Lithium iron phosphate battery

Specification

51.2V 600Ah
LiFePO4 Battery

Product model: lithium iron phosphate battery pack
Product Specification: 51.2V600Ah (16s2p)
Product Number: LN-LSTL48600001
Version number: RO.4

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Product acceptance and introduction

The proper use and maintenance of the product will ensure that your battery (or battery system) operates reliably and stably for a long time

- After receiving the product, please check whether the package is in good condition. If the package is damaged, it may cause product damage. If there is any damage, please contact our sales staff or sales staff within seven working days.
- Those who do not use or maintain according to the provisions of this manual shall be regarded as giving up the warranty right. Lanji New Energy Technology (Shenzhen) Group Co., Ltd. and its service station have the right not to give warranty, and shall not compensate for all losses caused thereby, but can provide the corresponding paid services according to the situation.
- Please reply within 7 working days after receiving the product and product instructions. With no reply within seven working days, we will see the customer to admit that this product and product instructions meet the requirements of your company.

1 Product indicators

1.1 Product Overview

This product is lithium iron battery battery pack, the battery pack consists of 323.2V300Ah lithium iron phosphate cells through 16 series 2 parallel mode Together. The battery pack adopts scientific internal structure design, advanced battery production process, has high specific energy, long life, safety and reliability, wide use temperature range and other characteristics, is a green energy storage power supply products.

1.2 Product parameters

order number	name of a part	project	parameter
1		specifications	Lithium iron-300Ah
	The cell	and models	
2		capacity	300Ah
3		nominal voltage	3.2V
4		Nominal internal resistance	≤0.5mΩ
5		compound mode	16 String 2 and
6		Standard of matching group	tolerance ≤1%
7			Single section internal resistance difference of 0.2mΩ
8			One-segment voltage difference is 5 m V
9			Charge retention capacity of 90%
10		nominal voltage (V)	51.2
11		Nominal Capacity (Ah)	600

12	Battery Pack Parameters	Minimum capacity (Ah)	600
13		Charge voltage (V)	58.4
14		Discharge cut-off voltage (V)	40
15		USB Output voltage (V)	/
16		USB maximum output current (A)	/
17		Maximum continuous discharge current (A)	1C
18		display screen	Voltage and percentage are shown
19		Standard charging current (A)	Within 0.5C
20		Charging is suitable for temperature	0℃~45℃
21		The discharge is suitable for temperature	-20℃~60℃
22		Battery pack size	720*435*860mm
23		Battery pack net weight	251kg
24		Storage temperature range	0℃~40℃
25		Storage of ambient humidity (RH)	＜75%
26		communication mode	485,232, CAN
27		Functional options	Cell module active equilibrium 5A
28		Charge power retention capacity	After charging according to 3.2V standard hold it for 28 days under standard test conditions,and then discharge with 3.3V standard discharge, with the charge retention rate of 80%
29		cycle index	Cycle life is not less than 5,000 times, capacity retention rate ≥80%。(Charge according to 3.2 for 0.5~1h; discharge according to 3.3 for 0.5~1h for one cycle).
30	management system	Single over pressure protection value	3.7V
31		Over pressure release value	3.65V
32		Single discharge under pressure protection value	2.5V
33		Under-pressure release value	2.7V
34		Over flow protection value	300A

1.3 Product pictures

2. Battery pack

2.1 Charging
The charging end of the battery pack is connected to the appropriate charger(charging voltageis 58.4V,do not reverse connection)for charging.

2.2 Discharge
Note the positive and negative electrodes(as shown in the battery case identification,do not reverse the connection)and connect to the matching load.

3.Battery pack test

The parameters of single battery and protective circuit are only used as thes tandard test data for separate accessories,for reference only.

3.1 Requirements for the battery pack test

The factory time of the tested battery pack is not more than one month.If the test is not tested due to transportation or other reasons,the battery pack can be charged and discharged again after testing.

The tests in this specification shall be performed under standard atmospheric conditions: temperature:15-26℃;relative humidity:65±20%.

The standard charging voltage of the battery pack is 58.4V,the standard discharge cut-off voltage is about 40V,and the standard current is 0.2C.

3.2 Standard charging

Use the special test cabinet for lithiumion battery pack, charge with constant current and constant current to 0.05A.

3.3 Standard discharge

Use the lithiumion battery pack special test cabinet, with the standard current, constant current discharge to the standard discharge cut-off voltage or the battery pack cut-off.

4. Electricity, pool group use environmental requirements

The discharge ambient temperature of the battery pack is-20℃~+60℃(ambient temperature>45℃, please note the ventilation and heat dissipation); the charging ambient temperature is 0℃~45℃. When the environment alhumidity is RH85%, when the environmental humidity is greater than 85%, pay attention to waterproof, and avoid the surface condensation of the battery pack.

5. Special attention

In order to make full use of the energy efficiency of lithiumion battery pack and prevent leakage and heating, please prohibit the following precautions:

- It is strictly prohibited to immerse the battery pack in water. Once entering the water orw ater into the battery, immediately isolate it, and ask professionals to deal with it;
- It is forbidden to charge the battery pack at temperatures over 45℃; discharge or hold the battery pack attemperatures above 60℃ and sta yaway Fire, heater, corrosive items, etc., otherwise it may cause the battery pack overheating, fire or function failure, short life reduction, or even dangerous a place difficult of access;
- Never charge the battery pack below 0℃.
- It is strictly prohibited to reverse the positive and negative electrodes, and short circuit the positive and negative electrodes.
- It is strictly prohibited to use the battery pack in series. Max 15pack Parallel, each pack have to top balanced to same voltage /IR value first.
- It is strictly prohibited to reverse charge the battery pack, and to insert the positive and negative terminals of the battery pack directly into the power socket.
- It is strictly prohibited to transport or store the battery pack together with conductive objects(such as hairpins, neckl aces, etc.).
- No knock, throw, trample, fall, disassembly, impact battery pack, etc.
- It is strictly prohibited to weld the battery pack directly and puncture the battery pack with nails or other sharp tools.
- It is strictly prohibited to use it in the environment of strong static electricity and strong magnetic field, otherwise it may damage the battery pack protection circuit.
- Never overload the battery pack.
- It is strictly prohibited to mechanically process the circuit board, which may damage the internal circuit and cause functional failure.
- It is strictly prohibited to deform the product, which may cause damage to electronic components or lines and make the product unstable.
- It is strictly prohibited to remove and assemble the shell to avoid unnecessary damage.
- It is strictly prohibited to overcharge and overput the battery pack.
- Please choose the appropriate special charger for the lithium-ion battery pack when charging.
- After using the battery pack, please charge within 12 hours. The battery pack is not charged for more than 12 hours after use. Please test the battery pack voltage before charging. If the voltage value of the battery pack is <40V, it cannot be recharged and placed in isolation. At the same time, consult the technical personnel of D o c a n Technology (Shenzhen)Group Co., LTD.
- If the battery pack leaks and the liquid splashes into the eyes or skin, please do not rub it, rinse with clean water, and seek medical treatment immediately.

● If the battery pack emits odor, heat, discoloration, deformation or any abnormality in the process of use, storage, charging, immediately stop charging, stop using, and remove it from the device and isolate it under the condition of ensuring safety.

● Insulating paper to wrap the electrodes at the terminal of the scrapped battery pack to reduce the safety risks in the later stage.

● The positive and negative terminals of the charging port will burn the internal circuit board. Please pay attention to the positive and negative terminals of the port when connecting.

● The size of the product does not include the outlet position, various connector, handles, wheels, heat sink and other parts

6. Daily use and maintenance of the battery pack

6.1 Storage of the battery pack

The storage temperature is 0℃ ~40℃ (the best storage temperature is 15℃ ~25℃,dry storage).
The performance of the battery pack is affected by the temperature, and
the most intuitive performance is the
change of the battery pack capacity, which is a normal phenomenon.
Avoid condensation resulting from temperature change during storage, otherwise it will
cause rust of battery
or metal parts.

6.2 Check the b attery pack before use

● After receiving the battery pack, the package should be carefully checked for abnormality and avoid impact during the handling.

● Check whether the battery pack shell and accessories are damaged, leakage, missing and other bad phenomena, if there is any damage, missing, please contact our company.

● Check whether the charge and discharge terminal of the battery pack is correct, measurewhether the positive and negative electrodes are inversely connected, and whether the voltage is within the normal operating voltage range of the equipment. If there is dirt or rust at the terminal, apply dry cloth before use, otherwise poor electrode terminal contact.

6.3 Notes for battery pack installation

● Clean the installation position of the battery pack to ensure that there is no dust, metal foreign or other foreign bodies. During the installation process, fireworks are strictly prohibited to avoid short circuit of the battery pack and prevent equipment damage or personnel injury.

● Battery pack in place, the battery pack is placed in the installation position, the battery pack should be installed in a well-ventilated, dry, clean environment, the battery pack should not be installed in a possible water immersion place, the battery pack use and storage should be avoided close to flammable and explosive items.

● Earthquake absorption and fixation should be done between the battery pack and the warehouse body to avoid mechanical damage of the battery pack.

● Tighten the electrical wire terminal on the battery pack terminal, do not force too much or exceed the specified torque, otherwise the terminal damage may be caused.

● After the installation, check whether the terminal fastening is in place, whether there is debris on the surface of the battery pack, use dry cloth to clean the outer packaging of the battery pack, do not use easy to generate electrostatic tools to clean the battery pack packaging, do not use volatile oil and other organic solvents, otherwise it will damage the battery pack packaging or even make the battery pack packaging crack.

● Care to ensure correct positive (+) negative (-) terminal polar connection. Otherwise, it may cause a fire or cause damage to the battery pack and electrical appliances.

● Test run of the equipment, observe the equipment and battery pack.

6.4 Working requirements of the battery pack

● The charging current shall not exceed the specified maximum charging current, and charging above the specified current may affect the service life of the battery pack or damage the internal circuit, or even cause danger.

● The discharge current shall not exceed the specified maximum discharge current, and the use of higher than the specified current discharge may affect the service life of the battery pack or cause damage to the internal circuit, or even dangerous.

● When the battery pack is insufficient, it should be charged in time, which is beneficial to extend the life of the battery pack. If the battery pack is not charged in time, the battery pack is in a power shortage state for a long time, which will affect the service life of the battery pack.

● Shallow charging and discharge of lithium ion battery pack is beneficial to improve the cycle life. It is recommended that users discharge to 10% of the nominal capacity and charge to 95% of the nominal capacity.

6.5 Daily maintenance of the battery pack

● The battery not used for a long time may be in an overdischarge state due to its self-discharge characteristics. In order to prevent the occurrence of overdischarge, the battery should be charged and discharged regularly, and maintain its voltage within a certain range (about 58.4 V).The battery pack shall be charged and discharged at least once within 3 months (the battery pack with communication function shall be charged and discharged at least once within a month. The SOC / capacity calibration shall be calibrated. The calibration method is to fully charge the battery pack with the charger and discharge to the battery pack protection.

● The battery pack shell cannot be cleaned using an organic solvent.

● Battery packs are consumable products and have a limited life span. When the battery pack capacity is lower than the use requirements, please replace the battery pack in time to avoid the loss caused by insufficient capacity .● In order to prevent the safety problems caused by the failure of the protection function of the protection board, do not charge for a long time. The battery will be taken out after it is full.When charged, in addition, you must use the original or the battery, and operate and use according to the instructions, otherwise it may damage the battery or even dangerous.

● The shallow charging and shallow discharge of the battery can ensure the economical use of the battery pack. Overcharging and overdischarge may cause the battery pack overheating, fire or function failure, shortened life, and even danger.

- The switch, power display board and output / entry interface of the battery pack are loss components, which can provide paid after-sales service.
- Lithium-ion batteries at the end of their life should be recycled and treated in accordance with local laws.

7 Other technical indicators

For matters not mentioned in this specification and other related parameters, if necessary, please contact our sales personnel or technical personnel. We will provide you whenever possible, thank you for your understanding. You are welcome to visit our website or call the customer service hotline for more product information.

8 Special statement (with user knowledge)

Before the purchase and use of the product, the user should make clear the particularity of lithium battery products and the risk of incorrect use, must read the product manual carefully, and be operated by people with the ability to use and application technology of the product. The technical performance, safety performance and quality standards of the product refer to the technical guarantee of the product only in accordance with the correct operation specifications only when the user meets the technical requirements, environmental requirements and skill requirements. owing to The wrong method, wrong connection mode, wrong power adaptation and load function parameters, which are inconsistent with the performance parameters indicated in the product specification, may cause damage to the product and the users personal and property . Product damage or other losses caused by improper use of users are not a product quality problem, and the Company shall not bear the relevant responsibilities. The R & D center of the company will continue to improve and upgrade the technology, performance, operation and other aspects of the product.

Please pay close attention to the company website or call the companys sales engineer to obtain the latest information of the product. The product shall meet the following management standards and conditions (not limited to) for use, storage and application: The product is strictly prohibited to any use in violation of the laws and regulations of the local state; the product is strictly prohibited to areas violating the use environment and place of lithium batteries; the product is strictly prohibited to use, charge and store in key areas of fire safety such as residential buildings and densely populated areas. The product is strictly prohibited to use, charge and store beyond the specified technical standards of the product. It is strictly prohibited to dismantle, modify and integrate the product in any way. This product should not be stored together with any inflammable and explosive articles and any other similar products.