



PRODUCTS INTRODUCTION

FR Electric(Zhe Jiang)Co.,Ltd.



PRODUCT CATALOG



Liquid Cooling PACK



Air Cooling PACK



Liquid Cooling ALL-in-One



Air Cooling ALL-in-One



Liquid Cooling BESS



5MWH BESS



PCS



PCS Combined Transformer



BATTERY PACK



PACK SPECIFICATION-Liquid Cooling

Battery Cell Specifications	280Ah	314Ah
Connection Mode	1P52S	1P52S
Rated Voltage	166.4V/130-189.8V	166.4V/130-189.8V
Rated Energy	46.592kWh@25°C	52.249kWh@25°C
Cooling	Liquid Cooling	Liquid Cooling
Dimensions (W*H*D)	802*247*1160mm	802*247*1160mm
Weight	330Kg	346kg
Charge/Discharge Ratio	0.5C	0.5C
Max. Rack Voltage	1500V	1500V



PACK SPECIFICATION-Air Cooling

Battery Cell Specifications	LFP 3.2V/280Ah	LFP 3.2V/314Ah
Connection Mode	1P20S	1P20S
Rated Voltage	64V/50-73V	64V/50-73V
Rated Energy	17.92kWh@25°C	20.08kWh@25°C
Cooling	Air Cooling	Air Cooling
Dimensions (W*H*D)	456*230*911mm	456*230*911mm
Weight	114kg	120kg
Charge/Discharge Ratio	0.5C	0.5C
Max. Rack Voltage	1500V	1500V

All-in-One BESS



Liquid Cooling BESS
FRES200-L10-261



Liquid Cooling BESS
FRES200-L20-418

Application Scenarios



C&I Power Station



PV Storage & Charging Station



Microgrid



Power Distribution Area Capacity Increase

Features Introduction



Extraordinary Safety

- Cell-level thermal control for ultra-stability;
- Proactive monitoring + Multi-stage explosion-proof protection;



Flexible Deployment

- AC/DC integrated design, Ultra-compact & LV-ready
- Single-cabinet autonomy, Multi-unit scalable power



Economical and Efficient

- Per-string design, Parallel zero-loss
- 92% system efficiency
- Long-life & high-safety cells
- 25% less aux. power by smart thermal control



Smart and User-Friendly

- Multi-mode & multi-scene
- Web/APP remote O&M
- AI-driven ROI boost
- Wind/PV compatible & future-proof

Technical Parameters

Product Model	FRES200-L10-261	FRES200-L20-418
Cell Type	LFP 3.2V/314Ah	LFP 3.2V/314Ah
Rated Energy	261kWh	418kWh
RACK Configuration	1P260S	1P416S
Rated Power	135kW	220kW
Grid Rated Voltage	400V	690V
Maximum Efficiency	92%	
Charge/Discharge Rate	0.5	
Depth of Discharge	0-99%	
Cycles	>8000&EOL70%	
Protection Grades	IP54	
Cooling	Liquid-cooling	
Fire Protection	Active Warning + Aerosol + PACK-Level	
Size W*D*H	1040*1300*2270mm	1400*1400*2270mm
Weight	≈2528kg	≈3704kg

All-in-One BESS



Air Cooling BESS
FRES200-A10-241



Air Cooling BESS
FRES200-A11-313

Application Scenarios



C&I Power Station



PV Storage & Charging Station



Microgrid



Power Distribution Area Capacity Increase

Features Introduction



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Smart and User-Friendly

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- Web/APP remote O&M
- AI-driven ROI boost
- Wind/PV compatible & future-proof

Technical Parameters

Product Model	FRES200-A10-241	FRES200-A11-313
Cell Type	LFP 3.2V/314Ah	LFP 3.2V/314Ah
Rated Energy	241kWh	313kWh
RACK Configuration	1P240S	1P312S
Rated Power	122kW	110kW
Grid Rated Voltage	400V	
Maximum Efficiency	92%	
Charge/Discharge Rate	0.5	0.3
Depth of Discharge	0-99%DOD	
Cycles	>8000次&EOL70%	
Protection Grades	IP54	
Cooling	风冷	
Fire Protection	主动预警+气溶胶	
Size W*D*H	1150*1300*2270mm	1040*1400*2270mm
Weight	≈2572kg	≈3300kg

Application Scenarios & BESS Value



Eight high energy consumption enterprises & Various application scenarios



Non-ferrous Industry



Chemical Industry



Iron and Steel Industry



Construction Materials



Petrochemical Industry



Papermaking Industry



Textile Industry



Equipment Manufacturing

Factory

Industrial Park

Office Building

School , Hospital

Charging Station

Isolated Island

Remote Area

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Peak-valley Arbitrage

The energy storage system charges when the power price is low and discharges the load when the power price is high, which saves costs and benefits for C&I customers.



Factory



Industrial Park



Office Building

Demand Management

The energy storage system automatically discharges to reduce the transformer load when the real-time power exceeds the demand to ensure that the power does not exceed the limit to reduce electricity costs.



Factory



Industrial Park



Office Building

Dynamic Capacity Increase

The energy storage system can be employed to delay the problem of insufficient transformer capacity and reduce the costs of transformer expansion.



Factory



Charging Pile

Demand Side Response

Users respond to the power grid command, temporarily adjust the power consumption situation in a planned way to promote the stability of the power system and obtain subsidies.



Factory



Industrial Park

Power Quality Improvement

The energy storage system responds to emergency active power output to solve frequency fluctuations and provides voltage support to cope with dips or interruptions.



Factory



Industrial Park



Office Building

PV Storage & Charging Microgrid

The energy storage system, photovoltaic, charging pile, etc., they are together to build a microgrid, the energy storage system stores the photovoltaic energy and discharges during the charging peak to charge the electric vehicle.



Charging Pile



Isolated Island



Remote Area

Project Cases-User Side



* Only recent cases are presented. For more project sharing, please pay attention to Faro' s public WeChat



📍 Holland 1260KW/2580KWh



📍 Jiangsu Kunshan 5000kW/10750kWh



📍 Zhejiang Zhuji 1992kW/5568kWh



📍 Jiangsu Haian 1200kW/2580kWh



📍 Shanghai 1620kW/3132kWh



📍 Jiangsu Haian 5900kW/14219kWh

Project Cases-User Side



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📍 Jiangsu Nantong 400kW/964kWh



📍 Zhejiang Jiaxing 488kW/964kWh



📍 Zhejiang Lishui 900kW/1935kWh



📍 Zhejiang Hangzhou 1100kW/2365kWh



📍 Zhejiang Jinhua 800kW/1720kWh



📍 Zhejiang Zhuji 800kW/1720kWh

Project Cases-User Side



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📍 Jiangsu Suzhou 400kW/1290kWh



📍 Jiangsu Nantong 3200kW/9890KWh



📍 Jiangsu Nantong 800kW/2580kWh



📍 Zhejiang Hangzhou 1400kW/3010kWh



📍 Jiangsu Huaian 800kW/2580kWh



📍 Zhejiang Jiaxing 2970kW/5805kWh

5MWH BESS



Features Introduction

Extraordinary Safety

- Safety isolation between PCS and battery cabinets;
- Proactive alerts with multi-stage fire protection;

Economical and Efficient

- Electrical system optimized: 92% efficiency;
- Long-life safe batteries: 25% energy saving with smart temperature control;

Flexible Deployment

- Multiple pre-installed interfaces enable efficient handling and installation;
- IP54 rating ensures reliable operation in diverse harsh environments;

Smart and User-Friendly

- Multi-mode & multi-scene
- Web/APP remote O&M
- AI-driven ROI boost
- Wind/PV compatible & future-proof

Technical Parameters

Product Model	FRES100-L20-5016
Cell Type	LFP 3.2V/314Ah
Rated Energy	5016kWh
Nominal Voltage	1331.2V
Voltage Range	1165V~1498V
RACK Configuration	12P416S
Depth of Discharge	0-99%DOD
Cycles	>8000次&EOL70%
Protection Grades	IP54
Cooling	Liquid-Cooling
Fire Protection	Heptafluoropropane or perfluorohexanone
Communication	RS485、CAN、Ethernet
Size W*D*H	6058*2438*2896mm
Weight	< 40T



Technical Parameters

Product Model	FRP0100C-1A-A	FRP0130C-1A-A	FRP0130C-1A-B	FRP0130C-1A-C
DC Parameter				
Rated Voltage	768V	1000V	768V	832V
Voltage Range	600-1500V			
Maximum Current	230A			
AC Parameter				
Rated Power	100kW	110kW	122kW	135kW
Maximum Power	120kW	132kW	146kW	162kW
Rated Voltage	400V			
Rated Voltage Range	360-440V			
Maximum Current	173A	190A	211A	234A
Rated Frequency	50Hz			
Power Factor	-1 ~ +1			
Current Distortion Rate	< 4%			
System Parameter				
Maximum Efficiency	98%			
Connection Mode	3L/N/PE			
Altitude	4000m （> 4000m Derating）			
Operating Temperature	-25~+60℃（>50℃ Derating）			
Operating Humidity	0~100%			
Cooling	Air-cooling			
Protection Grades	IP54			
Communication	CAN/RS485/Ethernet			
Size（W*H*D）	800*300*1050mm			
Weight	206kg			
Installation	Rack Installation			
Integrated High Voltage Box Fusion	Integrated			

Features Introduction

CostCut & BoostPro

- Perfectly matched 280/314Ah cell system
- High power density and high conversion efficiency, zero battery decay

Efficient and flexible

- Cluster-level management
- 3p3w/4w self-adaptive
- Modular design,tool-free Install & easy maintenance

Intelligent control

- High-efficiency smart fan speed control for enhanced cooling
- Smart distribution with programmable multi-mode operation

Intelligent and friendly

- EMS/BMS integration & active power conditioning
- Real-time monitoring | alerts | fault location

PCS Combined Transformer



Technical Parameters

DC Parameters	Product Model	FRP2500I-2A
	Max.DC Voltage	1500V
	Voltage Range	1040~1500V
	Max.DC Current	1322A*2
AC Parameters	Rated Power	2500kW
	Max. Power	2750kVA
	Rated Voltage	690V
	Voltage Range	621~759V
	Max.AC Current	2302A
	Rated Frequency	50Hz/60Hz
	Power factor	-1~+1
	Current Distortion Rate	<4%
Transformer parameter	LV / MV Voltage	0.69kV / 6kV~35kV
	Short-Circuit Impedance	6%~8%
	No-Load Current	≤0.70%
	No-Load Loss	≤2.05kW
	Load Loss	≤15.445kW
	Insulation Class	F(155°C)
	Power Frequency Withstand	(35/3)
System parameter	Maximum Efficiency	97%
	Connection Mode	Dyn11/Yd11
	Operating Altitude	4000m (> 4000m Derating)
	Operating Temperature	-35°C~+65°C(> 55°C Derating)
	Operating Humidity	0~100%
	Cooling	Air cooling
	Weight	IP54
	Communication	CAN/RS485/Modbus/Ethernet
	Size (W*D*H)	600*1050*2269mm
	Weight	1.6T

Features Introduction



Efficient Transformation

- Three-level topology 99% Eff. (max)
- Air-cooling @45°C w/o derating
- Wide Vdc (1500V full load)



Safe and Reliable

- IP54-rated
- 250kA DC SCCR
- BMS/EMS integration: Multi-protection



Flexible Application

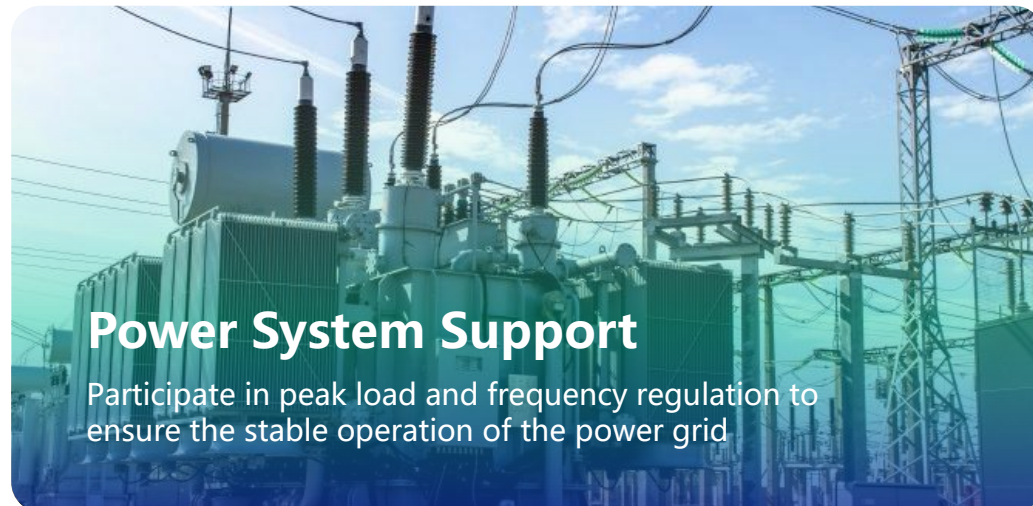
- Quad-operation with battery mode
- 100+ MW in VSG/VF/PQ modes
- Islandable & black-start grid support



Grid Support

- Prim. freq. + source-grid-load
- SCR=1.02 operation
- IEC61850 & <20ms response

Application Scenarios



Project Case – Generation Side



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Gansu Jinchang Photovoltaic Energy Storage Project

Capacity of energy storage: 40MW/80MWh

Features of energy storage: The project aims to improve the utilization rate of renewable energy, promote the development of clean energy and meet the needs of power grid peak regulation, backup and stable operation.



Gannan Photovoltaic Energy Storage Project

Capacity of energy storage: 9MW/18MWh

Features of energy storage: The project has the advantages of optimizing energy structure, stabilizing power grid operation, realizing energy peak shaving and valley filling, improving power supply reliability, reducing energy costs and promoting the development of renewable energy.

Dedicate to the efficient and safe storage and management of electrical energy

FR Electric(Zhe Jiang)Co.,Ltd



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