	Product Spec. Confirmation	Document: ZBox200 Doc. Version: V1.0 Issue Date: 07-03-2024

Energy storage system equipment Specification

Customer: _____

Product name: Energy storage system

Model: ZBox200

Author	Checked by	Approved by

Customer confirmation	
Customer company:	
Signature	Company signature
Date:	Date:

Battery System Specification

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1. Overview

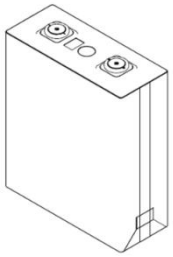
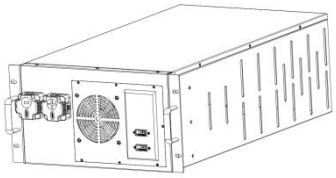
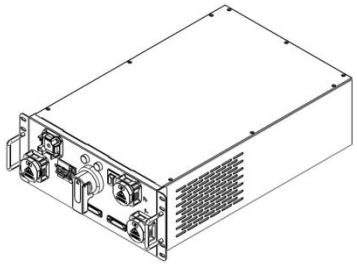
ZBox200 is a Lithium iron phosphate battery which designed for energy storage system. This battery system adopts a modular design and generally consists of two modules: a high-voltage control box and a battery box. And this product has big advantages on safety, cycle life, energy density, fast charging, and environmental protection.

2. Advantages

The battery energy storage system consists of a rack, a high-voltage control box, and battery box.

- Packed with high performance LFP single cell, long life, safety and wide temperature range
- High energy density, small size, light weight, no pollution;
- Adopting a standard 19 inch rack design and modular design;
- Integrated communication interface, CAN2and RS485 communicate with Inverter;
- A high-precision and high-performance battery management system achieves efficient operation;
- Standard pack, easily for installation, rapid deployment and capacity expansion.
- BMS provides complete management and protection for the battery.
- Voltage warning and protection for module and each single cell.
- Current warning and protection, and the maximum operating current can be customized.
- Temperature warning and protection.
- Battery module SOC and SOH calculation, display the accurate battery status.
- Supports maximum 10 battery clusters in parallel, up to 2000kWh

3. Battery parameter

Single cell	Cell Type	LiFePO4 Aluminum shell	
	Rated	3.2V/280Ah	
	Operating voltage range	2.5~3.65V	
	Dimension（T*W*H）	71.7*174.6*207.1	
	Weight	5.55±0.28kg	
	Rated Charging/Discharging rate	0.5C	
Battery module	Module Voltage	51.2V	
	Rated capacity	280Ah	
	Pack	1P16S	
	BMU inside	1set	
	Balance	Active balancing	
	Dimension（W*D*H）	450*750*231mm	
	Weight	~110KG	
	Cooling mode	Air cooling	
	Power Terminal	Plug-in type	
High-Voltage Box	Rated Voltage	DC1000V	
	Rated Current	140A	
	Maximum Current	200A	
	SOC Accuracy	<5%	
	IP Rating	IP20	
	Cooling mode	Natural Air Cooling	

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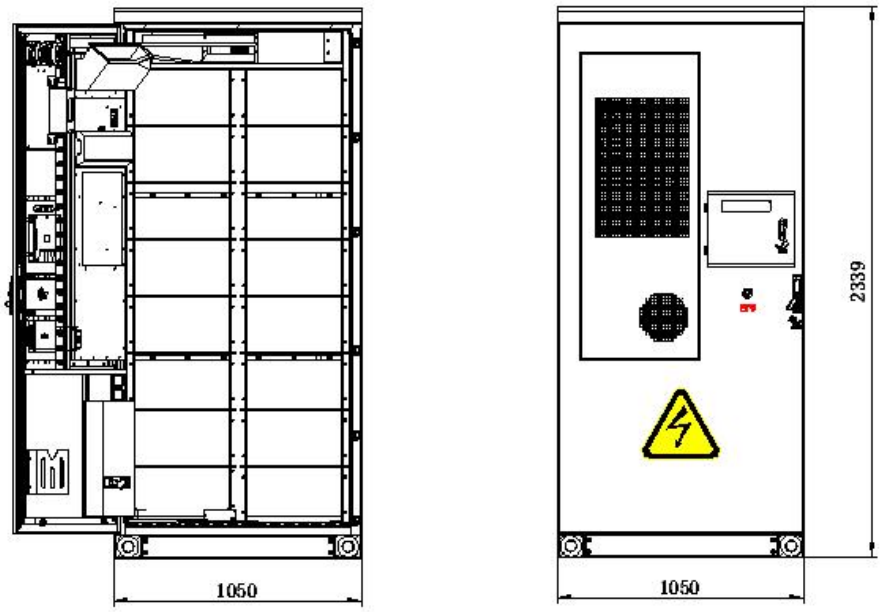
Battery Energy Storage System

Model	ZBox200
Cell Type	LFP/3.2V/280Ah
Battery Module Nominal Voltage	51.2V
Battery Module Energy	14.336kWh
Rated Voltage	768V
Voltage Range	672-864V
Recommend Charge/Discharge Current	140/140A
Rated Energy	215.04kWh
MAX. Charge/Discharge Current	200/200A
Operating Temperature	-20- 55℃
Operating Humidity	5%-95%R.H
Cooling Mode	HVAC
Firefighting System	Smoke + Temperature + Aerosol
Dimension(W*D*H)	1050*1190*2339mm
IP Rating	IP55
Weight	2.3T
Anti-corrosion Grade	StandardC4
Communication port	CAN, RS485, ETH
Parallel	MAX. 10 cabinets
Compliance	IEC62619、 CE,、CE-EMC、UN38.3、UN3480、MSDS

4. Drawings



ZBox200 Cabinet size drawing

5. Packing List

No.	Item	Specification	Number	Remarks
1	LiFePO4 battery pack	51.2V/280Ah battery pack	15	
2	BMU	16S Battery management unit	15	Integrated in the battery pack
3	High voltage box	High voltage box includes BCM	1	

4	HMI	LCD touch screen	1	
5	Power cable	Power cable between battery racks and CBMS	1set	
6	Communication cable	Communication cable between battery module and BMU	1set	
7	User manual	User manual	1	

6. SAFETY

The ZBox200 is a high voltage DC system, operated by skilled/qualified personnel only. Read all safety instructions carefully prior to any work and observe them at all times when working on with the system.

Incorrect operation or work may cause:

- injury or death to the operator or a third party;
- damage to the system hardware and other properties belonging to the operator or a third party.

Skills of Qualified Personnel

Qualified personnel must have the following skills:

- ✓ training in the installation and commissioning of the electrical system, as well as the dealing with hazards;
- ✓ knowledge of this manual and other related documents;
- ✓ knowledge of the local regulations and directives.

Symbol		Definition
	DANGER	Lethal voltage! Battery strings will produce high voltage DC power and can cause a lethal voltage and an electric shock. Only qualified person can perform the wiring of the battery strings.
	WARNING	Risk of battery system damage or personal injury DO NOT pull out the connectors while the system is Operating! De-energize from all multiple power sources and verify that there is no voltage.
	CAUTION	Risk of battery system failure or life cycle reduction.

Danger: Batteries deliver electric power, resulting in burns or a fire hazard when they are short circuited, or wronglyinstalled.

Danger: Lethal voltages are present in the battery terminals and cables. Severe injuries or death may occur if touch the cables and terminals.

Warning: DO NOT open or deform the battery module, otherwise the product will be out of warranty scope

Warning: Whenever working on the battery, wear suitable personal protective equipment (PPE) such as rubber gloves, rubber boots and goggles.

Warning: Battery system working temperature range: -20℃~55℃; Optimum temperature: 18℃~28℃. Out of the working temperature range may cause the battery system over / low temperature alarm or protection which further lead to the cycle life reduction as well as. It will affect the warranty terms as well.

Caution: Improper settings or maintenance can permanently damage the battery.

Caution: Incorrect inverter parameters will lead to a further faulty/damage to battery.

7. Disposal

The batteries may only be disposed of in accordance with the disposal regulations for used batteries applicable at the time of disposal. Immediately decommission any damaged batteries and please contact your installer or sales partner first before disposal. Ensure that the battery is not subjected to moisture or direct sunlight. Ensure quick removal by your installer or ZETARA.

①Batteries, including rechargeable batteries, may not be disposed of in household waste. You are legally obligated to return used batteries.

②Used batteries may contain pollutants that can damage the environment or harm your health if they are not stored or disposed of properly.

③Batteries also contain important raw materials such as iron, zinc, manganese, copper, cobalt or nickel and can be recycled.

Do not dispose of batteries in household waste!