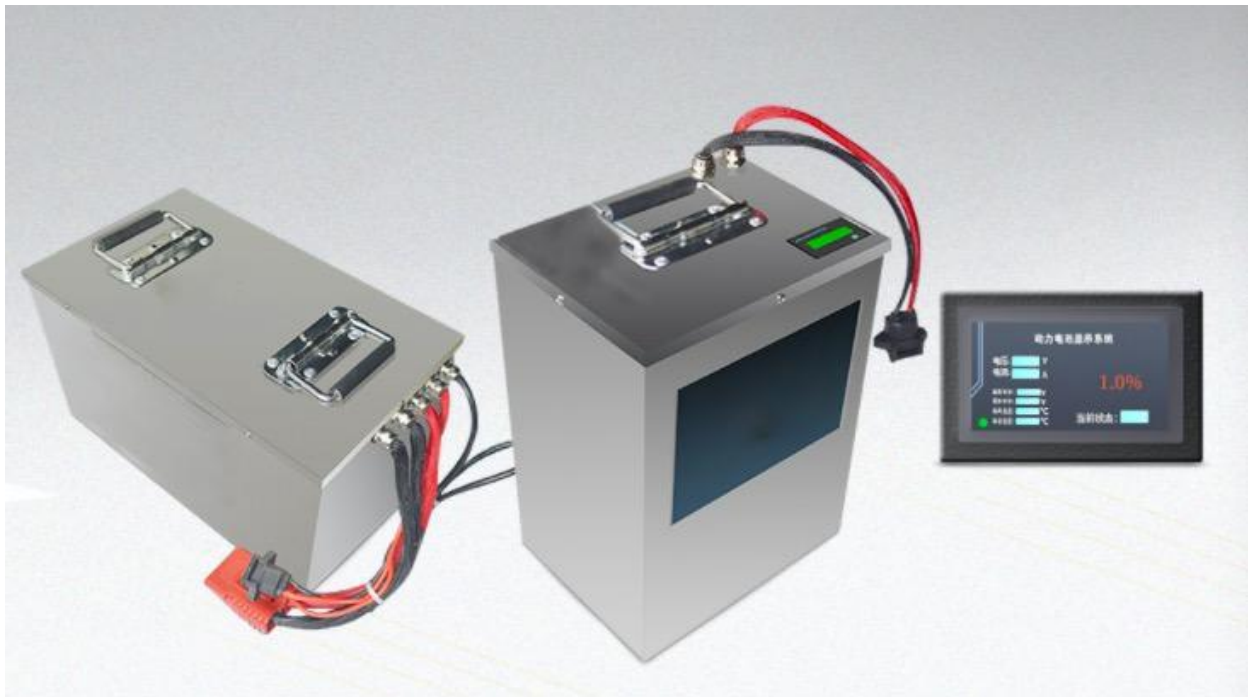


SYL-Instructions for the installation and use of lithium batteries



一、Product Specifications

Lithium battery varieties: ☐lithium iron phosphate ☐ternary lithium ☐other

Nominal voltage: ☐12V ☐24V ☐36V ☐48V ☐60V ☐64V☐72V ☐84V

☐96V ☐120V ☐144V ☐port custom V

Nominal capacity: ☐12AH ☐18 AH ☐20 AH ☐22AH ☐25 AH ☐30AH ☐32AH ☐

☐35AH ☐40AH ☐45AH ☐50AH ☐55AH ☐60AH ☐65AH ☐70AH ☐75AH ☐80AH

☐85AH ☐90 AH ☐100AH ☐110AH ☐120AH

☐150AH ☐180AH ☐200AH ☐250AH ☐300AH ☐port custom AH

Charger specifications: ☐3A ☐5A ☐6A ☐10A ☐15A ☐20A ☐25A ☐ A

Charging time: ☐2-4h ☐4-6h ☐6-8h ☐8-10h ☐10-12h

Protection board specifications: ☐25A ☐30A ☐40A ☐50A ☐80A ☐120A ☐

☐150A ☐200A ☐300A ☐not limited

Suitable power: **Do not use it in excess power, otherwise, the protection board may burn out, which is not covered by the warranty.**

Two-wheeled vehicle: ☐ Under 500w ☐Under1000w ☐Under1500w ☐ Under 2000w ☐

☐ Under 3000w ☐ Under 5000w ☐ Under 8000w

Tricycle: ☐ Under 500w ☐ Under1000w ☐ Under1200w ☐ Under 1500w ☐ Under 2000w

Note that the greater the weight of the three-wheeled vehicle, the greater the current, and pulling the heavy goods will increase the current carrying capacity of the protection board.

Four-wheeled vehicle: ☐ Under 1000w ☐ Under1800w ☐ Under 3000w ☐ Under 4000w

☐ Under 5000w ☐ Under 7500w

Remarks for other uses: Support A continuous current discharge

二、Voltage technical parameterreference

The built-in protection plate of the lithium battery automatically powers off at low voltage, shuts down the output, and there is no sign before the power is off. Power is cut off. To avoid carts, it is recommended to turn around at the door after receiving the full charge. Observe the battery characteristics. Take precautions against voltage, etc.

After the ternary lithium battery is fully charged, the voltage drop is relatively stable. Observe the power-off voltage and charge it in advance. As the voltage decreases, the speed will gradually decrease, and the characteristics are similar to lead acid. The following voltage is only used as a reference value, not as a standard voltage. Each car is different. There will be some differences. The voltage tested by yourself will prevail. Generally, the greater the current of the car, the higher the power-off voltage.

No.	Battery voltage (V)	Full voltage (V)	Power-off voltage (V)	Early charging voltage (V)
1	12V	12.6V	8V-9V	>9V
2	24V	29V	20V-21V	>21V
3	36V	41V-42V	28V-30V	>30V
4	48V	58V	40V-42V	>42V
5	60V	70V-71V	49V-51V	>52V
6	64V	74V-75V	53V-55V	>56V
7	72V	83V-84V	58V-60V	>62V

After the lithium iron phosphate battery is fully charged, there will be 2-3V virtual power. When the charger is fully charged and the charger is unplugged, the virtual power will gradually decrease until it is stable. When the battery is empty, it will automatically power off. And the

power-off voltage is higher than that of the normal lead-acid battery, and it can be restored after charging, which is normal. Before the power is cut off, the speed is basically not reduced, which will cause the illusion of sufficient power. The following voltages are only used as reference values and not as standard voltages. There will be certain differences depending on the car. The voltage tested by yourself shall prevail.

No.	Battery voltage(V)	Full voltage (V)	Power-off voltage (V)	Early charging voltage (V)
1	12V	13.2V-13.8V	11V-12V	> 12V
2	24V	26V-28.5V	22V-24V	> 24V
3	36V	41V-42V	33V-36V	> 36V
4	48V	53V-55V	45V-48V	> 48V
5	60V	67V-69V	56V-60V	> 60V
6	64V	70V-72V	60V-64V	> 64V
7	72V	82V-85V	68V-72V	> 72V

三 、 matters needing attention

Precautions for using the battery pack (please observe the following during use):

1. Generally, the battery cannot be delivered at full power, so after receiving the product, please fully charge it before using it. Please keep away from flammable and explosive materials when charging.
2. Before installation, please confirm whether the positive and negative poles of the battery are the same as the positive and negative poles of the charging port of the car to avoid short circuit. Damage caused by a short circuit is not covered by the free warranty.
3. Please use the equipped charger to charge, it is strictly forbidden to use other specifications of the charger, and it is strictly forbidden to use roadside fast charge and range extender generator. The problem caused by wrong charging cannot be guaranteed for free.

4. Lithium batteries cannot be used in series and parallel connection with other models, voltages, varieties, and capacities. If you need dual power, please switch.
5. Please do waterproof. Although the lithium battery is added with a shell, it cannot be fully waterproof. The built-in protection board will damage the circuit board. If your battery compartment may get water, please try to avoid water in the battery. The water supply cannot be guaranteed free of charge.
6. Please be shock-proof. It is strictly forbidden for the battery to sway in the battery compartment. The impact may easily damage the battery.
7. The battery can be placed freely without direction requirements, the position of the protection plate cannot be downward, and it is strictly prohibited to press the battery or the protection plate.
8. Please keep 50-70% power storage for a long period of time. It is strictly forbidden to run out of batteries. After-sales problems caused by the loss of electricity cannot be guaranteed free of charge.
9. It is strictly prohibited to put the battery in a closed high temperature and humid environment, and it is strictly forbidden to expose to the sun. If you do not use it for a long time, please place it in a dry and cool environment without using half electricity.
10. There is no strict requirement for charging, and it can be used whenever you want. In order to avoid the use of the cart, you can charge it in time.
11. Please avoid children's contact with the battery pack, and avoid metallic objects on the plug end to prevent external objects from short-circuiting.

四、 Note for using the charger

1. Avoid strong vibrations to avoid loose and damaged internal parts, it is best not to carry with the car.
2. Dry and ventilated, avoid covering the fan outlet to avoid damage caused by poor ventilation.
3. Connect the city power first and then the battery. Make sure that the positive and negative wiring is correct, and keep away from flammable and explosive materials when charging to avoid children.
4. After being fully charged, please unplug the charger and mains socket in time.

5. After the charger is connected to the mains, the indicator light is red, and it is green when it is full. After the charging is completed, the individual batteries will show traffic lights to switch back and forth. This is the normalization of the new batteries. It is normal and can be unplugged after 2 hours.

同口安装图



分口安装图



How to care for the battery

1. After the lithium iron battery is fully charged each time, try to charge it for an additional hour.

The battery management system has an automatic balancing function. Can make the battery fully balanced. For the safety of the ternary lithium battery, unplug the charger as soon as possible after fully charging. Can be used at any time to charge. Lithium batteries use only a full cycle of electricity to count a lifetime.

For example, 40 kilometers after a full charge, the first time to use 20 kilometers to full; the second time to use 20 kilometers to calculate a life.

2. Not used for a period of time (more than 1 month) requires at least 50%-70% power saving.

The battery needs to be recharged every 3 months during storage. Avoid running out of battery.

3. Please store it in a dry and cool place to reduce the speed of its own purification reaction.

Please do not put it in high temperature, airtight or humid environment to prevent it from getting wet. During storage, please avoid the positive and negative poles touching metal objects.

4. It is not allowed to disassemble and modify, and it is not allowed to modify the circuit without authorization. Avoid heavy pressure, impact and squeeze. Try to avoid water in the battery. Avoid high temperature exposure

五、Troubleshooting

Troubleshoot the battery pack:

No.	Malfunction	Reason	Measures
1	Can not be charged	Whether the patch panel is normal	Check if the plug-in board is powered on
		Whether the plug is loose	Check the plug and socket
		Is the fuse intact	Open black condom to check
		Whether the charger is damaged	Try the same V-number lead-acid charger
2	Can't	Whether the plug is	Check the plug and socket

	discharge	loose	
		Whether the controller is damaged	Try another car
3	Excessive path attenuation	Measure whether the charge is full	Check if the charger is damaged or not full
		Is it a car problem	Change the car to check if the power consumption of the controller increases
4	Reduced charging time	Is the charger normal	Charger replacement test
5	Power off repeatedly	Whether overcurrent or overheating	Check if the current is too large
		Whether the plug is loose	Check plug wiring, etc.

Troubleshoot the charger:

No.	Malfunction	Reason	Measures
1	Contact maintenance within one year	Charging indicator does not light	Check if power is on
		Does not turn green when the battery is fully charged	Check if it is full
		Extended charging time	Calculate the charging time is broken, contact return
		No-load output increase	Immediately stop charging and contact the manufacturer

六、After-sales service

1. The warranty period of the battery pack is 2 years, and the first year is free of charge. In the second year, the cost of maintenance materials shall be paid. Eliminate manual fees.
2. Under normal circumstances, quality problems within 2 years from the date of purchase. If the battery cannot be charged or discharged, the capacity in 2 years is less than 80% of the time of purchase (except for temperature), free warranty can be provided. The seller bears the freight for the warranty period of 3 months. In 3-6 months, both parties bear 50% freight. After 6 months, the buyer bears the freight.

The following conditions are not covered by the free warranty:

1. Used for super power (the discharge tube of the protection board is burnt out). Such as changing a more powerful car, pulling heavy goods, etc., exceeding the protection board current damage;
2. Water ingress, short circuit, power loss, reverse connection, impact, fall, shape change.
Caused by the fault;
3. Not used according to the requirements of the manual; unauthorized disassembly and modification of the circuit. Failures caused;
4. If the battery is damaged by disassembling it by yourself; use other types of chargers to charge the malfunction. Such as roadside fast charging, motor increaser, etc.; other non-battery, charger quality problems, etc. can not be guaranteed free of charge.