

# Electric Vehicle Power System Technology Co., Ltd

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## Specification for 15s(12s or 8cells)LiFePo4 balancing Capacitor-BMS

### Tech.Datum

|    |   |  |  |  |
|----|---|--|--|--|
| 1  | Maximum over-charge protecting voltage of unit cell:                      |  |  | 4.0V±50mV  |
| 2  | Maximum over-charge protecting voltage of whole pack:                     |  |  | 57V±0.9V   |
| 3  | Minimum over-discharge protecting voltage of unit cell:                   |  |  | 2.05V±80mV   |
| 4  | Minimum over-discharge protecting voltage of whole pack:                  |  |  | 34.5V±1.8V   |
| 5  | Maximum over-discharge protecting current of whole pack:                  |  |  | 300A±60A   |
| 6  | Normal rate of discharging current of BMS:                                |  |  | 40A  |
| 7  | Maximum discharging current of BMS:                                       |  |  | 60A  |
| 8  | Normal rate of charging current of BMS:                                   |  |  | 20A  |
| 9  | Maximum charging current of BMS:  |  |  | 30A  |
| 10 | The maximum time delayed of over-charging protecting cutoff:              |  |  | 3S   |
| 11 | The maximum time delayed of over-discharging protecting cutoff:           |  |  | 1.0S   |
| 12 | The maximum delayed of over-charging/discharging(150A) protecting cutoff: |  |  | 20MS   |
| 13 | Maximum running current of the balancing BMS:                             |  |  | 300uA (unit cell voltage above3.2v)  |
| 14 | Maximum running current of the balancing BMS:                             |  |  | 80uA (unit cell voltage under2.0v)   |
| 15 | Maximum internal impedance of the running of the balancing BMS:           |  |  | 4mΩ(unit cell voltage ≥2.5v)   |
| 16 | Maximum dimensions of BMS:  |  |  | (L)135mmX(W)51mmX(H)20mm   |
| 17 | Maximum weight of the BMS:  |  |  | 135.0g   |
| 18 | The BMS design for :  |  |  | LiFePO4 battery pack with 15<br>cells(Capacity of unit cell ≥1Ah) in series connetion              |
| 19 | The connecting method of the BMS and LiFePO4 battery pack:                |  |  |  |
| 20 | The fixing method of the BMS :  |  |  | adhesive tape  |
| 21 | Working method:   |  |  | Capacity balancing Real time balancing<br>(Balancing under charging/discharging and laying aside ) |
| 22 | The voltage tolerance of cells:   |  |  | ±5mv-±25mv(requirements for capacity<br>tolerance of LiFePO4 cells :±5%) Max.:±1mv                 |
| 23 | Maximum working temperature of the BMS:                                   |  |  | <20℃   |
| 24 | The temperature requirements for the external world:                      |  |  | -20℃-----+60℃  |

|    |  |  |  |  |
|----|--|--|--|--|
| 19 | The connecting method of the BMS and LiFePO4 battery pack: |  |  |  |
|----|--|--|--|--|

- (1)Connecting wires melded on from 0 of the BMS to the negative pole of 1st cell with a 18AWG high tempertaure endurable silica gel cable wire;;  
Connecting 1of the BMS and the positive pole of 1st cell& the negtive pole of 2nd cell with 18AWG high tempertaure endurable silica gel cable wire;;  
Connecting 2 of the BMS and the positive pole of 2nd cell & the negative pole of 3rd cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 3 of the BMS and the positive pole of 3rd cell & the negative pole of 4th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 4 of the BMS and the positive pole of 4th cell & the negative pole of 5th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 5 of the BMS and the positive pole of 5th cell & the negative pole of 6th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 6 of the BMS and the positive pole of 6th cell & the negative pole of 7th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 7of the BMS and the positive pole of 7th cell & the negative pole of 8th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 8of the BMS and the positive pole of 8th cell & the negative pole of 9th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 9of the BMS and the positive pole of 9th cell & the negative pole of 10th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 10 of the BMS and the positive pole of 10th cell & the negative pole of 11th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 11 of the BMS and the positive pole of 11th cell & the negative pole of 12th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 12of the BMS and the positive pole of 12th cell & the negtive pole of 13th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 13 of the BMS and the positive pole of 13th cell & the negative pole of 14th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 14 of the BMS and the positive pole of 14th cell & the negative pole of 15th cell with 18AWG high tempertaure endurable silica gel cable wire;  
Connecting 15th of the BMS and the positive pole of 15th cell with 18AWG high tempertaure endurable silica gel cable wire.
- (2)Welding a connecting wire onto OUT- take as (-)negative end for output(The wires connecting to GND(0)  
and OUT- should not be smaller then12AWG PE wire)
- (3)To weld a connecting wire which is not smaller than 12AWG PE wire onto the anode of the battery pack take as  
positive electrode for output.
- (4)Finally,To weld a connecting wire which is bigger than 12AWG PE wire onto P- take as (-)negative end for input.  
To weld a connecting wire which is bigger than 12AWG PE wire onto the anode of the battery pack take as  
positive electrode for input.

**1, Reading the manual first !**

**2, BMS Connecting in a strict order , or the BMS will be damaged!**

**3, an Anti-Static electricrcity electric (soldering) iron**