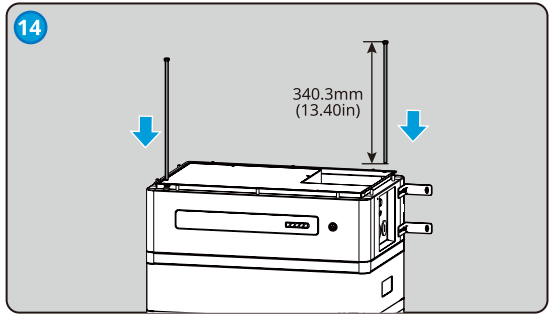
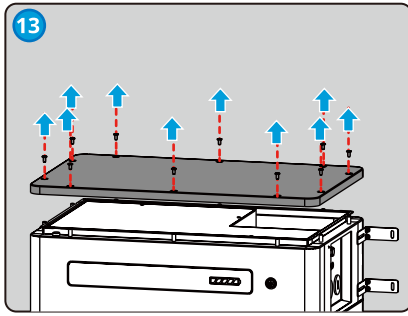


NOTICE

- Use the PCU-Battery Spacing pin to fix the last battery and PCU. Do not install the Battery-Battery Spacing pin.
- Installation Requirement For Locking Bracket:







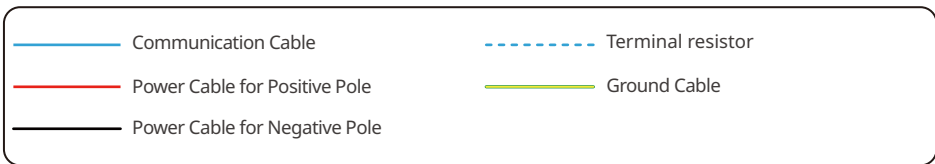
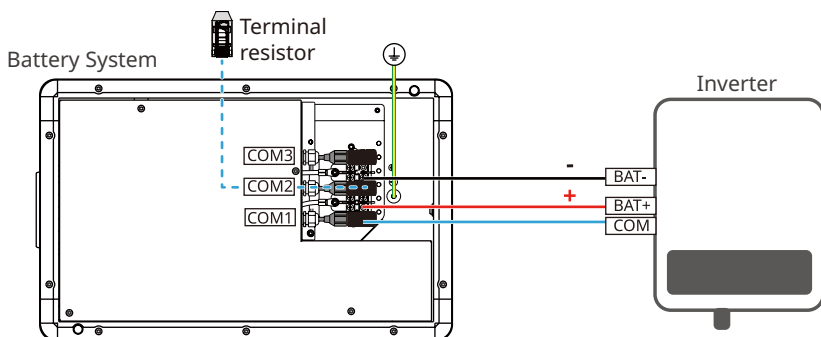
04 Electrical Connection

Wiring Diagram for paralized battery systems

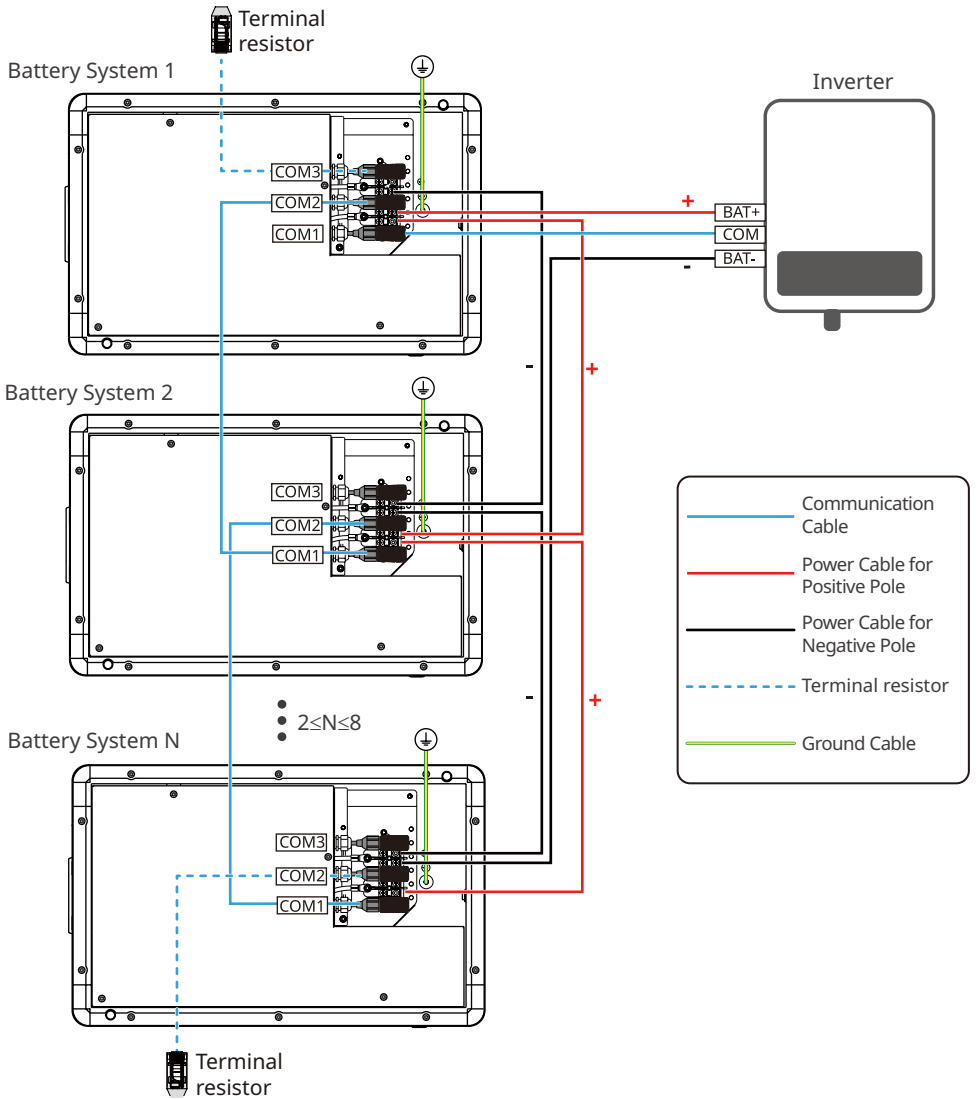
NOTICE

- A max of eight battery systems can be parallel connected in one energy storage system. Ensure that the usable energy of each battery system is the same.
- The PCU is installed with a terminal resistor by default.
- When a single battery system is applied, do not remove the terminal resistor.
- When using a multi battery system, please follow the steps below to install the terminal resistors:
 1. Remove the terminal resistor from COM2 of battery system 1 and install it in COM3.
 2. Remove the terminal resistors of battery system 2 to battery system N-1 and store them properly, then connect parallel communication cables.
 3. Do not remove the terminal resistor of battery system N.

Single battery system

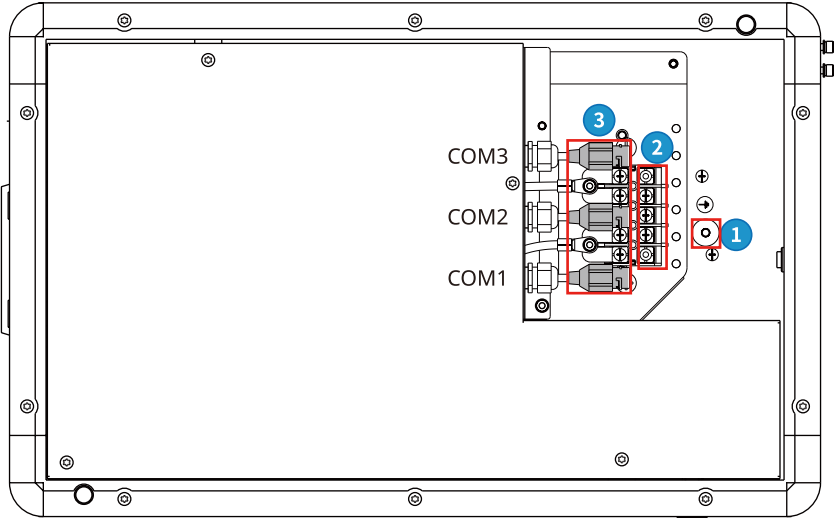


Parallized battery systems



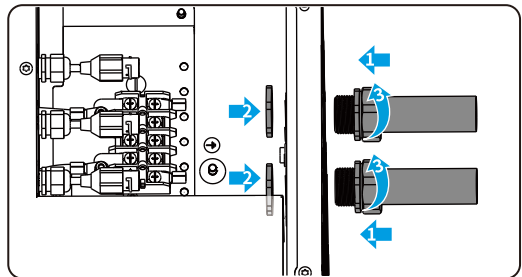
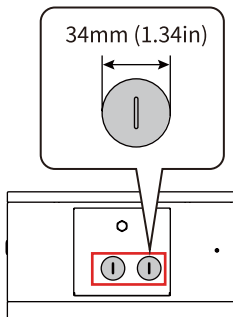
Cable Specifications

Top View

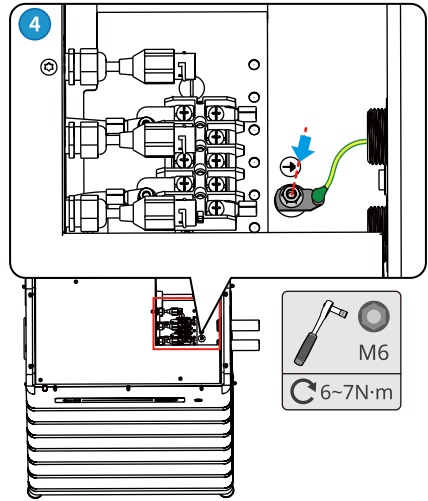
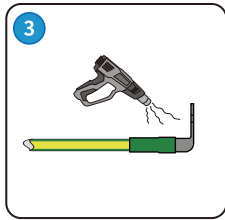
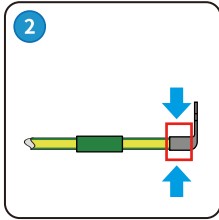
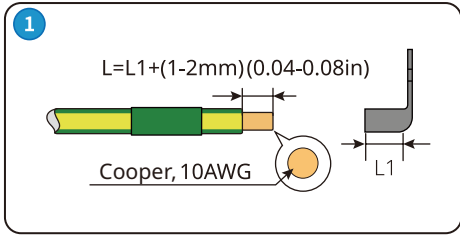


No.	Terminal/Port	Silkscreen	Recommended Cable Specifications
1	Grounding Point	⊕	105°C (221°F) copper cables, 10AWG.
2	DC Terminal (BAT)	⊕	105°C (221°F) copper cables, 6AWG.
		⊖	
3	Communication Terminal	COM1	-
		COM2	
		COM3	

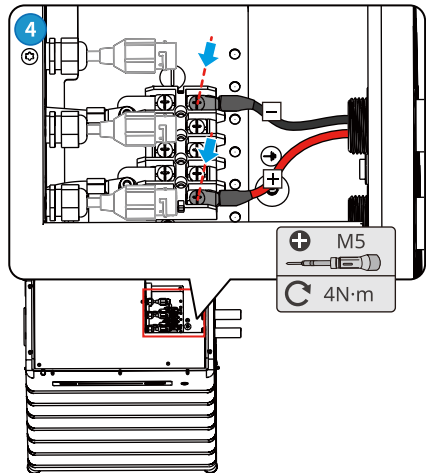
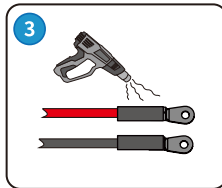
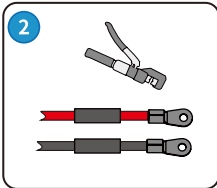
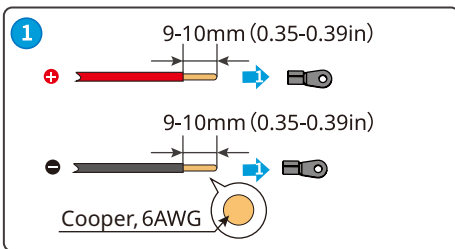
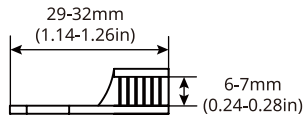
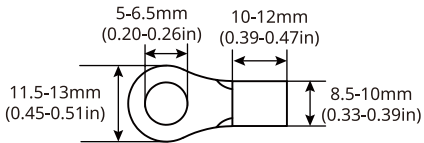
Installing the wiring conduit



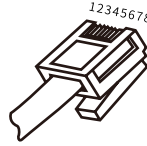
Connecting the PE cable



Connecting the Power cable



Connecting the Communication Cable

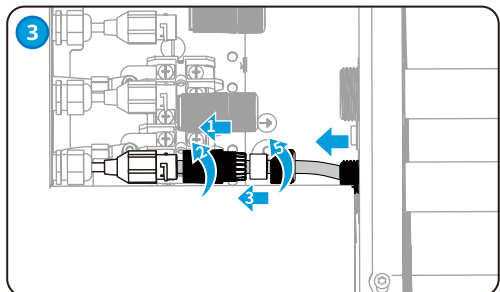
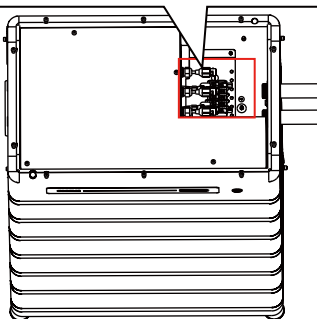
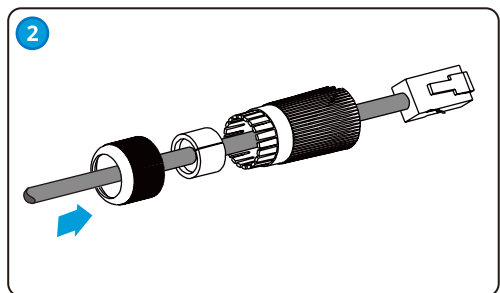
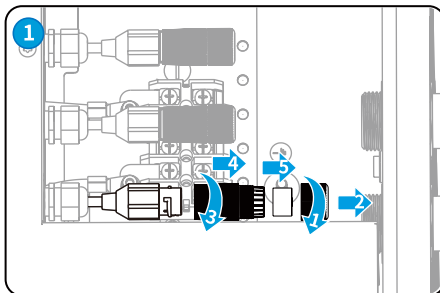


PIN	COM1	COM2	COM3	Description
1	CAN3H	CAN3H	CAN3H	BMS communication for battery system parallel connection
2	CAN3L	CAN3L	CAN3L	
3	N/A	N/A	N/A	Reserved
4	CAN2H	N/A	N/A	COM1: connects to the inverter BMS communication port to communication with the inverter COM2, COM3: reserved
5	CAN2L	N/A	N/A	
6	ISO_GND	ISO_GND	N/A	PIN for grounding.
7	HVIL_IN	HVIL_IN	N/A	COM1, COM2: interlock function COM3: reserved
8	HVIL_OUT	HVIL_OUT	N/A	

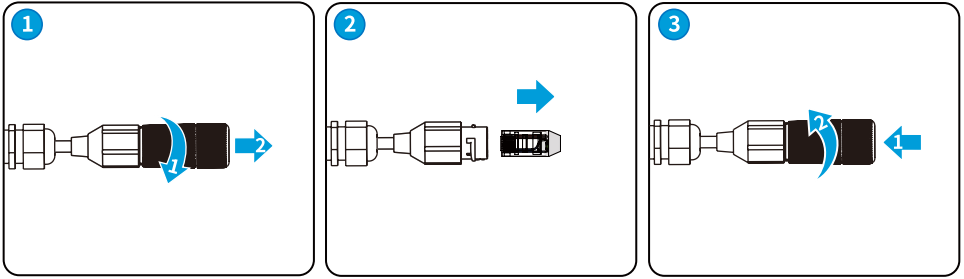
WARNING

- Detailed requirements for communication cable connection and termination resistor installation can be obtained in the system wiring network. This chapter only describes the connection method of communication cables and port definitions.
- If the termination resistor is not installed, the Interlock Failure will occur, and the battery system cannot work correctly.

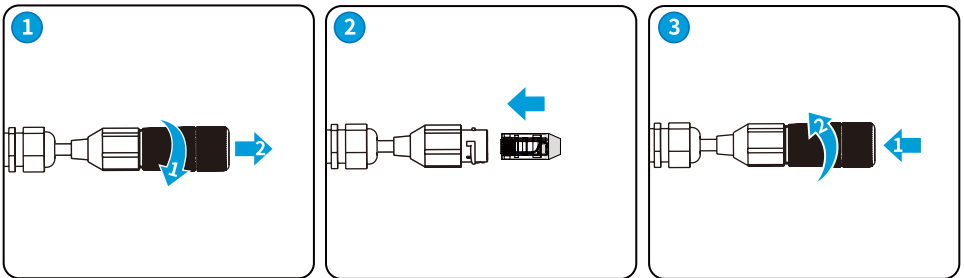
Connecting the Communication Cable



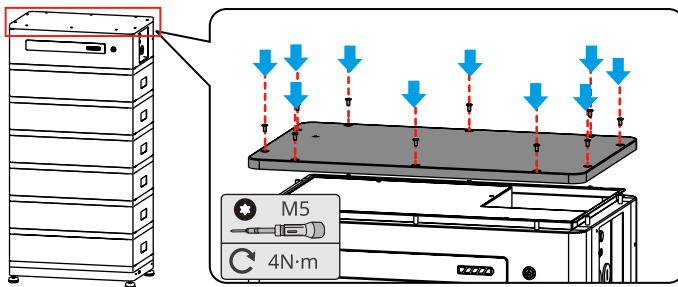
Remove the Terminal Resistor



Installing the terminal resistor



Installing the protection cover

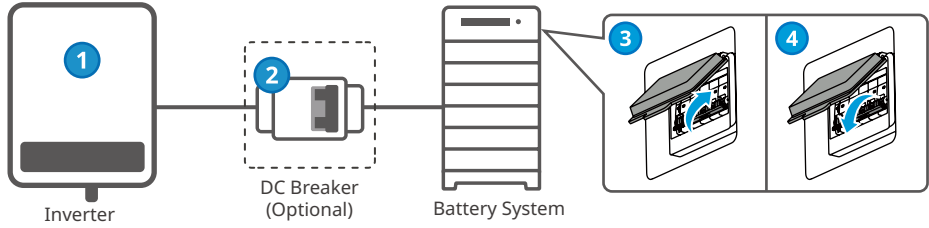


05 Power ON and OFF

NOTICE

Turn on the inverter in the system following the instructions in the user manual of the inverter.

Single battery system



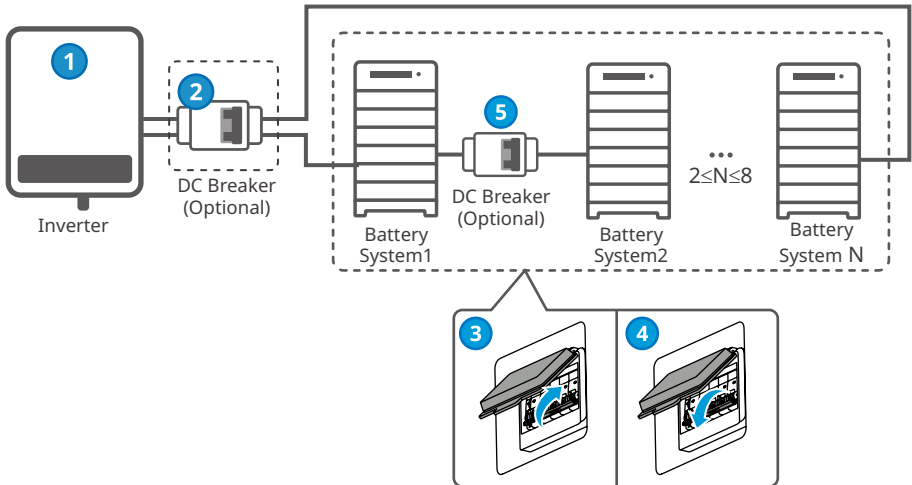
Power ON

Turn on 2 → 3 → 1

Power OFF

Turn off 1 → 4 → 2

Parallized battery systems



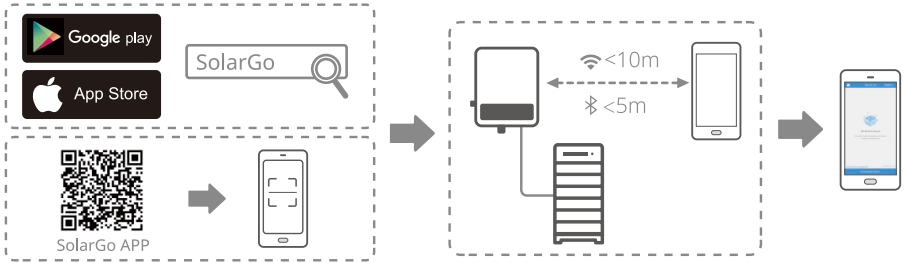
Power ON

Turn on 2 → 5 → 4 → 1

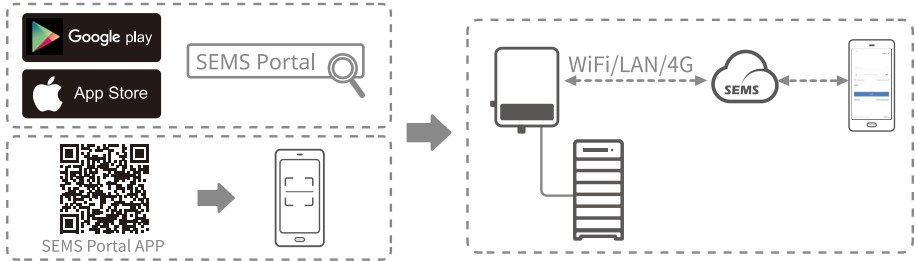
Power OFF

Turn off 1 → 4 → 5 → 2

Commissioning via SolarGo APP



Monitoring via SEMS Portal APP



For more information, please scan the following QR for User Manual.






Official Website

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 service@goodwe.com



340-00918-01



Local Contacts