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| File Name | ME-JBD250BMS | File No. | SP151122 | Page | 1/17 |
|-----------|--------------|----------|----------|------|------|

1. Scope

This installation guide shows the steps required to connect the custom Muller Energy 250A JBD Smart BMS.

2. Description and Model

Description : JIABAIDA Smart BMS 250A

This 4S Smart BMS with Bluetooth for 12V LiFePO4 batteries is only available at Muller Energy!

● **Package- BMS & Bluetooth & Balance Wires & RS485 display & 5A Heltec Active Balancer!**

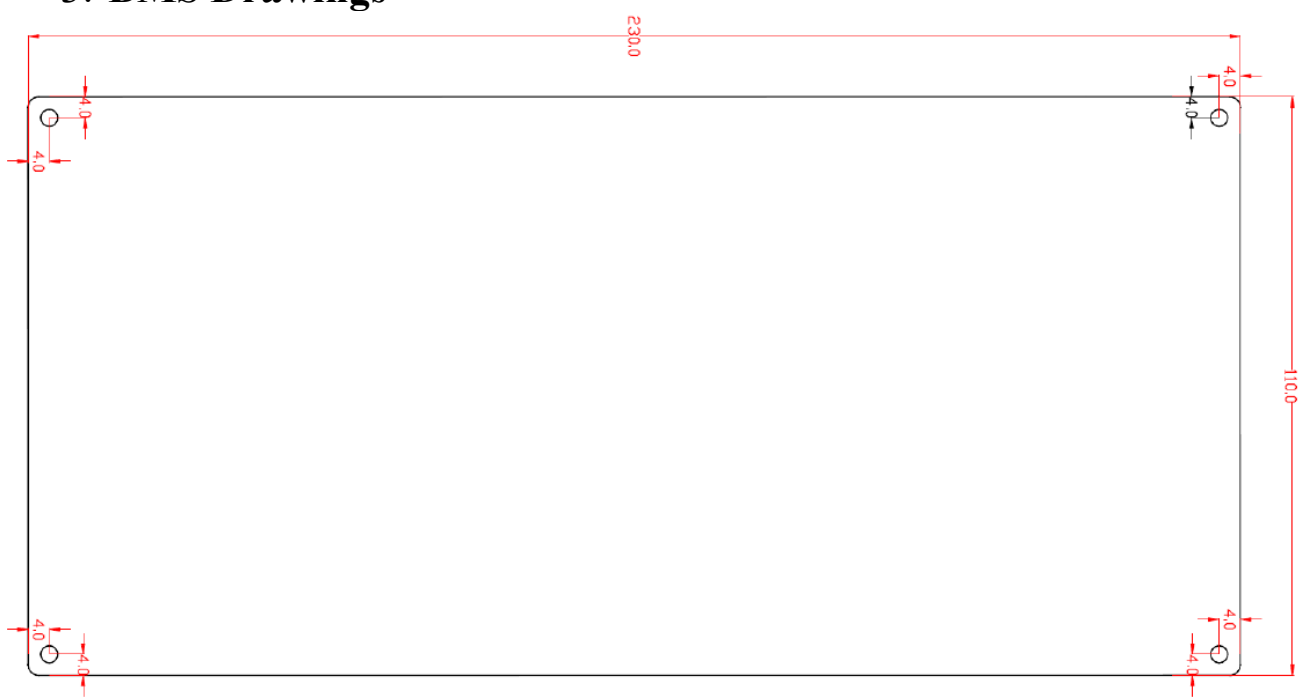
- Continuous Discharge Current 250A
- Continuous Charge Current 250A
- Balance Current 150mA
- RS485 connection
- Unlimited Parallel Connections
- Heating Function

1. Appearance



| | | | | | |
|-----------|--------------|----------|----------|------|------|
| File Name | ME-JBD250BMS | File No. | SP151122 | Page | 2/17 |
|-----------|--------------|----------|----------|------|------|

3. BMS Drawings



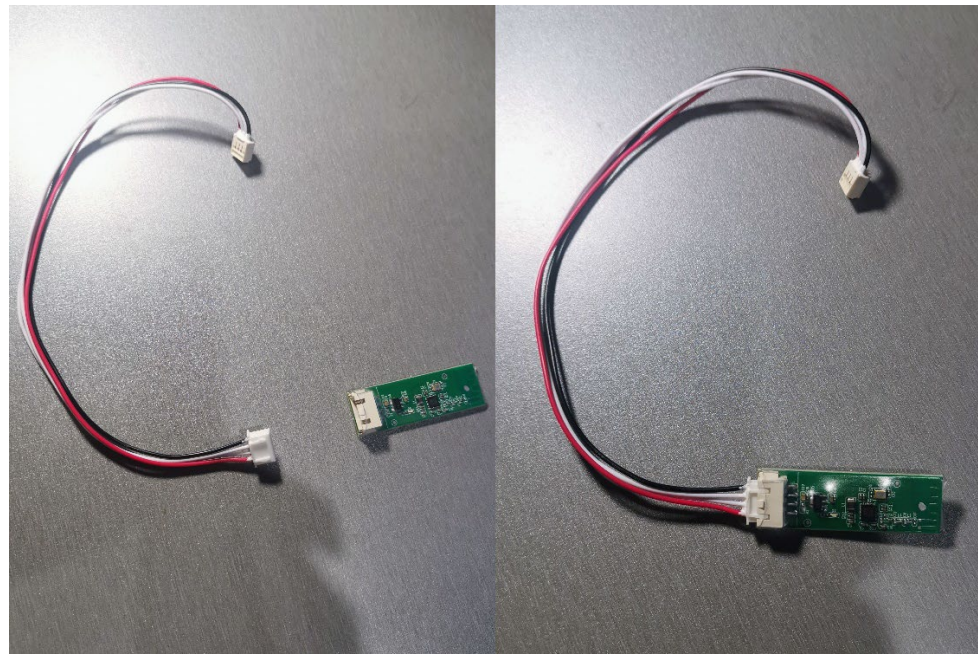
4. Installation



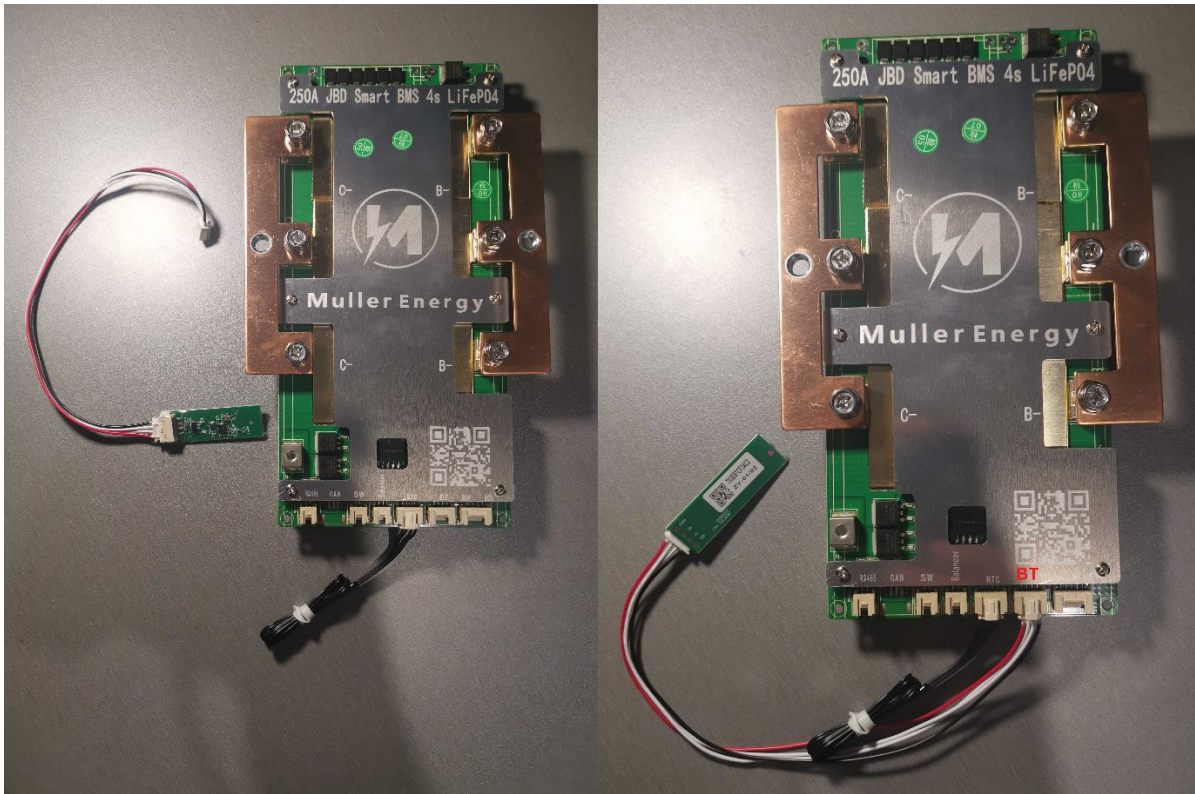
Select quality cells and cell separators. Muller Energy 280Ah EVE cells can be found [here](#).



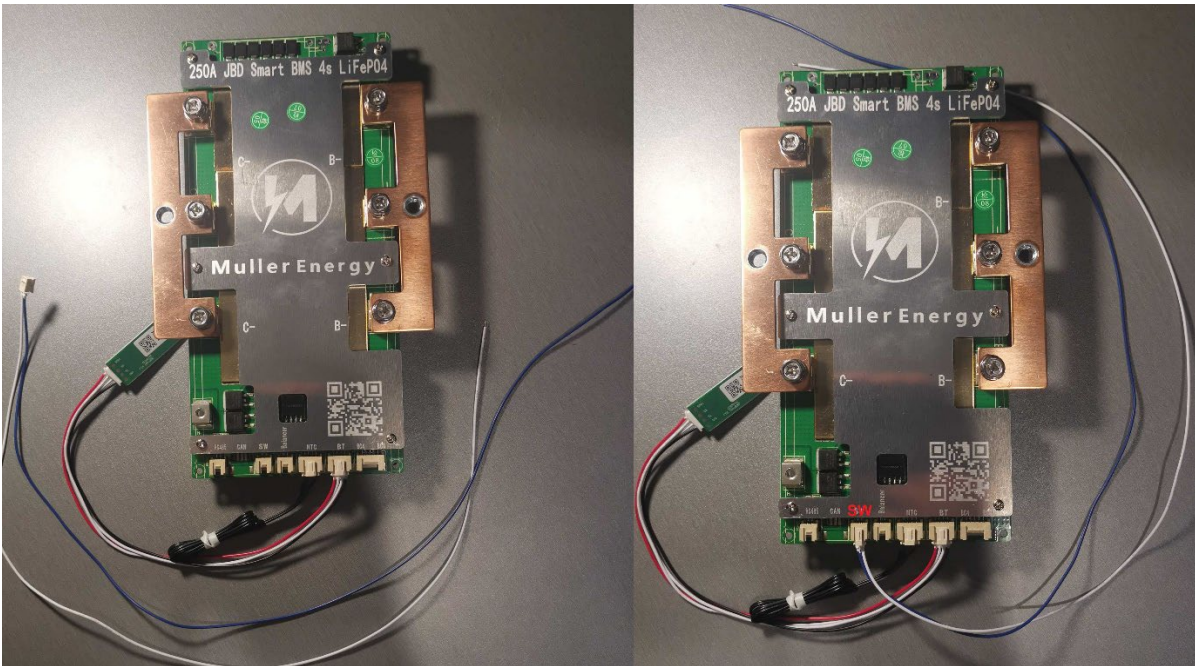
Set up cells in a 4s configuration, ensuring alternating the direction of the terminals of the cells.



Connect Bluetooth cable to Bluetooth dongle



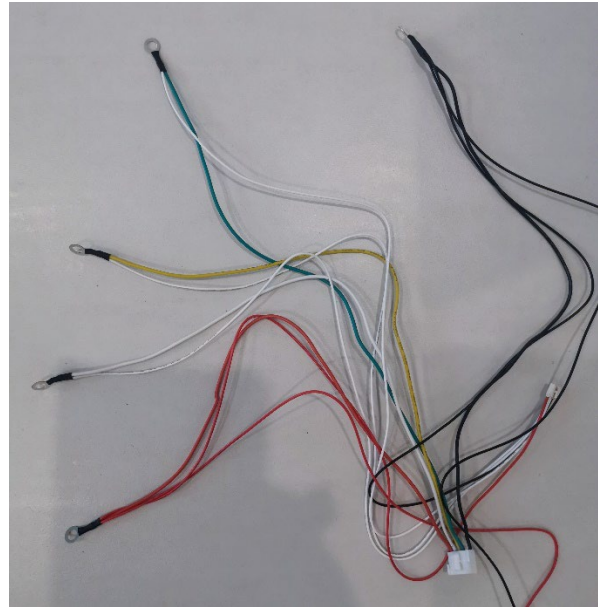
Insert Bluetooth dongle into the port marked “BT”.



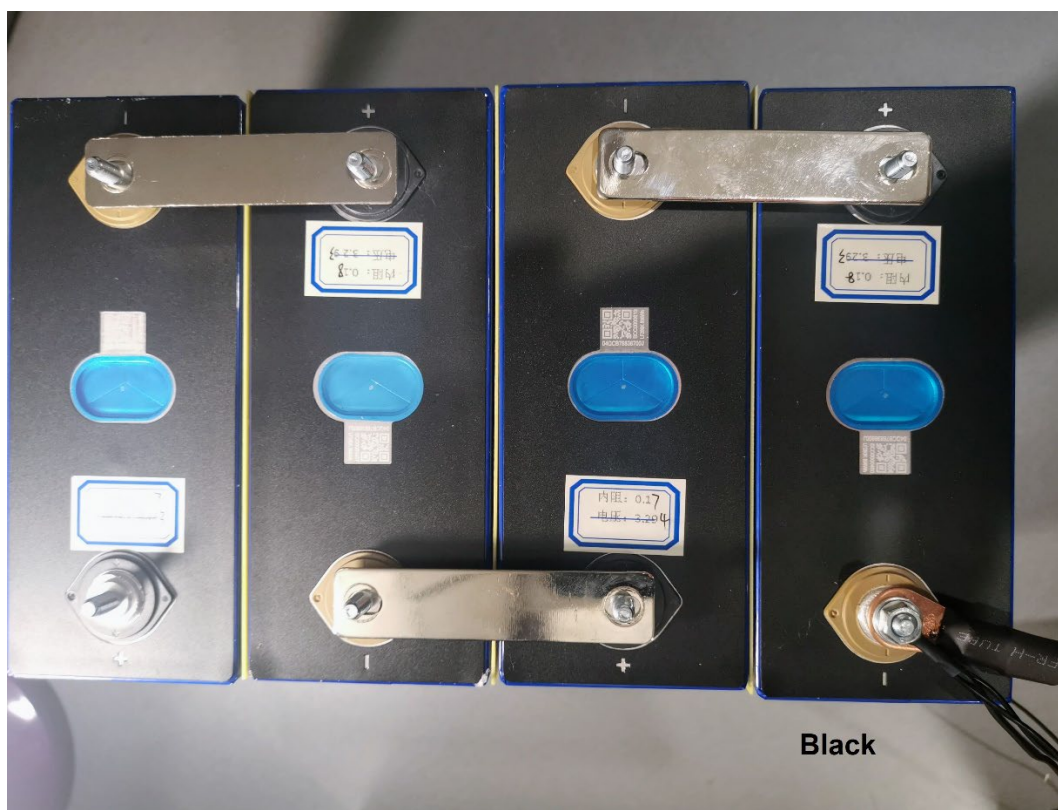
Connect the BMS disable switch into port marked “SW”. This can be connected to an external switch. The BMS will only discharge when the switch is closed or the two wires are connected together. This can be overridden in the BMS app (details below).



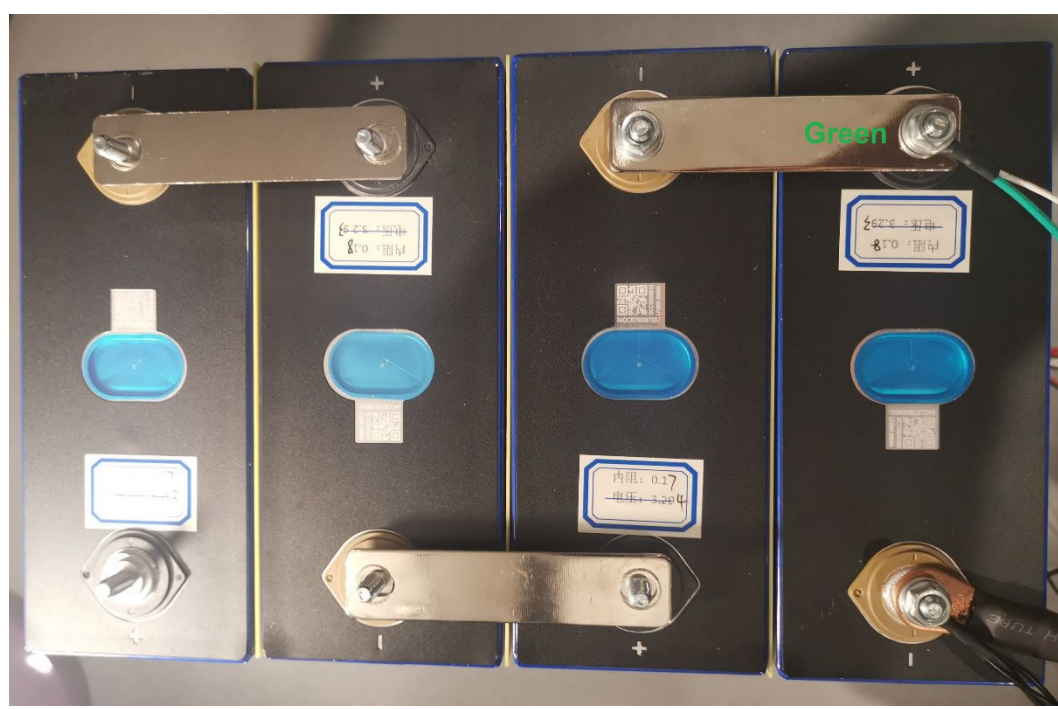
Place the bus bars to create 12V, please exercise extreme care as any short circuit here can be dangerous!



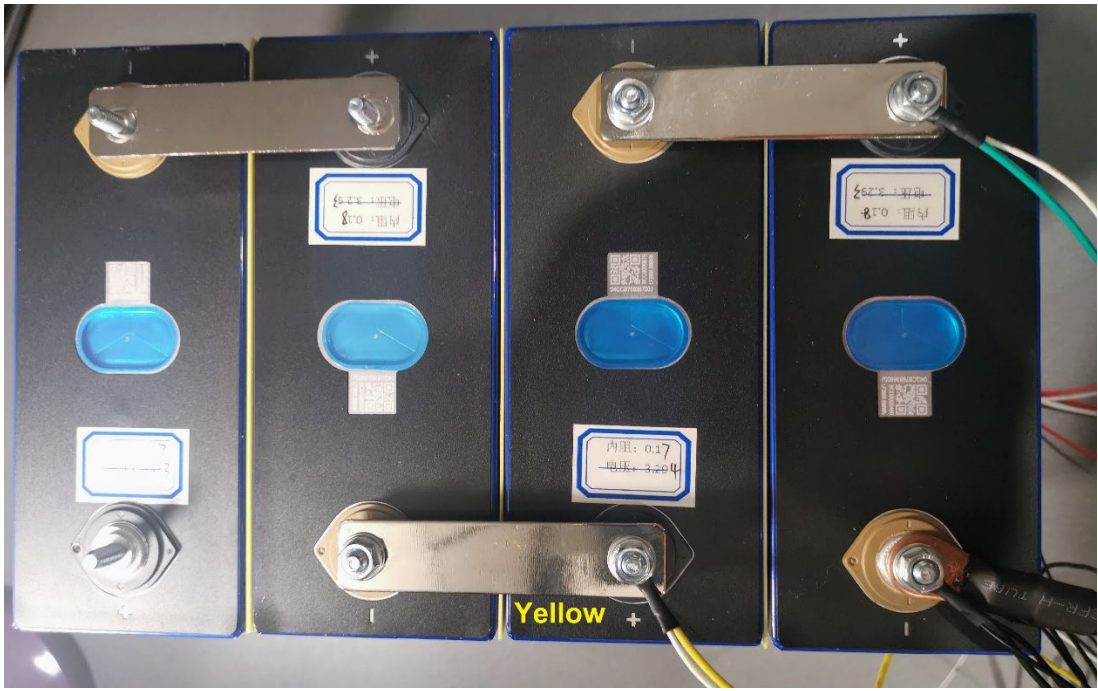
Locate the ring terminal ends of the “Noctopus Cable” (nine ends) for the next steps. Please exercise extreme care here as well, as connecting these cables incorrectly will damage the BMS and/or balancer and is not covered under warranty.



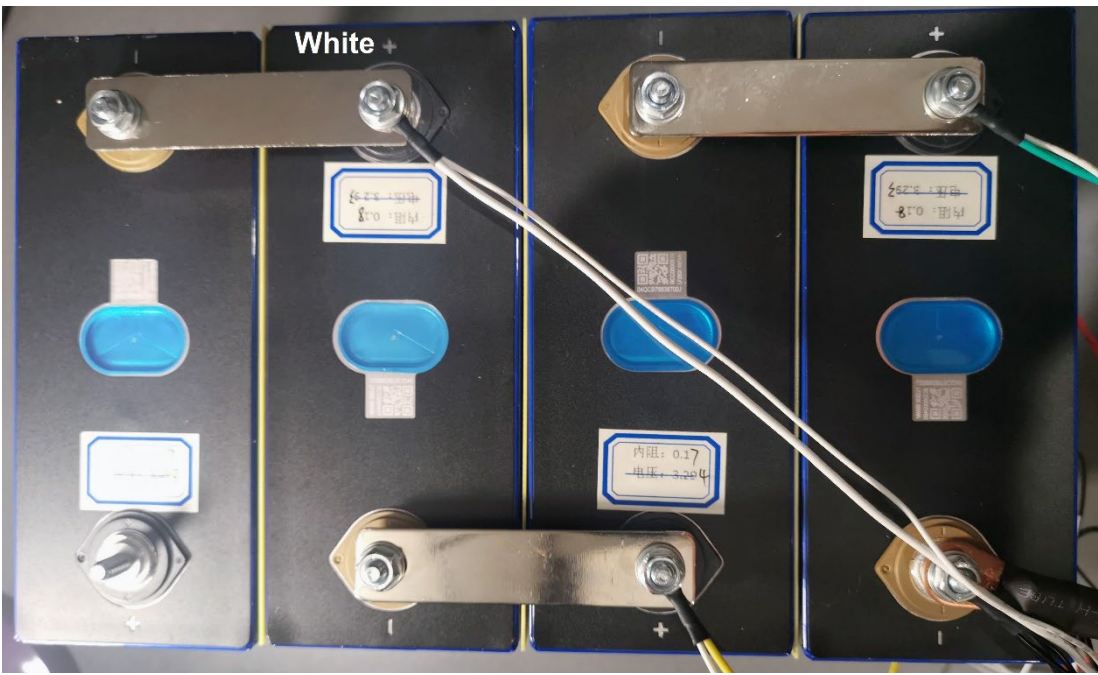
Connect the black ring terminal and the negative power cable to the main negative terminal. It's good practice to insulate the other end of the power cable with tape.



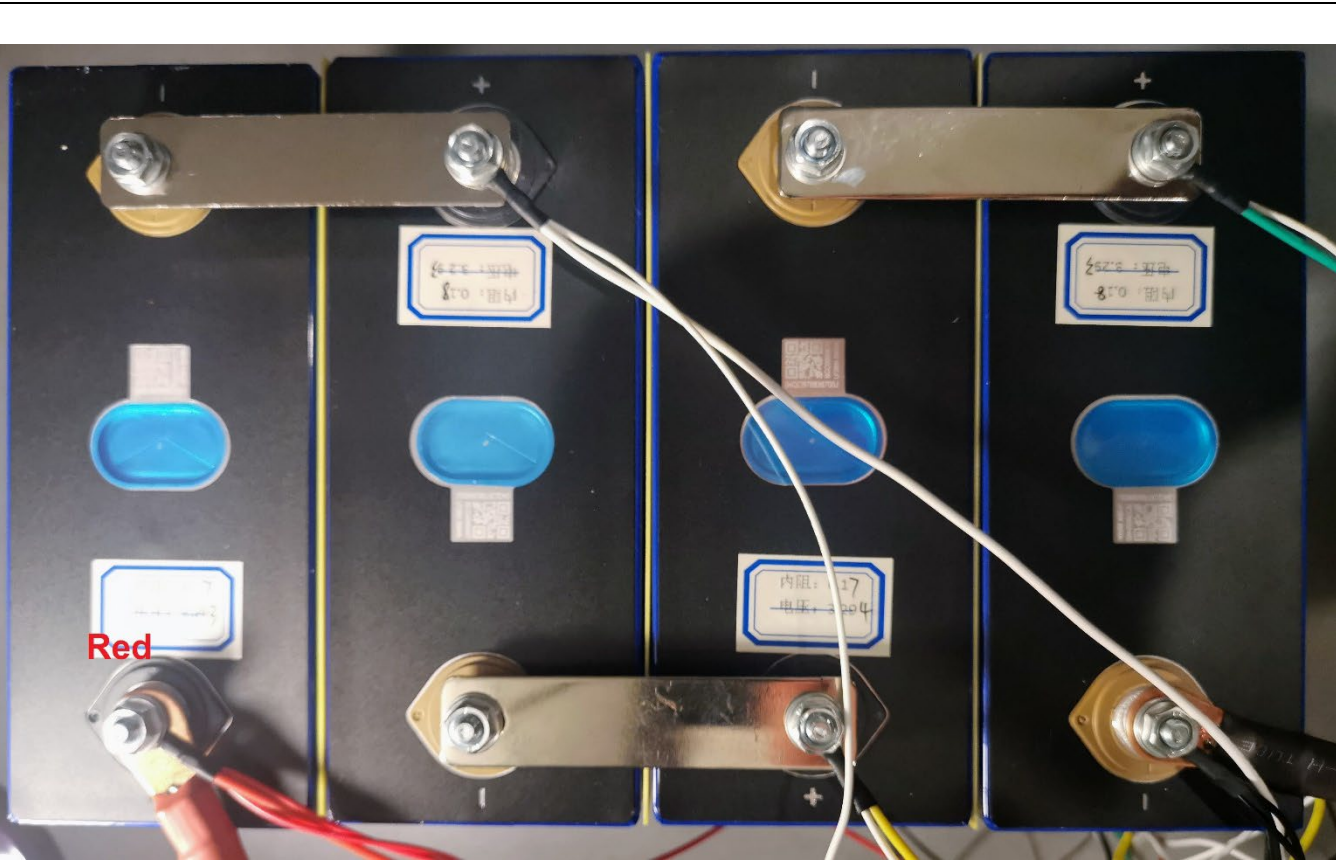
Connect the green ring terminal to the first positive terminal.



Connect the yellow ring terminal to the second positive terminal.



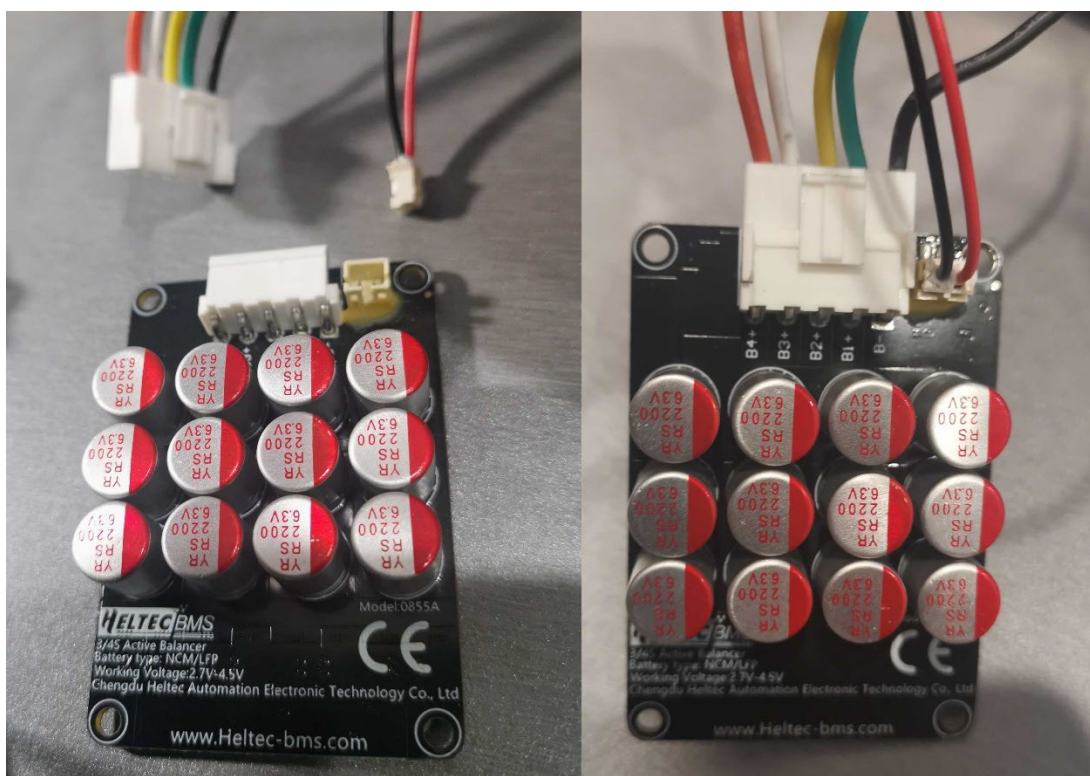
Connect the white ring terminal to the third positive terminal.



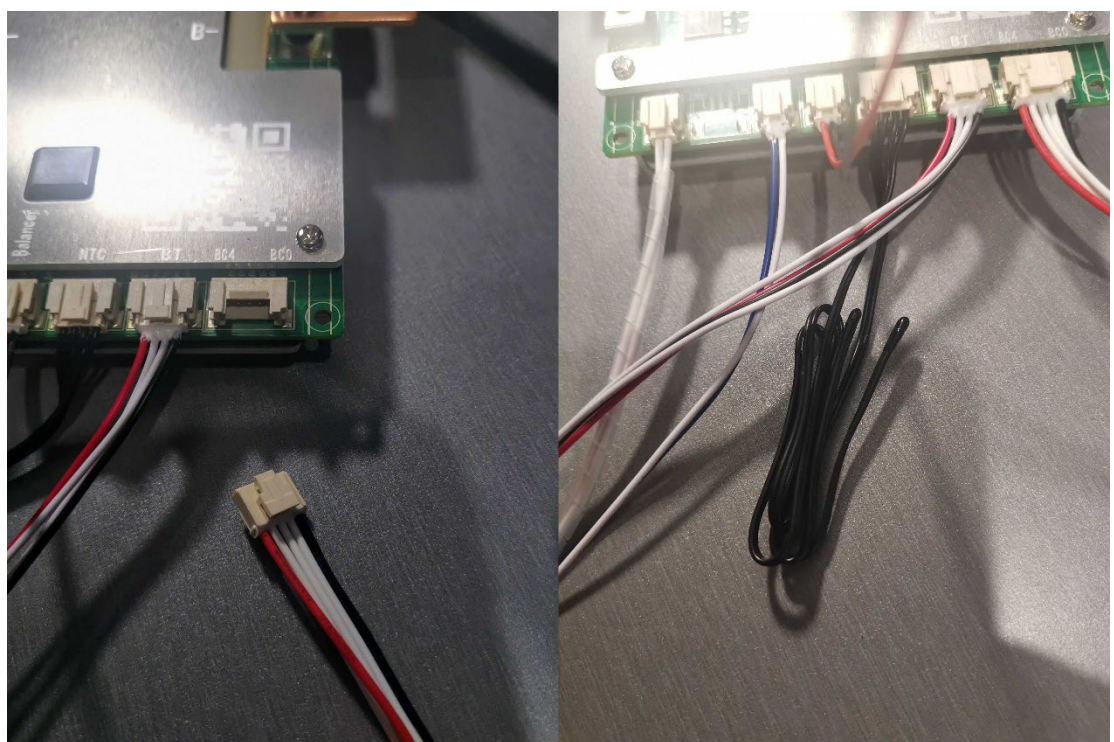
Connect the red ring terminal and the positive power cable to the main positive terminal. It's good practice to insulate the other end of the power cable with tape.



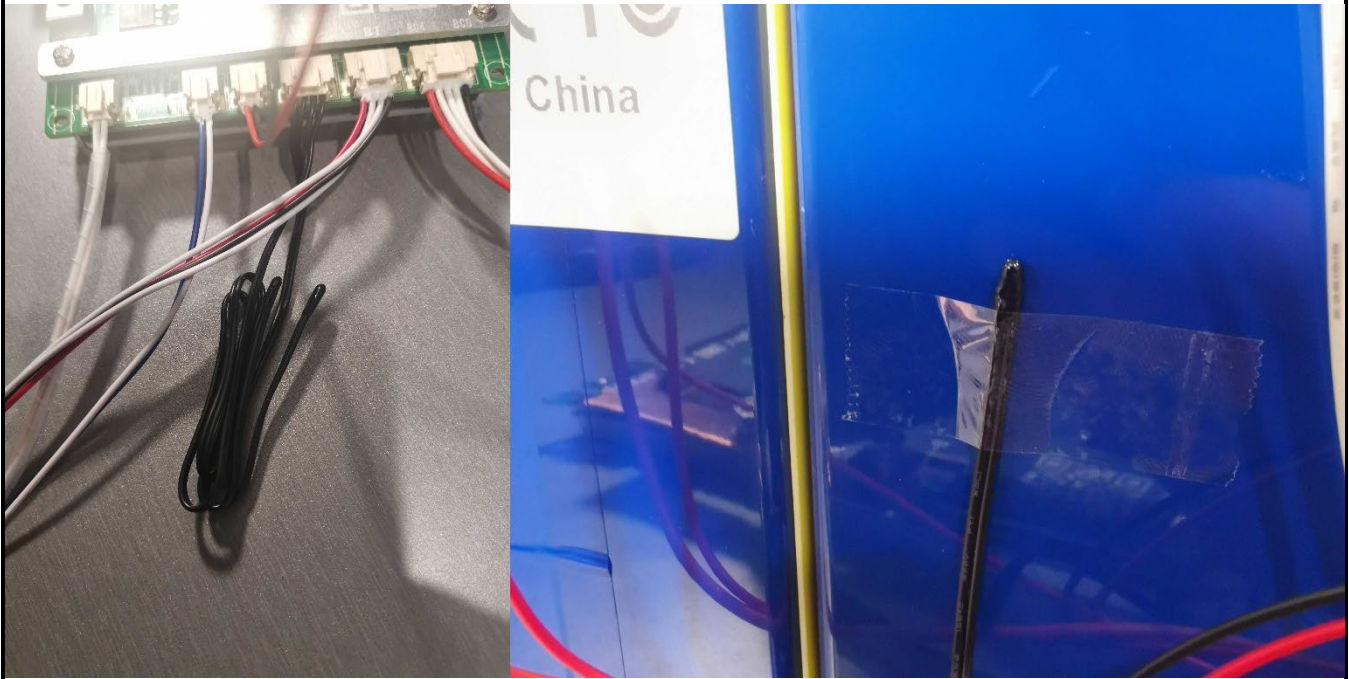
Connect negative power cable to the B- terminal of the BMS. 5-7Nm is recommended.



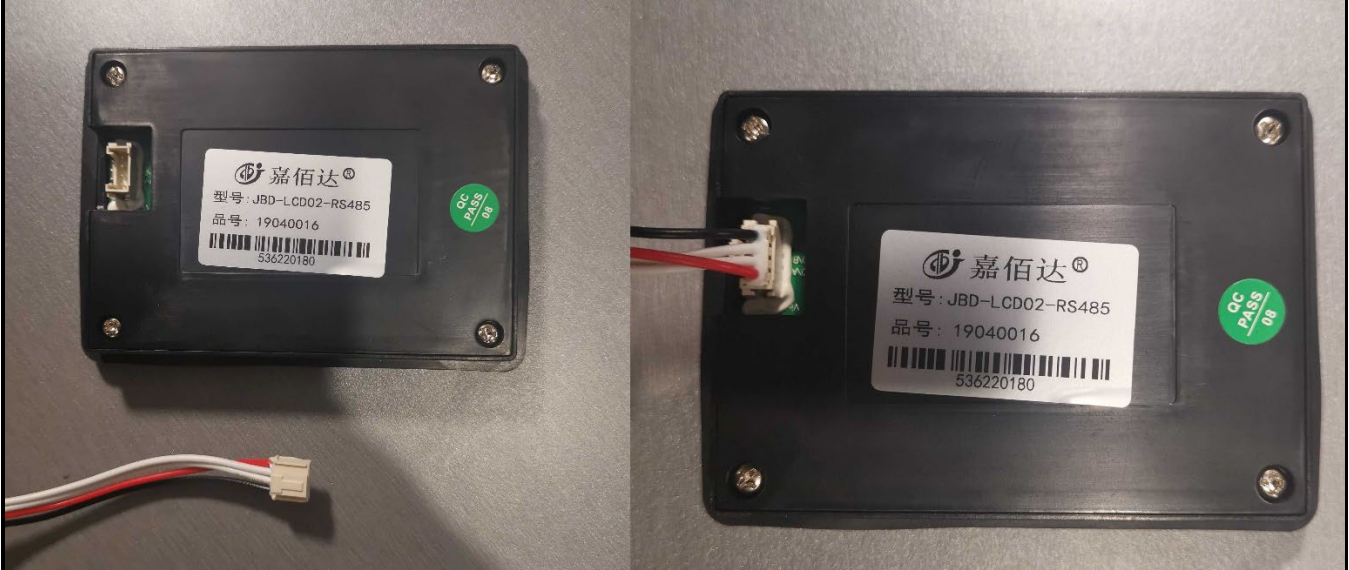
Connect both sets of cables to the active balancer.



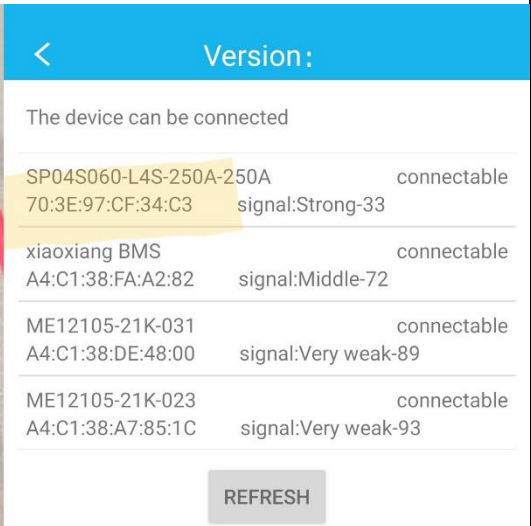
Connect the BMS sensor leads to the BMS.



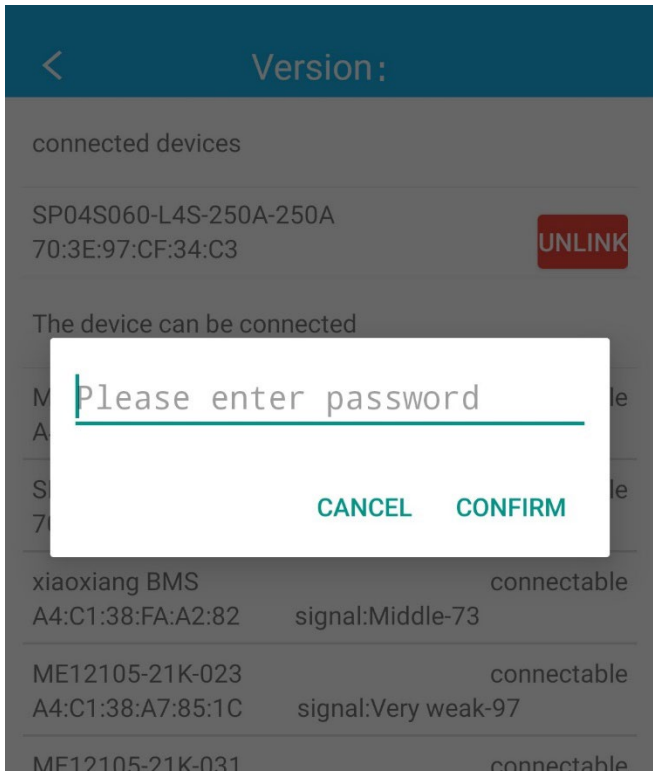
Connect the temperature sensors to the cells in an appropriate location. Sticky tape is for display purposes only. On an actual installation Kapton tape or silicone is recommended.



Connect the display cable to the back of the display.



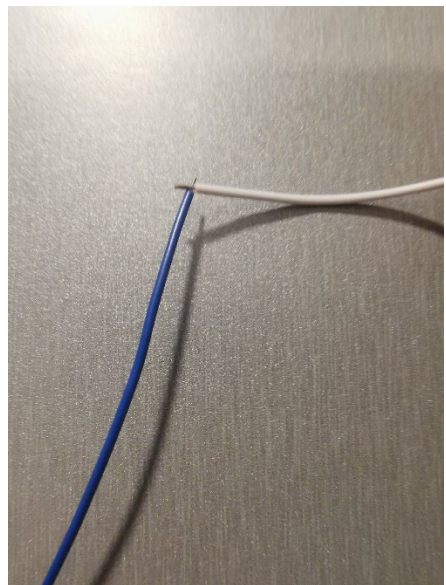
Enter the BMS app (which can be found at <http://mullerenergy.com.au/bms>) and connect the BMS. If you have multiple BMSs, you can select the right one by matching the MAC address on the back of the Bluetooth dongle.



Should you require a passcode, it's "000000".

| Parameter | | Function Setting | | |
|-----------|------------------------|--------------------|----------------------|-------------------------------------|
| | | Item | Parameter | Set |
| ☰ | Basic Information > | | | |
| 📍 | Origin Setting > | Switch function | | <input checked="" type="checkbox"/> |
| ⊕ | Protect Param > | Load detection | | <input checked="" type="checkbox"/> |
| ⌚ | Current Settings > | Balance enable | | <input checked="" type="checkbox"/> |
| 🌡️ | Temperature Settings > | Balanced method | Static equilibrium > | |
| 🔗 | Balance Settings > | LED enable | | <input type="checkbox"/> |
| ⚡ | Capacity voltage > | FCC | | <input type="checkbox"/> |
| 🔌 | Connect Resistance > | RTC | | <input type="checkbox"/> |
| 📦 | Function Setting > | Charging handshake | | <input type="checkbox"/> |
| 📶 | System Setting > | GPS | | <input type="checkbox"/> |

Once connected, you can overwrite the BMS discharge disable switch, by turning off “Switch function”. It’s recommended to turn off discharge via the app or on the screen prior to connecting or disconnecting a load to the battery, if not using the switch.



Alternatively, to enable discharge, the BMS discharge switch cables have to be connected together. Normally this would be done with a switch outside the battery case.

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|-----------|--------------|----------|----------|------|-------|
| File Name | ME-JBD250BMS | File No. | SP151122 | Page | 17/17 |
|-----------|--------------|----------|----------|------|-------|

5. Precautions

While this is “only” a 12V BMS, extreme caution needs to be taken while working on the BMS and the battery. If an accidental short circuit is created, this can cause over 1000A to flow which is enough to cause serious damage.

Wearing of gloves and eye protection is highly recommended, as is working with non-conductive tools.

If you are unsure of any of the steps, please contact the team at Muller Energy before proceeding.

Pictures in these instructions are for illustration purposes only.

When selecting wire sizes please consult a voltage drop calculator.

The use of fuses or circuit breakers is recommended. Sizing of the circuit breaker depends on your application.

Before using the battery, please ensure that all BMS settings are appropriate for your battery.