

产品规格书

PRODUCT SPECIFICATION

产品名称 (Product Name):

RE51100 电池箱
(RE51100 Battery Pack)

产品型号 (Product Model No.):

REHPN00510100C02AV02

日期 (Date): 29/01/2024

批准 (APPROVER)	审核 (AUDITOR)	编制 (EDITOR)	版本号 (VERSION NO.)

目录

1. 总则.....	3
2. 产品介绍.....	3
3. 产品配置及技术参数.....	4
4. 产品外观.....	4
5. 产品电气.....	5
6. 产品运维.....	6
7. 安全注意事项.....	6
8. 其他说明.....	7

CONTENT (English Version)

1. General Rules.....	10
2. Product Introduction.....	10
3. Product Configuration and Technical Data.....	11
4. Product Appearance.....	11
5. Product Electric.....	12
6. Product Operation and Maintenance.....	13
7. Safety Cautions.....	14
8. Other Descriptions.....	15

1. 总则

本产品规格书描述了 **RE51100 电池箱** 产品的性能指标、技术要求以及其它的注意事项。

2. 产品介绍

2.1 产品基本信息

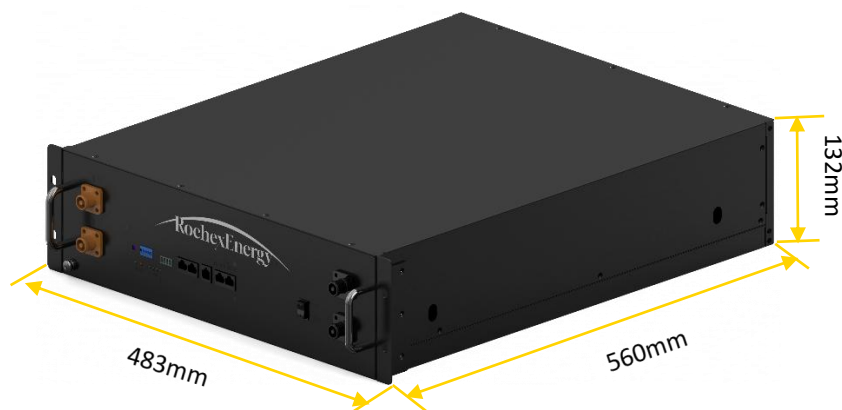
表 1 产品基本信息

产品名称	RE51100 电池箱
连接方式	1P16S
产品型号	REHPN00510100C02AV02
热管理方式 (TRM)	自然冷却

2.2 产品基本描述

RE51100 电池箱由下箱体和上盖、模组、1 个 BMU 和若干线束铜排等组成。

图 1 电池箱结构示意图



3. 产品配置及技术参数

表 2 产品基本参数

序号	项目	参数	备注
1	额定电压	51.2VDC	单体额定电压 3.2V
2	额定容量	100Ah	@0.5C, 25°C
3	额定电量	5.12kWh	@0.5C, 25°C
4	工作电压范围	40V-58.4VDC	单体工作电压范围 2.5V-3.65V
5	连接方式	1P16S	
6	额定充放电电流	50A	
7	额定充放电功率	0.5P	
8	工作环境湿度	5%-95% RH	
9	工作环境温度	充电: 0-55°C; 放电: -25-55°C	
10	存储温度	-30-60°C	建议 10°C-35°C 储存
11	应用海拔高度	≤2000m	
12	重量	~43±3kg	
13	尺寸 (长*宽*高)	483±2*560±2*132±2mm	不包含面板插件尺寸

4. 产品外观

电池箱吊装孔及固定孔如图 2 所示，一个电池箱具有 4 个吊装挂耳和 4 个固定孔，便于在不同工序的转运和安装。

图 2 产品外观





5. 产品电气

5.1 产品电气接口示意图

产品面板电气接口如图 3 所示：

图 3 面板电气接口



5.2 产品电气接口定义

产品电气接口如表 3 所示：

表 3 电气接口信息

序号	项目	规格型号	备注
1	电池负	插座：WNHVPC-3-M1-φ16-BK	
2	电池正	插座：WNHVPC-3-M1-φ16-OG	

6. 产品运维

6.1 包装

电池箱的包装方式应避免模块各个方向受压,同时包装方式应对电池箱进行限位处理,防止电池箱在包装内晃动。包装箱上的包装、储存和运输的图形标记不应被弄脏或破损。

6.2 运输

电池箱在运输过程中应防雨、防潮、轻搬轻放,严禁摔掷、翻滚、倒置,严禁与酸、碱等腐蚀性物品放在一起。所有零件正确包装或装箱后,在运输过程中应采取保护措施,以避免丢失、损坏和被盗。在卸货过程中,应小心搬运产品,防止坠落、滚动和重物压力,在搬运和放置电池的过程中,应使用具有适当承载能力的叉车,以避免损坏电池。

6.3 存储

电池箱应贮存于干燥、通风、阴凉的环境下,远离火源和热源,避免阳光直射、高温、腐蚀性气体、剧烈振动、机械冲击等状况;温度应控制在 $-20^{\circ}\text{C}\sim 45^{\circ}\text{C}$ 范围内,相对湿度应不大于85%,无凝露,大气压力为 $86\text{kPa}\sim 106\text{kPa}$ 。长期存放应在清洁通风的室内,温度为 $0^{\circ}\text{C}\sim 35^{\circ}\text{C}$ 。

7. 安全注意事项

- 1) 电池应放置在凉爽干燥的环境中,以避免长期放置在高温下($>45^{\circ}\text{C}$)或潮湿环境(湿度大于95%);
- 2) 禁止在热源(如火、加热器等)旁边使用和保存电池;
- 3) 禁止将电池扔进火或加热器中;
- 4) 产品不应受到严重的机械冲击、爆炸、雨淋;
- 5) 禁止将电池浸入水中;
- 6) 禁止随意取下电池;
- 7) 禁止将蓄电池的正极和负极直接连接;

- 8) 禁止用钉子和尖锐工具刺穿电池;
- 9) 禁止敲打、投掷、踩踏电池等;
- 10) 禁止将电池与其他制造商的电池或不同类型的电池混合使用;
- 11) 禁止任何反向充电、暴力拆卸、非正式测试等;
- 12) 如果电池发出气味、发热、变色、变形以及任何使用、储存、充电异常, 如果发生, 请立即将电池从房间中取出并停用.

8. 其他说明

8.1 免责声明

该规格书仅供参考, 任何本规格书中未提及的事项, 请咨询本公司, 当本规格书版本更新时, 本公司不做另行通知。

供货时电池的具体参数请以签订的技术协议为准, 必须严格按照本产品规范的相关要求使用电箱, 以避免充电和放电方法、储存和维护不当将影响电池的使用寿命和个人安全, 公司不对因滥用电池或电箱而导致事故负责。

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6. Product Operation and Maintenance	13
7. Safety Cautions	14
8. Other Descriptions	15

1. General Rules

This product specification describes the performance, technical requirements and other attentions of **RE51100 Battery Pack**.

2. Product Introduction

2.1 Basic Information of Product

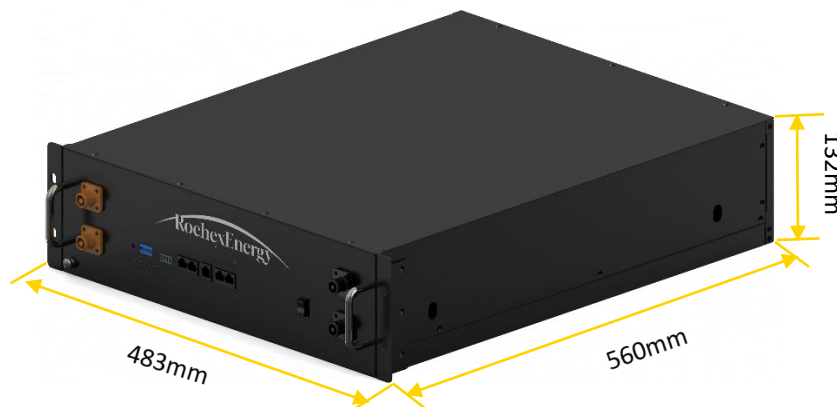
Table 1 Basic Information of Product

Product Name	RE51100 Battery Pack
Configuration	1P16S
Product Model No.	REHPN00510100C02AV02
Thermal Runaway Management (TRM)	Natural Cooling

2.2 Basic Description of Product

RE51100 Battery Pack is composed of lower box, top cover, battery modules, a BMU, some wires, copper bars and so on.

Graph 1 Structure of Battery Pack



3. Product Configuration and Technical Data

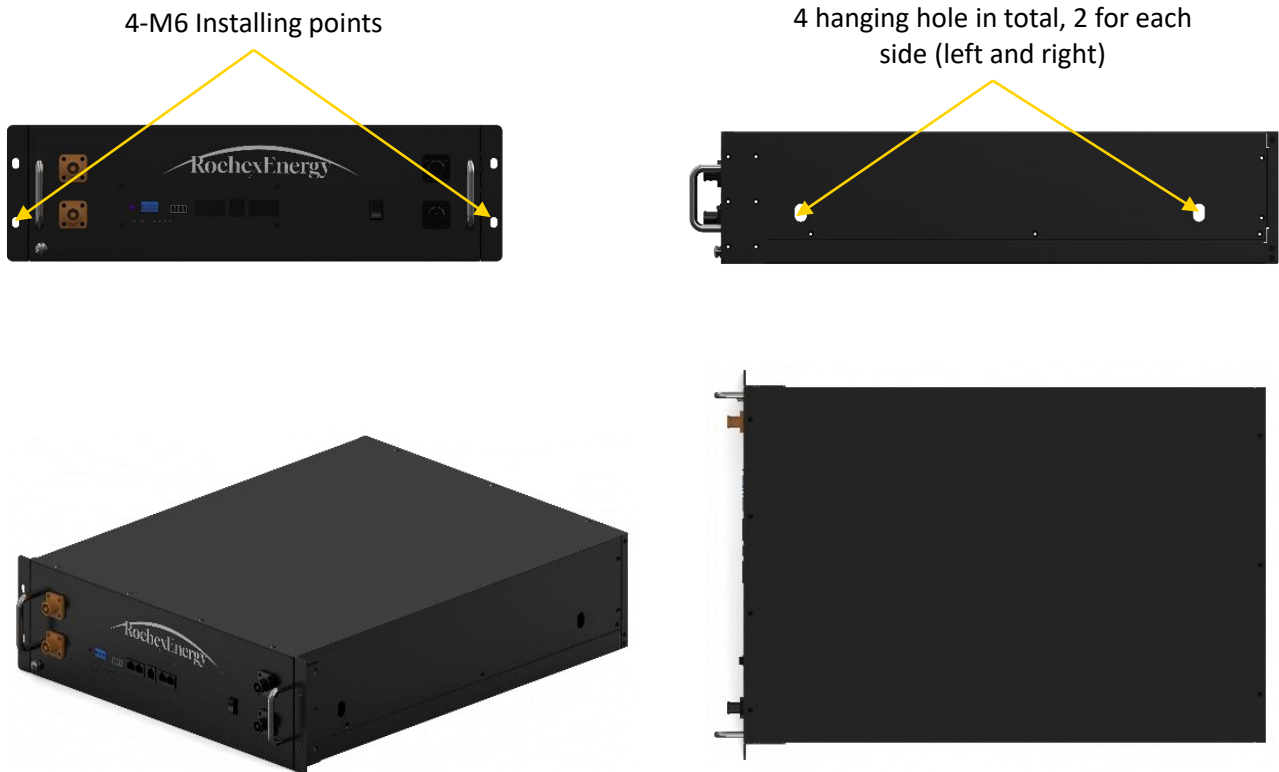
Table 2 Basic Parameters of Product

No.	Item	Parameters	Notes
1	Rated Voltage	51.2VDC	Rated voltage of single battery cell is 3.2V
2	Rated Capacity	100Ah	@0.5C, 25°C
3	Rated Energy	5.12kWh	@0.5C, 25°C
4	Working Voltage Range	40V-58.4VDC	Working voltage range of single battery cell is 2.5V-3.65V
5	Configuration	1P16S	
6	Rated Charging/Discharging Current	50A	
7	Rated Charging/Discharging Power	0.5P	
8	Working Environment Humidity	5%-95% RH	
9	Working Environment Temperature	Charging: 0-55°C Discharging: -25-55°C	
10	Storage Temperature	-30-60°C	Suggest to store this product at 10-35°C
11	Applied Altitude	≤2000m	
12	Weight	~43±3kg	
13	Dimension (L*W*H)	483±2*560±2*132±2mm	Exclude the sizes of connectors on panel

4. Product Appearance

The hoisting and mounting holes of battery pack are showed as graph 2. A battery pack has 4 hanging lugs and 4 mounting holes to transfer and install under different working processes.

Graph 2 Product Appearance



5. Product Electric

5.1 Schematic Diagram of Product Electric Connector

The electric connectors of Product panel are showed as graph 3:

Graph 3 Electric Connectors of Panel



5.2 Definition of Product Electrical Connector

Product electrical connectors are showed as table 3:

Table 3 Information of Electrical Connectors

No.	Item	Model No.	Notes
1	BAT-	Socket: WNHVPC-3-M1-φ16-BK	
2	BAT+	Socket: WNHVPC-3-M1-φ16-OG	

6. Product Operation and Maintenance

6.1 Package

The packaging method should prevent battery pack from being extruded by each direction and limit the position of battery pack in order to avoid that battery pack shakes inside of package. The signs of packaging, storage and transportation on packaging box should not be dirtied and damaged.

6.2 Transportation

In the transportation, the battery pack should be prevented from rain and humidity. It is strictly forbidden to throw, roll, invert and place strong acid, alkali and other corrosive object with battery pack. After all the components are packaged rightly, protective measures should be taken during the transportation in order to avoid losing, damaging and stealing. During the unloading process, it needs to be careful when carrying product for avoiding falling, rolling and pressure from dead weight. Usually, it is necessary to use forklift which has enough loading capacity for carrying and placing battery packs, which can prevent them from

being damaged.

6.3 Storage

The environment for Battery pack to store should be dry, ventilated and cool. Also, battery pack should be kept away from fire, heat, direct sunlight, high temperature, corrosive gas, heavily shake, mechanical shock and so on. The temperature of environment should be controlled at the range of $-20^{\circ}\text{C}\sim 45^{\circ}\text{C}$, the relative humidity should not be greater than 85% without condensation, atmospheric pressure should be $86\text{kPa}\sim 106\text{kPa}$. The temperature should be $0^{\circ}\text{C}\sim 35^{\circ}\text{C}$ for long-time storage at clean and ventilated indoor room.

7. Safety Cautions

- 1) Battery should not be placed at high temperature ($>45^{\circ}\text{C}$) or humid environment (humidity $> 95\%$) for a long time but a cool and dry environment;
- 2) It is forbidden to use and store battery near to heat source, such as fire, heater and so on;
- 3) It is forbidden to throw battery into fire and heater;
- 4) The product should not be hit by heavily mechanical shock, explosion and drench;
- 5) It is forbidden to immerse battery into water;
- 6) It is forbidden to take down battery randomly;
- 7) It is forbidden to connect BAT+ and BAT- directly;
- 8) It is forbidden to use nail and other needle-like tools to puncture the battery;
- 9) It is forbidden to beat, throw and tread battery;
- 10) It is forbidden to use batteries from different manufacturers or different types together;
- 11) Any reverse charging, violent disassembly, informal test and so on are forbidden;

- 12) Please take out and stop using the battery from room immediately, if the battery is smelling, heating, changing color and deforming or any abnormality of using, storing and charging happen.

8. Other Descriptions

8.1 Disclaimer

This specification is for reference only. Any matters are unmentioned in the specification, please consult Roche Energy freely. When the specification has been updated, there is no other notification from Roche Energy.

The parameters of battery at the time of delivery are subject to the technical agreement signed. It needs to strictly follow the relevant requirements in this product specification to use battery pack, which can prevent that improper way of charging/discharging, storage and maintenance affect the usage life of battery and personal safety. Roche Energy is not responsible for any accidents caused by misusing the battery or battery pack.