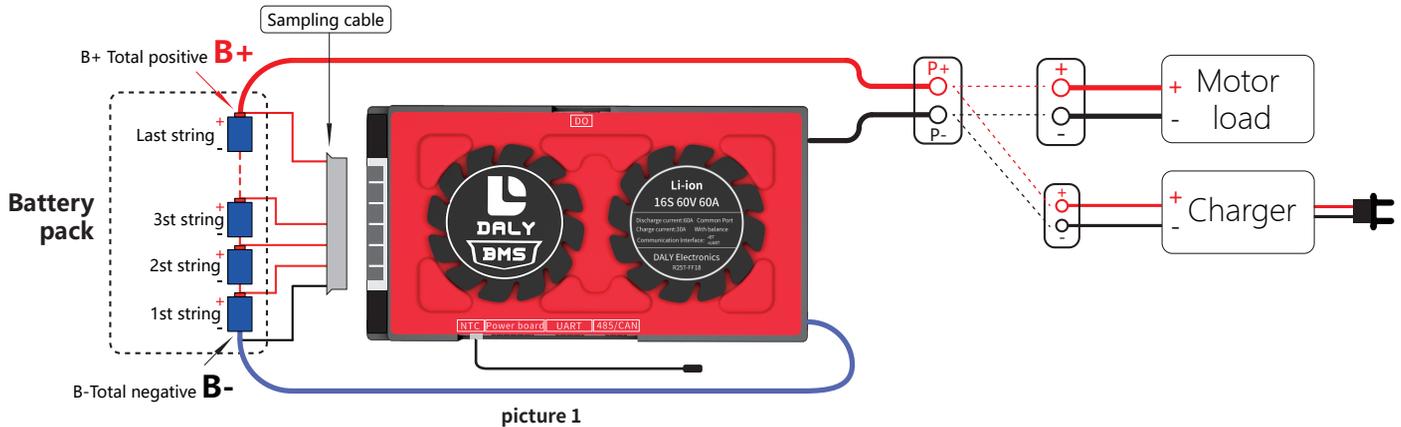




PACK PARALLEL BMS Manual

Wiring diagram of Smart BMS



1. BMS connection battery pack wiring sequence

※ Attention!: The cables of different manufacturers are not universal, please make sure to use our manufacturer matching wire; the colors of B- and P- lines of distinct manufacturers are different, please pay attention to the B- and P- marks;

※ Remember!! When welding the sampling wire, do not insert the wire into the BMS

- 1.1 The thin black wire connected to the battery pack total negative electrode(B-), the second wire (red wire) connected to the first string of battery positive poles, followed by connecting to the second of positive poles string of batteries in turn until the last string of total positive poles B+;
- 1.2 Don't plug directly into the BMS after the cable is connected please make should use the universal meter to measure the voltage between every two adjacent metal terminals on the back of the plug. Li-ion battery voltage should be between 3.0~4.15V, Lifepo4 battery should be between 2.5~3.6V, LTO battery should be between 1.8~2.8V, please make sure the voltage is correct before proceeding to the next step;
- 1.3 Insert the NTC (make sure the temperature control probe is inserted at the NTC)
- 1.4 Connect the B- line of the BMS (thick blue line) to the total negative poles of the battery (the length of the B- line shouldn't exceed 40cm);
- 1.5 Please insert the optional Bluetooth into the UART port (if there doesn't have optional Bluetooth, It can't be reviewed battery information through the mobile APP; another way to check through by upper computer software in the computer, please refer to the following case for the wiring tutorial of the upper computer software)
- 1.6 Insert the wire into the BMS

二、Wiring diagram of parallel BMS system

(The BMS and parallel BMS modules must be used together and can't be mixed using. Wiring should be done according to the purchased parallel BMS module corresponding to the current.)

Method 1 (the BMS and the parallel BMS module wire are not connected): After the BMS is assembled, when the parallel BMS module is connected to the BMS, first connect the parallel BMS modules P-wire to the BMS (the common port is connected to the BMS P-wire, and the separate port is connected to the BMS C- wire), and then connect B-, and then connect B+. After the wire is connected, first plug the BMS and parallel BMS module ports, then the B+ port, and finally the control signal wire to the protection board;

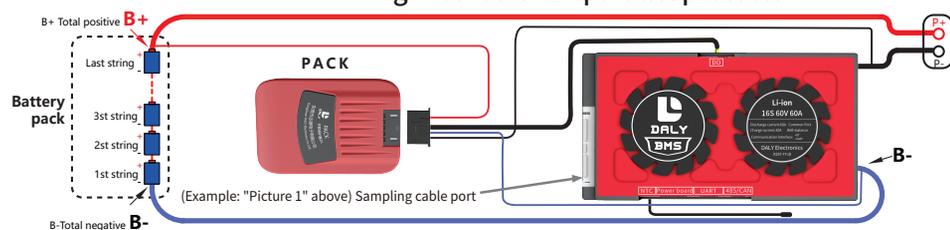
Method 2 (BMS and parallel BMS module lines are connected): first plug the BMS and parallel BMS module ports, then plug into the B+ port, and finally plug into the control signal line to the BMS;

※ Please strictly follow the above two methods for wiring, please operate in sequence if the wiring sequence is reversing, it will cause damage to the parallel BMS module.

※ The wiring method of 2A parallel BMS module:

2A parallel BMS module has one outlet and four wires. The red B+ wire is connecting to the total positive pole of the battery pack, the black starting wire with a terminal is connected to the DO port of the BMS, the blue B- wire is connected to the total negative pole of the battery pack or the B- wire of the BMS, The black P-wire is connected to the negative pole of the load or the P-wire of the BMS

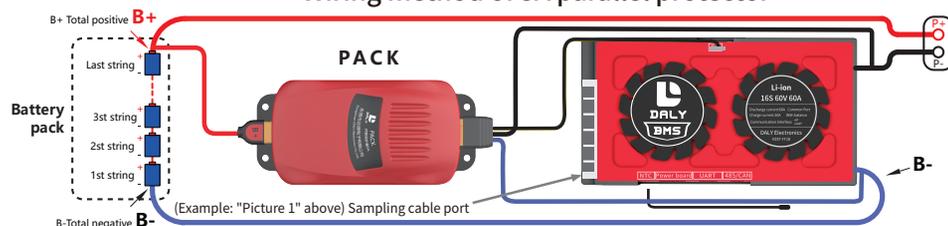
Wiring method of 2A parallel protector



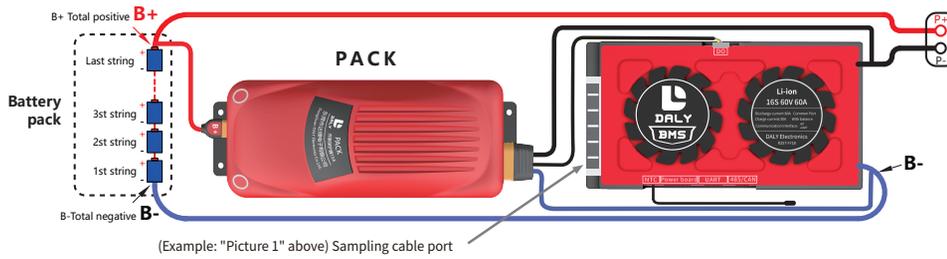
※ The wiring method of 5A and 15A parallel BMS moduleL:

5A and 15A parallel BMS modules have two outlets and four wires. The red B+ wire is connecting to the total positive pole of the battery pack, the black starting wire with a terminal is connected to the DO port of the BMS, the blue B- wire is connected to the total negative pole of the battery pack or the B- wire of the BMS, The black P-no port line is connected to the negative pole of the load or the P-line of the BMS.

Wiring method of 5A parallel protector



Wiring method of 2A parallel protector



3. Activate BMS:

Method 1 Button activation:

There is an activation button on the optional Bluetooth, touch the button to activate the BMS, and perform the third step. (If there is an optional button light board, there is also an activation button on it, which can realize this function)

Method 2 Charge activation:

If there is no optional button activation tool, you can activate the BMS by charging. Use this method to skip the third step and connect the P-wire according to the fourth step (the negative pole of the charger connect to the P-wire, and the charger's negative pole is connected to the P-wire. The positive pole is directly connecting to the total positive pole of the battery pack) use a multimeter to measure the output voltage of the charger, and ensure that the output voltage of the charger is at least 2V higher than the battery pack voltage. Use the charger to charge the battery pack, which can stimulate the BMS.

4. After the wiring are completed:

Measure whether the voltage of battery B+, B- is equal to the voltage of B+, P- (that is, whether the voltage of the battery pack itself is equal to the voltage after passing through the protection board), the equality means that the BMS is working normally and can be used normally. If not equal, please follow the wiring sequence above Check the sequence again.

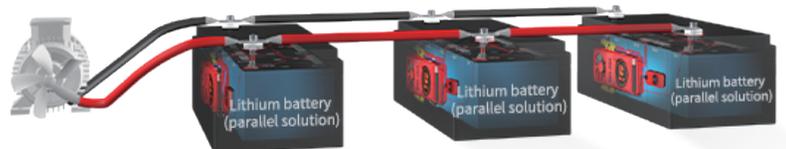
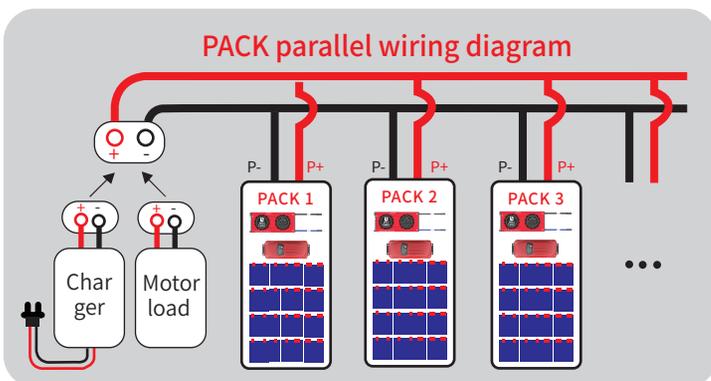
5. Connect the load and charger:

- 5.1 Connect the P- wire to the negative pole of the load power supply and connect the P- wire to the negative pole of the charger
- 5.2 Connect the positive power supply line of the load to the total positive pole of the battery pack, and the positive pole of the charger to the total positive pole of the battery pack.

6. Download the communication software (SMART BMS APP on the mobile phone, host computer on the computer), and set the capacity AH of the battery pack to the correct capacity.

- 6.1 Search for smart BMS in the mobile application market, download and install it. (If you can't download it, in the case below, you can scan the code with your browser to download the APP)
 - 6.2 Turn on the positioning and Bluetooth function of the mobile phone
 - 6.3 Open the SMART BMS APP, you can see the Bluetooth serial number on the first interface (the same as the serial number on the actual Bluetooth), click the Bluetooth serial number to enter the APP
 - 6.4 There are parameter settings in the lower right corner of the interface, click to open, click the second interface "Cell Features", you can see the rated capacity, enter the actual capacity of your battery pack XX, click Settings, enter the password 123456, the capacity will be refreshed. renew. for the capacity, you just entered.
 - 6.5 After the capacity is set, the battery pack can be charged. The charging triggers the overcharge secondary protection, and the SOC will be automatically calibrated to 100%. In addition: Please scan the code to watch the video for the operation of the host computer.
- PS: The SOC adopts the ampere-hour integration algorithm, and the accuracy of the actual battery capacity will make the SOC accurate. In the parameter setting interface, it is not recommended for non-professionals to modify other parameters. The wrong parameter setting will cause the product to not be used normally. guest Users can modify "protection parameters" and "temperature protection" according to their own needs.

7. PACK parallel Lithium battery pack



Dali official website



video tutorial



2A Wiring case



5A Wiring case



15A Wiring case

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