

PRODUCT SPECIFICATION

Product Name:

RE51100 Battery Pack

Product Model No.:

REHPN00510100C02AV02

Date: 29/01/2024

APPROVER	AUDITOR	EDITOR	VERSION NO.

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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

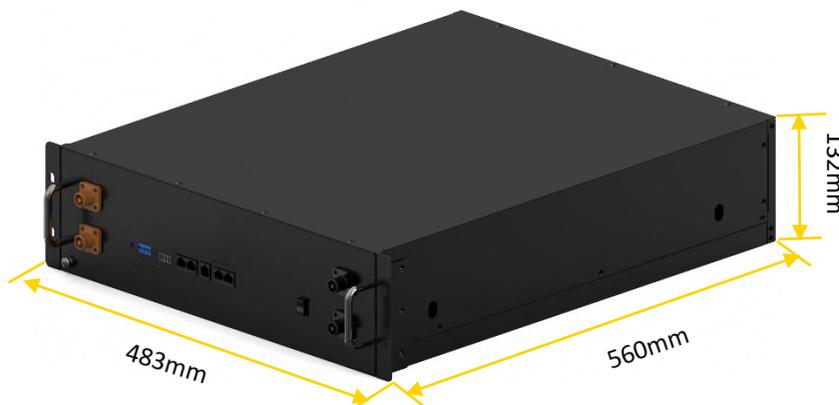
Table 1 Basic Information of Product

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

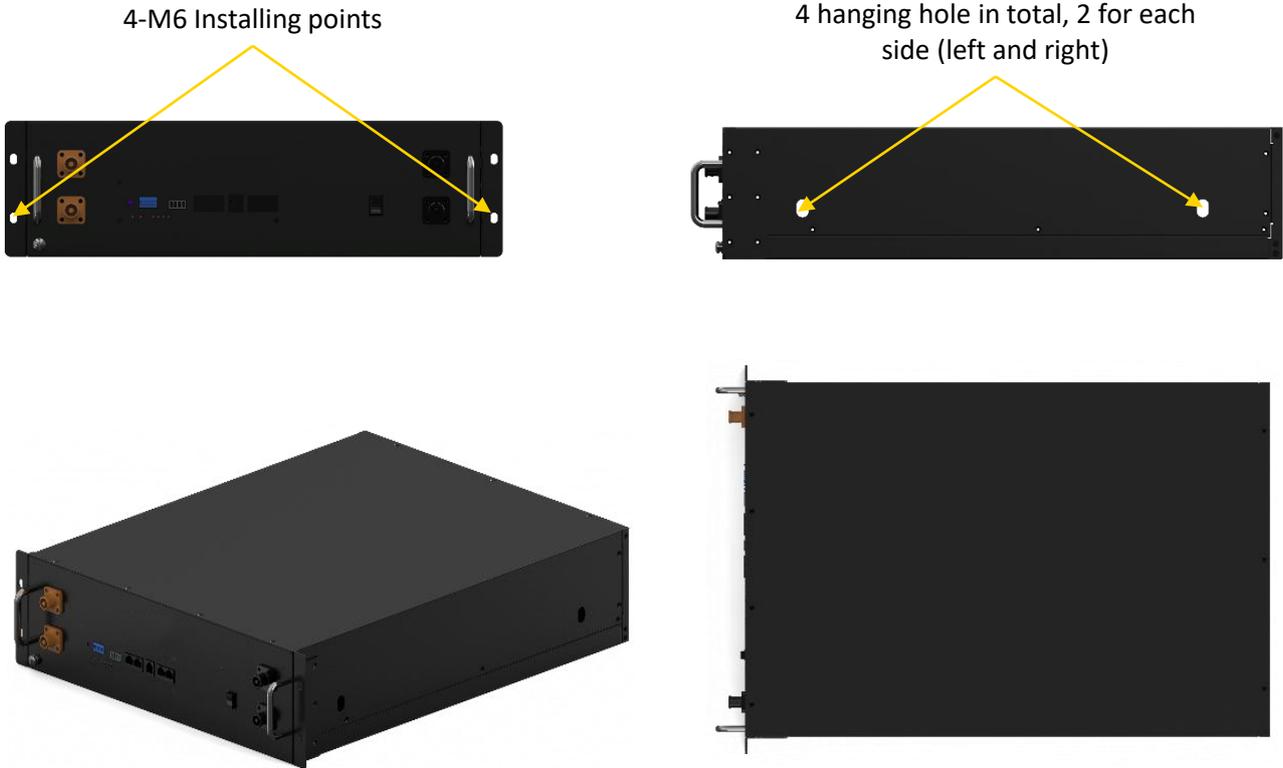
Table 2 Basic Parameters of Product

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.