



Product Specification Confirmation

(Product Name) : SBMS Li-ion 4S 12V20A Common port

(Version) : Rev 1.0

(Company P/N) : \_\_\_\_\_

(Sample send date) \_\_\_\_\_

(Product Summary):

- Use foreign premium IC in class A protection.
- Professional high current wiring design & workmanship, thus can withstand the shock of high current high
- Use full enclosed heat-dissipating glue and double-sided heat dissipation design, heat is dissipated in time, and the heat dissipation effect is better than others
- Fully sealed waterproof technology, with waterproof, dust proof, shockproof, anti-squeezing and other protective functions
- Complete overcharge, over discharge, over current, short circuit, and equalization functions

Electrical Parameters:( Room temperature 25°C , humidity 55%)

(NO)	(Description)		Specification)	(Unite)	Remarks
1	(Discharge)	(Continue discharge current)	20	A	
2	(Charge)	(Charge voltage)	16.8	V	
		(Charge current)	10	A	
	(Over charge protection)	(Over charge detect voltage)	4.25±0.05	V	
		(over charge protection delay)	1	S	
		(over charge release voltage)	4.15±0.05	V	
4	(Balance)	(Balance detect Voltage)	/	V	
		(Balance release voltage)	/	V	
		(Balance current)	/	mA	
5	(Over discharge) protection	(Over discharge detect voltage)	2.7±0.1	V	
		(Over discharge detect delay)	600	mS	
		(Over discharge release voltage)	3.0±0.1	V	

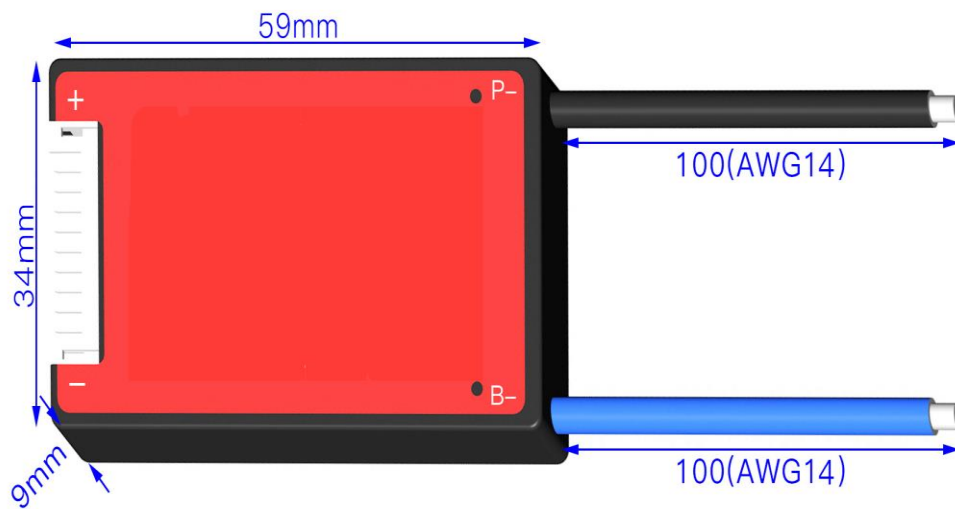
6	(Over Charge current protection)	(Over Charge current detect delay)	13±2	A	(Can set as required)
		(Over Charge current detect delay)	600	mS	(Can set as required )
		(Over Charge current protection release condition)	(Off load)		
7	(Over discharge current protection)	(Over discharge current detect voltage)	60±10	A	(Can set as required)
		(Over discharge current detect delay)	600	mS	(Can set as required)
		(Over discharge current protection release condition)	(Off load)		
8	(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)		
9	(Temp Protect)	(Temperature protection degrees )	/	℃	(No)
10	(Weak Current Switch)	(No)			
11	(Inner Resistance)	(Main Circuit Conduct Inner resistance)	<20	mΩ	
12	Self Consumption	(Working current)	100	uA	
		Sleeping current( over-discharge)	50	uA	
13	(Working Temp)	(Temp range)	-20~70	℃	



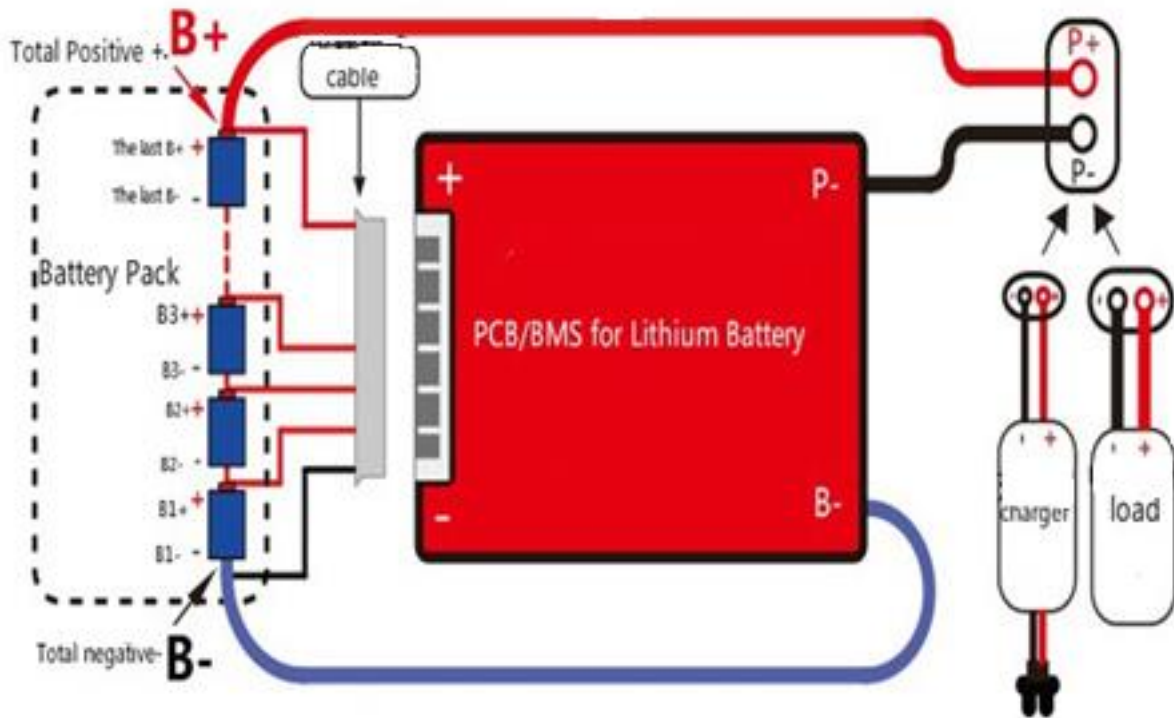
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13	( Storing Temp )	( Temp range )	-40~80	°C	
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(1). Product picture (BMS wiring Connection)



(2) . (Wiring diagram)



3. (Wiring operation):

- (1) First connect the B-cable of the protection board to the total negative pole of the battery pack
- (2) The cable starts from the thin black one connecting B-, the second red cable connects the positive pole of the first string of batteries, and the next string is connected in turn. The positive pole of the pool; then insert the cable into the protection board;
- (3) After finishing the wiring soldering, measure whether the battery B+, B-voltage and P+, P-voltage values are the same, only same, the protection board works positively. otherwise please follow the above re-operation;
- (4) When removing the protection board, first pull out the cable (if there are two cables, pull the high-voltage cable first, then pull the low-voltage cable), then remove Power cable B-.



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### Attention Items

1. Lithium battery BMS with different voltage range which can not be mixed using., Life Po4 BMS can not be used for Li-ion battery.
2. Cables from different manufacturers are not common ones, please make sure to use Sonikcell's matching cable.
3. When testing, installing, contacting, and using the protective board, take measures to put static electricity on it;
4. Mustn't let the heat dissipation surface of the protection board directly contact the battery core, otherwise the heat will be transmitted to the battery core, which will affect the safety of the battery;
5. Do not disassemble or change the components of the protection board by yourself;
6. The company's protective board has waterproof function, but please avoid immersing in water for a long time;
7. The metal heat sink of the protection board of the company is anodized and insulated, and the oxide layer will still be conductive after being destroyed. Avoid contact between the heat sink and the battery core and the nickel strip
8. If the protection board is abnormal, please stop using it. Then use it again with OK;
9. Do not use the two protective boards in series or in parallel

### Description :

Our products is tested by our tester & 100% visual inspection before shipping. But the BMS board is used in the different environment by customers (especially at high temperatures, Ultra-low temperature, under the sun, etc.), it is inevitable that there are BMSs which will fail. Please use it in a good environment, and choose a certain amount of protection board