

261kWh 户外一体柜规格书

Product Specification for 261kWh Outdoor Cabinet

T231H201/ T231H202/ T231H203

版本 V1.0



惠州亿纬锂能股份有限公司

EVE Energy Co., Ltd.

地址：广东省惠州市仲恺高新区惠风七路 38 号

Address: NO.38, Huifeng 7th Road, Zhongkai Hi-Tech Zone, Huizhou, Guangdong

Website: www.evebattery.com

惠州亿纬锂能股份有限公司

EVE Energy Co., Ltd.

本文件涉及惠州亿纬锂能股份有限公司核心技术机密, 未经惠州亿纬锂能股份有限公司允许, 任何人不得将本文件用于商业用途。

This document is the property of EVE Energy Co., Ltd. No rights are granted to use this document for any purpose without the permission of EVE Energy Co., Ltd.

修订履历 Change History

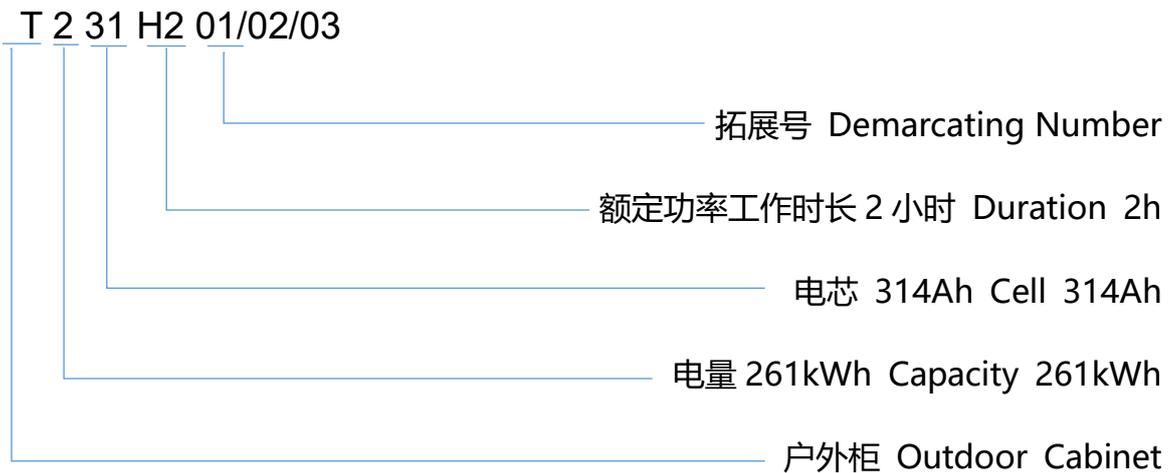
序号 No.	版本 Version	修订日期 Revised Date	修订内容 Revised Contents	修订人 Revised by	备注 Remarks
1	1.0	2024-12-29	首版发行 First version released	/	产品规格以最终发布产品为准, 本规格书将根据产品迭代更新 Product specifications are subjected to the final release version. This document will be updated as the product evolves

目 录 Contents

1. 概述 Product Overview.....	1
2. 应用说明 Scope of Application.....	1
3. 产品规格 Product Specification.....	3
4. 产品描述 Product Description	5
4.1 261kWh 户外柜外形尺寸图 Diagram of 261 kWh Outdoor Cabinet Dimensions	6
4.2 261kWh 户外柜系统布局 Outdoor Cabinet System Layout.....	6
4.3 电池箱 Battery Pack	9
4.2 控制盒 Control Box	10
4.7 双向储能变流器 Power Conversion System (PCS)	12
4.8 液冷机组 Liquid Cooling Machine	13
4.8.1 液冷机组工作原理 Liquid Cooling Machine Working Principle	13
4.8.2 液冷机组技术参数 Liquid Cooling Parameters.....	14
4.9 消防系统 Fire Suppression System	14
4.10 辅电系统 Auxiliary system	15
4.11 能量管理系统 Energy Management System (EMS)	15
5. 产品使用说明 Product Instructions	16
6. 产品维护保养 Product Maintenance	18

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.



261kWh 海外版户外柜共有 3 个版本，对应的产品型号分别为 T231H201、T231H202 和 T231H203。

261kWh oversea version outdoor cabinet has 3 versions, and the corresponding product model numbers are T231H201, T231H202 and T231H203.

2. 应用说明 Scope of Application

本文件旨在说明 261kWh 户外柜的规格，并向客户提供该产品的使用信息。本产品的标准供货内容为**户外柜组件**。不包含外接动力出线、外接通信出线。详细组件清单参考下表。

The purpose of this document is to specify the specifications of 261kWh Outdoor Cabinet, and also provide customers with information on the usage of this specified product. The standard supply scope is: battery cabinet' s components; external power cables and external communication cables are not included. Details are as follows.

表 1 标准供货清单

Table 1. Standard Supply List

序号 No.	组件 Components	规格型号 Model	数量 Quantity
1	电池箱 Battery pack	P531H202	5EA
2	控制盒 Control box	内含自研 BCMU Includes self-innovative BCMU	1 EA
3	双向储能变流器 Power conversion system (PCS)	125kW	1 EA
4	能量管理系统 Energy Management System (EMS)	储能一体化集控单元 ES-CCU (选配) Energy storage integrated centralized control unit ES-CCU (optional)	1 EA
5	消防系统 Fire suppression system	气溶胶 (舱级) Aerosols (cabinet level)	1 EA
6	液冷机组 Liquid cooling machine	包含液冷机组、液冷管路和冷却液 Includes liquid cooling machine, liquid cooling pipeline and coolant	1 EA
7	机柜 Cabinet	1020mm×1470mm×2250mm(尺寸以最终版为准) 1020mm×1470mm×2250mm (Dimensions are subjected to finalized version)	1 EA
8	柜内低压线束 Cabinet low-voltage harness	包含低压和通信线束, 出厂时已经连接到设备上 Includes low-voltage and communication harnesses, already connected to the equipment before delivery	1EA
9	柜内高压线束 Cabinet high-voltage harness	包含连接 PACK、PCS、进线开关等设备的高压线束, 出厂时已经连接到设备上 Includes high voltage wiring harnesses for connecting PACK, PCS, incoming switch, etc., connected to the equipment before delivery	1EA
10	动环检测系统 Environment monitoring system	含温湿度、水浸传感器、除湿器、行程开关等 Includes temperature and humidity sensor, water sensor, dehumidifier, stroke switch and etc.	1EA
11	辅电系统 Auxiliary system	含微型断路器、开关电源等 Includes micro circuit breaker, switching power	1EA

		supply, and etc.	
12	附属配件 Accessories	专用工具, 专用配件等 Special tools, special accessories, etc.	1EA
13	出厂检验报告 Factory inspection report	测试报告 Test report	1EA
14	产品合格证 Product certificate	关键零部件及整机 Key components and outdoor cabinet	1EA
15	产品包装件 Product packaging	薄膜+纸质外包装 Film + paper packaging	1EA

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.

3. 产品规格 Product Specification

表 2 261kWh 户外柜参数表

Table 2. 261kWh Outdoor Cabinet Parameters

项目 Items		规格参数 Parameters
直流侧 DC side	电芯类型 Cell type	LFP 3.2V/314Ah
	电池 Pack 配置 Pack type	1P52S/52.25kWh
	电池系统配置 Configuration	1P260S
	电池电压范围 Voltage range	DC 728V ~ DC 949V
	电池系统容量 Battery system capacity	261kWh
	放电倍率 Discharge rate	≤0.5P
	循环寿命 Cycle life	≥8000 次@25±3°C, ≥70%EOL ≥8000 times@25±3°C, ≥70%EOL
交流侧 AC side	PCS 功率 PCS rate	125kW
	PCS 冷却方式 PCS cooling method	液冷 Liquid cooling

	交流侧电压 AC side voltage	400V (-15% ~ +10%) 480V (-12%~+10%)
	交流接线方式 AC side connection	三相四线 3W+N+PE
	功率因数 Power factor	-1 (超前) ~1 (滞后) -1 (leading) ~1 (lagging)
	进线方式 Incoming mode	交流底部进线 AC side bottom incoming wires
系统参数 System parameters	热管理方式 Thermal management method	液冷液热 Liquid cooling+ liquid heating
	消防系统 Fire suppression system	主动预警+烟感温感+可燃气体探测 +柜体空间消防+外接水消防+防爆排风+泄爆阀 Active early warning + smoke and temperature sensor + combustible gas detection + cabinet level fire suppression + external water fire suppression + explosion-proof exhaust + blow-off valve
	防护等级 IP rating	IP55
	允许环境温度 Permitted ambient temperature	0~55°C (充电) -20~55°C (放电) 0~55°C (charge) -20~55°C (discharge)
	允许环境湿度 Permitted ambient humidity	0~95%RH (无凝露) 0~95%RH (no condensation)
	噪音 Noise	≤64dB (此项以样机实测数据重新定义) ≤64dB (this may be redefined by actual data of the sample)
	通讯方式 Communication method	LAN/CAN /RS485
	外形尺寸 (长*宽*高) Dimensions (Length*Width*Height)	1020mm×1470mm×2250mm (以实际产品为准) 1020mm×1470mm×2250mm (subject to actual product)
	重量 Weight	约 2700kg (以实际产品为准) Around 2700kg (subject to actual product)
	最大工作海拔	2000m

	Maximum operating altitude	
--	----------------------------	--

4. 产品描述 Product Description

亿纬储能推出的新一代工商业一体式储能柜，融合“All In One”的设计理念，将电池簇（5个PACK）、BMS、PCS、EMS、消防和热管理系统集成在单个标准化机柜，具有占地面积小、可靠性高、安装简易、扩展灵活，运维方便、系统效率高等特点。适用于微电网、备用电源、削峰填谷、分布式新能源消纳、光储充等多场景的应用需求。

The new generation of industrial and commercial integrated energy storage cabinet launched by EVE Energy Co., Ltd. integrates the design concept of "All In One", integrating battery clusters (5 packs), BMS, PCS, EMS, fire suppression system and thermal management system in a single standardized cabinet, with the advantages of economic space occupation, high reliability, easy installation and flexible expansion, easy operation and high system efficiency. This product is mainly applied to scenarios such as microgrid, back-up power, peak shaving and valley filling, distributed renewable energy consumption, and solar energy charge and storage.

工作模式 Operating mode

户外一体柜支持并网和离网两种运行模式。

Outdoor cabinet supports two operating modes: on-grid and off-grid.

(1) 并网运行：在并网状态下，储能柜交流侧连接电网，直流侧内部连接锂电池。根据不同的应用场景，选择的合适运行模式，对锂电池进行恒压、恒流或恒功率充放电。

On-grid operating: at on-grid mode, the AC side of the outdoor cabinet is connected to the power grid, and the DC side is connected to the DC side. According to different application scenarios, DC side can be charged and discharged at constant voltage, constant current or constant power in the appropriate operating mode

(2) 离网运行：在离网状态下，系统可输出固定频率（与电网相匹配）三相交流电压，实现对交流侧负荷的持续稳定供电。

Off-grid operating: at off-grid mode, the system can output three-phase AC voltage with fixed frequency (matching with the power grid) to achieve continuous and stable power supply to the load of the AC side.

4.1 261kWh 户外柜外形尺寸图 Diagram of 261 kWh Outdoor Cabinet Dimensions



尺寸: 1020mm*1470mm*2250mm

Dimenisons: 1020mm*1470mm*2250mm

图 3 电池柜外形尺寸图 (以最终发布产品为准)

Figure 3. Diagram of outdoor cabinet dimensions (subjected to final release product)

4.2 261kWh 户外柜系统布局 Outdoor Cabinet System Layout

电池簇配置: 单套储能柜系统共 1 簇, 每簇 5 个电池箱。单个电池箱内部包含 52 个电芯和 1 个 BMU (电池从控单元), 采集电池箱内部电芯的电压、温度。电池簇与电气舱物理上不在同一封闭空间, 簇内故障无法连锁反应, 热失控、电气火灾等问题可以被有效隔离, 系统安全性得到提升。

Battery cluster configuration: A single set of outdoor cabinet system has 1 cluster; each cluster has 5 battery pack. Each battery pack contains 52 battery cells and one BMU (battery slave control unit) to collect the voltage and temperature of the battery

cells inside the battery pack. Not physically in the same closed space as the electrical cabinet, battery cluster' s failure can not trigger chain reaction. Thermal runaway and electrical fire can be effectively isolated, and the system safety can be improved

表 3 261kWh 户外柜系统部件

Table 3. Outdoor cabinet system components

序号 No.	部件名称 Name	说明备注 Remarks
1	液冷机组 Liquid cooling machine	用于调节储能系统内电池组温度，确保其始终工作在合适温度范围内，以维持系统的最佳工作状态。详细介绍请参考“4.8 液冷机组”。 It is used to adjust the temperature of the battery pack in the energy storage system to ensure that it always works within the appropriate temperature range to maintain the best working condition of the system. Please refer to 4.8 liquid cooling machine for more details
2	双向储能变流器 Power conversion system (PCS)	双向储能变流器，实现电网和蓄电池之间的电能转换，并对交换过程进行监控和管理。详细介绍请参考“4.7 PCS”。 PCS can achieve energy conversion between grid and battery, and monitors and manages the conversion process. Please refer to 4.7 PCS for more details
3	温湿度传感器 Temperature and humidity sensor	采集，测量柜体内温度，湿度等环境参数的传感器装置。 Equipment that collects and measures temperature, humidity and other environmental parameters inside the cabinet.
4	消防系统 Fire suppression system	户外柜内设置了一套气溶胶消防系统，对电池舱的火灾风险有较好的探测和抑制作用。详细介绍请参考“4.9 消防系统”。 Outdoor cabinet has one set of aerosol fire suppression system, which has better detection and suppression effect on the fire risk of the battery cabinet. Please refer to 4.9 fire suppression system for more details
5	辅电系统 Auxiliary system	主回路以外的电源，控制，信号回路的总称。A general term for power, control, and signal circuits outside the main loop
6	温烟感探测器 Temperature and smoke sensor	探测柜内火灾信号，包含但不限于烟雾、温度、可燃气体浓度。Detect fire signal inside the cabinet, include but not limited to smoke, temperature and combustible gas concentration.

7	能量管理系统 Energy Management System (EMS)	户外柜各部件信息的接入汇总，就地显示、就地监控与能量管理单元，对储能系统集中监控与管理。详细介绍请参考“4.11 EMS”。 Access summary of the outdoor cabinet system's component information. Local display, local monitoring and energy management unit, centralized monitoring and management of the energy storage system
8	指示灯 Signal light	显示户外柜内部运行状态，故障不同状态的信号的指示设备 Device that display outdoor cabinet internal operating mode and fault signals indicating different states of the device.
9	控制盒 Control box	控制盒具有电池簇运行信息采集，电池簇回路接触器控制和保护等功能 The control box has the functions of battery cluster operation information collection, battery cluster loop contactor control and protection
10	电池 PACK Battery PACK	由 52 个磷酸铁锂电芯和 1 个 BMU（电池从控单元）及箱体结构件组成，可以储能和释放 52.25KWh 电能。详细介绍请参考“4.5 电池箱”。 Consist of 52 cells and 1 BMU (battery slave control unit) and cabinet's structure member, and can charge and discharge 52.25KWh energy.
11	液冷管路 Liquid cooling pipeline	输送液冷机组冷却液的管网。 Pipeline that deliver coolant of the liquid cooling machine.
12	动力电缆 Power cables	连接 PCS, 电池箱之间的电缆线束。 Cables that connects PCS and battery cabinet.
13	水浸传感器 Water sensor	采用交变电流采集积水的电感参数，准确区分是否发生水浸的传感器装置。 A sensor device that uses alternating current to collect inductance parameters of stagnant water and accurately distinguish whether water-soaked has occurred
14	除湿器 Dehumidifier	通过将空气中水分冷凝排出电柜，迅速降低柜内湿度，有效解除凝露困扰，保障设备安全运行。 By condensing the water in the air and discharging it from the cabinet, the humidity in the cabinet is quickly reduced, and the condensation problem is effectively removed to ensure the safe operation of the equipment

4.3 电池箱 Battery Pack

液冷电池箱由 52 个 MB31 电芯通过 1P52S 成组而成，内部集成 BMU、熔断器、MSD 等组件，电池箱尺寸如下图所示：

Liquid cooling battery pack is consisted of 52pcs MB31 cells with the configuration of 1P52S, and is integrated with BMU, fuse and other components inside. The appearance and dimensions are shown in the following figures:

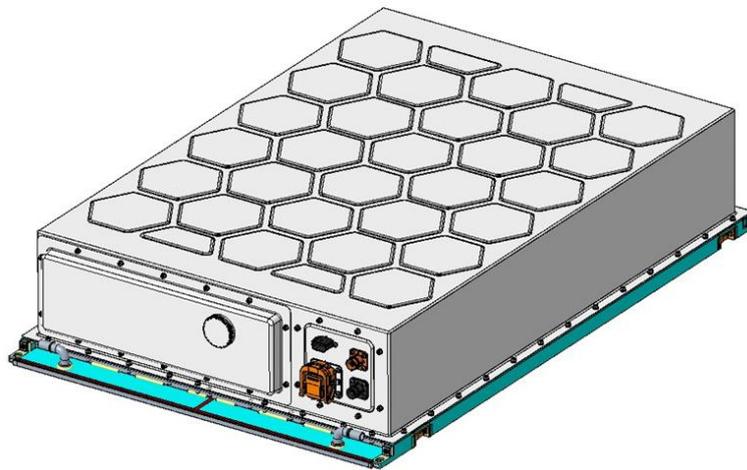
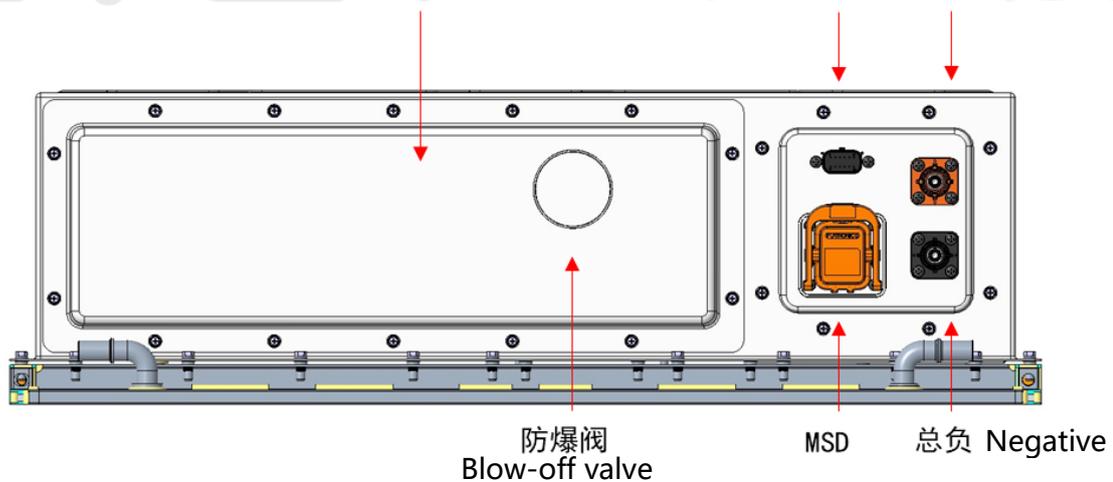


图 4 液冷电池箱外观图

Figure 4. Liquid cooling battery pack appearance

Maintenance window
维修窗口

Communication interface
通信 总正 Positive



防爆阀
Blow-off valve

MSD 总负 Negative

图 5 液冷电池箱接口示意图

Figure 5. The external interface of liquid cooling battery pack (reference only)

4.2 控制盒 Control Box

户外柜控制盒是专门为储能系统设计的控制单元，该控制盒具有电池簇运行信息采集，电池簇回路接触器控制和保护等功能。控制盒内安装电池簇控制主控单元 (BCU)、开关电源等。控制盒在设计时已充分考虑各元器件的电气特性、散热性能、安全性能及可操作维护性，空间布局合理，具有结构紧凑、配置灵活、安全可靠等特点。高压控制箱内置的储能电池簇控制主控单元 (BCU)，具有 CAN、菊花链、485 通讯总线接口，可实现控制盒与储能电池管理模块、储能电池管理系统主机以及储能高压箱之间的通讯功能，实现储能电池簇的控制、保护、和数据通讯功能。

Outdoor cabinet control box is a control unit specially designed for the outdoor cabinet energy storage system. The control box has the functions of battery cluster operation information collection, battery cluster loop contactor control and protection. The battery cluster control unit (BCU) and switching power supply are installed in the control box. In the design of the control box, the electrical characteristics, heat dissipation performance, safety performance and operable maintenance of each component have been fully considered. The space layout is reasonable, and it has the characteristics of compact structure, flexible configuration, safety and reliability. The energy storage battery cluster control master unit (BCU) in the high voltage control box has CAN, Daisy chain and 485 communication bus interfaces, which can realize the communication function between the control box and the energy storage battery management module, the energy storage battery management system host and the energy storage high-voltage box, and realize the control, protection and data communication function of the energy storage battery cluster.

产品功能 Product Functions

(1) 产品辅助电源标配工作电压为 24VDC，满足各种储能场合的需要；

The standard working voltage of the auxiliary power supply is 24VDC, which

meets the needs of various energy storage scenarios.

(2) 产品支持与储能系统电池管理从控模块和总控模块的 CAN 通信，实现电池簇信息的汇总和管理，实现信息的交互；

The product supports CAN communication with the secondary control module and the total control module of the battery management of the energy storage system, so as to realize the summary and management of battery cluster information and realize the interaction of information

(3) 支持与储能变流器的通信控制和干接点控制，支持 CAN 通信方式；

Support communication control and dry contact control with energy storage converter, support CAN communication mode.

(4) 支持外部直流断路器的手动分合闸控制功能；

Support external DC circuit breaker manual switching control function;

(5) 支持数字信号输入检测，可以检测开关状态信号等；

Support digital signal input detection, can detect switch status signals and etc.

(6) 产品具有精确的电池簇运行信息检测和电池簇绝缘状态检测功能；

The product has the function of accurate battery cluster operation information detection and battery cluster insulation status detection;

(7) 产品面板上设计有运行状态指示灯，能直观判别当前运行状态；

The operating status indicator light is designed on the product panel, which can intuitively judge the current operating status

(8) 产品精选高可靠性器件，采用多重冗余保护措施，充分考虑储能系统中可能的严酷的电磁环境以及高温、震动等环境，产品具有高可靠性，高稳定性和高抗干扰性能。

Products selected high-reliability devices and used multiple redundant protection measures. The design fully considers the possibilities of energy storage system may be in harsh electromagnetic environment and high temperature, vibration and other environments. Products have high reliability, high stability and high anti-interference

performance.

4.7 双向储能变流器 Power Conversion System (PCS)

双向储能变流器是电网和电池之间的转换装置，可对电池进行充放电。可以把来自于电池的直流电逆变为可并入电网的交流电，还可以把电网的交流电整流为可充入电池的直流电。双向储能变流器可用于并网模式或离网模式。

Power Conversion System (PCS) is a conversion device between the power grid and the battery, which can charge and discharge the battery. The direct current from the battery can be converted into alternating current that can be incorporated into the grid, and the alternating current from the grid can be rectified into direct current that can be charged into the battery. PCS can be used on-grid mode or off-grid mode.

表 10 PCS 技术参数表

Table 10. PCS parameters

直流侧参数 DC side parameters	
额定功率 Rated power	125kW
最大直流功率 DC side maximum power	137.5kW
直流电压范围 DC side voltage range	700~1000 (700~950 满载 full load) Vdc 680~1000 (680~1000 满载 full load) Vdc
直流最大电流 DC side maximum current	178A
交流参数 (并网) AC side parameters (on-grid)	
额定交流功率 Rated AC power	125kW
接线方式 Wiring method	三相四线 3W+N+PE
工作电压范围 Operating voltage range	340-440 Vac 422.4-528 Vac
允许电压波动范围 Allowable voltage variation range	400V (-15%~ +10%) 480V (-12%~ +10%)
长期工作电流范围 Long-term operating current range	0~198A 0~165A
允许电网频率 Allowable grid frequency	50/60 (-3~+3) Hz
总电流谐波畸变率 THDi	≤3%
功率因数/可调范围 Power factor/ Adjustable range	0.99/-1~1

交流参数 (离网) AC side parameters (off-grid)	
额定输出功率 Rated output power	125kW
额定输出频率 Rated output frequency	50/60Hz 60Hz
交流电压谐波 AC voltage harmonics	<3%
系统参数 system parameters	
最大转换效率 Maximum conversion efficiency	98.6%
允许环境温度 Allowable ambient temperature	-20~50°C
冷却方式 Thermal management	液冷 Liquid cooling
允许相对湿度 Allowable relative humidity	0~95% (无凝露) 0~95% (no condensation)
允许海拔高度 Allowable altitude	≤2000m
通讯参数 Communication parameters	通讯接口 RS 485, Ethernet, CAN Communication interfaces RS 485, Ethernet, CAN
通讯协议 Communication agreement	Modbus TCP/RTU , CAN
BMS 接入 BMS interface	支持 Support

4.8 液冷机组 Liquid Cooling Machine

液冷机组用于调节储能系统内电池组温度，确保其始终工作在合适温度范围内，以维持系统的最佳工作状态。

The liquid cooling machine is used to adjust the temperature of the battery pack in the energy storage system to ensure that it always works within the appropriate temperature range to maintain the best working condition of the system.

4.8.1 液冷机组工作原理 Liquid Cooling Machine Working Principle

储能用液冷式冷水机组,是可以同时对 PACK 和 PCS 进行热管理的一款双水路液冷产品。

Liquid cooling machine for energy storage is a dual-water liquid cooling product that can thermal manage PACK and PCS simultaneously.

4.8.2 液冷机组技术参数 Liquid Cooling Parameters

表 11 液冷机参数表 Liquid cooling parameters

机组 PACK 端参数 Liquid cooling machine PACK side parameters		
序号 No.	技术项目 Technical items	参数 Parameters
1	制冷量 Cooling amount	5.0 kW
2	制热量 Heating amount	2.0kW
机组 PCS 端参数 Liquid cooling machine PCS side parameters		
序号 No.	技术项目 Technical items	参数 Parameters
1	制冷量 Cooling amount	3 kW

4.9 消防系统 Fire Suppression System

本消防系统可分为气溶胶消防系统，防爆排风系统和应急水喷淋。当电池发生热失控导致可燃气体溢出时，防爆排风系统及时响应，进行排风、换气；当发生火情时，消防灭火系统迅速介入，进行探测、报警、灭火等动作；若火情蔓延或发生复燃现象，消防灭火系统无法控制火情时，可接入应急水喷淋进行紧急处置，防止发生爆燃、火灾等严重后果。

This fire suppression system consists of aerosol fire suppression system, explosion-proof exhaust system and emergency water sprinkler. When battery thermal runaway leads to the leakage of combustible gases, the explosion-proof exhaust system responds in time to carry out the actions of detecting, alarming and fire extinguishing, etc. If the fire spreads or occurs again and the fire suppression system is unable to control the fire, the emergency water sprinkler can be turned on in emergency situation to prevent serious consequences such as deflagration and fire disaster.

4.10 辅电系统 Auxiliary system

一体柜在充电运行模式时，由外部交流电给电池充电，液冷机组，消防及辅助电源供电也由外部市电供电。

一体柜在放电模式时，电池放电对外供电。常规情况下，液冷机组、消防及辅助电源供电由电池系统供电由市电提供，无市电情况下，辅电系统的重要设备由锂电池提供，用于保证消防系统以及 BMS、EMS 等系统的正常工作。

When outdoor cabinet operates as the charging mode, batteries are charged by external AC power. Liquid cooling machine, fire suppression system and auxiliary power supply are all supported by external power grid.

When outdoor cabinet operates as discharging mode, batteries discharge for external power supply. Under normal circumstances, liquid cooling machine, fire suppression system and auxiliary power supply are supported by external power grid. Under circumstances that have no external grid power, auxiliary power system's important devices are supported by lithium batteries, to ensure fire suppression system, BMS and EMS operate normally.

4.11 能量管理系统 Energy Management System (EMS)

EMS 本地控制系统具备户外柜的运行状态控制与监控功能，支持户外柜的全部单体电芯、温度数据，以及 PCS、液冷等设备信息接入，全面监控系统运行状态，并且本地数据支持 10 年滚动存储。同时最多支持多组户外柜系统并机统一控制，群调群控功率一键下发，便捷用户操作。

EMS 本地控制系统支持外部电表接入，并内置削峰填谷、智能调峰、防逆流、需量控制、智能光储充等运行策略，全面覆盖工商业储能应用场景，助力用户低成本无人化智能运维。

The Energy Management System (EMS) local control system has the function of controlling and monitoring the operating status of the outdoor cabinet, supporting the access of all cells' temperature data of the outdoor cabinet, as well as equipment information such as PCS and liquid cooling, comprehensively monitoring the

operating status of the system, and the local data supports rolling storage for 10 years. At the same time, a maximum of multiple groups of outdoor cabinet systems can be controlled simultaneously, and the power of group adjustment and group control can be delivered with one key, which is convenient for users to operate.

EMS local control system supports external meter access, and built-in peak shaving and valley filling, intelligent peak load balancing, anti-countercurrent, demand control, intelligent solar energy storage and charging and other operation strategies, fully covering industrial and commercial energy storage application scenarios, to help users with low-cost unmanned intelligent operation and maintenance.

5. 产品使用说明 Product Instructions

(1) 户外柜可以单独使用，也可以多机并联，最多支持 5 柜离网、15 柜并网并联使用；

Outdoor cabinet can be used independently or in parallel. A maximum of 5 cabinets can be in parallel off-grid and 15 cabinets can be in parallel on-grid.

(2) 户外柜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；

Outdoor cabinet must be operated within the specified charge conditions. Charge upper limit voltage should not exceed technical requirements to prevent battery from overcharging. Overcharge will lead the electrical performance, mechanical performance and safety performance of the battery pack to be decreased.

(3) 户外柜必须在规定的放电倍率或功率条件下使用，并且放电下限电压不得超过产品技术要求，防止电池过放电。以免影响电池的充放电性能、机械性能和安全性能；

The battery pack must be operated within the specified discharge conditions, and discharge lower limit voltage should not below technical requirements. Over-discharge will lead the electrical performance, mechanical performance and safety performance of the battery pack to be decreased.

(4) 户外柜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；

Outdoor cabinet must be operated within the specified environment conditions, ambient temperature too high or too low will affect the performance and the safety of the battery.

(5) 户外柜必须在清洁、通风的环境条件下使用或存储，避免与腐蚀性物质接触，并远离火源及热源；

Outdoor cabinet shall be used or stored in clean, dry and ventilated environment. Avoid contact with corrosive substances and keep away from fire and heat sources.

(6) 户外柜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；

Outdoor cabinet shall not be used or stored in strong static electricity and strong magnetic fields to avoid potential safety hazards.

(7) 户外柜安装或接线前，禁止拆下将正负极和通讯插座的防尘盖，避免造成接触短路和接口积灰；

Before the outdoor cabinet is installed or wired, remove the dust cover of positive and negative terminals and the communication socket is prohibited to avoid short circuit and interface dust.

(8) 未经 EVE 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；

Without the permission of EVE, no disassemble or modify are allowed. Otherwise the warranty will be terminated. In this situation, EVE will be free of responsibility for any losses caused by safety accidents.

(9) 不得将电池箱与金属物体混放，避免造成短路，产生安全风险；

Do not mix the outdoor cabinet with metal objects to avoid short circuits and safety risks.

(10) 户外柜必须按照设计状态正立安装或存放，严禁侧放或倒置。

Outdoor cabinet 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.

户外柜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 outdoor cabinet 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) 户外柜长时间搁置或存放时, 应保持在 30% ~ 50%的荷电状态下。

If the battery pack would be stored for a long time, it is recommended to maintain the SOC at 30% ~ 50%.

(2) 户外柜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, 每半年应进行一次充放电循环。

When outdoor cabinet needs to store for long time, it is recommended to supplement the battery every 3 months to prevent over-discharge and loss of power. Charge and discharge the battery every 6 months.

(3) 户外柜长时间运行后, 建议每运行 800 小时进行一次过滤棉清洗, 防止过滤棉堵塞影响通风散热。过滤棉清洗步骤: 用三角钥匙打开百叶窗门, 拆出百叶窗, 可以看到百叶窗后面过滤棉被镂空钣金压板罩起来; 用螺丝刀松掉钣金压板可取出过滤棉, 用高压气枪或高压水枪吹净过滤棉上面的灰尘即可; 再还原装回设备上。

After the outdoor cabinet runs for a long time, you are advised to clean the filter cotton every 800 hours to prevent blockage of the filter cotton and affect ventilation and heat dissipation. Filter cotton cleaning steps: Open the shutter door with the triangular key, remove the shutter, you can see the filter quilt hollow sheet metal plate behind the shutter cover; Use a screwdriver to loosen the sheet metal platen to

remove the filter cotton, and use a high-pressure air gun or water gun to blow the dust on the filter cotton. And put it back on the device

★ 免责声明：本设备应在产品规格书等规定的范围内使用。由于产品需求单位在安装、调试、维修、使用等过程中存在不当行为或用于产品规定的使用范围外等不按规定使用行为造成人员、动物或财产损失，生产厂家不负合同条款上和合同条款以外的责任。

★ Disclaimer: Product shall be used within the scope specified in product specifications. The manufacturer shall be free from liability for any damages to people, animals or property caused by the improper operations in the process of installation, commissioning, maintenance, use, etc., or uses not in accordance with the terms and conditions specified in product specifications.

EVE® 亿纬锂能