

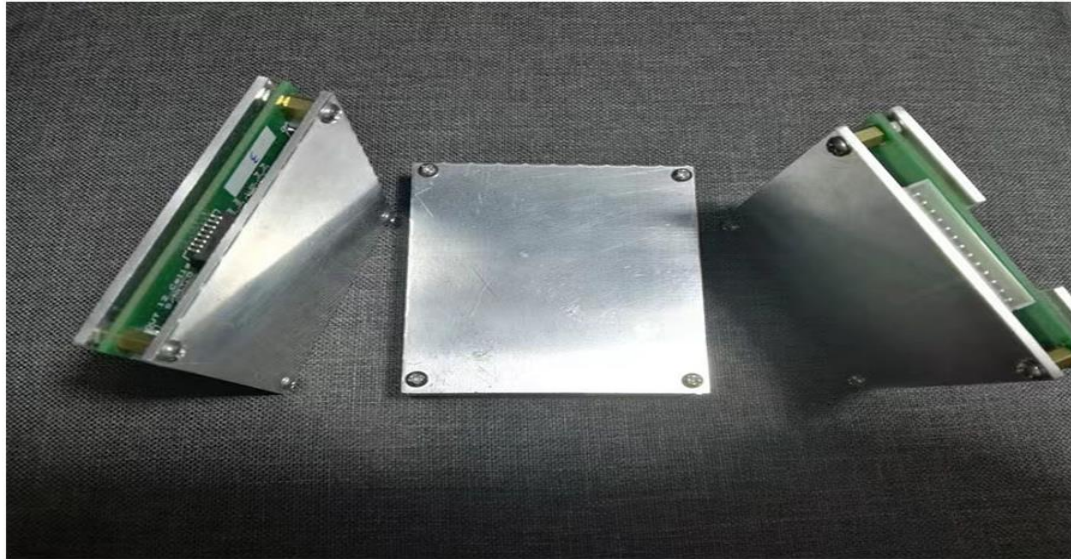
Points for Attention of BMS 4S-96S

1. Real-Time DATA Acquisition Module

TOPBMS

采集模块

微信： 17841591535

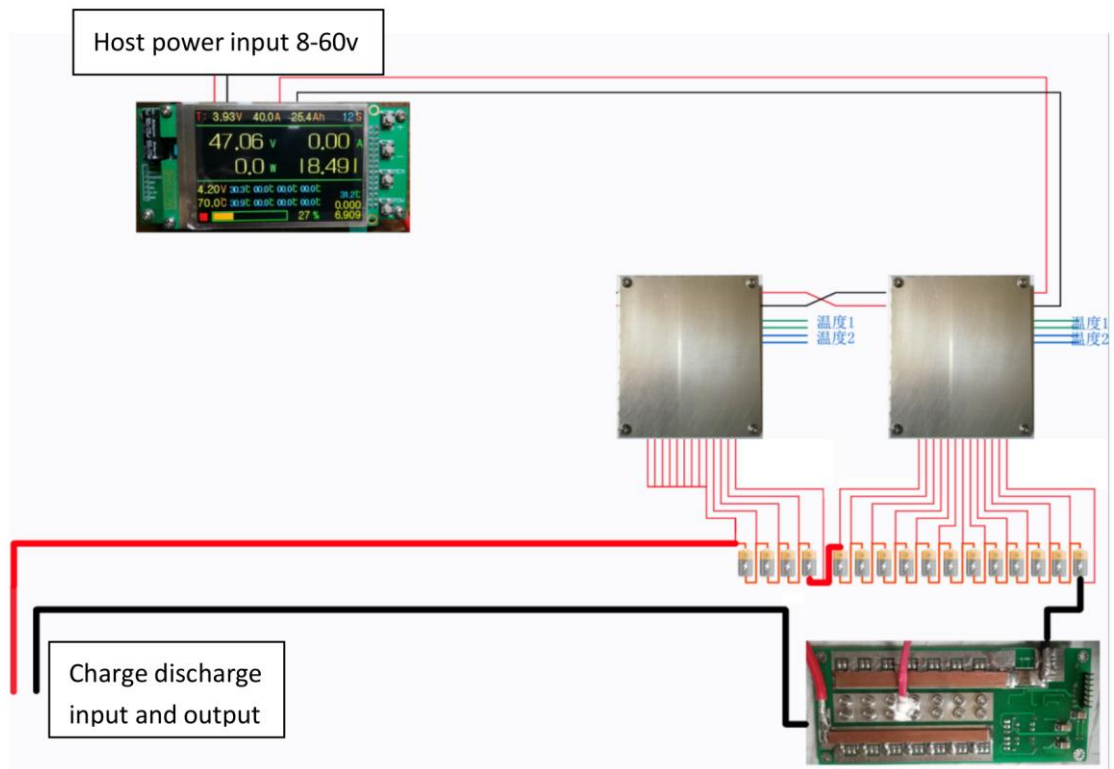


Each data acquisition module can work with batteries connected in 12 series, and all the extra wires of one data acquisition module are connected to the last pole of each module and these extra wires are not allowed to be connected next data acquisition module ;

Take the following connection of 2 date modules and 16 serial batteries for example ;

The 2 data acquisition modules has 24 wires , but there are only 16 CELLS

You can see that the 2nd module has extra wires which are connected to the last pole when there are less than 24 cell ; Each module is an independent unit, and each module is isolated;

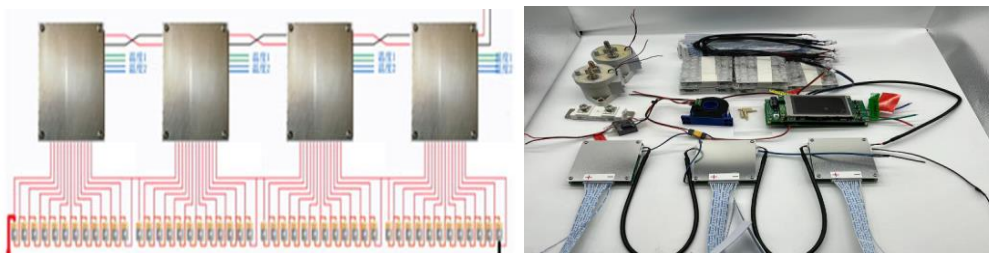


Note1 : When the serial number of battery cells is 13, 14, 15, 25, 26, 27, 37, 38,

39, the power supply voltage of a single module must be $\geq 11V$, Otherwise the data acquisition module can't work properly ;

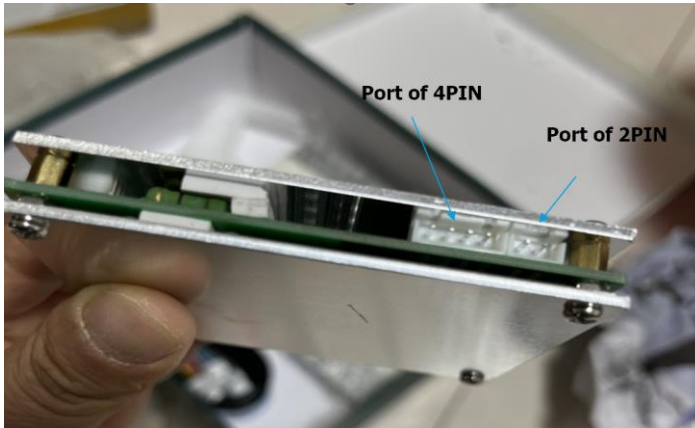
Wrong Wirings burn/damage acquisition module ; The withstand voltage of each data acquisition channel is only 5V, which will burn the MODULE

✧ Wiring Diagram of DATA Acquisition Module

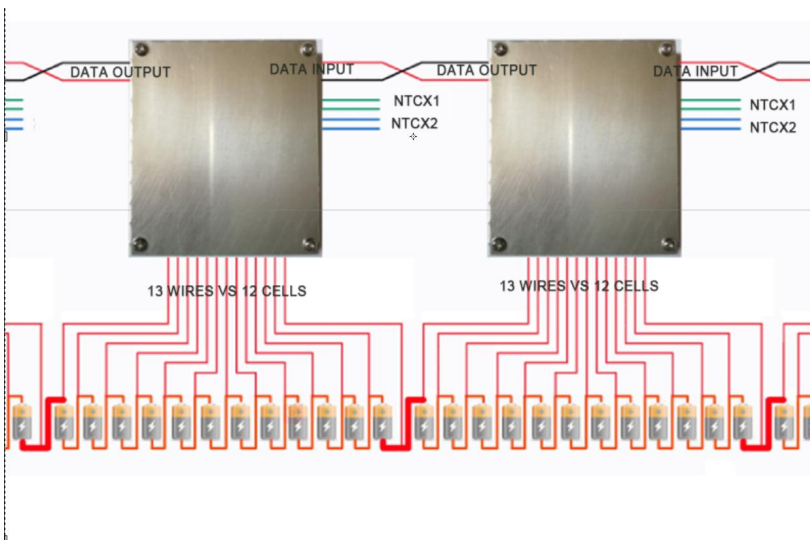
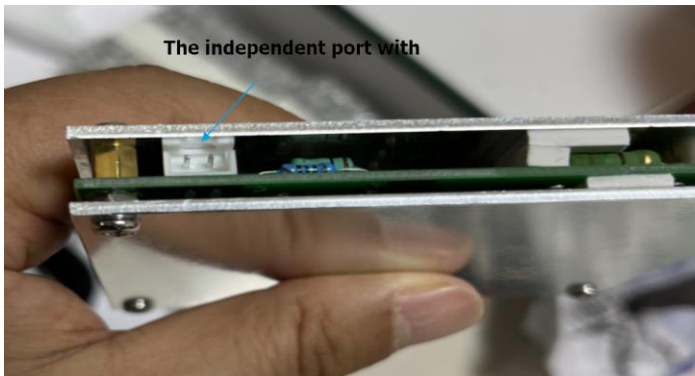


Acquisition module with passive equalization, balanced current 200MA, can only correct small voltage difference,

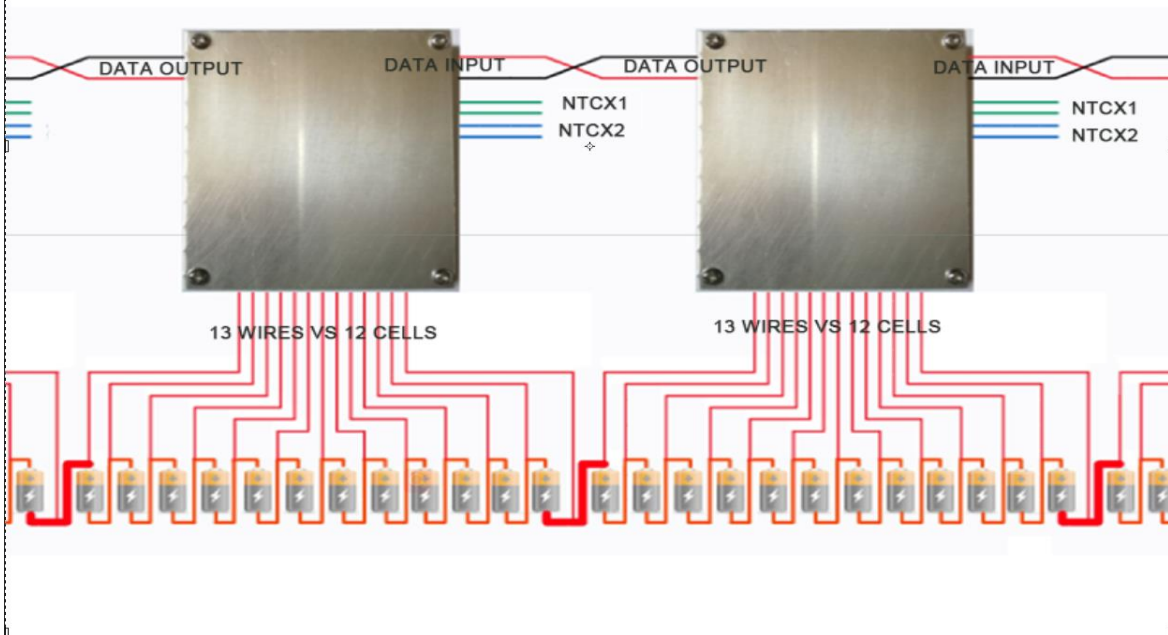
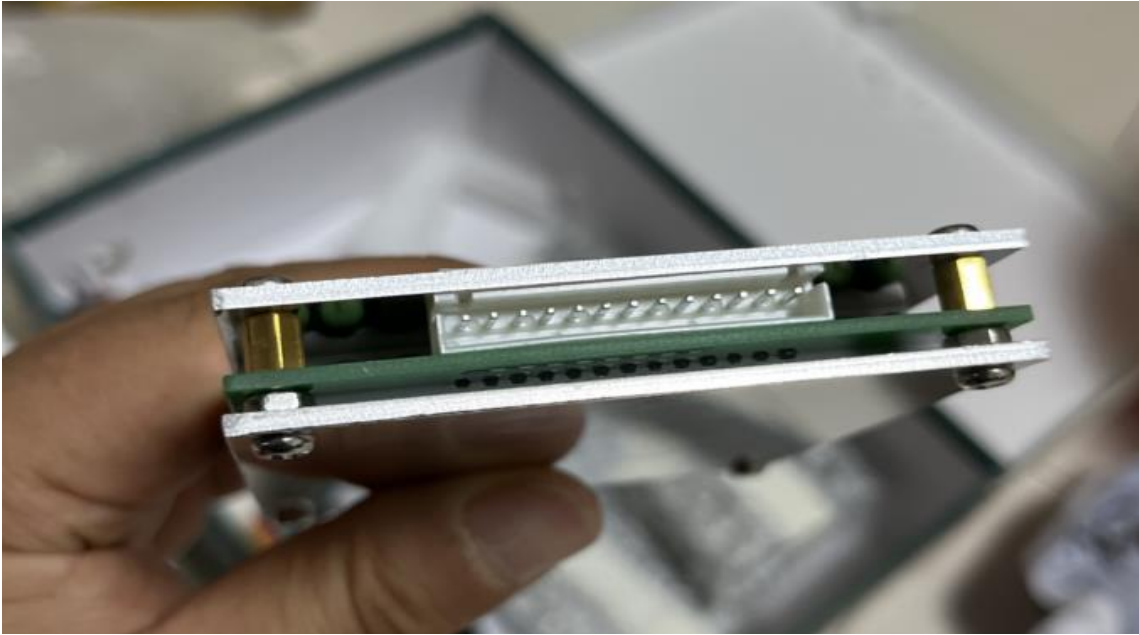
Port with 4Pin s for the temperature sensor; Port with 2pin nearby port with 4Ppin is the data input



The independent port with 2PIN on the other side of data acquisition module is the output to of acquisition module;

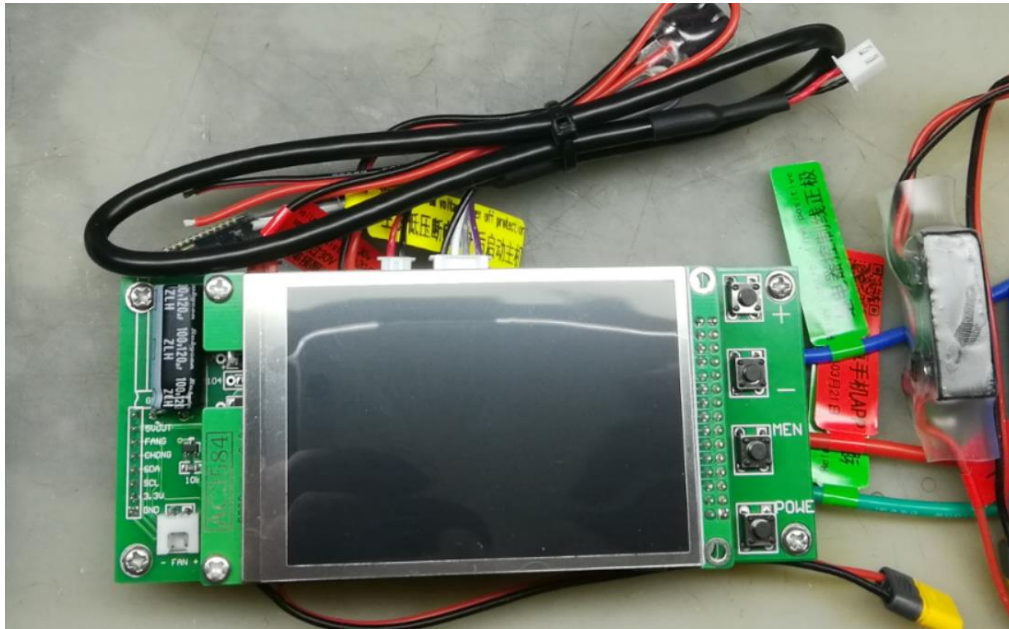


a single data acquisition module has 13 balancing wires which are connected to 12 CELLS maximum ;The most important thing for the acquisition module is that 13wires cannot be connected incorrectly. If wrong wiring , it can burn the module

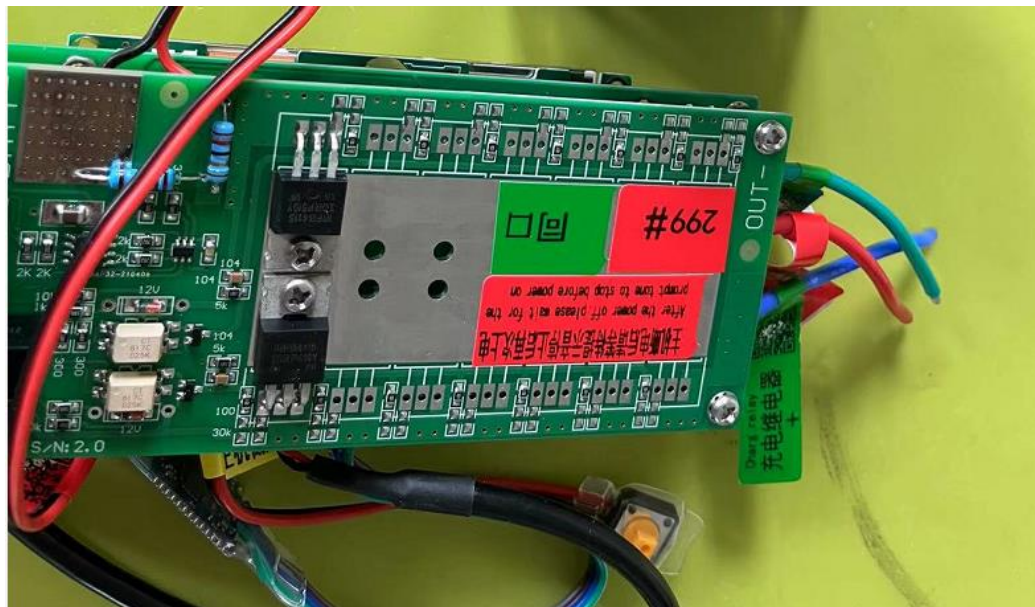


2.Main Borad includes

Display+ Controlling Board+ Power Driving Board



Front Side



Note: over 96S , two BMS systems can be connected in series t, As long as the total Voltage does not exceed 1000V, BMS can be connected in series

◇ 3 个系统: 主机电源、霍尔传感器电源与继电器驱动电源, 可以共用一组 12V

The buyer needs to prepare a 12V external power supply (10A discharging current) for the following three sub-systems

3 sub-systems:

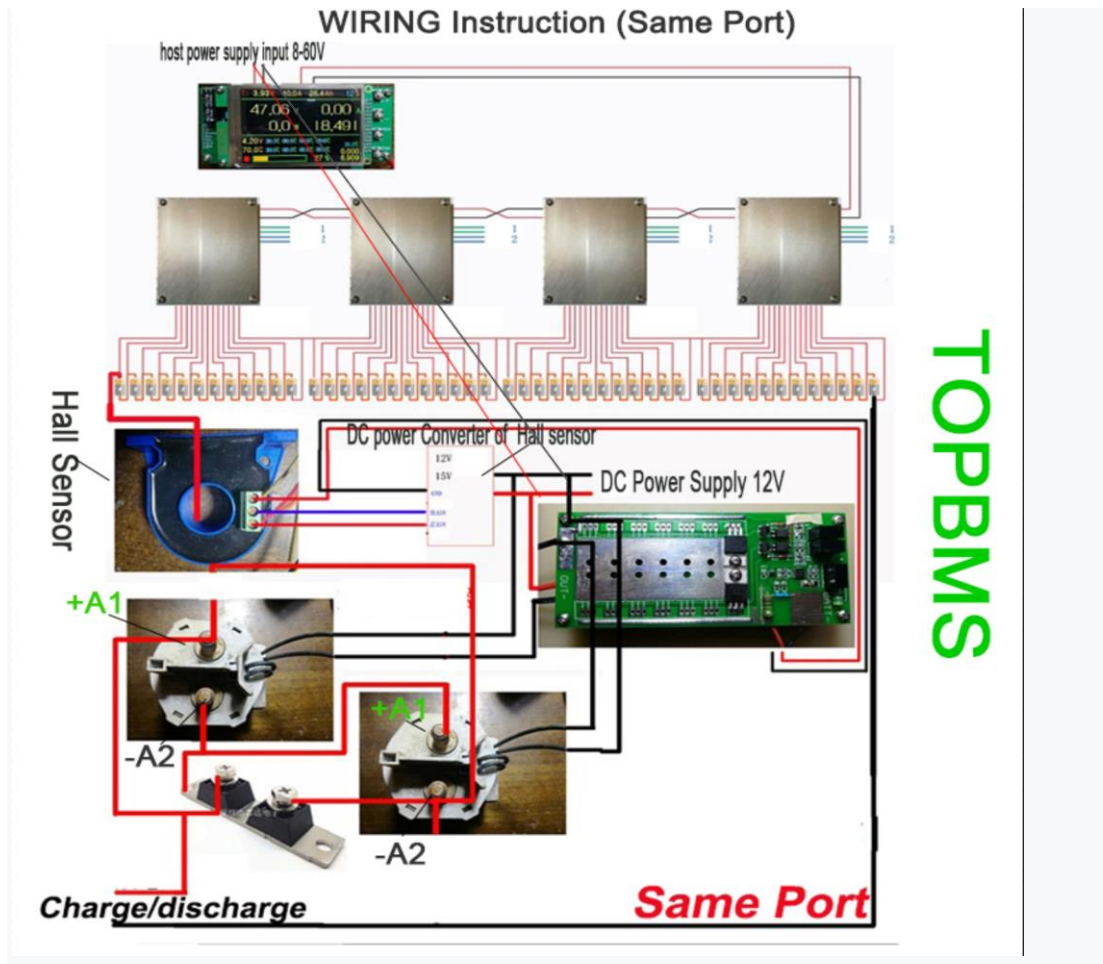
- Main Board DC power supply,
- Hall sensor DC power supply
- Relay drive DC power supply, can share a group of 12V,

How to make a 12V external power supply:

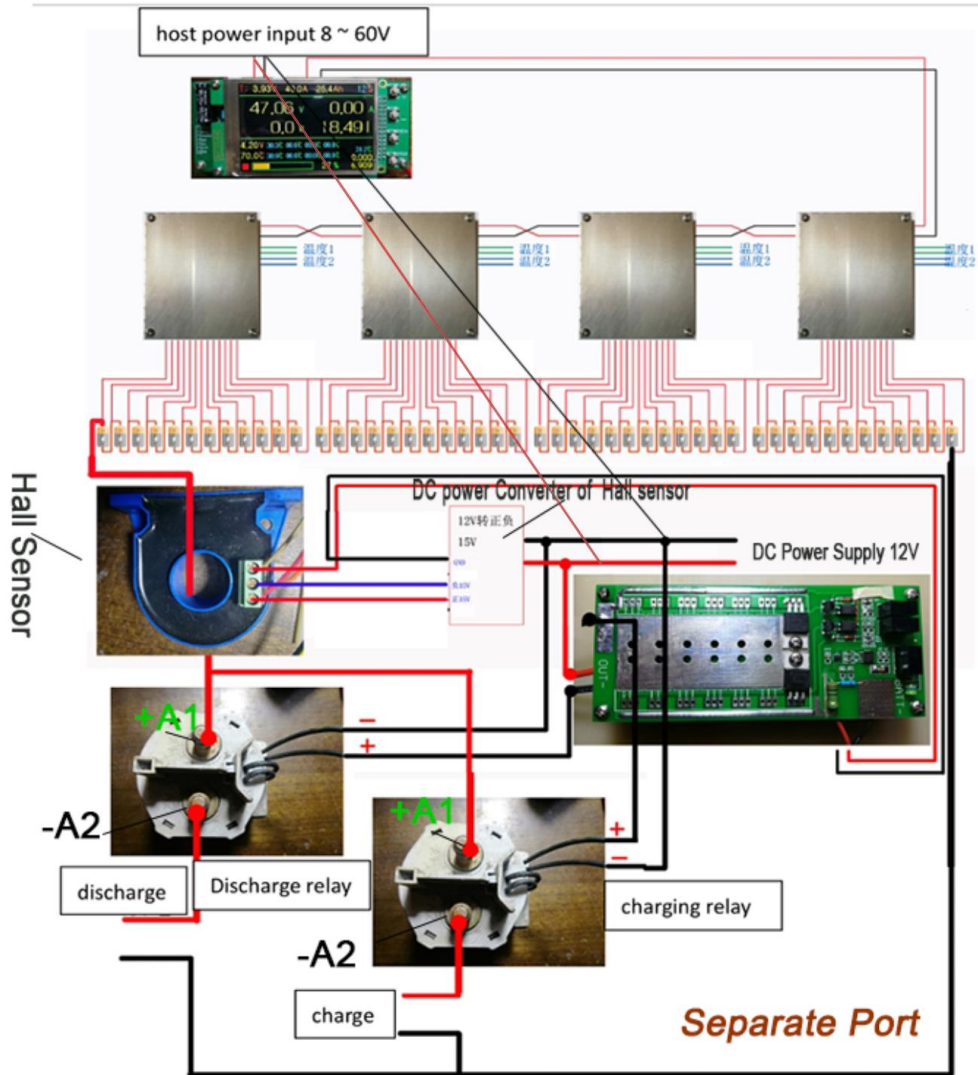
把电池组总压降压到 12V 就可以了, 至少要有 10A 的输出能力;

Prepare the independent battery pack of 12V, at least 10A discharging current ;

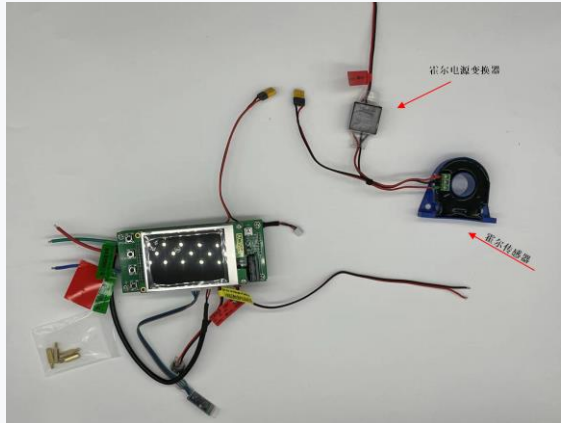
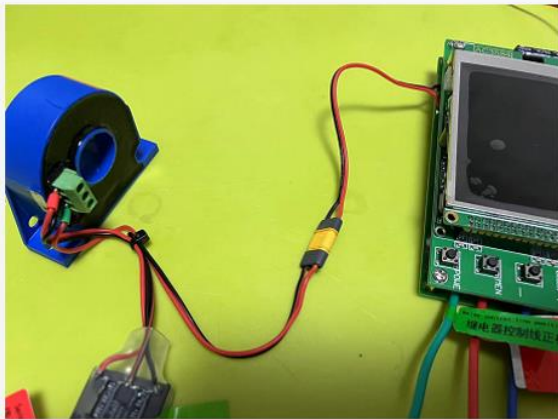
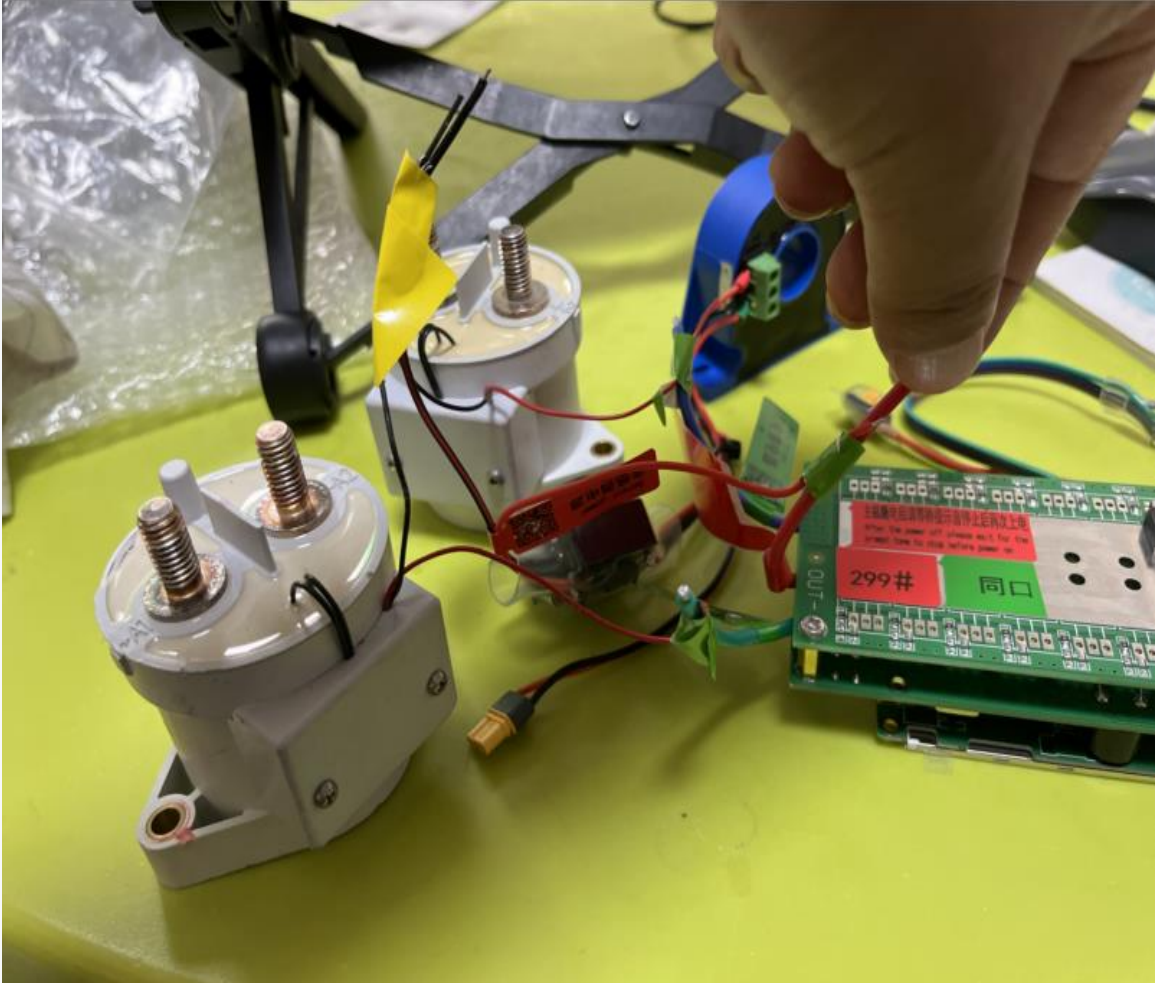
◇ Main control board + relay + Hall sensor external 12V power connection method:



WIRING Instruction (Separate Port)

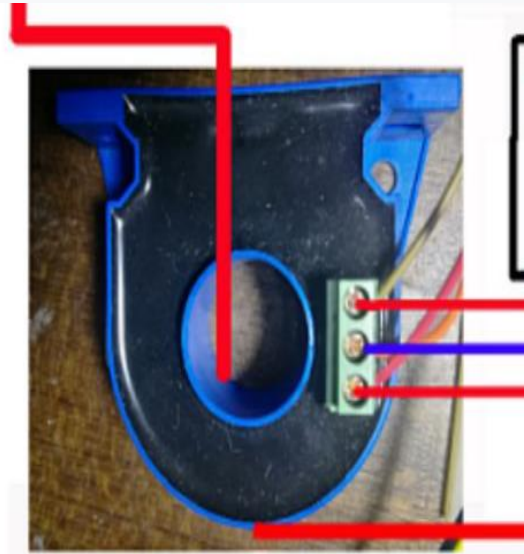
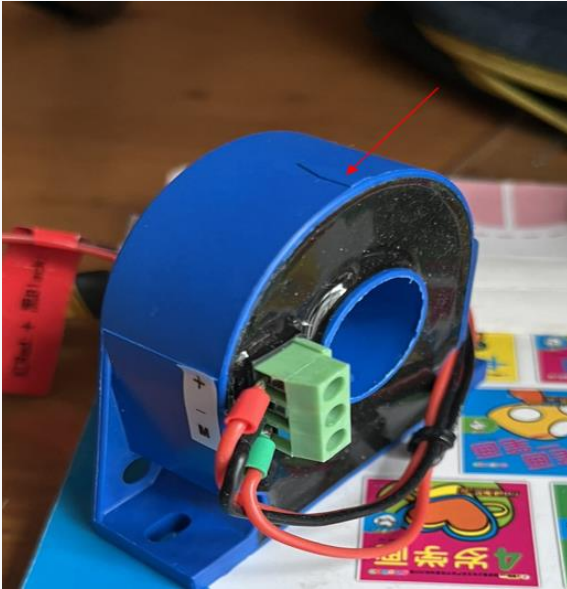


TOPBMS

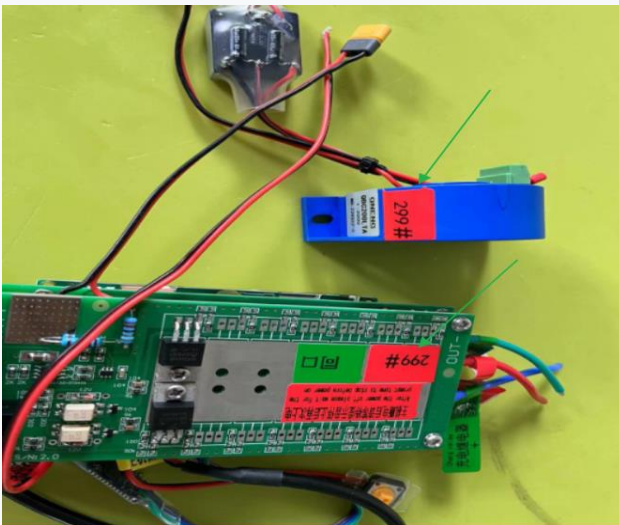


The positive wire of the entire battery goes through the hole of the hall sensor according to the following instruction :

- ◇ The sensor has arrows on top which indicates the direction of wire going through the hole ,
- ◇ If wire goes through in opposite direction, charging will show discharge, discharge will show charge in the DISPLAY

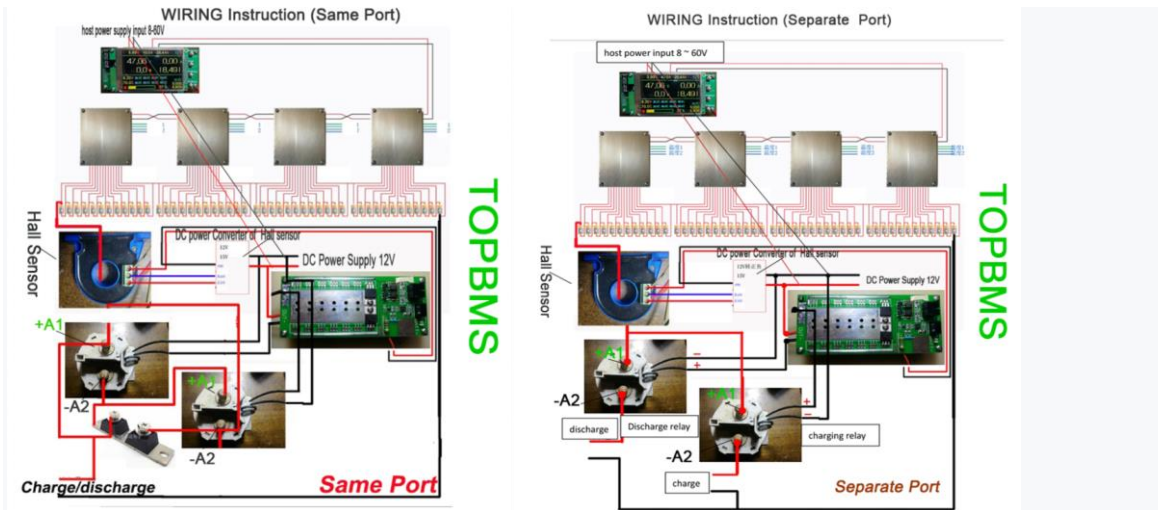


Note: During use, the host numbering must be consistent with the Hall sensor numbering



2. Wiring OF Fast Recovery Diode+ Relay

◇ Relay wires according to the following picture wiring

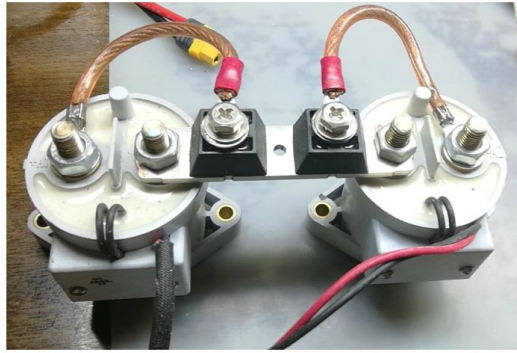


◇ Copper belt Connection method of Fast Recovery Diode+Relay



It can also be another kind of wiring: because the hole of the Fast Recovery Diode is smaller than the terminal of Relay ,

Widen the hole of Fast Recovery Diode , and then install the diode onto the 2 relays;



3. Supporting Screw of Main control board



It Can replace the screws on the four corners of the main board, fixed to the panel;

4. Soft Start of High voltage system:

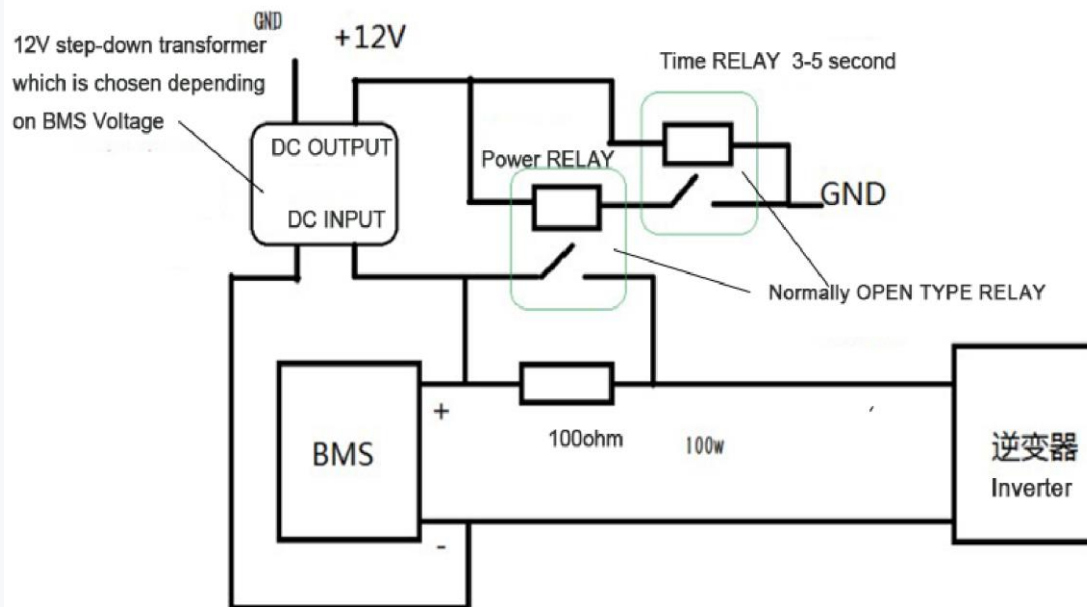
Customers need to confirm whether there is a large inductive load before installation; If there is a large capacitor, the impedance of the capacitor is almost equal to zero before power is added

In this case, the instantaneous peak current is very large; It will greatly reduce the life of the relay, serious will instantly melt the relay contact

Therefore, there must be a pre-charging road design; The design of pre-charging circuit is recommended as follows: a power relay, a time relay and a resistance of 100 ohms of about 100W, plus a power step-down device; Will greatly reduce the life of the relay, serious will instantly melt the relay contact

The power supply must be from the BMS output

Soft Start of High voltage system



Pre-charging Circuit

5. 蓝牙 APP 下载地址: www.cleverbms.com

6. 产品重量: 96 串大概在 1.7kg 左右, 64 串大概在 1.54kg 左右

Product weight: about 1.7kg for BMS 96S and 1.54kg for BMS 64S

7. 主控板尺寸: 长*宽*高=135*57*45MM

Dimensions of the main control board: L * W * H =135*57*45MM

8. 采集模块尺寸: 长*宽*高=82*72*13.8MM

DATA Collection module size: L * W * H =82*72* 13.8mm