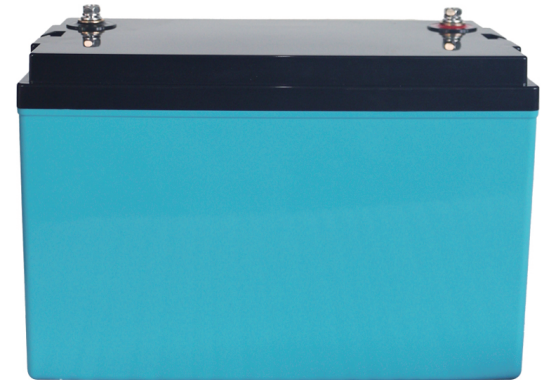


# User's Manual

For 12.8V/100Ah Lithium Battery

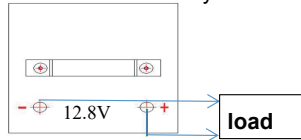


## Instruction manual for 12.8V lithium battery

### Battery usage

#### 1、Use as follows;

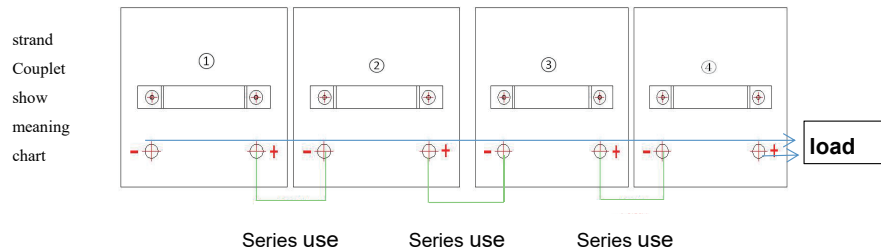
##### 1.1、Single battery use (The voltage level is 12.8V)



##### 1.2 The battery pack is used in series (the voltage level is 51.2v, 4 sets in series is maximum)

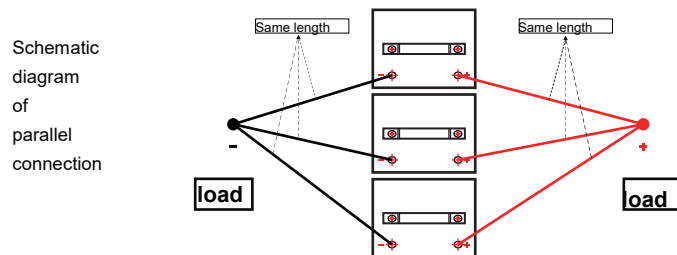
##### 1.2.1、Requirements for series use of battery pack: it must be the same model product ,

① # ② # ③ # ④ # voltage must be in low voltage state to realize series connection;



Note: up to 4 groups of batteries can be connected in series. In the low-voltage state, it is necessary to empty all the power in each group of batteries before connecting in series.

##### 1.3. The battery pack is used in parallel



1.3.1. Requirements for parallel operation of battery packs: they must be products of the same model, and the voltage of each group must be in the same state, and the voltage difference must be less than 0.5V to realize parallel operation;

(3) It should be upward and labeled upward. Do not put it upside down or put it at will;

(4) The battery must be handled with care during transportation, loading and unloading, and do not collide at will;

(5) Do not press heavy objects on the battery for transportation to avoid battery damage caused by extrusion;

(6) Do not transport with inflammable, explosive and sharp metal objects;

(7) There shall be moisture-proof, waterproof and fireproof labels on the packaging to avoid danger due to transportation.

### Appendix: Switching power supply system lithium iron battery parameter setting

NO	Parameter type	12.8 V battery system
1	float charge voltage	13.6 V (Can be setted)
2	Bulk charge voltage	14.4 V (Can be setted)
3	battery capacity	Set according to the actual capacity of the installed battery
4	Charging	Typical 0.20C ; Maximum 1C (Can be setted)
5	EOD(end of discharge)	10.8 V

### 3. Battery maintenance

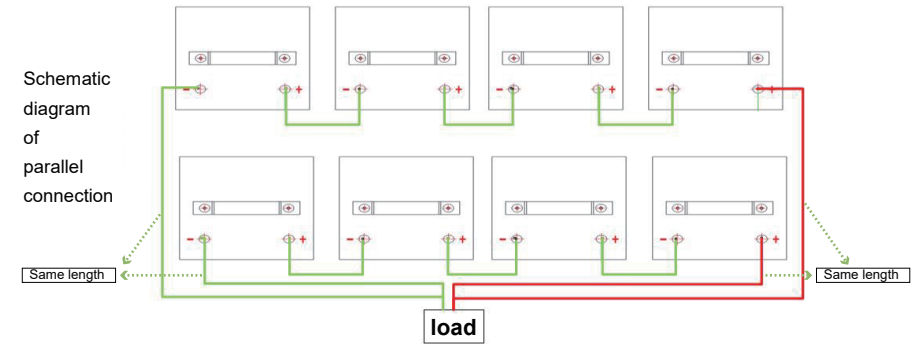
- (1) For the first time, the battery can reach the maximum capacity after 3-5 times of use;
- (2) The battery should be used in a ventilated and dry environment to avoid approaching the fire source;
- (3) The optimum working ambient temperature of the battery is  $15^{\circ}\text{C} \sim 35^{\circ}\text{C}$ , which will affect the normal operation of the battery;
- (4) Do not short circuit the positive and negative ends of the battery to avoid danger;
- (5) Do not use organic solvent to clean the battery shell; In case of accidents, use carbon dioxide fire extinguishers and fire extinguishers such as carbon tetrachloride and sand;
- (6) If the battery fails, please send it to the authorized Office of the manufacturer or relevant institutions for proper treatment. Please do not discard it at will to avoid danger.

### 4. Precautions during transportation

- (1) The battery is suitable for automobile, train, aircraft and other transportation modes, and the sun, rain and violent vibration shall be avoided during transportation;
- (2) The battery must be made of insulating and shockproof materials and marked with fragile words to avoid battery damage caused by bumps on the way;

Note: the number of parallel connection is not limited. The more parallel connection, the higher consistency requirements. It is recommended that the number of parallel connection not exceed 4 batteries

#### 1.4. Battery series and parallel use



1.4.1. Requirements for series and parallel operation of battery pack: it must be the same model product. The voltage of each group must be in the low voltage state. The voltage of each group must be in the same state, and the voltage difference must be less than 0.5V

Note: up to 4 groups of batteries can be connected in series without limiting the number of parallel connection. The more parallel connection, the higher consistency requirements. It is recommended that the number of parallel connection should not exceed 4 groups of batteries. Pay attention to parallel outgoing lines, and do not connect the outgoing lines from one battery lug

## II Precautions for use of lithium battery

In order to prevent leakage, heating, fire, explosion, performance degradation and other accidents of lithium battery, please use the battery normally according to the following specifications. The company is not responsible for accidents caused by failure to operate in accordance with the regulations.

(1) Handle with care and try to avoid violent vibration;

(2) Do not immerse the battery in water or other liquids, and pay attention to moisture protection;

(3) Short circuit between positive and negative terminals of the battery shall be avoided;

(4) Please charge according to the charging ambient temperature of 1 °C ~ 50 °C, and charge according to the charging current less than the requirements of the specification;

(5) Please discharge according to the discharge ambient temperature of - 10 °C ~ 55 °C, and discharge according to the discharge current less than the requirements of the specification;

(6) It is forbidden to disassemble the battery, which may cause internal short circuit and cause internal material decomposition, fire, explosion, etc. In addition, dismantling the battery may cause leakage of battery electrolyte, and the electrolyte in the battery will cause damage to human body; If electrolyte splashes on the skin, eyes or other parts of the body, please wash it with clean water immediately and go to the hospital for treatment immediately;

(7) Do not use fire to dispose of waste batteries, otherwise explosion and other dangerous accidents will occur;

(8) In case of battery damage, battery deformation, electrolyte leakage or smell of electrolyte and other abnormal phenomena, do not use the battery again, and send it to the authorized Office of the manufacturer or relevant institutions for proper treatment. In addition, the battery with electrolyte leakage shall be far away from the fire source to avoid explosion;

(9) Users are not allowed to disassemble the battery without permission, otherwise, our company will not be responsible.

## 2. Storage

Battery storage ambient temperature Clean, dry and ventilated rooms with 5 °C ~ 25 °C and relative humidity less than 75% shall avoid contact with corrosive liquids and away from fire and heat sources; The battery maintains about 50% ~ 60% power state; In order to prevent over discharge of the battery, the battery is charged once every 15 days during storage for about 2-3 hours.