



Active Series

Low Voltage Battery System



Quick Installation Guide

ENGLISH VERSION V1.1

1 Safety

	- Do not touch uninsulated cable termination. - Do not dispose of batteries in fire. - Before performing any work on the storage unit, please disconnect the storage unit from all voltage sources as described in this document.
	- Installation, repair, recycling, and disposal of storage unit must be performed by qualified personnel in accordance with national and local standards and regulations. - Do not use wet hands to touch the system. - To ensure property and personal safety, the batteries and inverter shall be well grounded.
	- Do not modify or tamper with storage unit and other components of the system. - Batteries are heavy, Lifting and moved the products shall be conducted by more than one person.

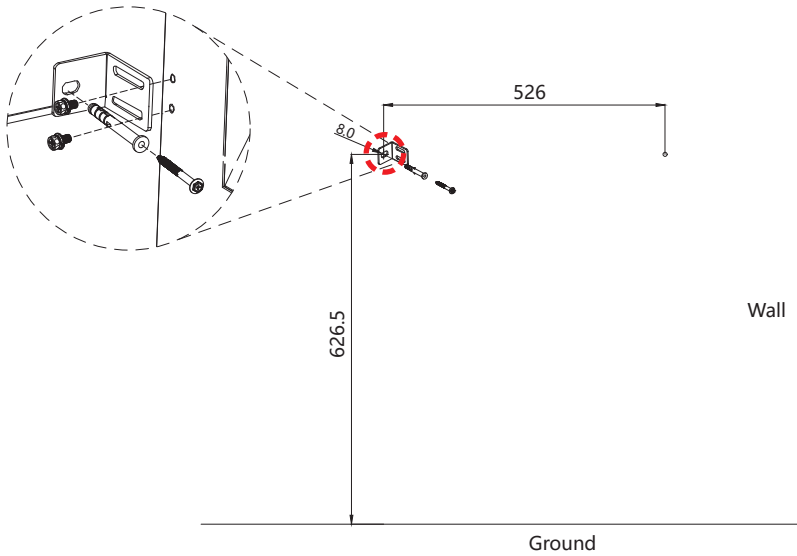
2 Installation

2.1 Floor Mounting Packing List

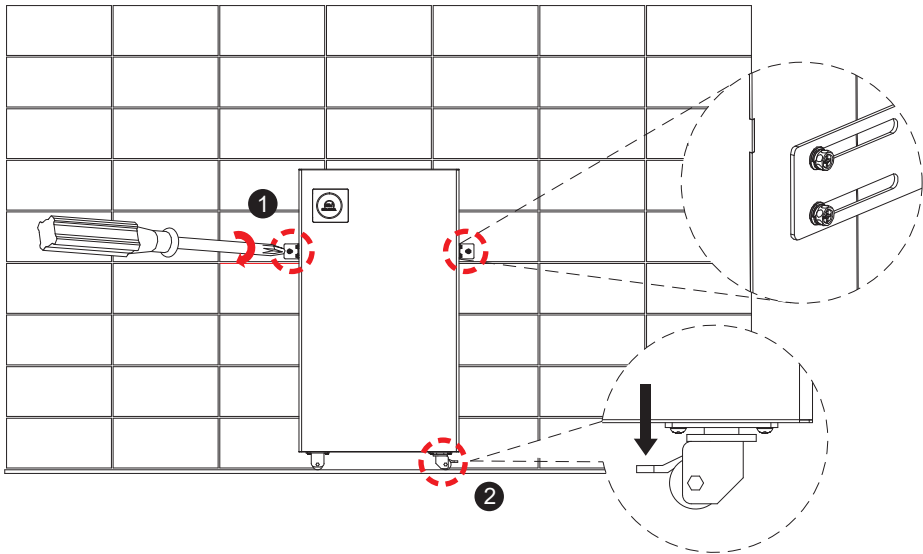
Battery Module × 1 Pcs	Fixed Support Rack × 2 Pcs	Expansion Screw M8-60 × 2 Pcs	Screw M8-16 × 4 Pcs
Screw M5-10 × 4 Pcs	Screw M4-10 × 2 Pcs	Circular Terminal RNB 5.5-4L × 2 Pcs	Cord × 2 Pcs
WiFi User Manual × 1 Pcs	Warranty Form × 1 Pcs	Qualified Certificate × 1 Pcs	User Manual × 1 Pcs

2.3 Installation

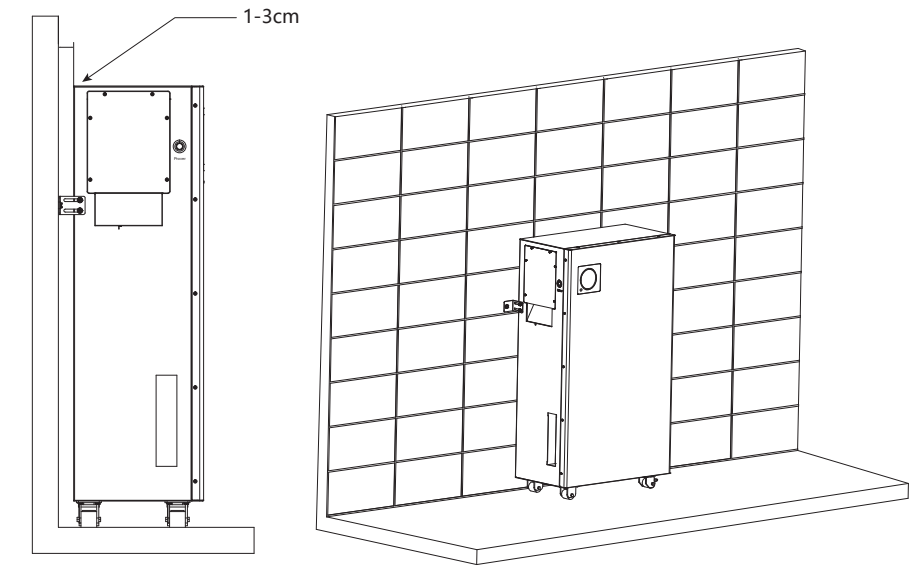
Step 1: Please refer to the following figure for the position of the expansion bolt holes for the Fixed Support Rack. The distance between the hole position and the ground is about 626.5mm, and the distance between two hole positions is about 526mm, with an opening of 8mm.



Step 2: Place the machine in the appropriate position on the bracket and tighten the screws on both sides. And press the locking switches for the movable casters in the left and right directions.

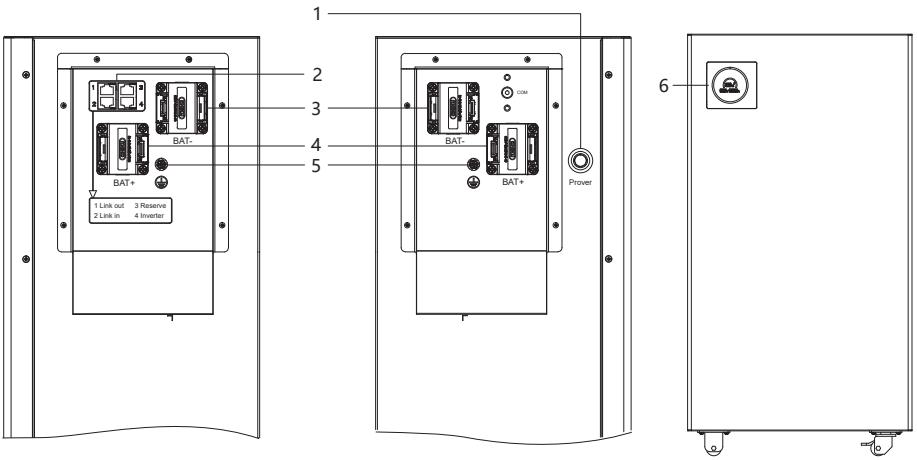


Step 3: Install against the wall with an interval of 1-3cm.



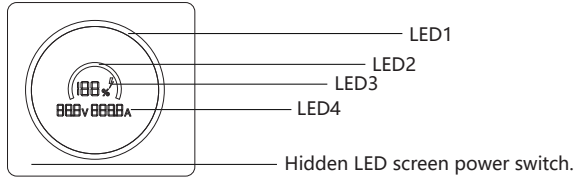
3 Electrical connections

3.1 Electrical Interface Description



Object	Description	Object	Description
1	Power On/Off Switch	4	Battery +
2	Inverter Communication (COM)	5	Grounding (PE)
3	Battery -	6	Battery indicator LEDs

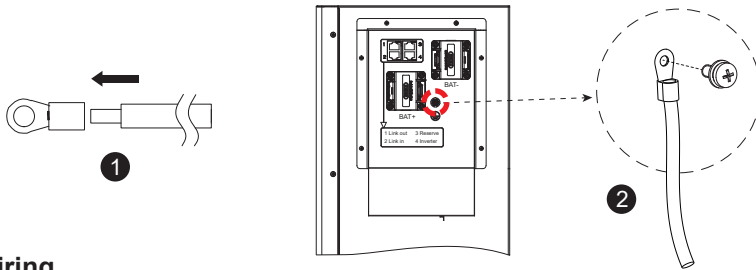
3.2 Battery Indicator LEDs



Battery Indicator LEDs				
Working State	LED1	LED2	LED3	LED4
Charge	Slow Flashing	Lighting	Flashing	Display real-time voltage, current and SOC
Discharge	Lighting	Lighting	Off	

The battery LED screen can be turned off by touching Hidden Power Switch in the bottom left corner of the screen.

3.3 External Protective Grounding Connection



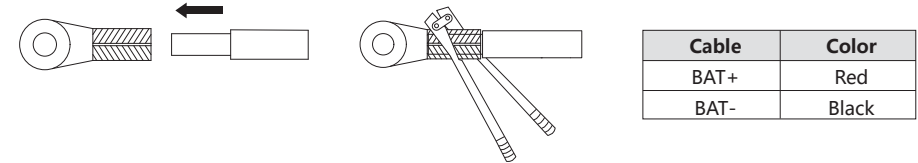
3.4 Wiring

3.4.1 Wire Processing

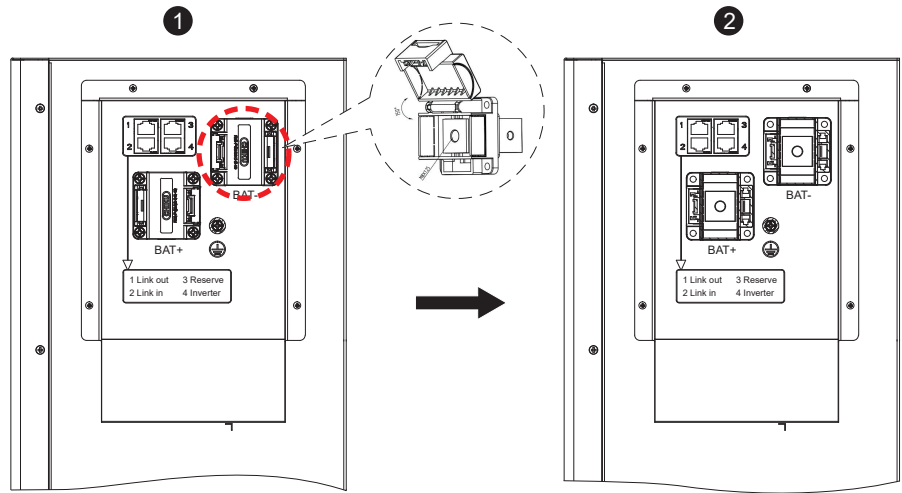
Step 1: Prepare the cables, the cable wire diameter is listed below. Use wire strippers to strip out the core of the cable by about 15mm.

Cable Type	Core Cross Sectional Area (mm²)
1 AWG	42.4

Step 2: Apply the cable into the crimping position. Use a special tool to crimp the cable to ensure that the crimping is intact.



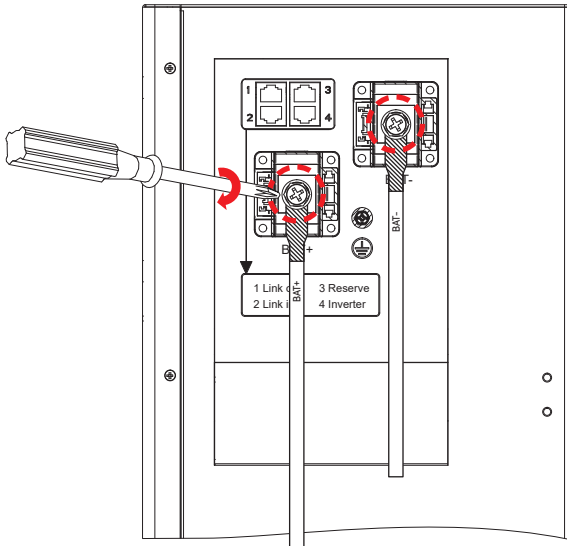
Step 3: Make sure the device is turned off, open the lid upwards, and connect the wires.



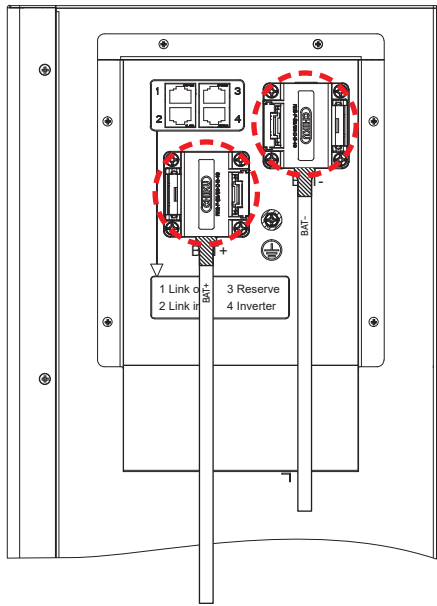
Note!

- There are 2 wiring holes for both positive and negative terminals, when the power of the inverter is less than 5kw, you can connect only one wiring hole.
- If the inverter power is greater than 5kw, both terminals need to be connected. Refer to 3.3.1 step 1 for wire diameter requirement.

Step 4: Remove the screws from the terminals, install the positive and negative wires of the battery, and then re fix them with M8-16 screws.

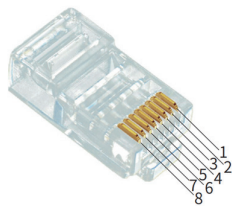


Step 5: After the wiring is completed, remove the cover.



3.4.2 Communication

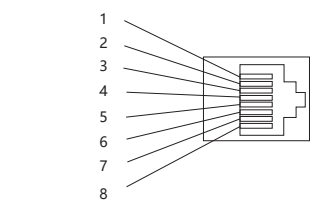
Battery RJ45 pins are defined in the following table, please make sure that the battery communication is the same as the inverter communication and the wire sequence is the same.



RJ45

Inverter communication

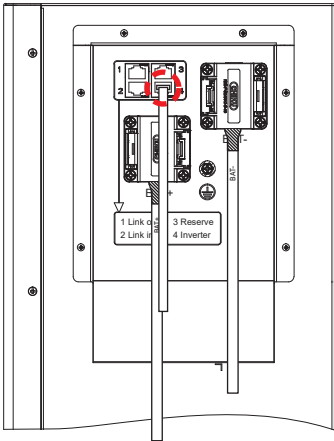
Object	Description	Object	Description
1	485 B	5	CAN L
2	485 A	6	NC
3	NC	7	NC
4	CAN H	8	NC



RJ45 female connector

BMS parallel (Link in, Link out)

Object	Description	Object	Description
1	CAN H	5	NC
2	CAN L	6	NC
3	NC	7	NC
4	NC	8	NC



The battery communicates with the inverter using the “COM” communication port on the machine.

3.5 Parallel



NOTE!

• This device allows a maximum of 16 parallel devices to be used.

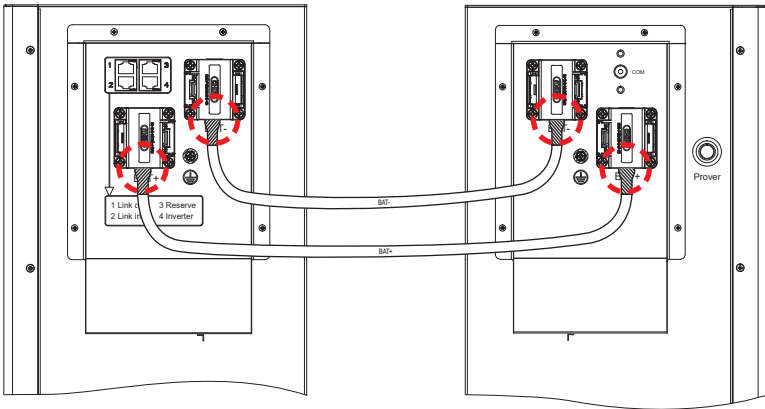


WARNING

• Due to the battery terminal current-carrying each 200A, parallel use of the maximum output power of 10kW, if you need to output more power, you need to replace the wiring, not directly connected to the battery terminal.

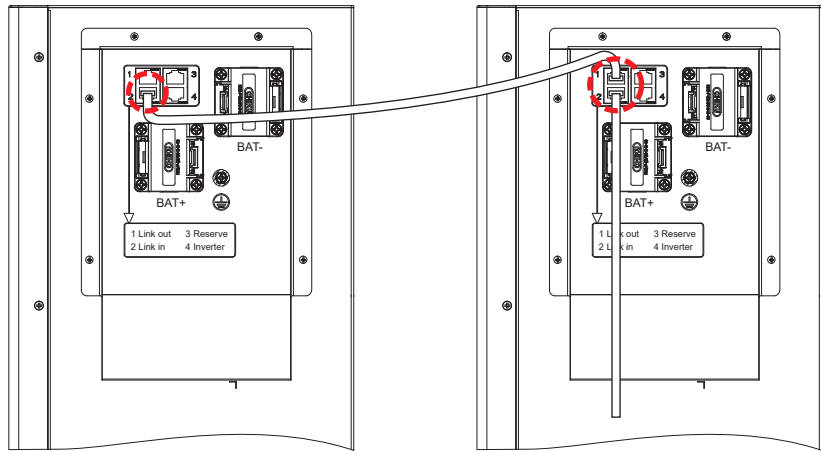
Step 1: Power Wiring

When batteries are used in parallel, the positive terminal of the battery is connected to the positive terminal of the another one and the negative terminal of the battery is connected to the negative terminal of the another one.



Step 2: Communication Wiring

Use the network cable to connect the of battery communication interface.



4 Technical Parameters

Model	
Electrical Parameter	
Battery Type	LiFePO ₄
Battery Capacity per Kit [Wh]	16.08kWh
Usable Energy [Wh]	14.47kWh
Rated Voltage [V]	51.2V
Voltage range [V]	44.8V-57.6V
Max. Charging and Discharging Rate	200A
Depth Of Discharge [DOD]	≤90%
Cycle Life (25°C, 0.5C)	≥8000 times, 80% Capacity retention
Scalability	Yes
General Data	
Communication Mode	RS485/CAN2.0
Operating Temperature Range	-20~55°C (Charge)/-20~55°C (Discharge)
Storage Temperature Range	-20°C~60°C
Cooling Method	Natural Convection
Altitude	≤3000m
Ambient Humidity	20-95% non-condensing
Noise[dBA]	<25
Ingress Protection	IP54
Dimensions [H*W*D]	855*470*250mm
Weight	118.55kg
Installation Methods	Floor Standing

5 Operational

5.1 Start up the Battery

The system shall be turned on in the correct sequence as follows:

- 1) If there is an access circuit breaker, you need to turn on the battery circuit breaker first.
- 2) Turn on the Power Switch on the unit.
- 3) Turn on the Inverter.
- 4) After the LED screen blinks, you can observe the battery operating status.

5.2 Shut Down the System

System shall be turned off in the correct sequence as follows:

- 1) Turn off the Inverter.
- 2) Turn off the Power Switch on the unit.
- 3) If there is an access circuit breaker, you need to turn off the battery circuit breaker at last.

6 Maintenance & Storage

After purchasing the system, please store it with following instructions:

- 1) Please store it in a dry and ventilated environment, keep it away from heat sources.
- 2) Please keep it in an environment with storage temperature as -15°C~60°C, humidity <85% RH.
- 3) For long-term storage (>3 months), please put it in an environment with a temperature of 18°C to 28°C and a humidity of < 85% RH.
- 4) The system should be stored in accordance with the storage requirements mentioned above, and the system should be installed within 6 months since delivered from the factory. Failure to install beyond 6 months is not covered by the manufacturer's warranty.
- 5) Failure to complete the installation within 6 months from the factory is subject to recharge operation. Consult the dealer or manufacturer for details of the operation.



Note!

- The battery remains 30% power when it is sent from the factory.
- The longer the battery is stored, the DOD value is getting bigger. When the battery remaining voltage fails to reach the startup voltage requirement, the battery may be damaged.

The battery cannot be disposed of as household refuse. When the service life of the battery reaches to the limit, it is not required to return it to the dealer, but it must be recycled to the special waste lithium battery recycling station in the area.