XIHO 51.2V 280/300/314Ah Stackable DIY Kits Assembly Instruction

WARNING

If any parts are missing, damaged or worn, stop using this KITS. Repair the KITS with manufacturer supplied parts.

IMPORTANT

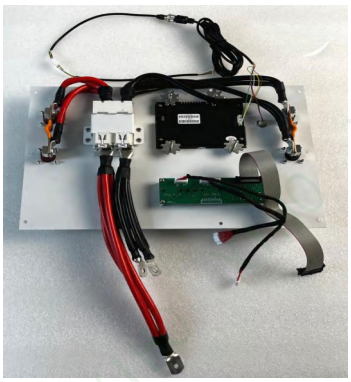
Assembly warnings and packaging inspection align with diesel generator installation guidelines emphasizing safety checks and post-unpacking procedures.

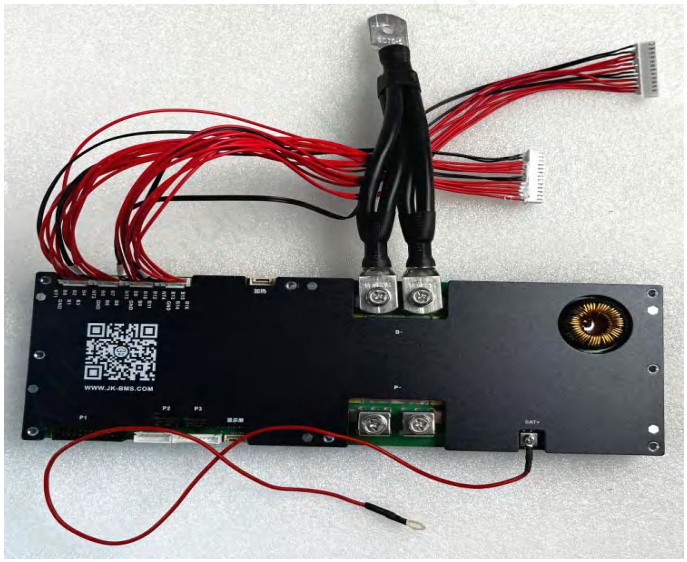
Removing protective layers corresponds to warnings about protective films in equipment handling.

Verifying components mirrors standardized unpacking protocols for technical devices.

ALL DIY kIT accessories are included in the DIY box

Remove all screws from the DIY box and keep them safely for securing the battery during reassembly.



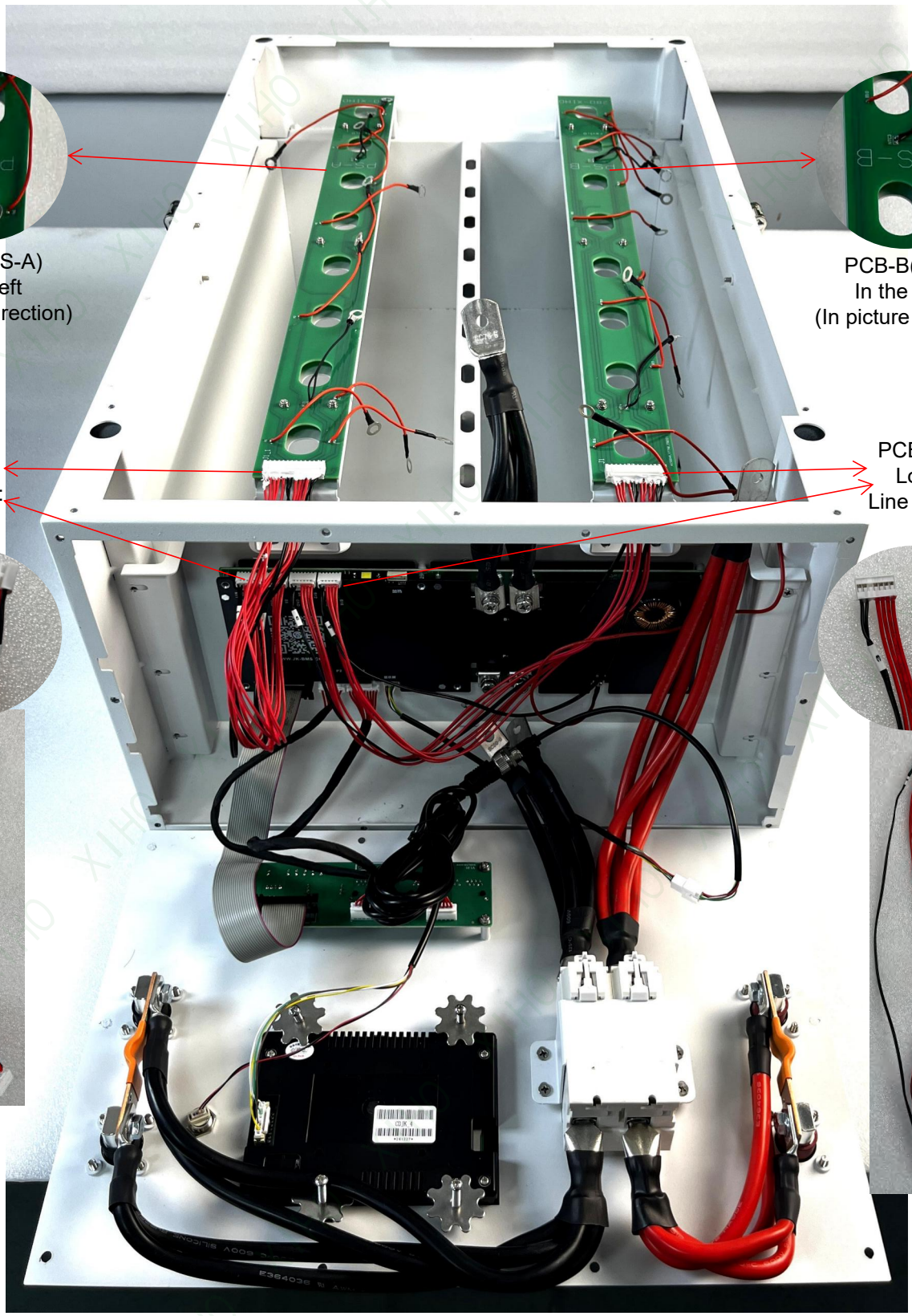


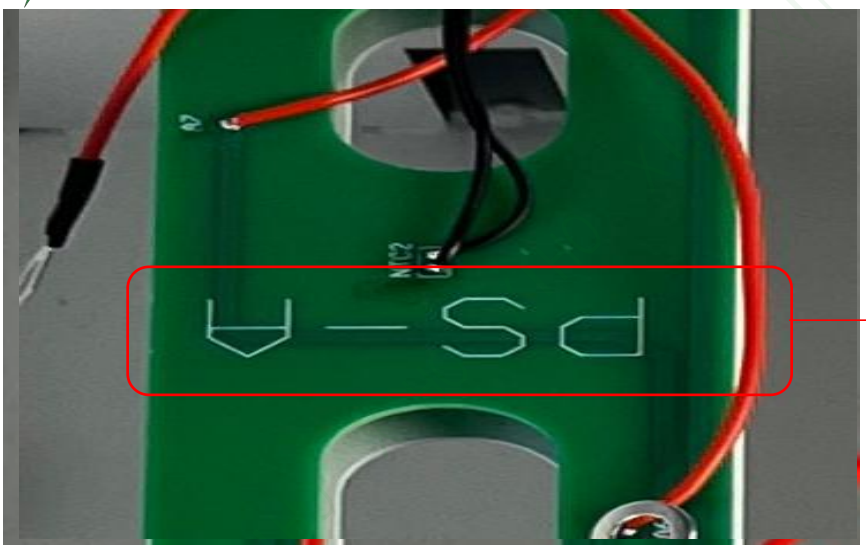
Wire pre-installation

See the YOUTUBE video for complete assembly steps:
https://www.youtube.com/watch?v=S1haUc023F4

Note:

When receiving the DIY kits accessories, the customers need to check whether the collection line of PCB board is wrong inserted or not, it means that PCB-A(PS-A) and PCB-B(PS-B)have assembly errors, PCB-A(PS-A) and PCB-B(PS-B) board are marked, as shown in the following picture:





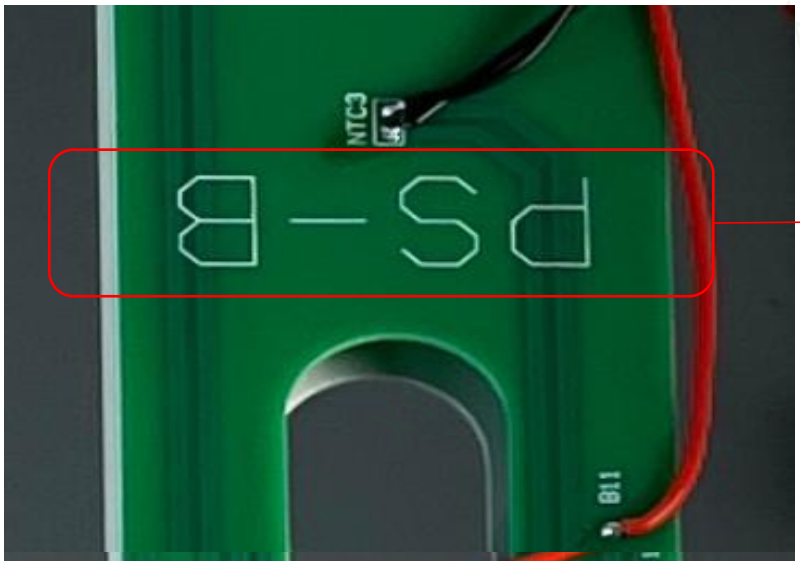
PCB-A(PS-A)

A0,A1,A2,A3,A4,
A5,A6,A7,A8,
NTC1,NTC2

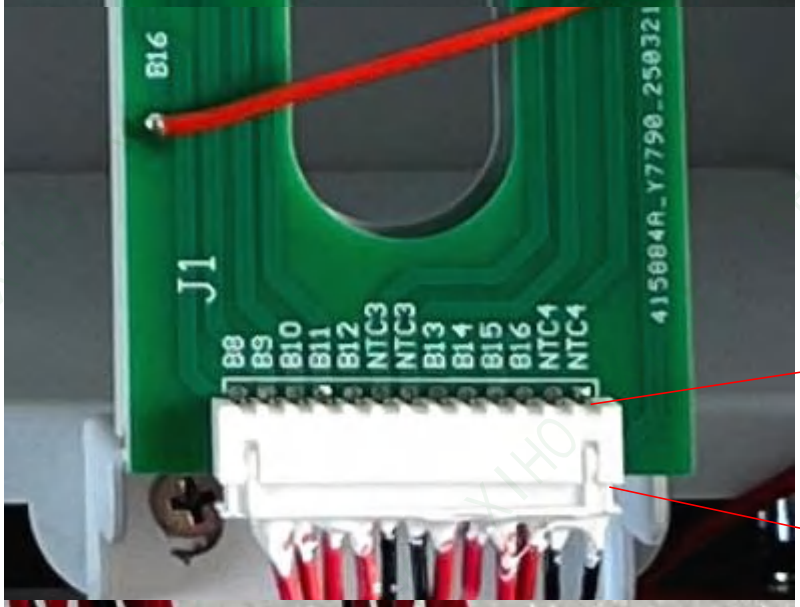
PCB-A Wire
Short Wire
Line number:
#1、#2

PCB-A(PS-A) board is marked with wires, they are **A0,A1,A2,A3,A4,A5,A6,A7,A8,NTC1,NTC2**, and there are **11 lines** on the collector terminal;

PCB-A(PS-A) connect Line number:#1、#2 , It corresponds to the BMS motherboard,you must confirm the wiring before inserting, or else it will damage the BMS, and we won't provide after-sales service.



PCB-B (PS-B)



B8,B9,B10,B11,B12,
B13,B14,B15,B16,
NTC3,NTC4

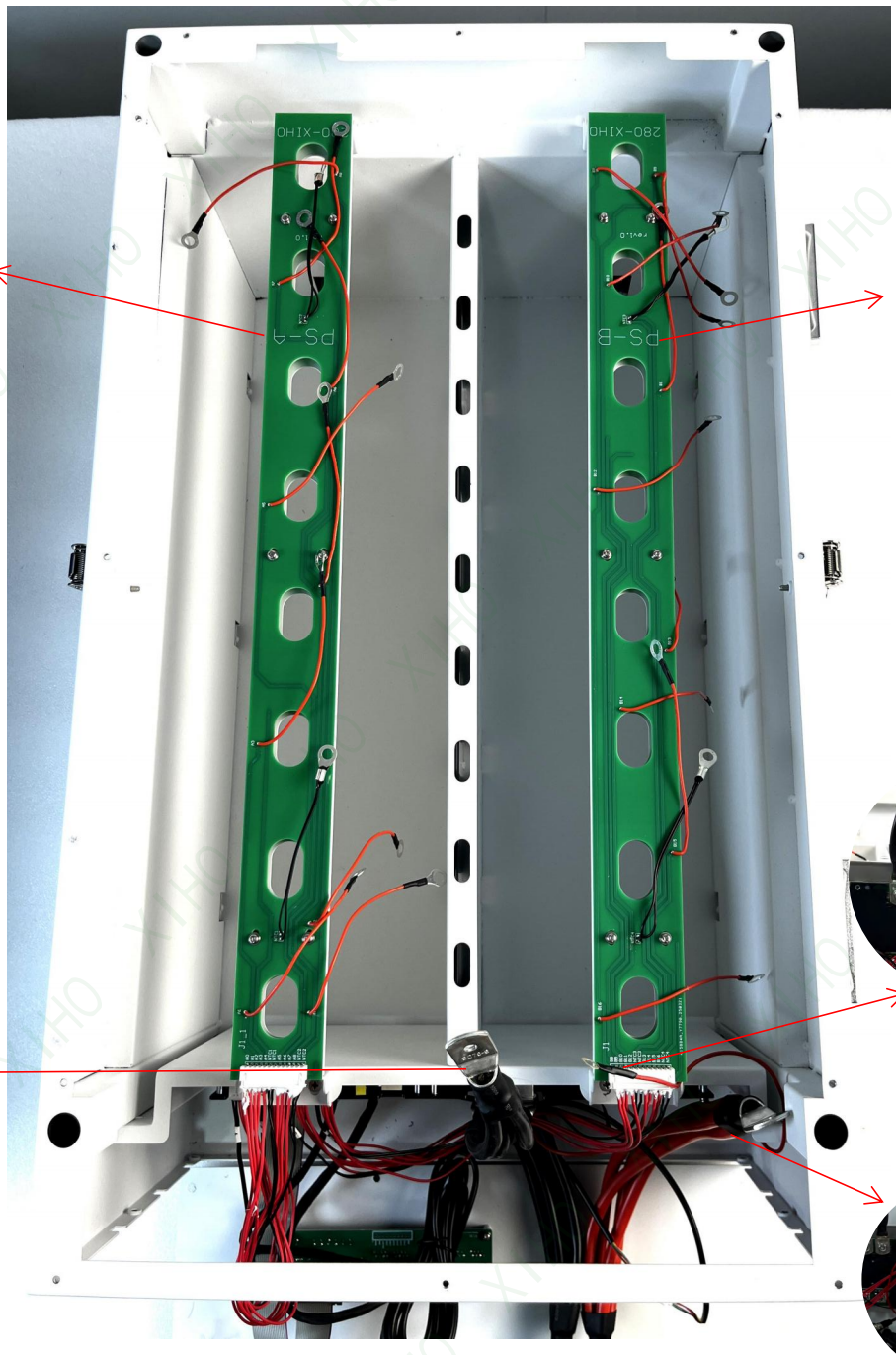
PCB-B Wire
Long Wire
Line number:
#3、#4

PCB-B(PS-B) board is marked with wires, they are **B8,B9,B10,B11,B12,B13,B14,B15,B16,NTC3,NTC4**, and there are **11 lines** on the collector terminal;

PCB-B(PS-B) connect Line number:#3、#4,It corresponds to the BMS motherboard,you must confirm the wiring before inserting, or else it will damage the BMS, and we won't provide after-sales service.

Note:

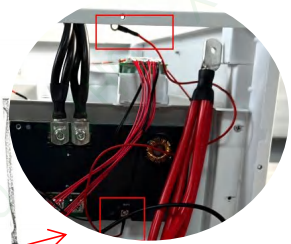
Please make sure that the goods you receive are as follows. If you receive the goods and they are inconsistent with the picture, you should report to our customer service in time. Do not assemble them without permission.



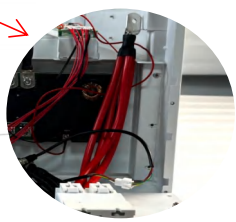
PCB-A(PS-A)
In the left
(In picture direction)

PCB-B(PS-B)
In the Right
(In picture direction)

B- Cable
(Connect to the Battery Pack Main Negative Terminal)



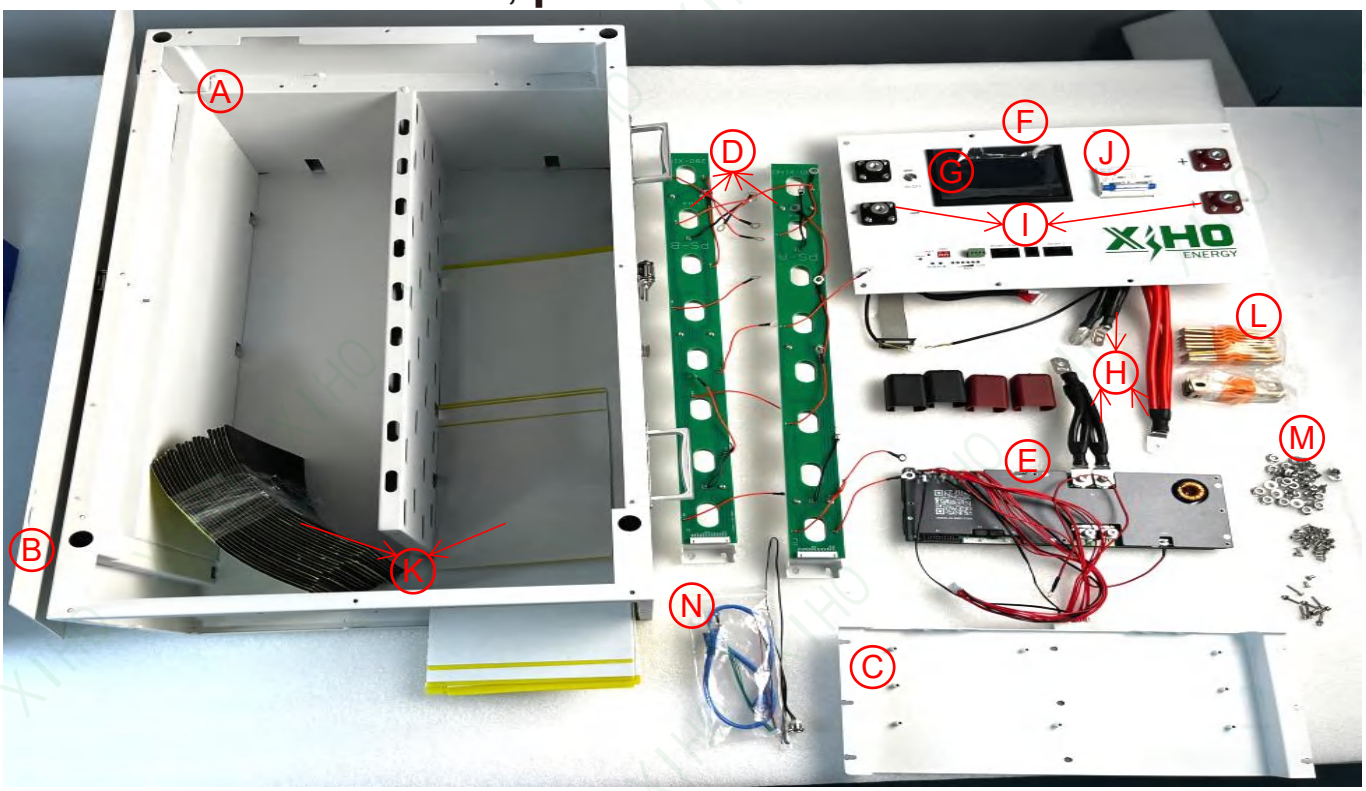
BAT+ Wire
(Connect to the Battery Pack Main Positive Terminal)

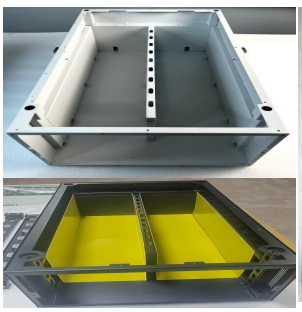


P+ Cable
(Connect to the Battery Pack Main Positive Terminal)

Packing list

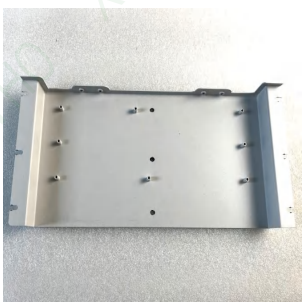
Please check the product carefully after receiving it, if any accessories are missed, **please contact XIHO**.





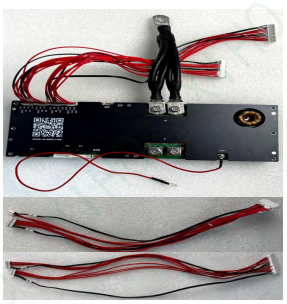
A.(Pre-installed)
Metal Box*1
(Black/White)

B.(Pre-installed)
Cover plate*1
(Black/White)

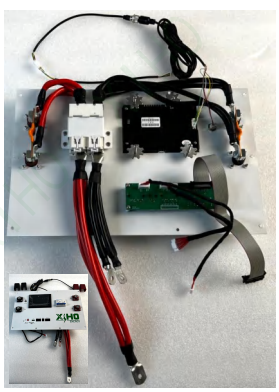


C.(Pre-installed)
Middle panel*1
(Black/White)

D.(Pre-installed)
PCB Board*2
(PS-A*1,PS-B*1)



E.(Pre-installed)
BMS Mainboard*1
PCB Wires*2
BAT+ Wire*1

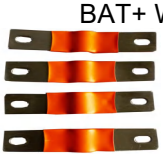


F.(Pre-installed)
Front plate*1
Communication Module*1
P1 Wire*1
P2 Wire*1,P3 Wire*1
ON/OFF Switch Wire*1

G.(Pre-installed)
LED Screen*1

H.(Pre-installed)
6AWG Wires*5
(Black and Red)

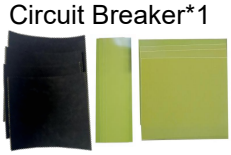
J.(Pre-installed)
12V-125V- 250A
Circuit Breaker*1



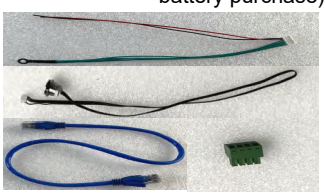
L.Copper
Flexiable
Busbar*15

M.Screws*32
(Accessory
provided with
battery purchase)

I.(Pre-installed)
Positive and
negative
terminals*4



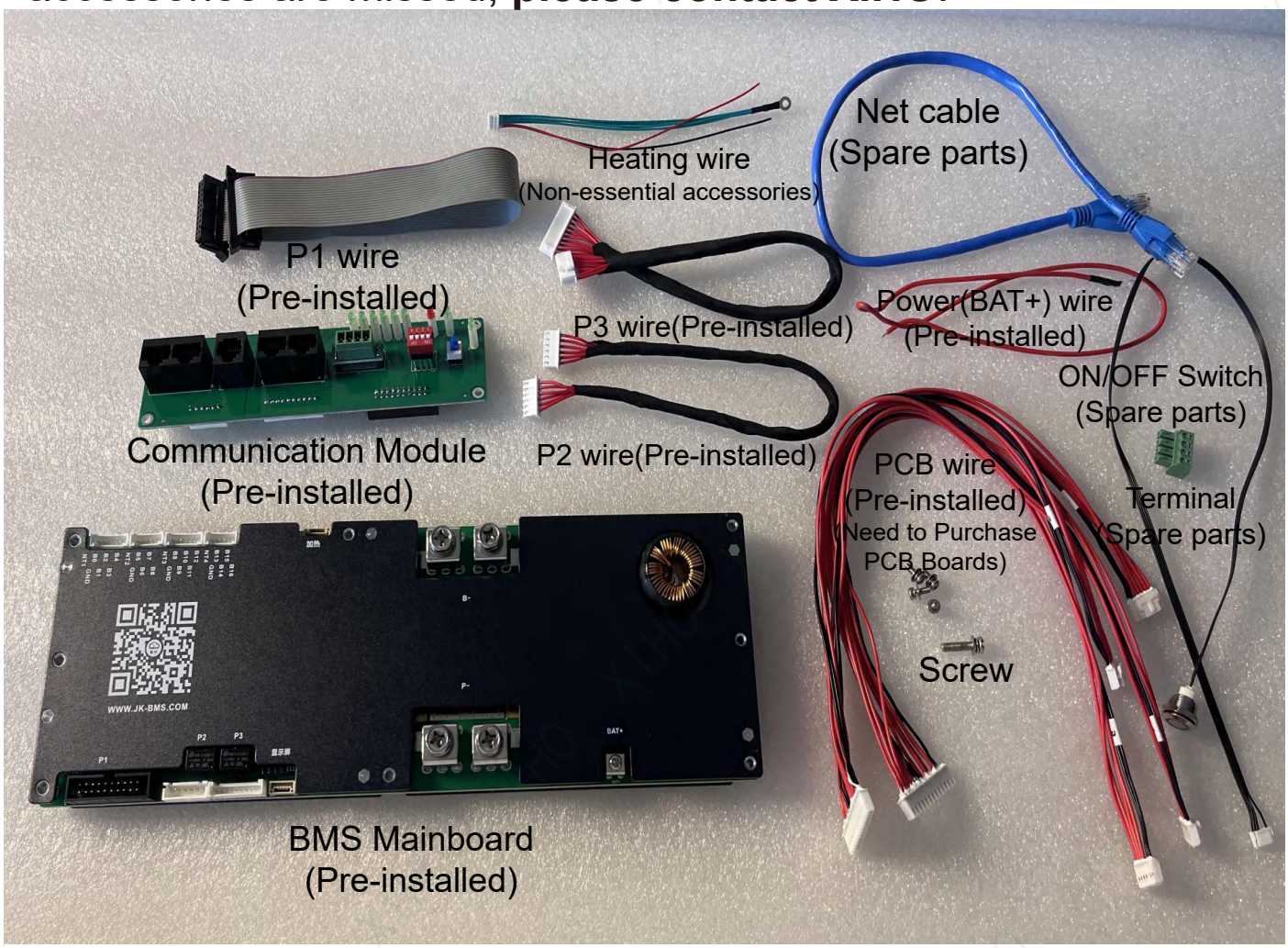
K.EVA Foam*14
Epoxy Board*12

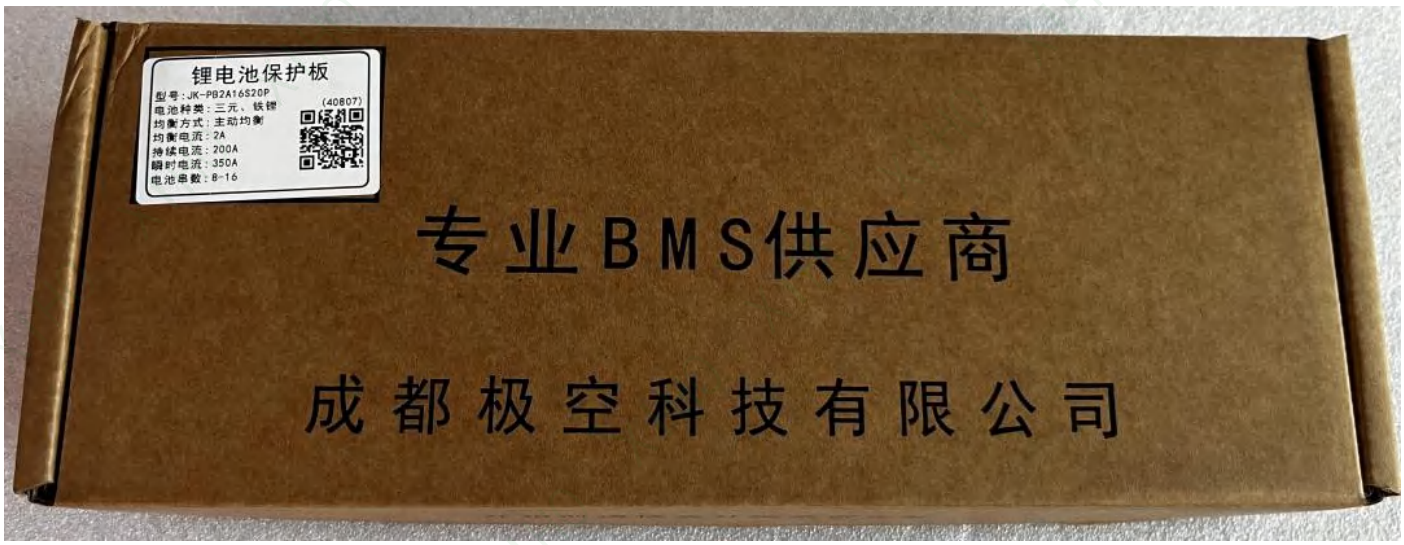


N.Heating wire*1
ON/OFF Switch*1
Net cable*1,Terminal*1
(Spare parts)

JK-PB2A16S-20P List：

Please check the product carefully after receiving it, if any accessories are missed, **please contact XIHO**.



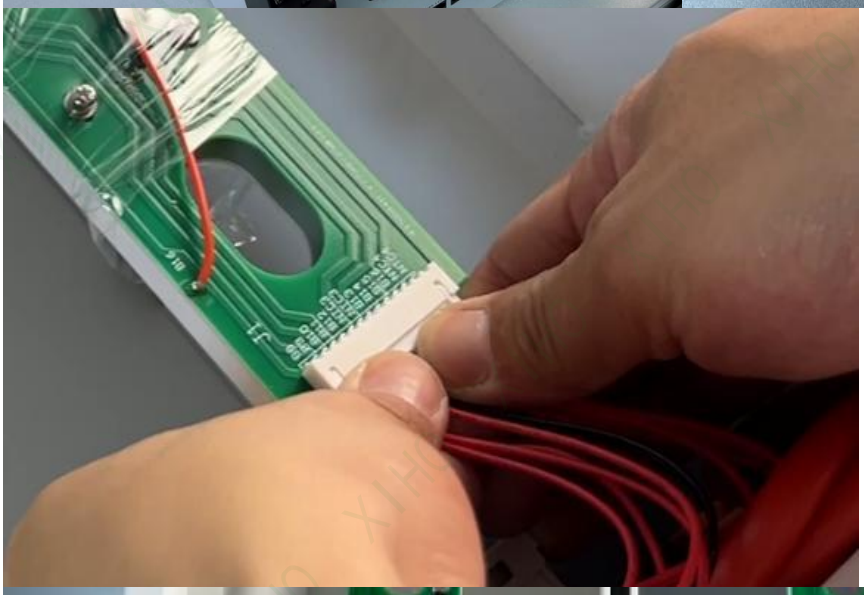


See the YOUTUBE video for more details:

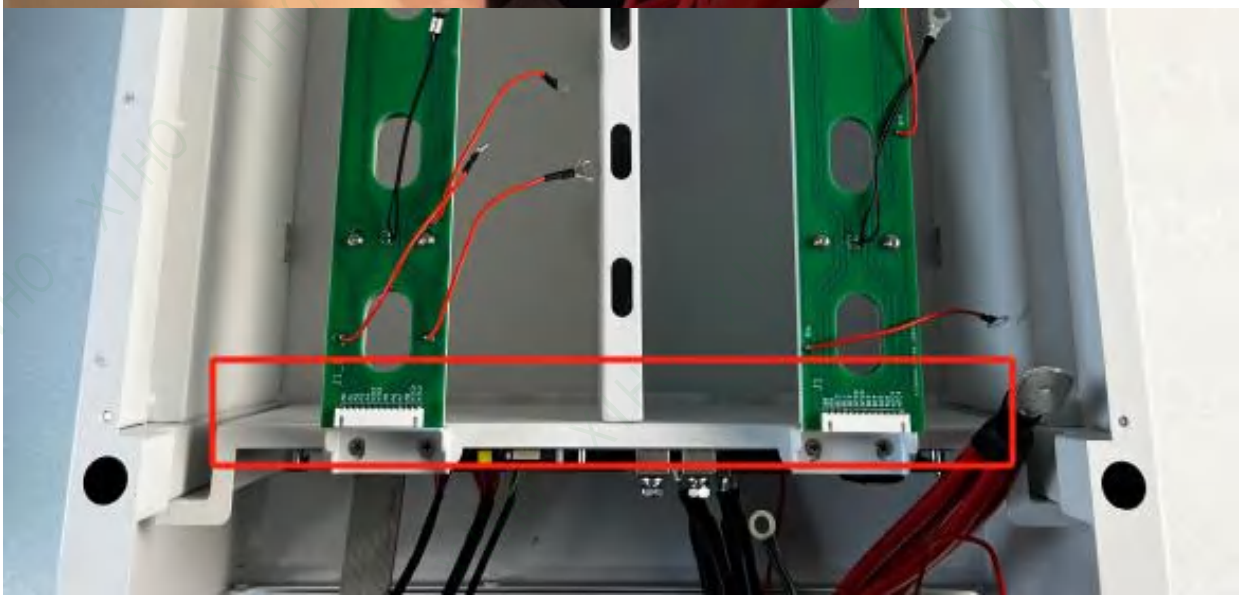
https://www.youtube.com/watch?v=GXUxj66DeIM

Assembly Steps:

1.Romove Cover plate(B),Disconnect the PCB wire connector.

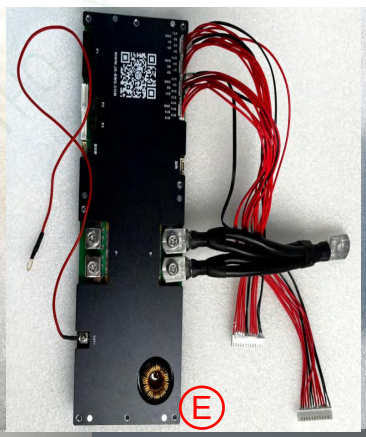


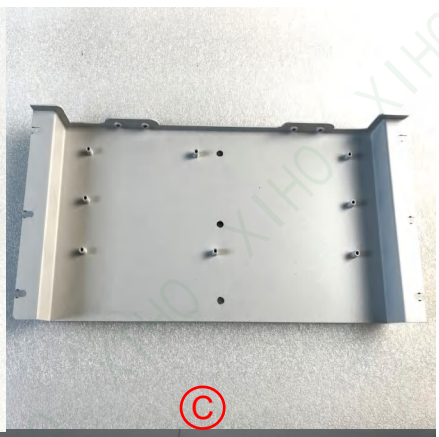
Note:
Gently press both ends inward and squeeze toward the center to release the connector. Do not pull the cable forcefully to avoid breakage.

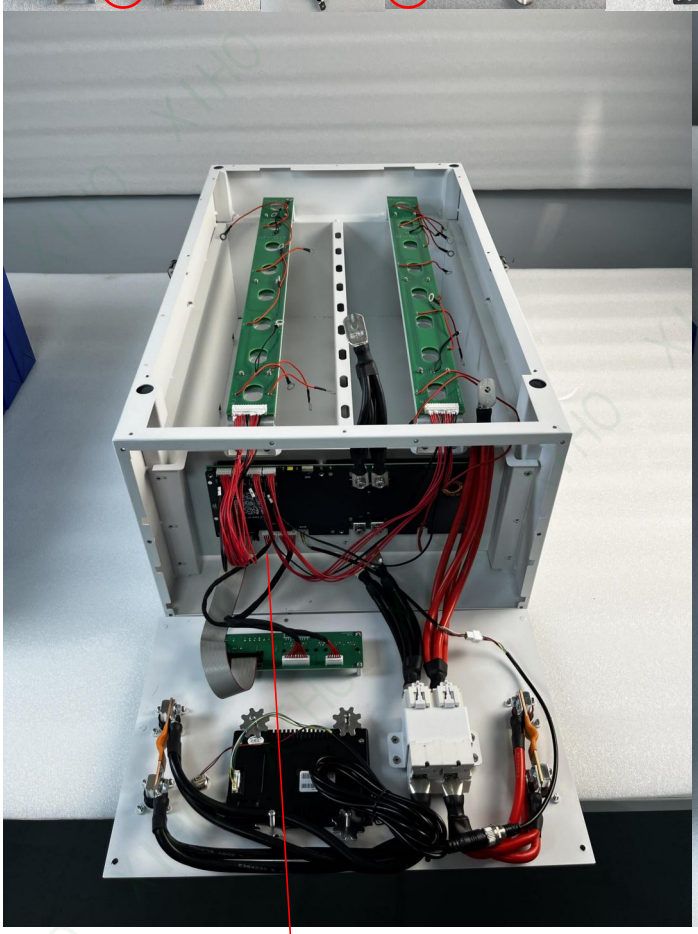


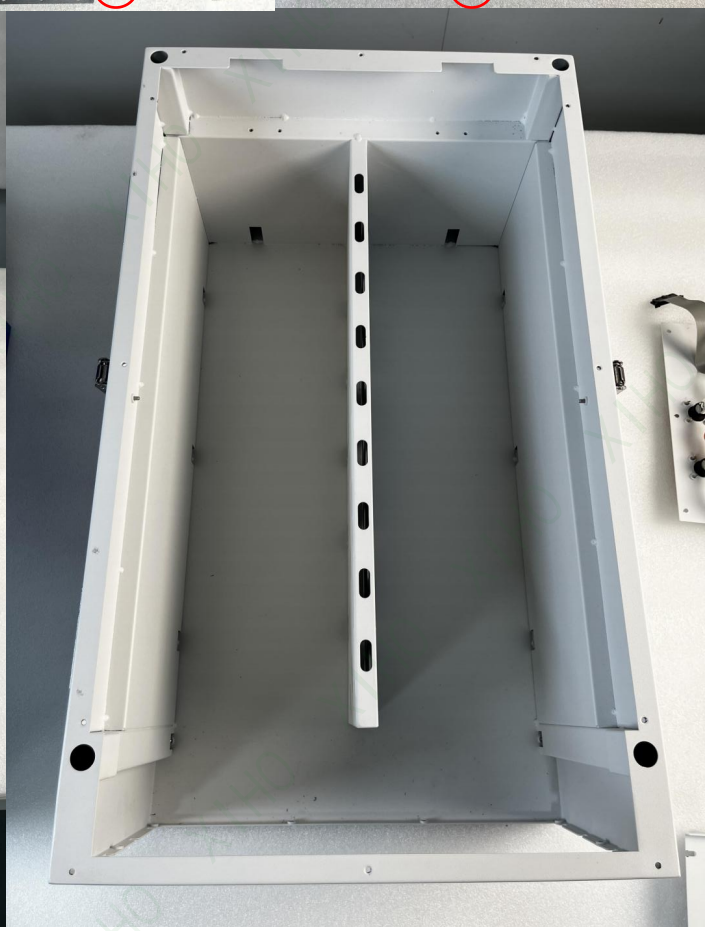
Assembly Steps:

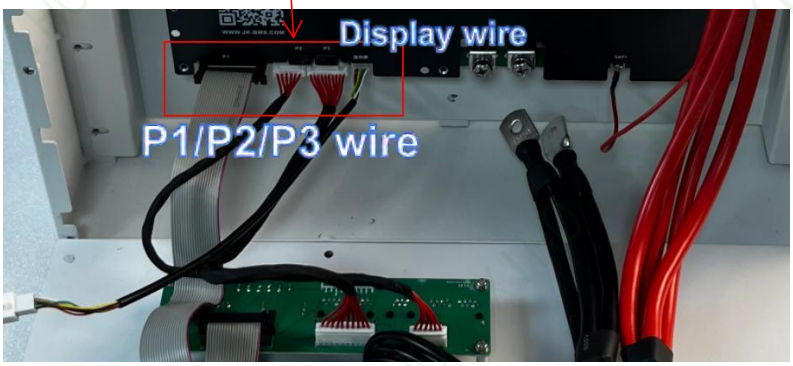
2.Romove PCB Board(D)、Front plate(F)、BMS Mainboard(E)、Middle panel(C),Retain all removed screws securely for reassembly.









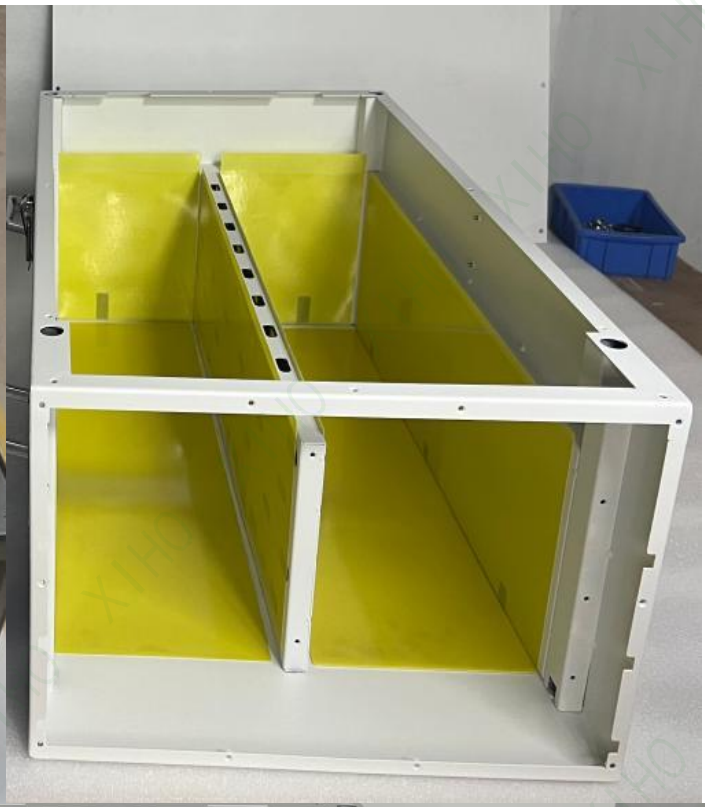


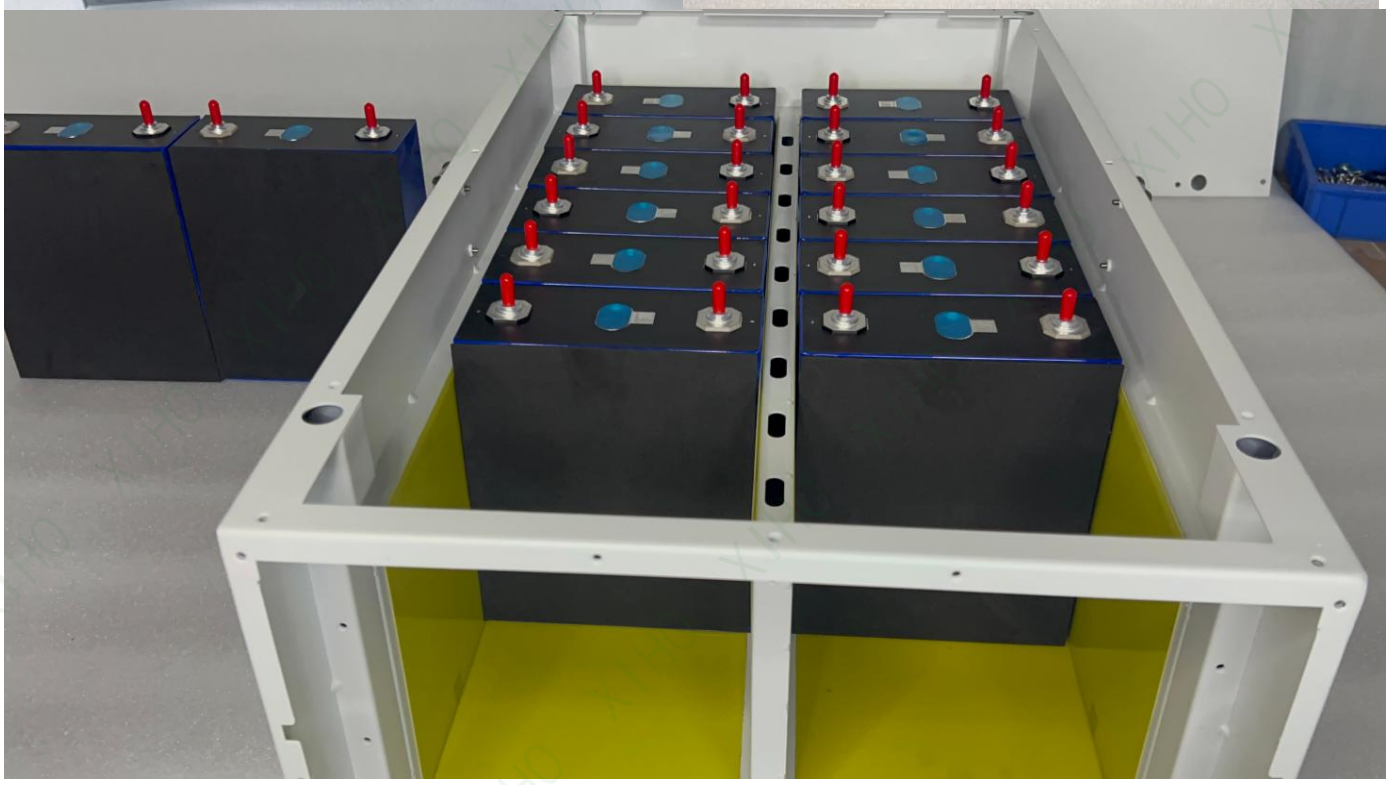
Note:

Remove the P1, P2, P3, and display wires

Assembly Steps:

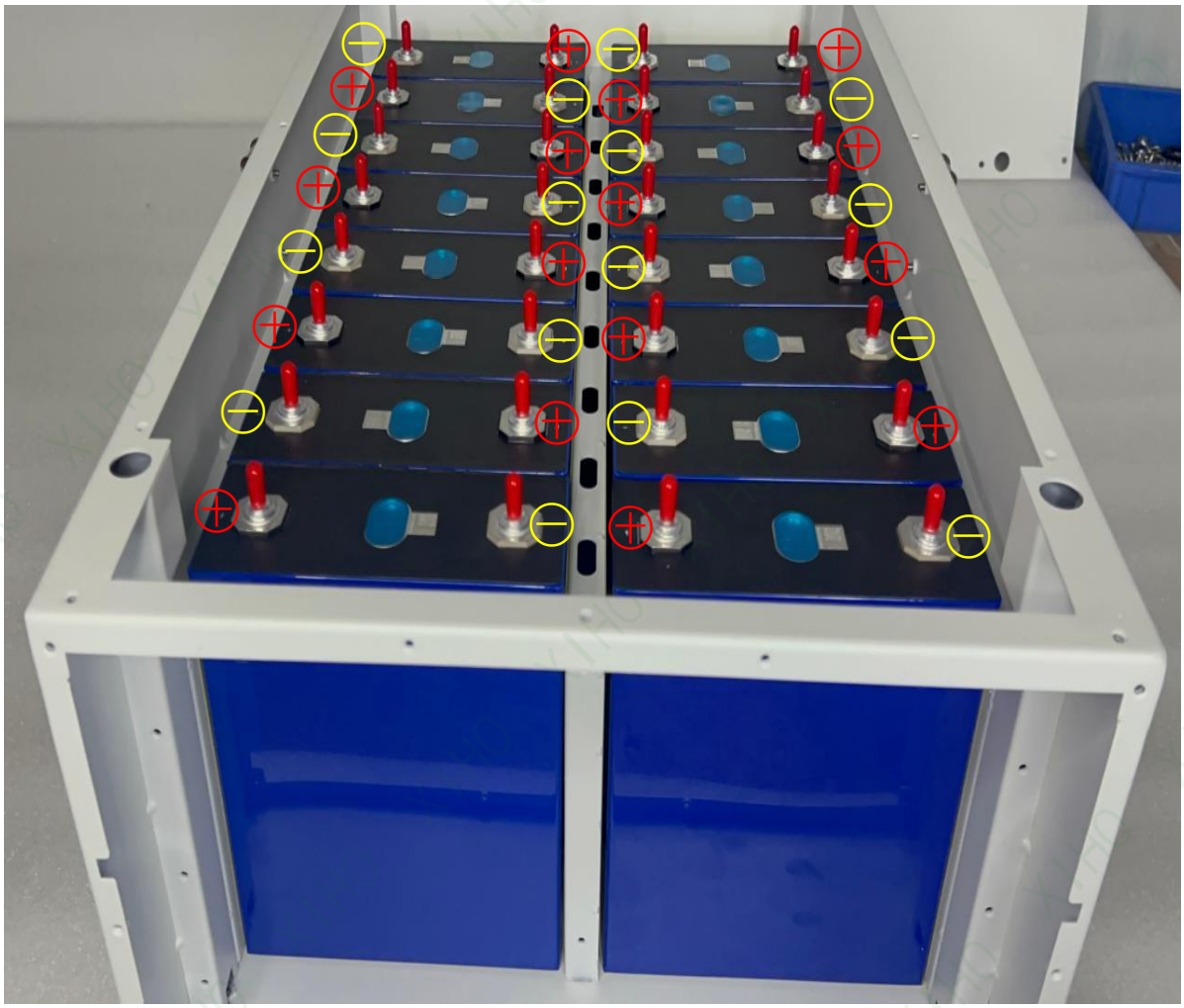
3.Put the epoxy board(K) and adhere EVA foam(K) padding onto the battery cells.





Assembly Steps:

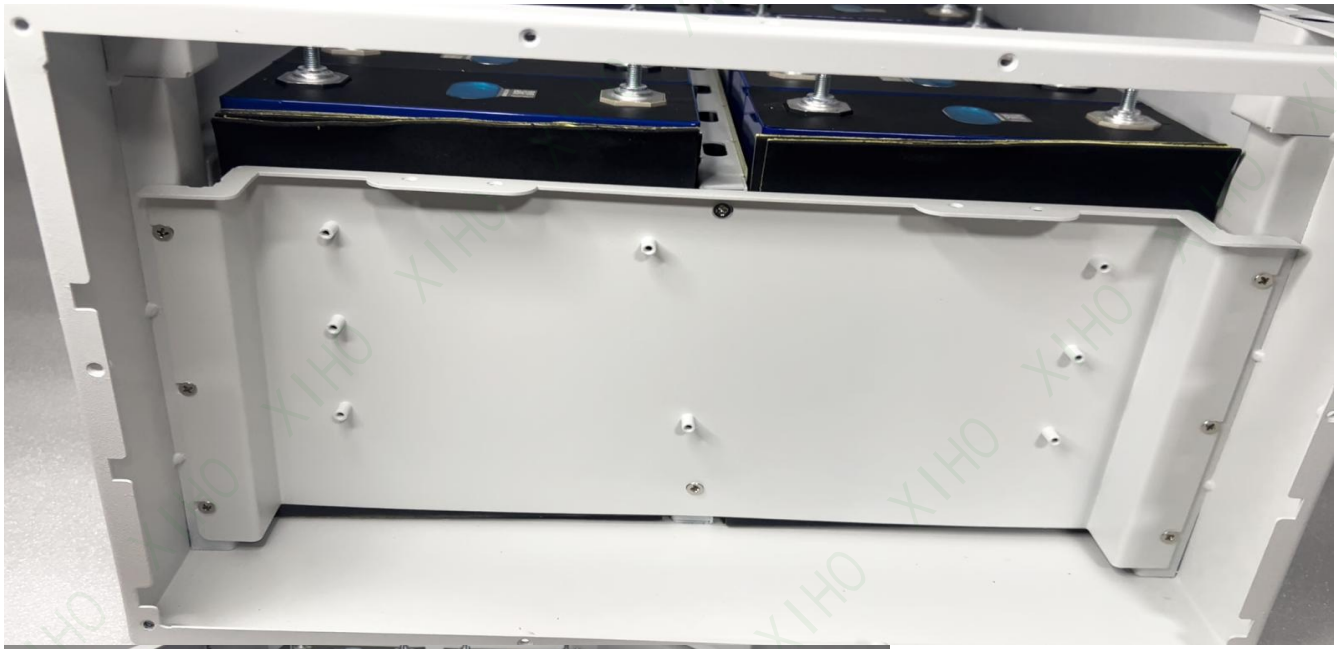
4.Align the battery cells according to the sequence as showed in following picture.
Pay attention to the 1st and 16th battery cells, the negative and positive terminals cannot be reversed.

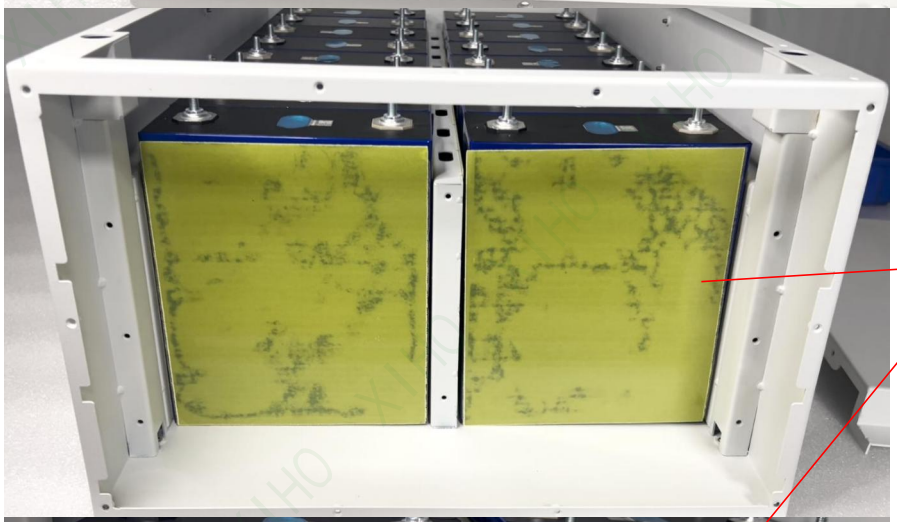


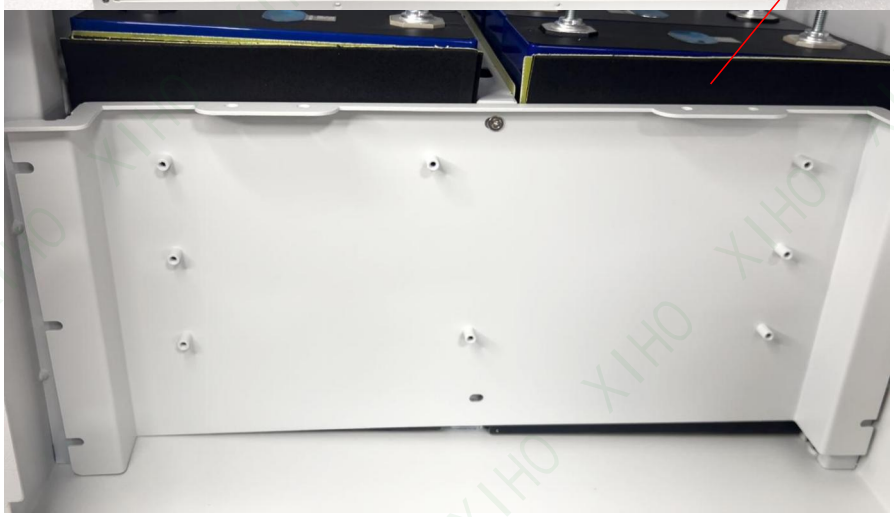
Voltage and internal resistance checking
Cells Voltage difference ≤ 20mV

Assembly Steps:

5.Install the middle plate(C) and securely fasten the screws.





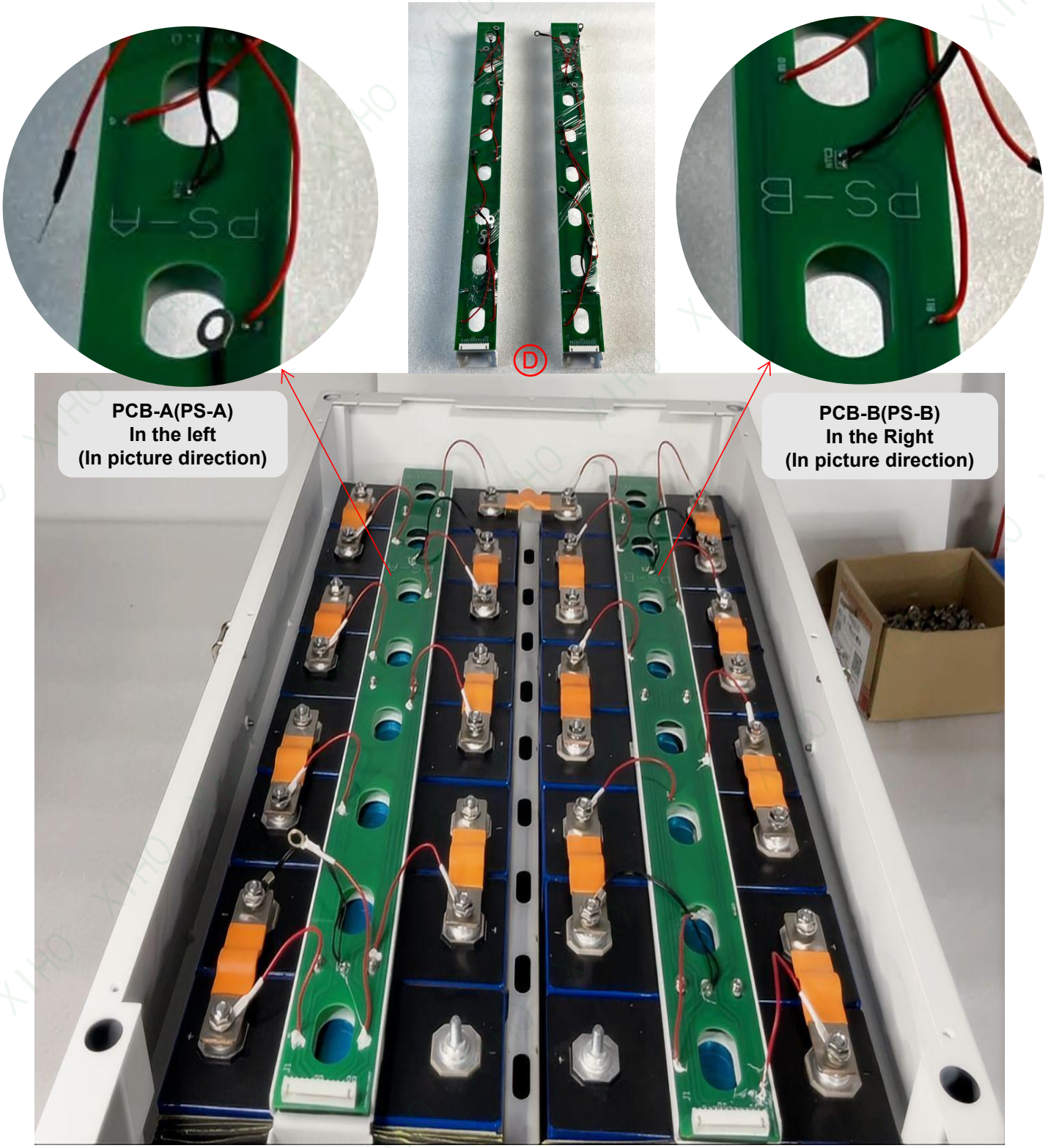


Note:

An epoxy board(K) and EVA foam(K) layer must be installed between the middle plate and the battery cells to provide electrical isolation and prevent short circuits.

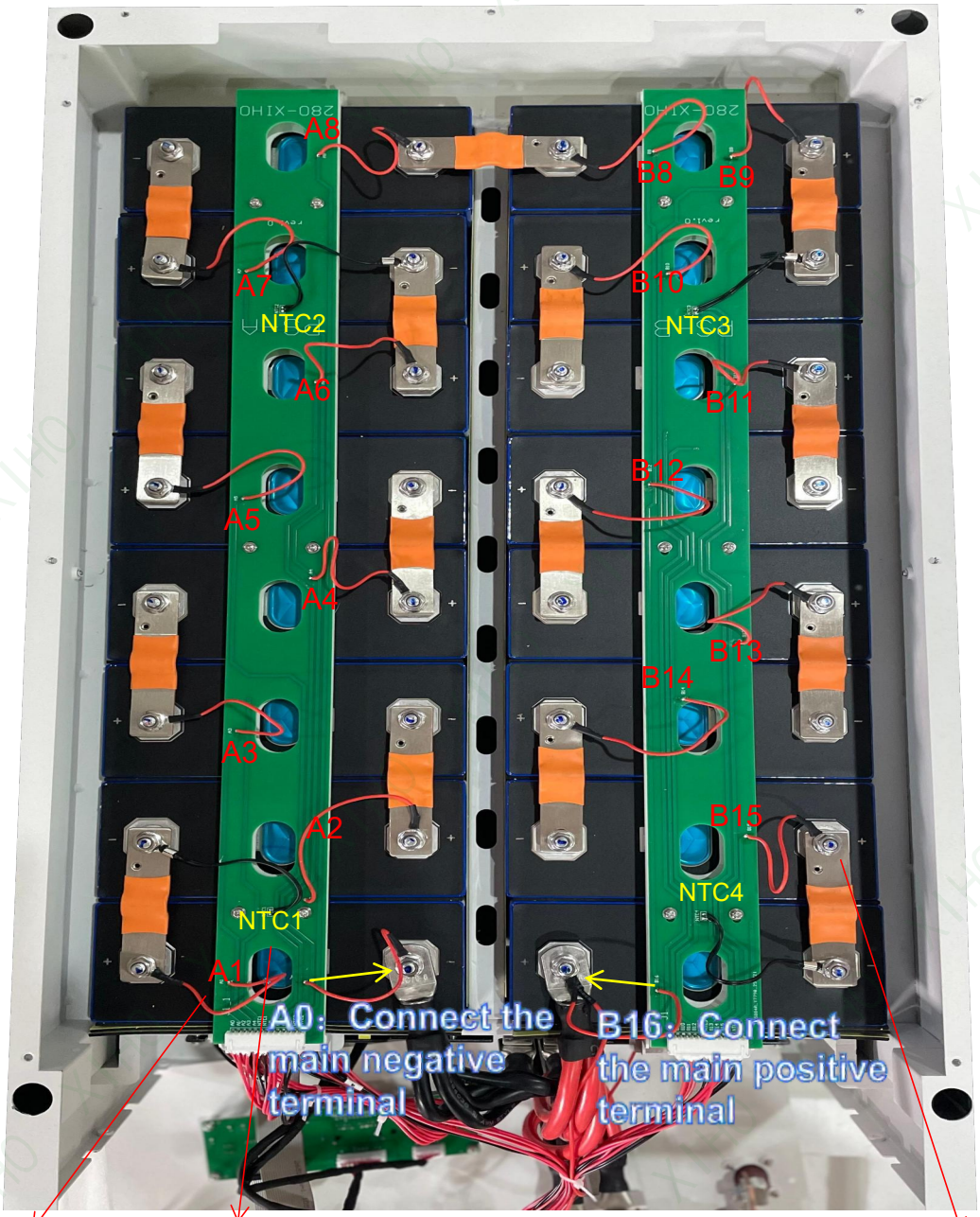
Assembly Steps:

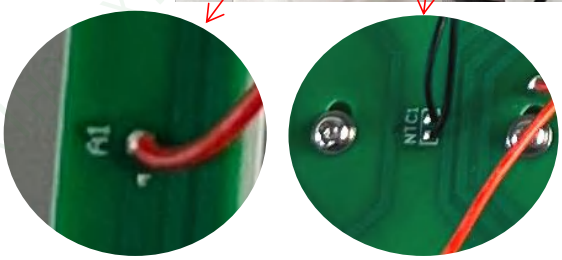
6. Install PCB board(D), **Pay attention to the position.**



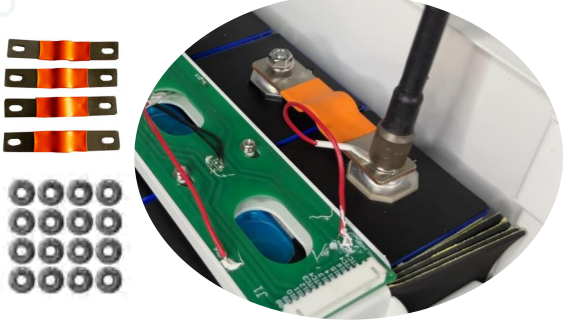
Assembly Steps:

7.Assemble the flexible busbar(L) and PCB bars harness in the sequence shown in the diagram, then torque the screws(M).





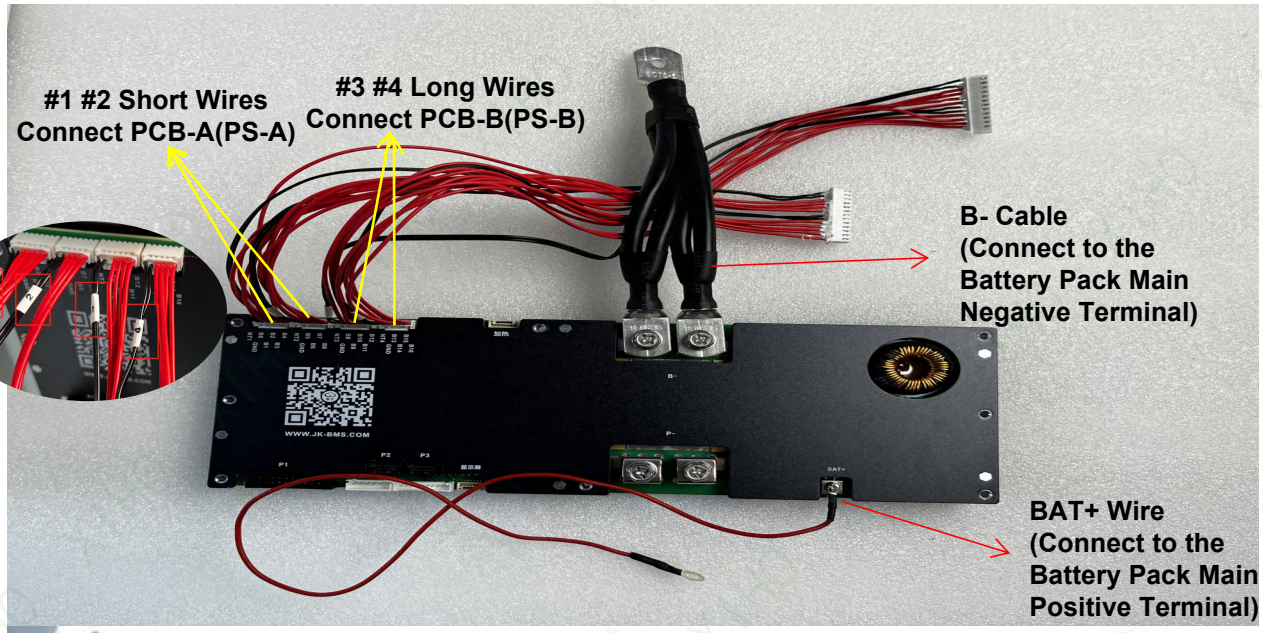
***Pay attention to the component designators on the PCB and their connections to the battery terminals**

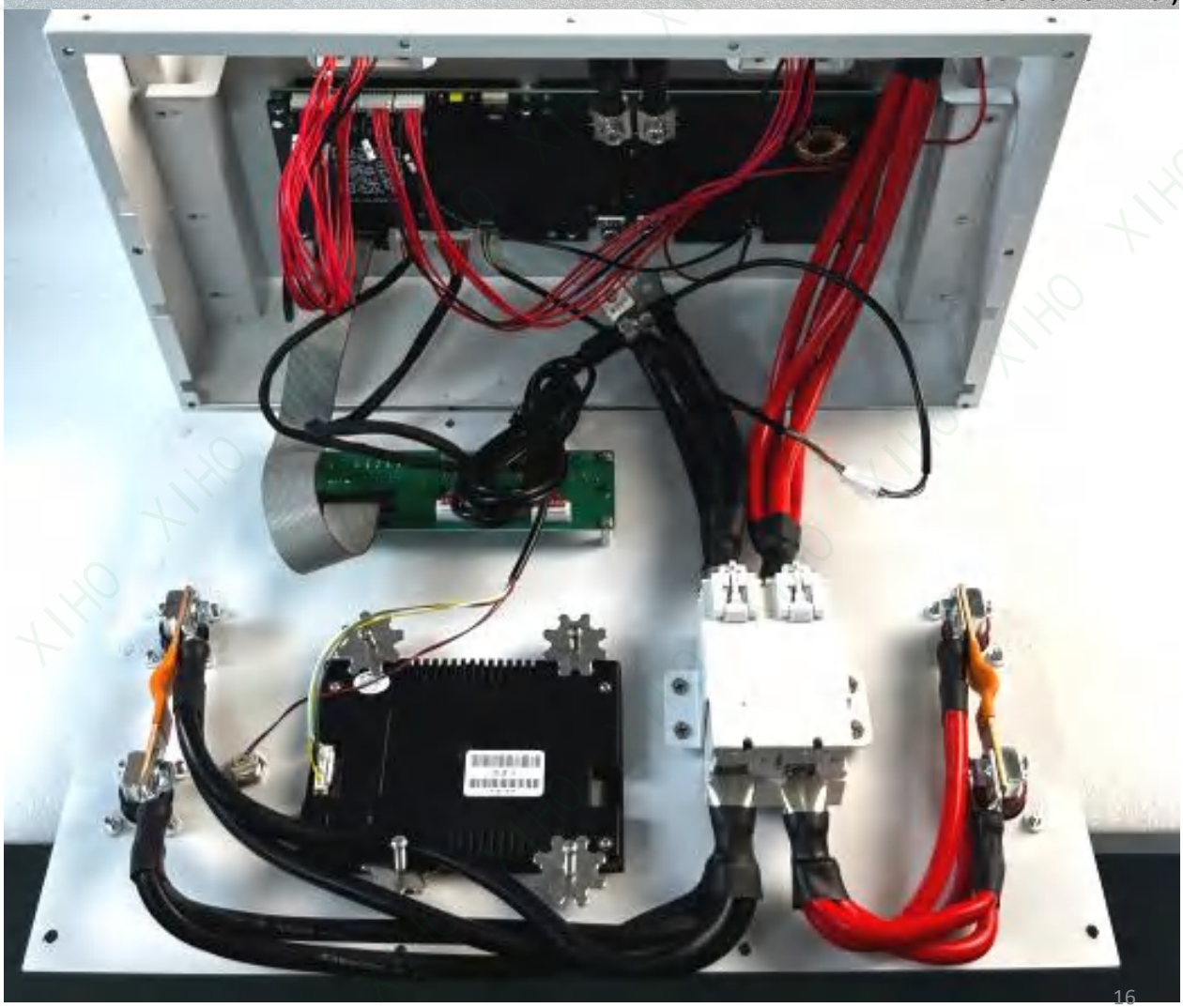


***Screw up(Torque: 5-6 Nm)**

Assembly Steps:

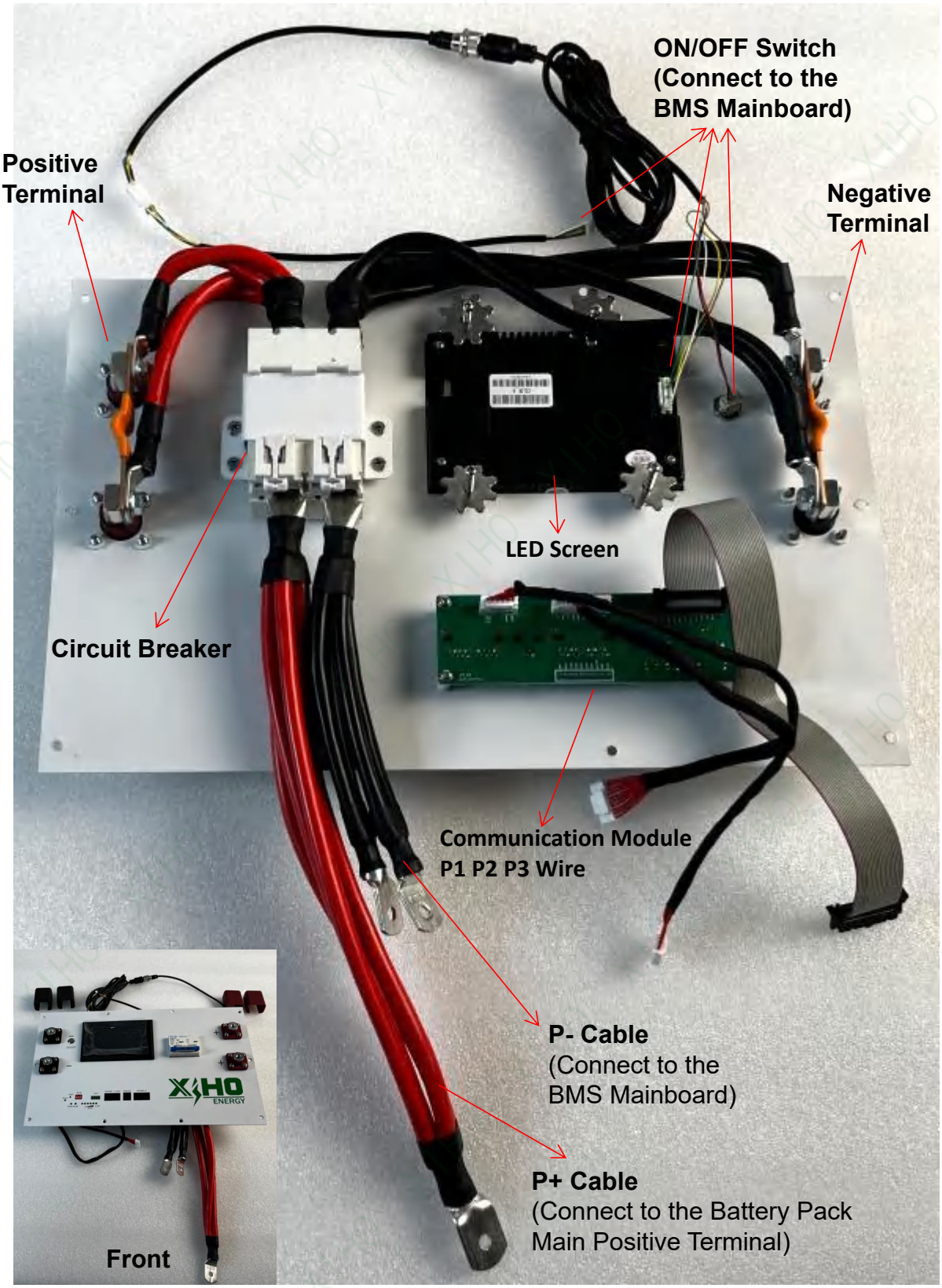
8.Install the BMS mainboard(E) (removed in Step 2) onto the middle plate(C).





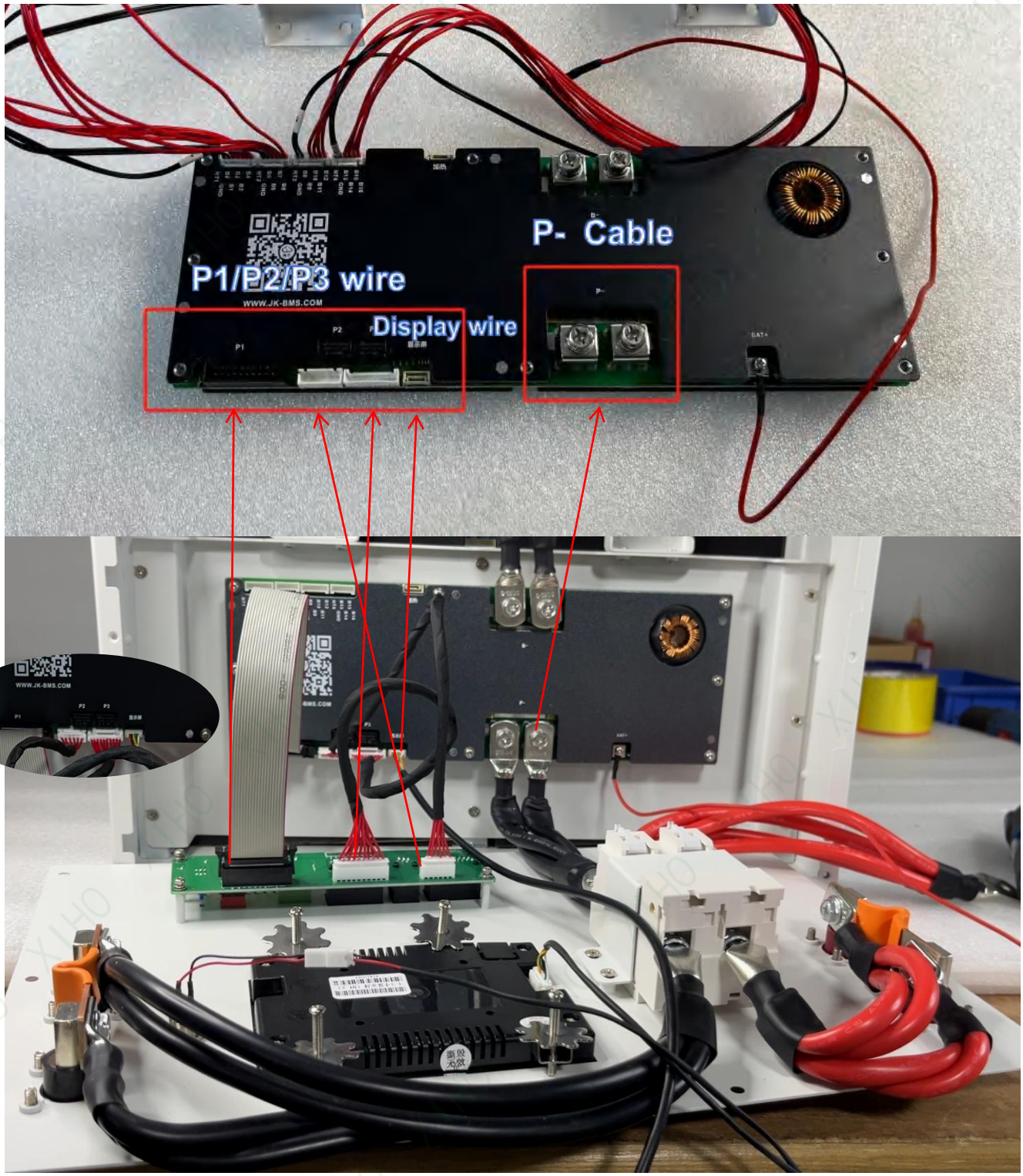
Assembly Steps:

9.Prepare the front panel(F) (removed in Step 2).



Assembly Steps:

10.Connect the BMS main board to the communication module and the P- cable，As shown in the picture above.



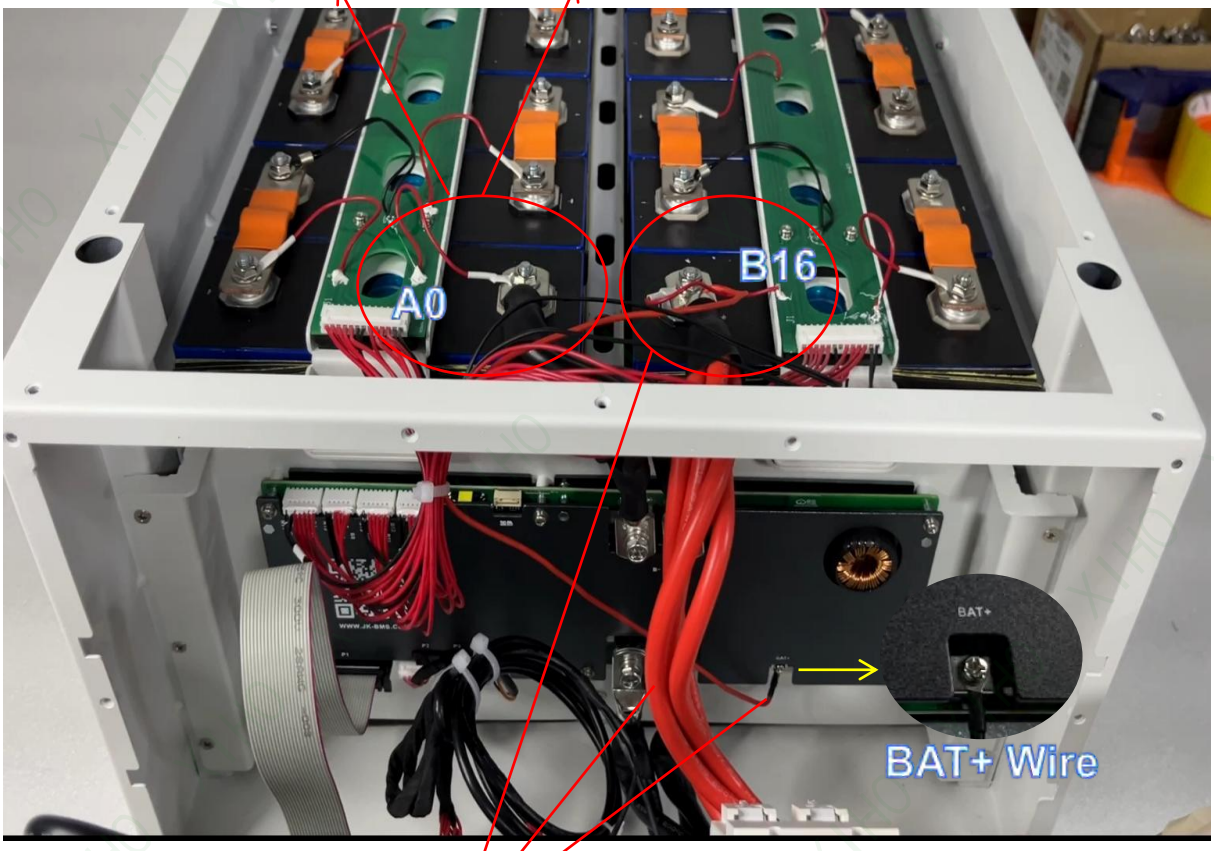
Assembly Steps:

11.Connect the battery pack's main positive and main negative terminals separately, then torque the screws(M).

Warning: When connecting, follow the correct sequence — connect the negative terminal first, then connect the positive terminal.

Note：Connect the positive terminal first

***Connect the B- cable on the BMS main board to the A0 wire on PCB-A (PS-A) to form the main negative terminal**



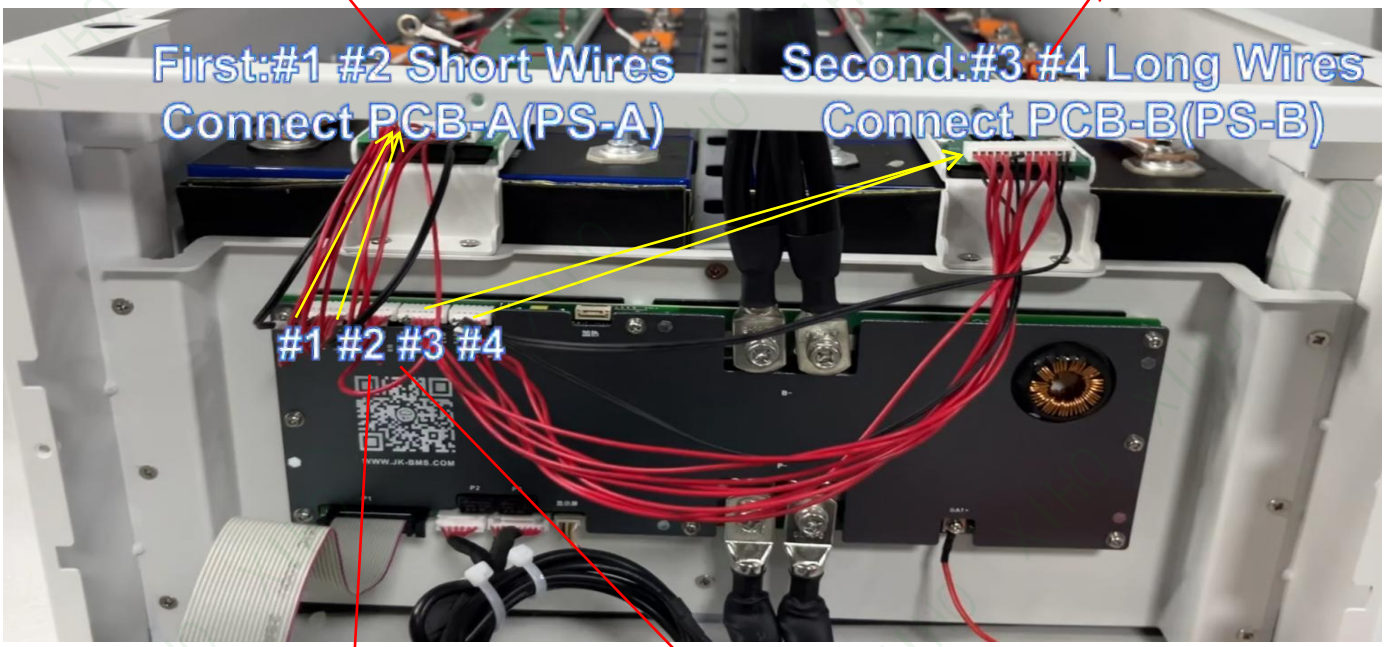
Note:Connect the negative terminal as the second step

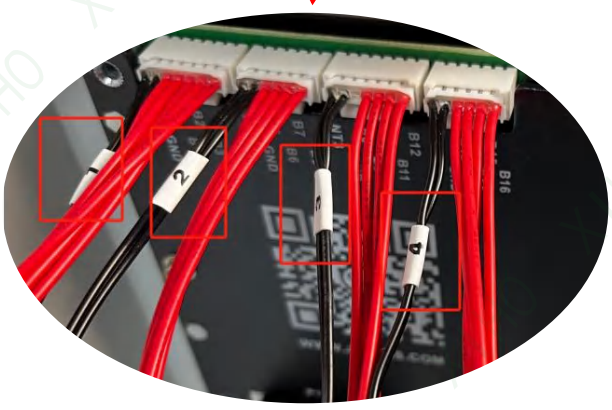
***Connect the BAT+ wire on the BMS mainboard, the B16 Wire on PCB-B (PS-B), and the positive cable from the front panel to form the main positive terminal**

Assembly Steps:

12.Connect the PCB wiring on the BMS mainboard to the PCB board according to the designated wiring sequence numbers**(Please Pay attention to the connection sequence, otherwise it may cause a short circuit).**

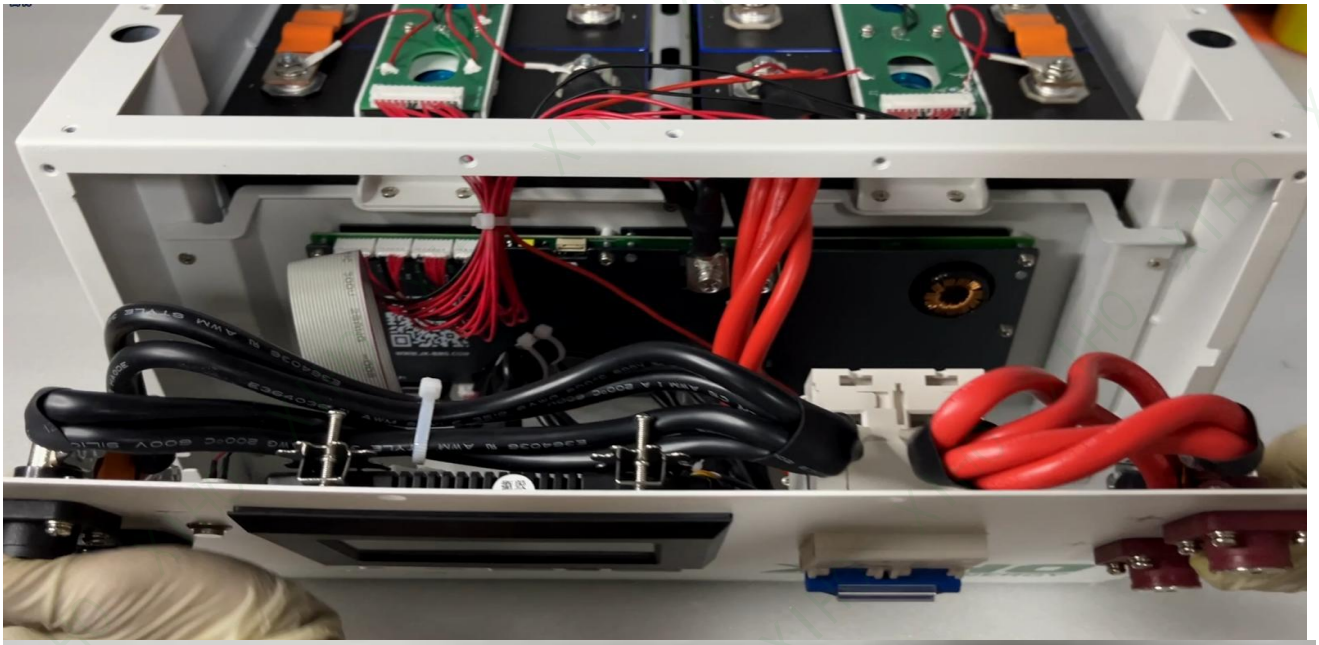
Warning: Connect lines 1 and 2 first, then connect lines 3 and 4. Follow this sequence strictly; otherwise, the BMS may malfunction or fail to operate.





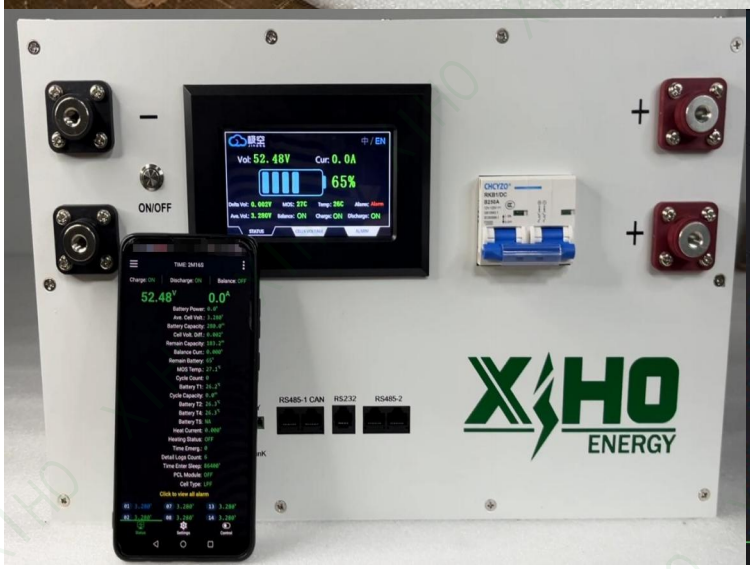
Assembly Steps:

13.Close the front panel(F) and secure the screws.



Assembly Steps:

14.Close the cover panel(B), secure the screws, power on the device, and connect to your smartphone via Bluetooth to view battery pack information.



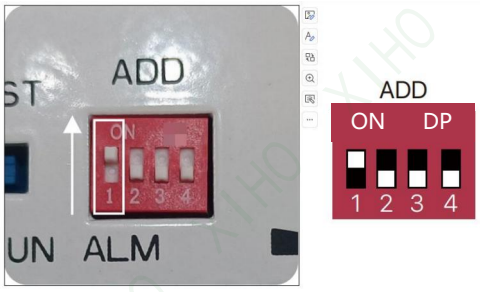
Operation of Upper System：

When multiple battery packs are connected in parallel, each pack must be assigned a unique address via DIP switches for proper operation. The address configuration table for the DIP switches is shown below.

4-BIT					
Address	Dip Switch Position				Illustration
	#1	#2	#3	#4	
0	OFF	OFF	OFF	OFF	
1	ON	OFF	OFF	OFF	
2	OFF	ON	OFF	OFF	
3	ON	ON	OFF	OFF	
4	OFF	OFF	ON	OFF	
5	ON	OFF	ON	OFF	
6	OFF	ON	ON	OFF	
7	ON	ON	ON	OFF	
8	OFF	OFF	OFF	ON	
9	ON	OFF	OFF	ON	
10	OFF	ON	OFF	ON	
11	ON	ON	OFF	ON	
12	OFF	OFF	ON	ON	
13	ON	OFF	ON	ON	
14	OFF	ON	ON	ON	
15	ON	ON	ON	ON	

Operation of Upper System：

Firstly, connect the USB to RS485 Cable from Battery to the PC/Laptop, dip switch 1 on the front plate, download the PC software and open it.
Secondly, modify the language, and check the status of the battery pack.



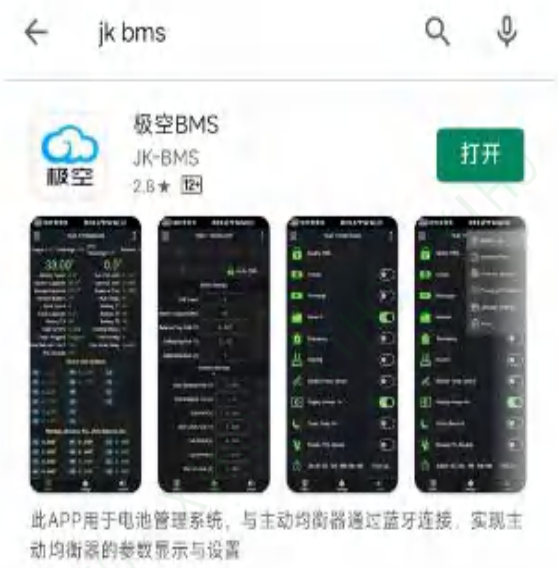
Operation of Bluetooth：

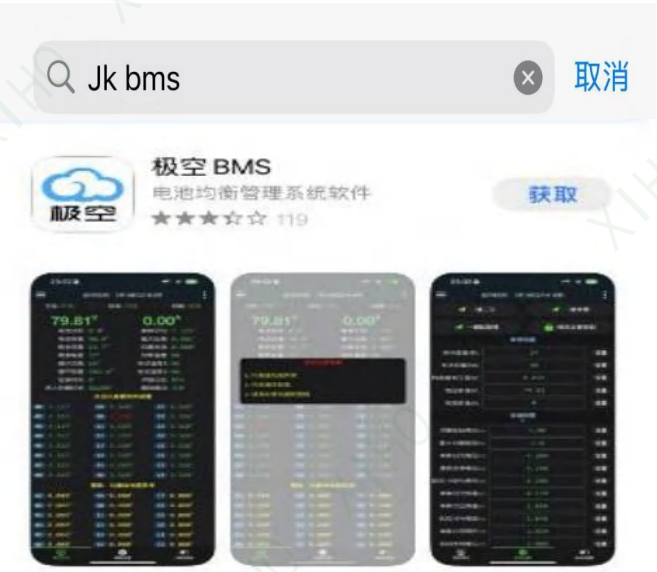
DIY KIT is equipped with a Bluetooth function, supports APP monitoring battery statuses. All information available in the battery, such as the state of charge, voltage, operating current, temperature, and other operating information are transmitted in real-time via the Bluetooth transmitter. The parameters can be made visible with the JK BMS App.

Download:

Android: "jk bms” in Google Play Store

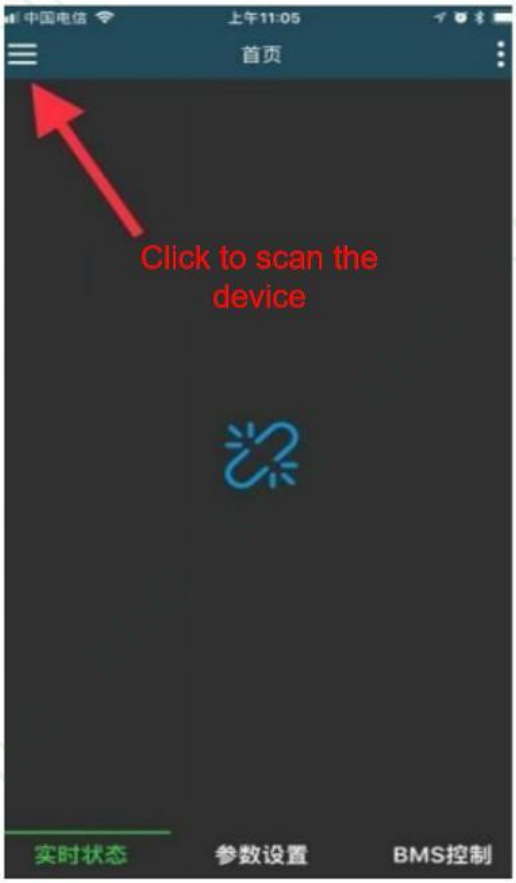
iOS: "jk bms" in Apple Store

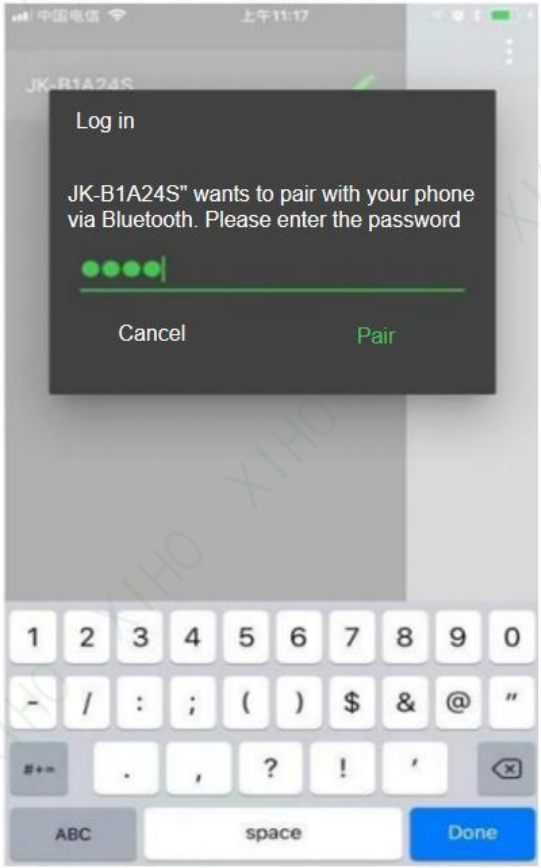




Operation of Bluetooth：

1. First, enable Bluetooth on your smartphone.
2. Open the app and tap the icon in the top-left corner to scan for devices.
3. After the scan completes, select the target device name (e.g., 'JK-B1A24S') from the list.
4. During the initial connection, the app will prompt for a pairing code. Enter the default password '**1234**'.
5. Once connected, the app automatically stores the password. For subsequent connections, simply open the app and tap the device name in the saved list to establish a link without re-entering credentials.
6. The password input interface is shown in the diagram below.

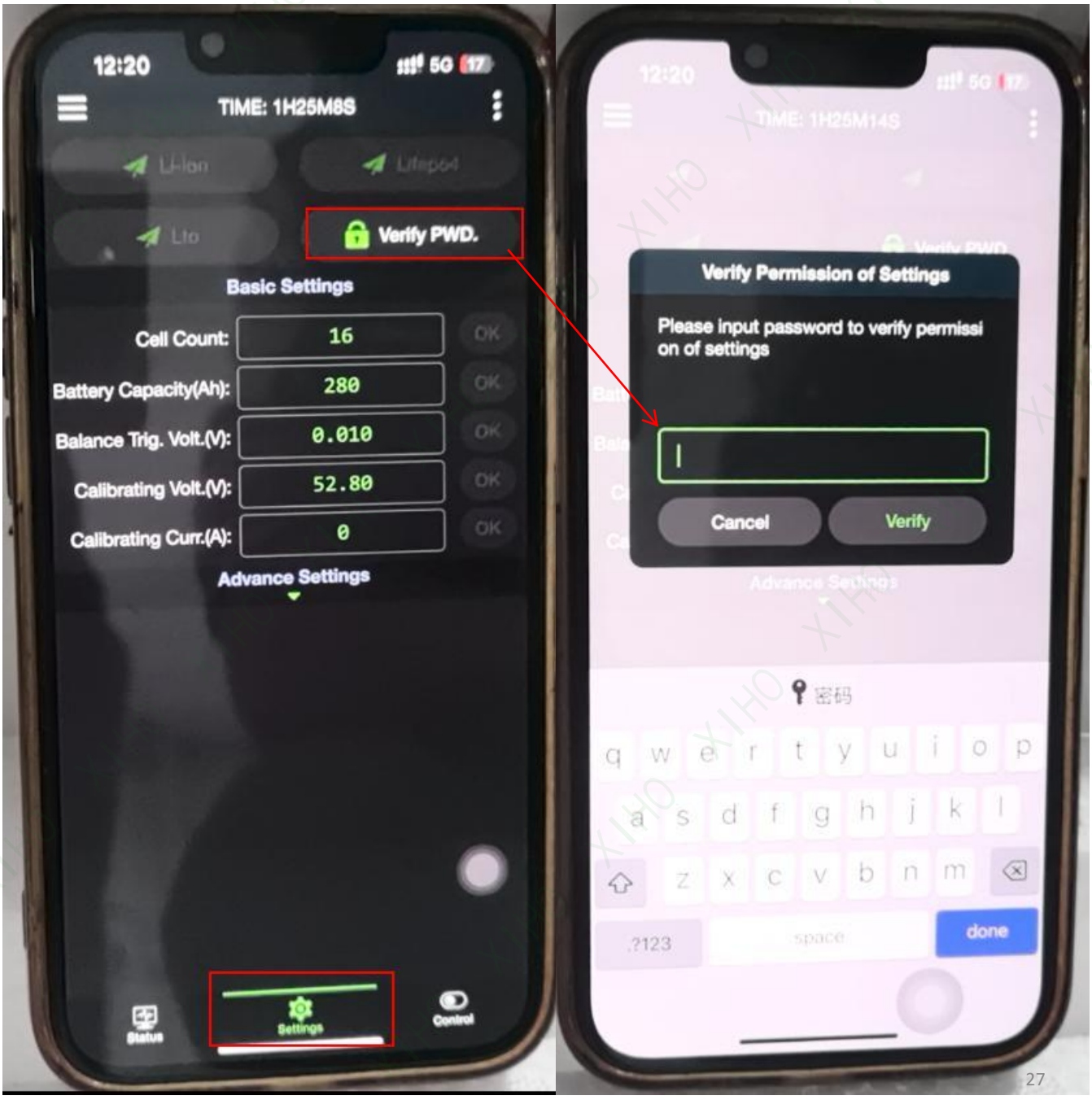




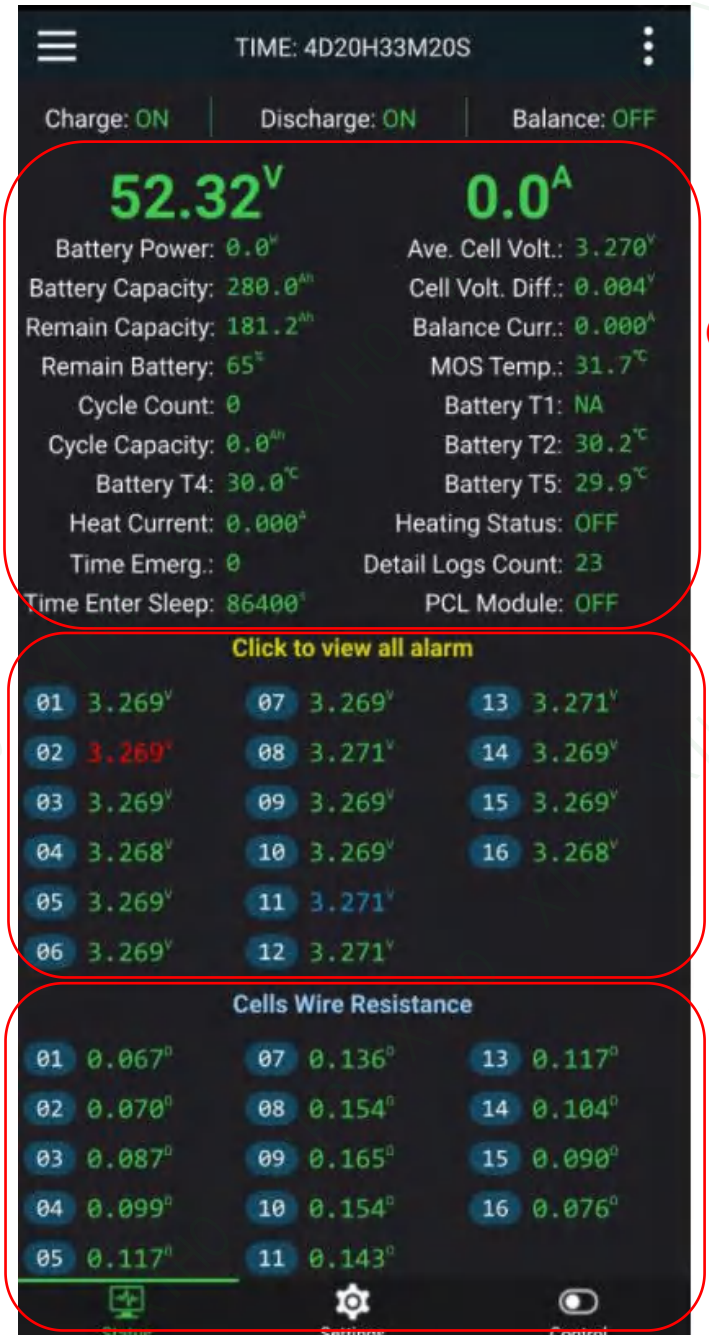
See the YOUTUBE video for more details:
https://youtu.be/jnVWLslE3-Q?si=uuBFxYLm-vypc_lx

Operation of Bluetooth：

Parameter Configuration: To modify the protection board’s operational parameters, you must first click the 'Authorized Settings' button and enter the parameter configuration password to verify access privileges. The default factory password for parameter settings is '**123456**'. Parameter adjustments are permitted only after successful password authentication. Note that the parameter configuration password and the device’s Bluetooth pairing password are independent of each other



Operation of Bluetooth：



①

Area 1: Battery Information Summary Panel

②

Area 2: Cell Voltage Monitoring Zone
Displays real-time voltage data of each individual cell in the battery pack. The cell with the lowest voltage is highlighted in red, while the highest voltage cell is marked in blue.

③

Area 3: Balancing Line Resistance Zone
Shows the balancing line resistance values calculated through the protection board's self-check. These values provide preliminary detection of wiring errors or poor contact. If the resistance exceeds a predefined threshold, the indicator turns yellow, and balancing functionality is disabled to prevent system instability.

Communication Compatible List：

No.	Brand Name	LOGO	Protocol	Baud Rate
1	GOODWE		CAN	500K
2	VICTRON		CAN	500K
3	GROWATT		CAN	500K
4	SOLAX		CAN	500K
5	SOFAR		CAN	500K
6	LUXPOWER		CAN	500K
7	MUST		CAN	500K
8	SOLIS		CAN	500K
9	SOROTEC		CAN	500K
10	MEGAREVO		CAN	500K
11	DEYE		CAN	500K
12	SMA		CAN	500K
13	VoltronicPower		RS485	9600
14	SRNE		RS485	9600
15	PYLON TECH		RS485	9600
16	GreatWatt		RS485	9600

Warnning：

Make battery pack must get all cells balanced before assembly.If there happens NOT know how to assembled or wrong assembly is not accepted refund.Professionals will detected voltage/resistance/appearance and other issues before every shipment,we can only ensure that the single battery cell is good,when arrival you can test the cells within 15 days after that means batteries have no problem,does not provide return nor refund.**If you found problems you can contact us for return or refund**.Battery can only be unused (the electrode intact,no welding,no wear,the appearance good)to provide return.Any return-behavior buyers need to be responsible for shipping fee.

1).Warranty period:

1 years(from the date of successful delivery)if the single battery capacity less than 80% initial capacity,take the test pictures or video to us,we willreplace it or give satisfied solution.

2).If any miss or damaged for the shipping.Please contact us firstly,then send us the picture or video to check.In case of loss of cargo or the battery is damaged and can not be used or there is a greater risk of use,we wil communicate with buyer if resend it or replace it or refund the product cost.If buyer send back the cells to seller,buyer should pay for the shipping cost.

3).These situations not provide return nor refund

①After the assembly or assembly process happen any problem,such as the protection board connected to the wrong wire burned lead to battery damage,charger failure,the assembly error or unbalanced assembly,etc.

②For damage caused,such as battery bulge/welded,battery pack without protection BMS caused by charging.

Green Energy

Change Lives

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