



Product Solution

Edition: V2.0

Release date: 2021/09-23

Customer:

Battery model name: 12V50Ah-24140160-4S1P-A0

Applicable Products):

Doc.No: Spec-Pack-3066

Customer approval

Comment:

Customer's signature/ Date: _____

Approved	Checked	Prepared



catalog

目录

<i>Product Solution</i>	1
1. Scope :	4
2. Normal performance:	4
3. Product dimension drawing:	6
4. Labels:	6
5. BMS/PCM Parameters:	7
6. Instructions	8
7. Disclaimers:	8

1. Scope :

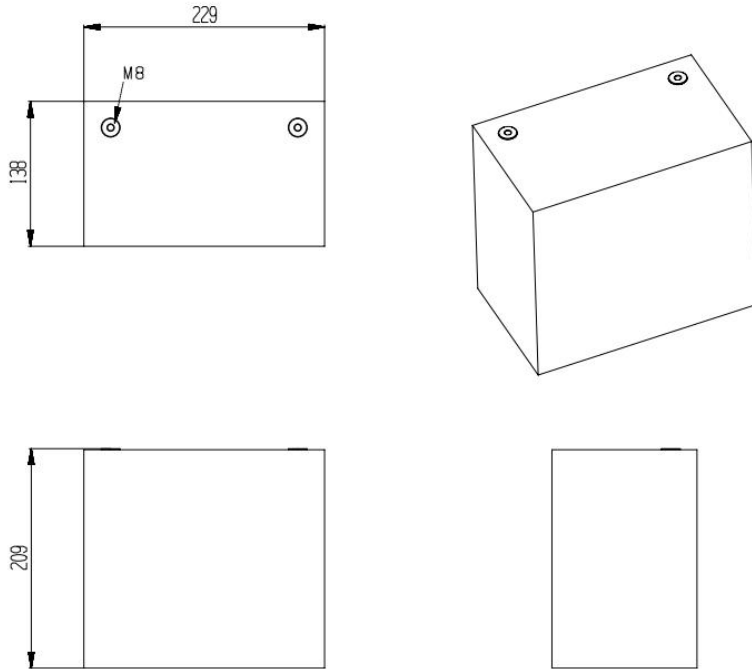
This specification is applicable to rechargeable battery pack products designed and developed by Atlas company

2. Normal performance:

Package	NO.	Item	General Parameter		Remark
	1	Combination method	4S1P		LiFePO4
	2	Rated Capacity	Typical	50Ah	0.2C,@25°C
			Minimum	49Ah	
	3	Nominal Voltage	12.8V		
	4	Factory SOC	30~60%		
	5	Voltage at end of Discharge	10.8V		Discharge Cut-off Voltage
	6	Charging mode (CC-CV)	MAX 14.6V		
	7	Internal Impedance	$\leq 30m\Omega$		Internal resistance measured at AC 1KHz after 50% charge The measure must uses the new batteries that within one week after shipment and cycles less than 5 times
	8	Standard charge current	10A		Charge time : Approx 6h
		Limiting current	/		
9	Standard discharge	10A			
10	Maximum Charge Current	50A			
11	Maximum Discharge Current	50A			

12	Operation Temperature Range	Charge: 0~45°C Discharge: -20~60°C	Bare Cell 60±25%R.H.
13	Storage Temperature Range	Less than 12 months : -10~35°C less than 3 months: -10~45°C Less than 7 day : -20~65°C (小于7天: -20~65°C)	60±25%R.H. at the shipment state
14	Dimensions	229*138*208mm	
15	Weight	6.5kg	
16	Volumetric specific energy	97.3WH/L	
17	Gravimetric specific energy	98.5WH/KG	
18	Communication mode	UART	
19	Battery software version	/	
21	Maximum series number	4PCS	Please refer to 6.2/6.4 parameters for serial use
22	Maximum number of parallels	4PCS	Please refer to 6.3/6.4 parameters for serial use

3. Product dimension drawing:



4. Labels:



5. BMS/PCM Parameters:

NO	Indicator item		Windows default	Delay	Optional	Remarks
1	Cell Over voltage Protection	Cell overcharge protection voltage	3750mV	0.8-2S		
		Cell overcharge protection Relief voltage	3500mV	/		
2	Cell Under voltage Protection	Cell Under voltage Protection voltage	2200mV	50-150mS		
		Cell Undercharge protection Relief voltage	2700mV	/		
3	Overcurrent in charge Protection	Overcurrent in charge Protection current	/	/		
		Discharge of charging over current protection	/	/		
4	Overcurrent in Discharge Protection	Overcurrent in Discharge Protection current	/	/		
		1 st Level Overcurrent Discharge	180A	0.25-0.3S	/	
		2 st Level Overcurrent Discharge	250A	50-150mS	/	
5	Short circuit protection	Short circuit protection current	1100A	\leq 800uS	/	
6	Overtemperature in Charge Protection	Over temperature Protection(Battery)	65°C	/	/	
		Over temperature release	45°C	/	/	
7	Lowtemperature in Charge Protection	Low temperature Protection(Battery)	/	/	/	
		Low temperature release	/	/	/	
8	Overtemperature in Discharge Protection	Over temperature Protection(Battery)	65°C	/	/	
		Over temperature release	45°C	/	/	
9	Low temperature in Discharge Protection	Low temperature Protection(Battery)	/	/	/	
		Low temperature release	/	/	/	
10	Balance function	Balanced opening voltage	3600mV		/	
		Balanced current	36mA		/	
11	Bluetooth function	Bluetooth				

6. Instructions

- 6.1. Please read the product manual and battery surface label carefully before use.
- 6.2. At most 4 batteries are allowed to be connected in series. Please connect them in series according to the following parameters:
Static voltage differences $\leq 40\text{mv}$, SOC $\leq 5\%$, internal resistance differences $\leq 2\text{m } \Omega$.
If the series connection is not in accordance with this parameter, the battery capacity will be insufficient, or the protection board will be damaged. Seriously affect the battery life.
- 6.3. In principle, parallel connection is not allowed, but if it needs to be used in parallel, a maximum of 4 sets are allowed to be connected in parallel, and the parallel connection shall be carried out according to the following parameters:
Static voltage differences $\leq 200\text{mv}$, SOC $\leq 5\%$, internal resistance differences $\leq 2\text{m } \Omega$.
If the parallel connection is not in accordance with this parameter, the protection board will be seriously damaged. Seriously affect the battery life. After parallel connection, the total capacity is subject to the lowest monomer capacity
- 6.4. Parallel connection and series connection are allowed.
- 6.5. Different material chemical systems, different batches of batteries and design technical parameters can not be assembled and used together.
- 6.6. The battery pack shall be stored at room temperature and charged to 40% - 60% of the electricity.
In order to prevent over discharge, it is recommended to charge every 3 months.
- 6.7. The battery pack shall be used under the specified conditions, and the performance of the battery stored for more than one year is not guaranteed.
- 6.8. During use, keep away from heat source and high voltage, avoid children playing with the battery, and do not beat the battery.

7. Disclaimers:

Please read the product specification, operation manual and precautions carefully before use. Understand the use method and application scope of the product; if the product use method is wrong, the circuit connection is wrong or the input power supply is used, and the load function parameters are inconsistent with the performance parameters indicated in the product specification, it is improper use. The product, load and peripheral connectors are damaged due to improper use. The company does not assume any responsibility.

Any matters not mentioned in this specification shall be determined by both parties through negotiation.