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FOR BETTER LIFE

Vertical Trolley Type 48280Ah Installation Guide (with Sheet Metal Compartment)

一、Enclosure Assembly Accessories:

1. Install wheels on the enclosure as shown in Figure 1 – L422-424mm, outer diameter 7.8mm, M5 threads on both ends, with 2 screws for fastening (tightening torque: 10Nm); also install two plastic feet using their own screws (tightening torque: 5Nm).

2. Install dust screens on both sides inside the enclosure as shown in Figure 2, using M4 flange nuts (tightening torque: 3Nm).

3. Paste epoxy boards 1/2/3 in order inside the enclosure. First peel off the adhesive liner of the epoxy board, then stick them in the corresponding positions as shown in Figure 3.

4. As shown in Figure 3, after matching inspection, paste EVA foam and PC spacers on the corresponding faces of the cells. The overall placement is shown in the schematic on the next page, separating the cells.

Figure 1

Figure 2

一、Enclosure Assembly Accessories:

Materials: Enclosure *1PCS, Wheels *2PCS, Epoxy board A *2PCS, Epoxy board B *2PCS, Epoxy board C *2PCS M4 flange nuts *2PCS, L422-424mm outer diameter 7.8mm with M5 threads both ends + 2 screws *1 set.

Tools: Electric screwdriver, PH2 cross bit.

Matching requirements: Voltage difference ≤0.010V, internal resistance difference ≤0.15mΩ.

Figure 4

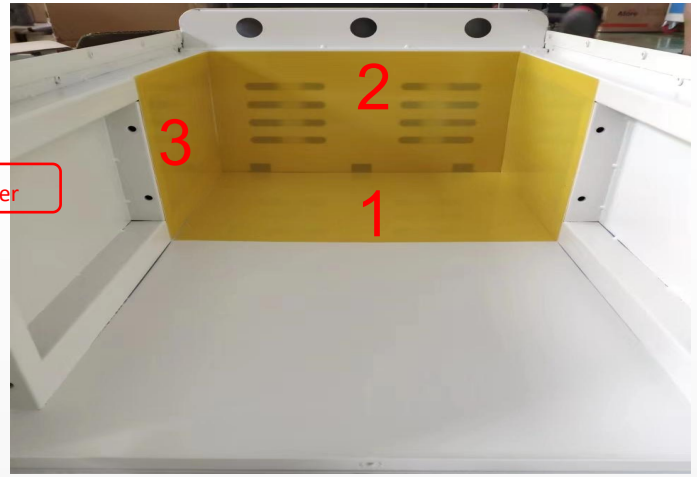

Figure 3

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二、Cell Stacking:

1. As shown in Figure 1, after matching inspection, paste EVA foam and PC spacers on the corresponding faces of the cells. The overall placement is shown in the schematic in Figure 1, separating the cells.

2. As shown in Figures 1 & 2, stack the cells into the enclosure in series connection. Paste Epoxy board B between the two columns to separate them. Paste Epoxy boards on the cells adjacent to the end plates.

3. Install end plates as shown in Figure 3, using 6 M8*20 cross hexagon combination screws (tightening torque: 15Nm).

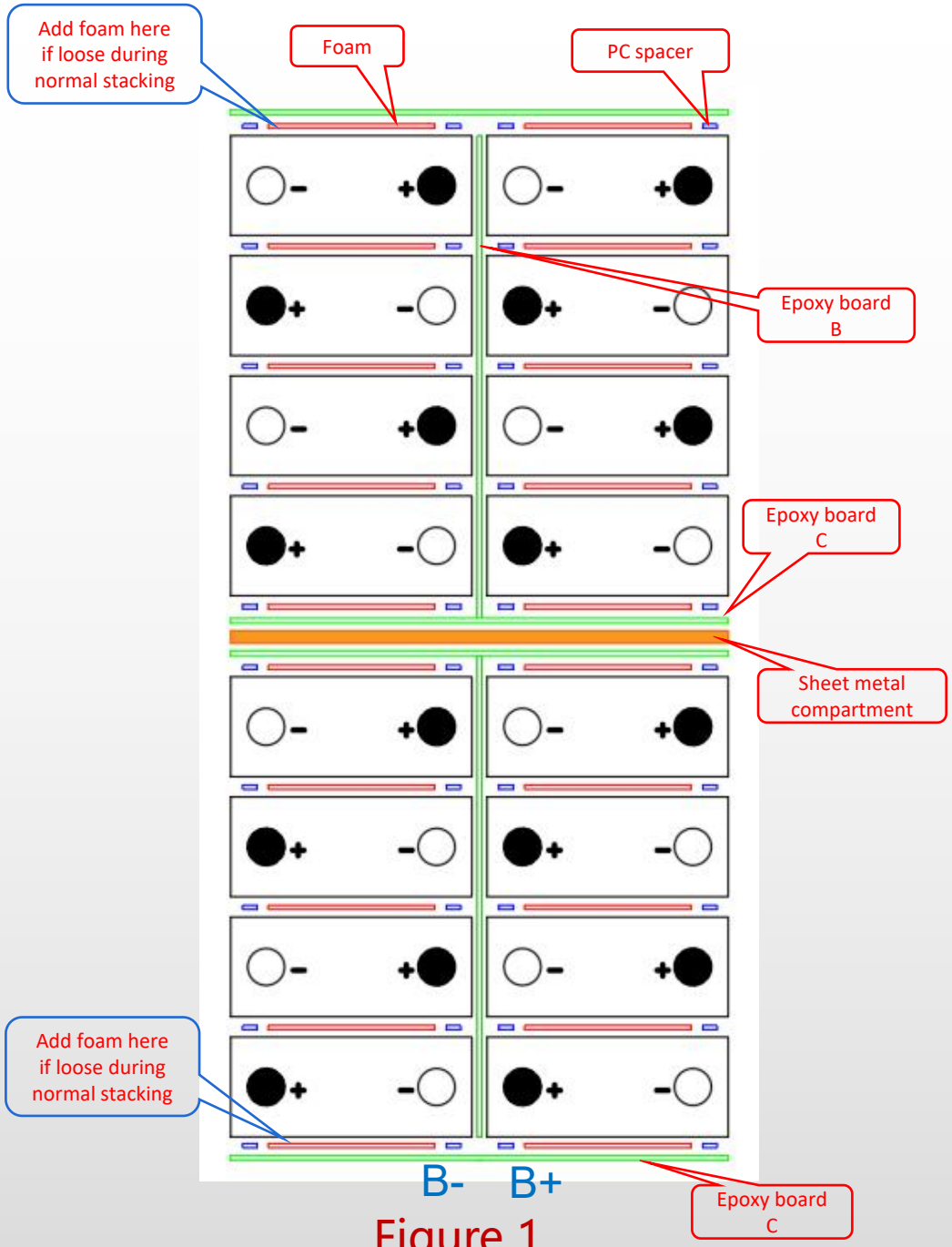

Figure 1

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二、Cell Stacking:

Materials: End plate *1PCS, Cells *16PCS, Cell foam *28PCS, Epoxy board A *1PCS, Epoxy board B *3PCS, Epoxy board C *2PCS, M8*20 cross hexagon combination screws *6PCS, PC spacers *56PCS.

Tools: Electric screwdriver, 13mm socket, PH2 cross bit.

Note: Due to tolerances from different cell manufacturers, if there is still looseness after pasting foam as instructed, add additional foam at the head and tail for filling.

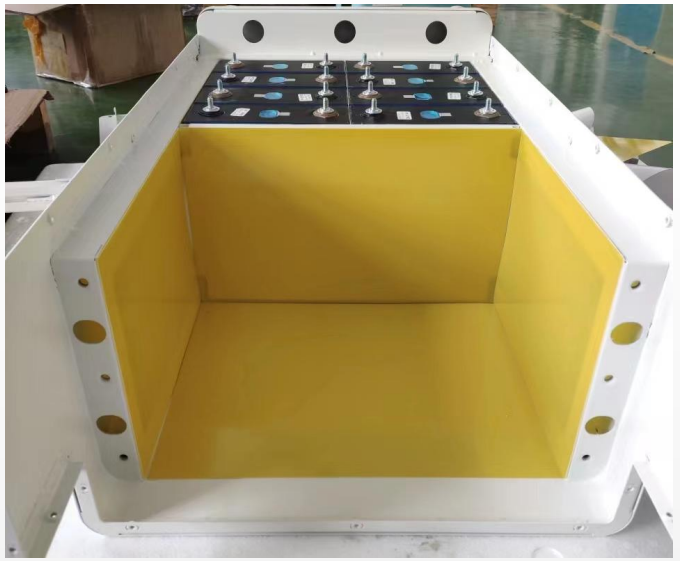

Figure 2

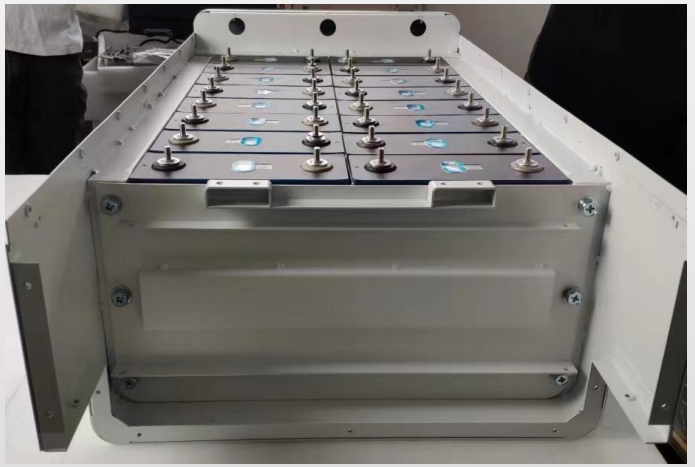

Figure 3

三、Installing Busbars:

1. Install busbars as shown in Figure 1 – mount series busbars on the terminals.

2. Paste foam on the clamping bars as shown in Figure 2 – stick EVA foam on the clamping bars, aligning with the holes.

3. Install the sampling board on the clamping bar as shown in Figure 3, using 6 M4*8 cross hexagon combination screws (tightening torque: 3Nm).

Materials: Foam *2PCS, Clamping bars *2PCS, Sampling boards *2PCS, M4*8 cross hexagon combination screws *12PCS, SF-N1 busbar *14PCS, SF-N13 busbar *1PCS.

Tools:Electric screwdriver, 10mm socket, PH2 cross bit.

Figure 1

Figure 2

Figure 3

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四、Installing Clamping Bars:

1. Install clamping bars as shown in Figure 1 – distinguish A/B boards, use 8 M5*8 cross hexagon combination screws (tightening torque: 5Nm).

2. Install sampling wire lugs as shown in Figure 2 – insert the sampling wire lugs into the terminals at the corresponding positions, then use 30 M6 flange nuts to fasten the busbars (tightening torque: 6Nm).

Materials: M5*8 cross hexagon combination screws *8PCS, M6 flange nuts *30PCS.

Tools: Electric screwdriver, 10mm socket, PH2 cross bit, torque wrench.

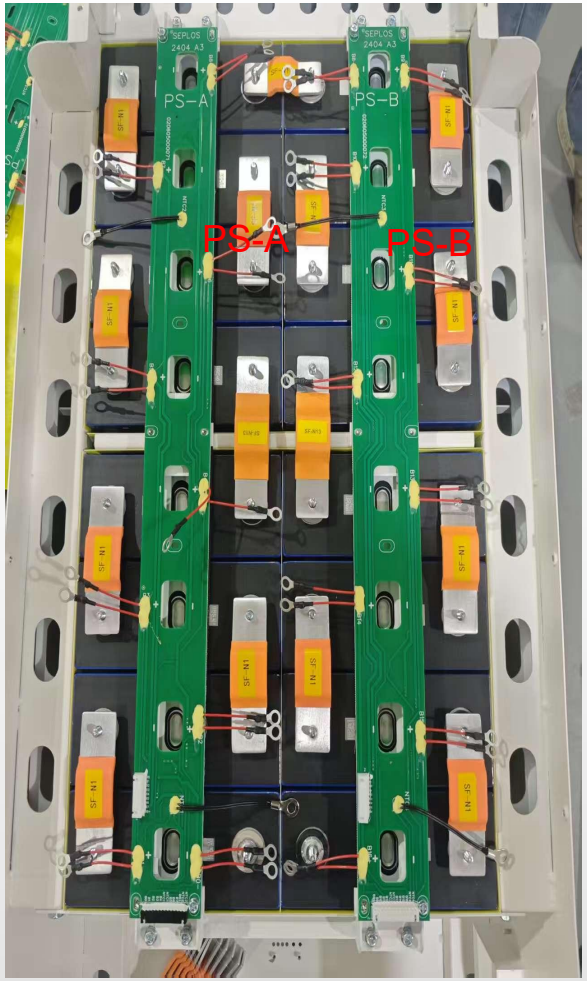

Figure 1

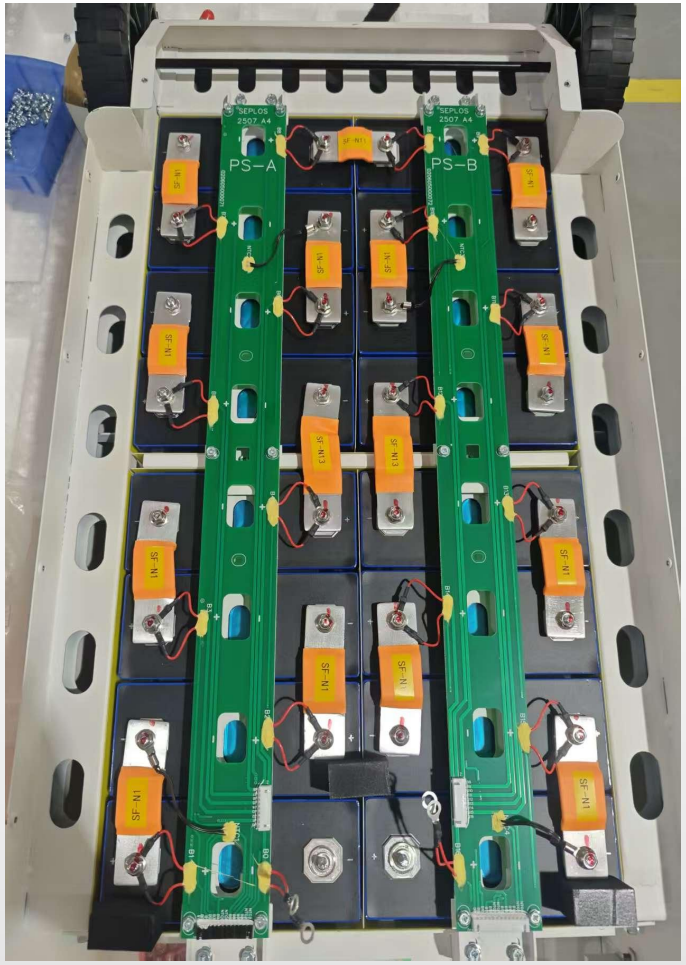

Figure 2

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五、BMS & Front Panel Assembly Accessories:

1. Active balancer mounting accessories: As shown in Figure 1, mount the active balancer onto the sheet metal bracket using 4 M3*8 cross pan head combination screws (tightening torque: 1Nm); sampling wires, etc.

2. Top panel mounting accessories: As shown in Figure 2 – install connector sockets *2 using 8 M4*10 hexagon socket flat head countersunk screws (tightening torque: 3Nm); install the adapter board using 3 M3*8 cross pan head combination screws (tightening torque: 1Nm); install the power switch – solder the plug to the switch, then insert and snap into ON/OFF accordingly; install the BMS using 6 M3*8 cross pan head combination screws (tightening torque: 1Nm); then install busbars, sampling wires, WiFi antenna, balancer switch wire, display wire (busbar screw torque: 8Nm).

Figure 1

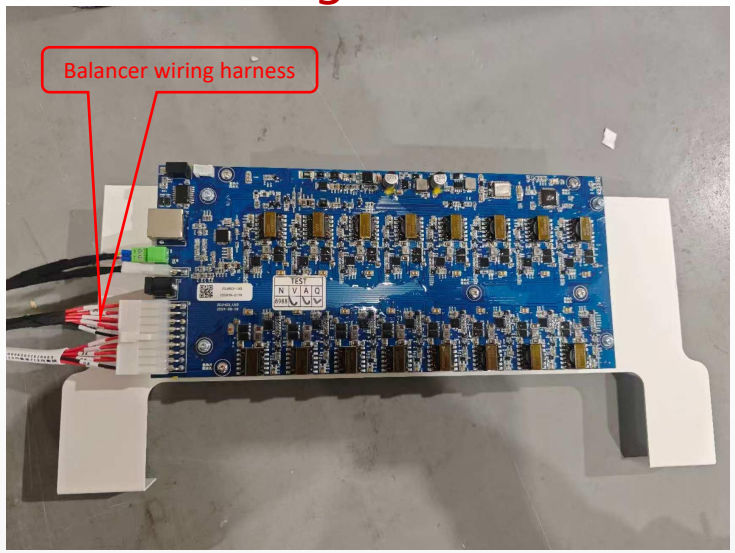
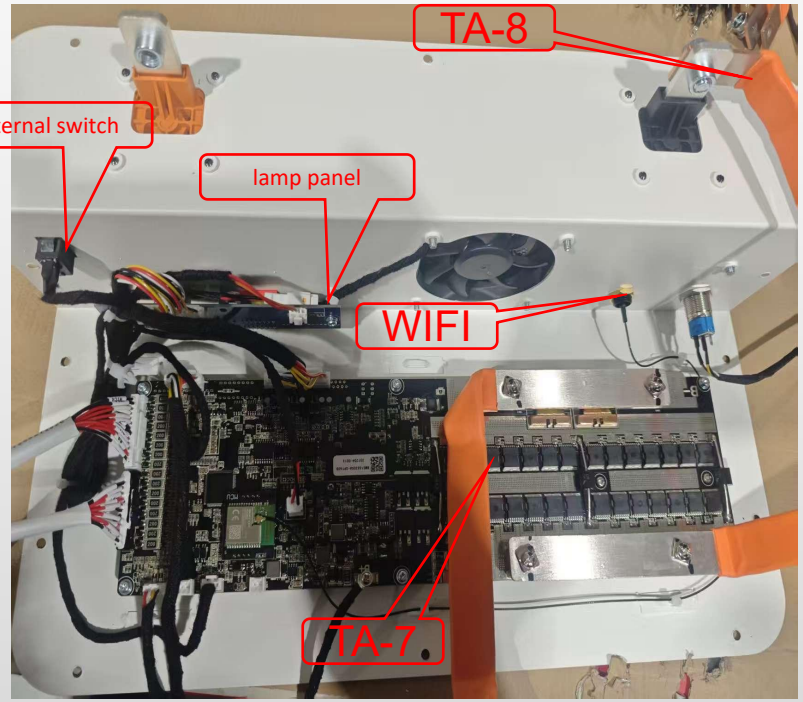


Figure 2



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五、BMS & Front Panel Assembly Accessories:

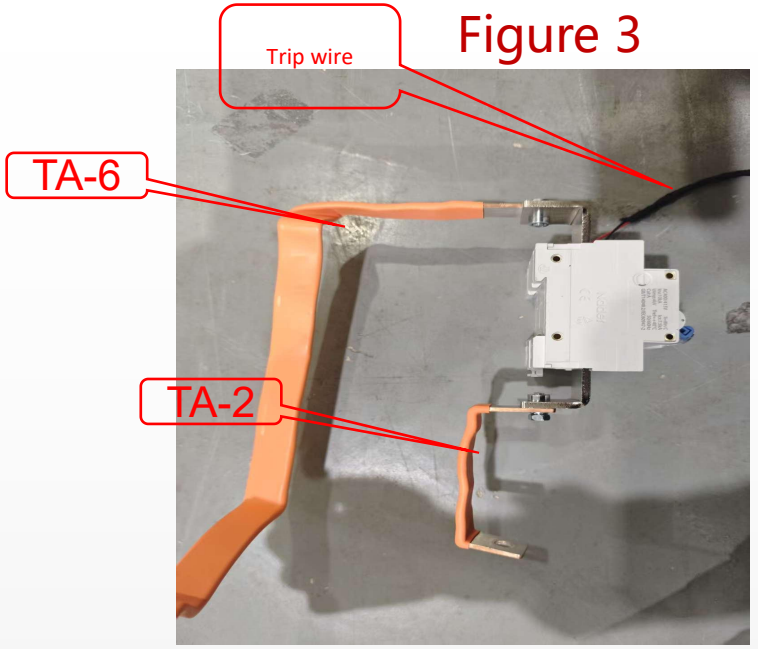
3. Install the circuit breaker as shown in Figure 3 – use busbars AT-6 and AT-2; fasten with the breaker's own screws (tightening torque: 10Nm); install the trip wire.

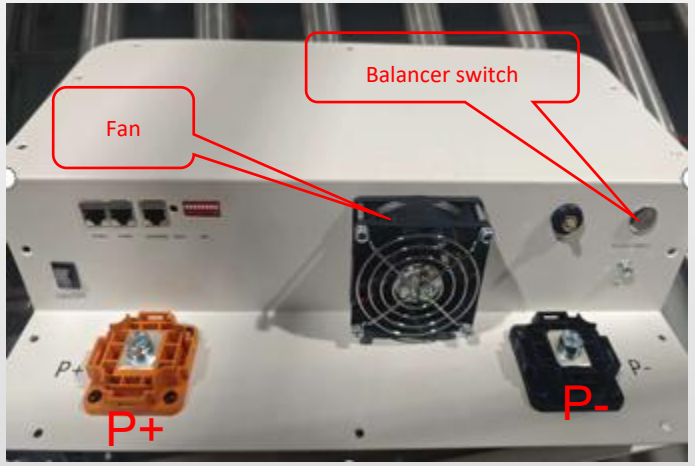
4. Install the fan using 4 M4*35 cross pan head combination screws (tightening torque: 1Nm).

Materials:BMS *1PCS, Active balancer *1PCS, Bracket *1PCS, Busbars: AT-6 *1PCS, AT-2 *1PCS, AT-7 *1PCS, AT-8 *1PCS, Small B+ wire *1PCS, Black sampling wire *1PCS, White sampling wire *1PCS, Display wire *1PCS, Adapter board data cables *3PCS, Top panel *1PCS, Connector sockets *2PCS, Adapter board *1PCS, Power switch *1PCS, Circuit breaker *1PCS, Trip wire *1PCS, M3*10 hexagon socket flat head countersunk screws *8PCS, M3*8 cross pan head combination screws *10PCS, M4*35 cross pan head combination screws *4PCS.

Tools: Electric screwdriver, PH2 cross bit, PH1 cross bit.

Figure 3





六、Installing Breaker, Active Balancer Bracket, and Front Panel into Enclosure:

1. Install the circuit breaker as shown in Figure 1 using 2 M4 flange nuts (tightening torque: 5Nm).

2. Install the active balancer as shown in Figure 2 using 4 M4*8 cross hexagon combination screws (tightening torque: 5Nm).

3. As shown in Figure 3, install the screen and light board using 6 M3*6 cross pan head combination screws (tightening torque: 1Nm).

Figure 1

Figure 2

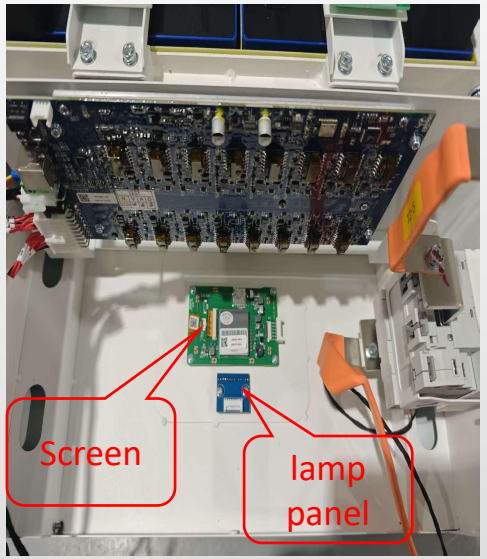


Figure 3

六、Installing Breaker, Active Balancer Bracket, and Front Panel into Enclosure:

4. Power connection busbars as shown in Figure 4 – B+/B- busbars use M6 flange nuts (tightening torque: 6Nm); P- TZ-6 busbar uses M8*16 cross hexagon combination screw (tightening torque: 15Nm).

5. Connect sampling wires to the sampling board – distinguish B+/B- sampling wires and active balancer sampling wires, plug in accordingly.

Materials: M4*8 cross hexagon screws *4PCS, M4 flange nuts *2PCS, M6 flange nuts *2PCS, M3*6 cross hexagon screws *6PCS, M8*16 cross hexagon combination screw *1PCS, Touch screen, Light board.

Tools: Electric screwdriver, 10mm socket, PH2 cross bit.

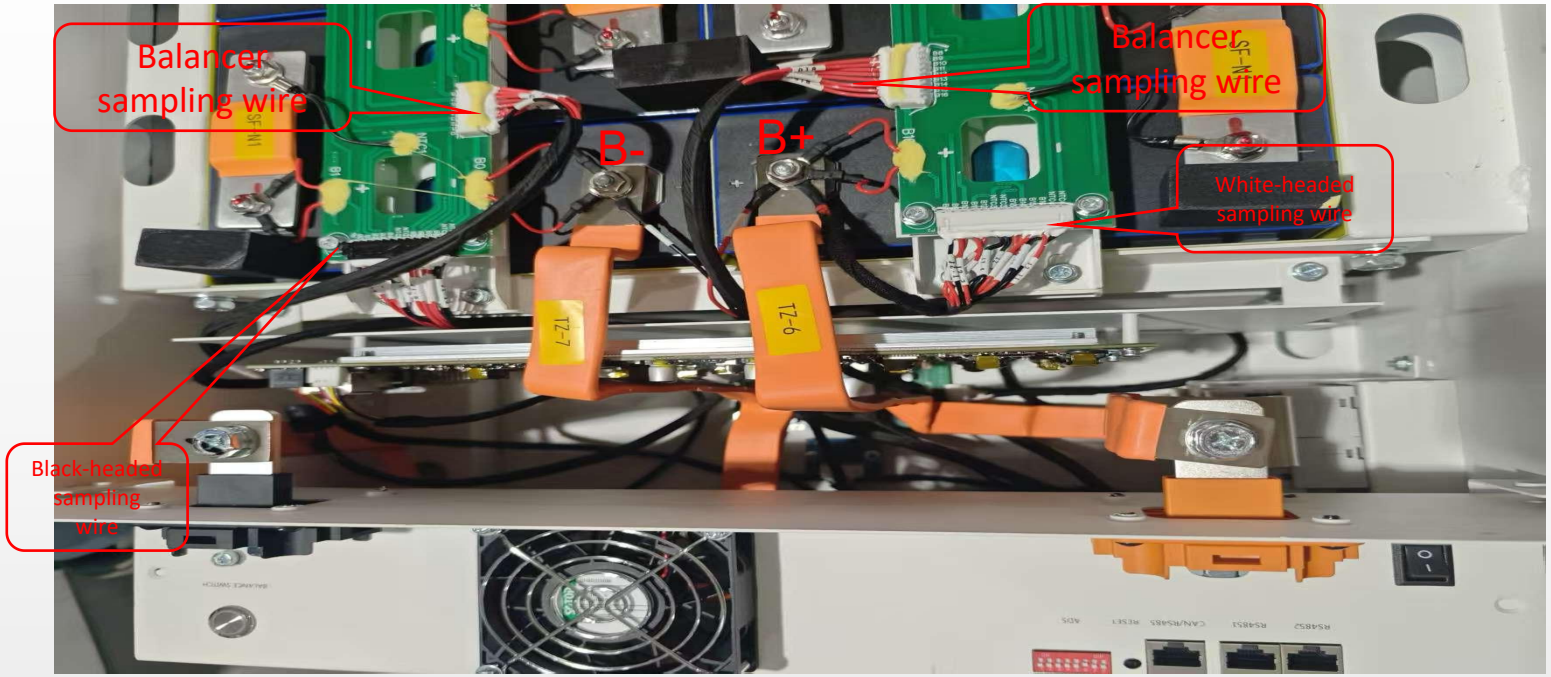


Figure 4

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七、Installing PC Film, Backplate Aerosol, and Trolley Handle:

1. Install PC film as shown in Figure 1 – place the PC film on top of the cells.

2. Install aerosol as shown in Figure 2 – secure the aerosol using cable ties, then fasten with 4 M4*8 cross hexagon combination screws (tightening torque: 5Nm).

3. As shown in Figure 2, install dust screen and dust screen bracket, using M4 flange nuts (tightening torque: 3Nm).

4. Install the two-section trolley handle as shown in Figure 3 using 16 M5*20 cross hexagon combination screws (tightening torque: 6Nm).

Materials: PC film, Aerosol, Dust screen, Two-section trolley handle, M4*8 cross hexagon screws *4PCS, M4 flange nuts, M5*20 cross hexagon combination screws *16PCS.

Tools: Electric screwdriver, 6mm socket, PH2 cross bit.

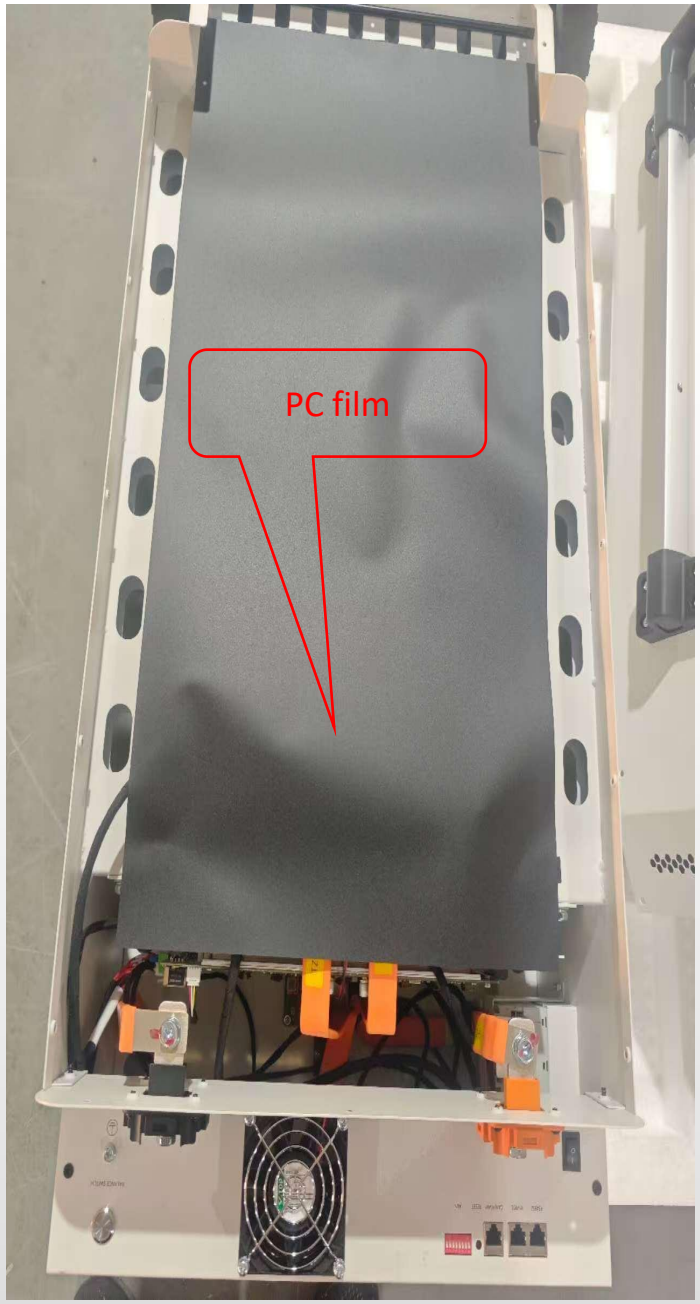

Figure 1

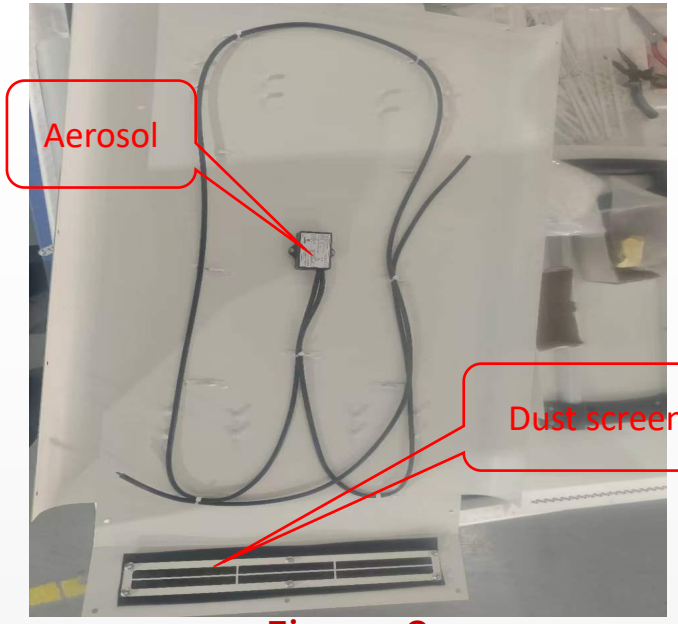

Figure 2

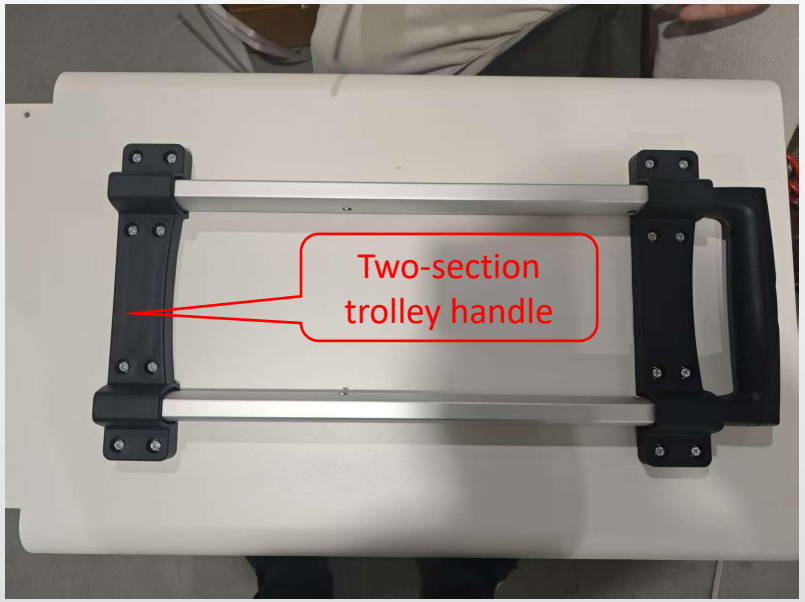

Figure 3

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八、Enclosure Cover Processing & Closing:

1. As shown in Figures 1 & 2, close the enclosure cover using 32 M4*10 hexagon socket countersunk head screws. Set the electric screwdriver torque to "5" (standard torque: 3Nm) until the screwdriver makes a clicking sound.

2. After installation, the BMS requires a capacity learning procedure as follows:
First, fully charge the battery (recommended current 100A)
Then discharge until the battery system protects (recommended current 100A)
Finally charge to 50% SOC (recommended current 100A)
Capacity learning is completed.

Materials: Enclosure cover *1PCS, M4*10 hexagon socket countersunk head screws *32PCS, PVC sticker *1PCS.

Tools: Electric screwdriver, PH1 cross bit.

Figure 1

Figure 2