

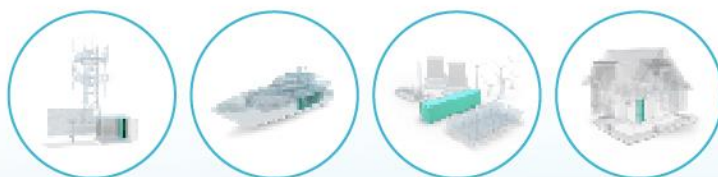
电池模组规格书

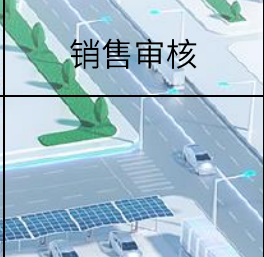
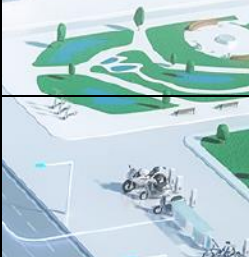
Product Specification

Battery Module

B131H201

版本 Version V2.0



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修订履历 Change history

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1	1.0	2024-04-01	首版发行 First release	/
2	2.0	2025-10-13	产品公差更新 Update product tolerance	/

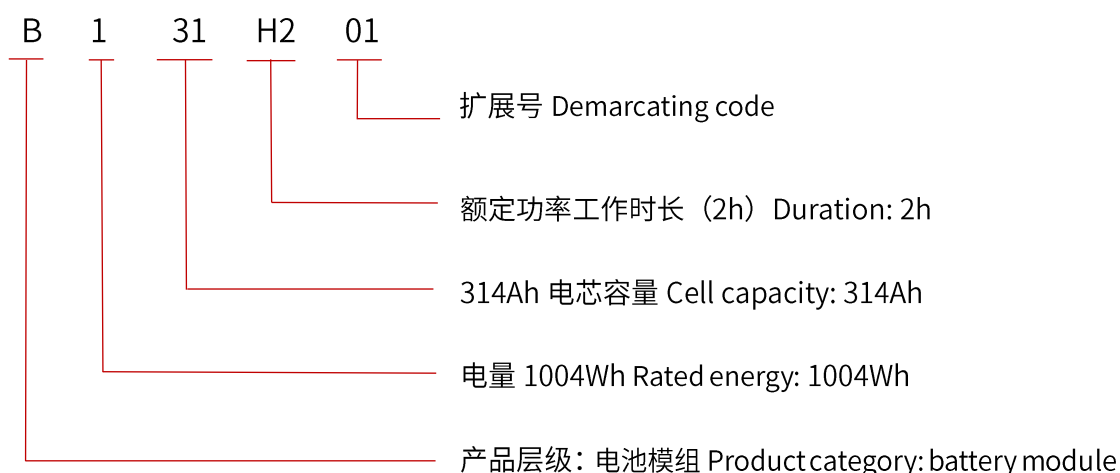
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1. 概述 Product Overview

产品型号定义规则参考以下说明。The definition of product model is shown as follows.



该规格书描述了电池模组(3.2V 314Ah)设计结构、基本特性、测试方法和磷酸铁锂电池注意事项等。针对客户需求亿纬储能可以提供不同的产品解决方案。本产品的标准供货内容为电池模组、模组连接铝排和安装螺丝。详细供货清单参考下表。

The purpose of this document is to specify the structure design, basic performance and product precautions of battery module: 3.2V 314Ah. EVE can provide diverse product solutions according to customers' demands. The supply scope of this product is: **battery module, module connection aluminum sheet and installation screw**. The details are as follows.

表 1 标准供货清单

Table 1 Components of Battery Module

序号 No.	组件 Component	型号 Model	数量 Quantity
1	模组 Battery module	B131H201	1
2	连接铝排及螺栓 module connection aluminum sheet and installation screw	/	1set
3	产品出厂检验报告 Test report	/	1
4	产品合格证 Product certificate	/	1
5	产品包装件 Product packaging	/	1

注：具体型号规格和数量以供货前确认为准。

Note: The specific model, specification and quantity are subject to confirmation before delivery.

2. 技术规格和性能描述 Product Specification

2.1 电芯技术参数 Technical Parameters (Cell)

亿纬储能采用自主研发和生产的磷酸铁锂电池 MB31(3.2V 314Ah)方形电芯，具有高安全性、长循环、高一致性、优越的充放电性能和绿色无污染，主要技术参数如下：

The prismatic LFP battery cell MB31(3.2V 314Ah) which is independently developed and produced by EVE, has the characteristics of high safety, longer cycle life, high consistency, excellent charge/discharge performance and green pollution-free. The main technical parameters are as below:

表 2 电芯技术参数表

Table 2 Technical Parameters (Cell)

序号 No.	项目 Item	规格 Specification		备注 Remark
1	标称容量 Nominal capacity	314Ah		0.5P, 25°C ± 2°C, 2.5-3.65V
2	标称电压 Nominal voltage	3.2V		
3	标称能量 Nominal Energy	1004.8Wh		0.5P, 25°C ± 2°C, 2.5-3.65V
4	工作电压 Operating voltage	2.5V~3.65V		
5	标准充电功率 Standard Charging Power	0.5P		
6	最大充电功率 Maximum charging Power	0.5P		
7	标准放电功率 Standard Discharging Power	0.5P		
8	最大放电功率 Maximum Discharging Power	0.5P		
9	交流内阻 AC internal resistance	0.18 mΩ ± 0.05 mΩ		AC, 1kHz, Delivery SOC
10	工作温度 Operation Temperature	充电 Charge	0-60°C	
		放电 Discharge	-30-60°C	

序号 No.	项目 Item	规格 Specification		备注 Remark
11	存储温度 Storage Temperature	1 年 1 year	0-35°C	
		1 个月 1 month	-20-45°C	
12	尺寸: L×W×H (mm) Dimension: L×W×H (mm)	173.7±0.5mm*71.7±0.8mm*207.2±0.5mm		300kgf
13	重量 Weight	5600±300g		



图 1 MB31 电芯示意图
Figure1 Battery cell: MB31

2.2 模组技术参数 Technical Parameters (Module)

该模组由 MB31 与焊接的连接器件组成。

This battery module is composed of MB31 cell and welded connector devices.

表 3 模组技术参数表

Table 3 Technical Parameters (Module)

序号 No.	项目 Item	规格 Specification	备注 Remark
1	额定电压 Rated voltage	3.2V	1P1S
2	交流内阻 AC internal resistance	≤0.3mΩ	AC, 1kHz, Delivery SOC
3	尺寸 Dimension	173.7±0.5mm*71.7±0.8mm*217.2±0.5mm	L×W×H, 300kgf
4	重量 Weight	5630±300g	

3. 模组外观及结构 Product Appearance and Structure

3.1 模组外形尺寸 Dimension

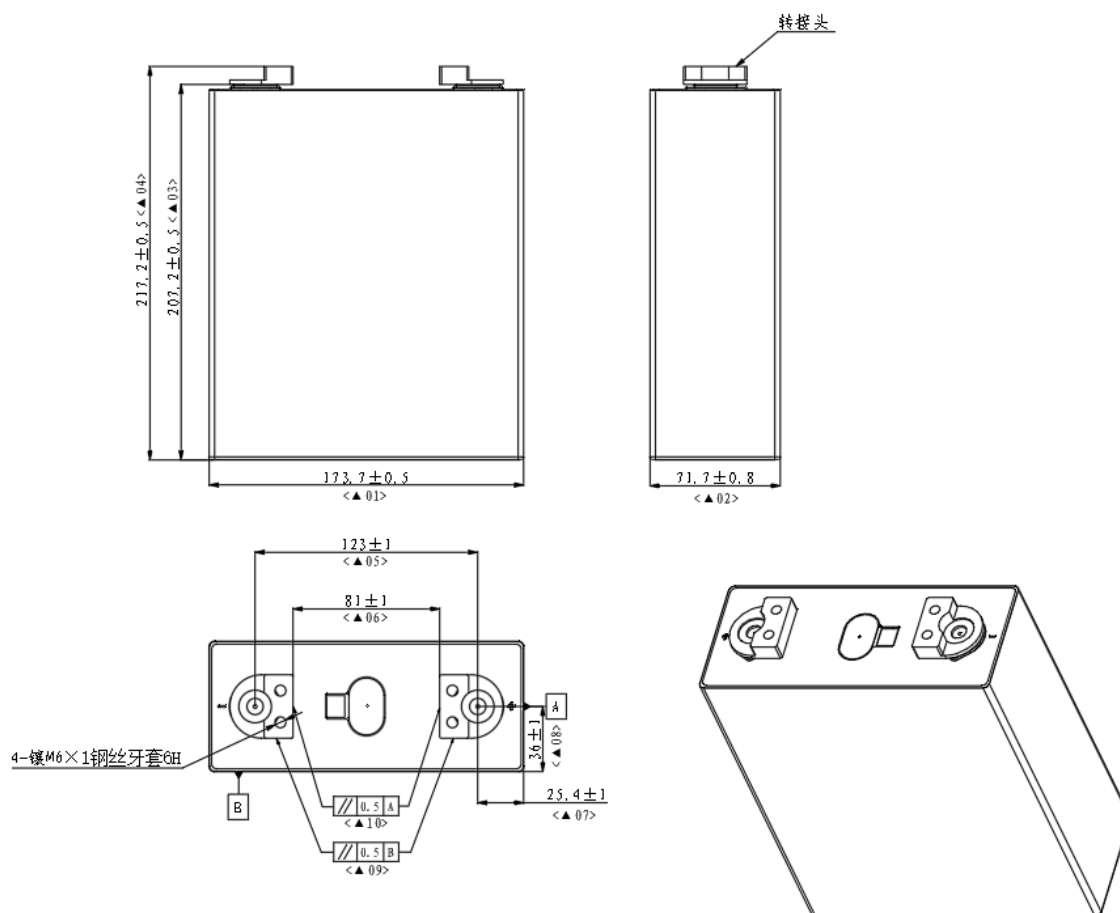


图 2 模组外形尺寸图

Figure 2 The dimension of battery module

注：连接螺栓采用 M6 型号。

Note: M6 bolts are recommended for fixing.

模组注意点如下：

The following lists some notes for battery module:

产品安装使用时拉拔力要求小于 100kgf，剪切力要求小于 80kgf；

When the product is installed and used, the drawing force is required to be less than 100kgf, and the shear force is required to be less than 80kgf;

4. 产品使用说明 Product Instructions

(1)请在使用前仔细阅读产品规格书，务必按照规定的充放电参数使用。

Please read the product instructions carefully before using the product, and be sure to use it according to the specified charge and discharge specifications.

(2)禁止拆卸或重组电池;禁止敲击、抛掷或踩踏模组。

Do not disassemble or reassemble, knock, throw or step on the battery.

(3)禁止短路电池模组。

Do not short-circuit the battery module.

(4)禁止在阳光照射下放置或工作，避免与腐蚀性物质接触，并远离火源及热源。

Do not place or operate the battery under the hot sunlight; and keep away from corrosive substances and fire or heat sources.

(5)禁止将电池模组投入水中。

Do not throw the battery into water.

(6)禁止反向充电或放电。

Do not reversely charge or discharge the battery.

(7)电池模组必须在规定的条件下使用，过高或过低的温度环境都会影响电池的性能和安全。

The battery module must be operated within the specified environment conditions, since too high or too low ambient temperature will affect the performance or safety of the battery.

(8)电池模组首次使用时，若有腐蚀，难闻气体或不正常现象，禁止使用。

Do not use the battery if there is corrosion, unpleasant smell or any abnormality during the first usage.

(9)电池模组可以单独使用，也可以多个并联使用，电池模组串并联使用时，正负极不能接反，

否则可能产生安全隐患，电池模组的串并联数量不能超过双方规定值。

The battery module can be used alone or multiple in parallels. When connecting in parallels, pay attention to the correct connection of the positive and negative terminals, otherwise it may lead to safety hazards. Besides, the quantity of the battery in series or parallels shall not exceed the value agreed by both parties.

(10) 电池模组必须在规定的充电倍率或功率条件下使用，并且充电上限电压不得超过产品技术要求，防止电池过充电。以免影响电池的充放电性能、机械性能和安全性能。

The battery module must be operated within the specified charge conditions. Over-charge will lead the electrical performance, mechanical performance and safety performance to be decreased.

(11) 电池模组禁止在强静电和强磁场的地方使用和存储，以免产生安全隐患。

Do not use or store the battery module in places with strong static electricity and strong magnetic fields to avoid potential safety hazards.

(12) 未经我司允许，不得私自拆卸或改装本产品，否则质保终止，若产生安全事故，我司概不负责。

This product shall not be disassembled or modified without the permission of EVE, otherwise the warranty will be terminated, and our company will not responsible for any safety accidents.

(13) 电池模组必须按照设计状态正立安装或存放，严禁侧放或倒置。

The battery module must be installed or stored upright in accordance with the design state, and it is strictly forbidden to put it on its side or upside down.

(14) 应严格按照产品安装说明操作进行组装，施加水平剪切力不应超过规定值。

Assembly should be carried out in strict accordance with the product installation instructions, and the horizontal shear force should not exceed the specified value.

(15) 电池模组应应用在约定的场景使用，如变更使用场景需与我司进行书面确认。

The battery module should be used in the agreed scene. If the use scene is changed, it

needs to be confirmed in writing with our company.

(16) 电池模组的使用必须严格遵照以上要求，否则质保终止，造成产品的性能损坏以及安全事故，我司概不负责。

The usage of battery module must strictly comply with the above requirements, otherwise the warranty will be terminated, and EVE will not be responsible for any product performance damages or safety accidents.

5. 产品安装说明 Product installation instructions

5.1 产品安装方法 Product installation method

(1) 电池成组：电池应根据串并要求正确摆放，并在成组时应采用约束夹具施加一个垂直于厚度方向的压缩力（建议 300kgf），保障电芯在安装和使用时电芯间不会发生相对位移。成组时电芯间距应保持在 2mm-2.5mm，给予电芯后期膨胀的空间。

Battery group: The battery should be placed correctly according to the string and requirements, and the constraint fixture should be used in the group to apply a compression force perpendicular to the thickness direction (300kgf is recommended), to ensure that the battery cell will not occur relative displacement during installation and use. When the cell spacing should be maintained at 2mm- 2.5mm, giving the cell space for later expansion.

(2) 铝排预固定：使用 M6X14 三合一螺栓先将连接铝排进行预连接，避免直接固定产生应力造成支架受力不均而出现缺陷；（预固定定义：拧动螺栓，使螺栓下端面与铝排端面接触，但无挤压力产生）

Pre-fixing of aluminum sheet: pre-connect the connecting aluminum sheet with M6X14 three-in-one bolt to avoid defects caused by uneven stress of the bracket caused by direct

fixing; (Pre-fixing definition: screw the bolt so that the lower end face of the bolt contacts the end face of the aluminum sheet, but no extrusion force is generated.)

(3)铝排紧固：使用与 M6X14 三合一螺栓相配的外六角批头的电批或扭力扳手，对螺栓进行锁附。紧固时应注意先紧固 1、4 位螺栓，后紧固 2、3 位螺栓。

Fastening of aluminum bar: use an external hexagon screwdriver or torque wrench matched with M6X14 three-in-one bolt to lock and attach the bolt. When fastening, attention should be paid to fastening bolts 1 and 4 first, and then fastening bolts 2 and 3.

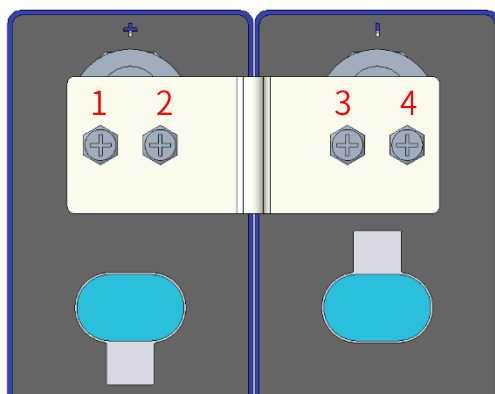


图 3 电芯紧固

Figure 3 Battery core fastening

5.2 铝排紧固要求 Aluminum sheet fastening requirements

(1)支架螺栓连接后拆装次数 ≤ 5 次；

The number of disassembly and assembly after bolt connection of the bracket is ≤ 5 ;

(2)螺栓拧紧扭力 $\leq 6\text{N.m}$ ；

Bolt tightening torque $\leq 6\text{ N.m}$;

(3)拧紧过程中产生水平方向剪切力不应超过规定值 80kgf，否则会导致焊道产生裂纹，甚至支架脱落。

The horizontal shearing force generated in the tightening process should not exceed the specified value of 80kgf, otherwise the weld bead will crack and even the bracket will fall off.

6. 产品维护保养 Product Maintenance

(1) 电池模组长时间搁置或存放时，应保持在 30-40%SOC，0°C~35°C，相对湿度≤60%的条件下。

If the battery mode is not used for a long time, it should be kept at 30-40%SOC, 0°C~35°C, and relative humidity ≤60%.

(2) 电池模组长时间搁置或存放时，防止电池过放亏电，每 3 个月一次充放电循环，不建议存放时间超过半年。

When the battery module is put on hold or stored for a long time, prevent the battery from over-discharging and losing power, and charge and discharge it once every three months. It is not recommended to store it for more than half a year.

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