1000kVA With Li-ion Battery

Container Energy Storage System

Power Is ON

BPE Strategic Power Solutions

BESS Container

BPE utilizes standardized battery modules, PCS modules, BMS, EMS, and associated subsystems to develop modular containerized solutions for large-scale grid-side energy storage applications.

The standardized containerized system can be configured as a 1000 kVA energy storage solution, capable of providing up to 4 hours of backup at a 500 kW load.

The standardized and prefabricated design significantly reduces customization lead time and on-site construction costs, while minimizing safety risks associated with installation variability and operational management.

This solution effectively meets the application requirements for grid peak shaving, frequency regulation, voltage regulation, emergency power support, and renewable energy integration, thereby ensuring reliable and stable operation of the power system.

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Configuration

PCS

Bidirectional AC / DC converter can realize the bidirectional conversion from DC to AC and AC to DC. It can not only convert AC to DC to charge battery, but also convert DC to AC to supply power to load or feedback to power grid.

Battery System

The system mainly consists of safe, efficient and long-life lithium iron phosphate cells, which are connected in series to form battery modules, and multiple modules are connected
in series to form battery clusters.

Air Conditioning

Air Conditioning (HVAC) system is configured to maintained an optimal temperature to maximize energy system operational life and efficiency.

Battery management system

The core components of the system can effectively protect the battery from overcharge, overdischarge and over-current. At the same time, the balanced management of the cells can ensure the safe, reliable and efficient operation of the whole system.

Power Management System

System operation data monitoring, operation strategy management, historical data record, system status record, etc.

Power Sync Cabinet

The microgrid management system cabinet integrates mains and off-grid switching, unifies DG, photovoltaic, and load control breakers under EMS-based centralized monitoring, and ensures optimized performance, high system stability, and seamless uninterrupted transition between grid and off-grid operation.

Enclosure

Protection degree IP54

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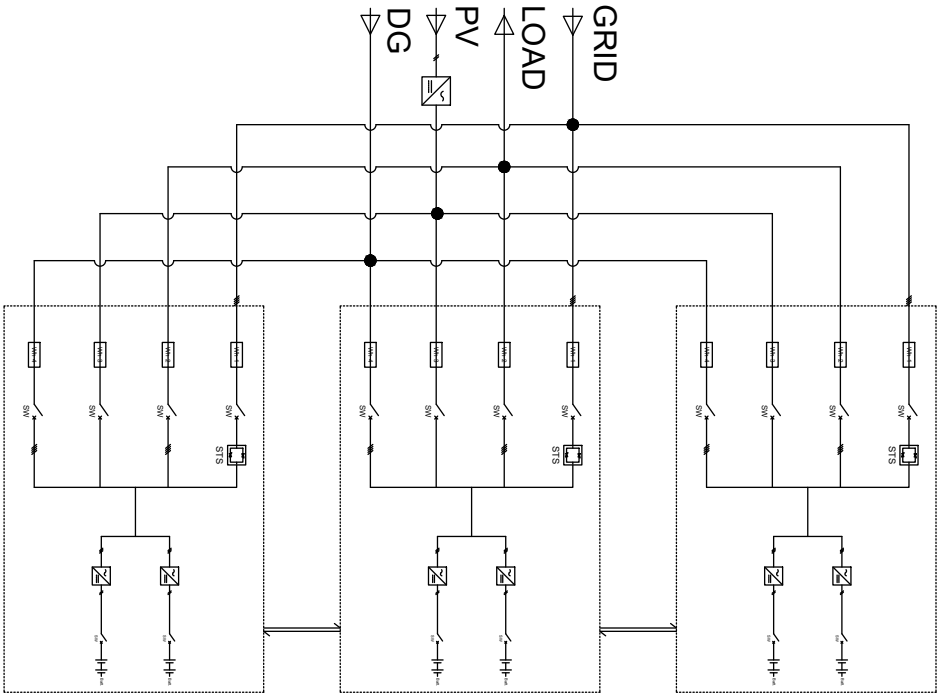

| Safe and reliable |

- High quality LFP batteries for mobile use.
- Intelligent air conditioning design, small temperature fluctuation.
- Automatic induction of fire source; automatic fire extinguishing; sound and light alarm function. Container-mounted network camera with video surveillance function; (optional)
- IP54, safe and reliable operation in outdoor environment.
- Serially designed PCS and battery pack eliminates circulating current and improve system reliability. Integrated BMS, DC, AC
- multi-layer protection, maximum safety performance design.

| Efficient and Convenient |

- Container installation, high modularity, simple structure, easy installation and maintenance. All-in-one equipment, which can be fixed, vehicle-mounted, and easy to move.
- Enables remote monitoring, device management, remote troubleshooting and data analysis.

| Cost optimization |

- Improving and energy storage, etc.
- One investment, multiple benefits: Peak shaving, backup power supply, microgrid building, power quality. Long cycle life, low failure rate, reduce operation and maintenance investment.
- Maximize green energy utilization.

Specification

Model		BESS10001560C
AC Parameter (Grid)	Rated Power (kVA)	1000
	Rated Grid Voltage (V)	3W+N+PE，380V/400V
	Grid Voltage Range	-15%~+10%
	Rated Grid Frequency (Hz)	50Hz/60Hz
	Grid Frequency Range (Hz)	±2Hz
	Output Current Harmonics	≤3%（Rated power）
	DC Component	＜0.5%In
	Power Factor Range	-0.9~+0.9
AC Parameter (No Grid)	Rated Output Power (kVA)	1000
	Max. Output Power (kVA)	1000
	Rated Output Voltage (V)	3W+N+PE，380V/400V
	Output Voltage Harmonics	3%
	Rated Frequency (Hz)	50Hz/60Hz
	Overload Capacity	105%：Long-time Running 105%~120%： 10min 120%）：1min
Battery Parameter	Cell Type	LFP
	Single Rack module capacity (KWh)	261.248
	No. of Battery Cabinets	6
	Battery System Power (KWh)	1567.48
	Rated operation hours (h)	2（Changeable number of battery modules with othertime options）
	Cycle Life	6000（0.5C@25℃ Charge/Discharge@90%DOD，EOL80%）
Protection	AC Switch	YES
	PV Electric Operated AC Switch	YES
	Grid Monitor	YES
	Surge Protection	YES
Basic Parameter	Size (W*D*H) (mm)	4950*2360*2470
	Weight (kg)	17500
	NO/OFF Grid Switch Device	STS（Optional）
	IP Class	Outdoor IP54
	Working Temperature Range	-20℃~55℃（Derated above 45°C）
	Relative Humidity	0%RH~95%RH，Non-condensing
	Temperature Control Method	PCS intelligent air cooling, battery immersion liquid cooling
	Fire Fighting	Perfluorohexanone fire extinguishing device
	Max. Working Altitude (m)	45℃，2000m；2000~4000m Derate
	Display	Touchscreen
	Communication Interface	RS485、LAN
	Communication Protocol	Modbus-RTU、Modbus-TCP

* Specifications are subject to change without any prior notice.

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