Address: Economic Development Zone of Hangbu town, Shucheng County, Lu'an, China

Tel:+86-0564-8030526 | Post Code:231300 | Web: www.lvwo-energy.com

Specification Approval Sheet

Specification

Model: 204V 50Ah

Cap: 50Ah

Date: 2023-2-14

Prepared By	Checked By	Approved By

Customer Approved	Signature:
	Date:
	Company Name: (Company Stamp)

Please return one copy with signature and your company's stamp to us if approved. Thank you!

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1 Scope of application

This product specification is applicable to the lithium iron phosphate battery pack produced by Anhui lvwo Energy Technology Co., Ltd. It specifies the product model, specifications, dimensions, performance and maintenance.

2 Product Type and Model

Product Type: LiFePO4 battery pack, using certified LiFePO4 cells.BMS included Product model: 204V-50Ah (3.2V-50Ah-64S1P)

Model Description:

Cell Type – Voltage – Capacity

Lithium Iron Phosphate – 204V – 50AH

3 Technical performance

3.1 Function Introduction

(1) Reliable charging and discharging. Efficient charging and discharging through lithium iron phosphate batteries, long service life and high reliability.

(2) Automatic protection function. Rapid response, high-precision data sampling, and complete and reliable protection functions:

- ◇ Battery pack overall overvoltage and undervoltage protection, battery single cell overvoltage and undervoltage protection;
- ◇ Charge and discharge overcurrent protection;
- ◇ Charge and discharge temperature over-temperature protection;
- ◇ Short circuit protection;

(3) Protection release mode. When the battery pack or single cell is in overcharge protection, the voltage returns to the overcharge reset voltage value, and the overcurrent or overdischarge protection is automatically

Clear alarm

(4) Battery balancing function. Balance control is performed according to the voltage of each battery cell, and energy transfer type balancing method (reserved) .

(5) The same port for charging and discharging, cabinet size: width x depth x height = 800x600x2260mm, supports charging and discharging 50A, with 485 communication function.

3.2 Technical Specifications

Item	Specification	Remark
Model	204V 50AH	
Rated voltage(V)	204	
Rated capacity (Ah)	50	0.2C discharge at 25℃
Rated energy (W)	10240	0.2C discharge at 25℃
Rated charging voltage (V)	233.6	
Rated charging current (A)	20A	
Rated discharge current (A)	50A	
Maximum continuous discharge current (A)	100A	

Battery pack overcharge protection voltage (V)	233.6	
Battery pack over-discharge protection voltage (V)	160	
BMS module quiescent current (μA)	≤200	
Charging temperature range (℃)	0 ~ 55	
Discharge temperature range (℃)	-20 ~ 60	When the temperature is greater than 55℃ , Please pay attention to ventilation and heat dissipation
Dimension(mm)	600(L)*600(W)*1210(H) ±2mm	Overall battery pack size (including shell)
Weight(kg)	300	Reference weight
Cycle performance	3000 times (80% DOD)	0.2C standard charge and discharge

3.3 Components

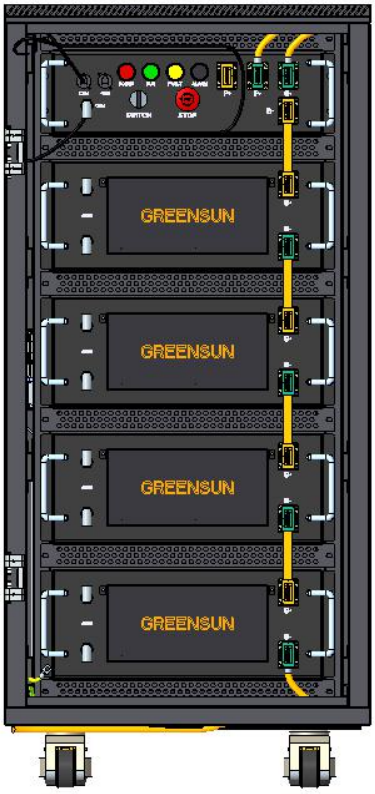
Item	Specification	Remark
Lithium iron phosphate battery	3.2V100Ah	Full capacity lithium iron phosphate battery
BMS	Host module, slave module (with 485/CAN communication function)	
Shell color	BLACK	

4 Appearance and interface diagram

4.1 Battery Pack Introduction

This lithium iron phosphate battery pack 204.8V 50Ah system consists of 64S1P, with 485/CAN communication interface, display screen, operation, fault indicator light function, host module quantity: 1PCS, slave module quantity: 16PCS.

4.2 Battery pack appearance and dimensions (the following figure is for reference only, please refer to the actual design)



5 Factory capacity

Unless customers have special requirements, the factory capacity of the battery pack is within the range of 40% to 75%.

6 store

(1) Storage time: 1 week, storage environment temperature: -20℃ ~ 50 ℃, relative humidity: 45% ~ 85%;

(2) Storage time: 1 month, storage environment temperature: -20℃ ~ 45 ℃, relative humidity: 45% ~ 85%;

(3) The storage time is 6 months, the storage environment temperature is -20℃ ~ 40℃, and the relative humidity is 45% ~ 85 %.

The battery pack is usually stored at 40% to 50% of the charge state in a clean, dry , ventilated room with an ambient temperature of -5℃ to 35℃ and a relative humidity of no more than 75%. It should avoid contact with corrosive substances and should be kept away from fire and heat sources. From the date of manufacture, it should be recharged every 6 months of storage, and the temperature range is 25℃±5℃.

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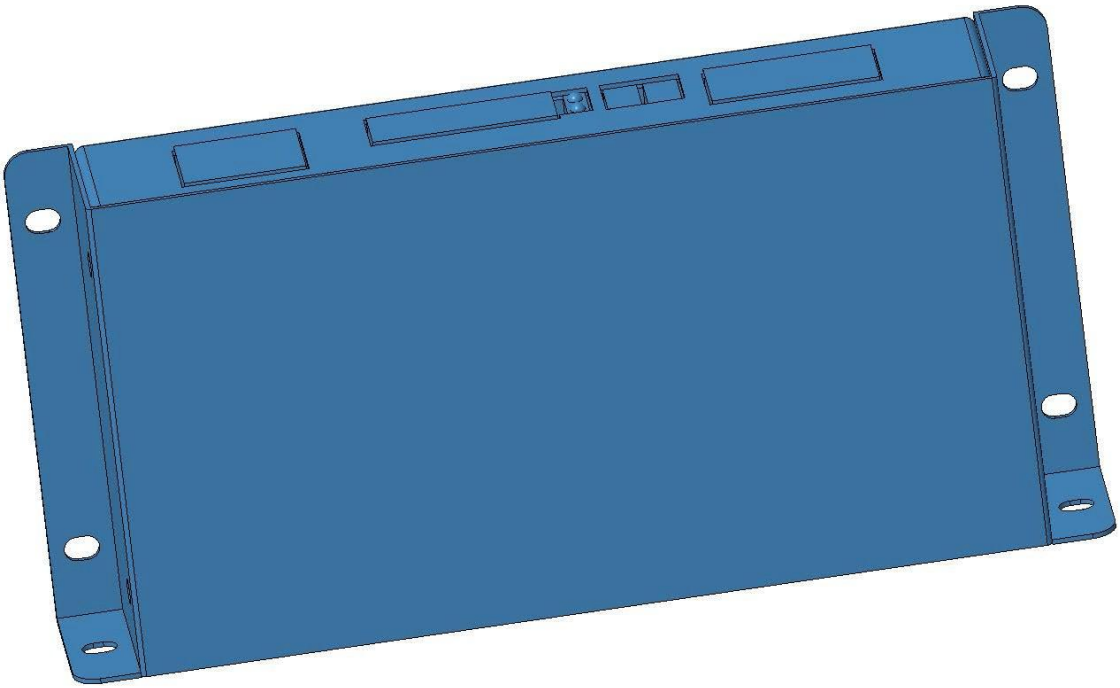
7 Master battery cluster management unit

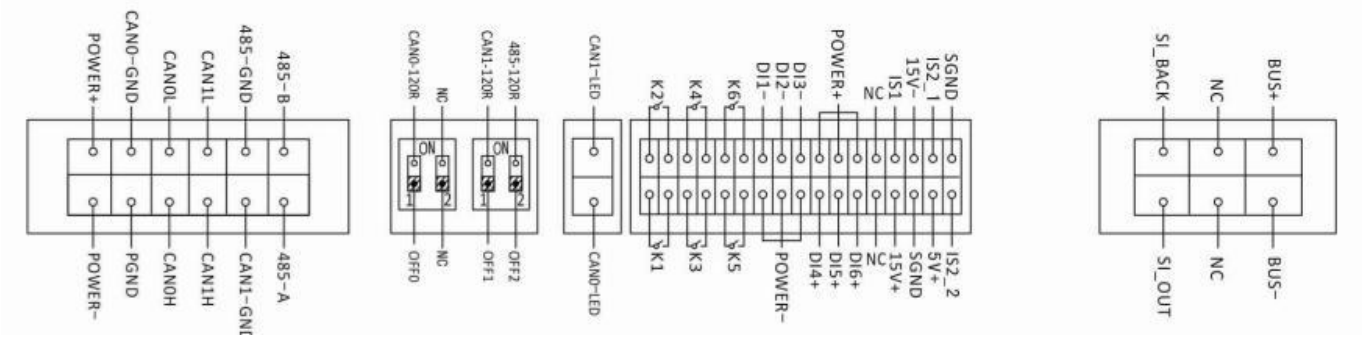
(1) Battery cluster current collection, total voltage collection, leakage detection

(2) Power-off protection when the battery status is abnormal

(3) BMS system self-check and fault diagnosis alarm

(4) Under the management of BMS, capacity calibration and SOC calibration can be completed independently as the basis for subsequent charge and discharge management



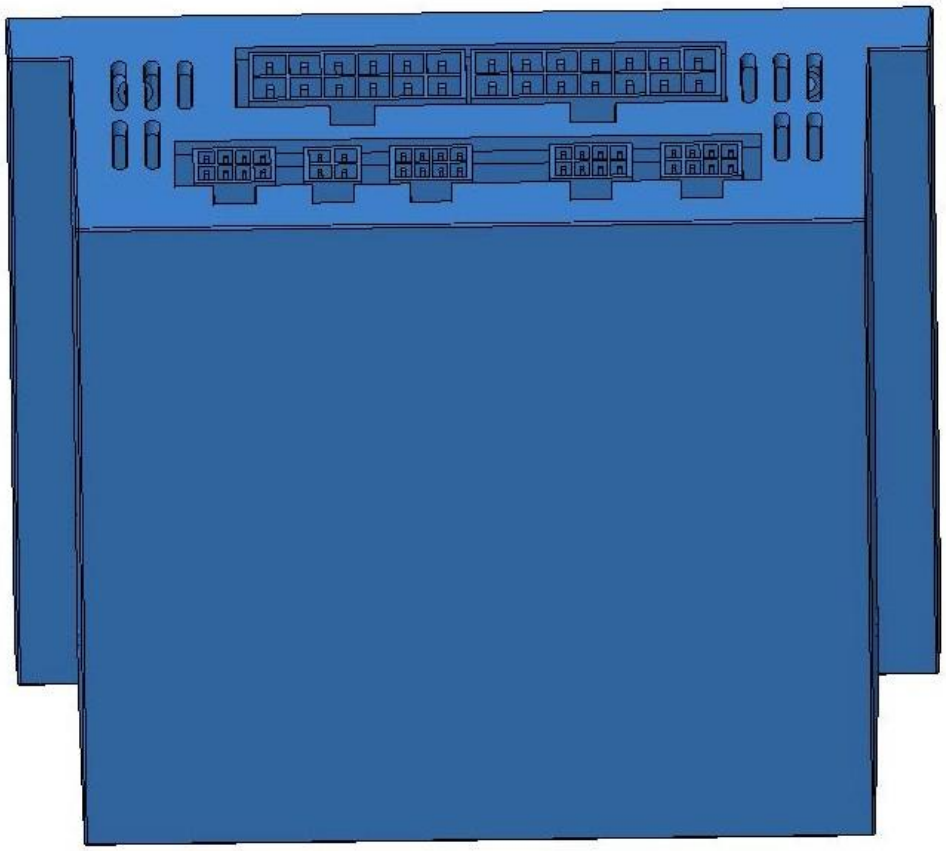


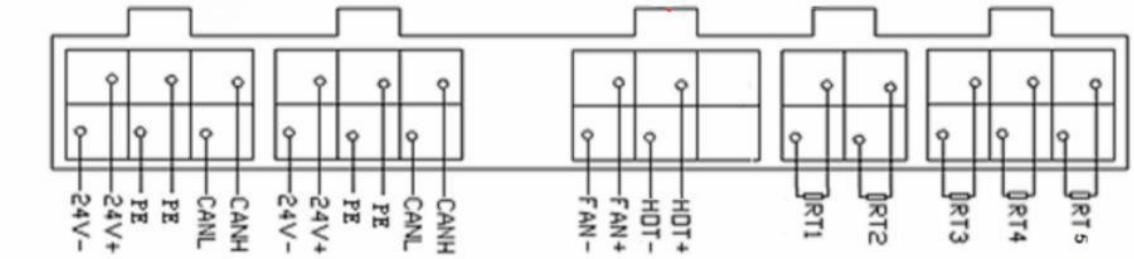
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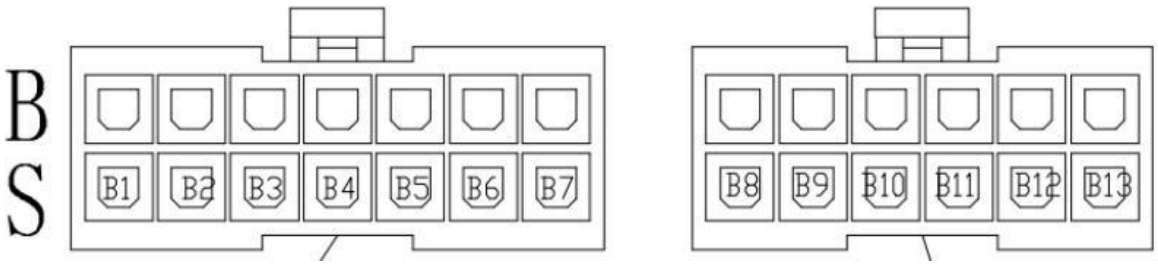
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8 Slave control battery cell management unit

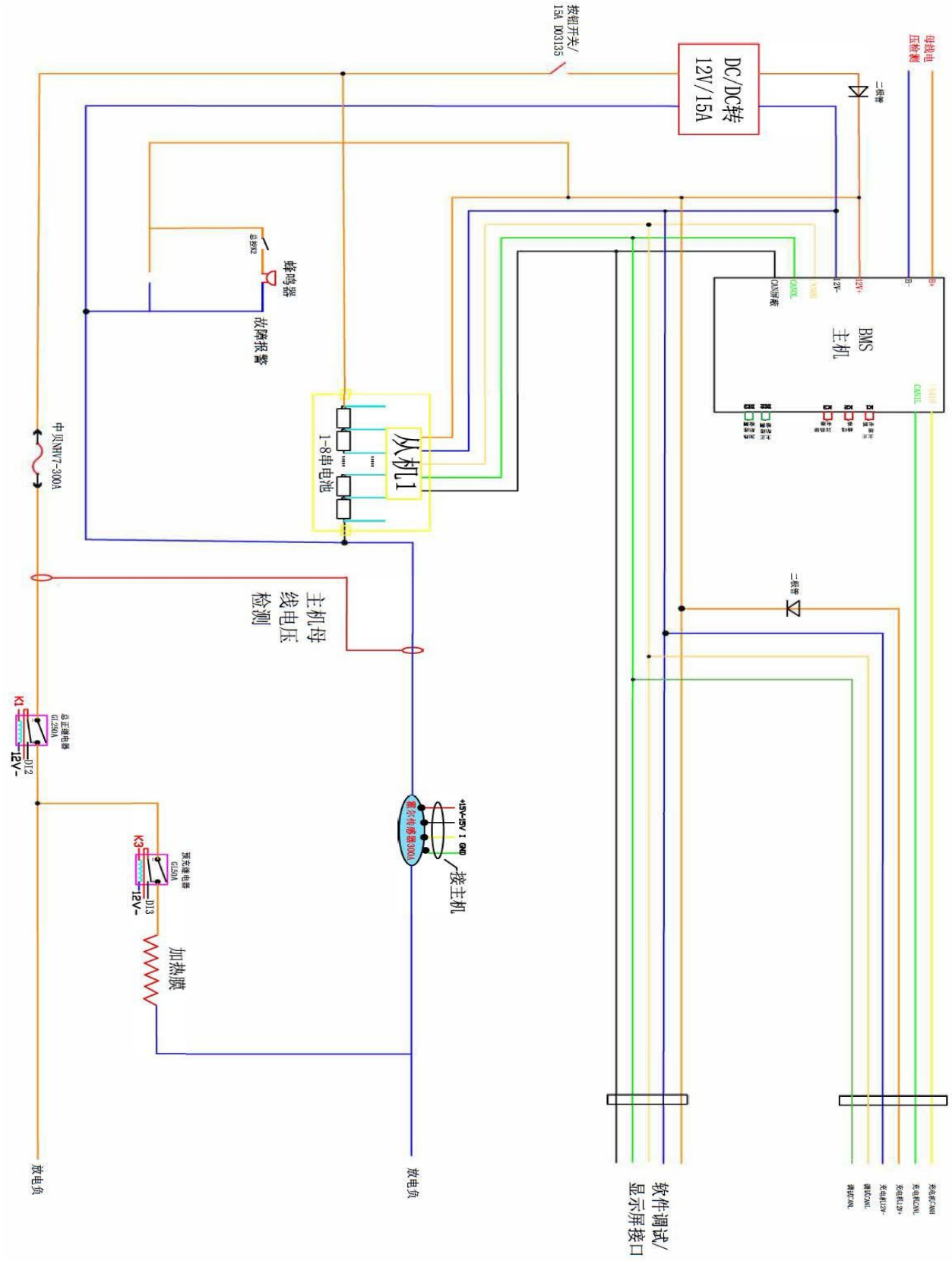
(1) Thermal management
(2) Battery balancing within the pack
(3) Information transmission
(4) Measurement of battery cell voltage and temperature







9 Electrical Schematics



10 Display function

(1) The display interface supports Chinese and English bilingual switching function



(2) Enter the main interface of the display screen to see the main parameters such as battery voltage, temperature, power, etc.



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11 Conditions of Usage

The battery can only be used under the following conditions, otherwise the battery performance or service life will be reduced. Using the battery outside this temperature range may cause overheating, explosion or fire.

(1) Charging: 0℃~45℃, relative humidity 45%~85%;
(2) Discharge: -10℃~55 ℃, relative humidity 45% ~ 85%;
(3) The daily average relative humidity is not more than 80 %, and the monthly average relative humidity is not more than 80%;
(4) The installation and use location shall be free from strong vibration and impact, strong electro magnetic interference, and the external magnetic field induction intensity shall not exceed 0.5mT;
(5) The vertical inclination of installation shall not exceed 5%;
(6) There must be no explosive hazardous media at the place of use, the surrounding media must not contain harmful gases and conductive media that corrode metals and destroy insulation, and mold is not allowed to exist.

12 Shelf life

The shelf life of the battery is three years after leaving the factory. The company promises that if there is a quality problem with the battery within three years, the company will be responsible for replacing it. If the problem is caused by user misuse, it will not be replaced.

13 Precautions for use

Please read the following precautions carefully to ensure the correct use of lithium iron phosphate batteries. Our company is not responsible for any problems caused by violation of the following precautions.

15 Dangerous matters

Failure to read the following carefully may cause battery leakage, explosion or fire.

(1) Do not put the battery into water or get it wet;
(2) use or store the battery near heat sources (such as fire or heater) ;
(3) Do not connect the positive and negative poles in reverse;
(4) Do not connect the battery directly to a wall socket or a car cigarette lighter socket;
(5) Do not throw the battery into fire or heat the battery;
(6)It is prohibited to short-circuit the positive and negative poles of the battery with wires or other metal objects, and it is prohibited to transport or store the battery together with necklaces, hairpins or other metal objects;

(7) Do not hit, throw or subject the battery to mechanical vibration;
(8) Do not pierce the battery case with nails or other sharp objects, and do not hammer or step on the battery;
(9) It is forbidden to disassemble the battery in any way;
(10) Do not charge the battery in the presence of fire or extreme heat.

16 Warning

Failure to read the following carefully may cause battery leakage, explosion or fire.

(1)Do not place batteries in microwave ovens or pressure containers;
(2)It is forbidden to use it in combination with primary batteries (such as dry batteries) or batteries of differentcapacity, model or type;
(3)If the battery emits an odor, becomes hot, deforms, changes color, or shows any other abnormalphenomenon, it must not be used; if the battery is being used or charged, it should be immediately removed from the electrical appliance or charging device and stopped using;

Batteries should be kept out of the reach of children;
(5)If the battery leaks or emits an odor, immediately move it away from open flames; leaking electrolyte maycause fire or explosion;
(6)If the battery leaks and the electrolyte enters your eyes, do not rub them, but rinse with water and seekmedical help immediately. If not treated in time, your eyes will be damaged

17 Precautions

Please use the lithium battery pack strictly in accordance with the instructions. If the battery leaks and the electrolyte gets on your skin or clothes, wash the affected area immediately with running water, otherwise it may cause skin inflammation.

Read the instructions for the device that uses the battery and install and remove the battery correctly.
If the battery pack terminals become dirty, wipe them clean with a dry cloth before use. Otherwise, the battery pack may have poor contact, resulting in energy loss or failure to charge .