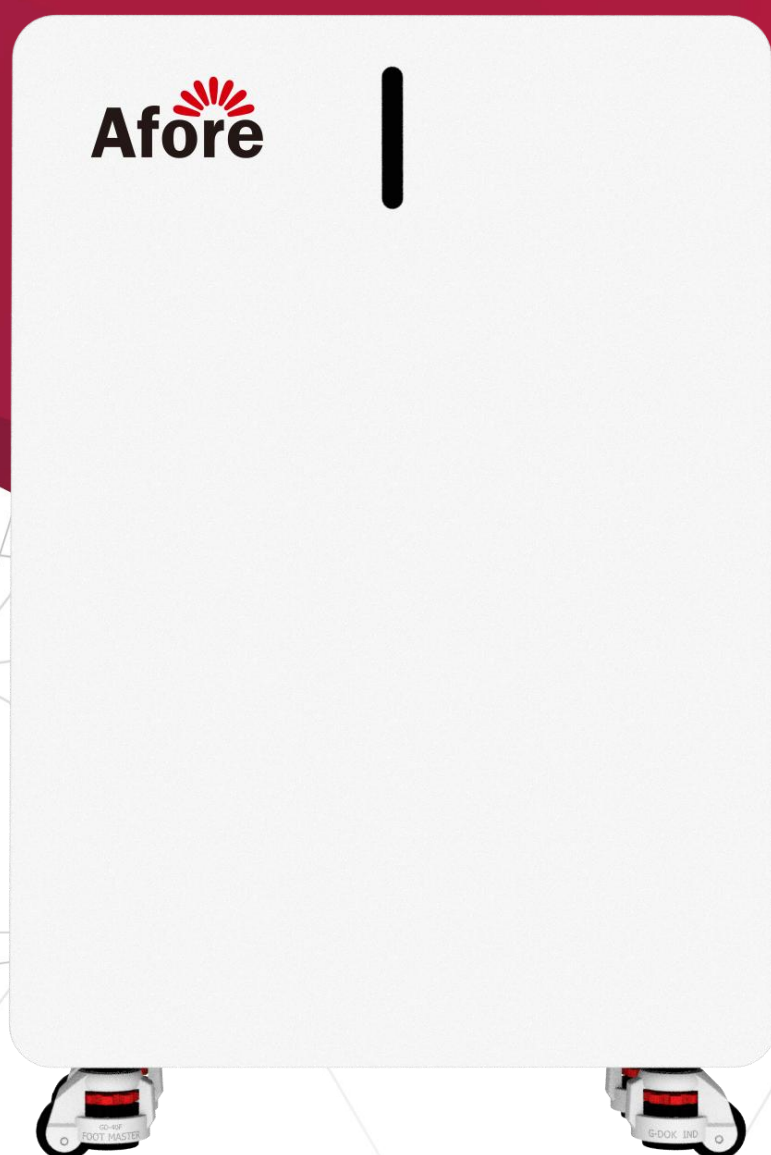


AF10000W-LA0 Series Operation Manual



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The material furnished in this manual is believed to be accurate and reliable. The information and recommendations in this manual do not constitute commitments or warranties in the form of assignments. The information in this document is subject to change without notice.

This manual mainly describes the product information, guidelines for installation, operation, maintenance and troubleshooting. And this manual applies to the AF10000W-LA0 system, including the hybrid inverter. Please keep the Manual properly and operate in strict accordance with all safety and operating instructions in this manual. Please do not operate the product before reading through the manual.

All brands and product names are trademarks or registered trademarks of their respective holders.

This Manual introduces AF10000W-LA0 system and hybrid inverter manufactured by our company. Please read this manual before you install the product and follow the instructions carefully during the installation process. Our company shall not be liable for any consequences resulting from the violation of the storage, transportation, installation, and operation regulations outlined in this document. Should you have any confusion, please contact our company for advice and clarification.

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1. Introduction

1.1 Content and Structure of this Manual

This manual applies to the AF10000W-LA0 Series Energy Storage System.

This manual provides product information as well as guidance for installation and inverter operation.

Observe all manuals accompanying the product, keep them in a convenient location, and ensure they remain accessible at all times.

Illustrations in this manual contain only essential information and may differ from the actual product.

1.2 Target Group

This manual is intended for qualified personnel and end users. Only qualified persons are permitted to perform operations marked with a warning symbol in this manual. Tasks that do not require specific qualifications are not marked and may be performed by end users.

- Knowledge of working principle of lithium-ion batteries.
- Knowledge of how to handle hazards and risks associated with installing and using electrical devices, batteries and systems.
- Knowledge of the installation and commissioning of electrical devices and systems.
- Knowledge of applicable standards and directives.
- An understanding of and compliance with this document, including all safety precautions.
- An understanding of and compliance with documentation from battery and inverter manufacturers, including all safety precautions.

1.3 Levels of Warning Messages



DANGER:

DANGER indicates a hazardous situation which, if not avoided, will result in death or

serious injury.

 WARNING:

WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 CAUTION:

CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

 NOTE:

NOTICE indicates a situation which, if not avoided, can result in property damage.

1.4 Marks

	Warning electric shock.		Do not operate until 10 minutes after discharge
	Warning Fire		Read the product and operation manual before operating the battery system!
	Do not reverse connect the positive and negative		CE
	Do not place near open flame		Recyclable
	Do not place at the children or pet touchable area		Grounding

1.5 Definition of Abbreviations and Nouns

Abbreviation	Noun
AC	alternating current
BAT	battery
BMS	battery management system
DC	direct current
INV	inverter

PV	photovoltaic
SOC	state of charge
SOH	state of health

2. Safety Instruction

This product is designed and tested in accordance with international safety requirements CE and UN38.3. However, as with all electrical and electronic device, certain precautions must be observed when installing and operating the product. To reduce the risk of personal injury and ensure safe installation and operation, close attention must be paid to following all instructions, cautions, and warnings in this manual.

2.1 Battery precautions



WARNING:

It is essential to read this user manual carefully before installing or using the battery. Failure to do so or to follow any instructions or warnings in this document may result in electric shock, serious injury, or death, and may also damage the battery, potentially rendering it inoperable.

- If the battery is stored for long time, it must be charged every three months, with a recommended SOC of 30%~50%.
- Battery needs to be recharged within 12 hours after being fully discharged.
- Do not install the product in any environment outside the temperature or humidity ranges specified in this manual.
- All power terminals must be disconnected before maintenance.
- Please contact the supplier within 24 hours if any abnormality occurs.
- Do not use cleaning solvents to clean the battery.
- Do not expose the battery to flammable or corrosive chemicals or vapors.
- Do not paint any part of the battery, including internal or external components.
- Do not connect the battery directly to PV solar wiring.
- Inserting any foreign object into any part of the battery is prohibited.

- Warranty claims shall be rejected for direct or indirect damage caused by the above reasons.

2.2 Emergency situation



DANGER:

This product is designed with multiple safety strategies to prevent hazards resulting from failure. However, hazards and dangers could emerge in few uncertain situations.

Fire

The battery PACK may catch fire when heated over 150°C.

Ensure an ABC or carbon dioxide extinguisher nearby the battery, and do not use water to extinguish the fire.

If a fire breaks out where the battery is installed, perform the following actions:

- Extinguish the fire before the battery catches fire.
- If the battery has caught fire, do not try to extinguish the fire. The fired battery will produce poisonous gases, please evacuate people immediately.

Leaking

If the battery PACK leaks, avoid contact with the leaking liquid or gas.

Electrolyte is corrosive and contact may cause skin irritation and chemical burns. If one is exposed to the leaked substance, perform the following actions:

Inhalation: Evacuate the contaminated area and seek medical attention immediately.

Eyes contact: Rinse eyes with flowing water for 15 minutes and seek medical attention immediately.

Skin contact: Wash the affected area thoroughly with soap and water and seek medical attention immediately.

Ingestion: Induce vomiting as soon as possible and seek medical attention immediately.

Wet battery

If the battery is wet or submerged in water, do not try to access it. Contact customer service for technical assistance.

Damaged battery

Damaged battery may emit toxic gas or/and flammable gas, which could cause hazards to lives or property. If the battery is damaged, please keep away from the

battery and contact customer service for help as soon as possible.

3. System Introduction

3.1 Parameters of energy storage system

Product Name	Rechargeable Li-ion Battery System
Battery Module	AF10000W-LA0
Total Energy (kWh)	10.49
Usable Energy (kWh)*	10.49
Voltage Range (Vd.c.)	44.8~57.6
Rated Capacity (Ah)	205
Nominal Voltage (Vd.c.)	51.2
Charging Voltage Declared by Manufacturer (Vd.c.)	57.6
V_{trip} : The Trip Voltage of Overcharge Protection Voltage Control (Vd.c.)	58
V_{trip} : The Trip Voltage of Over-discharge Protect (Vd.c.)	44
Nominal Charging Current (A)	100
Max. Continuous Charging Current (A)	100
Nominal Discharge Current (A)	100
Max. Continuous Discharging Current (A)	100
I_{trip} : The Trip Current of Overcharge Protection Current Control (A)	120
T_{trip} : The Trip Temperature of Overheating Protection (°C)	57
DOD (%)	100
Communication Interface	CAN/RS485/WIFI

Max Parallel Quantity		2
WIFI Frequency Range		2412 MHz - 2472 MHz
WIFI Maximum Transmission Power		20 dBm
Power Heating Film (W)		140
Display Screen		LED
Dimension(L*W*H) (mm)		(530±2)×(230±2)×(730±2)
Net Weight (kg)		(96±3)
Operating Condition		Indoor or outdoor
Storage Temperature Range		-35 - 60 °C, (It is required to conduct a full charging/discharging cycle for cell protection every three months,and the recommended SOC should be 30%~50%)
Operating Temperature	Charging	0 -52 °C
	Discharging	-15 - 52 °C
Humidity		15% - 85%RH(No Condensation)
Cooling Type		Natural
IP Rating of Enclosure		IP66
Configuration		16S
Installation Method		floor-standing
Supply Connection		Fixed power cord
Heating film(optional)		Power and Quantity: 35 W*4
		Rated Voltage: 25.6 V
Authentication Level		IEC 62619:2022; EN IEC 61000-6-3:2021, EN IEC 61000-6-1:2019,EN 301 489-1 V2.2.3:2019,EN 301 489-17 V3.3.1:2024, EN 300 328 V2.2.2:2019//UN38.3/MSDS

*Testing conditions based on temperature 25°C at the beginning of life. Total Energy/Usable Energy are measured with a standard test method: 0.2C Charge and Discharge. As per the characteristics of lithium batteries, such parameters as the charge/discharge current and efficiency listed above are subject to change. The final right of interpretation is reserved our company.

3.2 Product Appearance



Fig.3.2-1 Product Appearance

3.3 Battery Interface Instruction

All the ports and indicators are shown in the Fig. below and detailed in the following table.

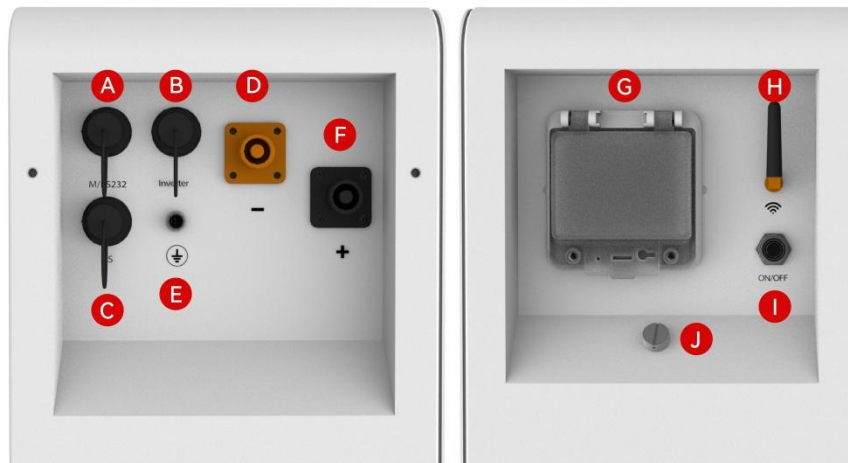


Fig.3.3-1 Operation panel

Object	Name	Description
A	M/RS232	Communication ports to parallel batteries/Communication ports to host computer software
B	S	Communication ports to parallel batteries
C	Inverter	Communication port to inverter
D	P+	Battery output anode
E	P-	Battery output cathode
F	GND	Grounding protection
G	Breaker	ON: main breaker ON, able to turn on battery system by ON/OFF button. OFF: battery system turn off completely, no power output.
H	WIFI	WIFI
I	Power switch	The switch of the battery
J	Battery Vent	Battery pressure relief valve

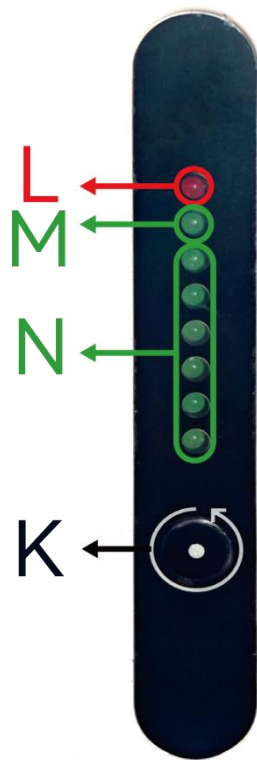


Fig. 3.3-2: Indicators

Object	Name	Description
L	ALM	Fault indicator (Red)
M	Run	Operation indicator (Green)
N	SOC	SOC indicators
K	Press Button	Reset Button

3.4 LED Indicators

Table 1: Battery Condition Indicators

Status	Normal/alarm/protection	RUN	ALM	SOC indicator LED						Remarks
				L6	L5	L4	L3	L2	L1	
		●	●	●	●	●	●	●	●	
Power off	Sleep	Off	Off	Off	Off	Off	Off	Off	Off	All indicators are OFF
Standby	Normal	Blink 1	Off	Indication as per SOC						Standby
	Alarm	Blink 1	Blink 3							Low voltage of battery module
Charging	Normal	On	Off	Indication as per SOC (Indication of max. SOC is Blink 2)						LED indicator blinks for max. SOC (Blink 2). For overcharging alarm, indicator doesn't blink
	Alarm	On	Blink 3							
	Overcharge protection	On	Off	On	On	On	On	On	On	If disconnected to city grid, the indicator shall turn to Standby mode
	Temperature, over current, failure protection	Off	On	Off	Off	Off	Off	Off	Off	Charging will be stopped
Discharging	Normal	Blink 3	Off	Indication as per SOC						
	Alarm	Blink 3	Blink 3							
	Under voltage protection	Off	Off	Off	Off	Off	Off	Off	Off	Discharging will be stopped
	Temperature, over current, short circuit, reverse connection, failure protection	Off	On	Off	Off	Off	Off	Off	Off	Discharging will be stopped
Failure		Off	On	Off	Off	Off	Off	Off	Off	Charging/discharging will be stopped

Table 2: SOC Indicators

Status		Charging						Discharging					
SOC indicators		L6	L5	L4	L3	L2	L1	L6	L5	L4	L3	L2	L1
SOC (%)	0%~17%	Off	Off	Off	Off	Off	Blink 2	Off	Off	Off	Off	Off	On
	18%~33%	Off	Off	Off	Off	Blink 2	On	Off	Off	Off	Off	On	On
	34%~50%	Off	Off	Off	Blink 2	On	On	Off	Off	Off	On	On	On
	51%~66%	Off	Off	Blink 2	On	On	On	Off	Off	On	On	On	On
	67%~83%	Off	Blink 2	On	On	On	On	Off	On	On	On	On	On
	84%~100%	Blink 2	On	On	On	On	On	On	On	On	On	On	On
Running indicator 		On						Blink (Blink 3)					

Table 3: Blinking LED Indicators

Blink mode	ON	OFF
Blink 1	0.25 S	3.75 S
Blink 2	0.5 S	0.5 S
Blink 3	0.5 S	1.5 S



Note: it is allowed to enable or disable LED indicator alarm via Master battery. The default setting is alarm enabled.

3.5 Description of Press Button

When the BMS is in Sleep mode, press and hold the button for 3–6 seconds before releasing it. The protection board will activate, and the LED indicators will turn on sequentially for 0.5 seconds, starting from the “RUN” indicator.

When the BMS is activated, press and hold the button for 3–6 seconds before releasing it. The protection board will enter Sleep mode, and the LED indicators will turn on sequentially for 0.5 seconds, starting from the minimum SOC indicator.

When the BMS is activated, press and hold the button for 6–10 seconds before releasing it. The protection board will reset, and all LED indicators will turn on simultaneously for 1.5 seconds.

Even after the BMS is reset, the parameters and functions already set and enabled via the master battery are retained. If it is necessary to restore the default values, this

can be done via the master battery. However, relevant operating records and saved data (e.g., SOC, cycles, protection records) remain unchanged.

When the BMS is activated, press and hold the button for 12–13 seconds and then release it. The Wi-Fi & Bluetooth module will reset. The corresponding LED operation sequence is as follows:

Press and hold the button; the LEDs will run in sequence again. All LEDs will turn on for 5 seconds and then turn off. Release the button when the LEDs turn off.

3.6 Sleep and Wake-up Functions

3.6.1 Sleep

When any of the following conditions is met, the system will enter low-power mode:

- 1) Single battery or system over-discharge protection is not cleared within 30 seconds;
- 2) Press and hold the button for 3–6 seconds before releasing it;
- 3) The minimum cell voltage is lower than the sleep voltage for a duration exceeding the sleep mode delay time (all of the following conditions must be satisfied: no communication, no protection active, no balancing, no current);
- 4) The system has been in standby for more than 24 hours (no communication, no charging or discharging, no grid power supply);
- 5) The system is turned off via the master battery software.

Before entering sleep mode, ensure that no external voltage is connected to the input terminals; otherwise, the system cannot enter low-power mode.

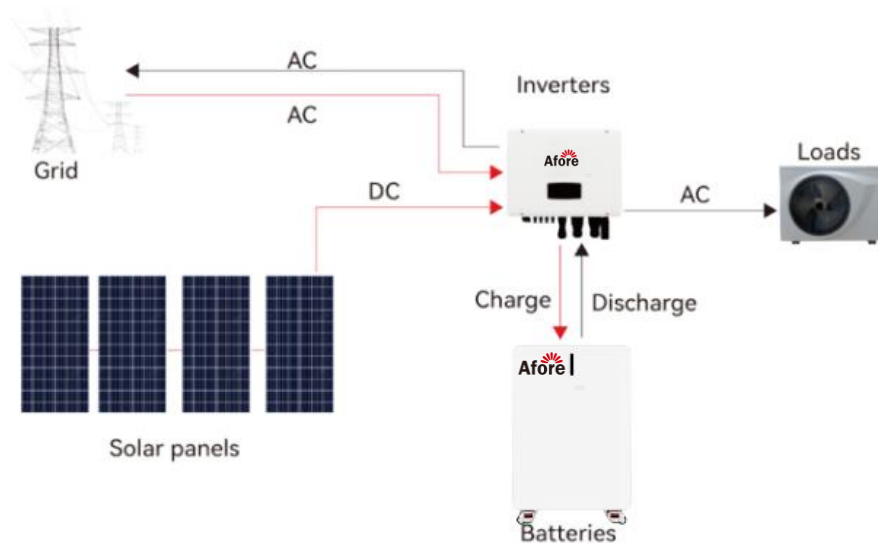
3.6.2 Wake-up

If the system is in low-power mode, it will exit low-power mode and enter normal operation mode when any of the following conditions is met:

- 1) A charger with an output voltage higher than 48 V is connected;
- 2) Press and hold the button for 3–6 seconds before releasing it;
- 3) RS232 communication is activated.

3.7 Application scenario

The AF10000W-LA0 series energy storage system (including inverter and battery AF10000W-LA0) is designed to improve energy independence for homeowners. Energy management is based on time-of-use and demand charge rate structures, significantly reducing the amount of energy purchased from the public grid and optimizing self-consumption. The system can be applied in DC-coupled systems and off-grid (with generator) systems.



3.8 Features

- The battery is non-toxic, pollution-free and environmental friendly.
- The positive electrode material is LiFePO_4 with safety performance and long cycle life.
- BMS has protection functions including over-discharge, over-charge, over-current and high/low temperature.
- Flexible configuration, multiple battery modules can be connected in parallel to increase storage energy.

4. Installation

4.1 Tools and safety gear

The following tools are recommended for the installation in the installation of batteries and hybrid inverter. And the safety gear should be worn correctly during installation.

During operation, consider that the noise emitted based on the environment could possibly exceed the legal thresholds (less than 70 dB), therefore, suitable ear protection must be worn.



Screwdriver



Wire cutter



Crimping modular plier



Voltmeter



Pocket knife



Insulating tape



Insulated gloves



Safety goggles



Safety shoes



Socket wrench



Percussion drill



Measuring tape



Spirit level



Dust mask



Safety helmet

4.2 Package Items

Unpacking

On receiving the products, please check to ensure that the packaging and all components are complete and undamaged. If any items are damaged or missing, please contact your dealer directly for support.

a. Battery pack



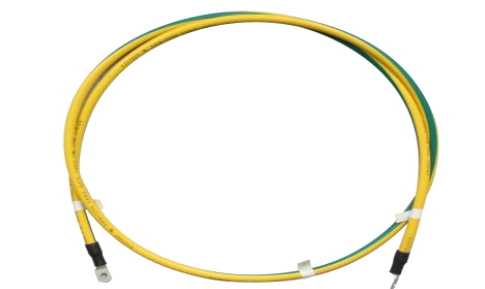
b. Power cables to inverter *2(2AWG)



c. RJ45 communication cable to inverter *1



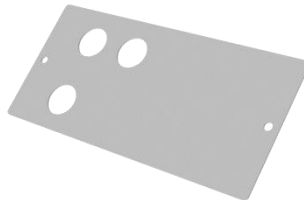
d. Ground wire *1(4AWG)



e. Wall fixing kit*2



f. Protective cover



g.Mounting bolts

		
2*Expansion bolt/M6*50/10*50/SUS 304	2*Gasket/M8*20*1.2 /SUS304	4*Combined cross recessed and hexagon socket head cap screw/M5*10/A2-70/SU S304

h. User Manual and Warranty Card



4.3 Installation Environmen

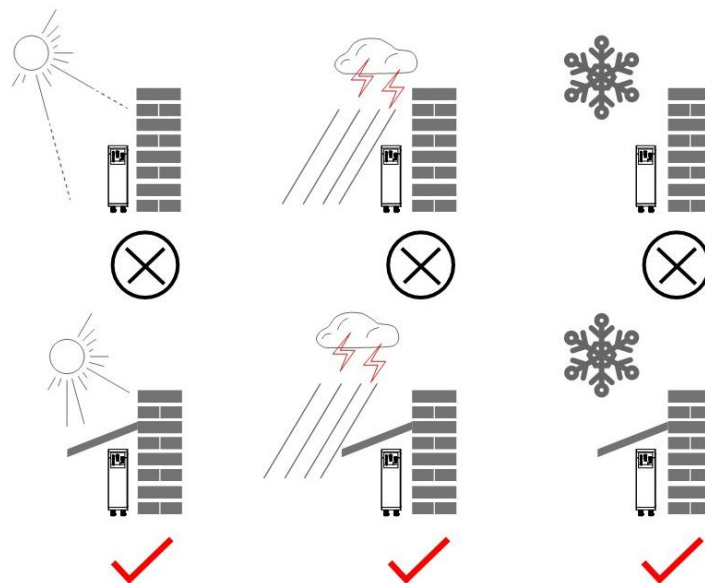
Make sure that the installation location meets the following conditions:

- Ensure the installation environment meets the following requirements:
- There are no flammable or explosive materials nearby
- Do not install the device in environments with smoke, flammable, or explosive materials
- Avoid installing the device in direct sunlight, rain, standing water, snow accumulation, dust, or sand. It is recommended to install it in a sheltered location. If the area is prone to natural disasters such as floods, mudslides, earthquakes, or typhoons, necessary protective measures should be taken during installation.
- Do not install the device in environments with strong electromagnetic

interference.

- The ambient temperature is within the range from 0°C to 40°C.
- The temperature and humidity (15%~85%RH(No Condensation)) are maintained at a constant level.
- There is minimal dust and dirt in the area.
- There are no mandatory ventilation requirements for battery module, but please avoid of installation in confined area. The aeration shall avoid of high salinity, humidity or temperature.
- The battery system should be used in PD2 environment.

When the battery system is installed outdoors, it must be properly protected. Do not expose the battery system directly to sunlight, water, rain, snow, spray, lightning, or similar environmental conditions.



4.4 Installation Location

Ensure the installation location meets the following requirements:

- Do not tilt or invert the equipment. The floor must be flat and level to ensure the equipment is installed horizontally.
- Do not install the equipment in a location easily accessible to children.

- Do not install the equipment near sources of fire or in damp locations.
- Do not install the equipment in enclosed, unventilated spaces that lack firefighting facilities and are difficult for firefighters to access.
- The distance from heat source is more than 2 meters.
- The distance from air outlet of inverter is more than 0.5 meters.
- According to the on-site situation, the equipment should be fixed to the wall during installation against the wall.
- Please install the battery on flat ground, if the ground is waterlogged, built a waterproof platform that meets the load-bearing requirement.



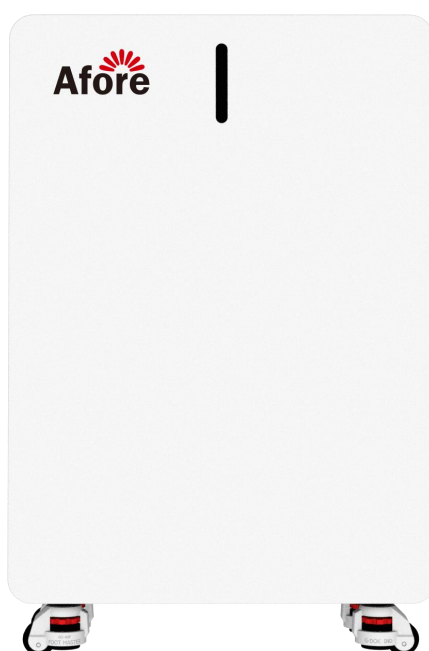
CAUTION:

I、In actual installation, the selection of the installation location must comply with local fire safety, environmental protection, and other regulations. The specific installation location plan shall be determined by the installer or EPC (Engineering, Procurement, Construction) contractor.

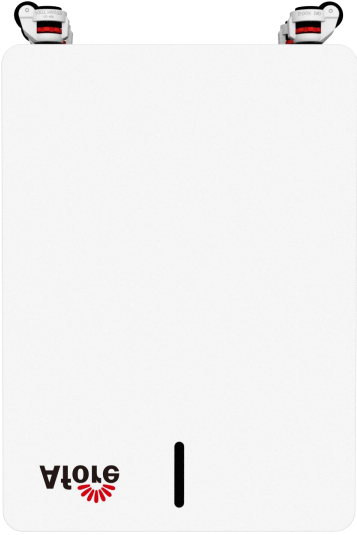
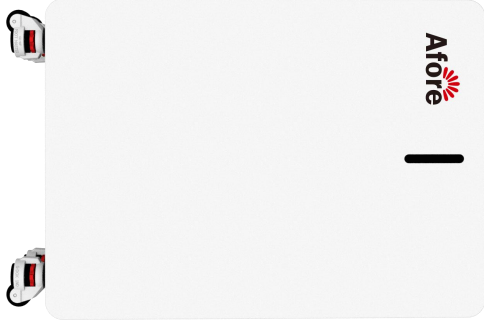
II、If the ambient temperature is out of the operating range, the battery stops operating to protect itself. The optimal temperature for the battery pack ranges from 10°C to 40°C. Frequent exposures to harsh temperatures may deteriorate the performance and life of the battery.

4.5 Installation Direction

Recommended:



 **Note:**

NOT ALLOWED	
	
Upside down	Sidelong

4.6 Single Battery Installation

4.6.1 Floor-standing

Step 1: Use two M5×10 cross-recessed hex head combination screws to install the two wall mounting brackets on the left and right sides of the battery housing, respectively. Torque requirement: 6 N·m;



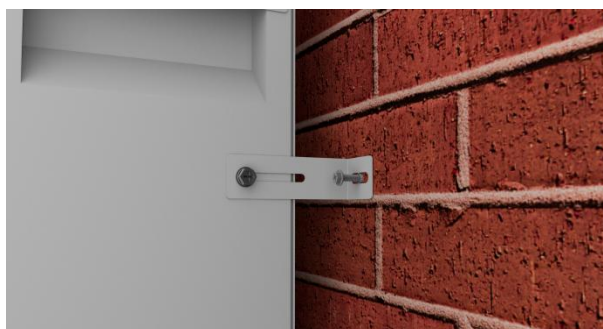
Step 2: Move the battery to a flat surface indoors, place it against a wall, position the mounting brackets flush against the wall, and use a marker to mark the drilling locations;



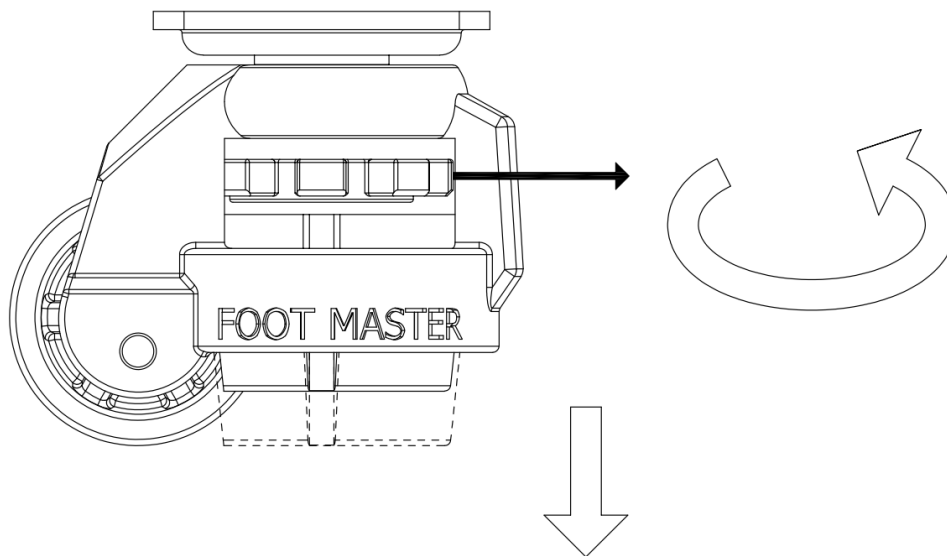
Step 3: Remove the battery and use an impact drill to drill a hole in the wall (diameter: 10 mm, depth: 50 mm);



Step 4: Tap the expansion tube into the mounting hole, position the battery over the expansion tube, and secure the battery to the wall using M6×50 bolts;

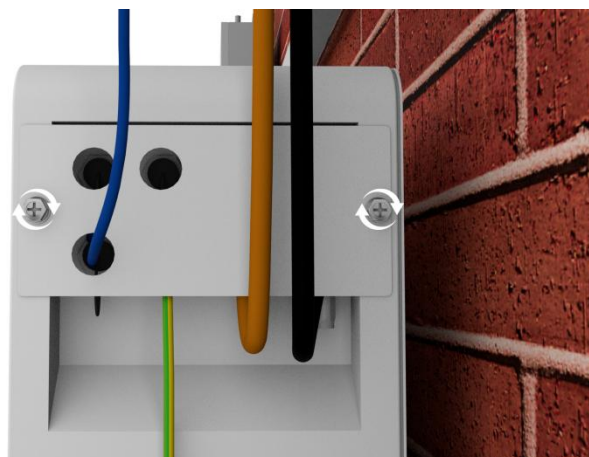


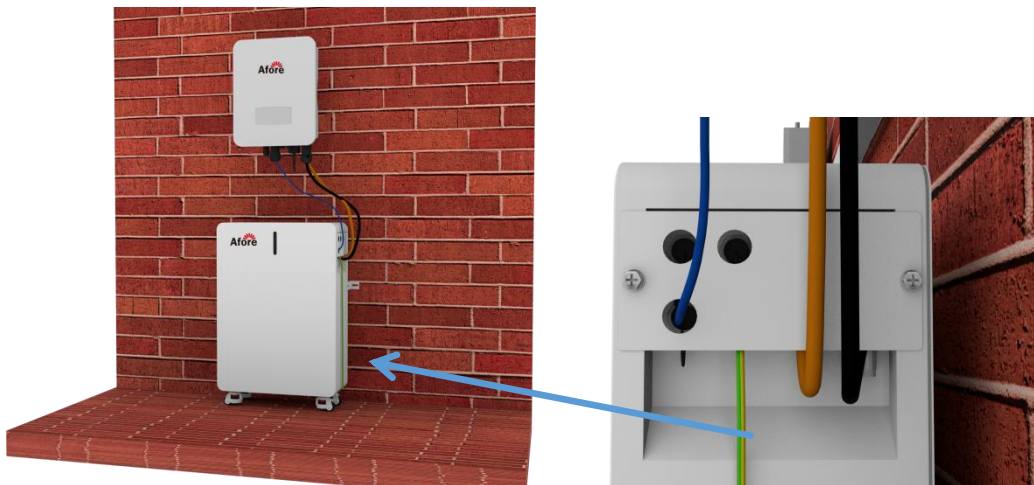
Step 5: Rotate anti-clockwise the regulating wheels on the bottom of the battery one by one till the foot masters fully touch the ground.



4.6.2 System Wiring

- 1) Connect the orange power cable(2AWG) of the battery to the corresponding port of inverter;
- 2) Connect the black power cable(2AWG) of the batter to the corresponding port of inverter;
- 3) Connect the communication cable from INV port to the corresponding port of inverter;
- 4) Grounding wire (4AWG) shall be connected to the ground point of each batter.
- 5) Secure the protective cover to the battery housing using two M5×10 cross-recessed hex head combination screws; torque requirement: 6 N·m;





4.7 Parallel Connection

4.7.1 Floor-standing

Step 1: Please check the voltage of each battery and make sure the voltage difference is less than 2V.

Step 2: Refer to Steps 1-5 for single battery installation

Step 3: The internal distance between adjacent batteries is a recommended one and shall be reasonably reduced as much as possible.

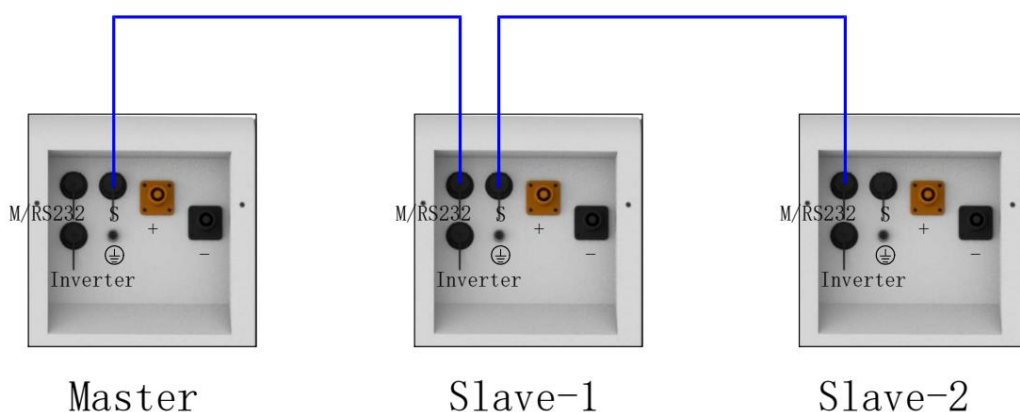


4.7.2 System Wiring for Parallel Connection

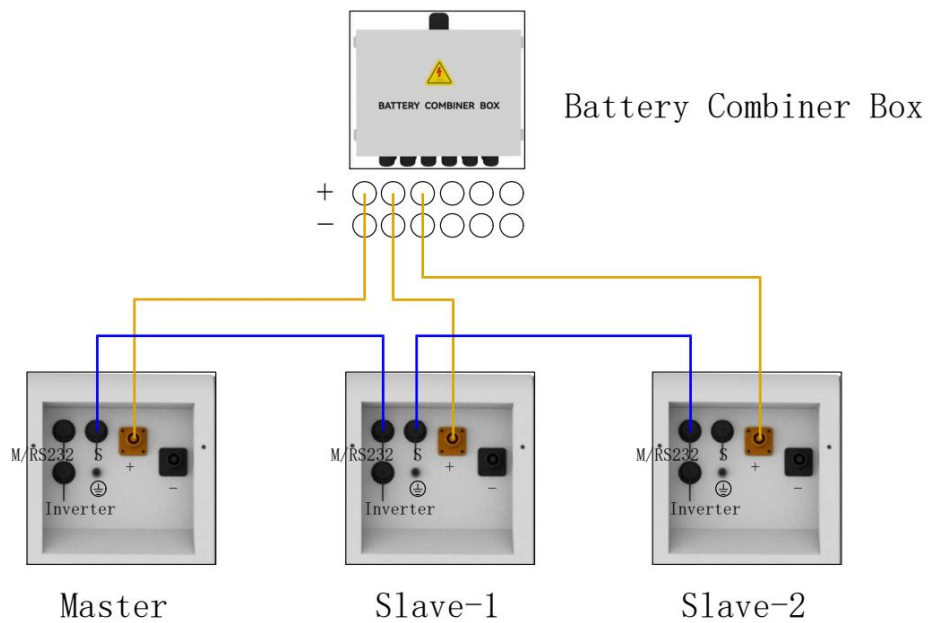
For parallel connection of battery systems, a battery combiner box shall be separately purchased (available at additional cost). In addition, a DC cable to be connected between the output terminal of battery combiner box and the BAT terminal of inverter shall be additionally prepared by the user (some inverter suppliers may provide such cable in the packing items). The output terminal of the battery combiner box is compatible with 1/0 AWG cables.

1) Connect the communication cable to the M/S communication terminals of adjacent batteries:

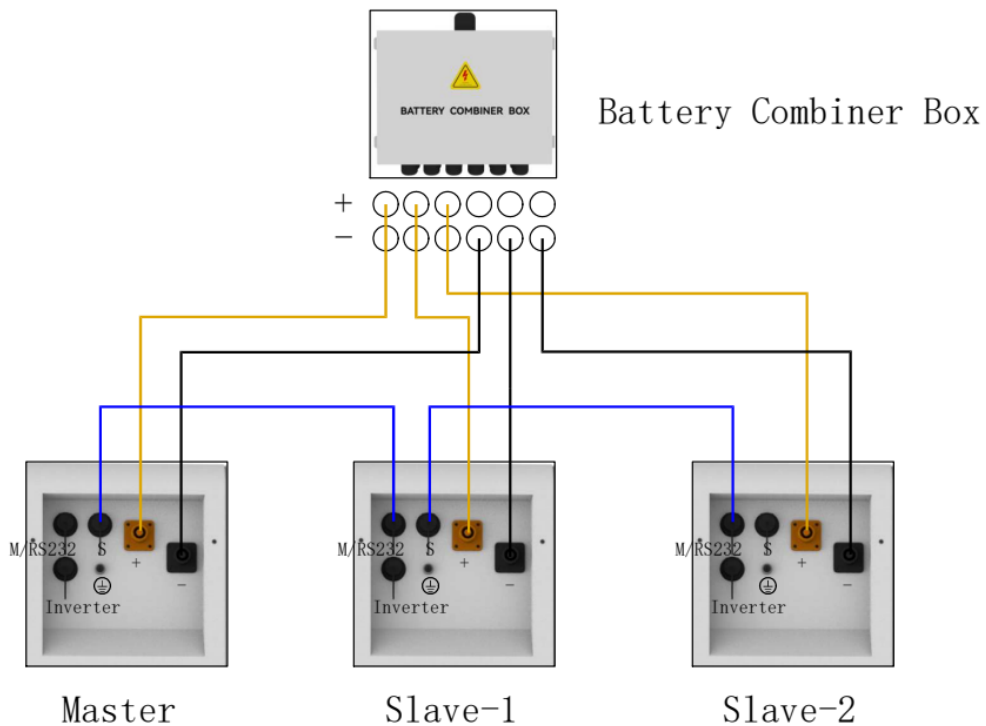
Connect the RJ45 port marked with S of Master with a communication cable to the RJ45 port marked with M/RS232 of Slave 1#; Connect the RJ45 port marked with S of Slave 1# with a communication cable to the RJ45 port marked with M/RS232 of Slave 2#;



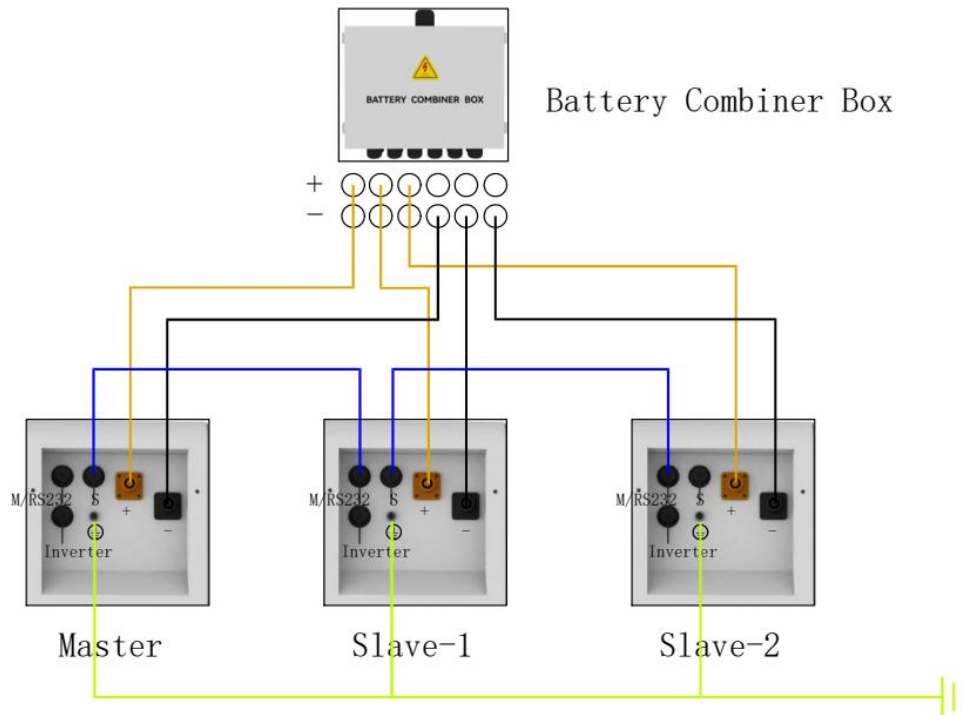
2) Connect the orange positive terminals of the master device and slave device to the orange positive terminals of the bus.



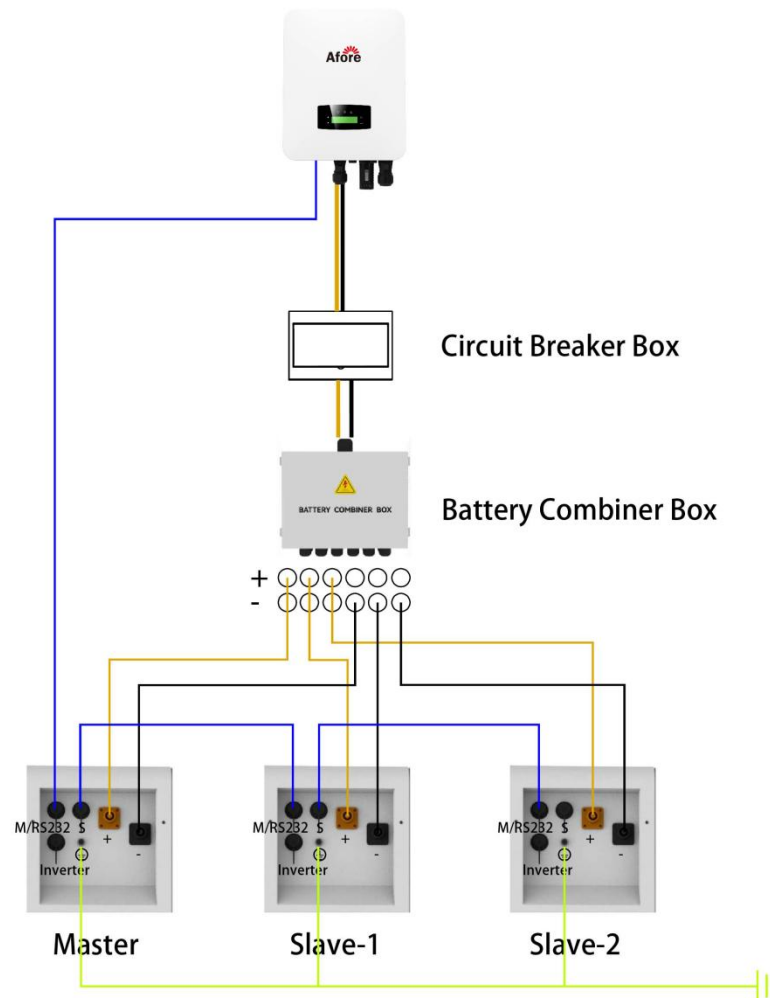
3) Connect the black parallel connection power cables to the P- terminals of adjacent batteries.



4) Connect the grounding protection points of each PACK with the yellow green grounding wire.



5) Only Master battery is allowed to communicate with the inverter via RS485 or CAN interface. Before connected to the inverter, +/- power cables leading from the battery system shall go through the combiner box first.





WARNING:

- I. When operating in parallel, a DC circuit breaker with overload and short-circuit protection must be installed on the positive and negative DC busbars between the inverter and the battery, with $I \geq 200 \text{ A}$ and $I_{cu} \geq 50 \text{ kA}$;
- II. For Australian market, an overcurrent and disconnection device that isolates all live conductors (positive and negative) is required between the battery system and the inverter.
- III. In Australia installations should be conducted in accordance with AS/NZS 3000 and AS/NZS 5139

4.8 Definition of communication Port Pin

Note:

The AF10000W-LA0 battery is designed to support both CAN and RS485 communication with the inverter. Please verify the communication mode of the inverter and select the corresponding mode of the battery.

Definition of RJ45 Port Pin

CAN/RS485	
PIN Number	Definition
1、 2、 3	NC
4	CAN-H
5	CAN-L
6	GND
7	RS485-A1
8	RS485-B1

Parallel communication ports-RJ45			
M/RS232		S	
PIN Number	Definition	PIN Number	Definition
1	UP_IN	1	DN_OP+
2	GND	2	GND
3	RS232-TX	3	NC
4	RS232-RX	4	NC
5	GND	5	NC
6	GND	6	GND
7	RS485-A	7	RS485-A
8	RS485-B	8	RS485-B

4.9 Operation requirements

DANGER:

Personnel responsible for the installation and maintenance of the equipment must undergo rigorous training and obtain relevant certifications. They must be familiar with local laws, regulations, and applicable standards, understand the battery

system's composition and working principles, be aware of all safety precautions, master correct operating methods, and possess the operational qualifications required by the country where the work is performed.

- ◆ Do not perform live work (including but not limited to installation, wiring, replacement, etc.). Before any operation, ensure that all power supplies to the equipment are disconnected, including but not limited to the grid-side, inverter, and diesel generator power switches.
- ◆ Do not use sharp objects to contact the battery pack connectors.
- ◆ Do not operate the equipment in severe weather conditions (including but not limited to thunderstorms, rain, snow, typhoons, etc.).
- ◆ Do not clean or immerse the equipment with water, alcohol, oil, etc., to prevent electric leakage or electrolyte leakage from the battery pack.
- ◆ Do not strike, drag, or step on the equipment.
- ◆ Before operating the equipment, inspect it for damage. If any abnormality is found (such as physical deformation, unusual odors, etc.), do not operate the equipment.
- ◆ Before starting work, wear protective gear such as insulated gloves, insulated shoes, and a safety helmet.
- ◆ Use insulated tools during installation and wiring.
- ◆ Equipment requiring grounding must be permanently connected to the protective earth (PE). When connecting cables, the protective earth wire must be connected first; when replacing equipment, the protective earth wire must be disconnected last.
- ◆ Before contacting equipment terminals, measure the voltage at the contact points to ensure there is no risk of electric shock.
- ◆ During equipment operation, prevent any foreign objects from falling into the equipment interior.

4.10 Power on

- 1) Check all power cables and communication cables between batteries, and between batteries and the inverter.
- 2) Switch on the disconnecting device between the battery and the inverter, if available.
- 3) Switch on the disconnecting device and press the self-locking push button until the operation indicator illuminates.

4.11 Power off

Press the self-locking push button and the switch is reset. Switch off the disconnecting device when all indicators are OFF.

5. Transport and Maintenance

5.1 Annual inspection

Every year after installation. The connection of power connectors, grounding points, power cables and screws are to be checked. Make sure there is no loosening, fracture or corrosion at any connection point. Check the installation environment such as dust, water, insect etc. and make sure it is suitable for IP66 battery system.

5.2 Transport requirement

The product transportation process shall meet the following requirements:

- Observe the caution signs on the packaging of the device before transportation.
- When carrying the equipment by hand, wear protective gloves to prevent injuries.
- Handle the product gently during transportation to prevent dropping, tumbling and heavy pressure.
- Prevent severe vibration, inversion, impact, extrusion, sun and rain during product transportation.

5.3 Storage

- ◆ The storage location should comply with local laws and regulations.
- ◆ The device must be stored indoors.
- ◆ Do not store battery packs together with other items. Firefighting equipment such as fire extinguishers that meet requirements must be placed in battery pack storage areas.
- ◆ Do not remove the original packaging material and check the outer packaging material regularly.
- ◆ If the battery is stored for long time, it must be charged every three months, with a recommended SOC of 30%~50%.
- ◆ Stack the device in accordance with the caution signs on the carton to prevent the device falling down and damage.
- ◆ Do not place it upside down.

5.4 Equipment Maintenance and Replacement

- ❖ Before maintaining or replacing equipment, the device must be powered off. Wait for the duration indicated on the delay label attached to the equipment before proceeding with the operation. The device may only be powered on for continued use after the fault has been completely resolved or the replacement operation has been completed.
- ❖ Battery energy storage systems pose a high risk of fire, and faulty battery packs may release flammable or toxic gases. Battery pack replacement may only be performed or supervised by professionals who are familiar with and have mastered the necessary preventive measures.
- ❖ When replacing battery packs, use only battery packs manufactured by our company. Mixing with battery packs of other brands is strictly prohibited.
- ❖ When a battery pack is faulty, its surface temperature may be high. Direct contact with bare hands is prohibited.
- ❖ Do not store faulty battery packs in flammable or explosive environments, and keep non-professionals away from them.
- ❖ During the storage of faulty battery packs, regular monitoring is required to ensure there is no leakage of electrolyte, overheating, flames, or other abnormal phenomena.

5.5 Disposal instructions

Private disassembly is prohibited; it must be performed by a professional and followed by proper recycling procedures.

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