USER MANUAL



LW25205 SERIES

LiFePO4 (LFP) Battery

LW25205A
LW25205E

EN

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1 Important Safety Instructions

※ Thank you for choosing EPEVER Lithium Iron Phosphate (LFP) battery, please read this manual carefully before using this product.

※ It is strictly forbidden to install this product in harsh environments such as moisture, salt spray, corrosion, greasy, flammable and explosive, or a large amount of dust accumulation.

※ Please keep this product manual for future reference.

Precautions for work and storage

a) Please keep the battery in a cool, dry place. The environment should be free of corrosive, explosive and insulation-damaging gases or conductive dust, and away from fire and heat sources and high pressure; It is forbidden to immerse the battery in water; Keep out of reach of children; Pay attention to anti-static electricity (static electricity may damage the battery protection circuit, causing battery damage).

b) The battery should be safely fixed in a reasonable use of the environment, the connector must be reliably connected to avoid contact friction caused by arc and sparks.

c) When handling the battery, please handle it gently to avoid mechanical vibration, collision and pressure shock.Otherwise, it may cause internal short circuit of the battery, resulting in high temperature and fire.

d) Do not short-circuit the positive and negative poles of the battery, and do not disassemble or assemble the battery to avoid danger.

e) Please keep the battery in a semi-charged state (40%~80% SOC is appropriate). Please wrap the battery with non-conductive materials to avoid direct metal contact with the battery, which may cause battery damage.

f) Please dispose of waste batteries safely and properly, and do not put them into fire or liquid.

g) This battery cannot be used in series.

Danger warning

a) It is strictly forbidden to crush, drop, collide, puncture, burn and other destructive behaviors on the battery.

b) It is forbidden to disassemble and assemble the battery. Improper disassembly and assembly may damage the protective function of the battery, resulting in deformation, heating, smoke or combustion of the battery.

c) It is forbidden to short circuit the battery. It is prohibited to connect the positive and negative electrodes of the battery with conductive materials; Do not store or transport the battery with the conductor to avoid battery damage due to short circuit.

d) It is forbidden to heat and incinerate batteries. It may melt battery components, lose safety features, or burn electrolyte. Overheating can deform, heat, smoke, or burn the battery.

Emergency treatment method

a) When the electrolyte leaks, avoid skin and eye contact with the electrolyte. In case of contact, wash immediately with plenty of water and seek help from a doctor. It is forbidden for any person or animal to swallow any part of the battery or the substances contained in the battery.

b) If the battery is seriously deformed or the electrolyte leaks due to collision and extrusion, the battery should be placed in the explosion-proof box or an open place, and the personnel should be evacuated quickly if conditions permit.

c) If the battery catches fire during use or storage, use a high-pressure water cannon to extinguish the fire under the condition of ensuring personal safety.

d) If the battery catches fire during charging, be sure to turn off the charger as soon as possible before executing the next fire extinguishing action.

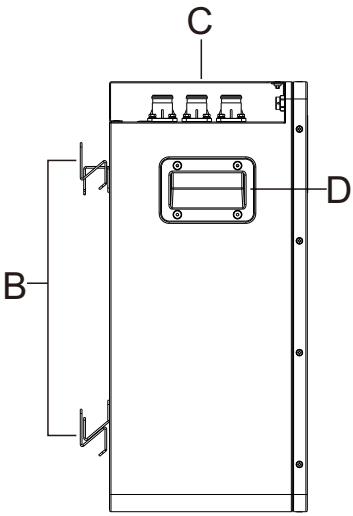
2 General Information

2.1 Appearance

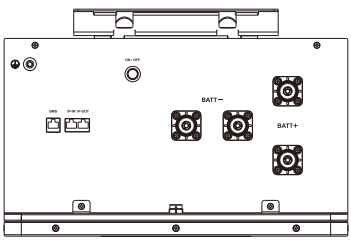
2.1.1 LW25205A series



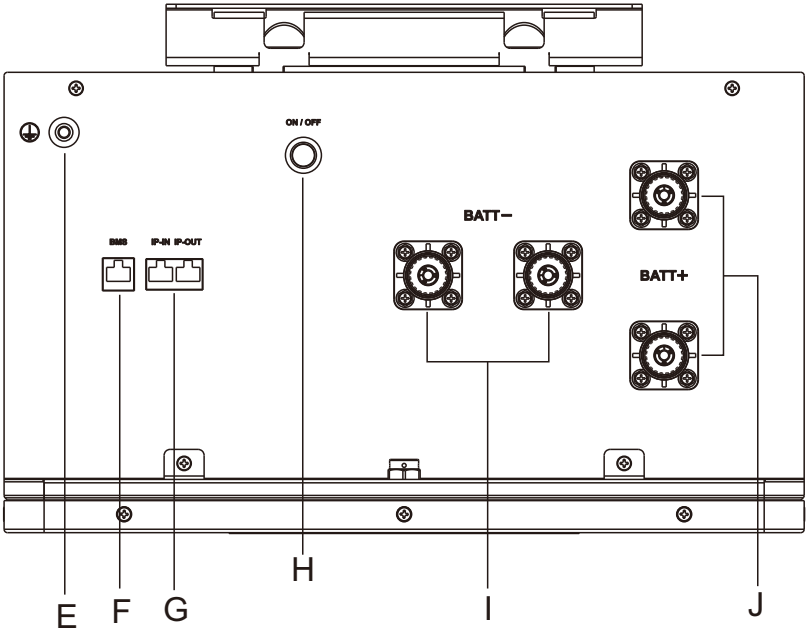
FRONT



SIDE

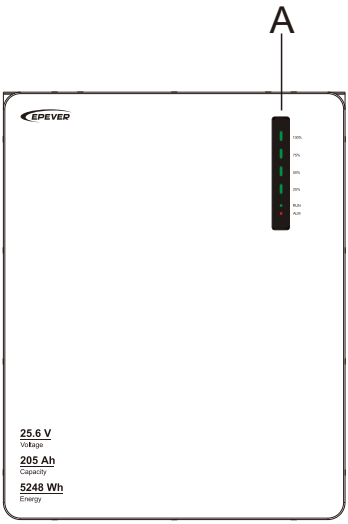


TOP

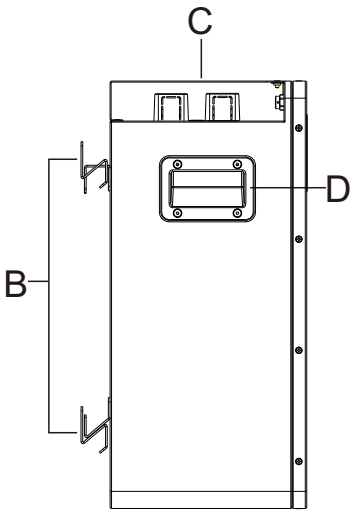


A	LCD	B	Wall-mounted bracket
C	Cover plate	D	Handle
E	Grounding terminal	F	Inverter/PC communication interface
G	Parallel communication interface	H	Switch
I	Negative connector	J	Positive connector

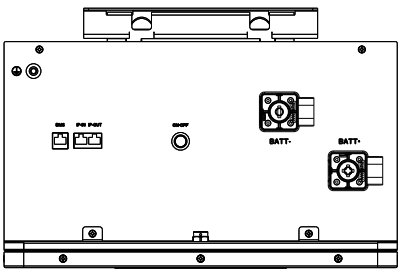
2.1.2 LW25205E series



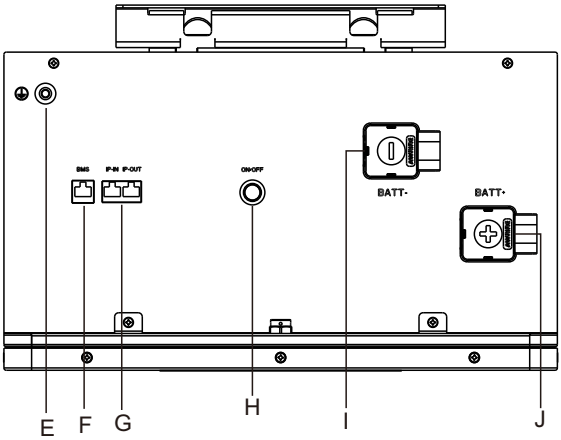
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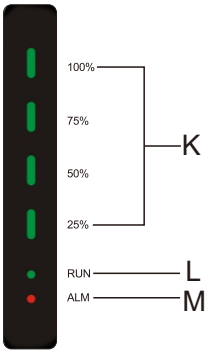


SIDE



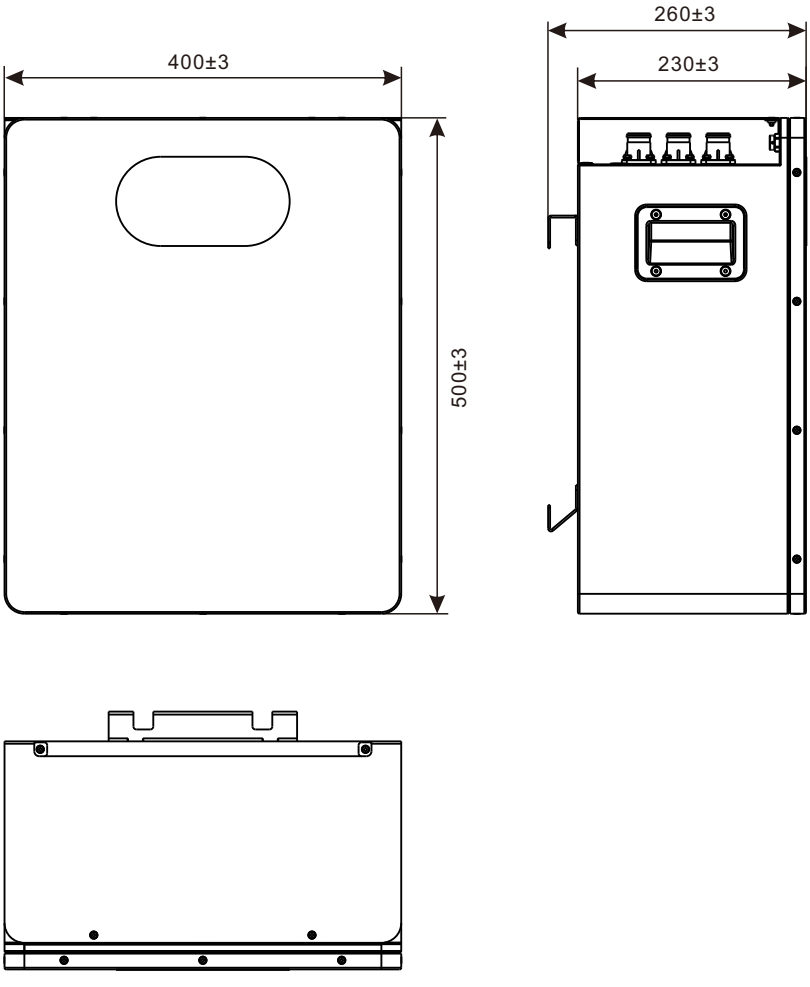
TOP





A	LED	B	Wall-mounted bracket
C	Cover plate	D	Handle
E	Grounding terminal	F	Inverter/PC communication interface
G	Parallel communication interface	H	Switch
I	Negative connector	J	Positive connector
K	Battery SOC indicator	L	RUN indicator (RUN)
M	ALM indicator (ALM)		

2.2 Product size



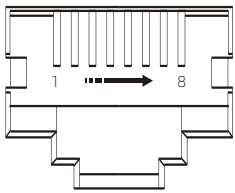
Note: The LW25205A/E series have the same outline dimensions.

3 Basic Information

3.1 Interface definition

(1)The pin definitions of the BMS communication interface are as follows. The RJ45 communication interface is used for connecting the lithium battery to an inverter or a PC.

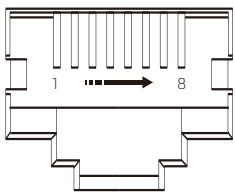
Pin No.	RJ45 Definition
1	RS485-B1
2	RS485-A1
3	ISO_GND
4	CAN1-H
5	CAN1-L
6	ISO_GND
7	RS485-A1
8	RS485-B1



(RJ45)(BMS)

(2)The pin definitions of the IP-IN communication interface are as follows. The RJ45 communication interface is used for parallel communication between lithium batteries.

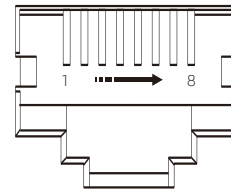
Pin No.	RJ45 Definition
1	CAN-H2
2	CAN-L2
3	ISO_GND
4	DO+
5	DO-
6	ISO_GND
7	CAN-L2
8	CAN-H2



(RJ45)(IP-IN)

(3)The pin definitions of the IP-OUT communication interface are as follows. The RJ45 communication interface is used for parallel communication between lithium batteries.

Pin No.	RJ45 Definition
1	CAN-H2
2	CAN-L2
3	ISO_GND
4	DI+
5	DI-
6	ISO_GND
7	CAN-L2
8	CAN-H2



(RJ45)(BMS)

3.2 Product features

- It has the function of single voltage and overall voltage detection, over-voltage and under-voltage alarm and protection.
- It has the functions of charge and discharge current detection, alarm and protection.
- It has the function of cell, environment and PCB temperature detection, and can alarm and protect when charging and discharging at high and low temperature.
- It has the function of detection and protection of output short circuit.
- With the battery SOC calculation, charge and discharge cycle calculation function.
- With a charge balancing function, reduce the charging current of the high-voltage cell (the reduced current is the balance current set by the BMS).
- With LCD indicator function, indicating the current battery SOC, battery fault status, operating status, etc.
- BMS manual and automatic sleep function.
- With charge current limiting function.

  With history storage function (not less than 500 storage capacity).
- With RS485 communication function, real-time monitoring of BMS and battery status.
- The two-stage over-current protection function of discharge has different response speed to different current values, which protects the battery more reliably.

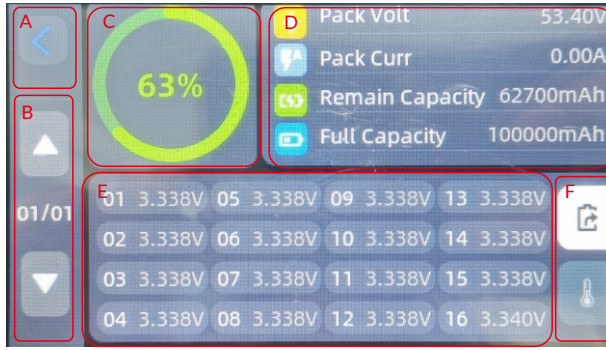
3.3 LCD color touch display instructions

- **Interface introduction:**
- **Main interface**:



Serial Number	Icon	Icon Meaning
1		Main Interface Icon. Click to directly enter the main interface.
2		Alarm Display Button. Click to enter the alarm interface. If there is an alarm, this icon will blink.
3		Parameter Setting Icon. Click to enter the settings interface.
4		Slave Device Interface Access Button. If no slave device is present, it enters the cell voltage and temperature display interface.

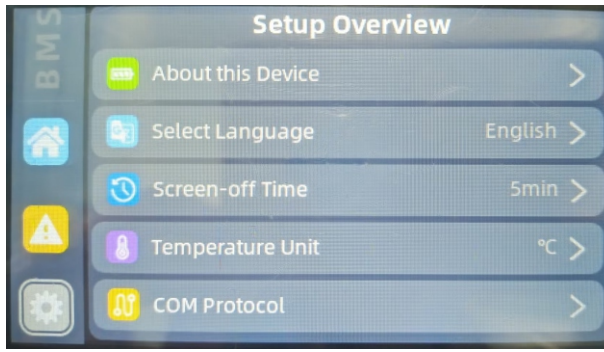
- **Slave interface**



A: Button to Return to Previous Interface
B: Select Slave Parameters
C: Slave SOC Display Area
D: Slave Voltage, Current, and Capacity Display Area
E: Slave Temperature or Cell Voltage Display Area
F: Button to Switch Between Slave Cell Voltage and Temperature Display
Note: If no parallel slave device is connected, all the above areas will display master device parameters.

- **Parameter settings**

Click the settings icon on the main interface to enter the parameter settings interface, as shown below:



The parameter settings interface allows you to configure the language, display screen sleep time, temperature unit, and communication protocol.

Notes:

a. The "About This Device" section is a display program and cannot be modified.
b. To prevent accidental touch, after entering the relevant settings interface and selecting the parameter to be configured, do not directly click the button to return to the main interface. Instead, click the button to return to the previous interface to verify whether the setting is accurate.

B. Communication Protocol Selection

The protocol setting is used to select the communication protocol between the BMS and the inverter:



Note: If the red box area in the figure above does not display a specific protocol, please wait for approximately 10 seconds for the data to buffer. (Note: Normal communication is required for buffering to occur.)

3.4 LED indication

<table>
<tr><td rowspan="2">Status</td><td>RUN LED</td><td>Alarm LED</td><td colspan="4">Battery Indicator LED</td><td>Instructions</td></tr>
<tr><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>●</td><td>/</td></tr>
<tr><td>Power Off /Sleep</td><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>Off</td><td>standby state</td></tr>
<tr><td rowspan="2">Standby state</td><td>Flash 1</td><td>Off</td><td colspan="4" rowspan="2">Display based on the real-time status of the current State of Charge (SOC).</td><td rowspan="2">Secondary protection has been triggered. Connect the host computer to check the fault information and take appropriate measures.</td></tr>
<tr><td>Flash 1</td><td>Flash 3</td></tr>
<tr><td rowspan="3">Charge</td><td>on</td><td>off</td><td colspan="4" rowspan="2">Display based on the real-time status of the current State of Charge (SOC).</td><td>Normal charge</td></tr>
<tr><td>on</td><td>Flash3</td><td>Over-charge alarm please unplug the charger</td></tr>
<tr><td>on</td><td>off</td><td>on</td><td>on</td><td>on</td><td>on</td><td>Overcharg protection; If the charger is unplugged, the indicator turns to standby state.</td></tr>
<tr><td rowspan="3">Discharge</td><td>Flash3</td><td>off</td><td colspan="4" rowspan="2">Display based on the real-time status of the current State of Charge (SOC).</td><td>Normal discharge</td></tr>
<tr><td>Flash3</td><td>Flash3</td><td>Over-discharge protection, please charge the battery.</td></tr>
<tr><td>off</td><td>off</td><td>off</td><td>off</td><td>off</td><td></td><td>Enter undervoltage sleep state, please charge the battery</td></tr>
<tr><td>Failure state</td><td>off</td><td>on</td><td>off</td><td>off</td><td>off</td><td>off</td><td>The LED indicates a protection mode (e.g., overtemperature, overcurrent, or short circuit), during which charging and discharging are disabled. Please troubleshoot the cause.</td></tr>
</table>

Note：When the charging current limit is triggered, the status of the charging overcurrent protection will be released, and at this time, the indicator light status will switch to the normal charging state

LED Flash Instructions:

Flash mode	on	off
Flash 1	0.25S	3.75S
Flash 2	0.5S	0.5S
Flash 3	0.5S	1.5S

SOC Instructions:

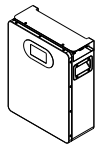
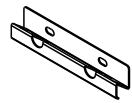
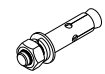
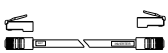
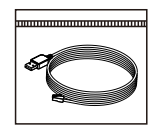
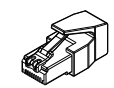
SOC	Charging				Discharge				Standby state			
	L4 ●	L3 ●	L2 ●	L1 ●	L4 ●	L3 ●	L2 ●	L1 ●	L4 ●	L3 ●	L2 ●	L1 ●
0~25%	off	off	off	Flash 2	off	off	off	on	off	off	off	on
25~50%	off	off	Flash 2	on	off	off	on	on	off	off	on	on
50~75%	off	Flash 2	on	on	off	on	on	on	off	on	on	on
75~100%	Flash 2	on	on	on	on	on	on	on	on	on	on	on

4 Instructions

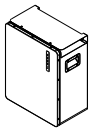
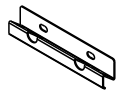
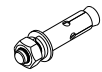
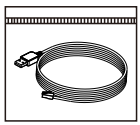
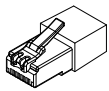
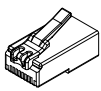
4.1 Packing list

Before unpacking, please check the outside of the battery for damage to the packaging and check the model of the battery. If there is any abnormality, please do not open the package and contact the after-sales service center as soon as possible. After unpacking the battery, please check whether the product is complete according to the packaging information. If you have any questions, please contact the after-sales service center as soon as possible.

- **Quick-connect series**

 X1 Lithium battery	 X2 Wall-mounted bracket	 X4 M8X60 expansion bolt	 X2 M8X12 bolt
 X1 Positive output power cable	 X1 Negative output power cable	 X1 Positive connector	 X1 Negative connector
 X1 RS485 communication cable	 X1 Battery pack parallel communication cable	 X1 Communication cable for PC	 x 1 RJ45 plug with terminal resistance(@ 120Ω)
 X1 RJ45 plug	 X2 RNB60-8 wiring terminal	 X2 RNB60-6 wiring terminal	

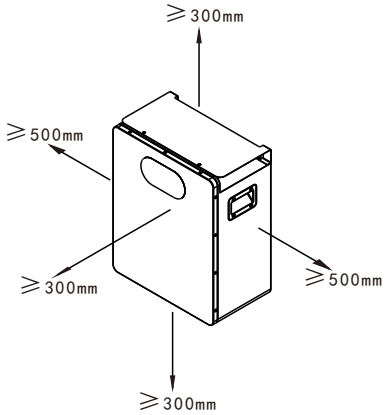
- **Screw-type series**

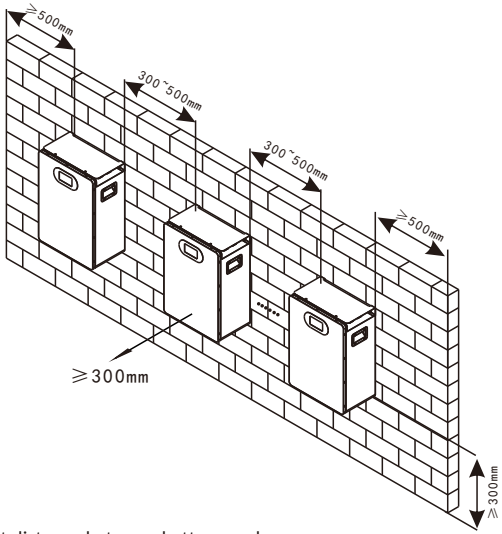
 X1 Lithium battery	 X2 Wall-mounted bracket	 X4 M8X60 expansion bolt	 X2 M8X12 bolt
 X1 RS485 communication cable	 X1 Battery pack parallel communication cable	 X1 Communication cable for PC	 X1 RJ45 plug with terminal resistance(@ 120Ω)
 X1 RJ45 plug	 X2 RNB60-8 wiring terminal	 X2 RNB60-6 wiring terminal	

4.2 Installation requirements

a.Space installation distance

Master and check the performance of all tools and devices to ensure safety before using them.

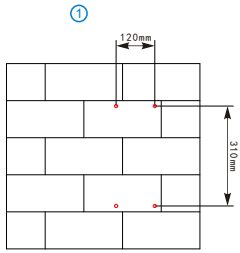


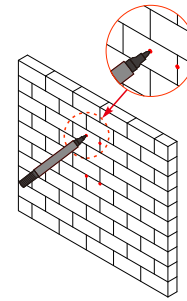


The left and right distance between battery packs is recommended. Minimize the distance as much as possible.

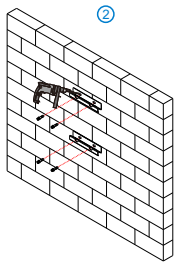
b. Space installation requirements

1.As shown in Figure 1 and Figure 2, use a marker to mark the screw hole positions on the wall according to the dimensions indicated.

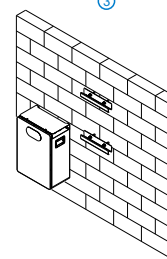




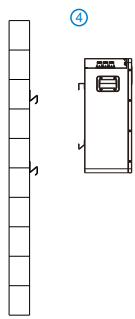
2.Using a hammer drill, create holes in the wall (Hole diameter: 10mm, Depth: 65mm). Insert M8 expansion bolts into the holes and tighten them.



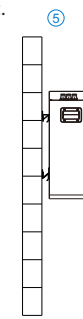
3. Lift the lithium battery vertically and align it with the slots.of the bracket.



4.Push the lithium battery horizontally into the slots of the bracket.



5.Slowly release your grip and allow the lithium battery to snap into the bracket.



c.Installation environment

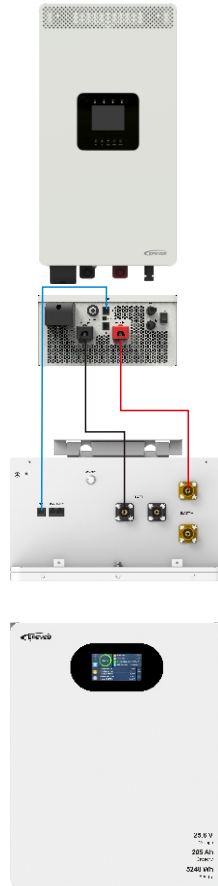
- The battery works best at 20~40°C.
- Avoid installation in environments with direct high temperature and rain.
- Avoid installation close to high temperature heat source or low temperature cold source.
- Avoid installation in places where the ambient temperature changes drastically.
- Avoid installation in strong interference environments.
- Avoid installation in places where children can enter.
- Avoid installation in places where water is likely to accumulate.
- It is forbidden to place flammable and explosive materials around the equipment.

d.Prepare tools

 Hammer Drill	 Rubber Hammer	 Claw Safety Hammer	 Insulated Cross Screwdriver	 Insulated Slotted Screwdriver
 Spirit Level	 Tape Ruler	 Insulation Tape	 Dustproof Cover	 Protective Glasses
 Utility Knife	 Wire Stripper	 Diagonal Pliers	 MC4 Crimper	 Multimeter
 AC/DC Clamp-On Ammeter	 Marker Pen	 Electric Screwdriver		

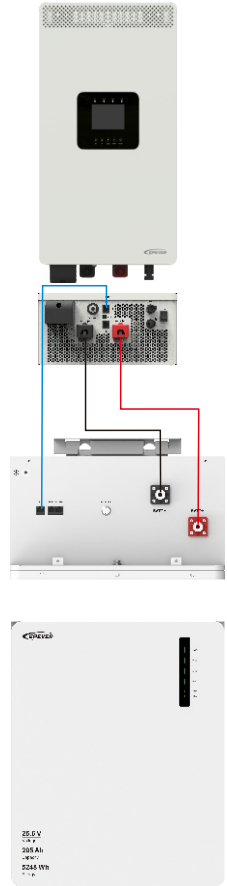
e.Wiring diagram

- **Connect to the inverter**
- **Quick-connect series**



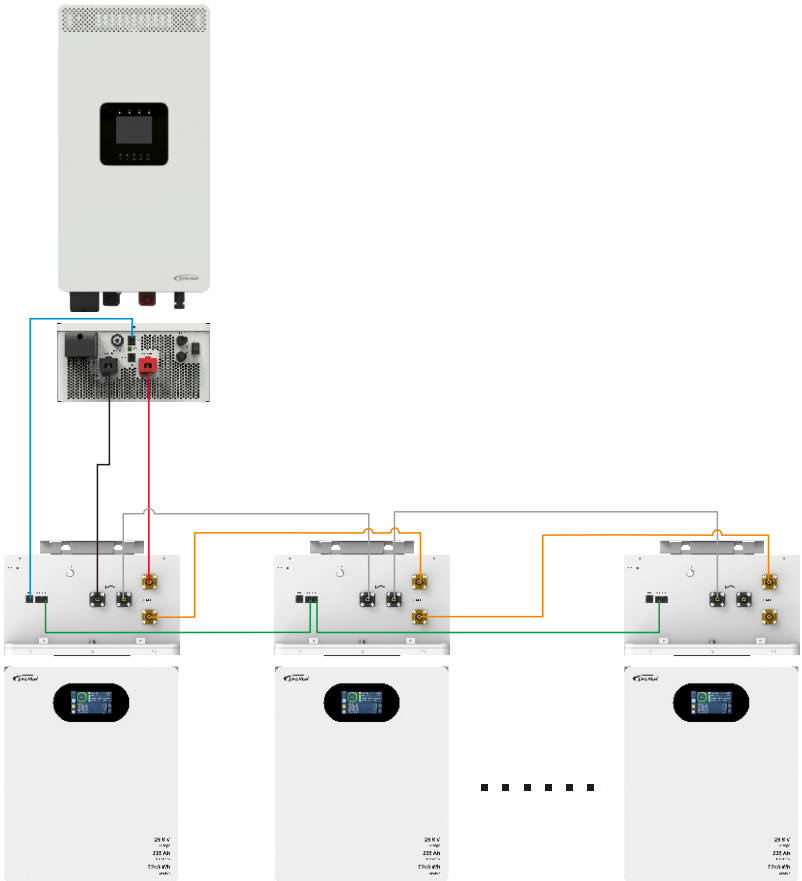
Positive output power cable(1200mm)
Negative output power cable(1200mm)
RS485 communication cable (1200mm)

- **Screw-type series**



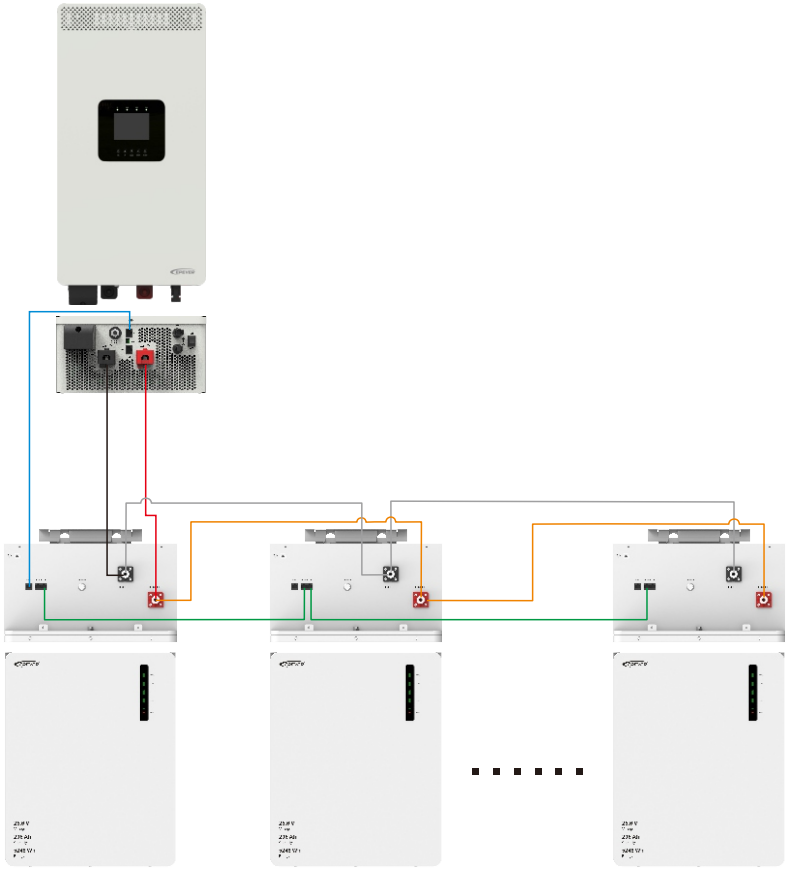
Positive output power cable
Negative output power cable
RS485 communication cable (1200mm)

- **Connect in parallel**
- **Quick-connect series**



Positive output power cable(1200mm)
Negative output power cable(1200mm)
RS485 communication cable (1200mm)
Lithium battery positive parallel power cable
Lithium battery negative parallel power cable
Lithium battery parallel communication cable (IP-OUT~IP-IN) (1000mm)

- **Screw-type series**



Positive output power cable(1200mm)
Negative output power cable(1200mm)
RS485 communication cable (1200mm)
Lithium battery positive parallel power cable
Lithium battery negative parallel power cable
Lithium battery parallel communication cable (IP-OUT~IP-IN) (1000mm)

Precautions for inverter connection and parallel connection:

According to the above parallel schematic diagram and 2.1 products appearance, select the correct wiring harness for connection.

1. Output power cable (black and red cables): The positive connector of the host is connected to the positive terminal of the inverter (red cable); The negative connector of the host is connected to the negative terminal of the inverter (black cable).

2. RS485 communication cable (blue cable): Communication between the host and the inverter. The interface of the host is BMS port, and the terminal port of the inverter is BMS port.

3. Lithium battery parallel power cable: The positive connector of the host is connected to the positive connector of the slave (orange cable); The negative connector of the host is connected to the negative connector of the slave (grey cable).

4. Lithium battery parallel communication cable (green cable): The IP-OUT communication interface of the first battery pack connects to the IP-IN communication interface of the second battery pack. The IP-OUT communication interface of the second battery pack connects to the IP-IN communication interface of the third battery pack, and so on.

(Note: The first battery pack serves as the host and is connected to the inverter.)

Warning

1. For operational safety and compliance, please disconnect the communication and cable link with the inverter when storing the battery.

2. During the handling and installation of the battery, it is recommended to wear safety helmets, goggles, protective shoes and other safety equipment suitable for the work to prevent accidental injury.

3. All wiring must be carried out by professionals. With the right cables, the battery connection is essential for the safe and efficient operation of the system. In order to reduce the risk, please use the cable provided by our company, or our recommended cable specifications.

4.3 Charging operation

1. Check before charging.

- Inspect the appearance of the battery and inverter or other connected equipment to ensure that the power cord and all wiring harnesses are connected.
- Make sure the power supply meets the specification requirements for the battery

2. Turn off the inverter or other equipment, connect the positive and negative terminals of the battery, and connect the communication cable normally.

⚠ **Warning: Before connecting the battery, ensure that the positive and negative terminals are connected. Do not reverse connect.**

3. Connect the charger to the battery's positive and negative terminals; then turn on the charger.

4. Press the battery's power switch to turn on the battery, and normal charging will begin.

● Standard Charging:

First, charge the battery to 28.8V with a constant current of 41A (0.2C), and then charge to 10.25A (0.05C) with a constant voltage of 28.8V.

Note: All tests stated in this document shall be performed at 25±2℃.

4.4 Discharge operation

1. Before discharging, check whether the load and equipment are turned off.

2. Properly connect the positive and negative terminals of the battery to the load/inverter or other equipment.

⚠ **Warning: Before connecting the load and equipment, please confirm the positive and negative wiring of the battery, and prohibit reverse connection.**

3. Turn on the load/inverter or other device.

4. Press the battery's power switch to turn on the battery, and normal discharging will begin.

● Standard discharge:

After the battery is standard charged, discharging the battery with a constant current of 41A (0.2C) till the battery voltage drops to 20.8V.

Note: All tests stated in this document shall be performed at 25±2℃.

❗recautions for charging and discharging operation:

a) When the temperature is high (≥35℃) in summer, the battery should not be charged more than 0.5C during the day, and it is recommended to stand for more than 30 minutes in the middle of the charge-discharge conversion to avoid the battery being used often in a high-temperature environment (a high-temperature environment will affect the battery life).

b) When the temperature is low (<0℃) in winter, the depth of battery discharge <70% to avoid over-discharge of the battery caused by too low temperature and affect the battery life.

⚠ **Warning: This lithium battery should only be used with a manufacturer or manufacturer-matched compatible inverter or other equipment. When the lithium battery does not communicate with the inverter or other equipment, it is forbidden to use the lithium battery.**

4.5 Description of battery parallel capacity and voltage

Capacity	Number of battery parallel groups	Charge Cut-off Voltage	Discharge cut-off voltage
410Ah	2 groups	28.8V	20.8V
205Ah*n	n≤32	28.8V	20.8V

5 Protection Features

NO.	Test Content			Default Parameters LiFePO4	Unit
1	Charge&Discharge and Equalization	Discharge	Rated discharge current	200	A
		Charge	Charge voltage	29.2	V
			Rated charging current	200	A
			After overcharging, update SOC to 100%, and allow charging again when SOC < 96% or there is discharge current.		
		Passive Equalization Function	Balance turn-on voltage	3.4	V
			Equalize the opening voltage difference	20	mV
			Balance current	150±30	mA
			Balancing activation conditions 1.Reach the set balanced opening voltage difference. 2.Reach the set balanced start voltage.		
2	Over-Charge Protection	Single Cell Over-Charge Level1	Over-charge alarm voltage	3.55±0.05	V
			Over-charge alarm delay	1±0.8	S
			Over-charge alarm release voltage	3.5±0.05	V
		Single Cell Over-Charge Level2	Single cell over-charge protection voltage	3.65±0.05	V
			Single cell over-charge protection delay	1±0.8	S
			Over-charge protection release voltage	3.38±0.05	V
		Single Cell Over-Charge Level3	Single cell over-charge protection voltage	3.7±0.05	V
			Single cell over-charge protection delay	1±0.8	S
			Over-charge protection release voltage	3.65±0.05	V
		Overall Overcharge Level1	Overcharge alarm voltage	28.4	V
			Overcharge alarm delay	1±0.8	S
			Overcharge alarm release voltage	28	V
		Overall Overcharge Level2	Overcharge protection voltage	29.2	V
			Overcharge protection delay	1±0.8	S
			Overcharge protection release voltage	27	V
		Overall Overcharge Level3	Overcharge protection voltage	29.6	V
			Overcharge protection delay	1±0.8	S
			Overcharge protection release voltage	29.2	V
		Other Conditions of Release	SOC release threshold	<96%	
			Discharge current release	>2	A

3	Over-Discharge Protection	Single Cell Over-Discharge Level1	Single cell over-discharge alarm voltage	2.9±0.05	V
			Single cell over-discharge alarm delay	1±0.8	S
			Single cell over-discharge alarm release voltage	2.95±0.05	V
		Single Cell Over-Discharge Level2	Single cell over-discharge protection voltage	2.7±0.05	V
			Single cell over-discharge protection delay	1±0.8	S
			Over-discharge protection release voltage	2.95±0.05	V
			If the over-discharge protection cannot be restored after 30 seconds, the system will enter sleep mode.		
		Single Cell Over-Discharge Level3	Single cell over-discharge protection voltage	2.6±0.05	V
			Single cell over-discharge protection delay	1±0.8	S
			Over-discharge protection release voltage	2.8±0.05	V
		Total Voltage Over-Discharge Level 1	Overall over-discharge alarm voltage	23.2	V
			Overall over-discharge alarm voltage delay	1±0.8	S
			Overall over-discharge alarm release voltage	23.6	V
		Total Voltage Over-Discharge Level 2	Overall discharge protection voltage	21.6	V
			Overall discharge protection delay	1±0.8	S
			Discharge protection release voltage	23.6	V
			If the over-discharge protection cannot be restored after 30 seconds, the system will enter sleep mode.		
		Total Voltage Over-Discharge Level 3	Overall discharge protection voltage	20.8	V
			Overall discharge protection delay	1±0.8	S
			Discharge protection release voltage	22.4	V
4	Over-Current Protection	Discharge Over-Current	Discharge over-current level 1 alarm current	210±3	A
			Discharge over-current level 1 alarm delay	1±0.8	S
			Discharge over-current level 2 protection current	220±3	A
			Discharge over-current level 2 protection delay	1±0.8	S
			Discharge over-current level 3 protection current	300±5	A
			Discharge over-current level 3 protection delay	1±0.8	S
			Release condition: 1. The lock will be automatically unlocked after 1 minute. If the lock occurs for 10 consecutive times, the lock will not be automatically unlocked 2. Charge release: charging current > 1A; Release is triggered when either condition is met.		
		Charge Over-Current	Charge over-current level 1 alarm current	210±3	A
			Charge over-current level 1 alarm delay	1±0.8	S
			Charge over-current level 2 protection current	220±3	A

			Charge over-current level 2 protection current	1±0.8	S
			Charge over-current level 3 protection current	300±5	A
			Charge over-current level 3 protection delay	1±0.8	S
			Release condition 1. The lock will be automatically unlocked after 1 minute. If the lock occurs for 10 consecutive times, the lock will not be automatically unlocked 2. Discharge release: discharge current > 1A		
5	Short Circuit Protection	Short Circuit Protection	Short-circuit protection current	2000	A
			Short-circuit protection delay	50±50	μs
			Short-circuit protection release：Remove Load release/charge release		
6	High Temperature Protection	Charging High Temperature	High temperature level1 alarm	60±2	℃
			High temperature level1 alarm delay	1±0.8	S
			High temperature level1 alarm release	55±2	℃
			High temperature level2 protection	65±2	℃
			High temperature level2 protection delay	1±0.8	S
			High temperature level2 protection release	60±2	℃
			High temperature level3 protection	70±2	℃
			High temperature level3 protection delay	1±0.8	S
			High temperature level3 protection release	65±2	℃
		Discharge High Temperature	High temperature level1 alarm	60±2	℃
			High temperature level1 alarm delay	1±0.8	S
			High temperature level1 alarm release	55±2	℃
			High temperature level2 protection	65±2	℃
			High temperature level2 protection delay	1±0.8	S
			High temperature level2 protection release	60±2	℃
			High temperature level3 protection	70±2	℃
			High temperature level3 protection delay	1±0.8	S
			High temperature level3 protection release	65±2	℃
7	Low Temperature Protection	Charge Low Temperature	Low temperature level1 alarm	5±2	℃
			Low temperature level1 alarm delay	1±0.8	S
			Low temperature level1 alarm release	10±2	℃
			Low temperature level2 protection	0±2	℃
			Low temperature level2 protection delay	1±0.8	S

			Low temperature level2 protection release	5±2	℃
			Low temperature level3 protection	-5±2	℃
			Low temperature level3 protection delay	1±0.8	S
			Low temperature level3 protection release	0±2	℃
			Low temperature level1 alarm	-15±2	℃
			Low temperature level1 alarm delay	1±0.8	S
			Low temperature level1 alarm release	-10±2	℃
			Low temperature level2 protection	-20±2	℃
			Low temperature level2 protection delay	1±0.8	S
			Low temperature level2 protection release	-15±2	℃
			Low temperature level3 protection	-25±2	℃
			Low temperature level3 protection delay	1±0.8	S
			Low temperature level3 protection release	−20±2	℃
8	Environment Temperature Protection	Environment Temperature	High temperature alarm	55±2	℃
			High temperature protection	60±2	℃
			High temperature protection release	55±2	℃
9	MOS Temperature Protection		High temperature alarm	90±2	℃
			High temperature alarm release	85±2	℃
			High temperature protection	115±2	℃
			High temperature protection release	85±2	℃
10	Voltage Difference Alarm		Voltage difference level 1 alarm	0.3	℃
			Voltage difference level 1 alarm release	0.25	℃
			Voltage difference level 2 alarm	0.5	℃
			Voltage difference level 2 alarm release	0.45	℃
			Voltage difference level 3 alarm	1	℃
			Voltage difference level 3 alarm release	0.8	℃
11	Temperature Difference Alarm		Temperature difference level 1 alarm	10±2	℃
			Temperature difference level 1 alarm release	7±2	℃
			Temperature difference level 2 alarm	15±2	℃
			Temperature difference level 2 alarm release	12±2	℃
			Temperature difference level 3 alarm	20±2	℃
			Temperature difference level 3 alarm release	15±2	℃

6 Specifications

Single Battery Pack Specifications

Parameter	LW25205A	LW25205E
Battery Type	LiFePO4	
Nominal Voltage	25.6V	
Nominal Capacity	205Ah	
Energy	5248Wh	
Charge Cut-off Voltage	28.8V	
Discharge Cut-off Voltage	20.8V	
Maximum Charge Current	200A	
Maximum Discharge Current	200A	
Recommend Discharge Current	100A	
Cycle Life	>6000 times (0.5C charge&discharge 80%DOD @25℃)	
Function	Optional:Bluetooth/Wi-Fi/Heating/Aerosol fire suppression module/Breaker	
Communication	RS485 CAN	
Display	LCD	LED
Parallel Connection	Max. 32 battery packs in parallel	
Certification	UN38.3 MSDS	
Operating Temperature Range	Charge: 0℃~+55℃ Discharge: -20℃~+55℃	
Storage Temperature Range	-5℃~+0℃/35℃~+45℃ (≤2month); 5℃~+35℃ (≤3 months, Optimum storage temperature); 15℃~+35℃ (≤6 months)	
Recommended Storage Humidity	40%~80%	
Terminal	M8/Quick-connect	
Dimension (W x H x D)	400mmx500mmx230mm	
Net Weight	47.6±1kg	47.5±1kg
IP Class	IP21/IP54/IP65	
Warranty	See lithium battery limited warranty	

1. Repeat the operation method of standard charging and standard discharge 3 times, and take the third result as the initial capacity of the battery.

2. When the battery is stored for more than 3 months, the storage voltage should be maintained at 26~26.8V.

3. For long-term storage, charge at least once every 3 months (no less than 30 minutes@0.2C).

7 Precautions

Maintenance precautions

Item	Cycle
If the battery is not in use, it needs to be fully charged and discharged to 50%.	3 months
Check whether the wall bracket installation is loose. Please tighten the appropriate position if available.	6 months
Check the casing for damage. If damaged, please repaint or contact after-sales service center.	6 months
Check exposed wires for wear and tear. If the cable is worn, replace the appropriate cable or contact the service center.	6 months
Check for debris buildup around the battery. Clean it to prevent heat dissipation of the battery.	6 months
Check water or pests to avoid long-term intrusion and damage to the battery.	6 months

⚠ Warning

1. If you find any problems that may affect the battery or the battery and energy storage system, please contact the after-sales service department, disassembly is strictly prohibited.

2. If you find that the copper wire inside the conductive wire is exposed, please strictly prohibit touching it due to the danger of high voltage. Please contact the after-sales personnel, disassembly is strictly prohibited.

3. If there are other emergencies, please contact the after-sales personnel first, operate under the guidance of the after-sales personnel, or wait for the after-sales personnel to operate on site.

8 Disclaimers

The warranty does not apply to the following conditions:

- Damage caused by improper use or inappropriate environments (It is strictly forbidden to install the Energy Storage System in the humid, salt spray, corrosive, greasy, flammable, explosive, dust accumulative or other harsh environments).
- The actual current/voltage/power exceeds the limit value of the Energy Storage System.
- Damage caused by working temperature exceeding the rated temperature range.
- Electric arc, fire, explosion and other accidents caused by failure to follow the Energy Storage System labels or manual instructions.
- Unauthorized disassembly and maintenance of the Energy Storage System.
- Damage caused by force majeure such as lightning strikes, rainstorms, mountain torrents and Utility failures.
- Damage occurred during transportation or loading/unloading the Energy Storage System.
- Serious battery discharge due to long-term storage and lack of maintenance.
- Faulty battery connection or short circuit resulting in BMS damage.

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