

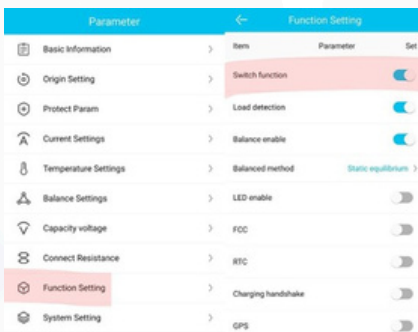


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NSW 2250
-  0493 274 334

# Muller Energy 250A JBD Smart BMS

## WIRING & INSTALLATION BASICS





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.

## 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.
- Before handling the battery, remove all jewellery, as metal objects can conduct electricity and pose a serious safety risk.
- 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.

## SCOPE

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

## DESCRIPTION AND MODEL

**Description:** JIABAIDA Smart BMS 250A

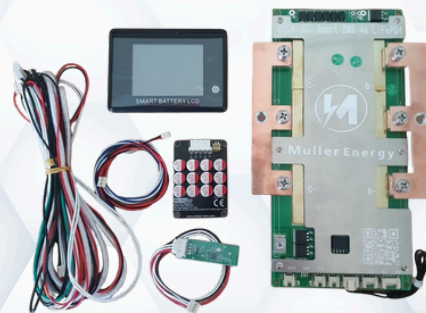
This 4S Smart BMS with Bluetooth for 12V LiFePO4 batteries is only available at Muller Energy!

## 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

## APPEARANCE

1



## Gather your supplies:

- Cells and BMS
- Protective Gloves and Eye Protection
- 13mm wrench (or similar)
- Positive and negative power cables
- Kapton Tape/ Silicone

2



### INSTALLATION

Select quality cells and cell separators. Muller Energy 314Ah EVE cells can be found here: <https://mullerenergy.com.au/product/eve-mb31-3-2v-314ah-lifepo4-prismatic-battery-cells-x-4-automotive-grade/>

3



The Muller Energy 314Ah EVE cells are arranged in a 4S configuration with alternating terminal orientation.

4



Connect Bluetooth cable to Bluetooth dongle

5



Insert Bluetooth dongle into the port marked "BT".

21



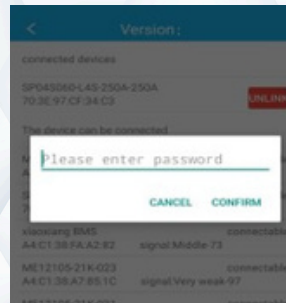
Connect the final (white) cable from the Octopus cable to the RS485 port on the BMS

22



Enter the BMS app (which can be found a <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.

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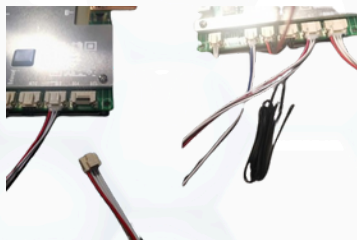
Should you require a passcode, it's "1234578". Account name is [bms@mullerenergy.com.au](mailto:bms@mullerenergy.com.au)

17



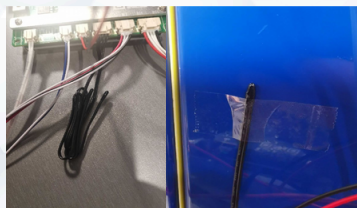
Connect the other end of the cable from the active balancer to the "Balancer" port on the BMS.

18



Connect the BMS sensor leads from the Octopus cable to the BMS.

19



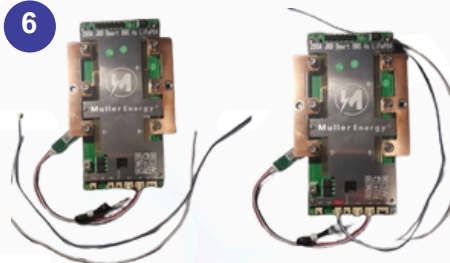
Connect the temperature sensors to the cells in an appropriate location. Sticky tape is for display purposes only. On an actual installation Kapton tape or silicone is recommended.

20



Connect the display cable from the Octopus cable to the back of the touchscreen. Please exercise care when unplugging this cable as the connector is a bit fragile.

6



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).

7



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

8



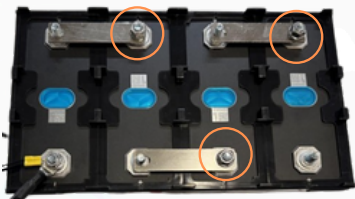
Locate the ring terminal ends of the "Noctopus Cable" (nine ends) for the next steps. Please exercise extreme care here as well, as connecting these cables incorrectly will damage the BMS and/or balancer and is **not covered under warranty**.

9



Connect the negative power cable to the main negative terminal first, followed by the **black** ring terminal. It's important that the power cable goes on first to ensure proper contact. As a safety precaution, insulate the other end of the power cable with tape before connecting.

10



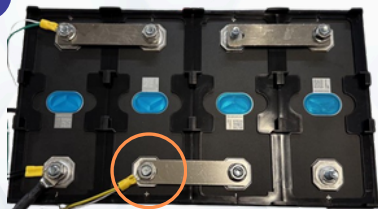
Secure the bus bars by placing washers and nuts onto the negative terminals beneath the bus bars.

11



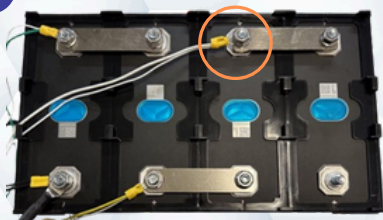
Connect the **green** ring terminal from the octopus cable to the first positive terminal.

12



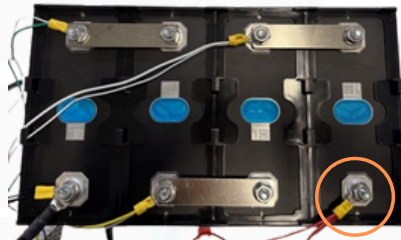
Connect the **yellow** ring terminal from the octopus cable to the second positive terminal.

13



Connect the **white** ring terminal from the octopus cable to the third positive terminal.

14



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 before handling it..

15



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

16



Connect both sets of cables to the active balancer (the coloured 4-pin cable from the Octopus cable, and the single cable coming from the BMS-supplied box).