Product Specification Confirmation

Customer Name：Sonikcell Co.,Ltd

Customer No.：_____

Product：Life Po4 SBMS 4S12V20A Common Port Balance

Version：Rev 2.0

Catalog

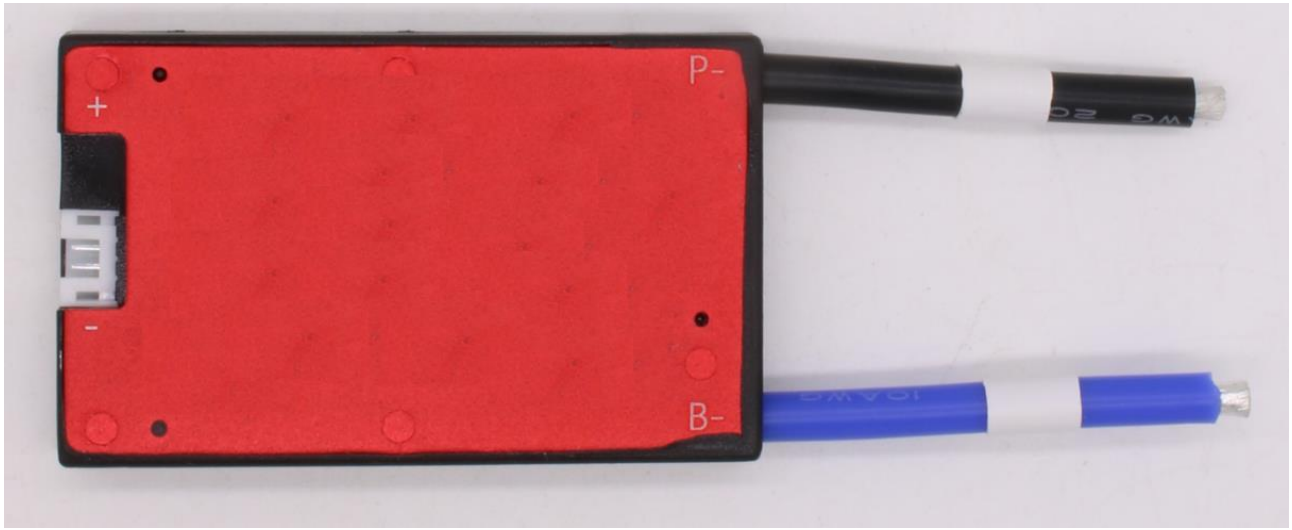
1. Product Summary:

4SLife Po412 V20A is product designed and developed by Sonikcell Co.,Ltd for mobile Lithium battery, it is widely used to 4S lithium battery pack, Life Po4 Battery The BMS is functioned to prevent lithium battery from over charging, over discharging, short circuit, and it helps voltage balance.

2. Product charaters

- Adopt Japan premium IC in class A protection
- Strong load capacity, continous high discharging current, adopt MOSFET which is in high voltage resistance and low conduct inner resistance, with dissipation to prevent over heat.
- IC is with voltage balance funtion, which function is simple and reliable and current balance can be made by adjustment.
- it is voltage detection to realize protection of over charging and discharging, over current, short circuit, the function of short circuit is stable and reliable, long time of loading in short circuit will not impact to BMS and core battery.
- proper temp control in charging and discharging
- Well sealed detection resistance with high power, low temp deviation, 1%precision
- extremly low electricity consumption, the runing current is less than 100uA.
- Adopt sealt waterproof process, the product has waterproof, dustproof, shockproof, extrusion prevention, the utilization life is 2 times of the other same products
- supportive of 4SLife Po4 Battery pack in series connection.

3.Product Picture：

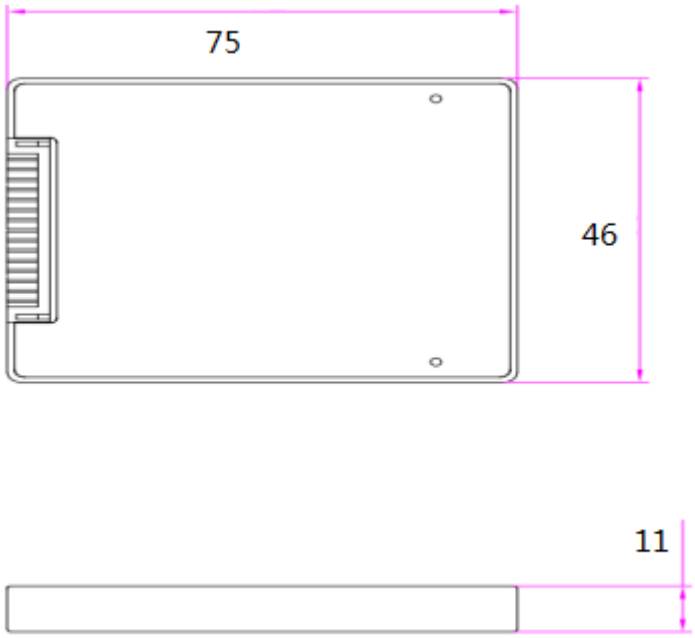


Finished product display

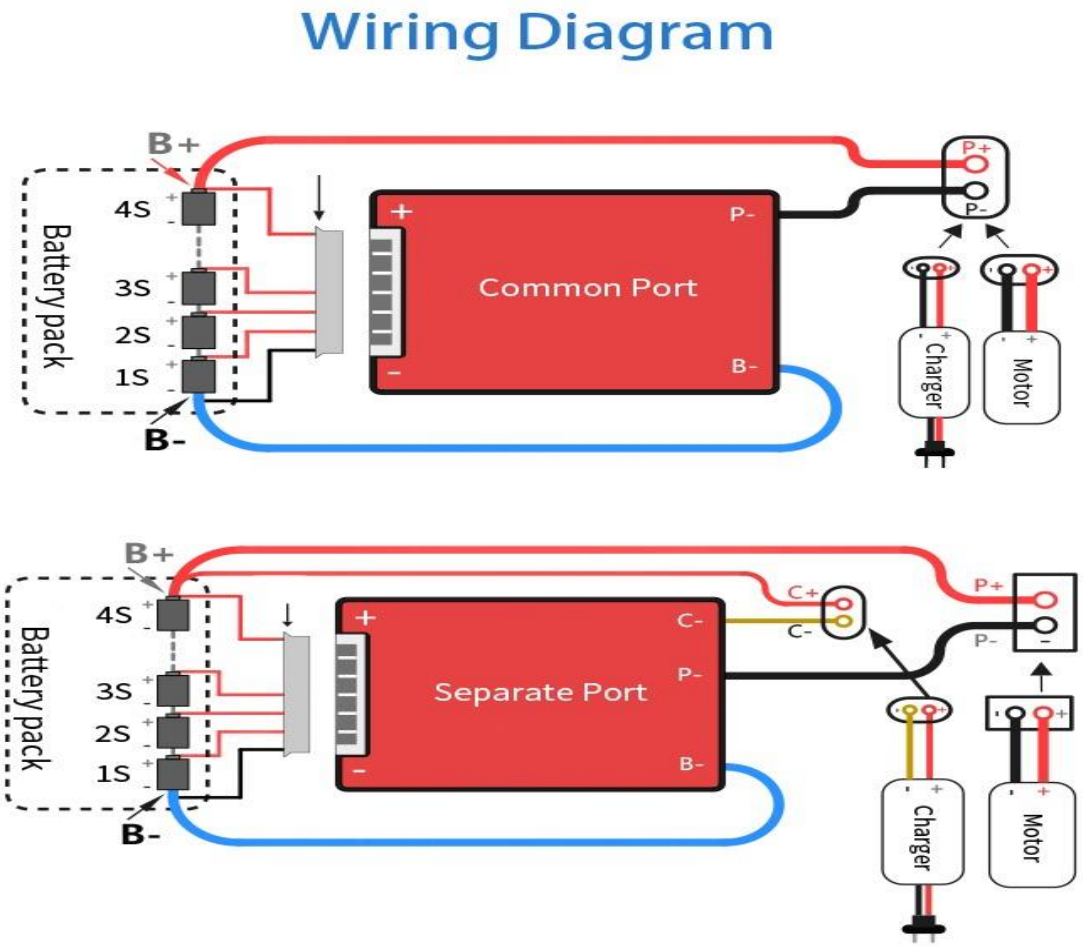
4.Electrical Parameters

	Description	Specification	Unite	Remarks
Discharge	Continue discharge current	20	A	
	Sparkle current	60	A	
Charge	Charge voltage	14.4	V	
	Charge current	20（MAX）	A	
Over charge protection	Over charge detect voltage	3.65±0.05	V	
	over charge protection delay	0.5	S	
	over charge release voltage	3.6±0.05	V	
Balance	Balance detect Voltage	3.6	V	
	Balance release voltage	3.6	V	
	Balance current	35±5	mA	
Over discharge protection	Over discharge detect voltage	2.5±0.1	V	
	Over discharge detect delay	0.5	S	
	Over discharge release voltage	2.5±0.1	V	
Over current protection	Over current detect voltage	150	mV	
	Over current detect delay	9	MS	
	Over current protection current	60±10	A	as required
	Over current protection release condition	Off load		
Short Circuit protection	Short Circuit protection condition	Short circuit of external load		
	Short circuit detect delay	250	uS	
	Short circuit protection release condition	Off load		
Temp Protect				No
Inner Resistance	Main Circuit Conduct Inner resistance	≤10	mΩ	
Self Consumption	Working current	≤100	uA	
	Sleeping current(when in discharge)	≤20	uA	
Working Temp	Temp range	-20/+80	℃	

5.BMS Measurement（Unit：mm）



6.Connection



7. Operation Guidance

7.1.Special attention

1.String wires are in differnent standard by different manufacture, please ensure to use our gifted matched string wires

2.Please make sure to strictly follow up with the operation sequence, if you violate the operation sequence, It may damage BMS parts, even with more serious damage.

7.2.Operation process：

1. First to connect BMS B- wire(Thick Blue wire) to Battery Cathod
2. Ensure not to insert string wires into BMS before string conncetion
3. Connection starts from the Thin black wire B-, connect the second wire(thin red wire) to the first serious battery Anode, then follow the sequence to connect every cell anode, till to the last cell B+
4. Complete the strings connection, please do not insert into BMS directly, but measure the voltage of every 2 closed insert end, for Li-ion battery, the voltage should be 2.8-4.2V, For Life Po4 battery, the voltage should be 2.5-3.65, For Lipo Battery, the voltage should be 1.6-2.8V
5. When ensure string connection and voltage are all correct, then insert into BMS
6. Then measure Voltage of Battery B+ and B- same with Voltage of P+ and P-, if same means BMS working normally, if not same, please recheck with the above operation process.
7. **If BMS needs to be taken off from battery pack, please operate in the backward sequence.**

8. Attention Items

1.Lithium batery BMS with different voltage platform can not be used mutaully, eg., Life Po4 SBMS can not be used for Li-ion battery

2.In utilization, please to make sure to Follow up the designed parameter and utilization conditions

3.Charge and discharge current can not be higher than the quoted current value in specification.

4.Please to utilize the BMS in the the regulated working temperature range, and make sure of the well heat dissipation environment

5.No self taking off and change parts in BMS

6.Our product has the function of waterproof, but still suggest avoid of long time water immersion.

7.We conduct Anode Oxidation process in BMS dissipation plate, but when the Oxidation layer destroid, it stll may electricity conductive, it is stll suggest to avoid Dissipation plate contact with Cell and Nickel band.