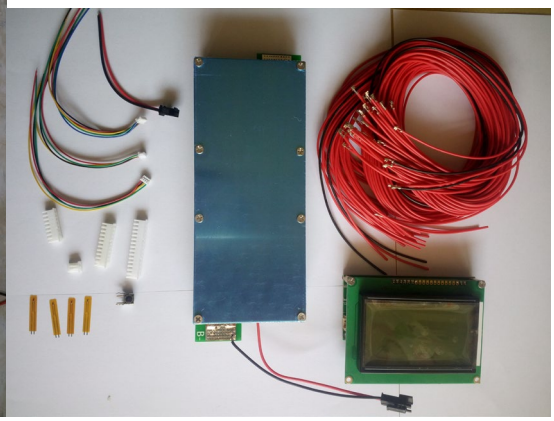
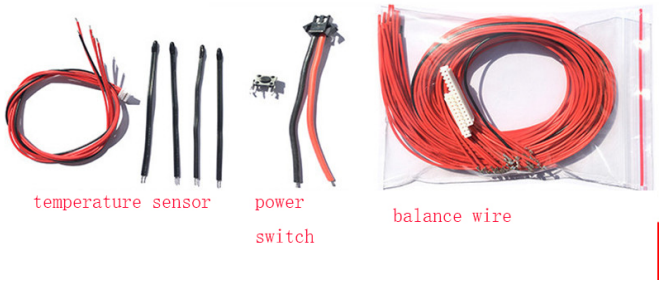
Installation Manual





Have two version

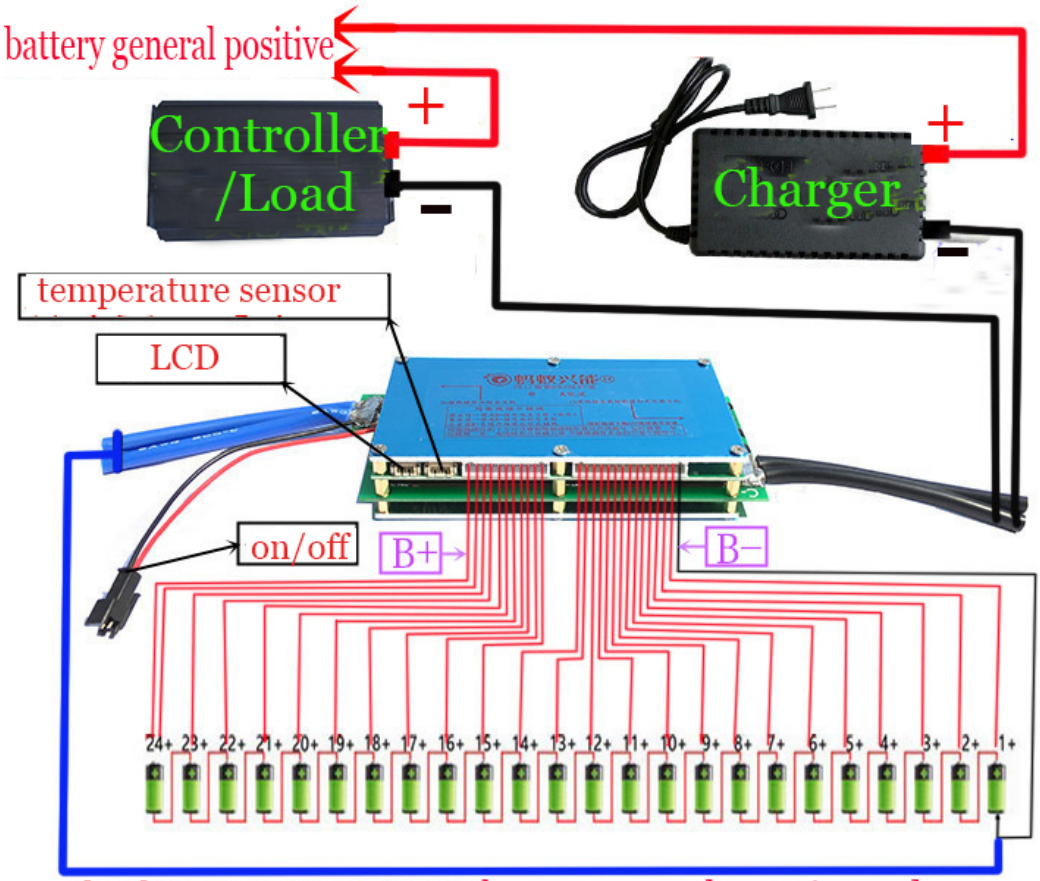
A: 24S version

LTO:	10S to 24S,	(24V to 68V battery pack)
LiFePO4:	8S to 24S,	(24V to 88V battery pack)
Li-ion(LiPo):	7S to 24S,	(24V to 102V battery pack)

B：32S version

LTO:	10S to 32S,	(24V to 90.67V battery pack)
LiFePO4:	8S to 32S,	(24V to 117.34V battery pack)
Li-ion(LiPo):	7S to 32S,	(24V to 136V battery pack)

Note: The BMS has many wirings and is sensitive and fragile. Every step of the wiring is carefully checked. It should not be sloppy. Every step must be insulated to prevent any short circuit! (There are a lot of careless customers short-circuiting the board) The temperature sensor must also be insulated again and then loaded into the battery pack! ! ! Otherwise, any consequences caused by the customer



Blue large wire connect to battery general negative end

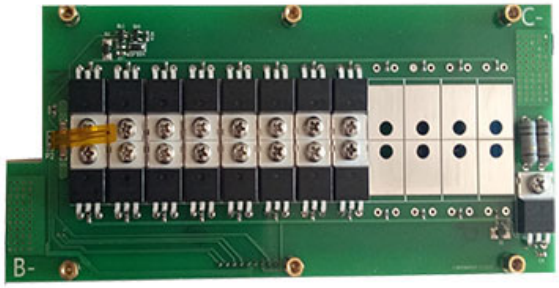
Black wire connect to charger,controller or other load.

Balance wires:B+ connect to battery general positive end

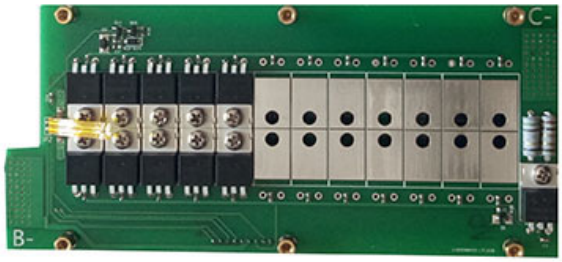
B- connect to battery general negative end

There have 50A/80A/100A/120A four version. The difference is the MOSFET number. 120A version, all MOSFET installed.

80A Power Board



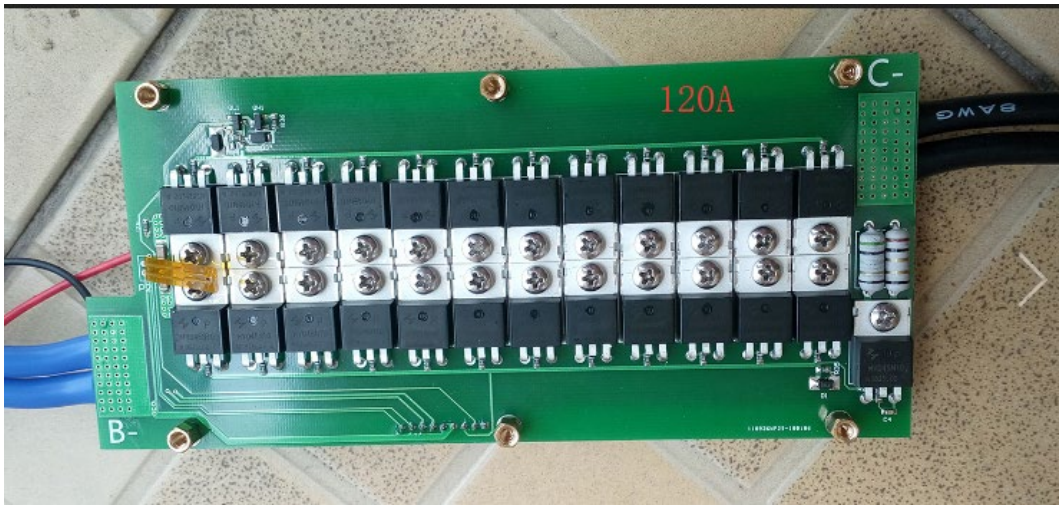
155*70*20mm

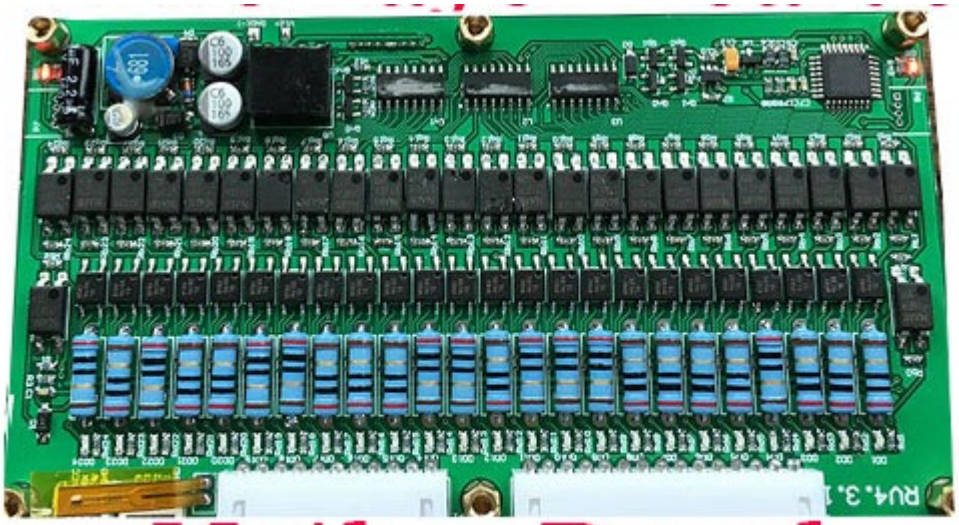


50A Power Board

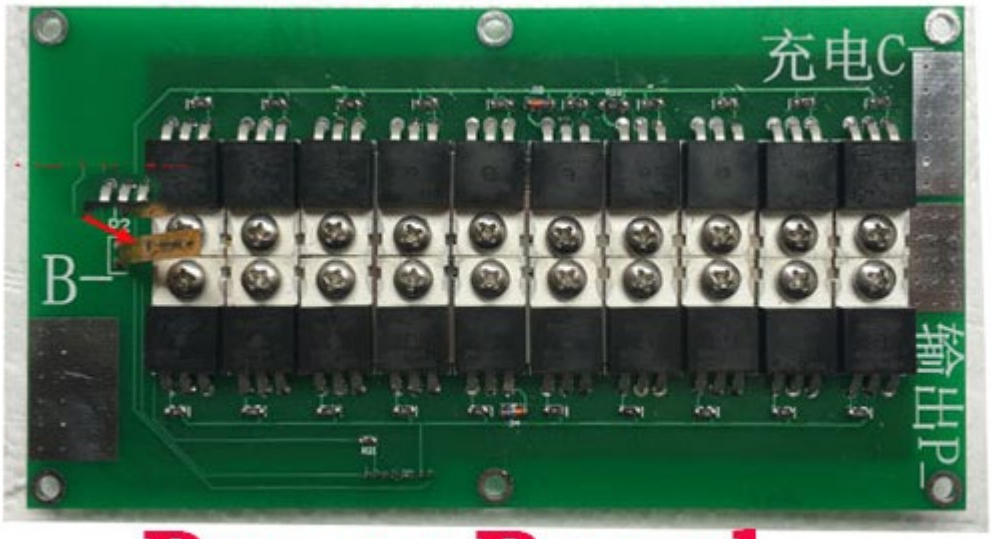
Current is continuous current!

120A version all MOSFET have installed



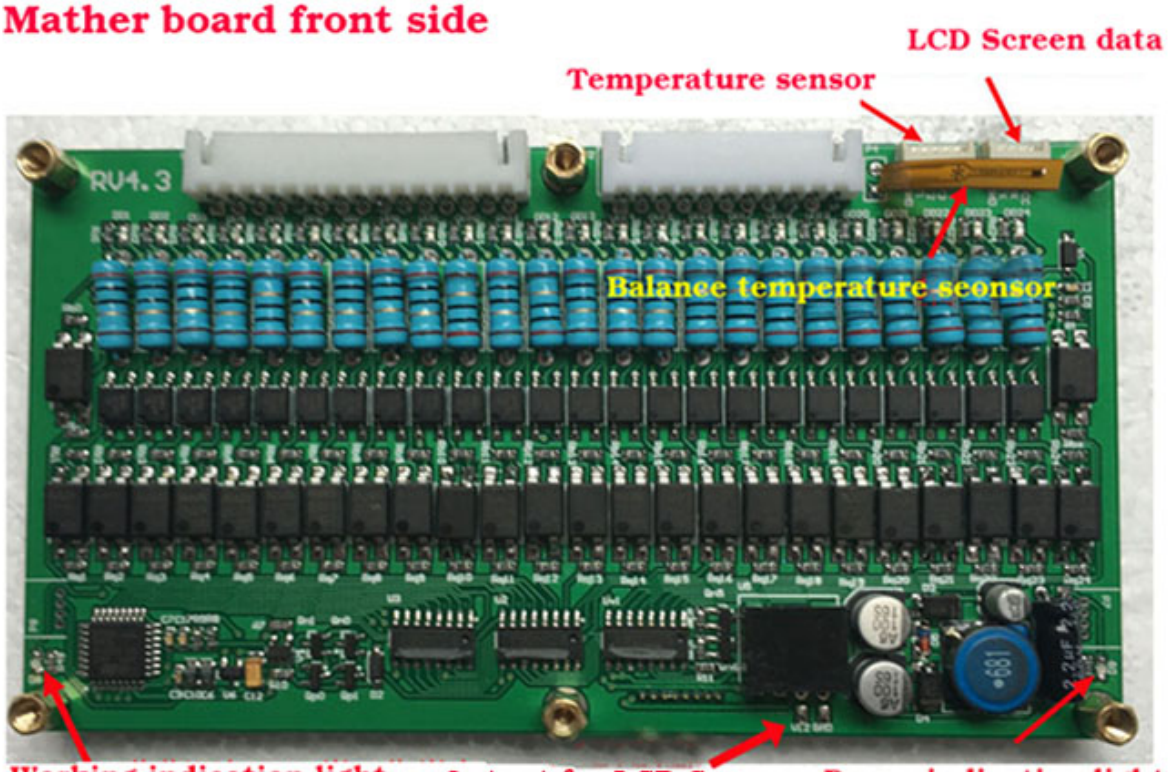


Mather Board

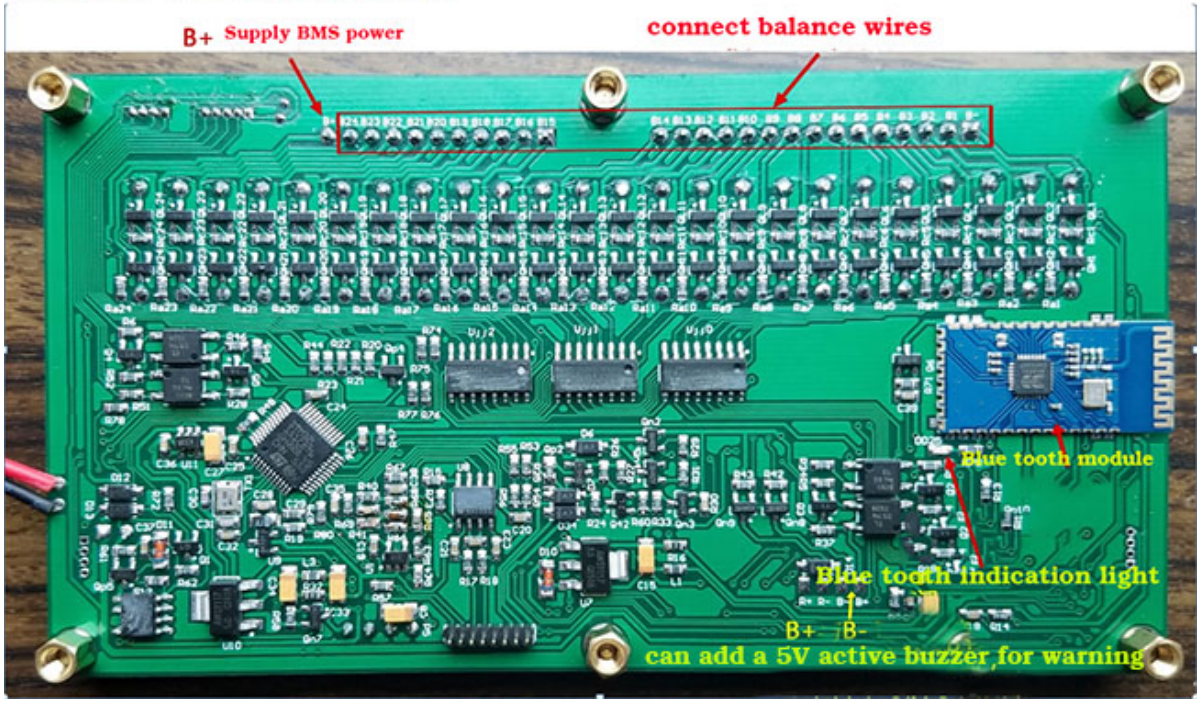


Power Board

Mather board front side

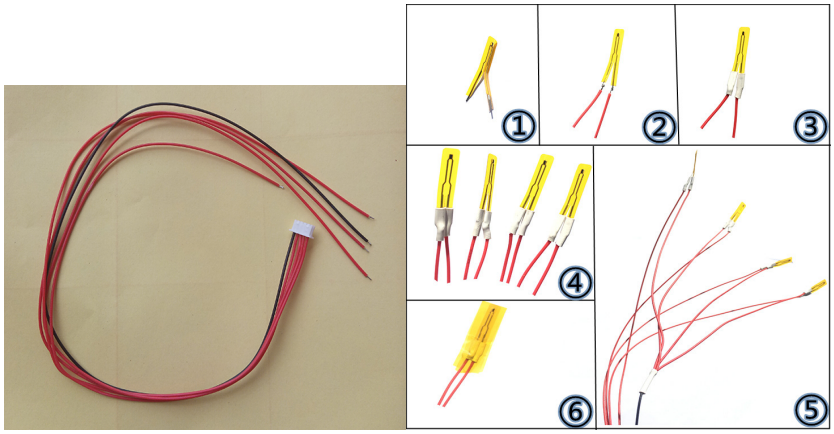


Mather board back side



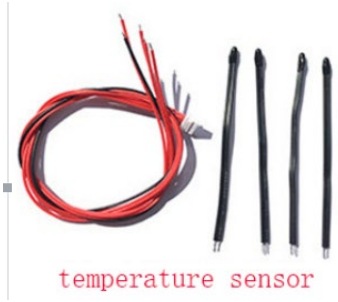
About temperature sensors:

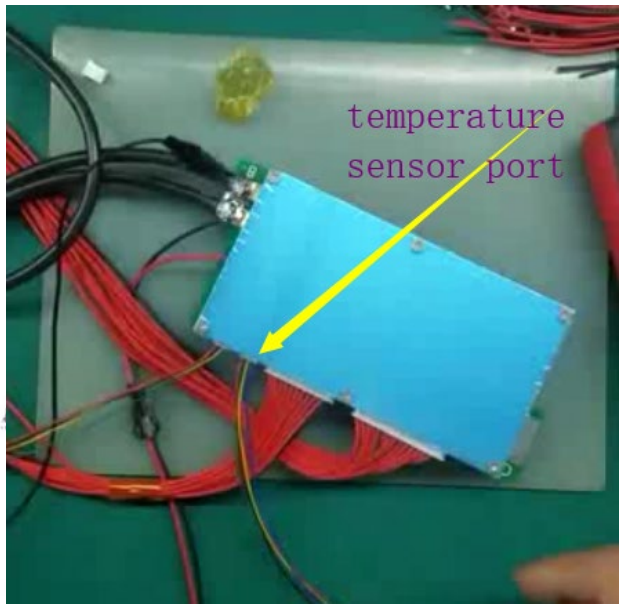
The black wire is Public line, new version changed the temperature sensor.

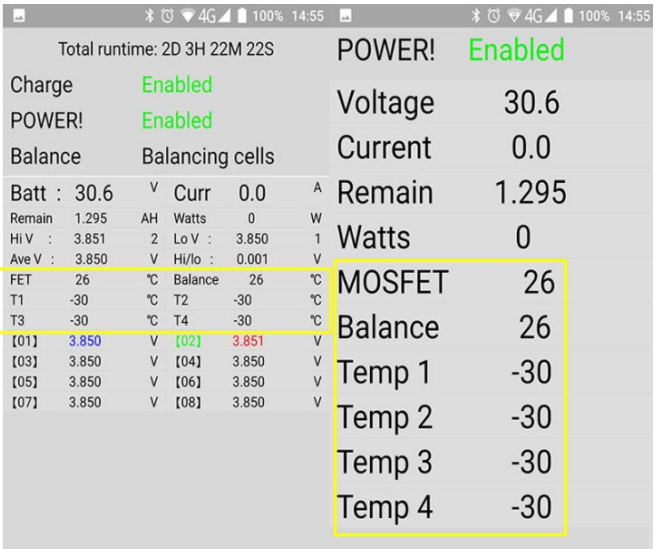


The old version use yellow temperature sensor

The new version use black temperature sensor.

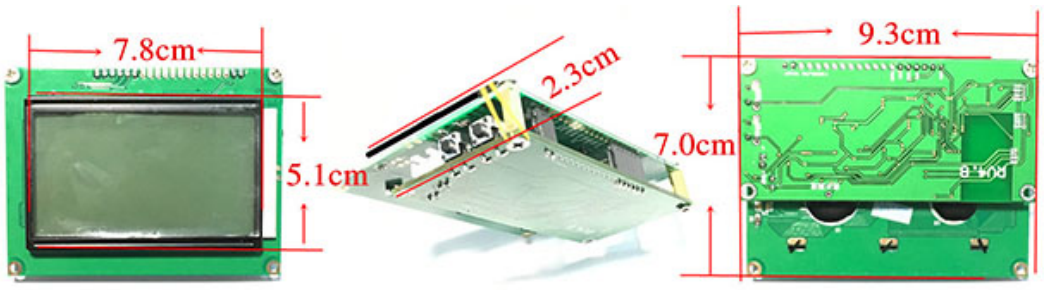




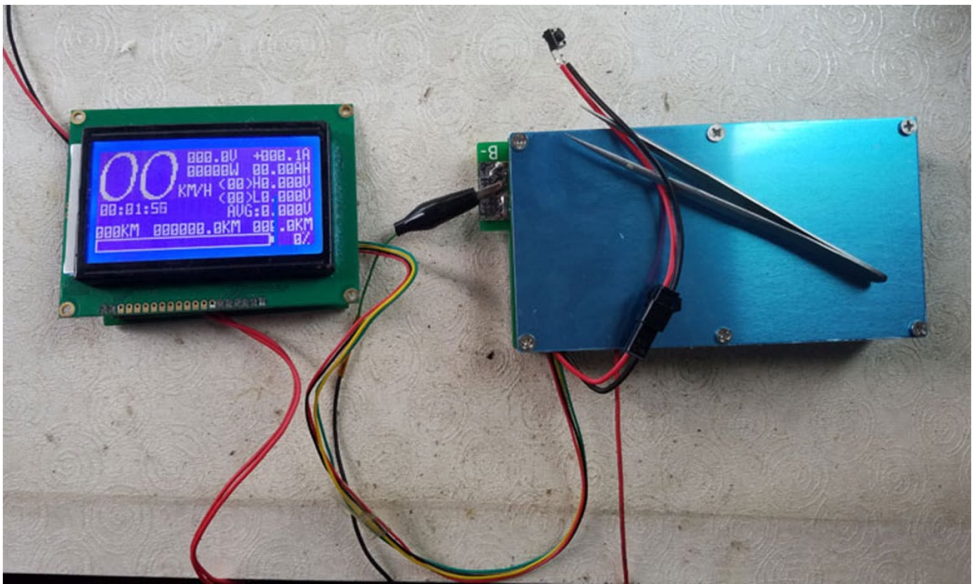


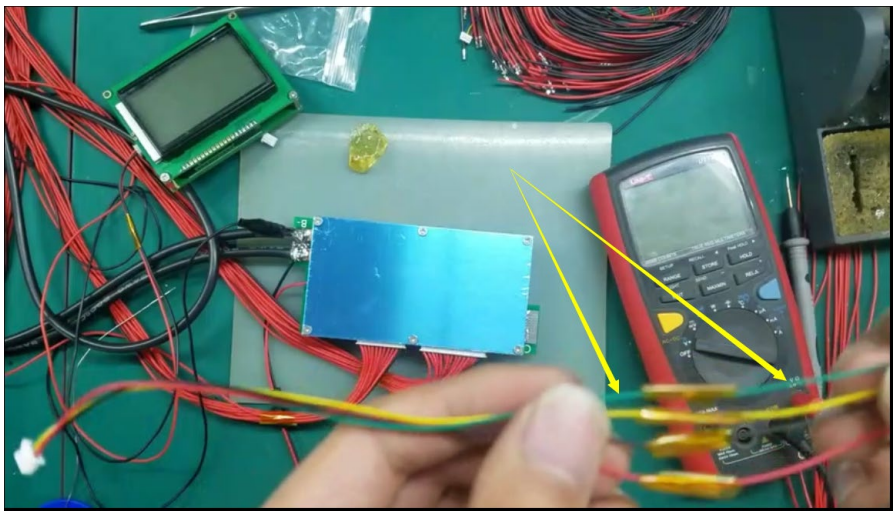
LCD screen Parameter: (RV 4.8 Drive)

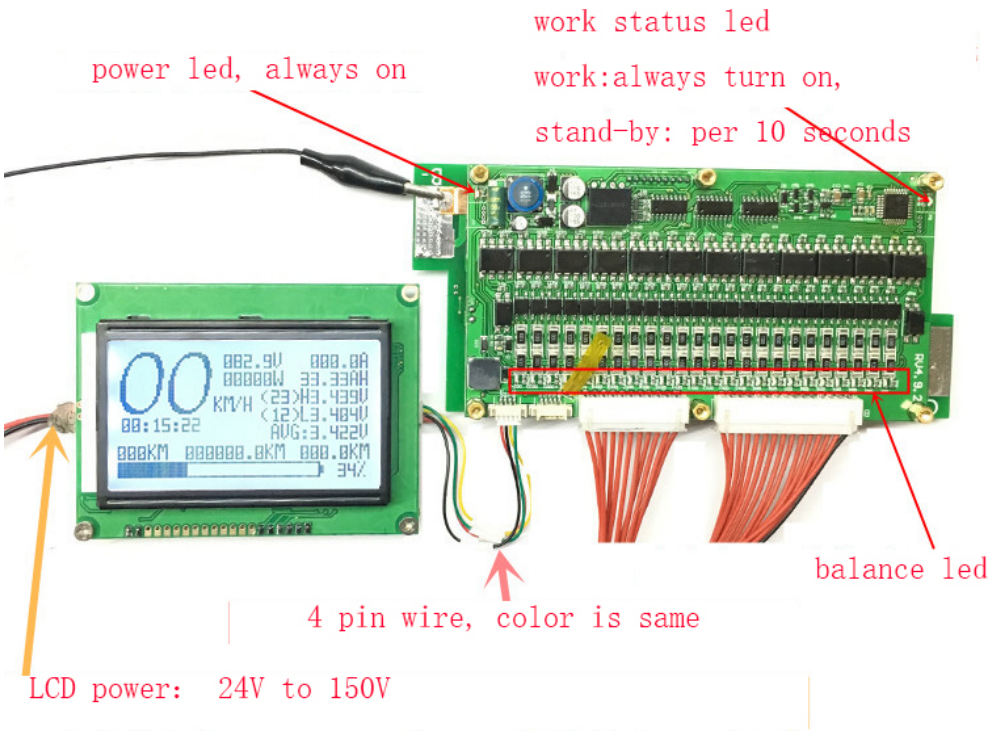
Voltage Range:24V-150V, Can connect to Battery directly.



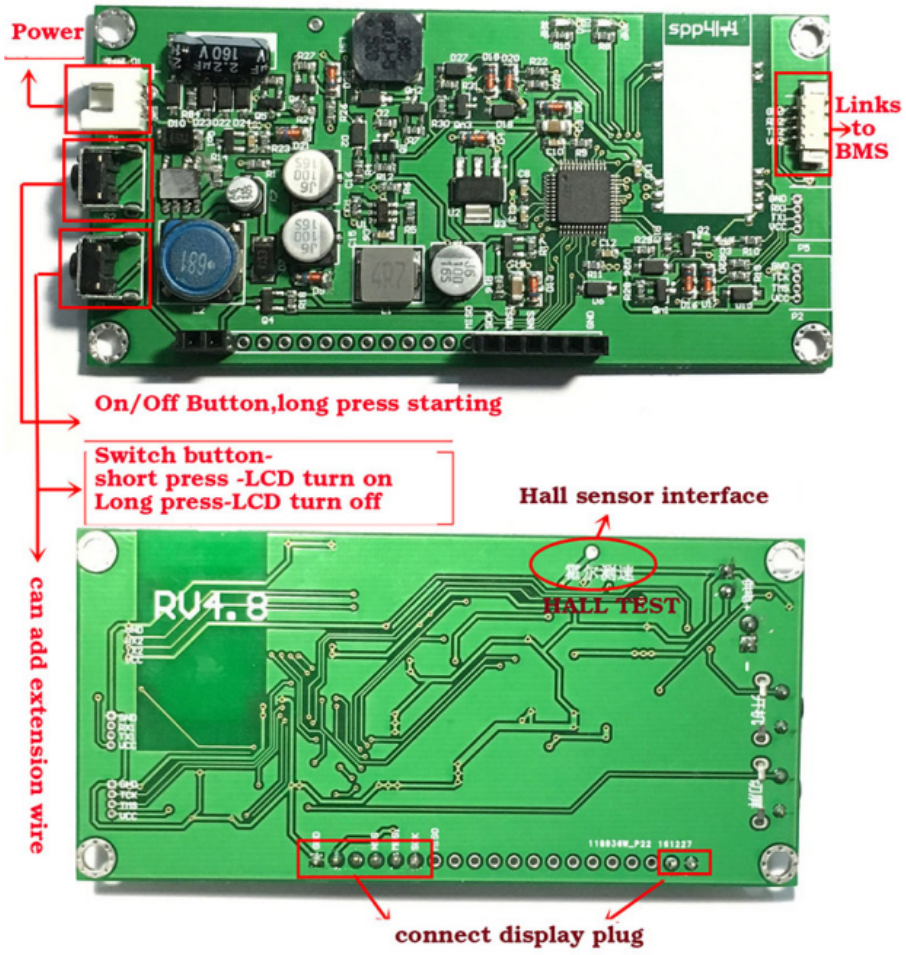
LCD date wire, color is same, yellow line connect to yellow line, red line to red line.

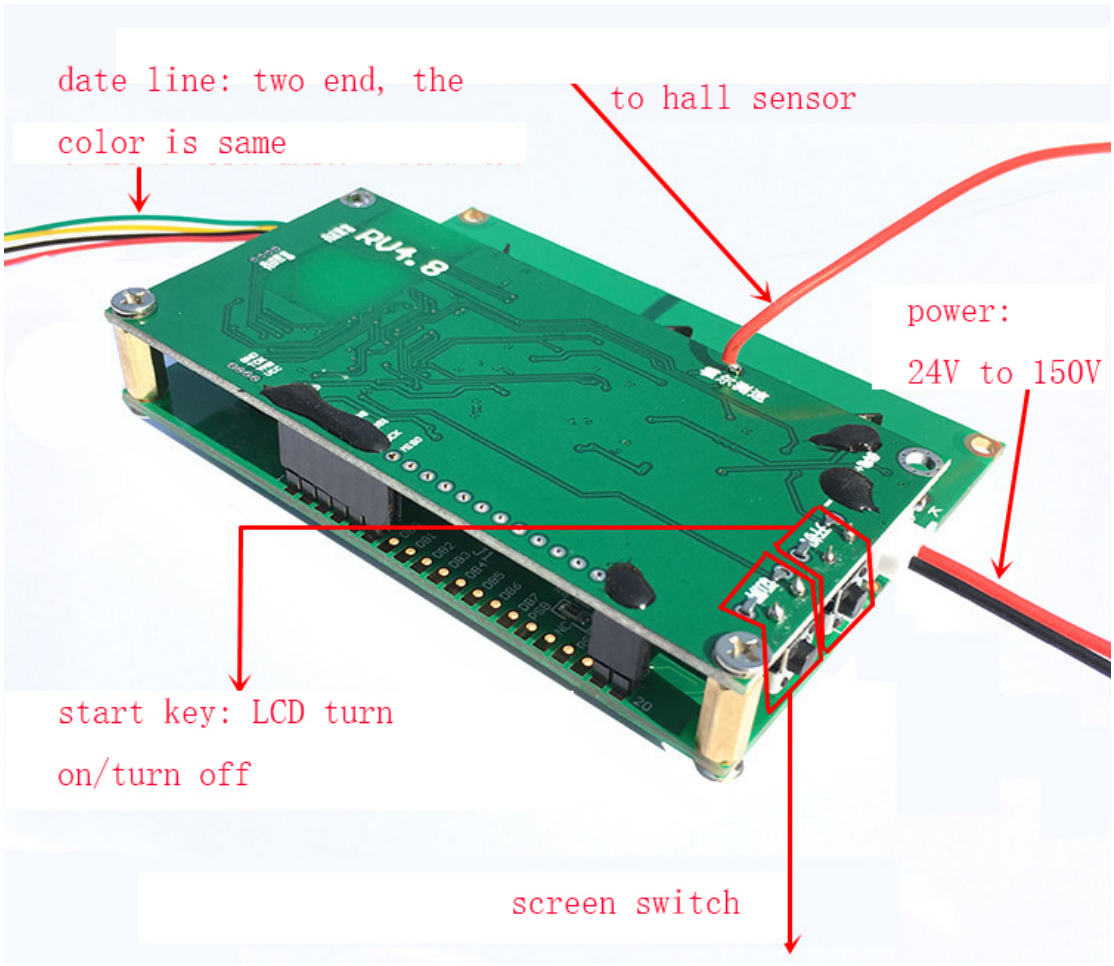






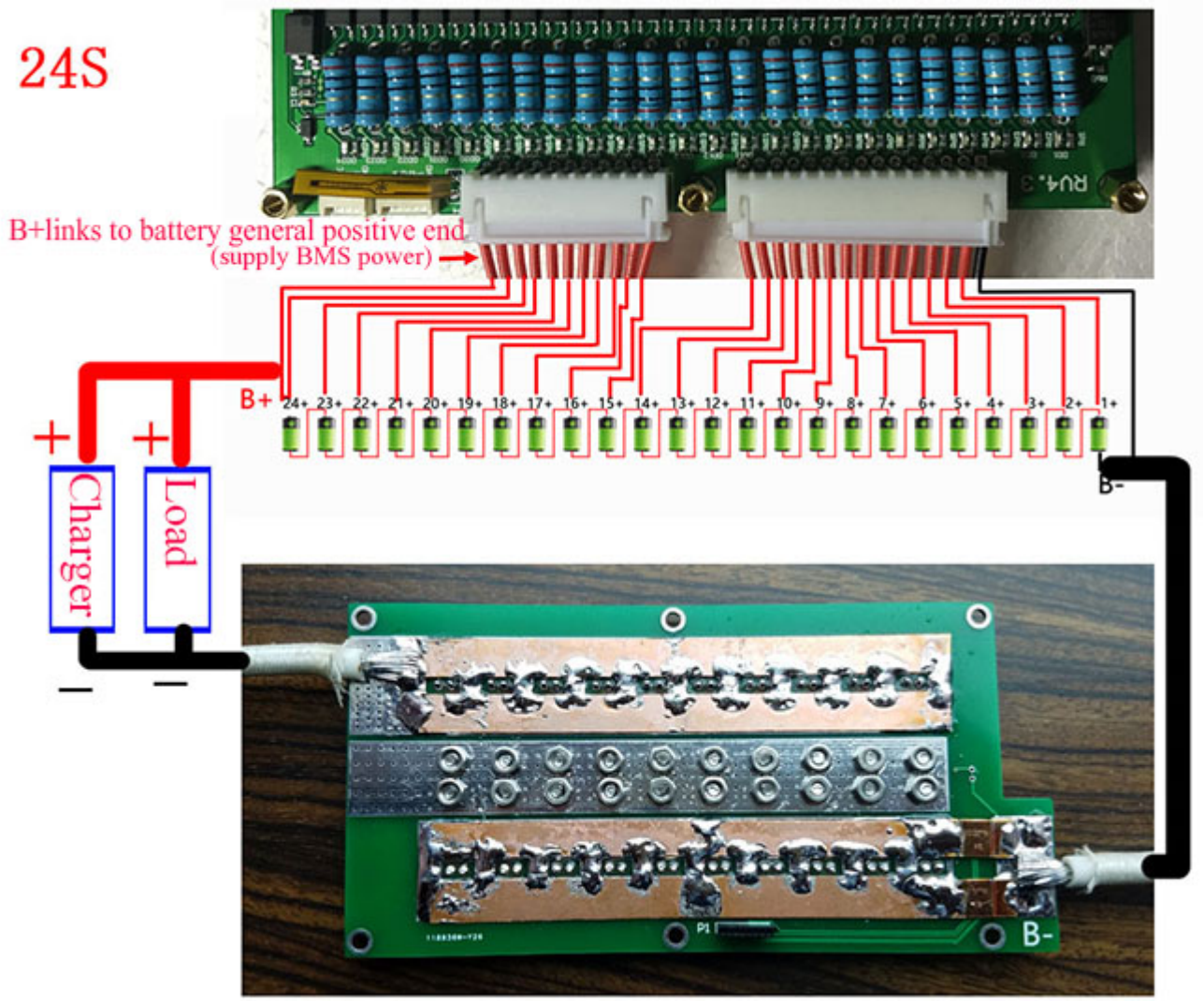
LCD POWER: 24V to 150V, can get from battery pack directly.



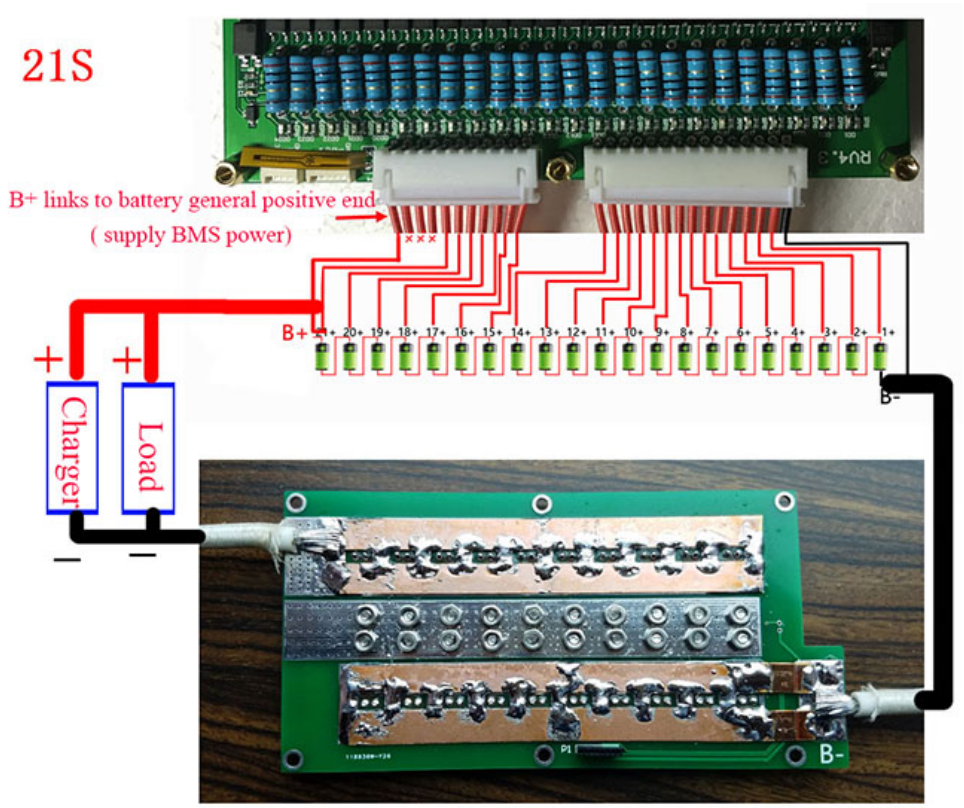

date line: two end, the color is same
to hall sensor
power: 24V to 150V
start key: LCD turn on/turn off
screen switch

Wiring diagram

24S use B-, (B1, B2, B3,... B23, B24), B+. 24+2=26 wire.



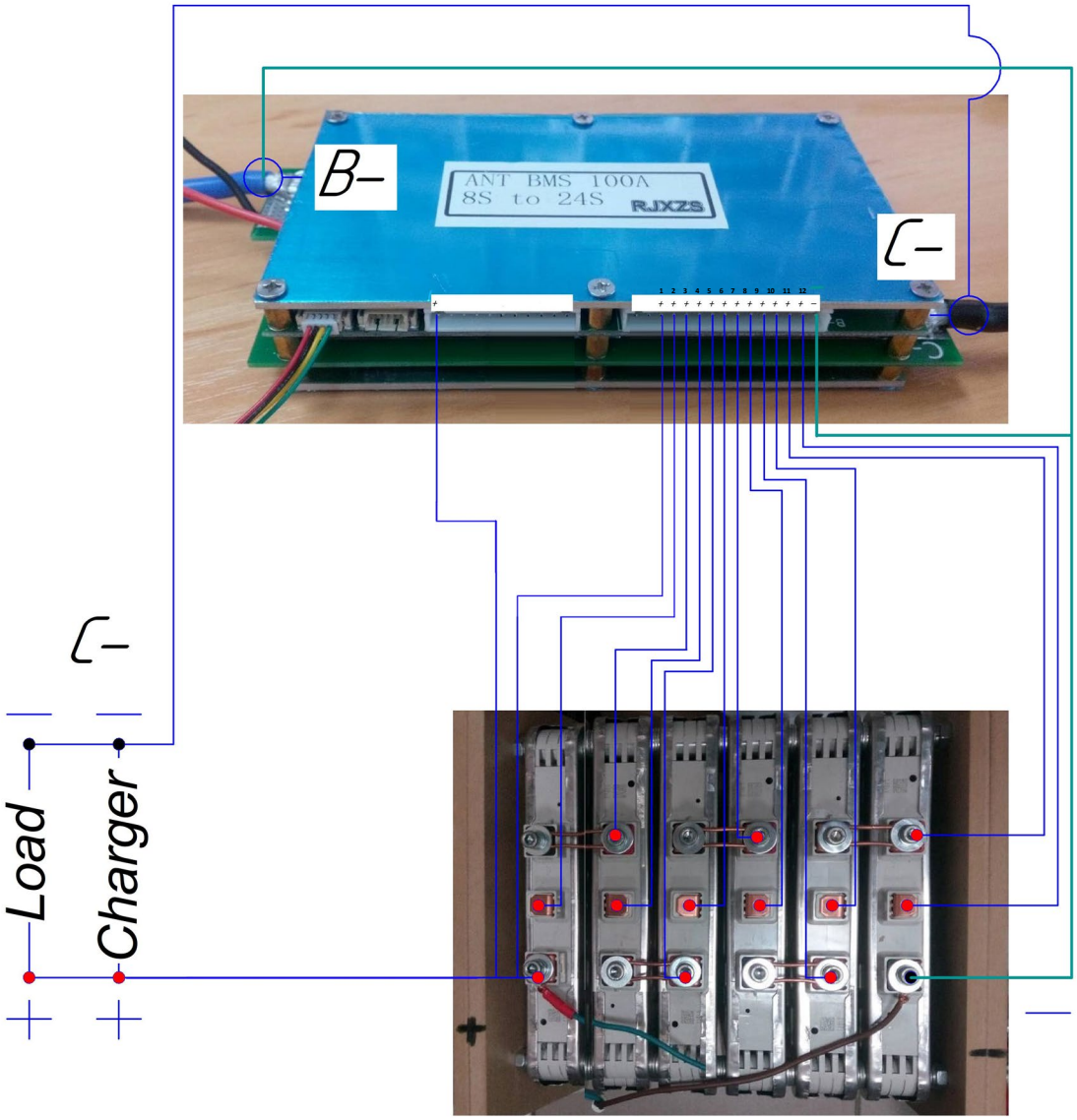
21S use B-, (B1, B2, B3,... B20, B21), B+. 21+2=23 wire.



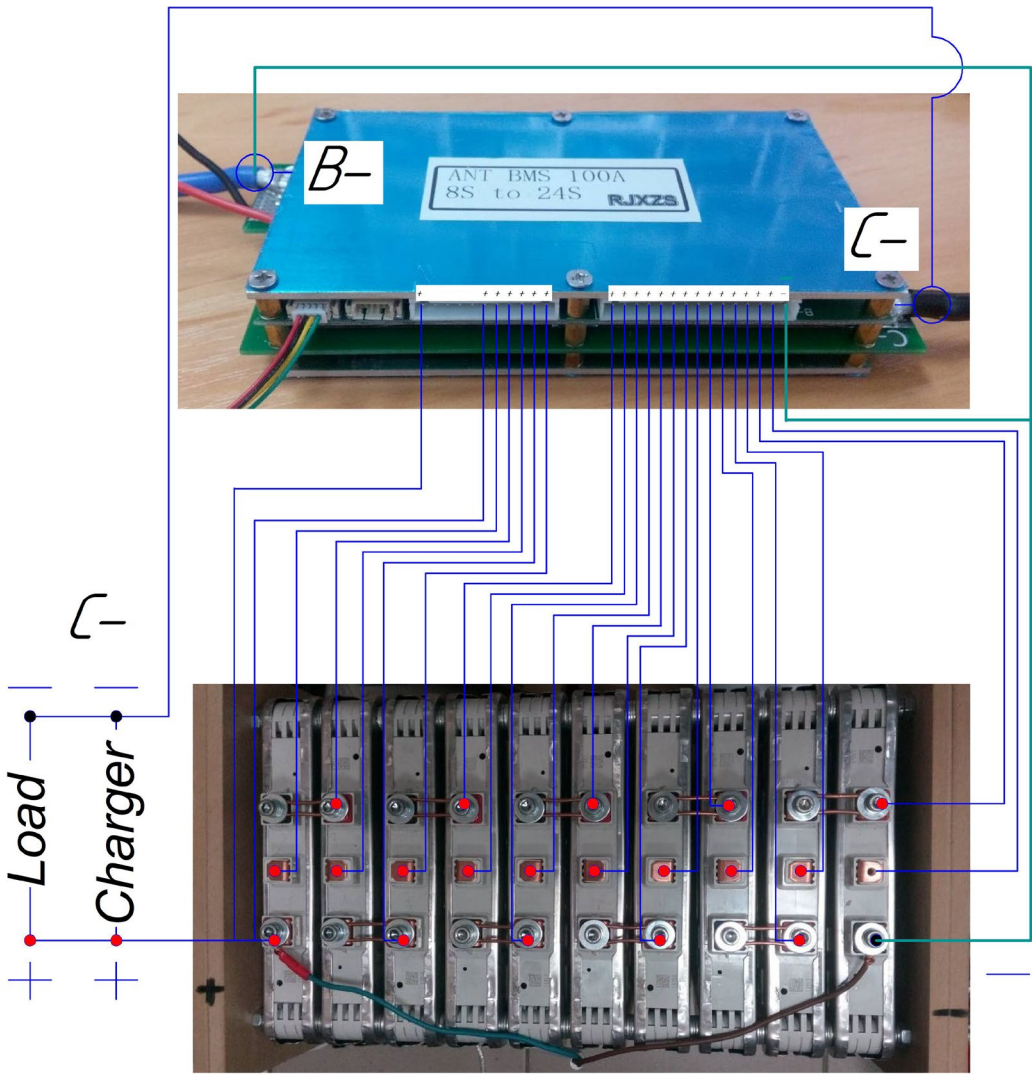
20S use B-, (B1, B2, B3,... B19, B20), B+. 20+2=22 wire.

48v

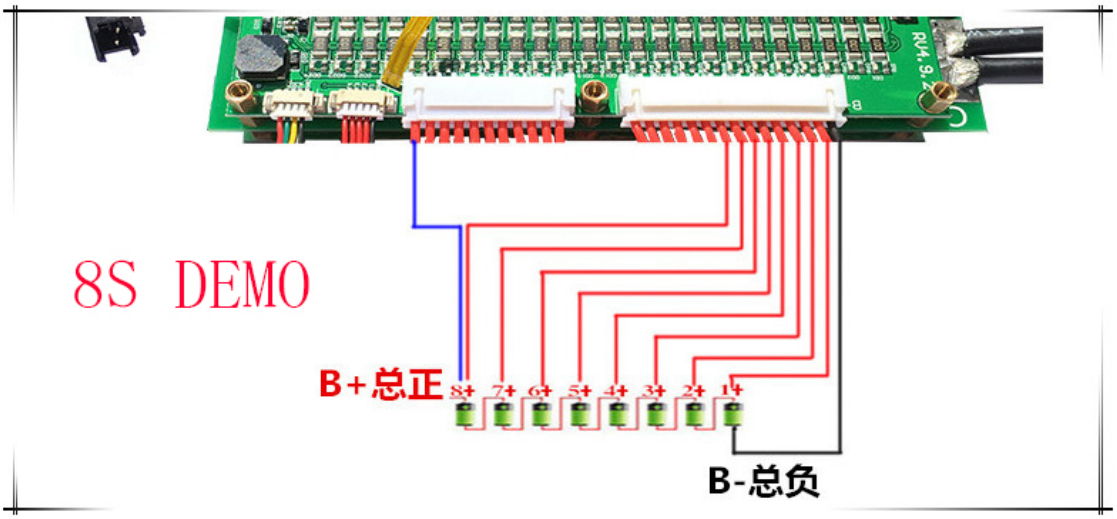
12S use B-, (B1, B2, B3,... B11, B12), B+. 12+2=14 wire.

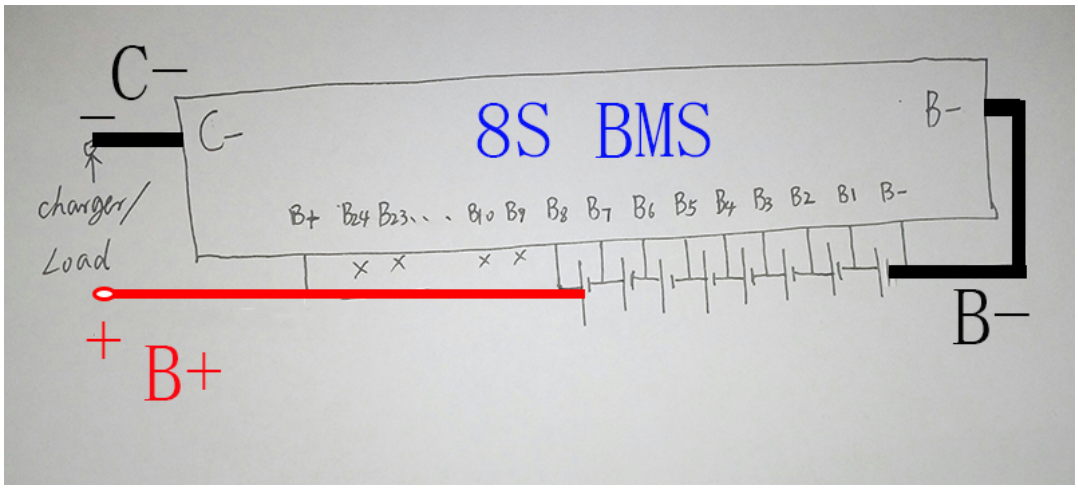


20S use B-, (B1, B2, B3,... B19, B20), B+. 20+2=22 wire.

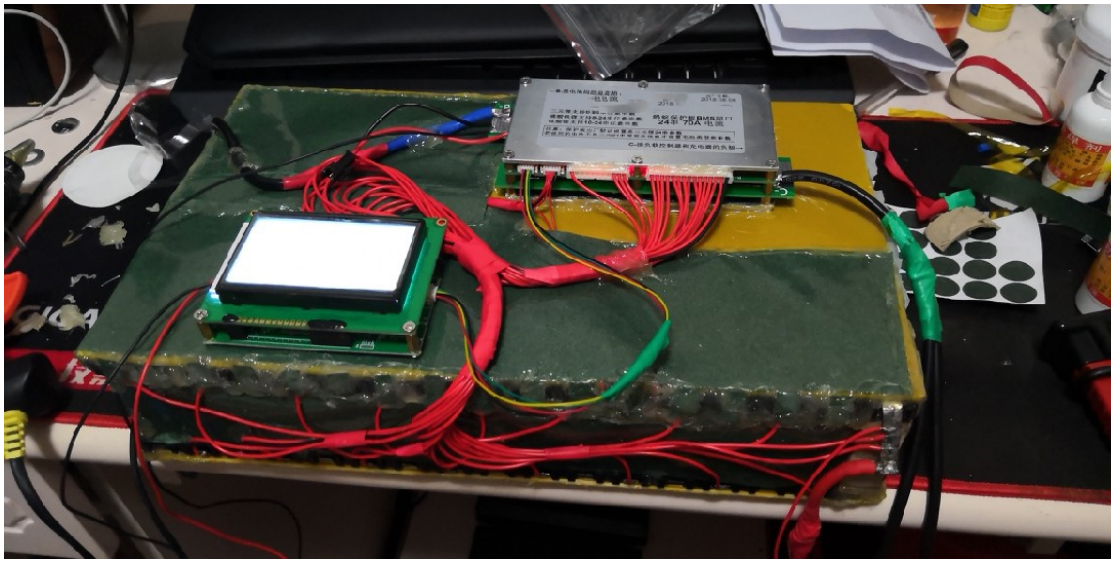


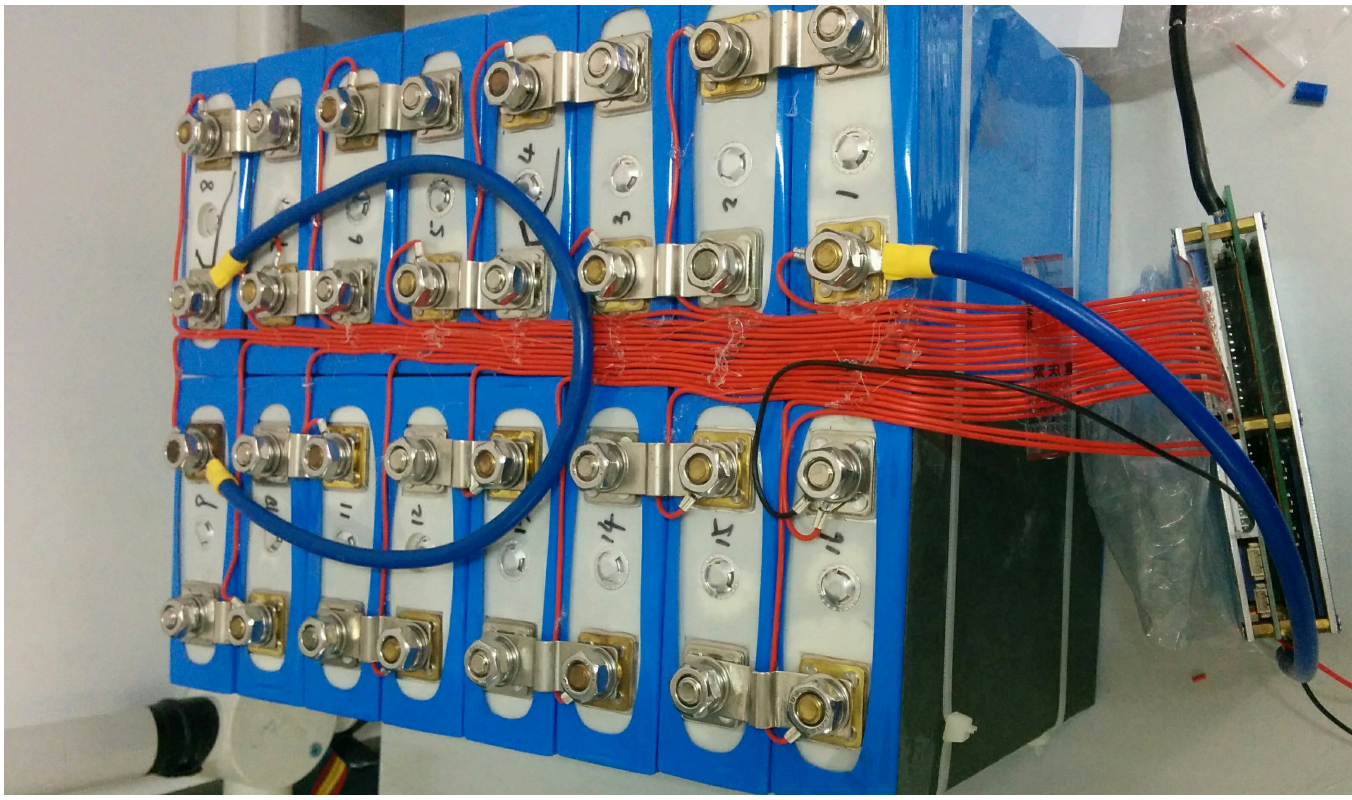
8S use B-, (B1, B2, B3,... B7, B8), B+. 8+2=10 wire.



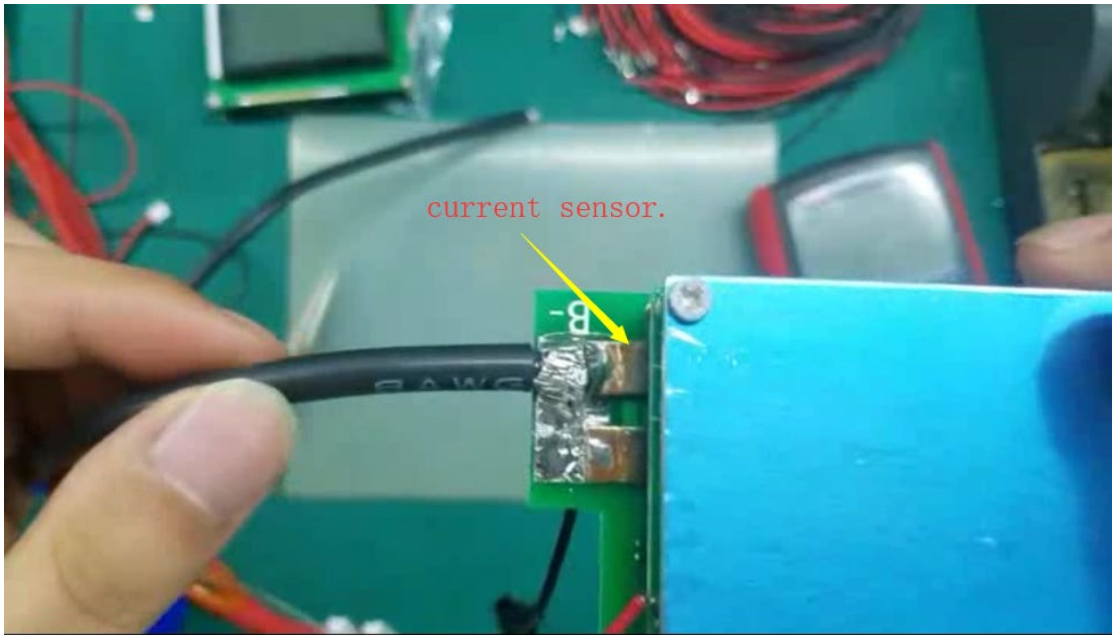


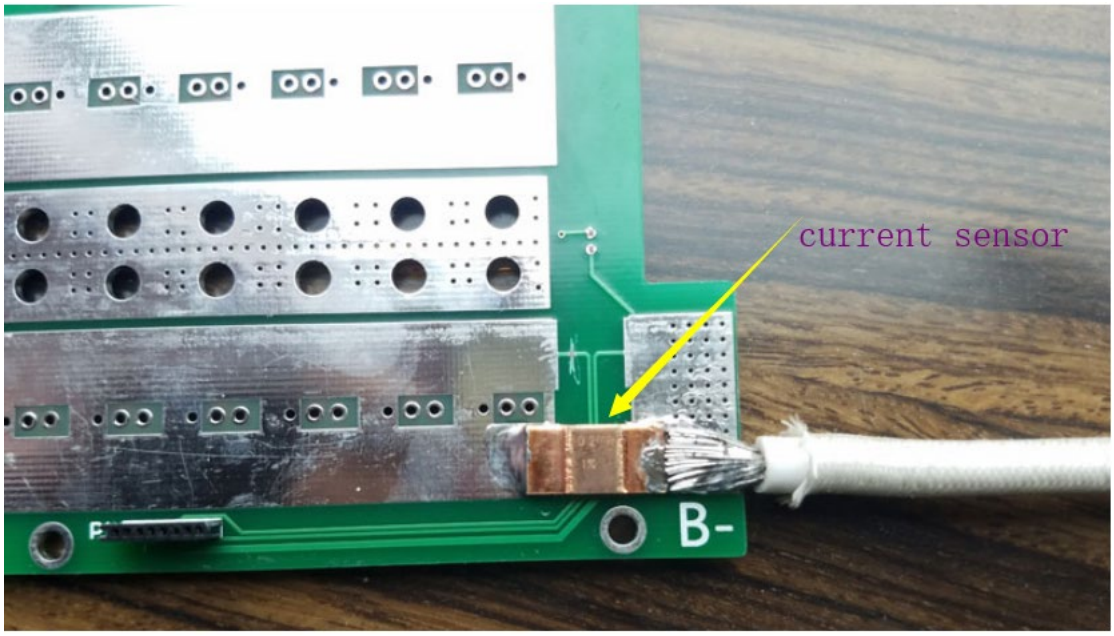
DEMO



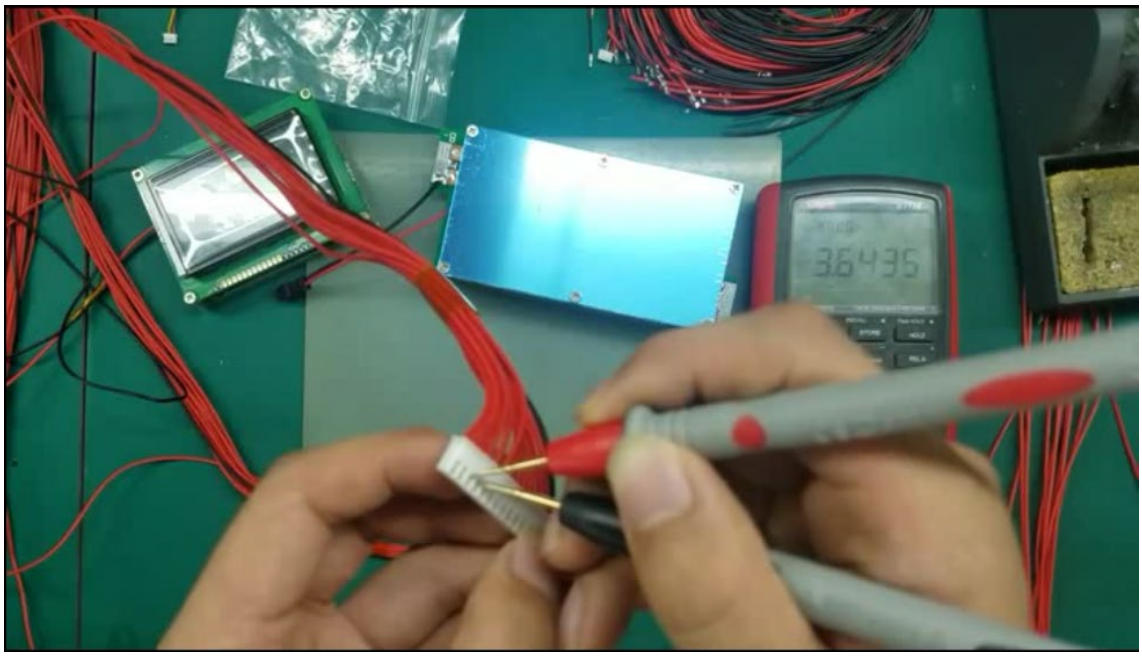


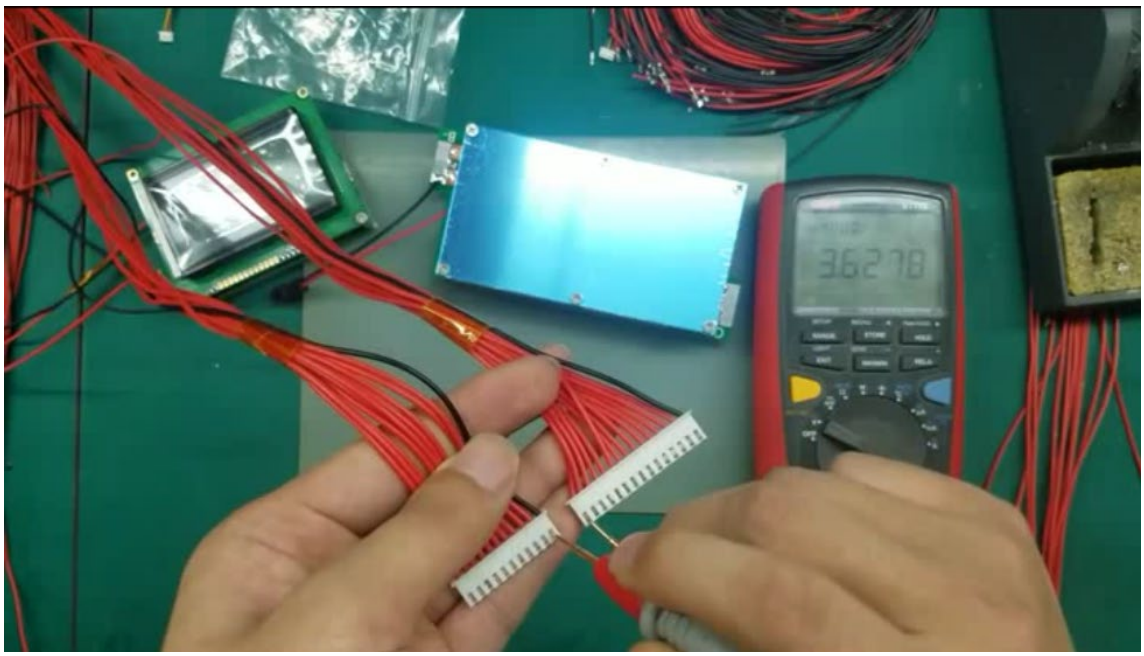
The copper piece is a current sensor, and the solder cannot exceed the raised line.





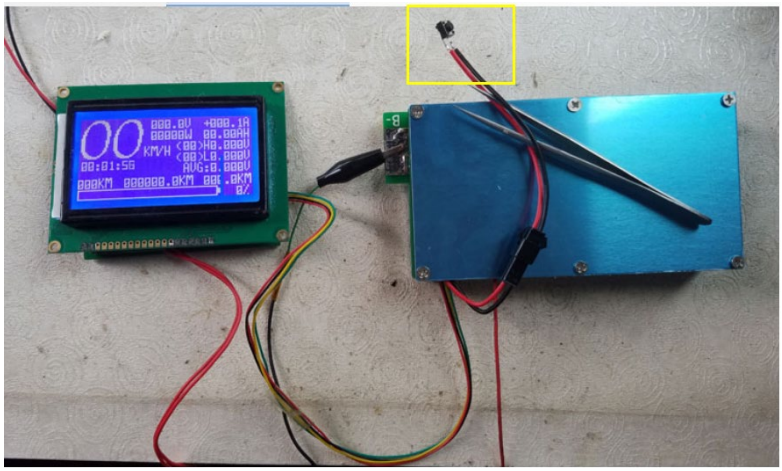
Before insert the balance wire, double check the voltage.





About the start and close buttons:

1. If the protection board is shut down due to abnormal power failure, just press the button to start the BMS.
2. During normal operation of the protection board, press and hold this button for more than 5 seconds, then release the button, the protection board will automatically turn off the power, stop working, zero power consumption.
3. more than 5 minutes, have not detect discharge current, the protection board will automatically turn off the main power supply, stop working, and zero power consumption.
4. If the BMS power is turned off because of the 2nd and 3rd reasons, you need to press and hold the power button for 3 seconds to start the normal operation of the protection board.
5. Please ensure good insulation of the power button, otherwise the BMS power may not be automatically turned off.



About onboard Bluetooth;

1. After the BMS works normally, Bluetooth is activated and you can search and connect at this time:

Name: BMS_ANT Pairing password: 1234

Note: After the BMS is in standby, the Bluetooth power will be automatically turned off (if Bluetooth is connected, it will not be turned off), Bluetooth cannot be connected at this time (automatic standby defaults to no current for 3 minutes), when the BMS detects discharge or charging current The standby will be automatically released in the future and Bluetooth will be turned back on. Before searching for Bluetooth signals, please make sure that the BMS is not on standby. If it is not found at one time, please try it multiple times.

All wiring connections are correct, the screen correctly displays the cell voltage

1. Install APP
2. Search and connect to BMS (name: SPP or BMS-ANT default password: 1234)
3. The protection board defaults to the Li-ion(3.7V) battery parameters, set the parameters according to your battery type, and set the capacity of your battery pack.
4. If there are less than 24 strings, please set the actual number of strings in the battery, and the protection board can have output.