

Quick Installation Guide

Low Voltage Battery

MBL050/120/160



1. Due to ongoing product development, the contents of this guide may be updated or revised periodically without prior notice. This guide does not replace the user manual or any safety instructions provided with the device.
2. Read, fully understand, and strictly follow the detailed instructions in the user manual and other related regulations before installing the device. The user manual can be downloaded from <http://support.sungrowpower.com/> or obtained by scanning the QR code on the side of the device or the back cover of this guide.
3. All operations must be performed by qualified personnel who have received training in electrical system installation, commissioning, and hazard management, and are familiar with the user manual and local regulations/directives.
4. Before installation, verify that all package contents are intact and match the scope of delivery. If any components are damaged or missing, contact SUNGROW or your distributor.
5. The cable used must be intact and well-insulated. Operation personnel must wear appropriate personal protective equipment (PPE) at all times.
6. Failure to comply with any of the instructions in this guide may result in personal injury, death, or device damage, and will void the warranty.

Safety

The battery has been designed and tested in strict accordance with international safety regulations. Before performing any work, read all safety instructions carefully and follow them at all times when working on or with the battery. Incorrect operation or handling may result in:

- Injury or death to the operator or third parties;
- Damage to the battery or other properties.

The following warning labels are affixed to the battery body.



CE mark of conformity.
EU/EEA importer.



Danger! Do not work on the product when it is energized.



Electric shock hazard!
Service must be performed only by qualified personnel. Keep out of reach of children.



No open flames!
Avoid exposure to flames, incineration, punctures, or impacts.



Read the manual before performing any operation on this product.



Please recycle the battery. Do not discard.



Do not dispose of it in the trash.
Compacting a lithium-ion battery is dangerous as it can explode.



Do not dispose of the battery as household waste.



This is a protective grounding terminal. It must be securely grounded to ensure operator safety.

DANGER

Risk of explosion

- Do not subject the battery to strong forces.
- Do not mechanically damage the battery (pierce, deform, disassemble, etc.)
- Do not heat the battery or dispose of it in a fire.
- Do not install the battery in potentially explosive environments.
- Do not immerse the battery in water or expose it to moisture or liquids.

DANGER

Risk of fire

- Do not expose the battery to temperatures above 60°C.
- Do not place the battery near heat sources, such as direct sunlight, fireplaces, thermally uninsulated walls exposed to sunlight, hot water, or heaters.
- Keep sources of ignition, such as sparks, flames, and smoking materials, away from the battery.

DANGER

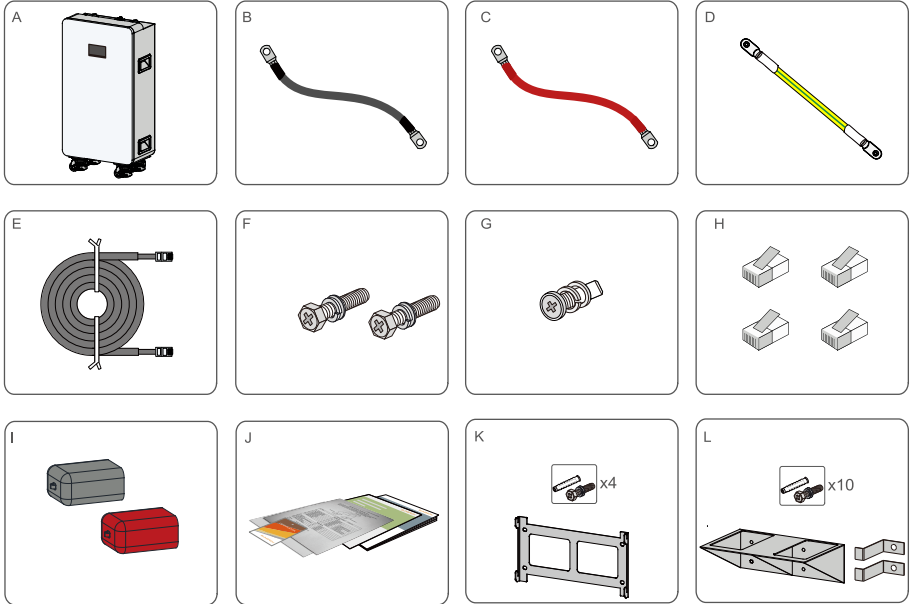
Risk of electric shock

- Do not disassemble the battery.
- Do not handle a wet battery or use wet tools.
- Do not immerse the battery in water or expose it to moisture or liquids.
- Keep the battery away from children and animals.
- Wear suitable clothing, guards and gloves to prevent you from direct contact with the DC voltage.
- Use insulated tools when working on the battery.
- Remove metal jewelry before working on the DC circuit.

NOTICE

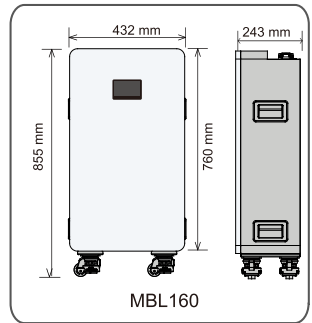
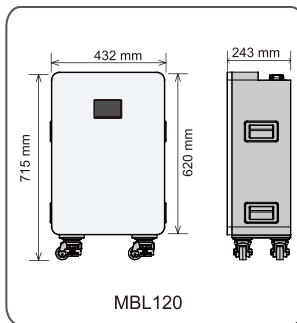
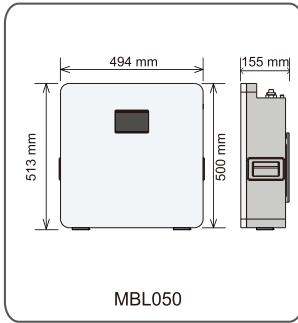
Always follow local regulations and standards when using the battery.

Scope of Delivery

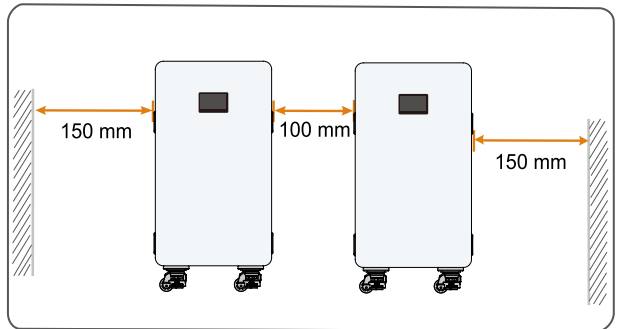
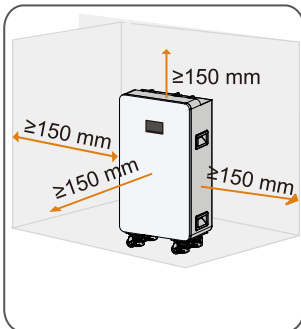
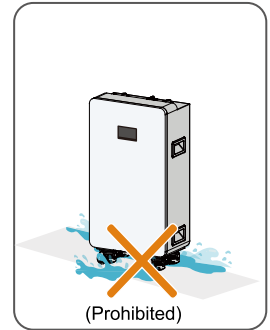
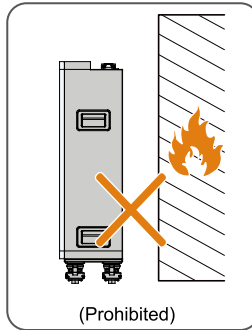
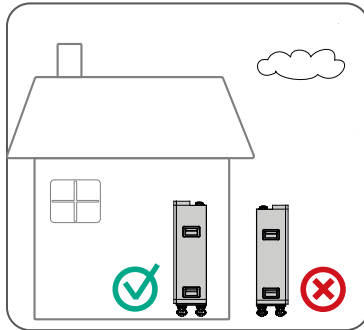
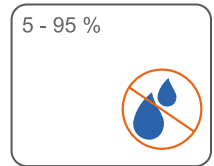
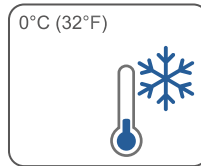
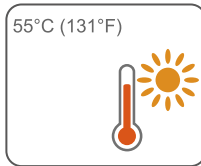


No.	Name	Quantity	
A	Battery	1	
B	Power line (black)	1	
C	Power line (red)	1	
D	Yellow-green bi-color grounding cable	1	
E	Communication connector	2	
F	MBL050: Screw (M6x12) MBL120/160: Screw (M8x16)	2	
G	Screw (M5x10)	1	
H	RJ45 connector	4	
I	Waterproof terminal cover	2	
J	Document	1	
K	Mounting bracket kit (standard for MBL050)	Mounting bracket	1
		Screw (M8x80)	4
L	Mounting bracket kit (optional for MBL120/160)	Mounting bracket	1
		Mounting ear	2
		Screw (M8x80)	10

Dimensions



Mounting Location



- For wall-mounted installation, no clearance is required between the battery and the floor.
- The load-bearing capacity of the installation structure shall be at least twice the weight of the battery, and the installation structure shall be compatible with the battery dimensions.
- Do not install the battery on a structure that may generate resonance, to prevent excessive noise.

Installation Tools

Goggles



Dust mask



Safety gloves



Safety shoes



Phillips screwdriver:
ST6.3, M5, M8, M10



Level



Marker



Hammer drill



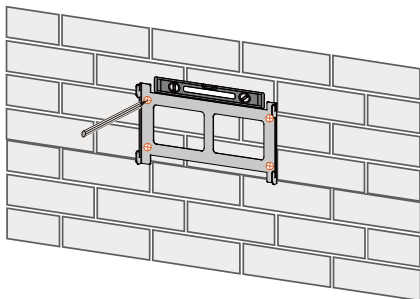
Rubber mallet



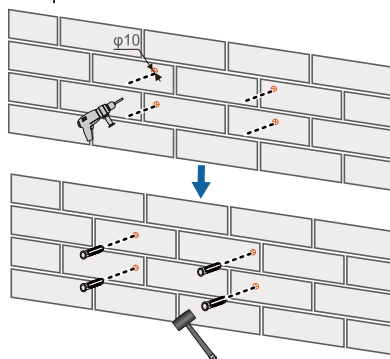
Battery Installation

MBL050

- 1 Place the mounting bracket against the wall, use a level to determine the installation position of the bracket and mark the screw holes.



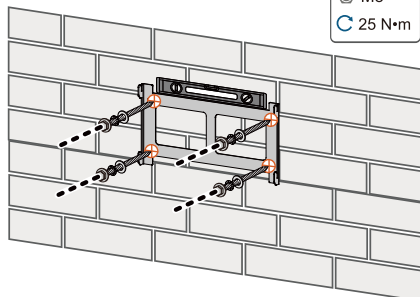
- 2 Drill holes at the marked positions on the wall and fix expansion sleeve anchors.



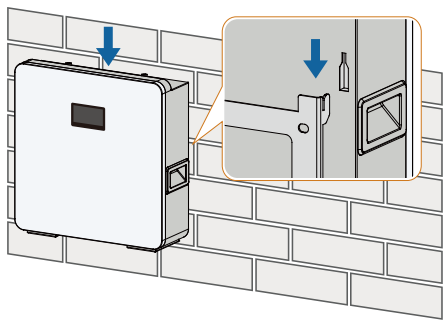
*The depth of the holes should be about 80 mm.

- 3 Secure the bracket on the wall using M8 screws.

 M8
 25 N·m

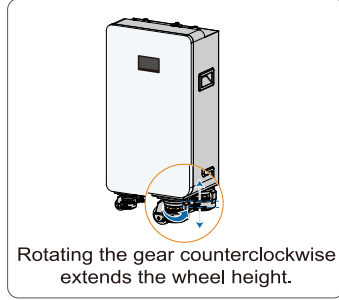
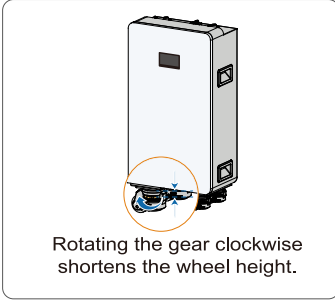
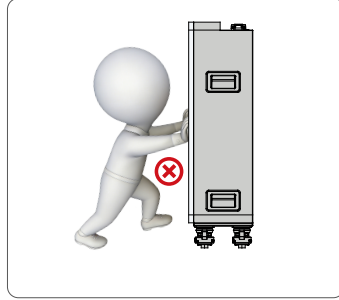
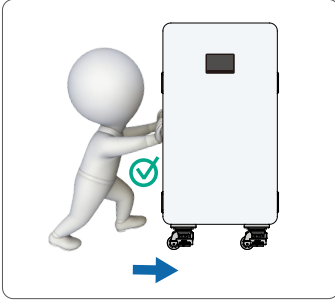


- 4 Align the four mounting holes on the rear of the battery with the mounting bracket, then lower the battery vertically until it is securely seated on the bracket.



Method 1: Floor-Mounted Installation

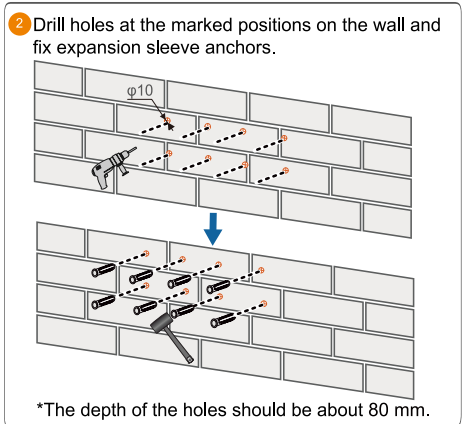
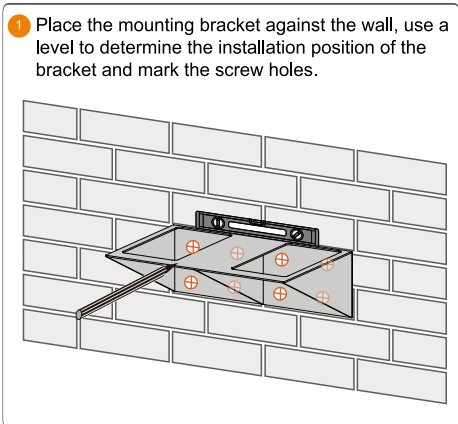
- The battery is pre-installed with leveling casters; please push it directly from the left or right side to the appropriate installation location.
- Rotate the adjustment gear in the center of the leveling caster until the bottom of the wheel contacts the ground, to prevent the battery from moving due to wheel rolling.
- After leveling, confirm that the battery remains vertical. Prolonged tilted placement or tipping may damage battery performance.



- If the installation floor is uneven, rotate the adjustment gear in the center of the leveling caster (adjustment range 0–10 mm) to level the battery vertically.

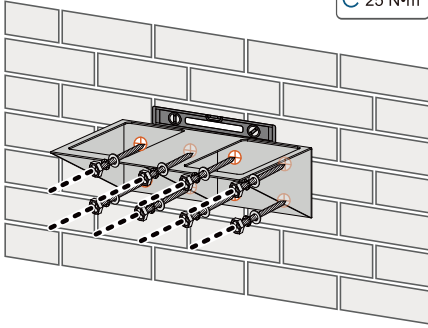
Method 2: Wall-Mounted Installation (Optional)

For wall-mounted installation, the mounting bracket kit for MBL120/160 shall be purchased.

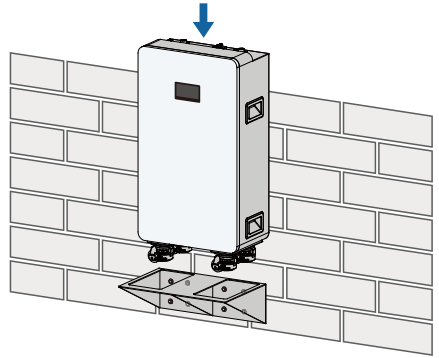


3 Secure the bracket on the wall using M8 screws.

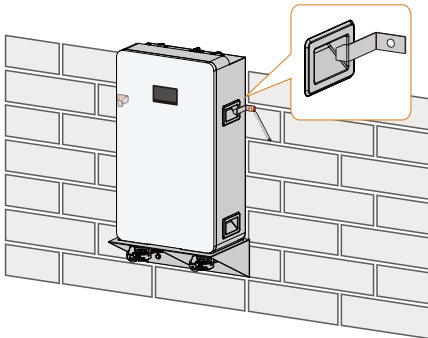
⊕ M8
⌚ 25 N•m



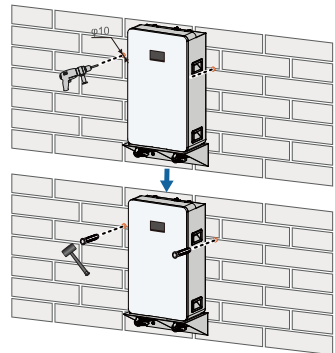
4 Place the battery on the mounting bracket.



5 Position the mounting ears on both sides of the carrying handles in the first row of the battery, and mark the screw holes.



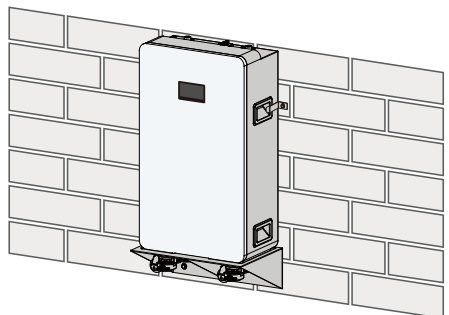
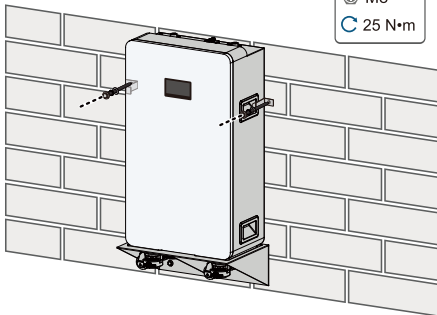
6 Drill holes at the marked positions on the wall and fix expansion sleeve anchors.



*The depth of the holes should be about 80 mm.

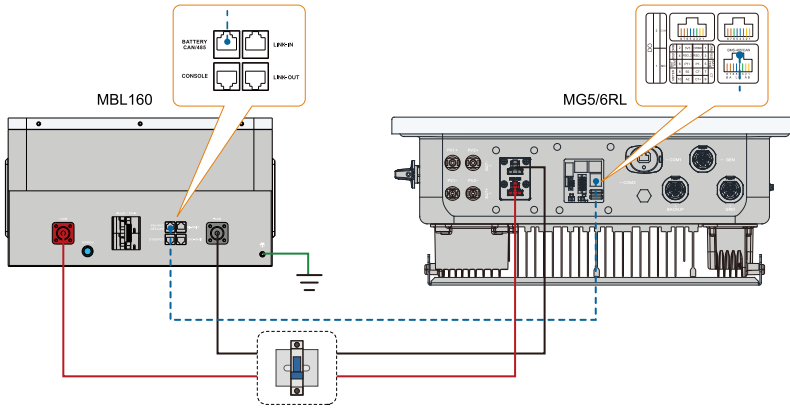
7 Secure the mounting ears using M8 screws. Installation is complete.

⊕ M8
⌚ 25 N•m



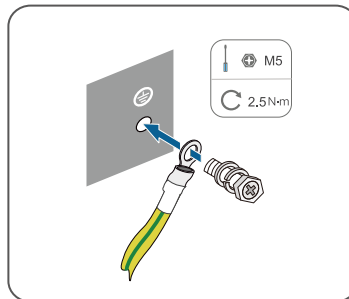
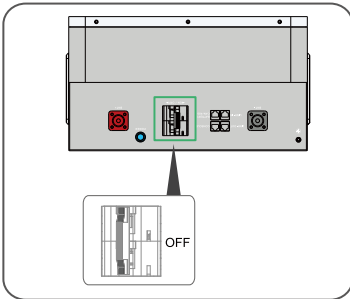
Electrical Connection Overview

The following diagram uses the MG5/6RL inverter and MBL160 battery as an example to illustrate the connection method with a single battery. This connection method also applies to the MG8/10/12RL inverter and MBL050/120 battery.



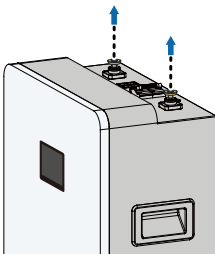
*Users may choose to connect an external circuit breaker via the power line.

Connecting the PE Cable

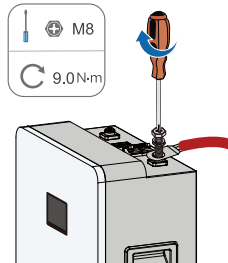


Power Cable Connection

- 1 Remove the transparent dust plug from the terminal.

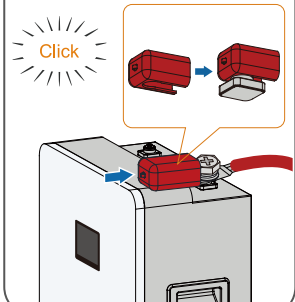


- 2 Connect the battery's positive terminal.



*The figure uses the MBL120/160 battery as an example. For MBL050, please use M6 screws, 5.0 N·m.

- 3 Snap the waterproof terminal cover into place on the connected terminal from the side of the terminal.



4 Connect the battery's negative terminal.

M8
9.0 N·m

*The figure uses the MBL120/160 battery as an example. For MBL050, please use M6 screws, 5.0 N·m.

5 Snap the waterproof terminal cover into place on the connected terminal from the side of the terminal.

Click

6

BAT+
BAT-

Communication Cable Connection

1

BATTERY CHARGER
CONSOLE
BMS+
BMS-

2 Once the battery is successfully connected, the inverter screen will display battery status information.

05/04/24 10:00:30

1.48 kW

1.48 kW SOC 80%

0kW

1.48 kW

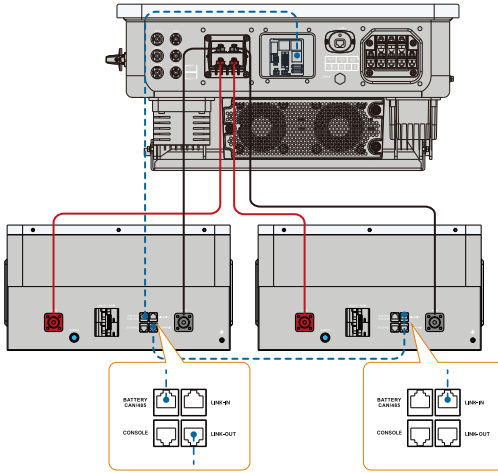
Home Dashboard History

Battery Parallel Connection

Multiple-Battery Cascade Requirements

- Supports parallel connection of up to 20 batteries simultaneously.
- When multiple batteries are connected in parallel, a terminal block must be used. Please ensure that:
 - The power cables from each battery to the terminal block shall be of equal length.
 - The terminal block used meets the charge / discharge current requirements for multiple batteries in parallel.
- Consistent battery status: Before connecting batteries in parallel, ensure that they have the same SOC and model, and the voltage difference between them is less than 1 V. If the battery SOC's are found to be inconsistent on site, handle it in any of the following ways:
 - First, connect one battery to the inverter to charge or discharge it until its SOC matches the other battery, and then perform parallel wiring.
 - Charge the batteries to the same SOC in the warehouse in advance, and then transport them to the site for installation.

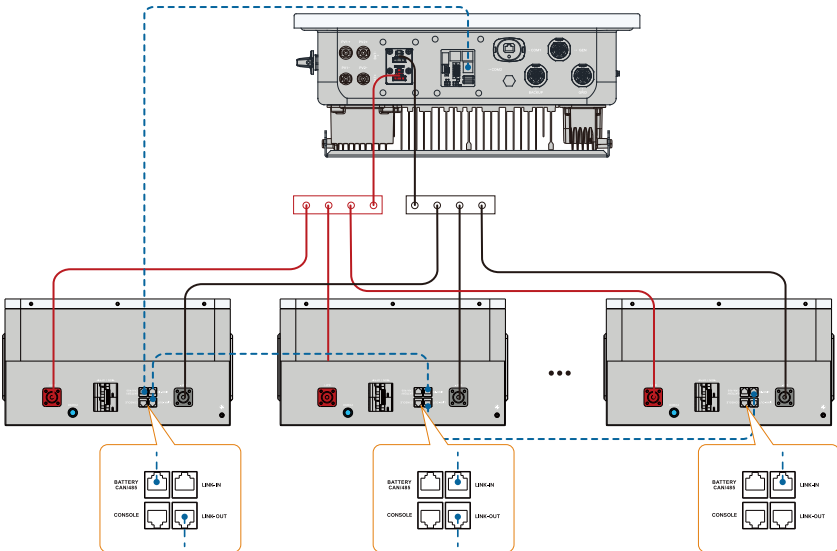
MG8/10/12RL Connected to Two Batteries

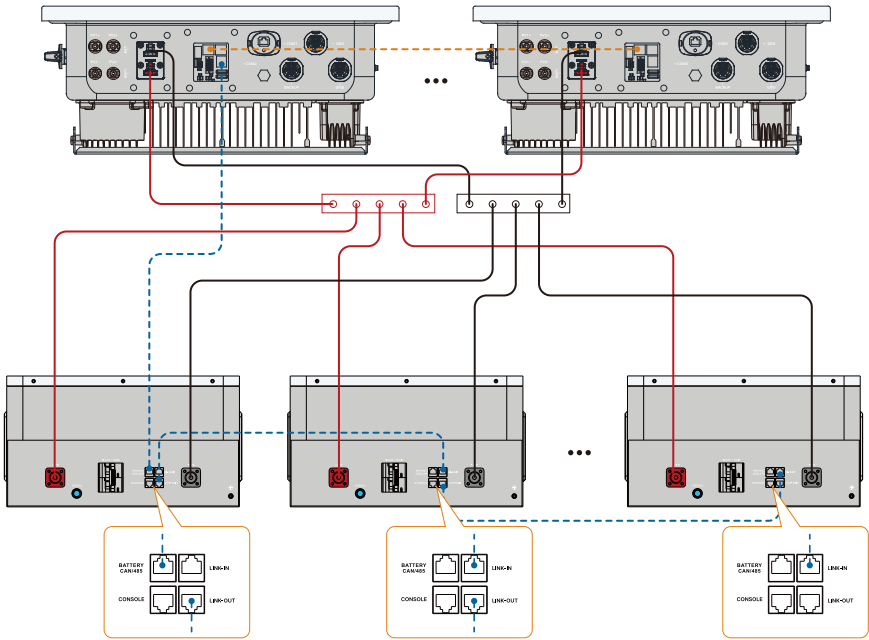


⚠ NOTICE

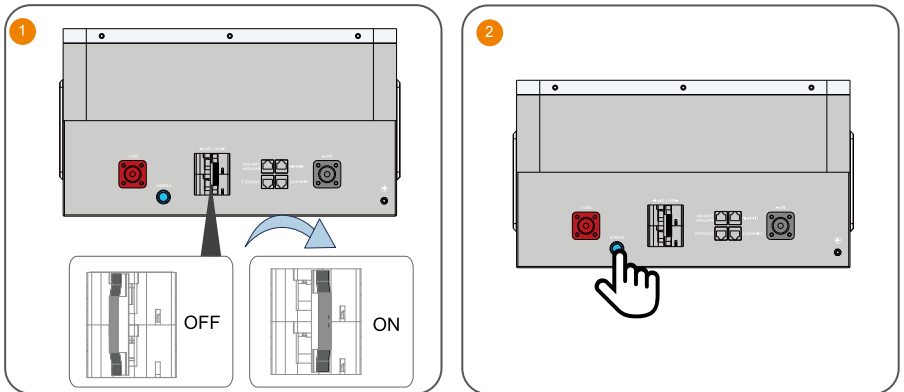
For information on how to connect the MG5/6RL to two batteries, refer to the instructions for connecting multiple batteries below.

MG5/6/8/10/12RL (Single Inverter) Connection Method with Multiple Batteries





Commissioning Procedure

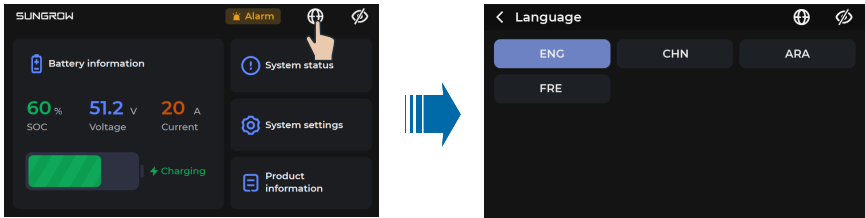


Screen Operation

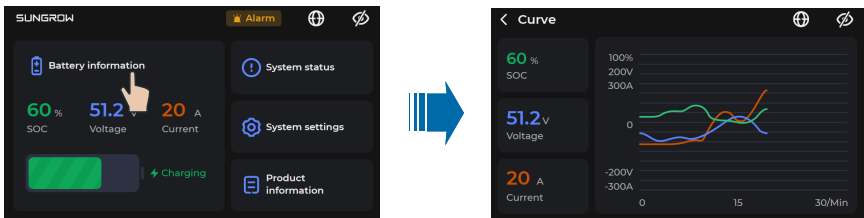
Screen Introduction



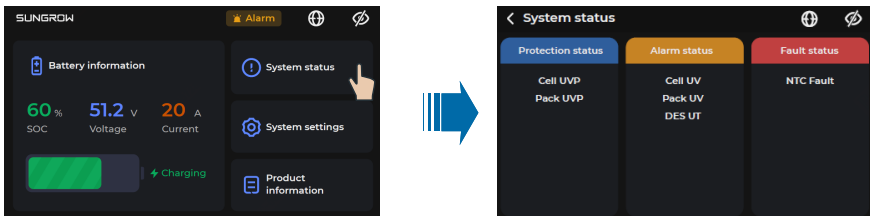
Switch Language



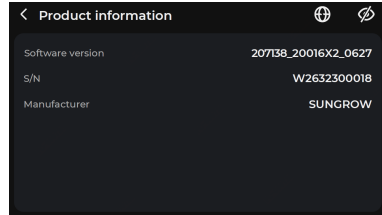
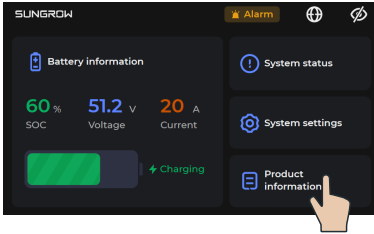
View Battery Information



View System Status

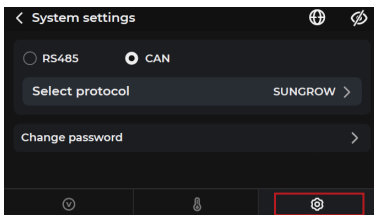
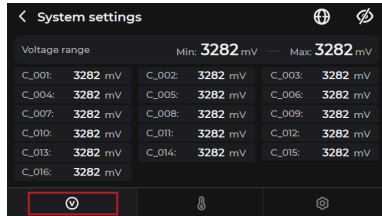
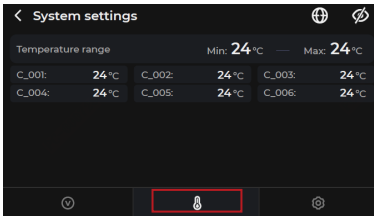
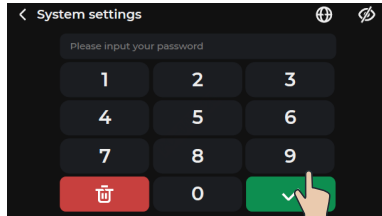
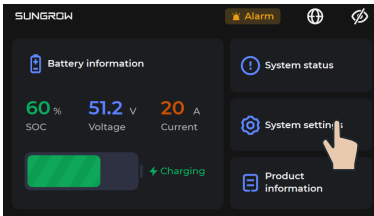


View Product Information



System Settings

System settings are intended for after-sales use only and generally do not require customer operation. To adjust them, please contact SUNGROW for the password.





Scan the QR code for more information or visit
<http://support.sungrow.com/>

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www.sungrowpower.com



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