

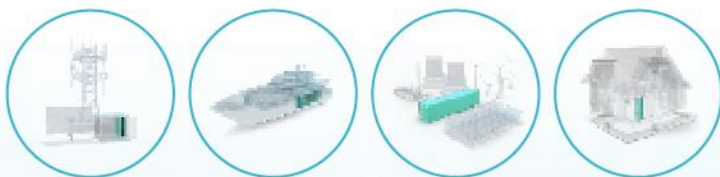
# 模组规格书

## Product Specification

Battery Module for ESS

BM-1/16-51.2/100L-02

版本 Version 1.0



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EVE Energy Storage Co., Ltd.

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## 修订履历 Change history

序号 No.	版本 Version	修订日期 Date	修订内容 Contents	修订人 Revised by
1	1.0	2024-10-14	首版发行 First release	/

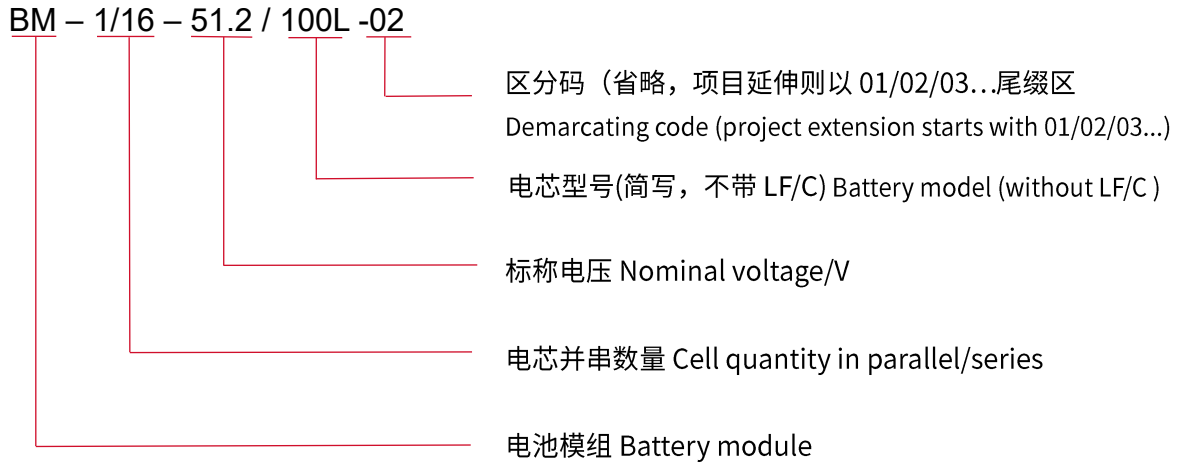
# 目 录 Content

1. 概述 Product Overview .....	3
2. 产品特点 Product Features .....	4
3. 技术规格和性能描述 Product Specification .....	5
4. 模组外观及结构 Product Appearance and Structure .....	8
5. 产品使用说明 Product Instructions .....	12
6. 产品维护保养 Product Maintenance .....	12



## 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(51.2V 100Ah)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, 不包含电池模组的安装螺丝以及跟模组低压输出端子配套的连接器的。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: 51.2V 100Ah. EVE can provide diverse product solutions according to customers' demands. The supply scope of this product is: **battery module**, without fixing screws and external plug-in connectors. 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	BM-1/16-51.2/100L-02	1
2	产品出厂检验报告 Test report	/	1
3	产品合格证 Product certificate	/	1
4	产品包装件 Product packaging	/	1
5	产品安装件 Product mounting		
5.1	X1 转接线连接器 X1 conversion connectors	森大 SDh8M-18P-01	1 套/set
5.2	X2 转接线连接器 X2 conversion connectors	森大 SD2012-2-20P	1 套/set

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. 特点 Product Features

- ◆ 小型化和易于安装  
Compact size and easy installation
- ◆ 通过方案设计实现产品多样化  
Product diversification through design
- ◆ 长循环和高安全性  
Longer cycle life and high safety

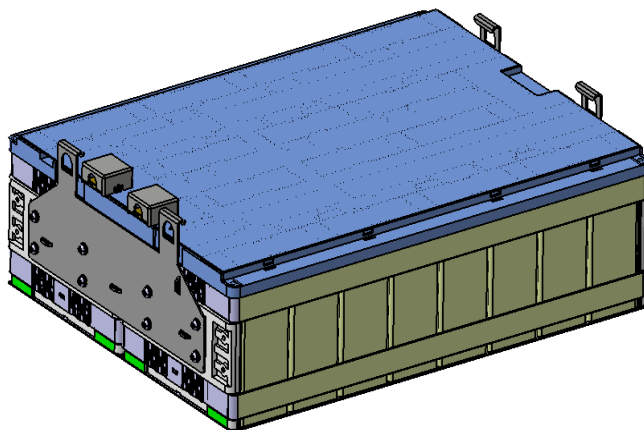


图 1 电池模组 (51.2V 100Ah) 示意图

Figure 1 Diagram of battery module (51.2V 100Ah)

注：图片仅供参考，具体以实物为准。

Note: The picture is for reference only, the specific object shall prevail.



### 3. 技术规格和性能描述 Product Specification

#### 3.1 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 LF100LA(3.2V 100Ah)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 cell LF100LA (3.2V 100Ah) 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	额定容量 Rated capacity	100Ah	0.5C, 25±2°C
2	额定电压 Rated voltage	3.2V	

序号 No.	项目 Item	规格 Specification	备注 Remark
3	工作电压 Operating voltage	2.5V~3.65V	
4	尺寸 W×D×H Dimension W×D×H	(160±0.8)*(50.1±0.5)*(118.5±0.5)mm	
5	重量 Weight	1.985±0.1kg	



图 2 电芯示意图

Figure 2 Battery cell: LF100LA

### 3.2 模组技术参数 Technical Parameters (Battery Module)

表 3 模组技术参数表

Table 3 Technical Parameters (Battery Module)

序号 No.	项目 Item	规格 Specification	备注 Remark
1	额定容量 Rated capacity	100Ah	充放电电流: 0.5C 25±2°C Charge/discharge current: 0.5C 25±2°C
2	额定电压 Rated voltage	51.2V	1P16S
3	额定能量 Rated energy	5.12Kwh	
4	标准充电电流 Standard charge current	50A(0.5C)	25±2°C
5	最大持续充电电流 Maximum constant charge current	100A(1C)	1C 25°C~45°C, 阶梯充电 1C 25°C~45°C, multistep charge

序号 No.	项目 Item	规格 Specification	备注 Remark
6	模组电压范围 Voltage range	40V~58.4V	1P16S
7	充电截止电压 Cut-off voltage of charge	58.4V	Cell: 3.65V Module: 58.4V
8	标准放电电流 Standard discharge current	50A(0.5C)	25±2°C
9	最大持续放电电流 Maximum constant discharge current	100A(1C)	1C 25°C~45°C, 阶梯放电 1C 25°C~45°C, multistep discharge
10	放电截止电压 Cut-off voltage of discharge	40V	Cell: 2.5V Module: 40V
11	工作温度 Operating temperature	充电 Charge	0°C~65°C
12		放电 Discharge	-20°C~65°C
13	存储温度 Storage humidity	1 个月内 Within 1 month	-20°C~45°C
14		1 年内 Within 1 year	0°C~35°C
15	尺寸 L×W×H Dimension L×W×H	(436.4±2.0)×(328±1.5)×(144.5±2.0)mm	
16	重量 Weight	34±2kg	净重(不包含纸箱及配件重 量) Net weight (not including carton and accessories)
17	应用场景 Application scenario	储能系统 ESS	1 次循环/天 1 cycle/day
18	使用要求 Usage requirement	搭配 BMS 使用 Together With BMS	BMS 需带均衡、保护功能 BMS shall provide balance and protection functions
19	工作湿度范围 Humidity range	<70% RH, 无冷凝水 <70% RH, without condensation	
20	海拔高度	≤3000m	

序号 No.	项目 Item	规格 Specification	备注 Remark
	Application altitude		

## 4. 模组外观及结构 Product Appearance and Structure

### 4.1 模组外形尺寸 Dimension

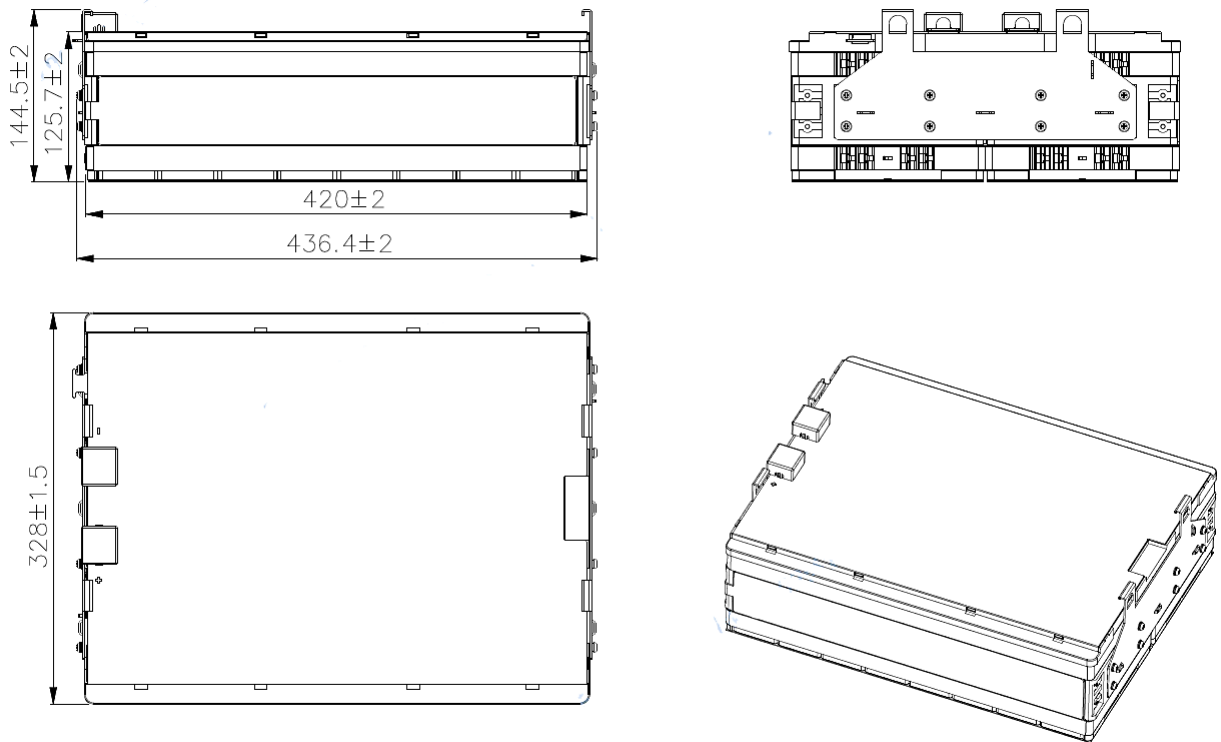


图 3 模组外形尺寸图

Figure 3 The dimension of battery module

## 4.2 模组采集线 Acquisition wire

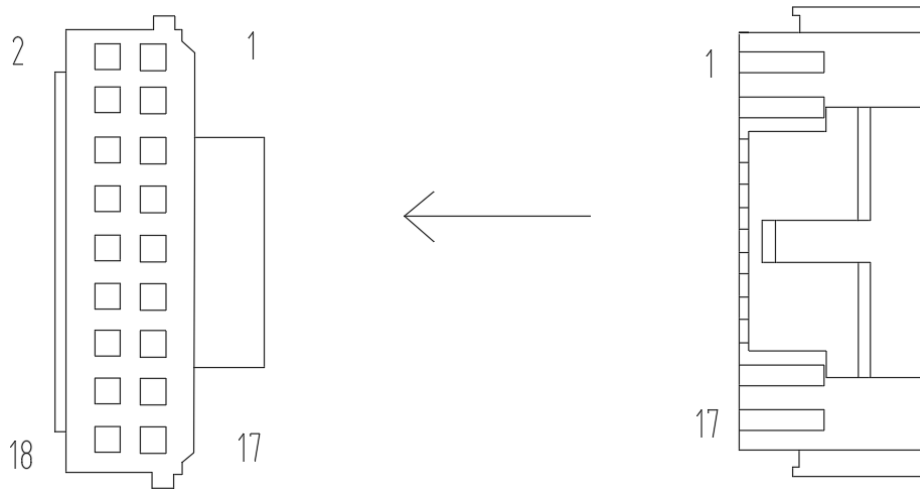


图 4 X1 线束连接器示意图

Figure 4 Schematic diagram of X1 connector

表 4 X1 连接器接线定义表

Table 4 The definition of X1 connector wiring (plug-in terminal: front view)

连接器型号 Connector type			盛凌 13461024		
线端标号 Definition of wires	接插件引脚 Pin No.	定义 Definition	线端标号 Definition of wires	接插件引脚 Pin No.	定义 Definition
B16+	1	电芯电压 16 正 Cell voltage 16 positive	T1	2	电芯温度 1 Cell temperature 1
B15+	3	电芯电压 15 正 Cell voltage 15 positive	T1	4	电芯温度 1 Cell temperature 1
B14+	5	电芯电压 14 正 Cell voltage 14 positive	T2	6	电芯温度 2 Cell temperature 2
B13+	7	电芯电压 13 正 Cell voltage 13 positive	T2	8	电芯温度 2 Cell temperature 2
B12+	9	电芯电压 12 正 Cell voltage 12 positive	T3	10	电芯温度 3 Cell temperature 3

B11+	11	电芯电压 11 正 Cell voltage 11 positive	T3	12	电芯温度 3 Cell temperature 3
B10+	13	电芯电压 10 正 Cell voltage 10 positive	T4	14	电芯温度 4 Cell temperature 4
B9+	15	电芯电压 9 正 Cell voltage 9 positive	T4	16	电芯温度 4 Cell temperature 4
B8+	17	电芯电压 8 正 Cell voltage 8 positive	/	18	/

注：具体接口型号及引脚定义以供货前确认为准。

Note: The specific interface model and pin definition are subject to confirmation before delivery.

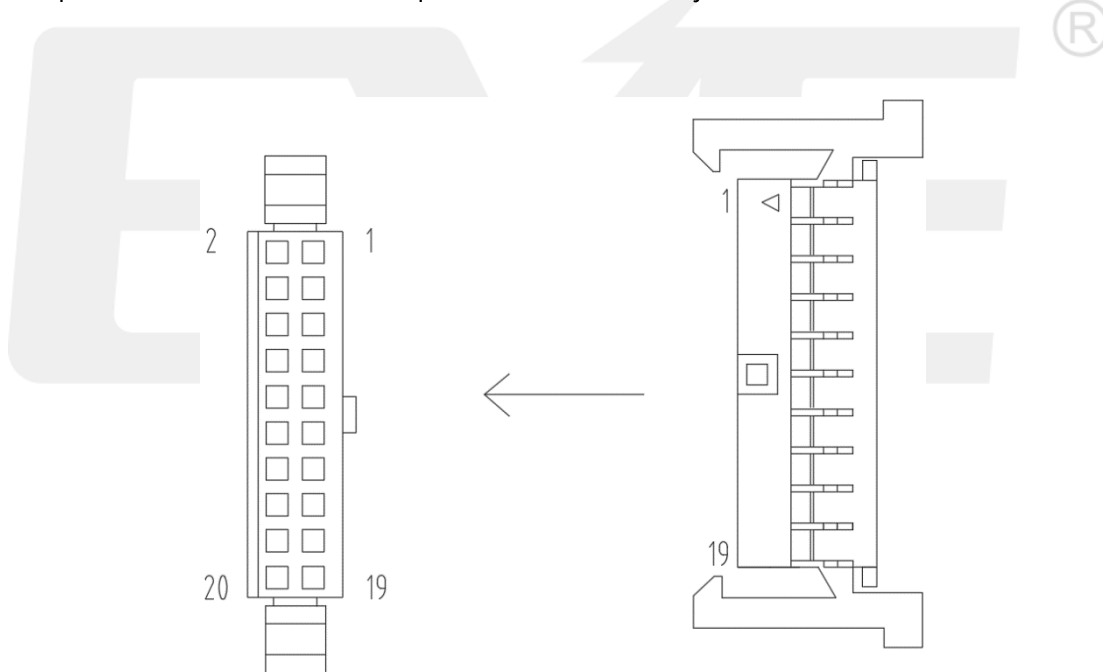


图 5 X2 线束连接器示意图

Figure 5 Schematic diagram of X2 connector

表 5 X2 连接器接线定义表

Table 5 The definition of X2 connector wiring (plug-in terminal: front view)

连接器型号 Connector type			盛凌 12301119		
线端标号 Definition of wires	接插件引脚 Pin No.	定义 Definition	线端标号 Definition of wires	接插件引脚 Pin No.	定义 Definition
/	1	/	/	2	/
B7+	3	电芯电压 7 正 Cell voltage 7 positive	T5	4	电芯温度 5 Cell temperature 5
B6+	5	电芯电压 6 正 Cell voltage 6 positive	T5	6	电芯温度 5 Cell temperature 5
B5+	7	电芯电压 5 正 Cell voltage 5 positive	T6	8	电芯温度 6 Cell temperature 6
B4+	9	电芯电压 4 正 Cell voltage 4 positive	T6	10	电芯温度 6 Cell temperature 6
B3+	11	电芯电压 3 正 Cell voltage 3 positive	T7	12	电芯温度 7 Cell temperature 7
B2+	13	电芯电压 2 正 Cell voltage 2 positive	T7	14	电芯温度 7 Cell temperature 7
B1+	15	电芯电压 1 正 Cell voltage 1 positive	T8	16	电芯温度 8 Cell temperature 8
B1-	17	电芯电压 1 负 Cell voltage 1 negative	T8	18	电芯温度 8 Cell temperature 8
/	19	/	/	20	/

注：具体接口型号及引脚定义以供货前确认为准。

Note: The specific interface model and pin definition are subject to confirmation before delivery.

## 5. 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 module into water.

(6) 禁止反向充电或过放电。

Do not reversely charge or discharge the battery.

(7) 电池模组必须在规定的的环境条件下使用，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 module if there is corrosion, unpleasant smell or any abnormality during the first usage.

(10) 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.

(11) 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. Overcharge will lead the electrical performance, mechanical performance and safety performance to be decreased.

(12) 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.

(13) 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.

(14) 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.

(15) 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.

## **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%~50%SOC 的状态下。

When the battery module not in use for a long time, it is recommended to maintain the SOC at 30%~50%.

(2) 电池模组长时间搁置或存放时，建议每 3 个月进行一次补充电，防止电池过放亏电，每年应进行一次充放电循环。

When the battery module not in use for a long time, it shall be charged every 3 months regularly in case of the occurrence of over-discharge; And it is recommended to cyclically charge and discharge the battery module every 6 months.

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