



## Lithium Battery Specification Approval Sheet

**Model : JSD-LFP51.2V200AH-10240Wh**  
**File Number: JSD210330001A**

Approved by	Checked by	Prepared by	Date
Richard	Tom	Alex	2021-03-30



## 1 Scope

This specification describes the design and development of the company's battery; it is the product of design, production and inspection basis. Its role is to understand the quality of the product and using the correct method for customers.

## 2 Product parameters

NO	Projects	Specification	Remark
<b>Cell unit parameter</b>			
1	Battery types and materials	LiFePO4	
2	Rated voltage/capacity	3.2V /100Ah	
3	Single battery voltage range	2.5V~3.65V	
4	Single battery weight	2.3kg	
5	The battery internal resistance	≤ 0.4mΩ	
6	Battery size	48*173*120(±2mm)	
<b>Battery parameter</b>			
1	Rated voltage	51.2V	
2	Rated capacity	200Ah	
3	Battery pack voltage range	40~58.4V	
4	Total Power ( kWh )	10240Wh	
5	Combination	16S2P	
6	Insulation resistance test value ( Ω )	≥20MΩ	
7	Operating temperature	Charging 0 ~ 55℃ ; Discharging -30 ~ 60℃	
8	Standard charging current	0.2C	
9	Quick charging current	0.5C	
10	Standard discharge current	0.5C	
11	Maximum continuous discharge current	1.0C	
12	Gross weight	86KG	
13	Ambient relative humidity	25-85%RH	
14	Battery size	485*160*755(±2mm)	



### 3 PCM Specification

#### 3.1 PCM parameter

Test items	Min	Typ	Max	Unit
Input voltage (B+ and B-)		51.2		V
Overcharge protection voltage (single section)	3.600	3.650	3.700	V
Overcharge release voltage (single section)	3.600	3.650	3.700	V
Overcharge protection delay time	500	1000	1500	ms
Overdischarge protection voltage (single section)	2.400	2.500	2.600	V
Overdischarge release voltage (single section)	2.900	3.000	3.100	V
Overdischarge protection delay time	500	1000	1500	ms
Overcurrent protection	199	200	205	A
Overcurrent protection delay time	50	150	250	ms
Equalizing start voltage	3.55	3.60	3.65	V
Equilibrium current	31	36	41	mA
Current consumption (single section 3.6V)			100	uA
PCM resistance			50	mΩ
Short circuit protection release condition	Disconnecting the load			
Short circuit protection delay time	200	450	750	us
Continuous discharge current	1	200	201	A
Continuous charging current	1	150	151	A
Charge, discharge temperature protection	/	55	/	°C
Maximum operating temperature range	-40	25	65	°C



#### 4 Product Electric Performance Test

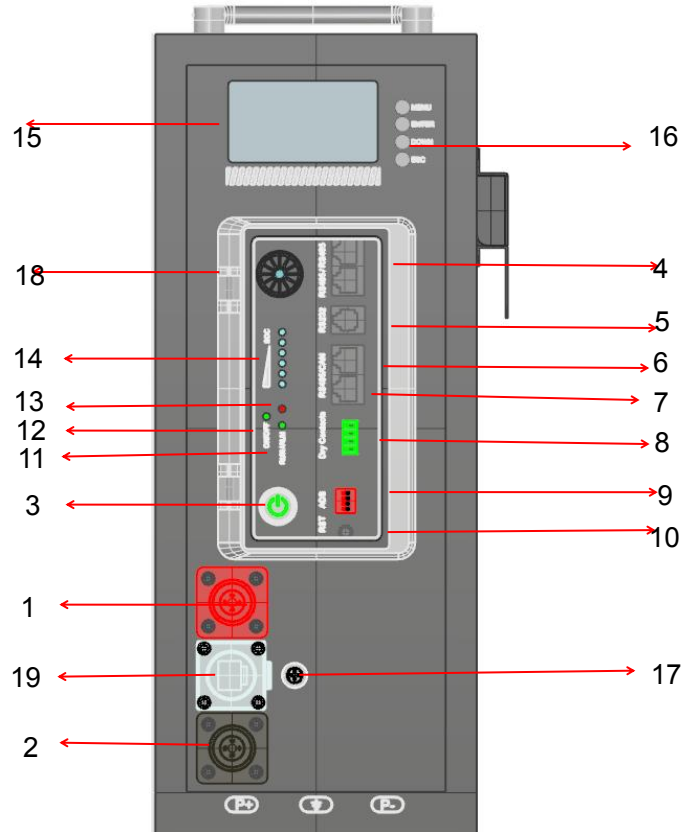
No.	Items	Test Conditions	Requirements
1	Open circuit voltage	Open circuit voltage measured within 24 hours after standard charge	≥51.2V
2	Impedance	Under the condition of full power, the AC impedance of AC1kHz is measured	≤50 mΩ
3	Capacity retention	Fully charging, store them at (20±5)°C for 28 days, then discharge to 40V @0.2C.	Discharging time ≥300min
4	Cycle Life @25°C	Discharge to 40V @0.2C, then Charge the battery @0.2C to reach 58.4V. Then charge the battery at constant 58.4V voltage until the charging current decreasing to 0.02C. Rest for 10 min. discharge to 40V@ 0.2C and rest for 10 min. Continue the charge/discharge cycles until discharge capacity lower than 80% of rated capacity.	Cycles life ≥6000
5	storage	Charge the battery to 40%~65% of its rated capacity using standard charging mode, then keep it in an 20°C±5°C, humidity 45%~85% room for 12 months, fully charge and discharge it @0.2C until voltage down . (The testing sample should be within 3 months dated from production date)	Discharge time ≥360min

## 5 Mechanical Performance

No.	content	Testing method	Requirements
1	Vibration Test	After standard charging, put battery on the vibration table. 30 min experiment from X, Y, Z axis. Scan rate: 1oct/min; Frequency 10-30Hz, Swing 0.38mm; Frequency 30-55Hz, Swing 0.19mm.	No influence to batteries' electrical performance and appearance.
2	Drop Test	The battery samples by the position of the height of 1 m free fall to placed in the sheet metal on the surface of the cement floor, and from the battery two axial direction of the positive and negative (four directions) free fall once in each direction.	No explosion or fire
3	Extrusion Test	The battery is placed between the plate extrusion, the pressure through a diameter of 32mm hydraulic cylinder pressure, until the pressure reaches 17.2Mpa, the applied pressure is 13KN, when the pressure reaches the pressure	No explosion or fire

### 5.1 Product description and description (Reference)





NO.	Description	Silk-screen	Remark
1	Red terminal	P+	Positive port
2	Black terminal	P-	Negative port
3	Switch	ON/OFF	
4	RS485 port	RS485	RS485 parallel communication interface
5	RS232 port	RS232	RS232 communication port
6	CANbus port	CANbus	CANbus and inverter connection port
7	RS485 port	RS485	RS485 and inverter connection port
8	Dry Cont cts		
9	Dial Switch	ADS	Set the address
10	Port Reset button	RST	For reset the batter
11	LED	RUN	Operation indicator
12	LED	ON/OFF	
13	LED	ALM	Alarm indicator
14	LED	CAP ACITY	
15	LCD	LCD screen	Capacity indicator
16	LCD Key	MENU ESC ENTER DOWN	
17	Wire	Ground wire	
18	Terminal Box		
19	Network cable port		communication

## 5.2 Battery pack accessories:

Part Name	Specifications	Drawings
power cord	250A /1.5m/plug	
Fixing frame	maximum load 150kg Matching screw	
Signal line of energy storage	Signal cable between the storage battery modules/1.5m	
Ground wire	Ground cable between the storage battery modules/1.5m	

Instructions for use:

1, Confirm the positive and negative polarity of the battery, and do not turn on the power supply when connecting the positive and negative electrodes to the load, so as to prevent the danger caused by a large number of electric sparks during the connection. It is normal to produce a slight electric spark in the process of connection, so turn on the power switch after turning it on.

2,

Note that the load uses power matching, beyond the use of power range forced use may damage the power supply, causing danger.

## 6 Storage and Transportation

### 6.1 Storage

6.1.1 The Li-ion battery pack should be stored in a cool, dry and well-ventilated area, and should be far from the fire and the high temperature.

6.1.2 The battery should store in the product specification book stipulation temperature range, the best storage temperature is  $25\pm 5^{\circ}\text{C}$ . The best humidity is  $60\pm 15\%$ .



6.1.3 The battery should be stored within room temperature, and charged to 40%~60% electric quantity. In order to avoid over-discharge, we suggest charge and discharge the batteries every three months, then charge to 40%~60%electric quantity .

## 6.2 Transportation

6.2.1 Don't put the battery product mix with other goods.

6.2.2 Do not immerse the battery products in water or allow it to get wet.

6.2.3 Do not over 1 layers staking and upside-down.

6.2.4 The highest temperature in transportation is lower than 65°C .

## 7 Warning

7.1. In order to ensure the safe, battery should be installed safety device, in static than manufacturing request when electrostatic when do not use, otherwise, safety device would failure, battery overheat, rupture, explosion and fire.

7.2 In the normal use of the following conditions, otherwise they will overheat and catch fire, performance and shorten the life.

Ambient condition: (temperature)

charging: 0~+45°C

discharging: -20~+60°C

7.3 If the battery leaks, electrolytes stick to the skin or clothing, wash off with water or fluid washing clothes or skin corrosion will die.

7.4 In order to not install error or loss of the battery, please carefully read the operating instructions, and follow the instructions for installation and removal (from device).

7.5 If the battery is not used, please take the battery out and placed in a dry place or electrical appliances will be corrosion of battery performance and reduce life.

7.6 If it is polluted battery terminal, please before you use it with a dry cloth to wipe clean, otherwise will result in poor contact with the device, power shortage or charge failure.

## 8 Warranty period

Warranty period of this product is 10 years from manufacturing code. The company is responsible for replacing the battery if it is proved that the defects of the battery are caused by the manufacturing process of our company, but not by the abuse or misuse of the customers.

### 8.1 Product responsibility

You must strictly adhere to our specifications and documentation comment later, due to the misuse of batteries can cause the battery to overheat, fire or explosion. For the specification for any accidental, I Secretary does not bear any responsibility.

If the specification, raw materials, production processes or production control system is changed, the change of information will vary depending on the quality and reliability data to inform consumers in writing.



# Superposed LifePO4 Battery

JSDSOLAR LiFePO4 Battery Solar Energy

Storage is new environmentally friendly backup power system focus on short-time and high-rate discharge scenarios. The environmentally friendly lithium ion battery configured with high-performance BMS, has a wide range of performance and application advantages compared with conventional battery. And the leader chemical technology, BMS technology and system design capabilities will bring excellent performance and reliability, and also provide the best solutions for industrial applications.



Safe & Reliable



Plug & Play



Fast Charging



Outdoor / Indoor



Long Lifespan



Flexible Installation

## Product Details

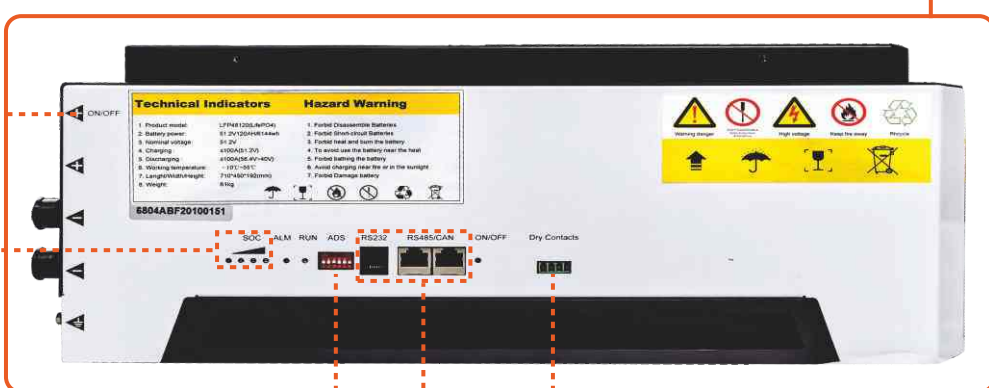
### Key Features

1. Advanced BMS protection functionality
2. Overcharge/overdischarge protection
3. Short circuit protection
4. One-key switch safe and efficient
5. Support customization
6. Match all inverter brands



Power Switch

Battery levels



Encoder

Dry contacts

Communication ports

## Display

The superposed battery is designed to make you install so easily even everyone can do, what's more can ensure safety and reliable



Overall



Back



Left



Right



Parallel Wire



Wire Connection 1



Wire Connection 2



Overall

### Technical Data

Specification	Description	Description
Mode	ESS-48V100AH	ESS-48V120AH
Total Energy	5000WH	6000WH
Battery Type	LiFePO4	
Normal Voltage	51.2V	
Normal Capacity	100Ah	120Ah
Max charge/Discharge Current	100A	
Cycle life	>6000 cycle	
Communication Interface	CAN/RS232/RS485	
Item Dimension	710*450*192mm	710*450*192mm
Package Dimension	770*510*250mm	770*510*250mm
Item Weight	52kg	62kg
Gross weight	54kg	64kg
IP Grade	IP21&IP65	
Operating temperature	-10~60°C	
Inverter	Match all hybrid and off grid inverter brands	
Installation	Floor	
Warranty	5 years	
Certification	CE ,RoHS,UN38.3, MSDS ,ISO	



SHENZHEN JINSDON LIGHTING TECHNOLOGY CO.,LTD

Add: No68, Baigongao Industrial Area, Fucheng Street, Longhua District, Shenzhen, 518110, China  
Tel: +86-755-89918655, Fax: +86-755-89918655,

Email:sales@jinsdonsolar.com  
Web:www.jinsdonsolar.com



# Lithium Batteries

# Power Wall 5KWH LiFePO4 Battery



- ✓ EVE A Grade battery cell
- ✓ High energy density 3.2V 100AH battery cell
- ✓ Display Screen and button to show battery status
- ✓ Parallel connection to expand battery capacity from 5KWH to 75KWH
- ✓ Long life cycle time >6000 cycles
- ✓ Active dual-core BMS to make charge and discharge more balance
- ✓ Rated Charge-Discharge Current : 50A
- ✓ Maxi Charge-Discharge Current : 100A
- ✓ Certification: CE, UM38.3, MSD

# Standing 10KWH LiFePO4 Battery

---



- ✓ EVE A Grade battery cell
- ✓ High energy density 3.2V 100AH battery cell
- ✓ Display Screen and button to show battery status
- ✓ Parallel connection to expand battery capacity from 10KWH to 150KWH
- ✓ Long life cycle time >6000 cycles
- ✓ Active dual-core BMS to make charge and discharge more balance
- ✓ Rated Charge-Discharge Current : 100A
- ✓ Maxi Charge-Discharge Current : 200A
- ✓ Certification: CE, FCC, UN38.3, MSD

# High Voltage Commercial LiFePO4 Battery



- ✓ Superpose design to save a lot installation space
- ✓ Touch Screen to set battery
- ✓ 60KWH or 90KWH one set
- ✓ Suitable for 60KWH to 360KWH back up power bank
- ✓ Compatible 50KW to 150KW solar inverter
- ✓ Adopted 320V to 460V high voltage tech to reach high efficiency
- ✓ Active dual-core BMS to make charge and discharge more balance.
- ✓ Certification: CE, UM38.3, MSD