

# SUNRICH

E N E R G Y



## LiFePO<sub>4</sub> Battery User Manual

Model: SE-B200

Thank you very much for choosing SUNRICH ENERGY lithium iron battery!  
In order to help you use, store and maintain the lithium battery of our company,  
please read and understand this user manual carefully before use.





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# BASIC INTRODUCTION

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## BATTERY SPECIFICATION

Model	SE-B200
Project Specifications	Standard Parameters
Nominal Voltage (V)	12.8
Nominal Capacity (Ah)	200
Nominal Energy (Wh)	2560
Charging Mode	CC/CV (Lithium Iron Battery Specialized Charger)
Charging Voltage (V)	14.4
Maximum Charging Current (A)	100
Maximum Discharge Current (A)	100
Overall Dimensions (Inch)	20.9 x 8.1 x 8.5
Recommended Discharge Cut Off Voltage (V)	11.2

### Environmental Conditions:

- (1) Charging temperature range: 32°F~131°F
- (2) Discharge temperature range: -4°F~140°F
- (3) Recommended storage temperature: 50°F~95°F
- (4) Relative humidity: 5%-90%

# CHARGE

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- (1) The battery pack must be charged with a specialized charger for lithium battery. When charging the battery, make sure that the power supply voltage is consistent with the input voltage of the charger, and the output voltage of the charger is consistent with the battery' s charging voltage. Unqualified chargers will lead to battery failure or short life.
- (2) When charging the battery, connect the charger output end to the battery charging port first, and then insert the charger into the socket. Do not connect and disconnect continuously.
- (3) The charging position shall be well ventilated. Do not charge in high temperature environment, and keep away from inflammable and explosive gases or objects. The charger and battery shall be placed on a stable, level surface.
- (4) It is normal that the surface of the battery box is slightly heated during charging. If it is found that the surface temperature of the battery box is too high, the power must be cut off immediately and the battery pack sent to the designated after sales service station for assessment.
- (5) Once fully charged, disconnect the charger from the battery.
- (6) When the battery leaves the factory, the SOC is between 40% - 60%, the battery must be fully charged before use.
- (7) It is strictly forbidden to directly contact any positive or negative terminals, or short-circuit any battery positive and negative terminals, which could result in injury or damage to equipment
- (8) The maximum charging time shall not be more than 12 hours (the specific charging time depends on the use of the battery), and the battery shall not be charged continuously.

# OPERATION

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- (1) The battery should only be used for the intended purpose, not for other purposes.
- (2) The battery shall be firmly installed on the electric vehicle or other electric equipment, so as to avoid damage due to movement during the operation of the equipment.
- (3) Do not expose the battery to moisture ( e.g. rain ) to prevent moisture from penetrating into the battery and affecting the service life of the battery pack.
- (4) Do not immerse the battery in water.
- (5) The performance of the battery will be affected by the ambient temperature. Operation at temperatures outside of the rated operating temperature will decrease battery pack performance.
- (6) The battery shall be placed in an area free from direct sunlight or other radiation sources, and the minimum distance from any heat source (fire source, heating, equipment, etc.) shall not be less than 2m.
- (7) The built-in battery management system could be damaged by static electricity. Please make sure to protect the battery pack against static discharge.
- (8) If abnormal phenomena such as a peculiar smell occurs during operation, discontinue use and return to the after sales outlet immediately for assessment.
- (9) This device should only be used or installed by qualified personnel. Keep out of reach of children.

## **SERIES OR PARALLEL CONNECTION**

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(1) The battery supports a maximum of four batteries connected in series or four batteries connected in parallel. When multiple battery packs are used in parallel, ensure that the voltage difference between the packs before parallel connection is as small as possible.

(2) When multiple battery packs are used in parallel, the total charging surge current of the charger may be applied to a single battery pack. It should be ensured that the total charging surge current of the charger does not exceed the maximum charging surge current of a single battery.

(3) When connecting battery with cables, make sure not to reverse the polarity of the connections. If it is indeed connected incorrectly, the BMS may be damaged. It needs to be retested and qualified before use.

(4) Series or parallel notes: the parallel battery harness should be equal in length and specifications, and the bus should have sufficient current carrying capacity.

## **DANGER WARNING**

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- (1) Do not disassemble the battery!**
- (2) Do not short circuit the battery!**
- (3) Do not use battery in water or in liquid!**

## **PRECAUTIONS FOR HANDLING ABNORMAL PROBLEMS**

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(1) This product should be repaired by professional personnel. If you open the battery shell by yourself, the warranty service will be terminated.

(2) If the battery is seriously impacted, compressed, dropped or heated, it must not be used and must be sent to the product agent or after-sales service office of the company in time for maintenance.

# TRANSPORTATION AND STORAGE

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## Transportation:

- (1) Battery transportation temperature: 20 ~ 30 °C.
- (2) Batteries shall be packed in boxes for transportation, and vehicles such as cars, trains and cabins can be used.
- (3) During transportation, the battery shall not be subject to severe vibration, impact, exposure to moisture, inversion and heavy pressures.
- (4) The battery shall be handled with care during loading and unloading. Throwing, rolling, compressing and dropping of battery are strictly prohibited.

## Storage:

- (1) When the battery is not used for a long time (more than 3 months), please remove it from the device, charge the battery to the semi saturated state, and then store it in a cool and dry room, and charge every three months.
- (2) If you want to store it for a long time (more than 3 months), store it in an environment where the temperature ranges from -10°C to 35°C @ 85% RH Max and does not contain corrosive gases. Charge and discharge it every 3 months and keep the SOC between 40-50%.
- (3) It is strictly prohibited to store the battery at a low state of charge.
- (4) The battery shall be stored in a dry and well ventilated place to avoid contact with corrosive substances, keep away from fire and heat sources, and disconnect the charger from the battery.



# TYPICAL FAULTS AND TROUBLESHOOTING

Fault Phenomenon	Reason	Processing method
Unable to charge normally	<ul style="list-style-type: none"> <li>- Charger not plugged in</li> <li>- Charger faulty</li> <li>- The terminal is dirty or the terminal is not properly fastened</li> <li>- BMS is in protection mode</li> <li>- Battery circuit fault</li> </ul>	<ul style="list-style-type: none"> <li>- Check charger connector</li> <li>- Replace charger</li> <li>- Clean the terminals and tighten the screws</li> <li>- Disconnect the battery for 30 seconds and reconnect</li> <li>- Please contact the nearest dealer for repair</li> </ul>
Abnormal discharge	<ul style="list-style-type: none"> <li>- Polarity error</li> <li>- The battery SOC is too low</li> <li>- Battery circuit fault</li> </ul>	<ul style="list-style-type: none"> <li>- Check polarity</li> <li>- Fully charge the battery before use</li> <li>- Please contact the nearest dealer for repair</li> </ul>
Abnormal discharge stop	<ul style="list-style-type: none"> <li>- Operation temperature too high, trigger over temperature protection</li> <li>- Excessive discharge current, triggers over current protection</li> <li>- External short circuit of battery, triggering short circuit protection</li> </ul>	<ul style="list-style-type: none"> <li>- Disconnect the load and allow the battery to rest for half an hour at room temperature</li> <li>- Reduce discharge current</li> <li>Turn off the device, disconnect the battery,</li> <li>- remove the short circuit and then reconnect</li> </ul>

## **MAINTENANCE**

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(1) According to the relevant laws and regulations of the state, the company carries out warranty for the products normally sold.

(2) When your battery needs to be repaired, please bring the purchase battery invoice and this warranty card to our company or the dealer's designated after-sales service station for repair.

(3) Failure caused by unauthorized disassembly and assembly, unauthorized maintenance and use not in accordance with the instructions is not covered by the warranty.

(4) Faults and losses caused by charging, use, maintenance, storage or transport not in accordance with the requirements of this manual are not within the scope of warranty and liability.

## **AFTER-SALE SERVICE**

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Customer Service: 1-800-850-9978

Order Support: [sales@sunrichenergy.com](mailto:sales@sunrichenergy.com)

Tech Support: [info@sunrichenergy.com](mailto:info@sunrichenergy.com)

Address(Office & Warehouse): 4648 Troy Ct, Riverside, CA 92509

Website: [www.sunrichenergy.com](http://www.sunrichenergy.com)

## OTHER MATTERS

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- (1) To ensure safe operation and proper function, please read this manual in detail before using the battery.
- (2) Please keep this manual for future reference.
- (3) The company will not bear any legal liability for direct and indirect losses caused by improper use.
- (4) If there is any discrepancy between the supplied product and the instruction manual due to the continuous development of the product, the supplied product will be referred to.
- (5) The company reserves the right to interpret the specification.
- (6) The company reserves the right to modify this manual without prior notice.



SUNRICH ENERGY

Making solar power accessible and  
affordable across America.