

# Lithium Battery System



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# COMPANY PROFILE

Jiangsu GSO New Energy Technology Co., Ltd is a technology-driven innovative enterprise focusing on the fields of photovoltaic (PV) and energy storage, and has obtained the certification of National High-Tech Enterprise. Its product portfolio covers residential energy storage, industrial & commercial energy storage, mobile energy storage, hybrid inverters, energy storage converters, and smart energy operation & maintenance services. The company is capable of providing customers with the overall deployment of PV and energy storage systems as well as customized solutions, which are applied in various energy storage scenarios including new energy power generation in alpine mountains and islands, PV-storage-diesel microgrids, industrial & commercial parks, data centers, and communication base stations.

With technological innovation as its driving force, GSO New Energy leverages the group company's technological advantages in power electronics. By integrating digital technology and energy storage technology, it has secured a number of national patents and software copyrights. Currently, the company has built a full-lifecycle product matrix covering all scenarios such as industrial & commercial energy storage and residential energy storage. Its sales network extends to more than 50 countries and regions worldwide, and it has cumulatively provided safe and efficient PV & energy storage products and technical services to over 200,000 users.

In the future, GSO New Energy will continue to uphold the spirit of innovation, commit to providing global users with safe, high-quality, intelligent, and integrated clean energy solutions, drive the high-quality development of the energy storage industry with core technologies, and join hands with partners to create a green and sustainable energy future.



- Mission** Become the evergreen tree in the power supply industry and customers' most trusted power supply expert.

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- Vision** To provide quality power solutions and green energy for mankind.

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- Values** Responsibility; Innovation; Integrity; Enterprising.

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- Quality policy** Customer first, quality oriented, refinement and innovation abide by the agreement.

# COMPANY HONOR



# SERVICE SYSTEM

GSO New Energy always aims to meet customer needs, is committed to improving service quality and value, takes customer service as the ultimate concept, and establishes an all-round, high-quality and standardized customer service system. It has formed a service structure from pre-sales telephone consultation, on-site environmental survey, power supply scheme design, to after-sales installation and commissioning, use and maintenance, technical training, and spare parts support. A number of professional and skilled engineers are ready to provide you with one-stop service and support at any time, helping customers to truly obtain a power supply solution with high practicability and reliability, maximizing investment value, and allowing customers to enjoy the high-quality service level.



## After-sale service >>

GSO New Energy has established after-sales service centers and cooperative branches in many overseas regions, and set up after-sales service networks in multiple provincial capitals and major cities in China, striving to choose the branch closest to customers, provide high-quality and fast services to users, respond quickly, arrive at the service site in a timely manner, and solve problems for customers as soon as possible.

To ensure the implementation of high-quality service levels, GSO New Energy achieves service goals by establishing a four-level service system including headquarters technical support center, regional maintenance center, provincial maintenance center, and municipal maintenance center. At the same time, tailored service plans will be provided for grassroots user units located in mountainous areas and townships during the service process.

## Customer training >>

GSO New Energy has a training center with professional and skilled engineers who provide customers with theoretical and practical training services in operation, use, maintenance, and other aspects. In addition, GSO New Energy will also formulate annual training plans for customers to help them better understand and use GSO brand products.



# GBP-R Series

## Rack Type Lithium Iron Phosphate Battery

### Product introduction >>

This product is composed of high-quality lithium iron phosphate cells (by series and parallel) and advanced BMS management system. It can be used as an independent DC power supply or as a "basic unit" to form a variety of energy storage lithium battery power systems, with high reliability and longer life. It can be used as backup power supply of communication base station, backup power supply of digital center, household energy storage power supply, industrial energy storage power supply, etc. It can be seamlessly connected with main equipment such as UPS and photovoltaic power generation.

 Small size and light weight	 Screen direct selection of inverter communication	 Standard cycle life is more than 5000 times
 Multiple in parallel, easy for expand, Automatic addressing, no need to dial a code	 Easy for installation and maintenance	



### Product parameters >>

Model	GBP									
	24-100R	24-200R	48-100R	48-200R	48-280R	48-314R	51.2-100R	51.2-200R	51.2-280R	51.2-314R
Nominal Voltage (V)	25.6		48				51.2			
Cell Specification	100	100	100	100	280	314	100	100	280	314
Nominal Capacity (Ah)	100	200	100	200	280	314	100	200	280	314
Nominal Energy (kWh)	2.56	5.12	4.8	9.6	13.44	15.1	5.12	10.24	14.33	16.1
Operating Voltage Range (V)	22.4~29.2		42~54.75				44.8~58.4			
Recommended Charging Voltage (V)	27.6		51.75				55.2			
Recommended Discharge Cut-off Voltage (V)	24		45				48			
Standard Charge/Discharge Current (A)	0.5C									
Maximum Continuous Charge/Discharge Current (A)	1C (Customizable)									
Allowable Humidity Range(%RH)	< 85									
Storage Temperature(°C)	-10 ~ 55(Recommend 10 ~ 35)									
Charging Temperature(°C)	0~55									
Discharging Temperature(°C)	-10~55									
Protection Level	IP20									
Cooling Method	Natural Air Cooling / Intelligent Fan									
Cycle Life	5000+Times at 80% DOD									
Maximum Dimension (D*W*H)mm	689*495*162	689*495*162	682*510*246	682*510*246	904*465*252	904*465*252	689*495*162	682*510*246	682*510*246	904*465*252
Weight(kg)	28	49	46	93	134	136	49	96	138	140

Note: The maximum charge/discharge rate of models GBP48-200R and BP51.2-200R can be customized to 1C. The above data is for reference only. In case of any changes, no further notice will be given.

# GBP-W Series

## Power Wall Type Lithium Ironphosphate Battery

### Product introduction >>

The product adopts modular design, higher integration, saves installation space; adopts high-performance lithium iron phosphate positive electrode material, the battery cell has good consistency, and the designed service life is more than 10 years; one-key switch machine, front operation, front wiring, easy installation, convenient maintenance and operation; various functions, over-temperature alarm protection, over-charge and over-discharge protection, short-circuit protection; strong compatibility, seamless connection with UPS, photovoltaic power generation and other main equipment; various forms of communication interfaces. CAN/RS485, etc. can be customized according to customer needs, which is convenient for remote monitoring and flexible use of the system. High-energy, low-power lithium-ion battery equipment achieves higher energy supply, lower energy consumption, and reduces environmental pollution; all-round, multi-level battery protection strategies and fault isolation measures are adopted to ensure the safe operation of the system.

-  Wall-hanging installation, save space.
-  Multiple in parallel, easy for expand, Automatic addressing, no need to dial a code.
-  Standard configuration with LCD display, real time knowing battery status, Screen direct selection of inverter communication.
-  Environmentally friendly non-polluting materials, free of heavy metals, green and environmentally friendly.
-  Standard cycle life is more than 5000 times.



### Product parameters >>

Model	GBP24-100W	GBP24-200W	GBP48-100W	GBP48-200W	GBP51.2-100W	GBP51.2-200W
Nominal Voltage (V)	25.6		48		51.2	
Cell Specification	100	100	100	100	100	100
Nominal Capacity (Ah)	100	200	100	200	100	200
Nominal Energy (kWh)	2.56	5.12	4.8	9.6	5.12	10.24
Operating Voltage Range (V)	22.4~29.2		42~54.75		44.8~58.4	
Recommended Charging Voltage (V)	27.6		51.75		55.2	
Recommended Discharge Cut-off Voltage (V)	24		45		48	
Standard Charge/Discharge Current (A)	0.5C					
Maximum Continuous Charge/Discharge Current (A)	1C (Customizable)					
Allowable Humidity Range(%RH)	< 85					
Storage Temperature (°C)	-10 ~ 55(Recommended 10 ~ 35)					
Charging Temperature (°C)	0~55					
Discharging Temperature (°C)	-10~55					
Protection Level	IP20					
Cooling Method	Natural Air Cooling / Intelligent Fan					
Cycle Life	5000+ Times at 80% DOD					
Maximum Dimension (D*W*H)mm	687*450*186			682*465*276	687*450*186	682*465*276
Weight(kg)	28	49	46	93	49	96

Note: The above data is for reference only. In case of any changes, no further notice will be given. For customization requirements such as Bluetooth function and 1C charge/discharge rate, please consult with the engineer.

# GBP-L Series

## Wheel Type Lifepo4 Batteries

### Product introduction >>

The product adopts wheel design, beautiful shape, and convenient movement; including the mainstream market inverter protocol, directly communicates; adopts a comprehensive and multi-level battery protection strategy and fault isolation measures to ensure the safe operation of the system. Widely used in small commercial and family energy storage.

-  Wheeled design, easy to move.
-  Embedded wiring, safe and reliable.
-  Standard configuration with LCD display screen, to understand battery status in real time, and directly select the inverter communication protocol on the screen.
-  Environmentally friendly and pollution-free materials, no heavy metals, green and environmentally friendly.
-  Standard cycle life over 5,000 times.



### Product parameters >>

Model	GBP48-280L	GBP48-314L	GBP48-560L	GBP48-628L	GBP51.2-280L	GBP51.2-314L	GBP51.2-560L	GBP51.2-628L
Nominal Voltage (V)	48				51.2			
Cell Specification	280	314	280	314	280	314	280	314
Nominal Capacity (Ah)	280	314	560	628	280	314	560	628
Operating Voltage Range (V)	42~54.75				44.8~58.4			
Recommended Charging Voltage (V)	51.75				55.2			
Recommended Discharge Cut-off Voltage (V)	45				48			
Standard Charge/Discharge Current (A)	100		100		100		100	
Maximum Continuous Charge/Discharge Current (A)	150		200		150		200	
Allowable Humidity Range(%RH)	< 85							
Storage Temperature (°C)	-10~55(Recommended 10~35)							
Charging Temperature (°C)	0~55							
Discharging Temperature (°C)	-10~55							
Protection Level	IP20							
Cooling Method	Natural Air Cooling							
Cycle Life	5000+ Times at 80% DOD							
Maximum Dimension (D*W*H)mm	248*680*880		890*350*1060		248*680*880		890*350*1060	
Weight(kg)	137	141	280	289	139	144	284/293	

Note: The above data is for reference only. In case of any changes, no further notice will be given. For special customization requirements, please consult with the engineer.

# GBP-H/L Series

## Vertical / Wheel Type Lifepo4 Batteries

### Product introduction >>

The product adopts vertical / wheel type design, beautiful shape, and convenient movement; including the mainstream market inverter protocol, directly communicates; adopts a comprehensive and multi-level battery protection strategy and fault isolation measures to ensure the safe operation of the system. Widely used in small commercial and family energy storage.

-  Vertical / Wheel Type design, safe and stable.
-  Hidden wiring, beautiful design.
-  Standard LCD display screen, to understand battery status in real time, and directly select the inverter communication protocol on the screen.
-  Environmentally friendly and pollution-free materials, no heavy metals, green and environmentally friendly.
-  Standard cycle life over 5,000 times.



### Product parameters >>

Model	GBP48-280HL	GBP48-314HL	GBP51.2-280HL	GBP51.2-314HL
Nominal Voltage (V)	48		51.2	
Cell Specification	280	314	280	314
Nominal Capacity (Ah)	280	314	280	314
Operating Voltage Range (V)	42~54.75		44.8~58.4	
Recommended Charging Voltage (V)	51.75		55.2	
Recommended Discharge Cut-off Voltage (V)	45		48	
Standard Charge/Discharge Current (A)	100			
Maximum Continuous Charge/Discharge Current (A)	150			
Allowable Humidity Range(%RH)	< 85			
Storage Temperature (°C)	-10 ~ 55(Recommended 10 ~ 35)			
Charging Temperature (°C)	0~55			
Discharging Temperature (°C)	-10~55			
Protection Level	IP20			
Cooling Method	Natural Air Cooling			
Cycle Life	5000+Times at 80% DOD			
Maximum Dimension (D*W*H)mm	480*246*990			
Weight(kg)	139	143	141	145

Note: The above data is for reference only. In case of any changes, no further notice will be given. For special customization requirements, please consult with the engineer.

# BOC Series

## Low-voltage Lithium Nattery Outdoor Cabinet

### Product introduction >>

The BOC series battery products are applied across six major markets: power systems (urban and rural grid upgrades, etc.), new energy sector (photovoltaic grid connection, etc.), industrial sector (factory and mine power distribution), telecommunications industry (5G base station power supply), transportation (charging, high-speed rail power supply, etc.), and commercial & residential areas (commercial facilities and community power distribution).

Equipped with lithium iron phosphate (LiFePO4) battery cells and a customized BMS (Battery Management System) for effective cell management, these batteries offer superior performance, safety, and reliability compared to traditional batteries. With diverse communication interfaces and a comprehensive software protocol library, the battery systems can directly interface and communicate with mainstream inverters on the market.

- Excellent resistance to rain, dust, sunlight, and corrosion, with an IP54 protection rating.
- Equipped with multiple protection mechanisms, including overcurrent protection, overvoltage protection, short-circuit protection, and lightning protection.
- Modular design allows for free combination of solutions, with independent units that facilitate installation, maintenance, and upgrading.
- Small footprint, space-saving structure, and easy mobility, suitable for various installation scenarios.



### Lithium Battery Pack Parameter Sheet >>

Model	GBP48-100R	GBP48-200R	GBP51.2-100R	GBP51.2-200R	GBP48-280R	GBP48-314R	GBP51.2-280R	GBP51.2-314R
Cell Type (Ah)	100	200	100	200	280	314	280	314
Nominal Energy (kWh)	4.8	9.6	5.12	10.24	13.44	15.1	14.33	16.1
Nominal Capacity (Ah)	100	200	100	200	280	314	280	314
Nominal Voltage (VDC)	48		51.2		48		51.2	
Operating Voltage Range (VDC)	42~54.75		44.8~58.4		42~54.75		44.8~58.4	
Standard Charge/Discharge Current (A)	50	100	50	100	100			
Maximum Continuous Charge/Discharge Current (A)	100	200	100	200	150			
Allowable Humidity Range (%RH)	< 85							
Storage Temperature (°C)	-10 ~ 55(Recommended 10 ~ 35)							
Charging Temperature (°C)	0~55							
Discharging Temperature (°C)	-10~55							
Protection Level	IP20							
Reference Weight (kg)	46	93	49	96	134	136	138	140
Reference Dimensions (D*W*H)mm	689*495*162	682*510*246	689*495*162	682*510*246	904*465*252			

Notes: For GBP48-100/200R and GBP51.2-100/200R, the standard charge/discharge current and maximum continuous charge/discharge current can be customized to 1C; the above are reference data, and if there are any changes, we will not notify you separately.

### Low-Voltage Lithium Battery Outdoor Cabinet Capacity Platform Parameter Table >>

Model	Dimensions D*W*H (mm)	Reference Weight (kg)	Reference Energy (kWh)
BOC-5K-3	1016*715*1000	124	15
BOC-5K-6	1016*715*1500	158	30
BOC-5K-10	1016*715*2200	205	50
BOC-10K-2	1016*715*1000	124	20
BOC-10K-4	1016*715*1500	158	40
BOC-10K-6	1016*715*2200	205	60
BOC-15K-2	1226*715*1000	142	32
BOC-15K-4	1226*715*1500	180	64
BOC-15K-6	1226*715*2200	229	96

Notes: Including AC single-cooling air conditioner, fire protection, lighting, and battery busbar equipment; excluding batteries.

# GLV1 Series

## Low Voltage Stack System



### Product introduction >>

This product adopts stacked design, flexible expansion, beautiful shape; System one-button start, side hidden wiring is convenient for customers to use; Screen direct selection market mainstream inverter protocol, direct communication; Comprehensive and multi-level battery protection strategies and fault isolation measures are adopted to ensure the safe operation of the system, which is widely used in small commercial and home energy storage.

- Chinese and English display summary of all PACK information; Screen direct selection inverter communication protocol;
- Summary switch, to achieve a key switch;
- Stack design allows flexible battery expansion;
- Multiple clusters are parallel. A maximum of eight battery packs can be connected in parallel.



### Product parameters >>

Model	GLV1-P10	GLV1-P15	GLV1-P20	GLV2-P20	GLV2-P30	GLV2-P40
Battery Module Model	LFP48V/100Ah			LFP48V/200Ah		
Battery Module Nominal Energy(kWh)	4.8			9.6		
Rated Voltage(V)	48					
Number of Cell Modules in Single Cluster	2	3	4	2	3	4
Single Cluster Battery Energy (kWh)	9.6	14.4	19.2	19.2	28.8	38.4
Maximum number of clusters in parallel	8					
Operating voltage range(V)	42~54.75					
Recommended Charge Voltage(V)	51.75					
Recommended discharge cut-off voltage(V)	45					
Maximum charge/discharge current(A)	0.5C					
Unit cluster size (D*W*H)mm	425*700*672	425*700*864	425*700*1056	479*700*848	479*700*1128	479*700*1408
Unit cluster weight(kg)	145	199	254	228	324	420
Communication mode	CAN/485/Bluetooth					
Storage temperature(°C)	-10 ~ 55(Recommended10 ~ 35)					
Humidity(%RH)	< 85					
Protection level	IP20					
Cooling method	Natural Air Cooling					
Number of cycles	≥5000					
Standard of security	CE,UN38.3,MSDS					

Note: The above data is subject to change without prior notice.

# GSL Series

## Wheel Type Pv & Battery Energy Storage Integrated Machine

### Product introduction >>

This series of products is a wheel type all-in-one machine that integrates hybrid inverters and energy storage batteries. Multiple application modes; Beautiful appearance, flexible mobility, and circular arc design are widely used in small commercial and home energy storage.



#### Multiple application modes

Three output modes;  
Four charging modes.



#### High Safety

DSP control, advanced control algorithm;  
Multiple security warnings and protection.



#### Intelligent and Friendly

Intelligent battery management system;  
Real time monitoring of APP cloud.



### Product parameters >>

Model	GSL48-3.5K-5kWh
<b>Inverted Output</b>	
Rated Output Power(W)	3500
Rated Output Power(VA)	3500
Maximum Peak Power(W)	6000
Rated AC Output	230VAC(Can be set to 200/208/220/240VAC), 50/60Hz
Output Voltage Waveform	Pure sine wave
Switching Time Between Inverter and Bypass	10ms (Typical)
Maximum Battery Inverter Efficiency	93%
Overload Protection	102%~110%, 5min; 110%~125%, 10s; >125%, 2s
<b>Battery</b>	
Capacity(kWh)	100
Rated Battery Voltage(VDC)	48/51.2
Battery Voltage Range(V)	42~54.75/44.8~58.4
Maximum Mppt Charging Current(A)	50
Maximum Mains Charging Current(A)	50
Maximum Mixed Charging Current(A)	50
<b>PV Charging</b>	
Mppt Quantity	1
Maximum Photovoltaic Array Power(W)	5500
Maximum Photovoltaic Input Current(A)	22
Maximum Open Circuit Voltage(VDC)	500
Mppt Scope Of Work(V)	70~450
Mppt Tracking Efficiency	99.9%
<b>Mains Input</b>	
Input Voltage Range(VAC)	90~280/170~280
Frequency Range(Hz)	50/60±0.3
<b>Specifications</b>	
Dimensions (D*W*H)mm	210*500*805
Weight (kg)	70
Waterproof Level	IP20
Working Temperature Range(°C)	-10~55
Storage Temperature Range(°C)	-10~55
Noise(dB)	<60
Cooling Method	Forced air cooling

Note: The above data is for reference and subject to change without prior notice. Special voltages can be customized.

# GSL Series

## Stacked Pv & Battery Energy Storage Integrated Machine

### Product introduction >>

This series of products is a stacked all-in-one machine that integrates a hybrid inverter and an energy storage battery. Multiple application modes, high power density, plug-and-play, hidden wiring design are widely used in small commercial and home energy storage.



#### Multiple application modes

Three output modes; Four charging modes.



#### Flexible combination method

Stacked design;  
Battery pack capacity expansion on demand.



#### High security

DSP control, advanced control algorithm;  
Multiple safety warnings and protection.



#### Smart and friendly

Intelligent battery management system;  
APP cloud real-time monitoring.



### Product parameters >>

Model	GSL48				
	5.5K-10kWh	5.5K-20kWh	5.5K-30kWh	10K-10kWh	10K-20kWh
<b>Inverted Output</b>					
Rated Output Power(W)	5500			10000	
Rated Output Powe(VA)	5500			10000	
Maximum Peak Power(W)	10000			15000	
Rated AC Output	230VAC (Can be set 200/208/220/240VAC, 50/60Hz)				
Output Voltage Waveform	Pure Sine Wave				
Inverter and Bypass Switching Time	10ms (typical)				
Maximum Battery Inverter Efficiency	93%				
Overload Protection	102%~110%, 5min; 110%~125%, 10s; >125%, 5s				
<b>Battery</b>					
Energy Capacity(kWh)	10	20	30	10	20
Battery Module Quantity	1	2	3	1	2
Rated Battery Voltage(VDC)	48				
Battery Voltage Range(V)	42~54.75/44.8~58.4				
Rated Charge-Discharge Rate	0.5C			1C	
Max.MPPT Charging Current(A)	100			200	
Max.Mains Charging Current(A)	60			120	
Maxi.Hybrid Charging Current(A)	100			200	
<b>PV Charging</b>					
MPPT Quantity	1			2	
Max. PV Array Power(W)	5500			5500+5500	
Max. PV Input Current(A)	22			22+22	
Max. Open Circuit Voltage(VDC)	500			500+500	
MPPT Work Range(V)	120~450				
MPPT Tracking Efficiency	99.9%				
<b>Mains Input</b>					
Input Voltage Range(VAC)	90~280/170~280				
Frequency Range(Hz)	50/60±0.3				
<b>Specifications</b>					
Dimensions(W*D*H)mm	250*690*850	250*690*1310	250*690*1770	250*690*960	250*690*1420
Weight(kg)	125	225	325	128	228
Classification of Waterproof	IP20				
Operating Temperature Range(°C)	-10~55				
Storage Temperature Range(°C)	-25~60				
Noise(dB)	<60				
Heat Dissipation	Inverter forced air cooling (variable speed of fan) / Battery natural air cooling				

Note: The above data is for reference and subject to change without prior notice. Special voltages can be customized.

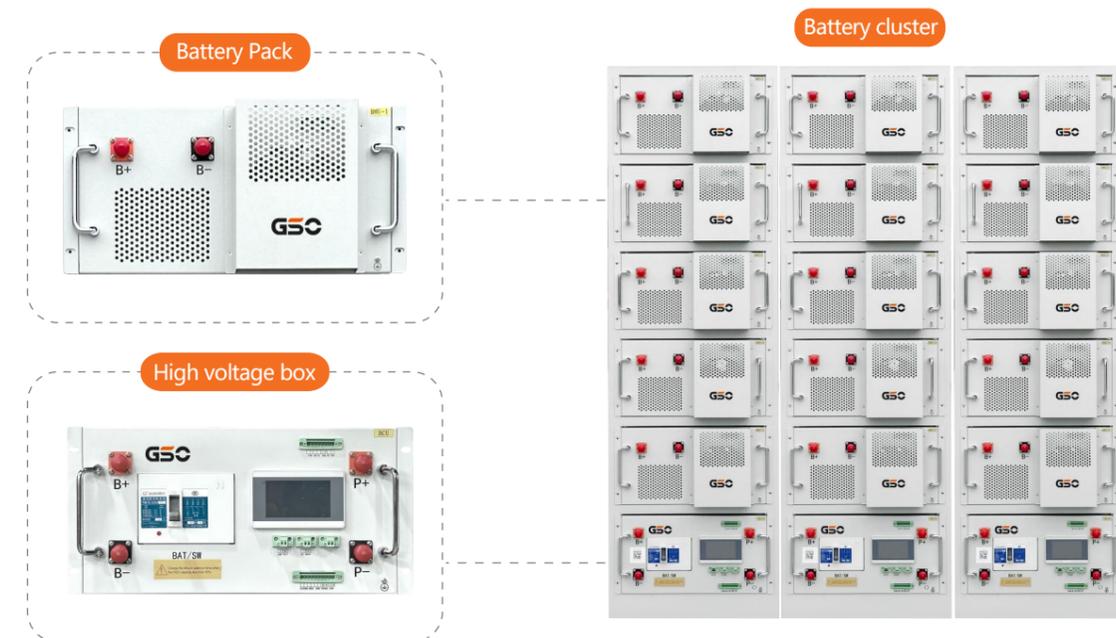
# GBP-H2 Series

## Lithium Battery Cluster Energy Storage System

### Product introduction >>

GBP-H2 series battery products are high-voltage and large-capacity systems developed for industrial and commercial emergency power supply, peak shaving and valley filling, and power supply in remote mountainous areas, islands and other areas without electricity or weak electricity. It uses lithium iron phosphate cells and a customized BMS system to effectively manage the cells. Compared with traditional batteries, it has better product performance and safety and reliability. Diversified communication interfaces and software protocol libraries enable the battery system to directly match and communicate with all mainstream inverters on the market. The product has many charge and discharge cycles, high power density, and a service life of more than 10 years. Unique designs and innovations have been made in compatibility, energy density, dynamic monitoring, safety, reliability, and product appearance, which can bring users a better energy storage application experience.

- Modular design, building-block construction, and automatic ID code recognition.
- Each cluster is equipped with an independent display screen to visually show the operation and alarm status.
- The communication forms are diverse, supporting various types such as TCP/IP, CAN, RS485, dry and wet contacts, etc.
- It is compatible with various types of equipment models currently available in the market, such as inverters, wind power controllers, and chargers.
- Support protocol customization.
- Optional remote DTU is available, which supports online remote upgrades.



### Product parameters >>

Model	GBP96-100	GBP48-200	GBP38.4-280	GBP38.4-314
Cell Type (Ah)	100		280	314
Nominal Energy (kWh)	9.6		10.7	12
Nominal Capacity(Ah)	100	200	280	314
Nominal Voltage(VDC)	96	48	38.4	
Operating Voltage Range(VDC)	90~106.5	45~53.2	36~42.6	
Charging Temperature(°C)	0~55			
Discharging Temperature(°C)	-10~55			
Protection Level	IP20			
Reference Weight (kg)	87.8		86.5	94
Reference Size(D*W*H)mm	684*510*245			

Note: The battery pack is used with the system, the cycle life is ≥5000 working conditions, 25°C, 80%DOD; special voltage can be consulted and selected; the system with different voltage and capacity registration can be configured according to the battery pack specifications.

### Lithium battery cluster voltage platform parameter table >>

Model	Nominal voltage(V)	Nominal capacity(Ah)	Operating voltage range(VDC)	Recommended charge and discharge current (A)
GBP96-100/200	96	100/200	90~106.5	50/100
GBP192-100/200	192		180~213	
GBP220-100/200	220.8/224		207~245	
GBP288-100/200	288		270~319.5	
GBP360-100/200	358.4		336~400	
GBP384-100/200	384		360~426	
GBP480-100/200	480		450~532	
GBP384-280/314	384	280/314	360~426	140/150
GBP460-280/314	460.8		432~511	
GBP538-280/314	537.6		504~596	
GBP576-280/314	576		540~639	
GBP652-280/314	652.8		612~724	
GBP692-280/314	691.2		648~767	
GBP768-280/314	768		720~852	

Note: See attachment for detailed parameters, special voltage and capacity can be customized.

# GBP-PC Series

## Lithium Battery Cluster Energy Storage System

### Product introduction >>

GBP-PC series battery products are high-voltage and large-capacity systems developed for industrial and commercial emergency power supply, peak shaving and valley filling, and power supply in remote mountainous areas, islands and other areas without electricity or weak electricity. It uses lithium iron phosphate cells and a customized BMS system to effectively manage the cells. Compared with traditional batteries, it has better product performance and safety and reliability. Diversified communication interfaces and software protocol libraries enable the battery system to directly match and communicate with all mainstream inverters on the market. The product has many charge and discharge cycles, high power density, and a service life of more than 10 years. Unique designs and innovations have been made in compatibility, energy density, dynamic monitoring, safety, reliability, and product appearance, which can bring users a better energy storage application experience.

- Modular design and building block-style assembly, with automatic ID code recognition.
- Each cluster is equipped with an independent display screen, which intuitively shows the operation and alarm status.
- Supports multiple communication types such as TCP/IP, CAN, RS485, and dry/wet contacts.
- Compatible with various types of mainstream equipment on the market, including inverters, wind power controllers, and battery chargers.
- Supports protocol customization; optional remote DTU enables online remote upgrades.
- Removable battery rack to reduce transportation space.



### Product parameters >>

Model	GBP51.2 314
Cell Type (Ah)	314
Nominal Energy (kWh)	16.1
Nominal Capacity(Ah)	314
Nominal Voltage(VDC)	51.2
Operating Voltage Range(VDC)	48~56.8
Charging Temperature(°C)	0~55
Discharging Temperature(°C)	-10~55
Protection Level	IP20
Reference Weight (kg)	128
Reference Size(D*W*H)mm	904*510*245

Note: The battery pack is used with the system, the cycle life is  $\geq 5000$  working conditions, 25°C, 80%DOD; special voltage can be consulted and selected; the system with different voltage and capacity registration can be configured according to the battery pack specifications.

### Lithium battery cluster voltage platform parameter table >>

Model	Nominal Voltage(V)	Nominal Capacity(Ah)	Operating Voltage Range(VDC)	Recommended Charge and Discharge Current (A)
GBP-PC2	102.4	314	96~113.6	150
GBP-PC3	153.6		144~170.4	
GBP-PC4	204.8		192~227.2	
GBP-PC5	256		240~284	
GBP-PC6	307.2		288~340.8	
GBP-PC7	358.4		336~397.6	
GBP-PC8	409.6		384~454.4	
GBP-PC9	460.8		432~511.2	
GBP-PC10	512		480~568	
GBP-PC11	563.2		528~624.8	
GBP-PC12	614.4		576~681.6	
GBP-PC13	665.6		624~738.4	
GBP-PC14	716.8		672~795.2	
GBP-PC15	768		720~852	
GBP-PC16	819.2		768~908.8	

Note: See attachment for detailed parameters, special voltage and capacity can be customized.

# GHV2-PC Series

## High-voltage Lithium Battery Stack System

### Product introduction >>

This product adopts a modular design, allowing free assembly according to needs. It features excellent cell performance and superior consistency, along with a long cycle life, which can better meet customer requirements. The unique stacking design eliminates wiring troubles, and the built-in high-quality battery intelligent management system ensures the reliability and safety of the battery. In addition, the battery output uses quick-plug connectors for easy customer operation. It has a wide voltage selection range and is equipped with external CAN and RS485 ports, which can be compatible with various mainstream brands of inverters on the market, providing greater compatibility and flexibility. A DTU can be optionally configured to facilitate customers' remote operation and battery status reading.

#### Long Life and Cost Reduction

- Charge - discharge conversion efficiency is 91%, and the system life is more than 6000 cycles;
- No - wiring design facilitates transportation and eliminates battery installation work.

#### Safe and Reliable

- High - performance battery management system and triple battery logic protection design;
- Remote DTU design enables remote monitoring of battery status and convenient reading and modification of parameters.

#### Efficient and Flexible

- Integrated design concept, featuring high efficiency and high energy density, reducing the floor area by 20%;
- Intelligent - level management reduces the battery bucket effect and increases the discharge capacity.



### General Parameters >>

Model	Number of Modules	Rated Voltage (V)	Operating Voltage (V)	Charging Voltage (V)	Size(W*D*H)mm
GHV2-PC3	3	153.6	144~170.4	165.6	480*890*1080
GHV2-PC4	4	204.8	192~227.2	220.8	480*890*1325
GHV2-PC5	5	256	240~284	276	480*890*1570
GHV2-PC6	6	307.2	288~340.8	331.2	480*890*1815
GHV2-PC7	7	358.4	336~397.6	386.4	480*890*2060
GHV2-PC8	8	409.6	384~454.4	441.6	960*890*1405
GHV2-PC9	9	460.8	432~511.2	496.8	960*890*1405
GHV2-PC10	10	512	480~568	552	960*890*1650
GHV2-PC11	11	563.2	528~624.8	607.2	960*890*1650
GHV2-PC12	12	614.4	576~681.6	662.4	960*890*1895
GHV2-PC13	13	665.6	624~738.4	717.6	960*890*1895
GHV2-PC14	14	716.8	672~795.2	772.8	960*890*2140
GHV2-PC15	15	768	720~852	828	960*890*2140

### System Parameters>>

Battery Module	BAT-14.33(16S1P51.2V280Ah)
Maximum Charging Current (A)	140
Maximum Discharging Current (A)	140
Control Module	PDU-HV2
Working temperature range(°C)	Charging: 0 ~ 55°C; Discharging: -20 ~ 55°C
Working humidity range (%RH)	0~95% Without condensation
Heat-dissipating method	Forced Air Cooling
Hybrid Inverter Communication Method	CAN/485
EMS Communication Method	TCP/IP

Note: The above data is subject to change without prior notice.

# GSS-PC Series

## Lithium Battery Outdoor Cabinet

### Product introduction >>

The battery outdoor cabinet is safe, reliable, intelligent, efficient and flexible to deploy. Through modular design and advanced management technology, it provides users with cost-effective energy storage solutions. From cell-level safety control to system-level intelligent scheduling, it fully meets the energy storage needs of different scenarios, and helps green energy transformation and intelligent upgrade of power systems. It adapts to a variety of hybrid inverter brands, fully adapts to support single-branch and two-branch inverters.

#### Strong environmental adaptability

- It has the characteristics of waterproof, dustproof, sun-proof, and corrosion-resistant. It can operate stably for a long time in high temperature, humid, dusty and other outdoor environments, protecting the battery from external erosion.

#### Safety protection design

- Fireproof materials or heat-insulating structures are usually used to reduce the risk of fire caused by battery overheating or short circuit; some products are equipped with anti-theft locks or intelligent monitoring systems to improve safety.

#### Modularity and scalability

- Supports flexible combination of multiple battery packs to meet different capacity requirements; reserved interfaces are convenient for later upgrades or connection to other devices (such as solar panels, inverters, etc.).

#### Saving space and flexible deployment

- Outdoor independent installation, no need to occupy indoor space; adaptable to diverse scenarios.



### General Parameters >>

Model	System Composition	Rated Voltage (V)	Operating Voltage (V)	Rated Energy (kWh)	Dimensions(D*W*H)mm	Weight(t)
GSS-PC4	4pack	204.8	192~227.2	64.3	1300*750*1675	0.9
GSS-PC5	5pack	256	240~284	80.4	1300*750*1930	1.0
GSS-PC6	6pack	307.2	288~340.8	96.5	1300*750*2185	1.1
GSS-PC7	7pack	358.4	336~397.6	112.5	1300*1183*1420	1.5
GSS-PC8	8pack	409.6	384~454.4	128.6	1300*1183*1675	1.7
GSS-PC9	9pack	460.8	432~511.2	144.7		1.8
GSS-PC10	10pack	512	480~568	160.8	1300*1183*1930	2.0
GSS-PC11	11pack	563.2	528~624.8	176.8		2.1
GSS-PC12	12pack	614.4	576~681.6	192.9	1300*1183*2185	2.3
GSS-PC13	13pack	665.6	624~738.4	209.0		2.4
GSS-PC14	14pack	716.8	672~795.2	225.1	1300*1183*2440	2.5
GSS-PC15	15pack	768	720~852	241		2.6

### System Parameters>>

Cell Parameters	Cell Type	Lithium Iron Phosphate Cell
	Cell Specification	3.2V314Ah
PACK Parameters	Combination Mode	16S1P
	Rated Voltage (V)	51.2
	Operating Voltage (V)	48~56.8
	Rated Energy (kWh)	16
	Standard Charge/Discharge Power	0.5P
System Parameters	Maximum Charge/Discharge Rate	0.5P
	DC Overcurrent Protection	Yes
Protection & General Parameters	DC Short - Circuit Protection	Yes
	DC Overvoltage Protection	Yes
	Over - temperature Protection	Yes
	Fire - fighting System	Aerosol/Perfluoroketone Optional
	Wiring Mode	Side - entry Wiring
	Ambient Temperature (°C)	-20~50 (>45 requires derating)
	Charging Temperature (°C)	0~55
	Discharging Temperature (°C)	-10~55
	Ambient Humidity (%RH)	<95, No Condensation
	Operating Altitude (m)	5000 ( Derated use above 2000m)
	Protection Class	IP54(Key Components IP65)
	Cooling Method	Industrial Air Conditioning

Note: Subject to the actual product. If there are any modifications to the parameters, we will not notify separately.

# GSO50-100P/GSO100-200P

## Out Door Cabinet-On Grid Machine Series

### Product introduction >>

The air cooling outdoor cabinet-on grid machine integrates energy storage batteries, PCS, EMS, air conditioning and fire protection systems. It is a product specially launched for the application needs of small industrial and commercial, hospital buildings, and household energy storage peak-shaving and valley-filling applications.

#### Product Features

- All in one, factory prefabricated design;
- Flexible deployment, plug and play;

#### Intelligent and friendly

- Programmable working mode, touch screen control;
- Linkage of local and cloud monitoring, rapid digital diagnosis, and intelligent automatic inspection;

#### Safe and efficient

- High efficient neutral point clamped;
- No parallel circulation, reduce energy loss significantly;
- 3S collaboration,EMS closed-loop safety logic,make sure system security;

#### Cost effective

- Multiple charging and discharging logic, support peak and valley arbitrage
- System comprehensive conversion efficiency  $\geq 90\%$



### Product parameters >>

Model	GSO50-100P	GSO100-200P
Rated Power(kW)	50	100
Maximum Output Power(kW)	55	110
Rated AC Voltage(V)	AC 400	
AC Voltage Range(V)	AC 380(-20%~+15%)	
Rated AC Frequency(Hz)	50/60±2.5	
Power Factor	-0.99 ~ +0.99	
THDI	≤3%(Full load)	
Charging/Discharging Conversion Time(ms)	< 100	
Isolation Method	None isolation	
Connect Method	Three phase four wire	
Battery Configuration	1P225S	1P210S
Battery Cell Type	LFP 150Ah	LFP 300Ah
Nominal Voltage(V)	720	672
Operating Voltage(V)	652.5~798.75	609~745.5
Battery Capacity(kWh)	108	201
PCS Maximum Efficiency	≥98%	
System Aximum Efficiency	> 90%	
Charging/Discharging Rate	≤0.5C	
AC Input	Yes	
PCS AC Protection	Yes	
AC Output Protection	Yes	
Over Voltage Protection	Yes	
Fire Protection	Aerosol / Perfluoro	
Dimension(D*W*H)	1200*1100*2200	1200*1600*2200
Weight(t)	1.8	2.6
Incoming Line Method	Side connection(Bottom connection can be customized)	
Operating Temperature Range(°C)	-20~50(De-rating power from 45)	
Temperature Humidity(%RH)	≤95%, Non-condensing	
Work Altitude(m)	≤3000(De-rating power from 2000)	
IP Grade	IP54(Key Device IP65)	
Cooling Method	Industrial air Conditioning(for battery )/Forced air cooling(for electrical equipment)	
Communication Interfaces	RS485/Etherne	
Communication Rules	RTU/MODBUS-TCP	

Note: The above data is for reference only and is subject to change without prior notice.

# GSO50-100/GSO125-245

## Out Door Cabinet-On/off Grid Machine Series

### Product introduction >>

The air cooling outdoor cabinet-on/off grid machine integrates energy storage batteries, PCS, EMS, DCDC, air conditioning and fire protection systems. Suitable for various application scenarios, and can be widely applied in small-scale commercial and industrial enterprises, hospital buildings, residential energy storage, etc. Equipped with features such as peak shaving, self-consumption, dynamic scaling, and planned curve response.

#### Highly integrated

- All in one, factory prefabricated design;
- Flexible deployment, plug and play;
- Incorporating STS, it achieves seamless switching between on off grid.
- Incorporating DCDC, it enables PV integration, saving electricity costs.

#### Intelligent and friendly

- Programmable working mode, touch screen control;
- Intelligent switching strategies for different scenarios: peak shaving, self-consumption, dynamic scaling, planned curve response;
- Linkage of local and cloud monitoring, rapid digital diagnosis, and intelligent automatic inspection;

#### Safe and efficient

- High efficient neutral point clamped;
- No parallel circulation, reduce energy loss significantly;
- 3S collaboration,EMS closed-loop safety logic,make sure system security;

#### Grid friendly

- Equipped with active and reactive power quadrant regulation.
- Equipped with Low Voltage Ride Through (LVRT) and High Voltage Ride Through (HVRT).
- Equipped with precise switching between power, grid, and loading.



### Product parameters >>

Model	GSO50-100	GSO80-165	GSO105-200	GSO105-225	GSO125-245	
On grid parameter	Rated power(kW)	50	80	105	125	
	Maximum output power(kW)	55	88	116	138	
	Rated grid voltage(V)	400				
	Rated current(A)	72	115	167	200	
	Allowable grid voltage(V)	±15%				
	Rated grid frequency(Hz)	50±5				
	Power Factor	0.99				
	THDI	< 3% (Rated power)				
	Overload capacity	110% Long term				
	Access method	3P4L				
Off grid parameter	Rated output voltage(V)	400				
	Rated output power(kW)	50	80	100	125	
	Rated grid frequency(Hz)	50±5				
	THDU	< 3% (Linear power)				
	Unbalanced load capacity	100%				
	Overload capacity	110% Long term				
	Charge and discharge conversion time (ms)	< 20				
	Battery parameter	Battery system configuration	1P216S	1P224S	1P224S	1P224S
		Cell Type	150Ah	230Ah	280Ah	314Ah
		Rated voltage(V)	691.2	716.8	716.8	716.8
Operating voltage(V)		650~767	650~796	650~796	650~796	
Battery Capacity(kWh)		108	170	215	230	
PV	PV voltage range	500~620	500~620	500~620	500~620	
	Maximum input power(kW)	50		100		
	Rated current on Low voltage side(A)	100		200		
	Maximum efficiency	≥99%				
	Number of MPPT tracker	1		2		
System efficiency	PCS maximum efficiency	≥98%				
	System maximum efficiency	> 90%				
	Battery charge and discharge rate	≤0.5C				
Protection	Battery reverse connection protection	Yes				
	DC overcurrent protection	Yes				
	AC overcurrent protection	Yes				
	AC overvoltage protection	Yes				
	Surge protection	Yes				
	Fire protection system	Non-stationary pressure perfluoroacetone				
	Grid support	L/HVRT, active and reactive power control				
General parameter	Dimensions(D*W*H)mm	1400*1400*2200	1400*1950*2200			
	Weight (t)	2.5	3	3.3	3.7	
	Line entry method	Side entry				
	Ambient temperature(°C)	-20~50( De-rating power from 45°C)				
	Charging temperature(°C)	0~55				
	Discharge temperature(°C)	-10~55				
	Ambient humidity(%RH)	<95%RH, non-condensing				
	Working altitude(m)	5000 (De-rating power from 2000m)				
	Ingress Protection Rating	IP54(IP65 for key components)				
	Cooling method	Industrial air conditioning (battery compartment) / forced air cooling (electrical compartment)				
Commu-nication	Communication interface	CAN/RS485/Ethernet				
	Communication Protocol	RTU/MODBUS-TCP				

Note: Actual product may vary. Supports US standard three-phase and split-phase systems (customizable). Specifications are subject to change without prior notice.

# GLC125-261/GLC250-514

## Liquid Cooling Outdoor Cabinet

### Performance characteristics >>

#### Longevity and cost reduction

- Balancing technology improves battery consistency and extends system lifespan.
- The temperature difference of the batteries in the PACK is less than 3°C, which effectively extends the battery life.
- The charge and discharge conversion efficiency is greater than 91%, and the system life is more than 6,000 times.
- Intelligent liquid cooling temperature control reduces auxiliary power consumption by 20%, saving operating costs.
- Pre-installed design for easy transportation, no battery installation work.

#### Safe and reliable

- AI monitoring of battery cell health and early warning of sick batteries.
- Closed liquid cooling system + cloud management, safer.
- Triple independent fire protection, space-level and PACK-level fire protection, 1.5H fire resistance for the whole cabinet.

#### Efficient and flexible

- ALL IN ONE design concept, high power, high energy density, and 20% less floor space.
- Intelligent cluster-level management reduces the cask effect of battery clusters and increases discharge capacity.
- Plug and play, Three-phase four-wire.

#### Lean Intelligence

- SOC high-precision status assessment can dynamically adjust energy efficiency management strategies. Intelligent cloud operation and maintenance, APP terminal, unattended operation.
- Multi-scenario function presets: substation management, industrial and commercial microgrids, oil engine replacement, etc.



### Product parameters >>

Mode		GLC125-261	GLC250-514
DC Battery Parameters	Battery cell Type	LFP3.2V/314Ah	
	Battery Pack Configuration	1P52S/52.249kWh	1P64S/64.31kWh
	Battery System Configuration	1P260S	1P256S*2
	Battery Voltage Range	728~923	716.8~908.8
	Battery System Capacity	261.24	514.45
	Temperature Detection	Battery cell + copper busbar	
	Battery Charging/Discharging Rate	≤0.5P	
AC Parameters (On grid)	Rated Power	125	250
	Maximum Output Power	135	270
	Rated Grid Voltage	AC380V-15%~+10%	
	Rated Grid Frequency	50/60, ±5	
	Power Factor	-1 (leading) ~ 1 (lagging)	
	AC Current Harmonics (THDi)	<3% (rated output power)	
	Connect Method	Three-phase, four-wire	
AC Parameters (Off grid)	Rated Output Voltage	380V±3%AC	
	Rated Output Power	125	250
	Rated Output Frequency	50/60Hz	
	AC Voltage Harmonics (THDu)	<3% (linear load)	
System Parameters	Overload Capacity	1.1 times rated load (45°C), 1.2 times for 1 min, 1.3 times for 1 s	
	Highest System Efficiency	91%	
Protection	DC Input	Load switch + fuse	
	Overvoltage Protection	DC Type II/AC Type II	
	Fire Protection System	PACK-level fire protection, full cabinet fire protection	
Incoming Line Method		AC power input from bottom	
Environment Requirements	Allowable Ambient Temperature	-30~+55 (derating at 45)	
	Allowable Ambient Humidity	0~95%RH	
	Maximum Working Altitude	3000 (derating above 2000)	
	Protection Level	IP54	
	Corrosion Resistance Grade	C3	
	Cooling Method	Liquid cooling	
	Weight	2.3	6
Dimension(W*D*H) mm	982*1380*2657	1360*2380*2394	

Note: The actual product shall prevail. Parameters are subject to modification without prior notice.

# Energy Storage System

## Containerized



### Product Introduction >>

The containerized energy storage system includes: BESS, bidirectional power conversion system (PCS), DC conversion system (PDS), microgrid switching system (STS), energy management system (EMS), auxiliary power distribution system, air conditioning system, and fire protection.

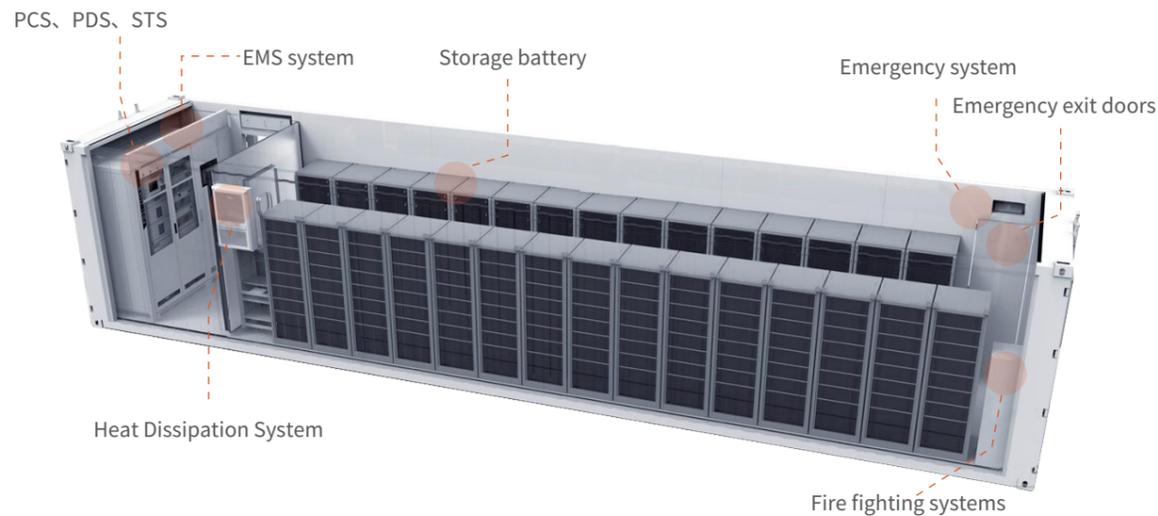
### Performance advantage >>

- According to customer needs, the type and capacity of the battery system can be flexibly configured
- PCS adopts modular, power frequency overall architecture, simple maintenance, flexible configuration, and can realize multiple parallel machines
- Supports on-grid and off-grid operation mode, seamless switching, and supports black start
- EMS unattended system, local control, cloud monitoring operation, with highly customizable functions
- With peak shaving and valley filling, demand response, anti-reverse flow operation, backup power supply, command response and other modes
- With a complete gas fire extinguishing system and automatic fire monitoring and alarm system, sound and light alarm and fault transmission
- With a complete heat dissipation and temperature control system to ensure that the temperature of the battery compartment is within the optimal working range
- The access control system has remote control and on-site operation functions

### Product parameters >>

Model	10ft	20ft	40ft
Output Voltage (V)	380/400±15%		
Grid Frequency (Hz)	50/60(±2.5)		
Output Power (kW)	50~100	50~500	250~630
Battery Capacity(kWh)	50~400	200~1500	800~3000
Battery Type	Lithium Iron Phosphate Battery		
Dimensions(D*W*H)mm	Inner:2831*2352*2385	Inner:2352*5898*2385	Inner:2352*12032*2385
	Outer:2438*2991*2591	Outer:2438*6058*2591	Outer:2438*12192*2591
Protection Level	IP54		
Humidity Range (%RH)	0~95		
Altitude (m)	3000		
Operating Temperature (°C)	-20~50		
Battery Voltage Range (V)	250~850		
Maximum DC Current (A)	200	750	1500
Connection Method	3P4W		
Power Factor	-1~1		
Communication Method	RS485,CAN,Ethernet		
Isolation Method	Power Frequency Isolation		

Note: The above data are subject to change without prior notice.



# Battery Combiner Box Regular Version



## Product Introduction >>

This product is used with low-voltage lithium iron phosphate battery pack. It is compact and easy to install. It can effectively solve the problem of inconsistent battery pack capacity when multiple low-voltage battery packs are running in parallel. It is widely used in small-scale industrial and commercial and household energy storage.

## Performance advantage >>



Indoor installation



Use multiple batteries in parallel



Easy and quick installation

## Product parameter >>

Model	GSBD3-8-250A	GSBD3-10-500A	GSBD4-12-800A	GSBD6-20-1250A
Number of connected batteries	3~8	3~10	4~12	6~20
Maximum allowable current (A)	250	500	800	1250
Working temperature(°C)	-10~55			
Chassis size (D*W*H)mm	410*310*180		500*600*250	
Weight(kg)	12~26			

Note: The above data is for reference only and is subject to change without prior notice.

# Battery Combiner Box Customized Version



## Product Introduction >>

This product is used with low-voltage lithium iron phosphate battery pack. It is compact, easy and quick to install, and has over-current and over-voltage protection measures, making the system operation more efficient and safer. At the same time, it effectively solves the problem of inconsistent battery pack capacity when multiple low-voltage battery packs are running in parallel. It is widely used in small-scale industrial and commercial and household energy storage.

## Performance advantage >>



Use multiple batteries in parallel



Easy and quick installation



Overcurrent and overvoltage protection

## Product parameter >>

Model	GSBC2-5-100A	GSBC3-8-300A	GSBC6-10-500A	GSBC11-16-500A
Number of connected batteries	2~5	3~8	6~10	10~16
Maximum allowable current (A)	100	300	500	500
Withstand voltage(VDC)	250	500		
Overcurrent protection	Yes			
Working temperature(°C)	-10~55			
Chassis size (D*W*H)mm	500*600*250			500*700*220
Weight (kg)	18~20			

Note: The above data is for reference only and is subject to change without prior notice.