

电动冲浪板用铁锂电池组 HM1501 使用说明书

Instruction manual of iron lithium battery pack HM1501 for electric surfboard

1. 产品规格与结构

1. Product specification and structure

1.1 产品规格

1.1 Product specification

型号: HM1501

Model: HM1501

规格: 15S1P 48V 40Ah 磷酸铁锂电池组

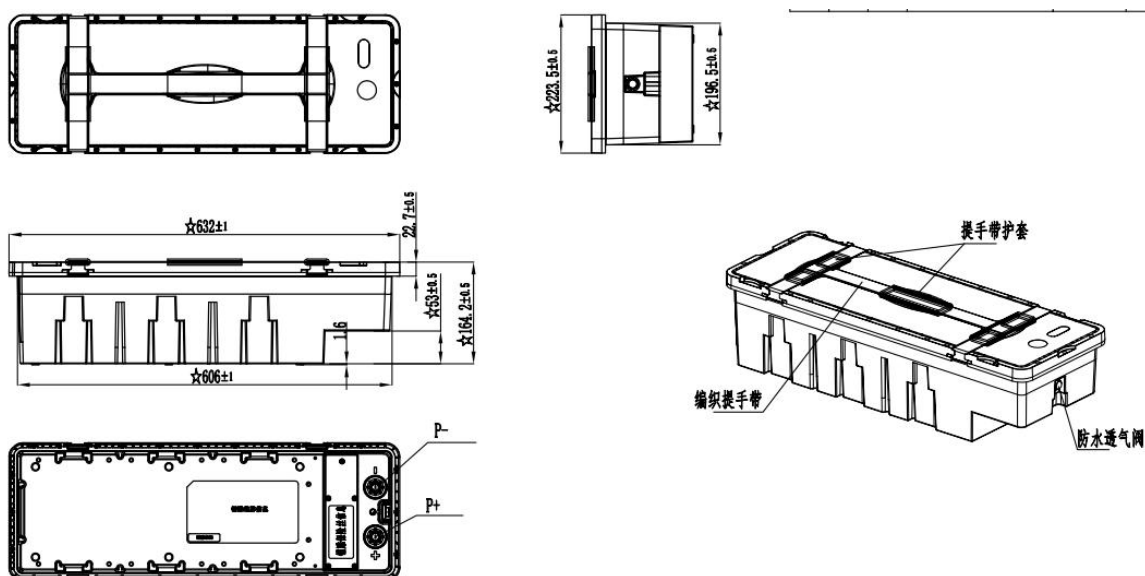
Specification: 15S1P 48V 40Ah Lithium iron phosphate battery pack

1.2 产品结构

1.2 Product structure

电池组外形图 (15S1P)

Outline drawing of battery pack (15S1P)



2 产品性能指标

2 Product performance index

2.1 产品技术参数

2.1 Product technical parameters

项目 Item	基本信息 Basic information	备注 Remarks
电芯型号 Cell model	LP27148134	Nominal 40Ah (Cmin/0.2C)
组合方式 Combination pattern	15 串 1 并 15cells in series connection and 1 cells in parallel connection	15 颗电芯 15 cells
尺寸 Dimension	632*223.5*164.2	
重量 Weight	23kg	

防水等级 Waterproof grade	IP68		
额定电压 Rated voltage	48V		
放电截止电压 Discharging	37.5V		
标称容量 Nominal capacity	40Ah		
标准循环寿命 Standard cycle life	≥2000 次		标准充放电循环 2000 次，放电容量 ≥80%初始容量。
自放电	剩余容量 ≥90%		该容量是指标准充电后，在 23°C±2° 环境下贮存 28 天，以 No.3 的条件下所测得的容量。
初始交流内阻 Initial AC internal resistance	≤15mΩ		标准充电后，在 AC 1KHz 条件下测量的交流阻抗(该处所标内阻为电池包内阻，单体芯内阻为 ≤0.5mΩ)
充电限制电压 Charging limited voltage	55V		
充电电流 charging current	30A		
最大充电电流 Maximum charging current	100A		
最大持续放电电流 Maximum discharging current	200A		
最大瞬间放电电流 Maximum transient discharging current	250A		持续时间 20 毫秒，瞬间
使用环境 Operating environments	充电温度范围 Charging temperature range	0°C~55°C	
	放电温度范围 Discharging temperature range	-20°C~+60°C	
存储环境 Storage environment	-45°C~+45°C	1 个月 1 month	*电池电压为 3.275V~3.304V，20%-40%SOC 状态下保存，若需长时间存放，每隔 90 天需对电池充放电一次
	-30°C~+45°C	3 个月 3 months	
	-20°C~+35°C	6 个月 12 months	

3. 产品使用方法

3. Product usage

3.1 电池充电

3.1 battery charging

3.1.1 电池使用后，应对其进行及时充电。本电池必须使用配套的专用充电器对电池进行充电。

3.1.1 After the battery is used, it shall be charged in time. The battery must be charged with a matching special charger.

3.1.2 充电时先将充电机先接上 220V 交流电源，待充电器自检完成进入待命状态下，将输出接口插入电池的充电接口中，充电器会自动与电池进行通讯握手，握手成功后进行充电状态对电池进行充电，充电 1~1.5 小时至充电机显示屏上显示充电完成即可使用。

3.1.2 When charging, first connect the charger with 220V AC power supply. When the charger enters the standby state after self inspection, insert the output interface into the charging interface of the battery. The charger will automatically shake hands with the battery. After the handshake is successful, charge the battery in the charging state. Charge the battery for 1-1.5 hours until the charger display shows that the charging is completed.

3.2 电池放电

3.2 battery discharge

3.2.1 电动冲浪板运行过程，也是放电的过程。用户使用时不得对电池过放电，过放电将对电池的寿命产生极大的危害。本产品过放电压不得小于 37.5V。

3.2.1 The operation process of electric surfboard is also the process of discharge. The user shall not over-discharge the battery when using it. Over-discharge will cause great harm to the service life of the battery. The over discharge voltage of this product shall not be less than 37.5V.

3.3 电池搁置、存贮与补充充电

3.3 battery shelving, storage and supplementary charging

3.3.1 电池贮存应该在阴凉干燥的环境中，最佳温度为-5℃~35℃。

3.3.1 The battery shall be stored in a cool and dry environment, and the optimal temperature is -5 °C~35 °C.

3.3.2 搁置或存放的电池至少 3 个月进行一次检查，进行一次补充电。

3.3.2 the batteries placed or stored shall be inspected at least once every 3 months and supplemented with electricity once.

3.3.3 电池应开路状态搁置，电池不用使用时需从电动冲浪板上取下来，以防止电池长时间处于放电状态而引起损坏。

3.3.3 the battery shall be placed in an open state. When the battery is not used, it shall be removed from the electric surfboard to prevent damage caused by the battery being discharged for a long time.

3.3.4 电池在装机使用前，尤其使用前应进行补充充电，充电方法同上。

3.3.4 The battery shall be recharged before installation and use, especially before use. The charging method is the same as above.

4 电池使用维护及注意事项

4 battery use, maintenance and precautions

- 切勿将电池储存在潮湿、高温的地方；

Do not store the battery in a humid and high-temperature place.

- 切勿将电池放置火中、以免引起爆炸；

Do not place the battery in the fire to avoid explosion.

- 切勿将电池端子短路或电池反充电；

Do not short circuit the battery terminal or reverse charge the battery.

- 切勿拆开或穿刺电池外壳；

Do not disassemble or puncture the battery case.

- 使用者手湿，切勿触摸电池端子，否则有电击风险；

The user's hands are wet, do not touch the battery terminals, otherwise there is a risk of electric shock.

- 不要挤压、撞击电池；

Do not squeeze or impact the battery.

- 存放电池或充电时，请勿超过规定温度限值（请参见型号参数表）；

When storing or charging the battery, do not exceed the specified temperature limit (see the model parameter table).

- 避免在阳光直射下充电；

Avoid charging in direct sunlight.

- 勿将电池随意拆卸或擅自改装；

Do not disassemble or refit the battery at will.

- 电池不使用时，应充足电后放在干燥阴凉处贮存，做好绝缘，防止重压和儿童接触，并每 3 个月进行一次完全充电；

When the battery is not in use, it should be stored in a dry and cool place after being fully charged, and well insulated to prevent heavy pressure and contact with children, and fully charged every 3 months.

- 请使用原配的专用充电器对电池进行充电。

Please use the original special charger to charge the battery.

- 请勿随意丢弃电池，具体请参见您所在地区关于电池回收和/或处置的法律、法规。

Please do not discard the battery at will. Please refer to the laws and regulations on battery recycling and / or disposal in your area for details.

5 质量保证

5 quality assurance

- 电池出厂后，其技术性能应符合云众动力公司企业标准的有关规定。

After the battery leaves the factory, its technical performance shall meet the relevant provisions of the enterprise standards of Edgelion power company.

- 开箱后如发现损坏，应查明后及时与经销商或制造商联系。

If any damage is found after unpacking, contact the dealer or manufacturer in time after finding out.

6 提示

6 Tips

6.1 通常而言，常温下充满电的电池，电芯每 28 天会衰减 $\leq 8\%$ 电量，电路板每 28 天耗电 $\leq 2\%$ 电量.所以不允许耗空的电池进行长时间存放，若电池电量完全耗尽将会对电池造成永久性损伤。

6.1 Generally speaking, for a fully charged battery at normal temperature, the battery cell will decay $\leq 8\%$ of the power every 28 days, and the circuit board will consume $\leq 2\%$ of the power every 28 days Therefore, it is not allowed to store the depleted battery for a long time. If the battery is completely exhausted, it will cause permanent damage to the battery.

6.2 电量在 20~40%的电池存储时应该每隔 30~60 天充一次电。每次使用后，请及时为电池充电，电池内部有智慧晶片记录电池的充放电情况，若出现过度充电或充电不足导致的电池损坏不在保修范围内。

6.2 When 20-40% of the battery is stored, it should be charged every 30-60 days. After each use, please charge the battery in time. There is an intelligent chip inside the battery to record the charge and discharge of the battery. If the battery is damaged due to overcharge or insufficient charge, it is not covered by the warranty.

6.3 请勿使用非原装充电器对电池进行充电，如果使用非原装充电器对电池充电造成的电池损坏不在保修范围内。

6.3 Do not use a non original charger to charge the battery. If you use a non original charger to charge the battery, the battery damage will not be covered by the warranty.

7 警告

7 warning

7.1 请不要试图拆卸电池。请勿触碰电池接点。请勿拆解或穿刺外壳。将电池接点远离金属物品以避免短路，否则有着火与电击风险。

7.1 Please do not attempt to remove the battery. Do not touch the battery contacts. Do not disassemble or puncture the housing. Keep the battery contact away from metal objects to avoid short circuit, otherwise there is a risk of fire and electric shock.

7.2 使用者不可自行维修本产品所含零件。如果电池已受损，或流出液体，请不要充电或使用电池。

7.2 Users are not allowed to repair the parts contained in this product by themselves. Do not charge or use the battery if the battery is damaged or liquid flows out.

8 FCC STATEMENT :

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

This device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

Warning:

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE:

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

RF warning statement:

This equipment complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment should be installed and operated with minimum distance 20cm between the radiator & your body.