

SOL LFP Battery User Manual

A world-class manufacturer of lithium-ion power batteries and energy storage systems. Focus on promoting sustainable environmental protection development commitments, and make active efforts and contributions to achieve carbon neutrality.

Thank you for purchasing our product. Please read this manual carefully before using it, and operate it strictly in accordance with the product manual. After reading it, please keep it in a safe place for future reference.

The copyright belongs to SOL. If there is any infringement, please contact us immediately and we will deal with it in time.



Warning

I About operation



Before using the product, please read the product specification, instruction manual and precautions carefully to understand the use method and application scope of the product.



If the product is used incorrectly, the circuit is connected incorrectly, the input power or the load function parameters do not match the performance parameters marked in the product specification, etc., these phenomena are improper use. The company does not assume any responsibility for damage to the product, load and surrounding connections due to improper use.



Batteries cannot be used outdoors in rainy and snowy weather. During daily use, keep it away from heat and high voltage, and prevent children from playing with the battery, and do not hit the battery.



Do not short-circuit the positive and negative poles of the battery, do not disassemble the battery by yourself, and do not leave the battery in a damp place to avoid danger.



Discarded batteries should be handled safely and properly, do not put into fire or water.



The battery pack should be stored at ambient temperature (ambient temperature: charge 0 to 45 °C, discharge -20 to 60 °C). and should be charged to a capacity of 40%~60%. Working and storage humidity: <90% RH. To prevent the battery from being over-discharged, a full charge must be performed once the storage time exceeds 2 months.



The battery pack should be used under specified conditions, and battery performance over one year of storage is not guaranteed.



The battery must meet relevant regulations during transportation, such as packaging, documentation, and labeling requirements.

S0L series Battery Series & Parallel Guidance

1. Batteries cannot be used in mixed batches, only the same batch can be used in series or parallel
2. Each battery must be fully charged before the batteries are connected in series or in parallel, and the voltage difference of the battery pack should be within 100mV
3. When the battery is under voltage, the BMS will perform shutdown protection. At this time, press the switch, The indicator light is on, but the battery has no output at this time; you can connect the battery to the inverter to charge or use the charger to charge and activate the battery , and the display switch can also wake up the battery.
4. During the battery charging process, the charging mode will change from CC to CV, and when the OLED display shows full power, the mode will automatically switch to CV mode. After the battery is fully charged, it will automatically enter the balance state. Do not remove the charger at this time and continue to charge the battery until the OLED display voltage is 14.6V (12.8V battery)/29.2V (25.6V battery)
5. The maximum current of the battery system used in series or parallel is 100A
6. When the batteries are used in series or in parallel, the DIP switches must be set correctly according to the user manual. Confirm all the power cables and communication cables are connected correctly, then the load can be connected. Finally, according to the order from the last slave battery to the master battery, turn on the battery in turn, please be sure to start the master battery at last (the power cables should be as thick as possible and has good conductivity, the contact surface of the connection is large, and there is no looseness, etc.)
7. When the batteries are used in series or in parallel, the battery which connected to the positive pole of the load is used as the master battery, other batteries are slaves, and the negative pole of the last slave is connected to the negative pole of the load.
8. Do not press the button to turn off any battery or change the DIP switch during use, If you want to change the mode, please turn off all the batteries in turn according to the power-on sequence, and finally disconnect the load. Then you can reset the mode according to the user manual.

PCS Recommended charging and discharging protection threshold parameters:

12V system PCS recommended charging voltage for series connection is $3.6V \times 4 = 14.4V$, discharge cut-off protection voltage is $2.9 \times 4 = 11.6V$
24V PCS recommended charging voltage for series connection is $3.6V \times 8 = 28.8V$, discharge cut-off protection voltage is $2.9 \times 8 = 23.2V$
48V PCS recommended charging voltage for series connection is $3.6V \times 16 = 57.6V$, discharge cut-off protection voltage is $2.9 \times 16 = 46.4V$

product Series parameter table

Single battery rated voltage/V	12.8V	25.6V
Rated capacity of a single battery/Ah	100Ah	100Ah
Single battery standard charging current/A	50A	50A
Maximum discharge current of a single battery/A	100A	100A
Maximum discharge power of a single battery/W	1300W	2600W
The maximum number of serial connections in the system/PCS	4	2
Series system maximum voltage/V	51.2V	51.2V

when using the Battery, you need to connect the communication cable (485) and adjust the DIP switch (DIP)

Description and operation process of Active Balancing mode:

1. The premise of using the Active Balancing mode: the voltage difference between each battery in the system before series or parallel $\geq 0.3V$
 2. Cut-off condition of Active Balancing mode: the voltage difference between each battery in the system is less than $0.1V$
 3. Connect the batteries in parallel according to the parallel mode, no need to connect the inverter, ensure that the parallel cable, communication cable, and DIP settings are all correct, for all connected battery, turn DIP switches 2, 3, and 4 upward; 1, 5 down.
- In the order from the last slave battery to the master battery, turn on the batteries and enter the Active Balancing mode.

↓↑↑↑↓



1 2 3 4 5

Active
Balancing

Instructions and operating procedures for single battery use mode:

When the battery leaves the factory, it will be configured as a single battery by default, and the setting mode is the dial 1234 up and 5 down.

If you need to use single battery only, please make sure that the dial setting is correct before use, otherwise it will not turn on.

↑↑↑↑↓



1 2 3 4 5

single battery

↑↑↑↑↓



1 2 3 4 5

Default config

Series or Parallel battery use mode:

Please refer to the instructions for the 1234 dial position of the DIP switch.

Parallel dialing

BatteryQty	2pcs	3pcs	4pcs
Master			
S1			
S2			
S3			

Series dialing

BatteryQty	2pcs	3pcs	4pcs
Master			
S1			
S2			
S3			

battery indicator operating status description

The green indicator light is solid on	The battery is working normally
The red indicator light flashes	The battery is faulty and the corresponding fault code is displayed on the screen
The indicator light off	The battery is off and not working

Tips:

1. The user can query the fault solution according to the fault code displayed on the screen;
2. If there is a fault code outside the table, please contact the dealer or after-sales to solve it;
3. The fault code shown may change due to the different battery version, and it is not compatible with the previous version. The problem can be solved through the dealer or after-sales service. with the previous version. The problem can be solved through the dealer or after-sales service.