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No.:WBY-SZSJ-CN20200930-5

Product Development Agreements

38.4V25Ah Battery System Specification

A5Version

Anhui Lvwo Recycling Energy Technology Co., Ltd.	Agreement No.:**WBY-SZSJ-CN20200930-5**

Description of Changes to the Technical File

Changes in previous versions of this document are as follows:

No.	Version Number	Changes Description	Time	Person
1	A0	Initial Version	2020-09-30	
2	A1	Modify the shell dimension	2020-11-05	
3	A2	Change the size of the cell housing	2020-11-27	
4	A3	Change the protection plate and layout	2021-01-08	
5	A4	Change the outlet position and harness length	2021-04-08	
6	A5	Optimize data	2023-01-12	

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1.Battery System Design Reference Technical File

GB 2894	Safety Signs(neq ISO 3864:1984)
GB 16179	Guidelines for the Use of Safety Signs
GB 8897.4-2008	Galvanic Batteries Part 4 Safety Requirements for Lithium Batteries
GB 21966-2008	Safety Requirements for Lithium Primary Batteries and Accumulators in Transportation
GJB 4477-2002	General Specification for Lithium-ion Battery Packs

2.Supply List

No.	Name	Unit	Quantity	Remark
1	38.4V15AhBattery	pcs	1	
2	Specifications	pcs	1	

3.Battery System Usage Requirements

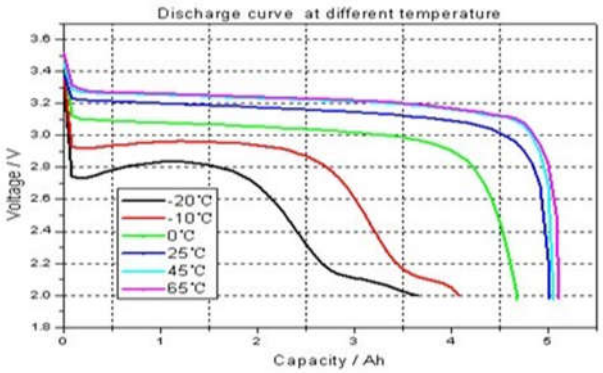
1. Battery system external working environment temperature requirements: charging and discharging: charging -10℃～60℃, discharging -20℃～60℃;
2. Battery system external working environment humidity requirements: 10%≤humidity≤90%RH;
3. Keep the SOC above 20% when the battery system is in operation;
4. When the battery system is not in use for a short period of time, it is required to keep the SOC above 60% and store it in a dry, clean and well-ventilated warehouse at 5℃～45℃;
5. During the loading process of the battery pack, it is required to be handled with care to prevent it from being thrown, rolled or hit;
6. It must not be inverted or placed horizontally in the storage state; it is strictly forbidden to expose the battery pack to the sun, rain or soak it in water for a long time;
7. Ensure that the battery system is away from flammable and explosive items and high temperature environment when in operation or storage;
8. It is strictly forbidden to force the battery system to operate when it is short-circuited, overcharged or in high temperature alarm;
9. It is strictly forbidden for customers to disassemble the battery system without permission.

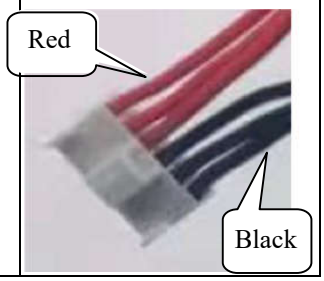
4.Battery Parameters

Cell Parameters			
No.	Project	Index	Remark
1	Battery type	Lithium iron phosphate power battery	
2	Rated voltage/capacity	3.2V/7.5Ah(IFR32800)	
3	Cell voltage range	2.0V-3.65V	
4	Cell weight	147g	
5	Dimension	Diameter:32mm,height:81mm	
6	Cathode material	Lithium iron phosphate	
7	Anode material	Artificial graphite	

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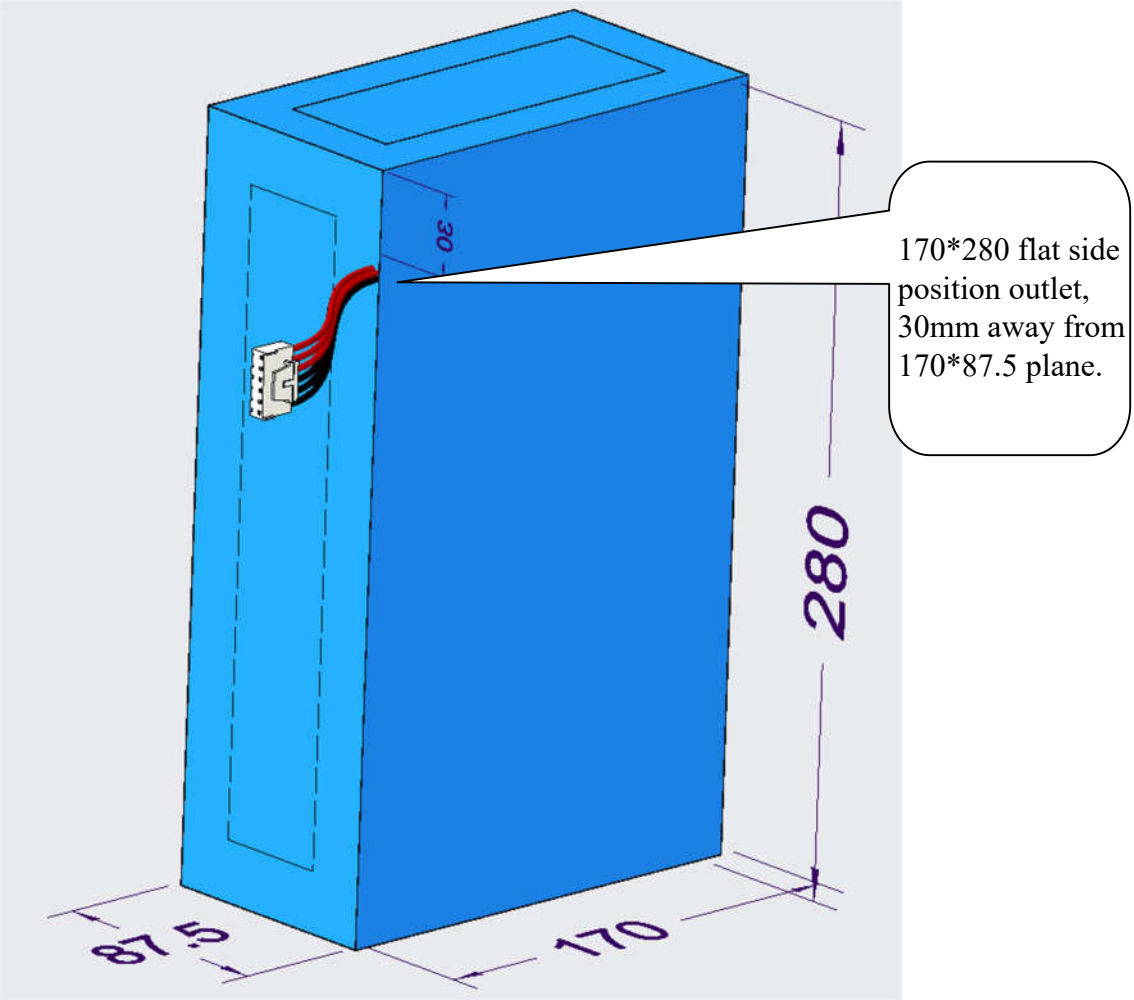
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8	Electrolyte composition	Lithium hexafluorophosphate material	
9	Electrolyte morphology	Barren liquor	
10	Operating temperature	Charge 0℃-60℃;Discharge-20℃-60℃	
11	Charge retention capability	97%（25℃,30days）	
12	Cycle times	More than 4000 times (0.2C cycle, room temperature, capacity retention rate: 80%)	
13	Discharge curves of monomers in -20℃,-10℃,0℃, 25℃,45℃,65℃ environments		

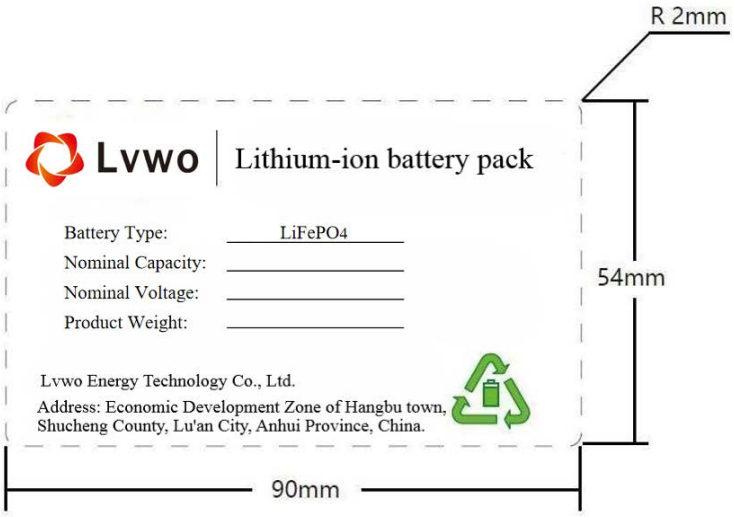
Battery System Parameters			
1	Rated voltage	38.4V	12 series
2	Battery pack voltage range	34～43.8V	
3	Rated capacity	25Ah	
4	Total energy	1095Wh	
5	SOC Range	10%-100%	
6	Charge-discharge capacity efficiency	≥96%	
7	Standard charging current	5A	Recommended 0.6C or lower
8	Standard discharge current	≤30A	Recommended 0.8C or lower
9	Maximum continuous charge and discharge current	35A	
10	Total weight	6.6 kg	
11	Ambient relative humidity	10%-90%	
12	Shell material	Fiberglass board+PVC film	
13	Battery pack composition	12S3P in one pack	
14	Battery system charging and discharging ambient temperature	Charge-10℃~60℃ Discharge-20℃~60℃	
15	Product dimension	280*170*87.5mm±2（L*W*H*）	Tolerance 0~+3mm
16	Input/output method	VH3.96-6P Terminal	

5.Product Dimensions Diagram

Fiberglass board + blue PVC film shell,leading cable length 280mm

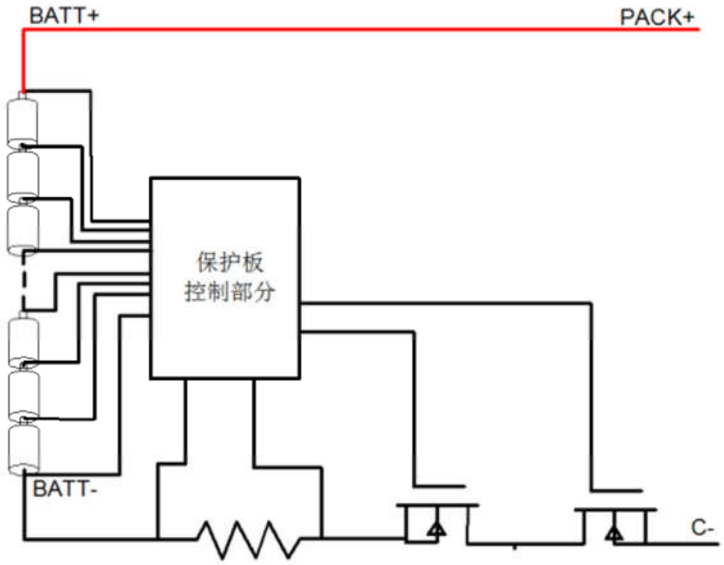


6.Warning Stickers and Nameplate



7.Protection Board Specifications

7.1 Principle Diagram



7.2 Electrical Parameters

For details, please refer to the specification of the protection board.

8.Charger

1. Special charger for lithium iron phosphate battery
2. Maximum input voltage≤43.8V(CC/CV)
3. Maximum continuous output current≤30A

Description: In order to prevent overcharging due to the failure of the charger or protection board, the charger end will be cut off preferentially at the end of charging.