



索光而生·乐储致远

Live on Light, Forward Sustainably

光储系统解决方案及产品手册

Light storage system solutions and product manual

杭州索乐光电有限公司

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杭州索乐光电有限公司

HANGZHOU SOLAR PHOTOELECTRICITY CO.,LTD.

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公司致力成为全球领先的智慧能源、智慧城市服务商

创立于
2005年

海外合作伙伴
40+

注册资本
10,010万(元)

三大发展方向



以光伏组件为核心

实现可再生能源的获取



以储能系统为核心

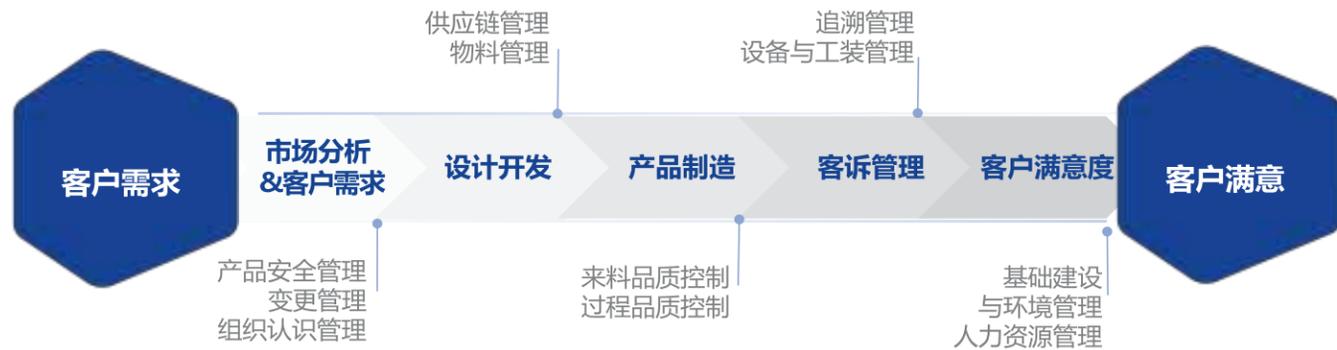
实现多场景多能互补



以智能化周边为核心

实现市场应用的集成创新

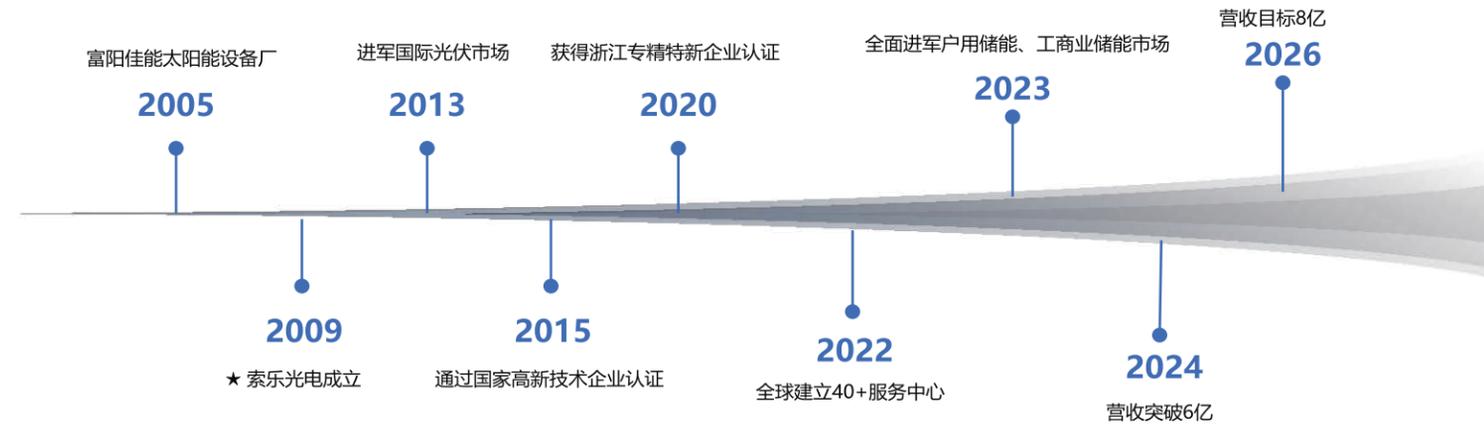
研发能力



质量与环境



发展历程



市场运维



海外地区 深切了解客户需求，为客户提供**24h*7**全球响应全面细致的技术服务



100+
服务网点覆盖城市



40+
服务网点数量



服务网点
+ 物流网络
+ 备件中央仓
+ 旧件回收



现场维修
+ 赋能自修+客户培训
+ 远程诊断咨询+备件/工具支持
+ 质保期内免费定期巡检

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Floor-standing DC backup power supply

1260



 **IP54 protection**
Corrosion-resistant metal materials

 **Safer to Use**
High-density LiFePO4 battery

 **Long battery life**
≥3000 cycle life (DOD 80%)

 **0.77kWh capacity**
To meet more electricity needs

 **Stable & Reliable**
Advanced BMS management

 **Widely Compatible**
compatible with mainstream inverters

Model		1260
Main parameters of the battery pack		
Cell type	LFP	
Nominal voltage	12.8V	
Nominal capacity	60Ah@0.5C	
Maximum number of modules in parallel	/	
Operating voltage range	11 ~ 14.6V	
Nominal energy	0.77kWh	
Charging/Discharge current	Recommended	25A
	Max	50A
	Peak value	60 (3S)
Other battery pack parameters		
Recommended discharge depth	80%	
Size (W*H*D)	210*208.5*135mm	
Weight	6.84kg	
display screen	LED	
Level of protection	IP54	
Charging temperature	0°C ~ +50°C	
Discharge temperature	-20°C ~ 60°C	
Storage temperature	0 ~ 45°C	
Humidness	10% ~ 85%	
Attitude	≤3000m	
Cycle life	≥3000 (25°C ,0.5C Charging and discharging ,80%DOD)	
Cooling mode	Natural cooling	
Installation mode	Floor mounted	
Box material	Metal plate	
Connector	USB/DC	
Working Life	>5years	
Reference standard	GBT36276-2023, IEC62619	
Transport standard	UN38.3	

Floor-standing DC backup power supply

12100



 **IP54 protection**
Corrosion-resistant metal materials

 **Safer to Use**
High-density LiFePO4 battery

 **Long battery life**
≥ 6000 cycle life (DOD 80%)

 **1.28kWh capacity**
To meet more electricity needs

 **Stable & Reliable**
Advanced BMS management

 **Widely Compatible**
compatible with mainstream inverters

Model		12100
Main parameters of the battery pack		
Cell type	LFP	
Nominal voltage	12.8V	
Nominal capacity	100Ah@0.5C	
Maximum number of modules in parallel	4pcs	
Operating voltage range	11~14.6V	
Nominal energy	1.28kWh	
Charging/Discharge current	Recommended	50A
	Max	100A
	Peak value	110A(10S)
Other battery pack parameters		
Recommended discharge depth	80%	
Size (W*H*D)	300*206*150mm	
Weight	12kg	
LCD display screen	Key screen	
Level of protection	IP54	
Charging temperature	0°C~ 50°C	
Discharge temperature	-20°C~ 60°C	
Storage temperature	0~45°C	
Humidness	10%~85%	
Atitude	≤3000m	
Cycle life	≥6000 (25°C ,0.5C Charging and discharging ,80%DOD)	
Cooling mode	Natural cooling	
Installation mode	Floor mounted	
Box material	Metal plate	
Communication mode	Bluetooth	
Working Life	>5years	
Reference standard	GBT36276-2023, UL9540, IEC62619	
Transport standard	UN38.3	

Floor-standing DC backup power supply

12300



 **IP54 protection**
Corrosion-resistant metal materials

 **Safer to Use**
High-density LiFePO4 battery

 **Long battery life**
≥6000 cycle life (DOD 80%)

 **3.8kWh capacity**
To meet more electricity needs

 **Stable & Reliable**
Advanced BMS management

 **Widely Compatible**
compatible with mainstream inverters

Model		12300
Main parameters of the battery pack		
Cell type	LFP	
Nominal voltage	12.8V	
Nominal capacity	295Ah@0.2C	
Maximum number of modules in parallel	4 pcs	
Operating voltage range	11V ~ 14.6V	
Nominal energy	3.8kWh	
Charging/Discharge current	Recommended	100A
	Max	150A
	Peak value	180A(3S)
Other battery pack parameters		
Recommended discharge depth	80%	
Size (W*H*D)	380mm*224.5*250mm	
Weight	31kg	
LCD display screen	Key screen	
Level of protection	IP54	
Charging temperature	0°C ~ 50°C	
Discharge temperature	-20°C ~ 60°C	
Storage temperature	0 ~ 45°C	
Humidness	10% ~ 85%	
Attitude	≤3000m	
Cycle life	≥6000 (25°C, 0.3C Charging and discharging, 80%DOD)	
Cooling mode	Natural cooling	
Installation mode	Floor mounted	
Box material	Metal plate	
Communication mode	Bluetooth	
Working Life	≥8years	
Reference standard	GBT36276-2023, UL9540, IEC62619	
Transport standard	UN38.3t	

Stacked type DC energy storage battery

24120



Model		24120
Main parameters of the battery pack		
Cell type		LFP
Nominal voltage		25.6V
Nominal capacity		120Ah@0.5C
Maximum number of modules in parallel		8pcs
Operating voltage range		20V~29.2V
Nominal energy		3KWh
Charging/Discharge current	Recommended	50A
	Max	100A
	Peak value	110A(1S, 25°C)Overcurrent protection value
Other battery pack parameters		
Recommended discharge depth		80%
Size (W*H*D)		490mm*135mm*440mm
Weight		24kg
LCD display screen		5*LED(SOC20%~SOC100%)
Level of protection		IP54
Charging temperature		0°C~50°C
Discharge temperature		-20°C~ 60°C
Storage temperature		0~45°C
Humidness		10%~85%
Atitude		≤3000m
Cycle life		≥6000 (25°C, 0.5C Charging and discharging, 80%DOD)
Cooling mode		Natural cooling
Installation mode		Stacked
Box material		metal plate
Communication mode		UART
Working Life		>5years
Reference standard		GBT36276-2023,UL9540,IEC62619
Transport standard		UN38.3

 **IP54 protection**
Corrosion-resistant metal materials

 **Safer to Use**
High-density LiFePO4 battery

 **Long battery life**
≥6000 cycle life (DOD 80%)

 **3kWh capacity**
To meet more electricity needs

 **Stable & Reliable**
Advanced BMS management

 **Widely Compatible**
compatible with mainstream inverters

Stacked type DC energy storage battery

DW48105



Model		DW48105
Main parameters of the battery pack		
Cell type	LFP	
Nominal voltage	48V	
Nominal capacity	105Ah@0.5C	
Maximum number of modules in parallel	15pcs	
Operating voltage range	41.25V ~ 54.75V	
Nominal energy	5kWh	
Charging/Discharge current	Recommended	50A
	Max	100A
	Peak value	120A(3S)
Other battery pack parameters		
Recommended discharge depth	80%	
Size (W*H*D)	490mm*170mm*527.5mm	
Weight	47kg	
LCD display screen	LCD segment code screen	
Level of protection	IP54	
Charging temperature	0°C ~ 50°C	
Discharge temperature	-20°C ~ 60°C	
Storage temperature	0 ~ 45°C	
Humidness	10% ~ 85%	
Attitude	≤3000m	
Cycle life	≥6000 (25°C, 0.5C Charging and discharging, 80%DOD)	
Cooling mode	Natural cooling	
Installation mode	Stacked	
Box material	Metal plate	
PCS communication mode	RS485(Standard) or CAN	
BMS Parallel communication	RS485	
Working Life	>5years	
Reference standard	GBT36276-2023, UL9540, IEC62619	
Transport standard	UN38.3	

 **IP54 protection**
Corrosion-resistant metal materials

 **Safer to Use**
High-density LiFePO4 battery

 **Long battery life**
≥6000 cycle life (DOD 80%)

 **5kWh capacity**
To meet more electricity needs

 **Stable & Reliable**
Advanced BMS management

 **Widely Compatible**
compatible with mainstream inverters

Wall-mounted DC energy storage battery



Model		BG48105
Main parameters of the battery pack		
Cell type		LFP
Nominal voltage		51.2V
Nominal capacity		105Ah@0.5C
Maximum number of modules in parallel		15pcs
Operating voltage range		44V ~ 58.4V
Nominal energy		5.3kWh
Charging/Discharge current	Recommended	50A
	Max	100A
	Peak value	120A(3S)
Other battery pack parameters		
Recommended discharge depth		80%
Size (W*H*D)		480mm*645mm*155mm
Weight		48kg
LCD display screen		LCD segment code screen
Level of protection		IP54
Charging temperature		0°C ~ 50°C
Discharge temperature		-20°C ~ 60°C
Storage temperature		0 ~ 45°C
Humidness		10% ~ 85%
Atitude		≤3000m
Cycle life		≥6000 (25°C,0.5C Charging and discharging, 80%DOD)
Cooling mode		Natural cooling
Installation mode		Wall-mounted
Box material		Metal plate
PCS communication mode		RS485(standard) or CAN
BMS Parallel communication		RS485
Working Life		>5years
Reference standard		GBT36276-2023, UL9540, IEC62619
Transport standard		UN38.3

 **IP54 protection**
Corrosion-resistant metal materials

 **Safer to Use**
High-density LiFePO4 battery

 **Long battery life**
≥6000 cycle life (DOD 80%)

 **5.3kWh capacity**
To meet more electricity needs

 **Stable & Reliable**
Advanced BMS management

 **Widely Compatible**
compatible with mainstream inverters

HZS-H系列储能系统

HZS -H Series Energy Storage System

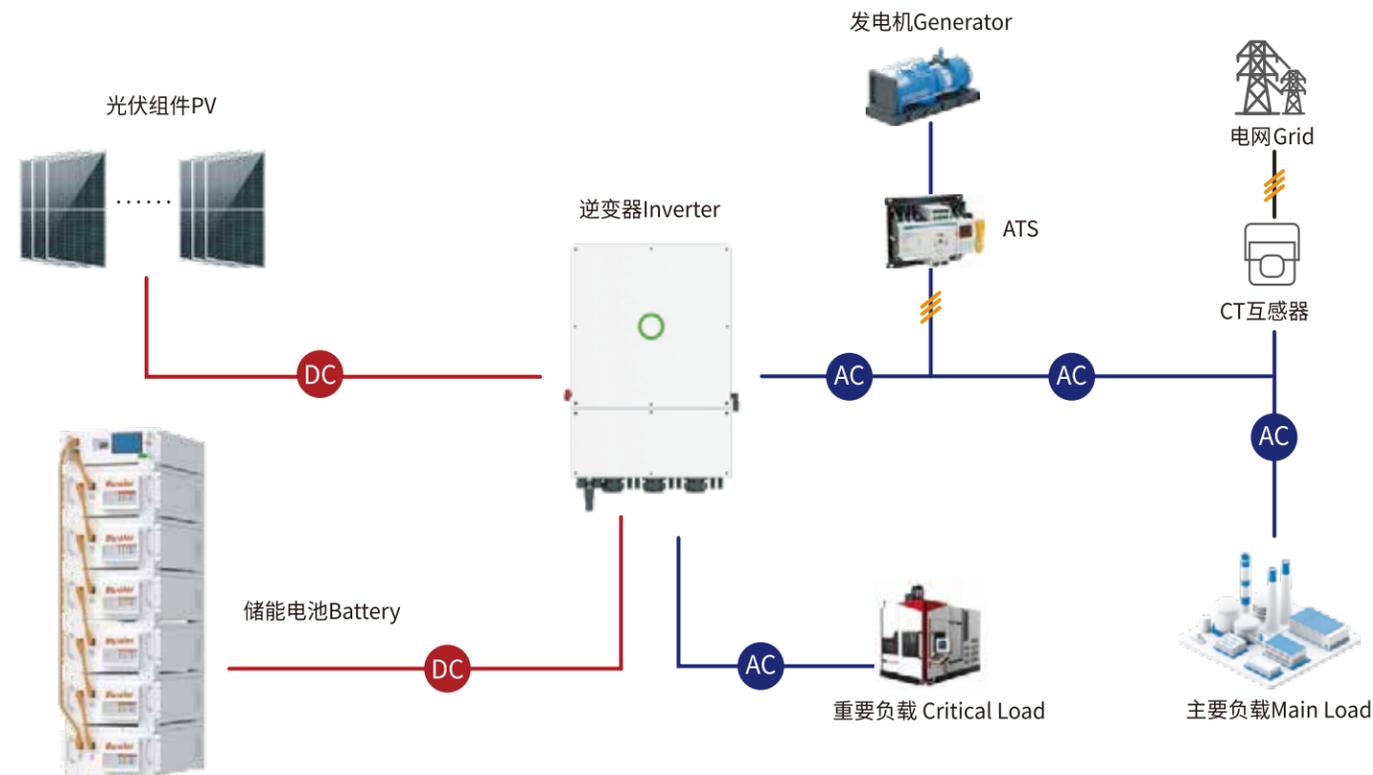
Hzrolar 索乐光电

Hzrolar 索乐光电



This air-cooled DC energy storage cabinet offers a cost-effective solution for small and medium-sized industrial and commercial applications. Featuring high-safety lithium iron phosphate cells in innovative configurations (1P18S×6, 1P18S ×8, 1P18S×10, 1P18S×12), it delivers extended lifespan through compact design with minimal footprint, enabling flexible indoor deployment. Compatible with mainstream inverters, the unit comes standard with WiFi remote maintenance interfaces and communication ports (RS485/TCP/CAN), significantly reducing installation and long-term operation.

产品方案 Product Program



技术参数 Technology Parameters

规格型号 Model	HZS-H30-108	HZS-H50-144	HZS-H50-180	HZS-H50-216
光伏输入(推荐) PV Input(Recommended)				
最大光伏功率 Max PV power	60kW		100kW	
产品指标 Product Indicators				
额定功率 Max PV Power	30kW		50kW	
额定交流输出电压范围 Rated AC Output Voltage/Range	3+N+PE,380/400VAC		3+N+PE,380/400VAC	
额定输出频率范围 Rated Output Frequency/Range	50 Hz: 45-55; 60 Hz: 55-65		50 Hz: 45-55; 60 Hz: 55-65	
电池最大充放电电流 Battery Max. Charging/Discharging Current	150A		150A	
电池电压范围 Battery Voltage Range	180-800VDC		180-800VDC	
额定电网交流输入电压 Rated AC Input(On grid)Voltage	3+N+PE 380/400/415VAC		3+N+PE 380/400/415VAC	
额定电网输入频率 Rated Input(On grid)Frequency	50Hz,60Hz		50Hz,60Hz	
产品指标 Product Indicators				
电芯类型 Cell Type	LFP314Ah			
配置 Configuration	1P18S*6	1P18S*8	1P18S*10	1P18S*12
系统电量 Rated Energy(kWh)	108kWh	144kWh	180kWh	216kWh
额定充放电倍率 Charge/Discharge Rate	≤0.33P			
电芯温差 Cell Temperature Difference	≤5°C			
电芯温升 Cell tem Perature Rise	≤10°C			
标准电压 Nominal Voltage	345.6V	460.8V	576V	691.2V
工作电压范围 Working Voltage	291.6V~388.8V	388.8V~518.4V	486V~648V	583.2V~777.6V
充放电深度 Charge/Discharge Depth	90%DOD (推荐Recommend)			
热管理方式 Thermal Management	风冷Air-cooled			
循环次数 Cycle Life	≥4500times			
柜体尺寸(宽*深*高) Size	PACK:534*780*240mm		高压箱PDU:534*780*170mm	
重量 Weight (Kg)	PACK:125kg		高压箱PDU:25kg	
通讯方式 Communication Mode	RS485、TCP、CAN (推荐Recommend)			
电池防护等级 IP Grade	IP 32			
工作温度 Working Temperature	充电 Charging:0~+55°C,放电 Discharge:-20~+60°C			
工作海拔 Altitude Limited(m)	≤3000m			
参照标准 Reference Standard	GB/T36276、IEC62619			
远程运维 Remote Operation and Maintenance	WiFi			



Key Strengths

- ! Internal integration PV interfaces, battery interfaces, load interfaces and grid interfaces.
- ! Support single-phase and three-phase load power supply at the same time.
- ! Easy expansion, support PV flexible configuration.
- ! When the battery is depleted, it supports grid connected photovoltaic function.
- ! DC-coupled solution with 2% higher system efficiency.
- ! Control power AC and DC redundant power supply, the system is more secure and reliable.

Applications



HZS Microgrid

Model	HZS0050	HZS0100	HZS0250	HZS0500
AC(on-grid)				
Max output power(KVA)	55	110	275	550
Rated output power(KW)	50	100	250	500
Rated votage(V)	400			
Votage range(V)	320~460			
Rated current(A)	72	144	361	722
Rated frequency (Hz)	50/60			
Rated frequency range(Hz)	45~55/55~65			
THDi	<3%			
Power factor	1 leading~ 1 lagging (Optional)			
AC connection form	3W+N+PE			
Isolation transformer	200/400	270/400	270/400	315/400
AC(off-grid)				
Max output power(KVA)	55	110	275	550
Rated output power(KW)	50	100	250	500
Rated votage(V)	400			
Rated current(A)	72	144	361	722
THDu	≤1% Linear; or ≤5% nonlinear			
Rated frequency(Hz)	50/60			
Overload capacity	110%			
PV input				
Max PV input voltage(V)	1000			
Max PV power(KW)	60/120	120/180/240	300/360	600/660/720
MPPT number	1/2	2/3/4	5/6	10/11/12
MPPT voltage range	250-850			
MPPT full load voltage range	450-850			
Battery				
Battery voltage range(V)	320~850	420~850	420~850	500~850
Max charging power(KW)	60/120	120/180/240	300/360	600/660/720
General parameter				
Dimension (W/D/H)(mm)	800*800*1900	1200*800*2050	(600*720*2050)*1+ 1200*800*2050	(600*720*2050)*2+ 1600*1050*2050
Net weight(kg)	720/750	1120/1150/1180	1980/2010	3265/3295/3325
Ambient temperature(C)	-30~55			
Relative humidity	0~95% non-condensing			
Protective grade	IP20			
Noise level(dB)	< 70			
Altitude	5000m(>3000 derating)			
Cooling mode	Air cooling			
Display and Communication				
Display	LCD touch screen			
BMS communication interface	RS485/CAN			
Local communication	RS485,TCP/IP			
Certificate	EN62109-1/-2、EN62477-1、EN61000-6-2、EN61000-6-4、South Africa NRS097-2-1:2017、Pakistan&India IEC61727,IEC62116,IEC61683			

Energy Storage Battery Cabinet



The energy storage battery cabinet serves as the energy storage component of the energy storage system. The cabinet is designed to standard specifications, integrating a battery system, high-voltage system, temperature control system, and fire protection system. It has passed the UL9540A, the industry's highest standard for battery thermal runaway safety certification. A single energy storage system can be configured with multiple battery cabinets, each independently connected to the power conversion modules inside the power cabinet, eliminating the risk of circulating currents. The battery cabinet is compact, with a capacity that can be flexibly configured, facilitating distributed deployment.

Product Features



Flexible Configuration

- Outdoor cabinet design with a small footprint, allowing for distributed or centralized deployment based on actual needs.
- Flexible single-cabinet capacity selection, more suitable for commercial and industrial energy storage application scenarios.



Independent Branch Input

- Each battery cluster (single cabinet) is independently matched with a set of power conversion devices, and multiple battery cabinets correspond to multiple sets of power conversion devices within the power cabinet, eliminating the risk of circulating current issues.



Reliable Safety

- The cabinet is designed with IP55 protection, featuring industrial air conditioning for constant temperature control.
- A four-tier fire protection system ensures the safe and stable operation of the battery system.
- The small-capacity design of the battery cabinet with physical isolation allows for controllable faults.
- Certified to meet UL9540A safety standards.



Intelligent and Efficient

- The intelligent zonal thermal management system reduces the temperature difference within the cabinet, extending the battery's operational life.
- The open and flexible software architecture is easier to match with different application scenarios.
- The SOS graded management algorithm provides real-time battery health checks to ensure the safe operation of the battery system.

Technical Specifications

Category	215KWh DC cabinet
Environmental Conditions	
Operating Temperature	-20℃~+50℃
Relative Humidity	≤95% (no condensation)
Altitude	≤2000m (derated above 2000m)
Basic Parameters	
Battery Type	Lithium Iron Phosphate (LFP) / 280Ah
Rated Capacity	215KWh
Rated Voltage	768Vdc
Operating Voltage Range	672Vdc-864Vdc
Number of Battery Packs	15
Battery Cell Charge and Discharge Cycles	≥6000 cycles
Rated Charging Current	140A (0.5C, actual depends on system control strategy)
Rated Discharging Current	140A (0.5C, actual depends on system control strategy)
Other	
Noise Level	≤70dB
Fire Protection System	Combustible gas detection, smoke detection, temperature detection, aerosol suppression
Thermal Control Method	Intelligent air conditioning
Protection Class	IP55
Communication Interface	CAN
Communication Interface	2450kg
Dimensions (W × D × H)	1200mm × 1150mm × 2200mm (excluding protruding parts of air conditioning) 1200mm × 1400mm × 2200mm (including protruding parts of air conditioning)
Reference standard	GB/T36276, IEC62619, UL9540A

分布式光伏电站的投资与工程建设

Investment and EPC of Distributed Photovoltaic Power Station

全球视野，专业积淀——您可信赖的光伏电站伙伴

我们专注于光伏电站的全周期服务，从项目投资、工程设计到建设运维。凭借领先的技术和丰富的经验，我们已在全球成功投资与建设超100个光伏电站项目，确保每一座电站高效稳定运行，为客户最大化能源产出与投资回报。

我们致力于推动绿色能源的全球化发展，以坚实的项目履历，为合作伙伴创造可持续价值，共建清洁未来。

Global vision, professional accumulation

—— your reliable partner in photovoltaic power stations

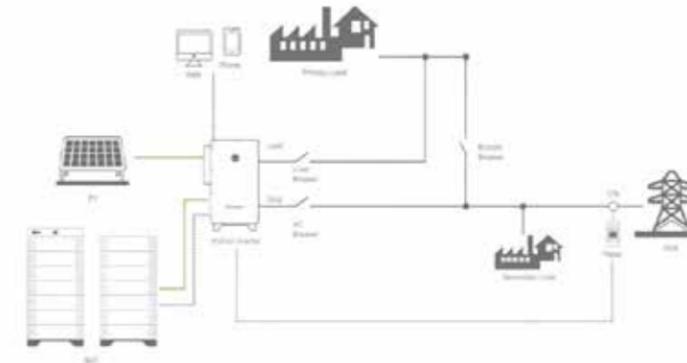
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We are committed to advancing the global green energy transition, creating sustainable value for our partners and powering a cleaner future.



解决方案

Solution

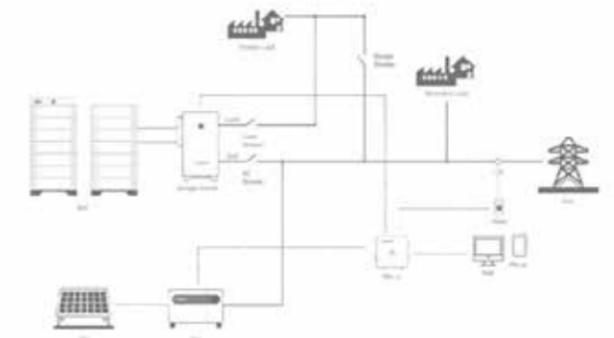


DC Coupling Solution

- Maximize self-consumption
- Multiple work modes for smart energy management
- Support backup power function

AC Coupling Solution

- Integrated into existing solar system
- Enhance the solar self-consumption
- Emergency backup power



PV+Storage System+Diesel Generator Solution

- Maximize the utilization of clean energy
- Minimize the operational frequency of diesel generators to mitigate environmental pollution
- Ensure a consistent 24/7 power supply for primary loads

