



SUN-BATT-10.65



USER MANUAL

WallMounted

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TECHNICAL DATA



Model	SUN-BATT-10.65
Performance	
Cell Technology	LFP (LiFePO ₄)
Nominal Voltage	51.2Vdc
Nominal Capacity	208Ah
Battery Energy ¹	10.65kWh
Operating Voltage	44.8 ~ 56.16Vdc
Max. Charge and Discharge Current ²	200A
Communication	
Display	SOC status indicator, LED indicator
Communication	RS232, RS485, CAN, Wi-Fi
General Specification	
Dimension (W×D×H)	550×160×836 mm
Weight	89kg
Installation	Floor stand or wall mounted
Working Temperature ³	Charge: 0 to 50°C Discharge: -15 to 50°C
Environmental Humidity	≤ 95%RH (no condensation)
Ingress Protection Rating	IP20
Cycle Life ⁴	6000 cycles or ten (10) years @ 80% DOD / 25°C / 0.5C, 70% EOL
Scalability	Max. 15 batteries in parallel
Application	ON grid / ON grid + backup / OFF grid
Compatible Inverters	Refer to compatible inverter list (compatible with major PCS brands)

Standard Compliance	
Certification	UN38.3 / IEC62619 / IEC61000 (more available upon request)
Ordering and Deliverable Part	
Product Ordering Part	SUN-BATT-10.65 Battery SUN-BATT-10.65 Parallel Cable SUN-BATT-10.65 to PCS Cable

¹ Test conditions: 100% depth of discharge (DoD), 0.2C rate charge & discharge at 25°C.

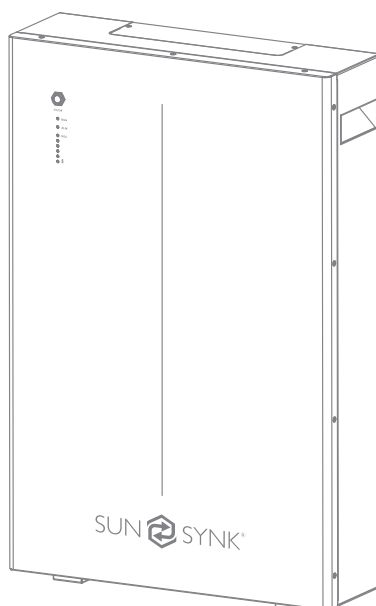
² There is 0.5C or 1C configurations optional in factory default.

³ Charge/discharge derating occurs when the temperature is below 0°C or above 45°C.

⁴ Please refer to the Warranty Letter for applicable conditions, the warranty is due whichever comes first.

PRODUCT OVERVIEW

Brief Introduction



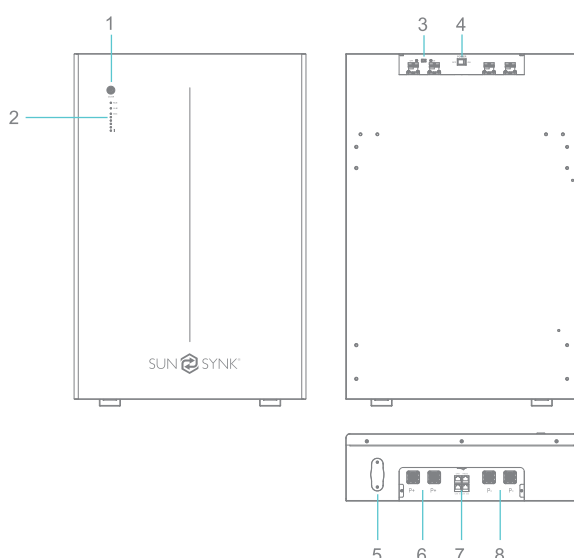
SUN-BATT-10.65 is a lithium battery with an operational voltage range of 44.8 to 56.16V. It's specifically designed for residential energy storage applications and is compatible with a 48V battery hybrid inverter. However, please note that SUN-BATT-10.65 is not suitable for powering life-sustaining medical devices.

This battery comes equipped with a built-in BMS (Battery Management System) that efficiently manages and monitors cell information, including voltage, current, and temperature. The BMS also ensures balanced cell charging to prolong the battery's cycle life. Additionally, the BMS offers protection features such as over-discharge, overcharge, over-current, and high/low-temperature safeguards. The system can automatically handle charge, discharge, and balance states.

For enhanced capacity and power, multiple SUN-BATT-10.65 batteries can be connected in parallel. The maximum number of batteries that can be connected in parallel is 15 SUN-BATT-10.65 units.

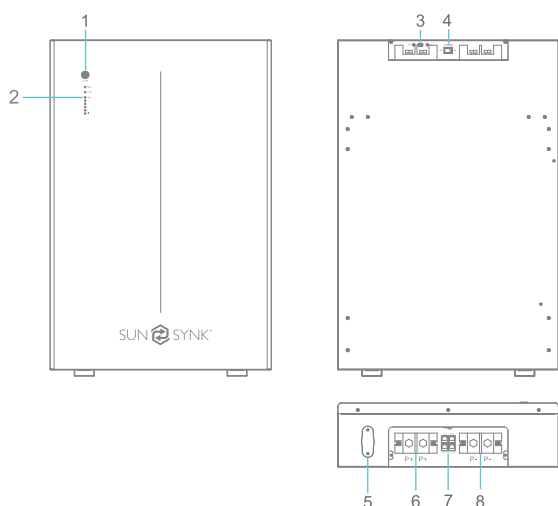
Interface Introduction

Style A



Item	Name	Description
1	ON/OFF Button	Start-up Switch
2	Status Indicator	Operation, Alarm, and SOC Status
3	Slide Switch	BMS Power Supply Switch
4	Rocker Switch	BMS Switch
5	WiFi Interface	WiFi Port
6	Positive Terminal	Total Positive Terminal
7	Communication Port	Communication Interface
8	Negative Terminal	Total Negative Terminal

Style B



Item	Name	Description
1	ON/OFF Button	Start-up Switch
2	Status Indicator	Operation, Alarm, and SOC Status
3	Slide Switch	BMS Power Supply Switch
4	Rocker Switch	BMS Switch
5	WiFi Interface	WiFi Port
6	Positive Terminal	Total Positive Terminal
7	Communication Port	Communication Interface
8	Negative Terminal	Total Negative Terminal

Switch ON/OFF

Switching ON:

1. For a single SUN-BATT-10.65 battery, toggle the rocker switch to ON, then press and hold the ON/OFF button on the front panel for more than 3 seconds. The LED will flash, indicating normal operation. L1 to L6 LEDs display battery State of Charge (SoC), while L7/L8 LEDs show battery status.
2. For multiple SUN-BATT-10.65 batteries in parallel, switch ON the rocker switches on all batteries. Then, long-press the ON/OFF button on the MASTER battery for more than 3 seconds. The LED will flash, and the battery system will automatically assign an ID to each slave battery. After encoding, the battery system operates normally.









Switching OFF:

1. Press and hold the start button on the MASTER battery for more than 3 seconds and release it. The MASTER battery will shut down, followed by the slave batteries entering sleep mode.
2. For a single SUN-BATT-10.65 battery, toggle the rocker switch to OFF.
3. For multiple SUN-BATT-10.65 batteries in parallel, switch OFF the rocker switch on the MASTER battery first, followed by turning OFF the rocker switches on all slave batteries.









LED Indicator Definition

Note:









- flash 1 - 0.25s light / 3.75s off
- flash 2 - 0.5s light / 0.5s off
- flash 3 - 0.5s light / 1.5s off

Status		RUN	ALM	Battery Level Indicator						Discriptions
		L8	L7	L6	L5	L4	L3	L2	L1	
										
Shut down		OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	All OFF
Standby		Flash 1	OFF	According to the battery level						Indicates Standby
Charging	Normal	Light	OFF	According to the battery level						The highest capacity indicator LED flashes (flash 2),others lighting
	Full Charged	Light	OFF	Light	Light	Light	Light	Light	Light	Turn to standby status when charger off
	Protection	OFF	Light	OFF	OFF	OFF	OFF	OFF	OFF	Stop charging
Dis-charge	Normal	Flash 3	OFF	According to the battery level						
	UVP	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	Stop charging
	Protection	OFF	Light	OFF	OFF	OFF	OFF	OFF	OFF	Stop discharge
Fault		OFF	Light	OFF	OFF	OFF	OFF	OFF	OFF	Stop charging and Discharge

Charging Battery Level Indicators Instructions:

Status		Charging							
Battery Level Indicator		L8	L7	L6	L5	L4	L3	L2	L1
									
Battery Level (%)	0~17%	Light	OFF	OFF	OFF	OFF	OFF	OFF	Flash 2
	18~33%			OFF	OFF	OFF	OFF	Flash 2	Light
	34~50%			OFF	OFF	OFF	Flash 2	Light	Light
	51~66%			OFF	OFF	Flash 2	Light	Light	Light
	67~83%			OFF	Flash 2	Light	Light	Light	Light
	84~100%			Flash 2	Light	Light	Light	Light	Light
	Full Charged			Light	Light	Light	Light	Light	Light

Discharging Battery Level Indicators Instructions:

Status		Discharge							
Battery Level Indicator		L8	L7	L6	L5	L4	L3	L2	L1
									
Battery Level (%)	0~17%	Flash 3	OFF	OFF	OFF	OFF	OFF	OFF	Light
	18~33%			OFF	OFF	OFF	OFF	Light	Light
	34~50%			OFF	OFF	OFF	Light	Light	Light
	51~66%			OFF	OFF	Light	Light	Light	Light
	67~83%			OFF	Light	Light	Light	Light	Light
	84~100%			Light	Light	Light	Light	Light	Light

Protection Fault Indicators Instructions

Status	Charging							
	L8	L7	L6	L5	L4	L3	L2	L1
Battery Level Indicator								
Battery Level (%)			84~100%	67~83%	51~66%	34~50%	18~33%	0~17%
Cell Failure	OFF/ Light	Light	OFF	OFF	OFF	OFF	OFF	OFF
NTC Failure			Light	OFF	OFF	OFF	OFF	OFF
Precharge Failure			OFF	Light	OFF	OFF	OFF	OFF
Short Circuit Fault			Light	Light	OFF	OFF	OFF	OFF
Charging MOS Failure			OFF	OFF	Light	OFF	OFF	OFF
Discharge MOS Failure			Light	OFF	Light	OFF	OFF	OFF
Precharge Failure			OFF	Light	Light	OFF	OFF	OFF
Total Negative Contact Failure			Light	Light	Light	OFF	OFF	OFF
Overvoltage Protection of Charging Cells			OFF	OFF	OFF	Light	OFF	OFF
Overall Charging Over-voltage Protection			Light	OFF	OFF	Light	OFF	OFF
Charging Overcurrent Protection			OFF	Light	OFF	Light	OFF	OFF
Discharge Cell Under-voltage Protection			Light	Light	OFF	Light	OFF	OFF
Discharge Overall Under-voltage Protection			OFF	OFF	Light	Light	OFF	OFF
Discharge Overcurrent Protection			Light	OFF	Light	Light	OFF	OFF
Charging High Temperature Protection			OFF	Light	Light	Light	OFF	OFF
Charging Low Temperature Protection			Light	Light	Light	Light	OFF	OFF
High Temperature Protection for Discharge			OFF	OFF	OFF	OFF	Light	OFF
Discharge Low Temperature Protection			Light	OFF	OFF	OFF	Light	OFF
MOS Tube High Temperature Protection			OFF	Light	OFF	OFF	Light	OFF
Environmental Low Temperature Protection			Light	Light	OFF	OFF	Light	OFF
Ambient High Temperature Protection			OFF	OFF	Light	OFF	Light	OFF

Note: In normal operation, the fault indicator lamp (ALM) remains off, and the SOC lamp functions as a power indicator. When a fault occurs, the ALM lamp lights up continuously, while the SOC lamp displays fault codes based on their priority, with lower-priority faults corresponding to dimmer lights. If multiple protection faults are present simultaneously, the RUN lamp will also remain lit continuously.

CAN / RS485 Port

CAN / RS485 Communication Terminal (RJ45 port), connect to inverter, follow CAN / RS485 protocol.

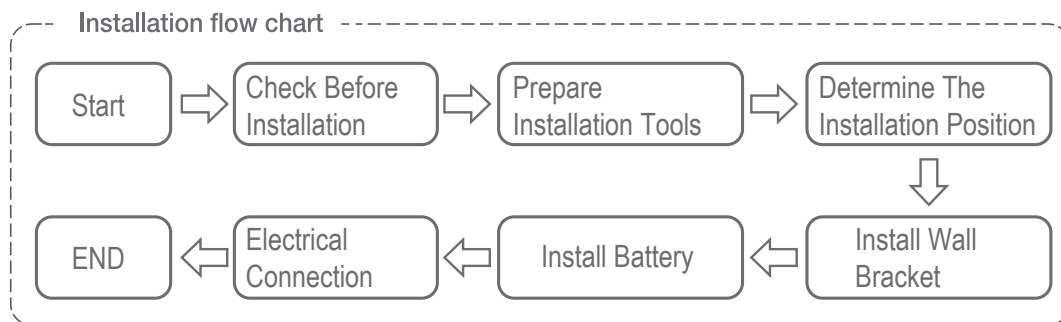
PIN	Definition
Pin 1, Pin 8	RS485-B (to inverter, reserved)
Pin 2, Pin 7	RS485-A (to inverter, reserved)
Pin 3	NC
Pin 4	CANH (to inverter)
Pin 5	CANL (to inverter)
Pin 6	GND

RS232 Port

RS232 Communication Terminal (RJ45 port) follow RS232 protocol, for manufacturer or professional engineer to debug or service.

PIN	Definition
Pin 1, Pin 8	GND
Pin 2, Pin 7	RS232_TX
Pin 3, Pin 6	RS232_RX
Pin 4, Pin 5	NC

INSTALLATION GUIDE



Checking Before Installation

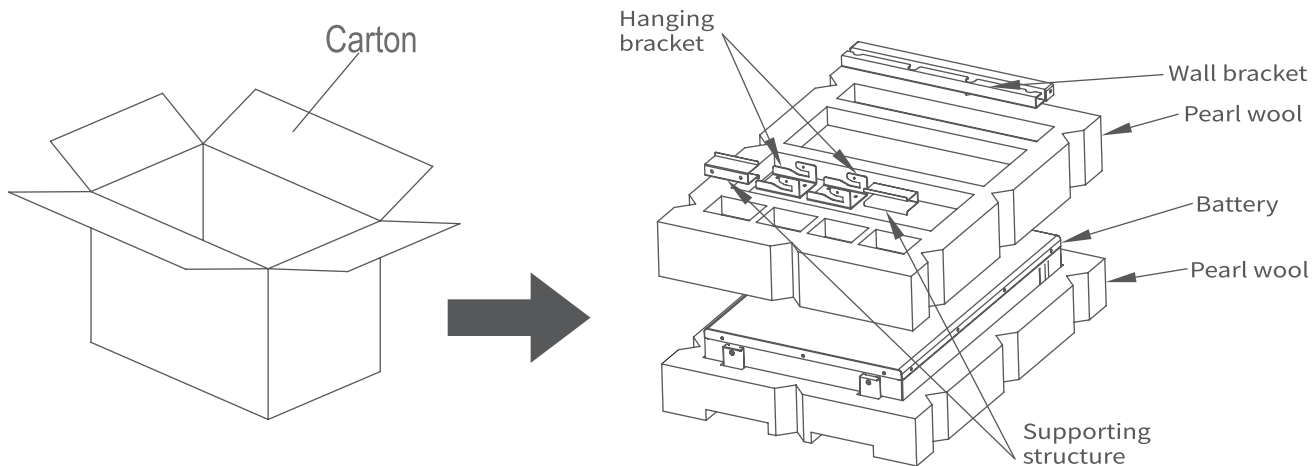
Checking Outer Packing Materials


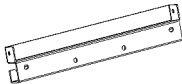
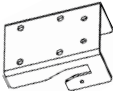
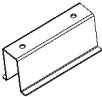
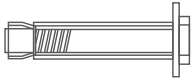




Check the outer packing materials for any damage such as holes or cracks before installing the battery. If you notice any damage, do not unpack the battery and contact the dealer immediately. It's recommended to remove the packing materials within 24 hours before installing the battery.

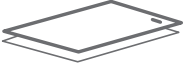
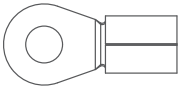
Checking Deliverables

After unpacking the battery, check whether deliverables are intact and complete. If any damage is found or any component is missed, contact the dealer.







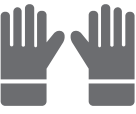



The below table shows the components and mechanical parts that should be delivered.



NO.	Pictures	Quantity	Description
1		1PCS	Battery
2		1PCS	Wall bracket
3		2PCS	Hanging bracket
4		2PCS	Supporting Structure
5		4PCS	M10*60
6		12PCS	M6*16
7		2PCS	M4*20
8		1PCS	Manual
9		1PCS	Test Report

NO.	Pictures	Quantity	Description
10		1PCS	Certificate
11		4PCS	OT95-10 (Style B)

Tools

Tools			
Installation	Knife 	Measuring tape 	Socket wrench (10/16mm) 
	Rubber mallet 	Cross Screwdriver 	Hammer drill (8mm) 
Protection	ESD gloves 	Safety goggles 	Anti-dust respirator 
	Safety shoes 		

Installation Requirements

Installation Environment Requirements

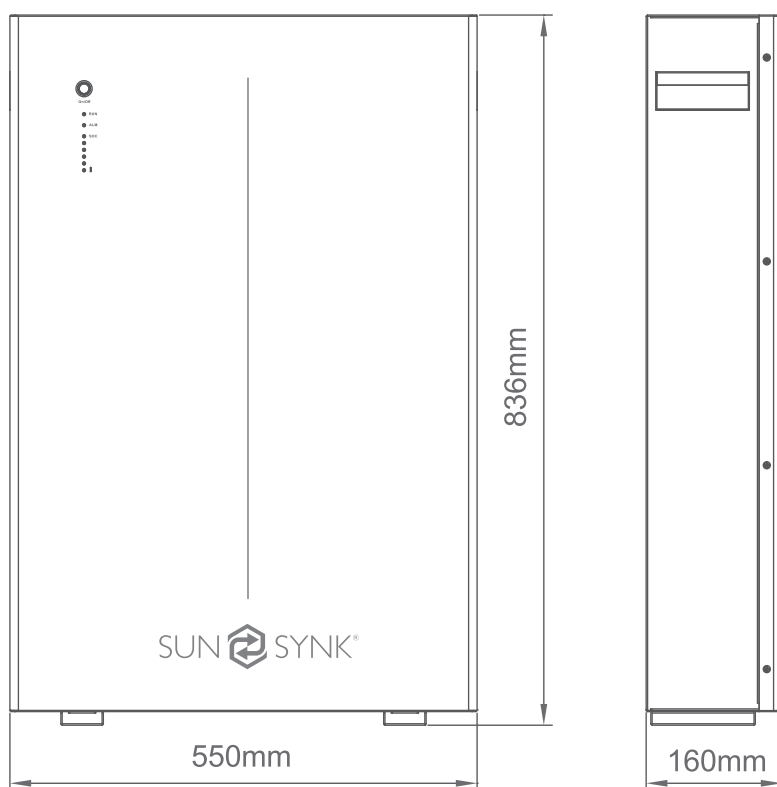
- Install the battery in the indoor environment.
- Place battery in secure location away from children and animals.
- Do not place the battery near any heat sources and avoid sparks.
- Do not expose the battery to moisture or liquids.
- Do not expose the battery to direct sunlight.

Installation Carrier Requirements

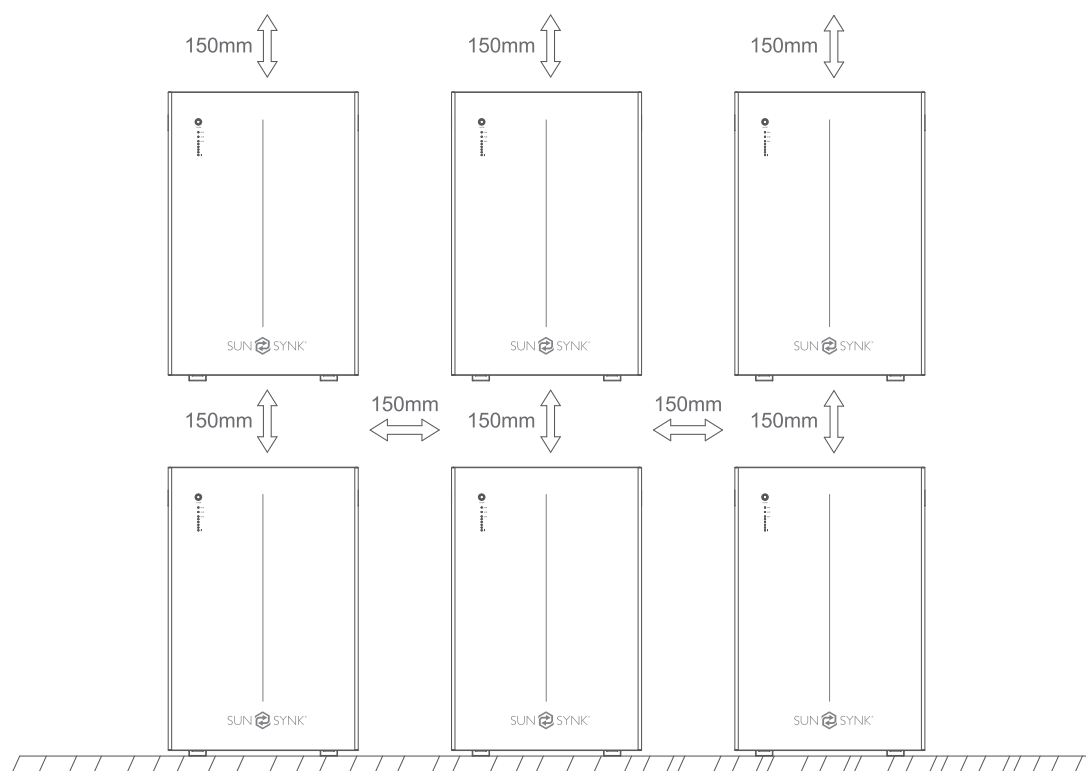
- Only mount battery on fire resistant building. Do not install batteries on flammable buildings.
- Battery is quite heavy, make sure the wall/ground can meet the load bearing requirements.

Installation Instructions

Dimensions



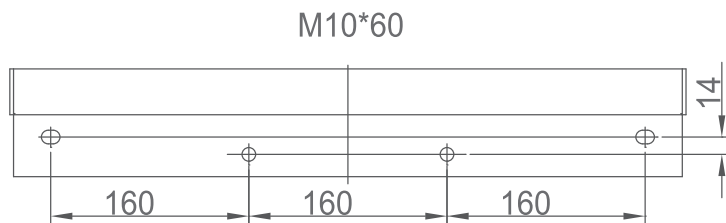
Minimum mounting distance between battery pack and equipment:



Installation Procedure

STEP 1

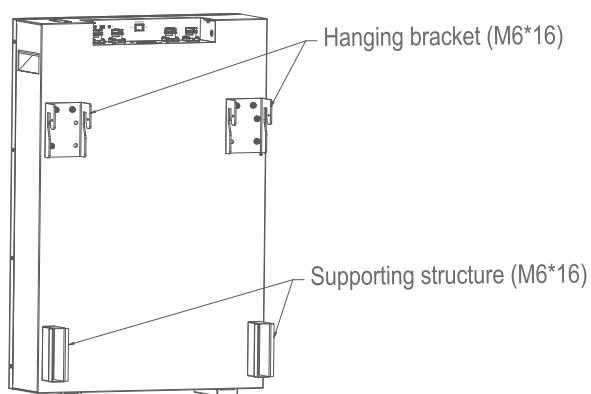
Drill the hole with an 12mm drill bit as follows and fix the wall bracket to the wall.



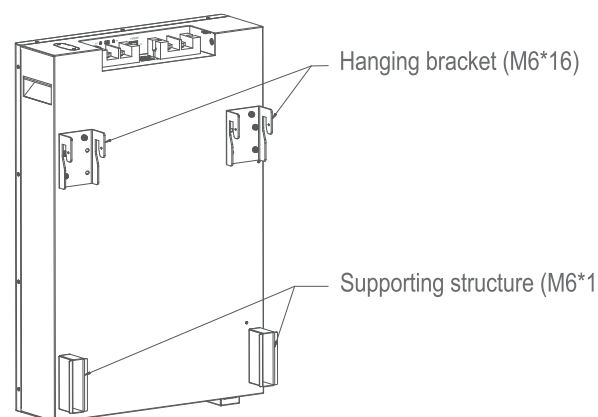
STEP 2

Install the hanging bracket.

Style A

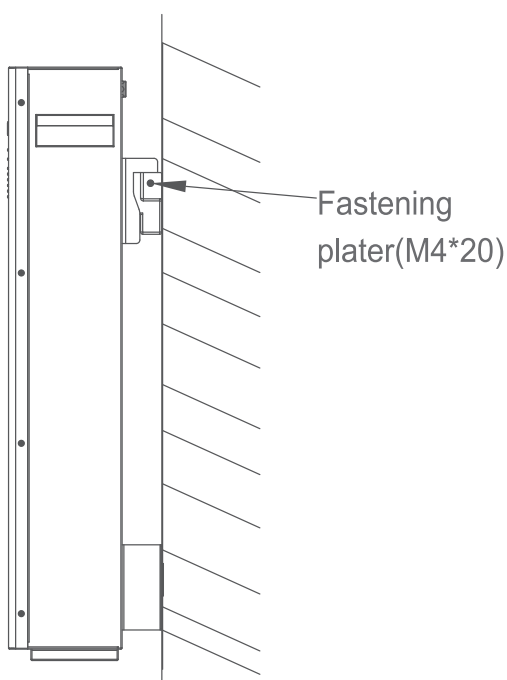


Style B



STEP 3

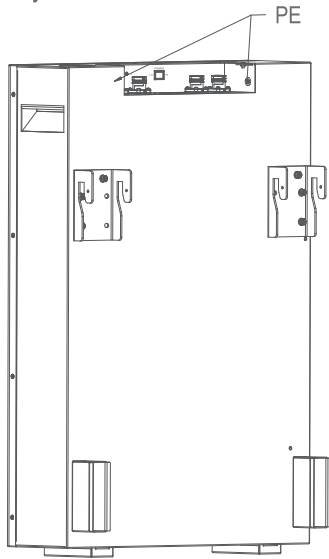
Hang SUN-BATT-10.65 on the wall bracket and tighten it.



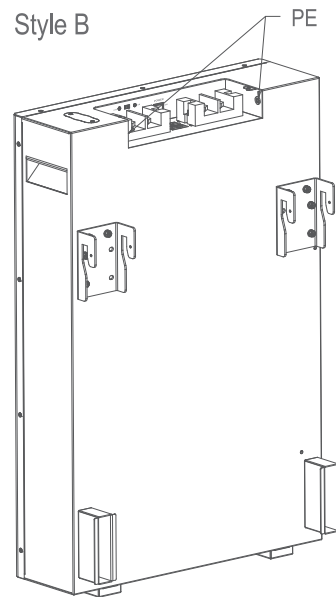
STEP 4

Connect to ground.

Style A



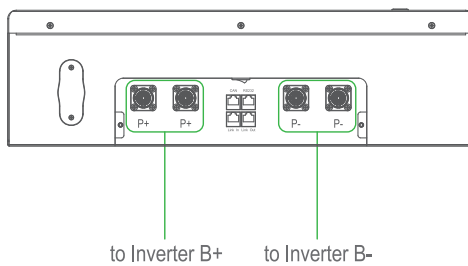
Style B



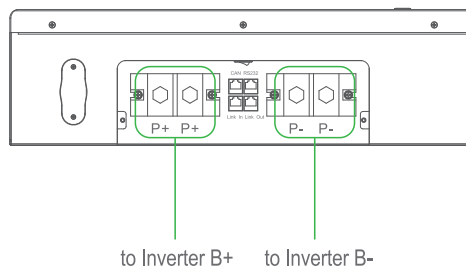
STEP 5

Connect power cable.

Style A



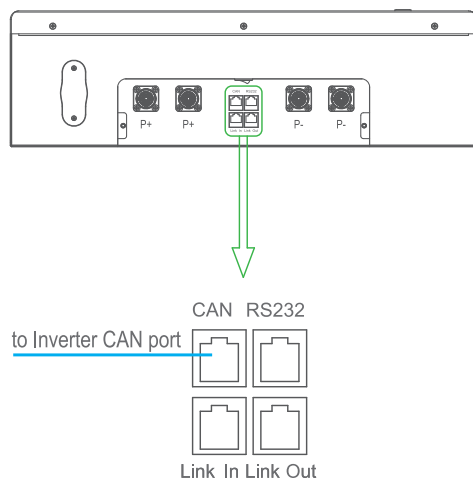
Style B



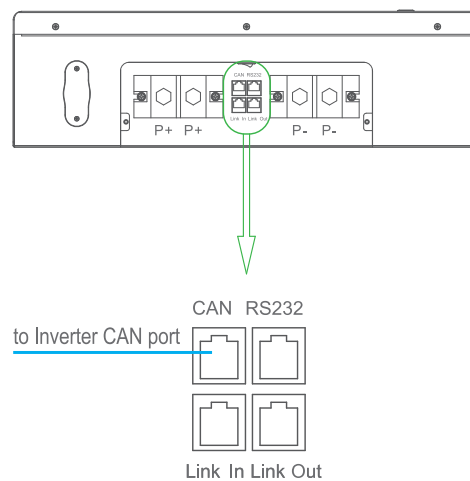
STEP 6

Connect communication cable.

Style A



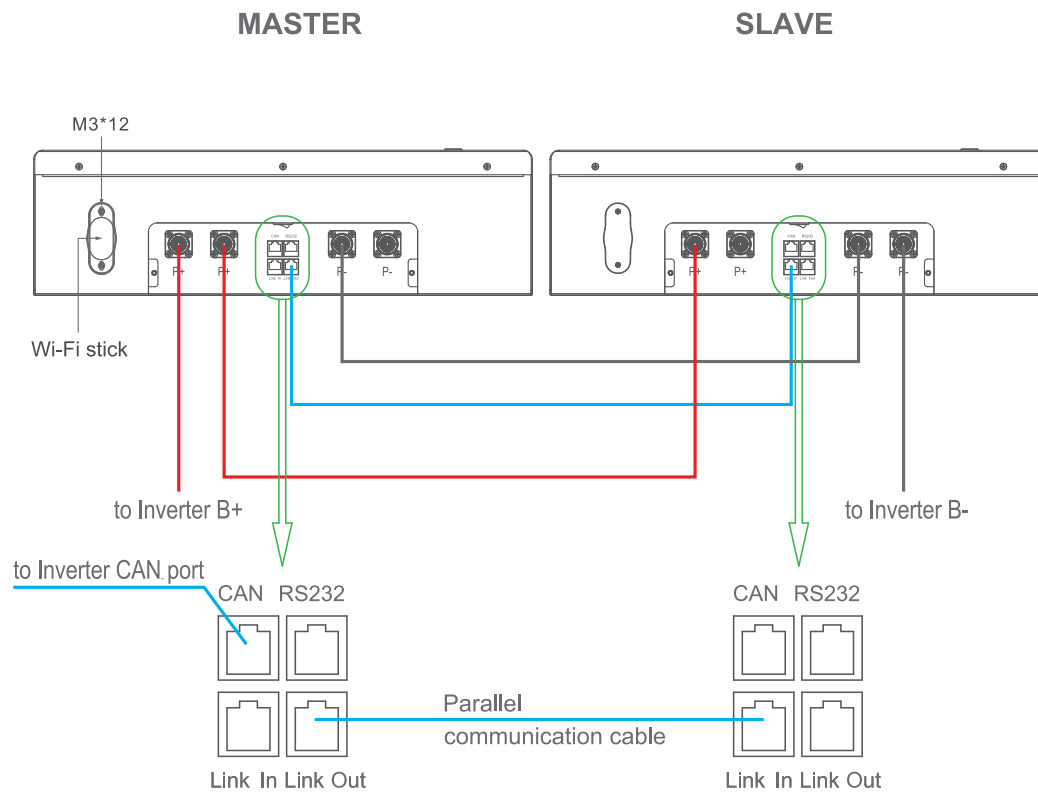
Style B



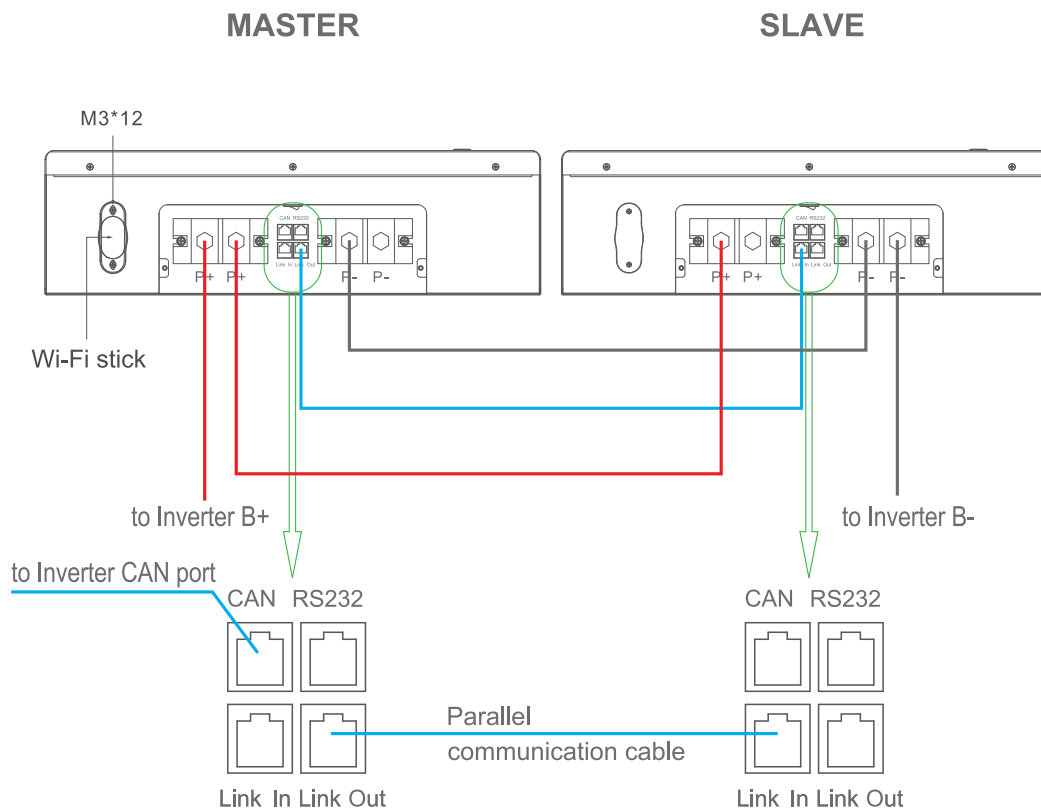
STEP 7

Connect communication cable.

Style A



Style B



MAINTENANCE

Recharge Requirements During Normal Storage

Battery should be stored in an environment with temperature range between -10°C ~ $+45^{\circ}\text{C}$, and maintained regularly according to following table with 0.5C (100A) current till 40% SoC after long storage time.

Recharge Conditions When In Storage			
Storage Environment Temperature	Relative Humidity of Storage Environment	Storage Time	SOC
Below -10°C	/	prohibit	/
$-10\sim 25^{\circ}\text{C}$	5%~70%	≤ 12 months	$30\%\leq \text{SOC}\leq 60\%$
$25\sim 35^{\circ}\text{C}$	5%~70%	≤ 6 months	$30\%\leq \text{SOC}\leq 60\%$
$35\sim 45^{\circ}\text{C}$	5%~70%	≤ 3 months	$30\%\leq \text{SOC}\leq 60\%$
Above 45°C	/	prohibit	/

Recharge Requirements When Over Discharged

Over discharged (90% DoD) battery should be recharged according to following table, otherwise over discharged battery will be damaged.

Recharge conditions when battery is over discharged		
Storage Environment Temperature	Storage Time	Note
$-10\sim 25^{\circ}\text{C}$	≤ 15 days	Battery Pack disconnected from Inverter
$25\sim 35^{\circ}\text{C}$	≤ 7 days	
$35\sim 45^{\circ}\text{C}$	< 12 hours	Battery Pack connected to Inverter

BATTERY DISPOSAL

Dispose of the battery in accordance with local regulations for electronic waste and used batteries.

- Do not dispose of the battery system with household waste.
- Avoid exposing the battery to high temperatures, direct sunlight, high humidity, or corrosive environments.



CONTACT US

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