

# **SEPLOS MASON560L-H Installation Instructions**

## 一、 Box installation accessories:

1.Box mounting wheelsAs shown in Figure1,use 16 M6\*14Phillips hex screws with spring washer to fix (locking torque:10Nm)

2.Paste epoxy boards 1/2/3 in the cabinet in order.First tear off the centrifugal paper of the epoxy board film and paste them in the corresponding positions as shown in "Figure 2".

### Materials:

Box\*1PCS,wheel\*4PCS,Epoxy board A\*4PCS,Epoxy board B\*2PCS,  
Epoxy board C\*2PCS,M6\*14Phillips hex screw with spring washer\* 16 PCS

### Tool:

Electric Screwdriver,10 mm socket,PH2 cross bit



Figure 1

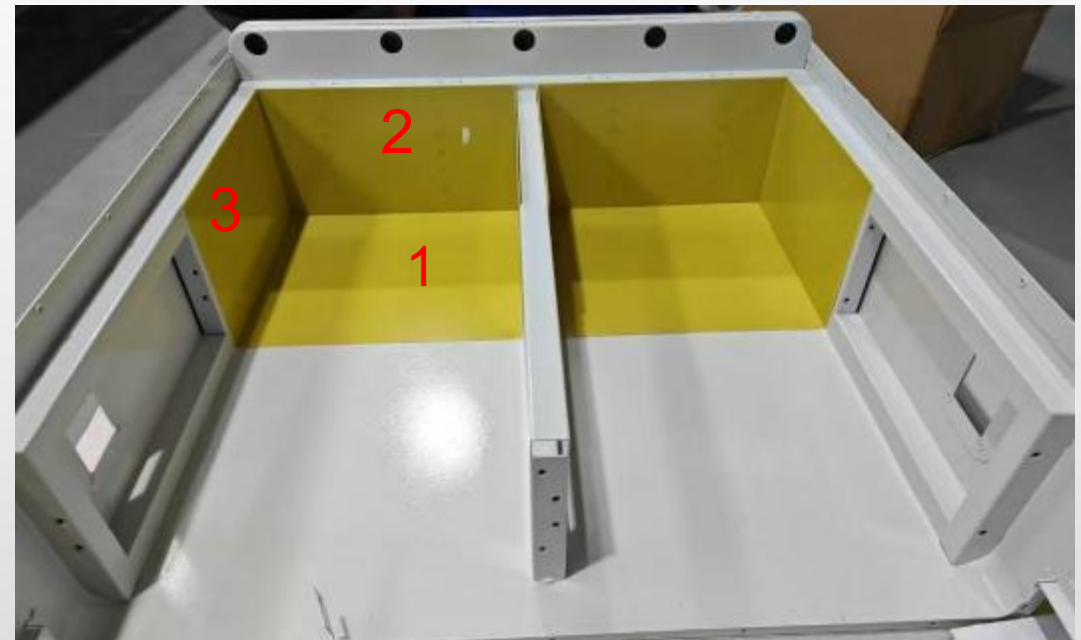


Figure 2

## 二、 Box installation accessories:

1. Battery cell grouping test, as shown in "Figure 1", use instruments to test the battery cells and group them as required;

2. As shown in Figure 2, paste EVA foam and PC gasket on the corresponding surfaces of the battery cells. The overall position is as shown in the schematic diagram on the next page to separate the battery cells.

### Materials:

Cell\* 32 PCS, Foam\* 56 PCS, PC gasket\* 112 PCS

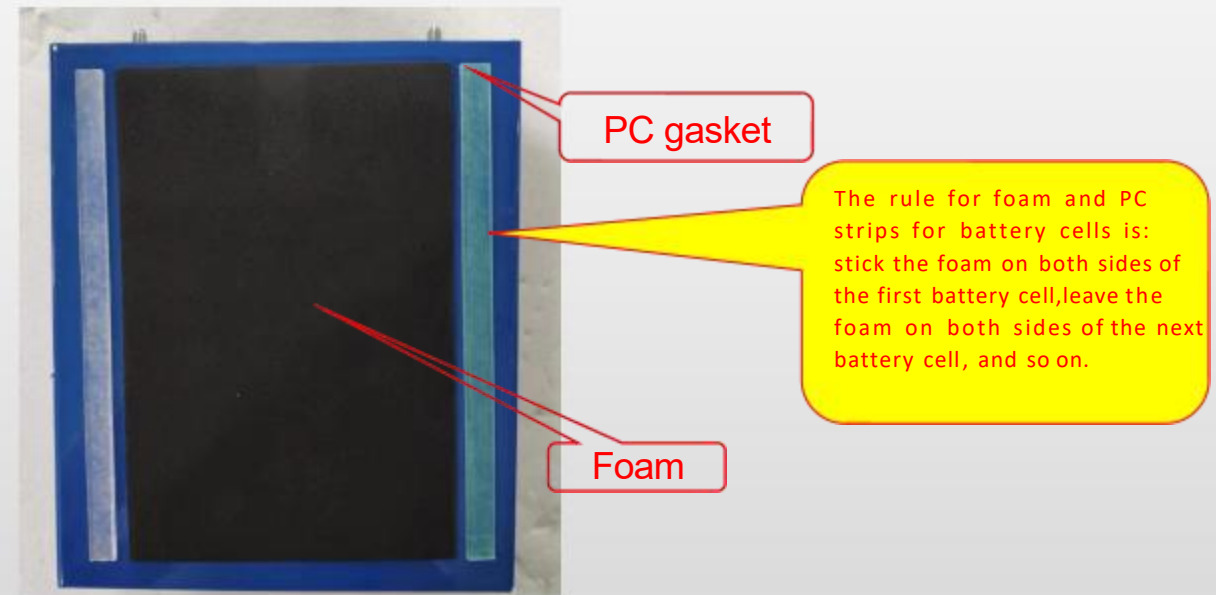
### Tools:

Internal resistance tester



Figure 1

Figure 2



### 三、 The cells are stacked into the box:

1.As shown in "Figure 1", after the battery cells are tested and assembled as required,EVA foam and PC gaskets are pasted on the corresponding surfaces of the battery cells.The overall position is as shown in the schematic diagram of "Figure 1" to separate the battery cells.

2. As shown in Figure 2, stack the cells in series into the box, with the sheet metal interlayer in the middle fixed with M6\*35 screws (locking torque: 15Nm).

3.As shown in Figure 3, tear off the release paper from the epoxy board and stick it into the box.

4. Install the left and right end plates as shown in Figure 4, and tighten them using 6 M6\*35Phillips hex screws with spring washer (locking torque: 15Nm).

#### Materials:

End Plate\*2PCS ,Cell\*32PCS ,Epoxy board A\*8PCS  
Epoxy board B\*6PCS,Epoxy board C \*2PCS,  
M6\*35Phillips hex screw with spring washer \*  
16PCS

Tool: Electric Screwdriver、 13mm socket、 PH2 cross bit

Note: Due to the tolerance of battery cells from different manufacturers, if there is still looseness after affixing the foam as instructed, add foam filling at the head and tail.

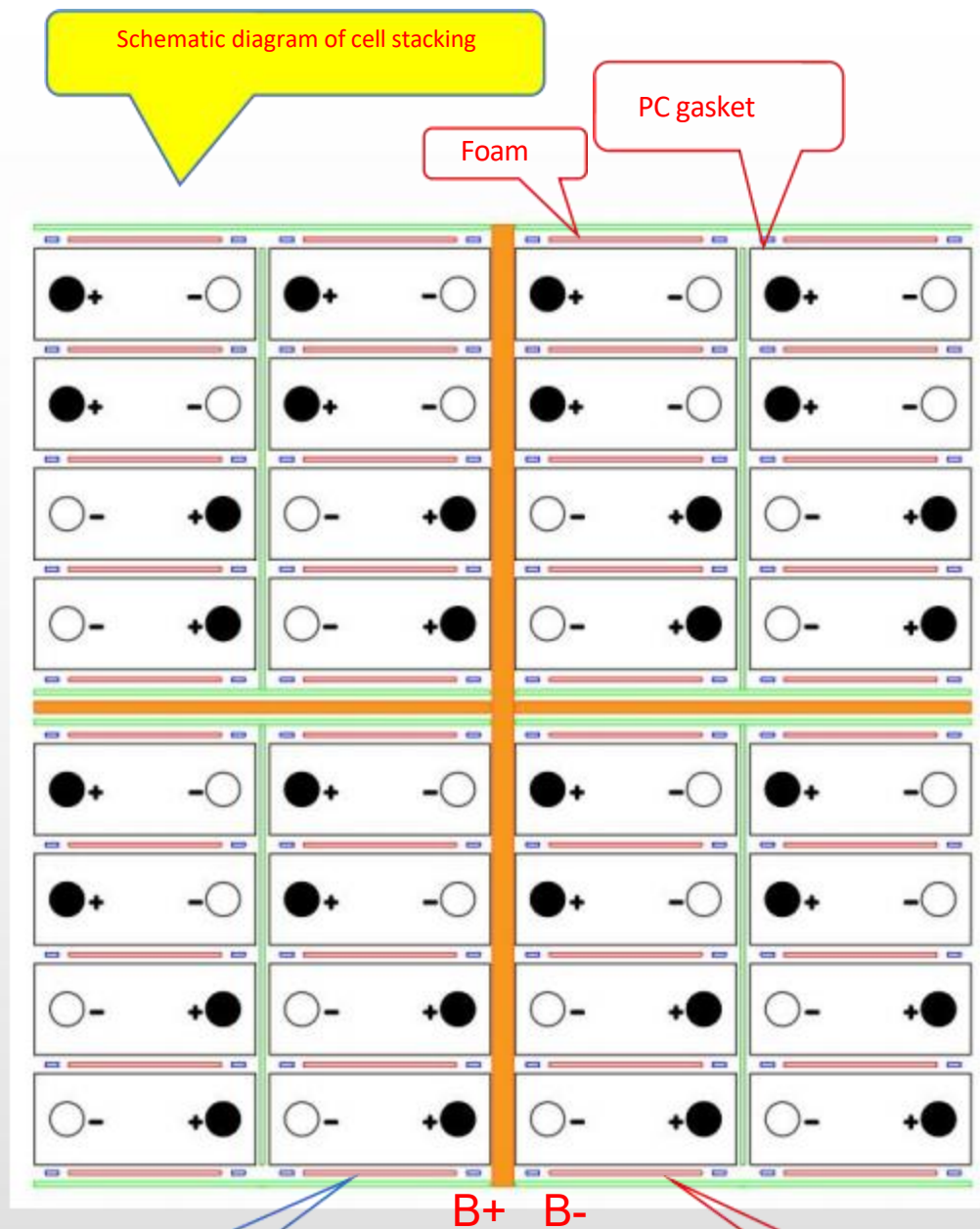


Figure 1

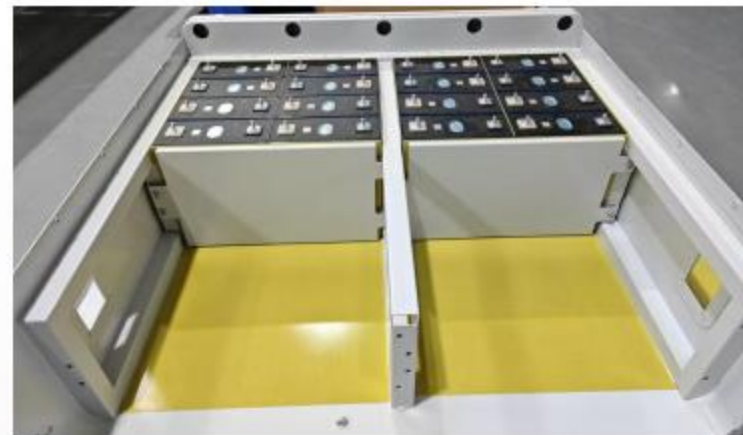


Figure 2

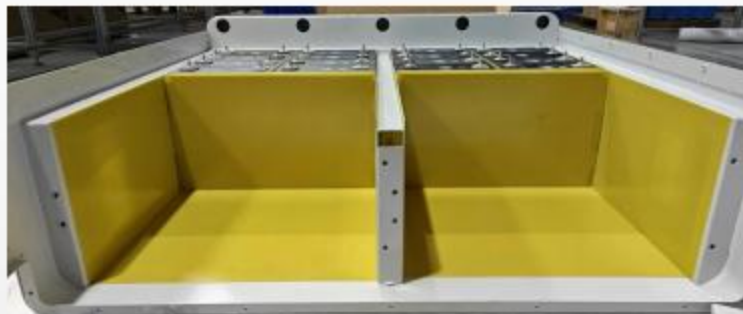


Figure 3



Figure 4

Left end plate

Right end plate



#### 四、Install aluminum bar:

1. Install the aluminum bars in series in the corresponding positions on the poles as shown in Figure 1.

##### Materials:

XY-6 Aluminum bar\* 4 PCS,  
XY-7 Aluminum bar\* 8 PCS,  
XY-8 Aluminum bar\* 1 PCS,  
XY-9 Aluminum bar\* 2 PCS

##### Tools:

small rubber hammer

Figure 1



## 五、Install the acquisition board and voltage strip:

1.Stick foam on the pressure strip, as shown in "Figure 1".

2.Install the sampling plate on the voltage strip, as shown in "Figure 2". Pay attention to the direction of the voltage strip and the sheet metal, and use 6 M4\*8Phillips hex screws with spring washer to tighten it(locking torque: 3Nm)

3.Install the voltage strip into the box. As shown in Figure 3, install the acquisition board into the box according to the corresponding positions of A/B/C/D and fix it with M5\*10 screws (locking torque: 5Nm).

### Materials:

Foam\*4PCS,Layering\*4PCS,Sampling Plate\*4PCS,

M4\*8Phillips hex screw with spring washer\*24PCS

M5\*10Phillips hex screw with spring washer \*16PCS

Tool : Electric Screwdriver、PH2 cross bit

Figure 1



Figure 2



Figure 3



The acquisition board plug is installed on the wider sheet metal end.

After tightening the aluminum row screws, check with a torque wrench and mark them.



## 六、 Install the sampling line ear:

1. Install the sampling wire ears and temperature sensing wires, as shown in Figure 1. Install the sampling wire ears at the corresponding positions and lock the M6 flange nut. (locking torque: 6Nm)
2. Lock the aluminum bar nuts. As shown in Figure 1, the aluminum bar is locked with an M6 flange nut. (locking torque: 6Nm)
3. Use a torque wrench to check whether each nut is tightened, and then mark it with a marker;

Materials:

M6 flange nut\*60PCS

Tool:

Electric Screwdriver, 10mm socket, Torque wrench

After tightening the aluminum row screws, check with a torque wrench and mark them

Install the acquisition line ear and tighten the screws

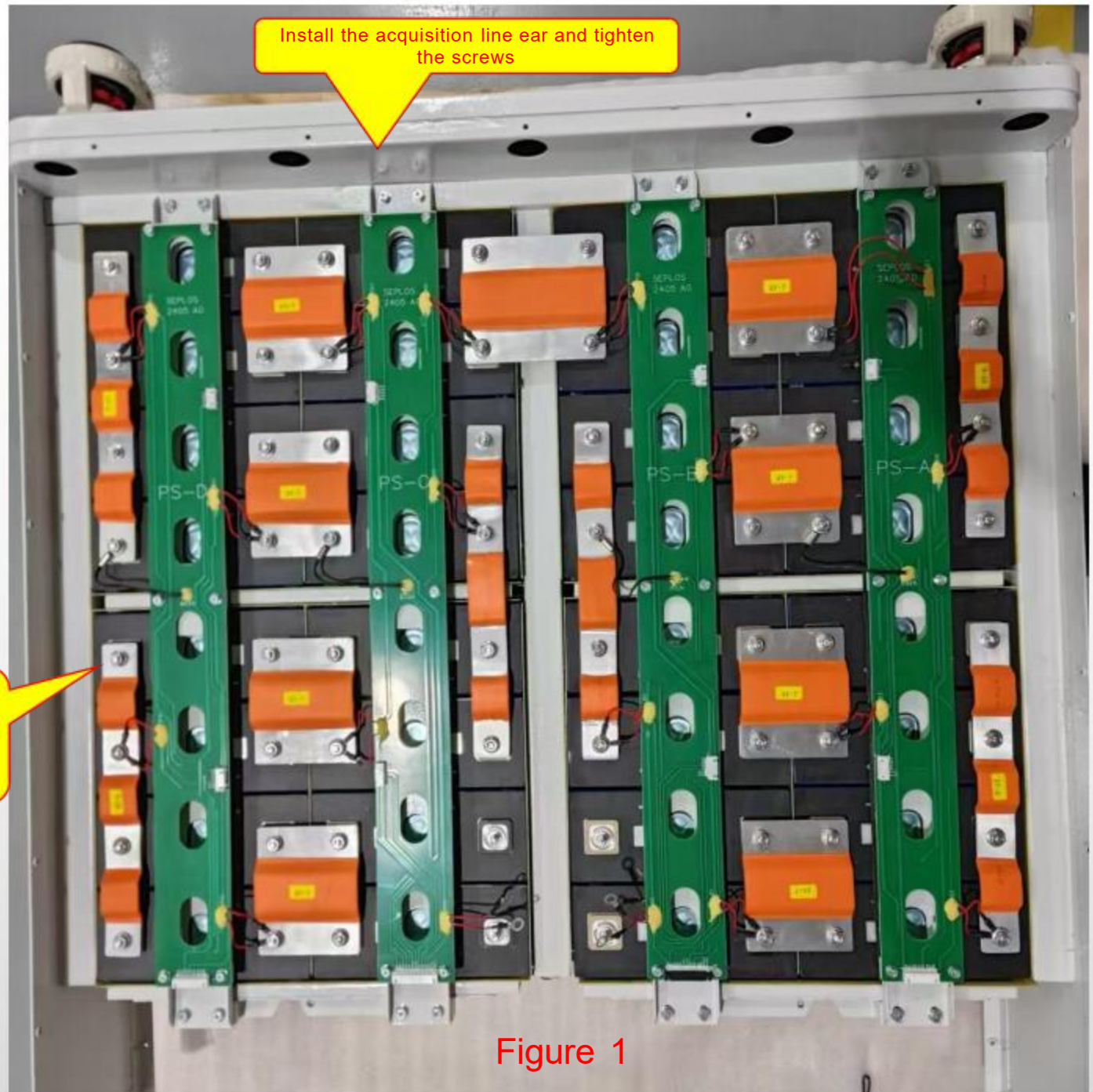


Figure 1

## 七、Install BMS into sheet metal:

1. Install the BMS on the sheet metal bracket, as shown in Figure 1. Install the BMS on the sheet metal bracket, use 6 M3\*8 Phillips round head screw locks (locking torque: 1Nm)
2. Install the copper busbar and fix it with the screws provided by the BMS (locking torque: 8Nm)
3. Install the small B+ line and fix it with the screws provided by the BMS (locking torque: 1Nm)
4. Insert sampling lines A and B, screen line, light board line, and adapter board line.
5. Use a torque wrench to check whether each nut is tightened, and then mark it with a marker;

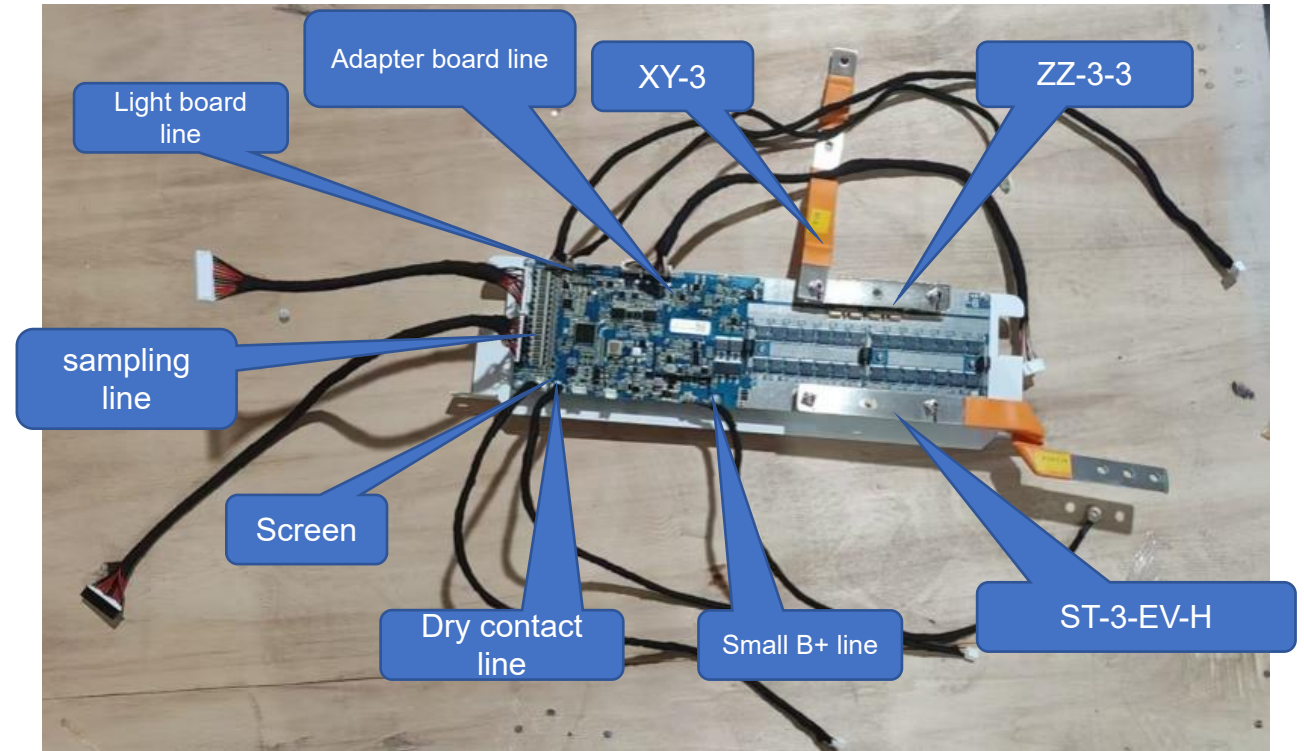
### Material:

BMS\*1PCS, BMS bracket\*1PCS, Copper busbar XY-3\*1PCS, ST-3-EV-H\*1PCS, ZZ-3\*1PCS, Small B+ line\*1PCS, Black sampling line \*1PCS, White sampling line\*1PCS, Display line\*1PCS, Light board line\*1PCS, Adapter board line\*1PCS, M3\*8 Phillips screw\*6PCS, M5\*25 screw\*2PCS

### Tool:

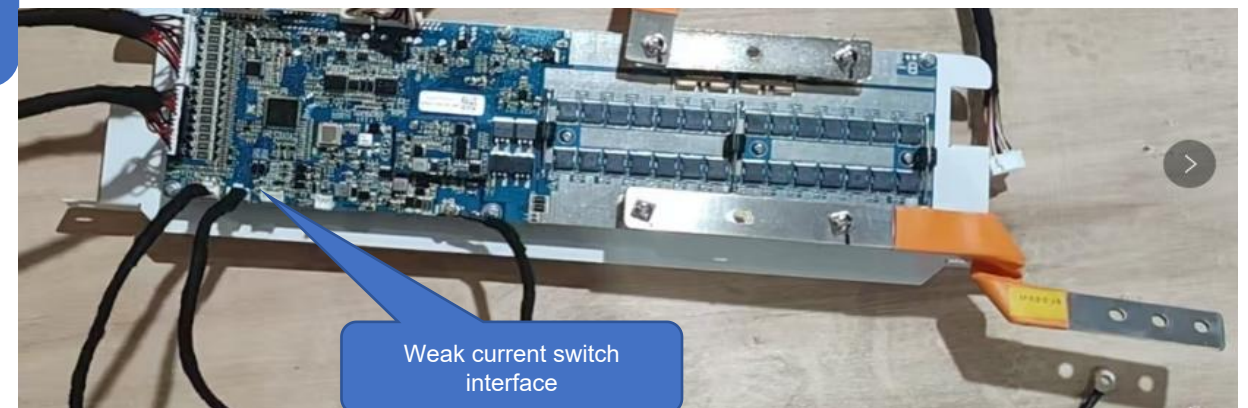
Electric batch, PH2 cross bit, PH1 cross bit, Torque wrench

Figure1



After tightening the electrical connection screws, check with a torque wrench and mark them.

Figure 2

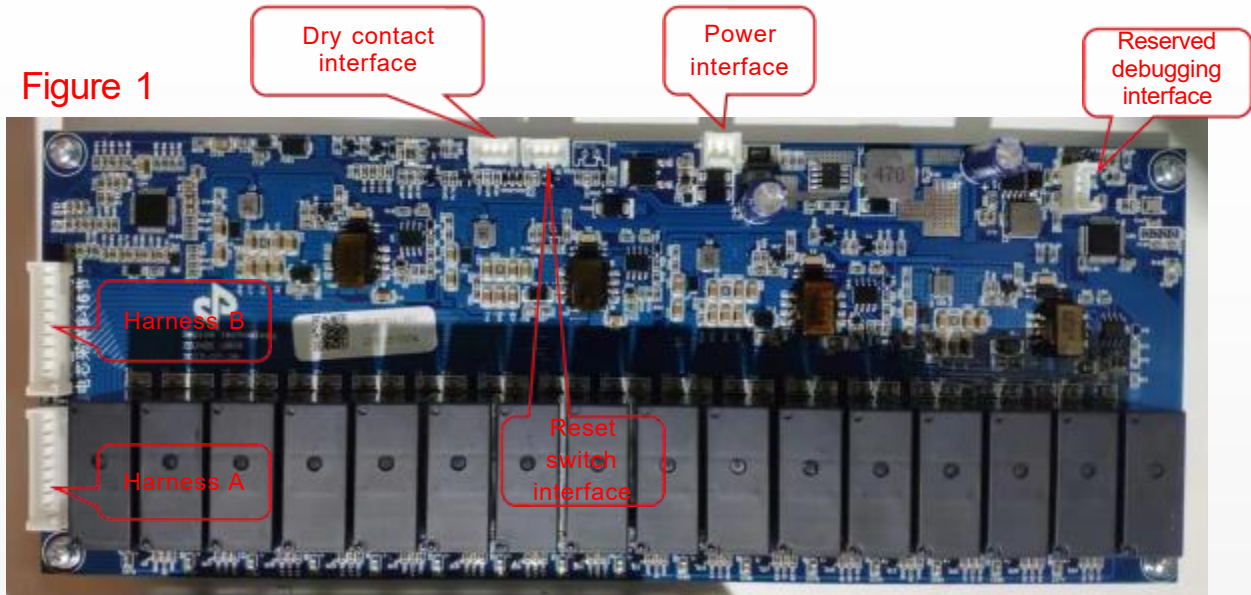




## 八、 Introduction to the function port of the balance board:

1. The function of the balance board interface is introduced in Figure " 1" .  
Please install the balance board according to the instructions in the figure.

Balance board reset  
button LED indicator  
Description



State	Functional Description
Standby	The LED light of the active balance board flashes in standby mode
Turn on Balance	The LED light of the active balancing board is always on in the balancing state.
Power on	Press the reset button and the LED light flashes once to turn on the balance board
Power off	Press the reset button, the LED light flashes 6 times, then the LED light goes out and the machine shuts down.
Stop balancing	In the balancing state, press the reset button and the LED light flashes 4 times to stop balancing. Press the reset button and the LED light flashes 4 times to start balancing.

## 九、Front panel mounting accessories, balance board:

1.Top plate installation accessories: Install the balancing plate and adapter plate as shown in "Figure 2" and fix them with 3 M3\*8 cross screws (locking torque: 1Nm) ;  
Install terminal socket \*2, use 8 M4\*10 hexagon sockets to fix (locking torque: 3Nm) ;  
Install the switch key, install the switch key corresponding to ON/OFF into the sheet metal, and then insert it into the interface of the balancing board;  
P+ copper busbar: TS-1, fixed with M8\*16 hexagon socket (locking torque: 8Nm);

2.Install the circuit breaker into the sheet metal and fix it with M3\*6 countersunk screws (locking torque: 1Nm)Install 3P-1 and ST-2-EV-H copper busbars and use the screws provided by the circuit breaker to lock them (locking torque: 8Nm)

3. Enter and exit the data line at the corresponding position.

### Material:

Front panel\*1,balance board\*1,Copper row ST-2-EV-H\*1, TS-1\*1,3P-1\*2,circuit breaker\*1,connector socket\*2, adapter board\*1,On/off key\*2,switch\*2, Balanced acquisition line\*2,M4\*10 Hex socket flat head screw \*8PCS,M3\*8 Phillips round head screw\*4PCS,M6\*14Phillips hex screw with spring washer\*2PCS,M8\*16Phillips hex screw with spring washer\*2PCS,M3\*6 Countersunk head screws\*6

Tool: Electric batch、PH2 cross bit、PH1 cross bit、10mm socket、13mm socket、Hexagonal H2.5 bit

Figure 1

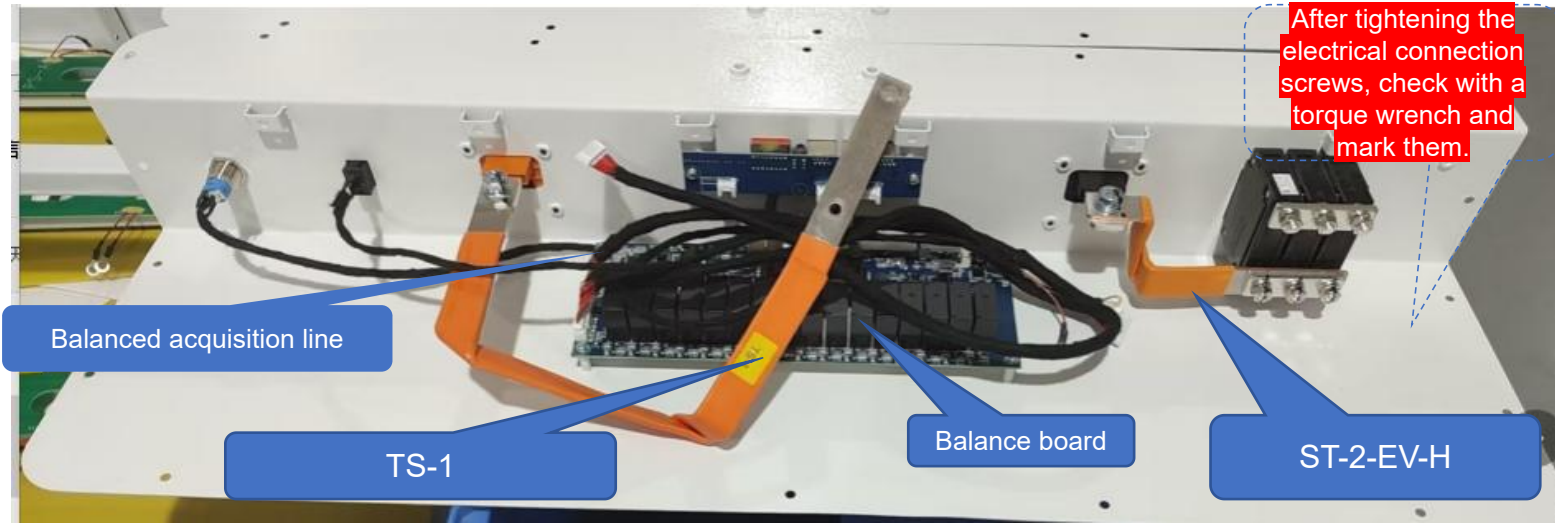


Figure2



Figure3

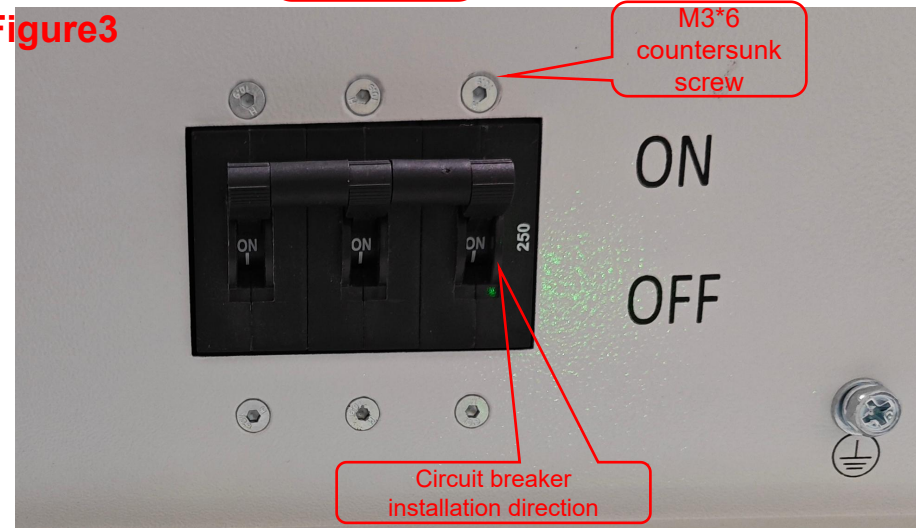
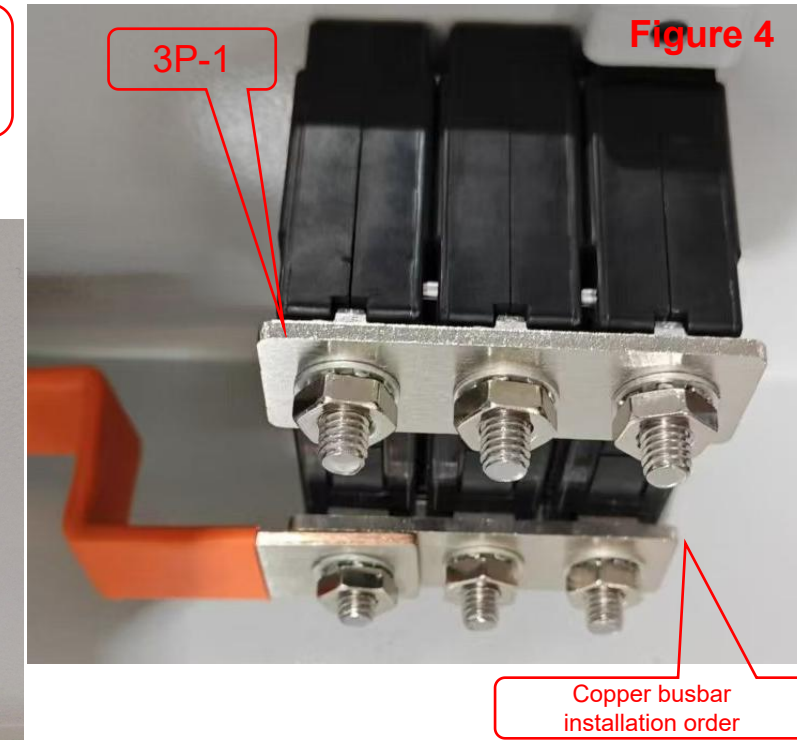


Figure 4





## +、Install the BMS bracket into the box:

1.Install the BMS bracket into the box, as shown in Figure 1;

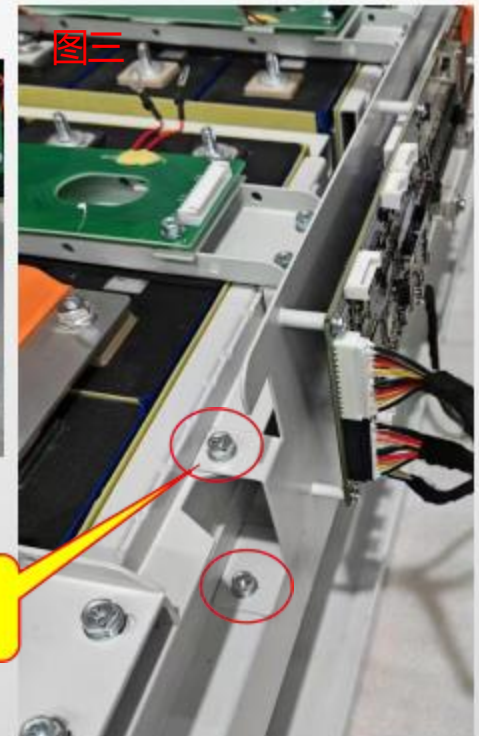
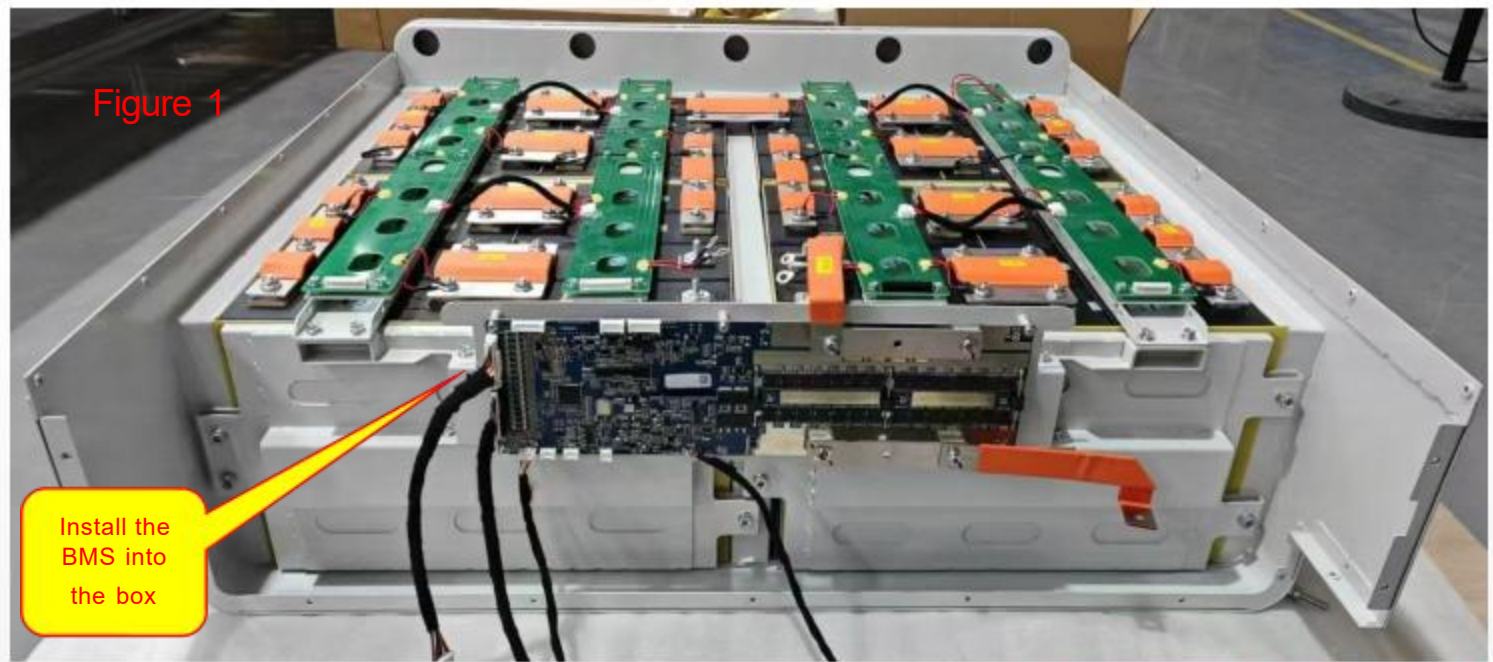
2.As shown in Figures 2 and 3, use 4 M4\*10 hexagonal screws to fix the BMS bracket. (locking torque: 3Nm)

Materials:

M4\*10 Cross hexagon screw\*4PCS

Tool:

Electric Screwdriver、 PH2 cross bit





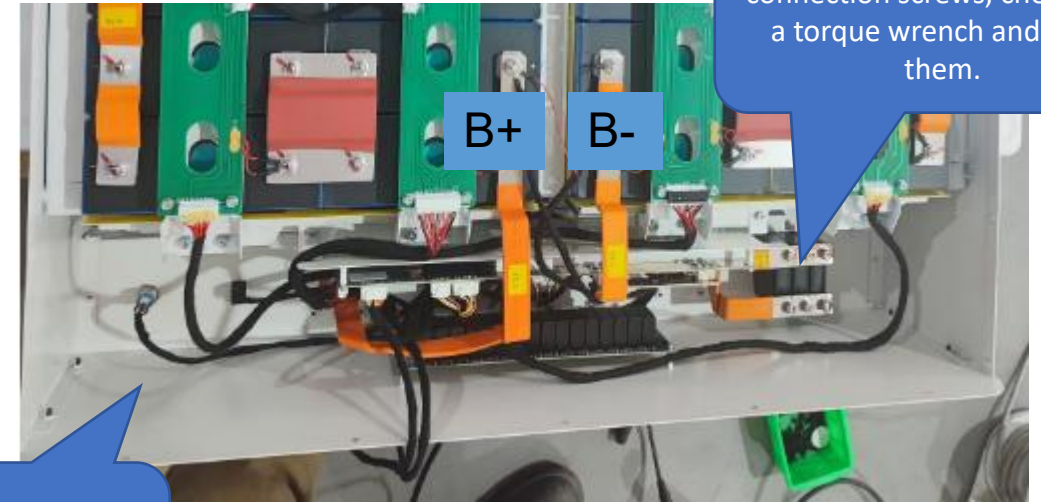
## 十一、Install the top plate into the cabinet:

1. Install the top plate as shown in Figure 1. Install the top plate into the chassis using M4\*10 Hex socket countersunk screw lock. (locking torque: 3Nm) ;
2. As shown in Figure 2, install the copper busbar on the circuit breaker and tighten the screws. (locking torque: 6Nm) ;
3. After tightening the electrical connection screws, check with a torque wrench and mark them.

**Material:**  
M4\*10 Hex socket countersunk screw\*6PCS

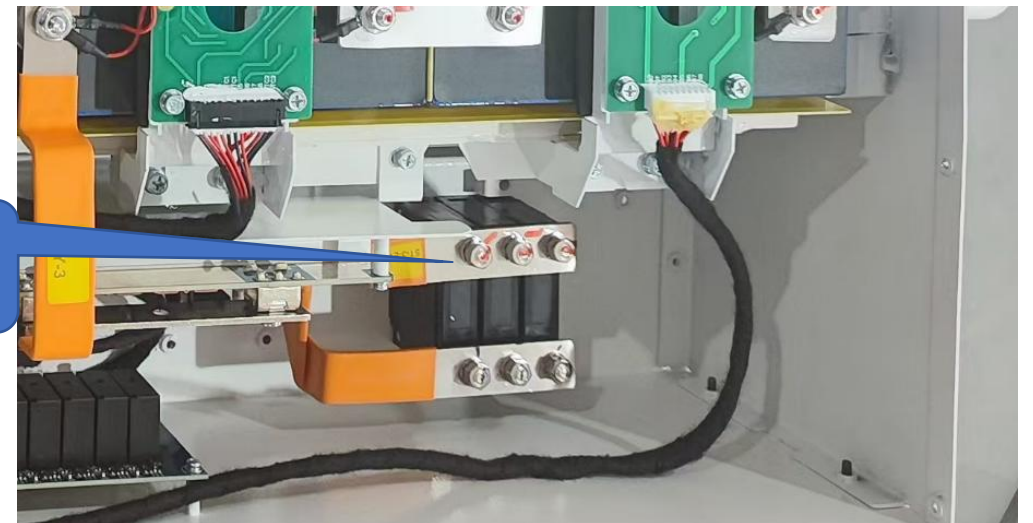
**Tool:**  
Electric batch、10mm socket、13mm socket、  
PH2 cross bit

**Figure 1**



Install the top plate  
into the cabinet

**Figure 2**



Lock the copper busbar of the  
circuit breaker

**Figure 1**

## 十二、Connect copper busbar and acquisition line:

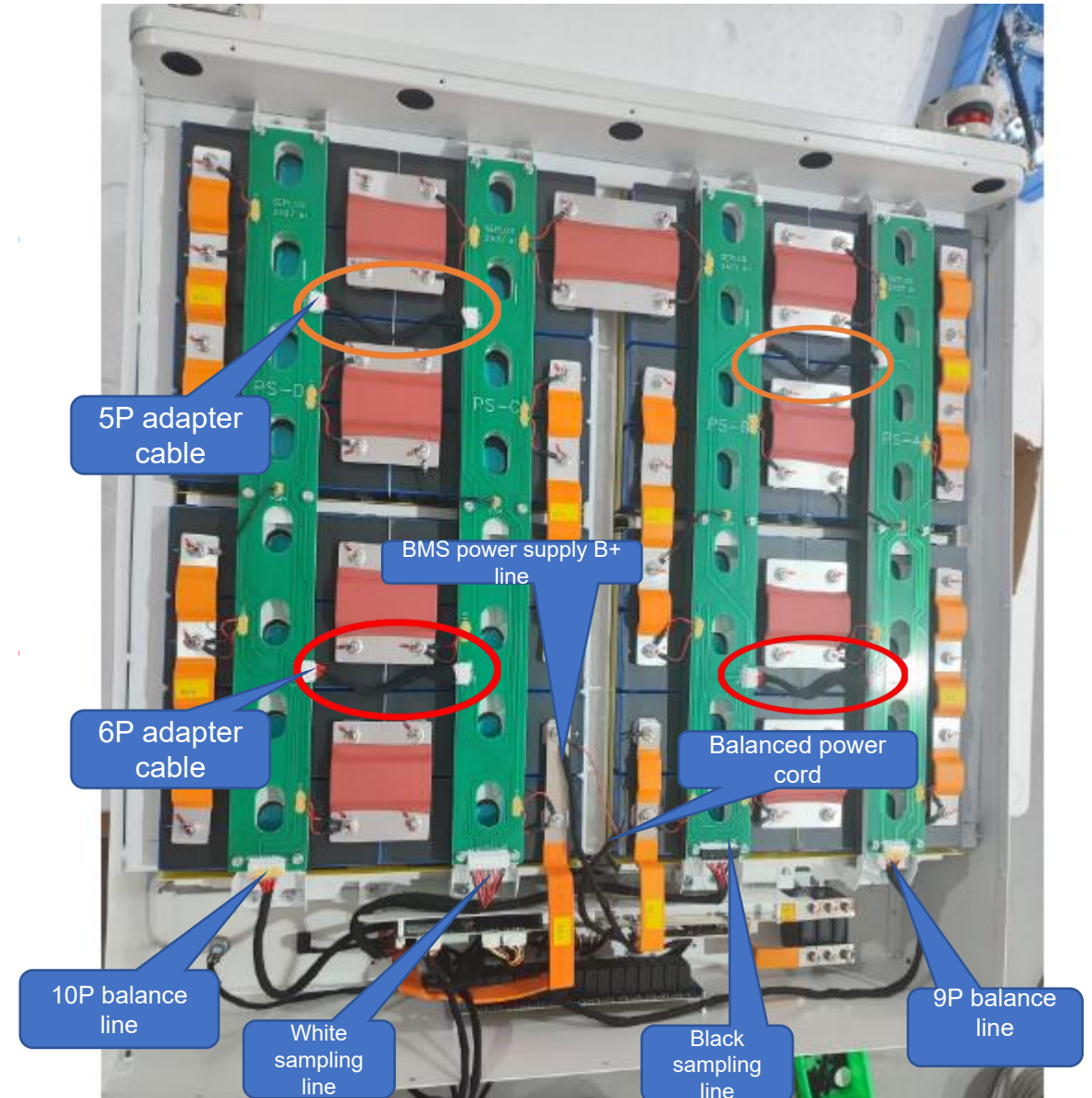
1. Insert the adapter cable as shown in "Figure 1" to connect the acquisition board;
2. As shown in "Figure 1", insert the sampling line plug of the equalizing board and the switch line plug into the BMS.
3. Install B-copper busbar, sampling wire ear, and negative power line of the balancing board; Use M6 flange nut lock (locking torque: 6Nm) ;
4. Insert the blackhead sampling line and whitehead sampling line as shown in "Figure 1";
5. Install B+ copper busbar, small B+ wire, sampling wire ear, and positive power wire of the balancing board; Use M6 flange nut lock (locking torque: 6Nm)
6. After all electrical connection screws are tightened, check them with a torque wrench and mark them.

### Material:

Adapter cable\*4PCS, M6 flange nut \*4PCS

### Tool:

Electric screwdriver, 10mm socket, PH2 cross bit.



### 十三、 Box cover processing and closing:

1 . Place the foam pads at the corresponding positions, as shown in Figure 1 , and tear off the centrifugal paper.

2.As shown in "Figure 2", align the 4 corners and apply the PC film;

Materials:  
EVA foam with double-sided adhesive\* 9 PCS,  
PC film\*1PCS

Figure 1



Figure 2





## 十四、Internal resistance test, insulation test:

1. Test the voltage and internal resistance of the whole machine, as shown in "Figure 1". Use an internal resistance meter to detect the voltage of the finished battery pack. If the internal voltage is  $\geq 52.8$  and the internal resistance is less than  $8\text{m}\Omega$ , it is qualified.

2. As shown in "Figure 2", use a safety instrument to test insulation and grounding; if it shows PASS, it is qualified.

### Materials:

Box cover\*1PCS, Display\*1PCS, LED Light Board\*1,  
M3\*8 Phillips round head screw\*6PCS, M4\*10 Hex socket countersunk  
screw\*17PCS, PVC sticker\*1PCS

### Tool:

Electric Screwdriver, Hexagonal H2.5 bit, PH1 cross bit

Figure 1



Figure 2



Figure 3

## 十二、Box cover processing and closing:

1.Install the box cover accessories, as shown in "Figure 1". Install the display screen, LED light board, aerosol, and use M3\*8 Phillips round head screw to tighten. (locking torque: 1Nm)

2.As shown in "Figure 2", insert the display cable and LED light cable.

3.As shown in Figures 3 and 4, close the box cover and tighten it with 17 M4\*10 Hex socket countersunk screws. (locking torque: 3Nm) ;

4.As shown in "Figures 3 and 4", apply the LCD sticker.

5.After installation, BMS needs to perform capacity learning. Specific steps:

Fully charge the battery first

(recommended current 100A)

Put it in the battery system for protection

(recommended current 100A)

Charge to 50%

(recommended current 100A)

Complete capacity learning.

### Materials:

Box cover\*1PCS, Display\*1PCS, LED Light Board\*1, M3\*8 Phillips round head screw\*6PCS, M4\*10 Hex socket countersunk screw\*17PCS, PVC sticker\*1PCS

### Tool:

Electric Screwdriver, Hexagonal H2.5 bit, PH1 cross bit

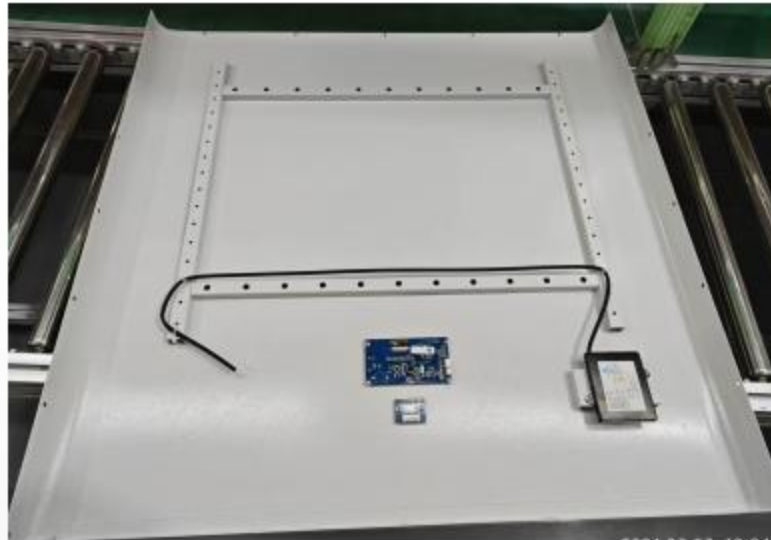


Figure 1



Figure 2



Figure 3



Figure 4