

POWER BASE CUBE ZR-BESS-100-300-01



Power 50kW/100kW

Capacity 96.8kWh-387kWh

Characteristics

- Optical storage integrated system to meet microgrid applications;
- Small size, flexible deployment
- Simple transportation and maintenance, with classification society certification, meeting shipping requirements,
- Unattended system, remote monitoring
- Provide a variety of configurations to meet different demands;
- Complete certification and protection, applicable to multiple national grid systems;
- In combine with diesel generators, to achieve seamless switching



Modular design

Easy for transportation
Easy for installation
Easy for maintenance



Flexible applications

PCS offers a variety of models
Configurable battery capacity
optional application scenarios



Specialties

Virtual synchronous motor technology is more suitable for microgrid applications
Fast response speed, immediately support weak power grid
Supporting multiple off-grid drooping parallel

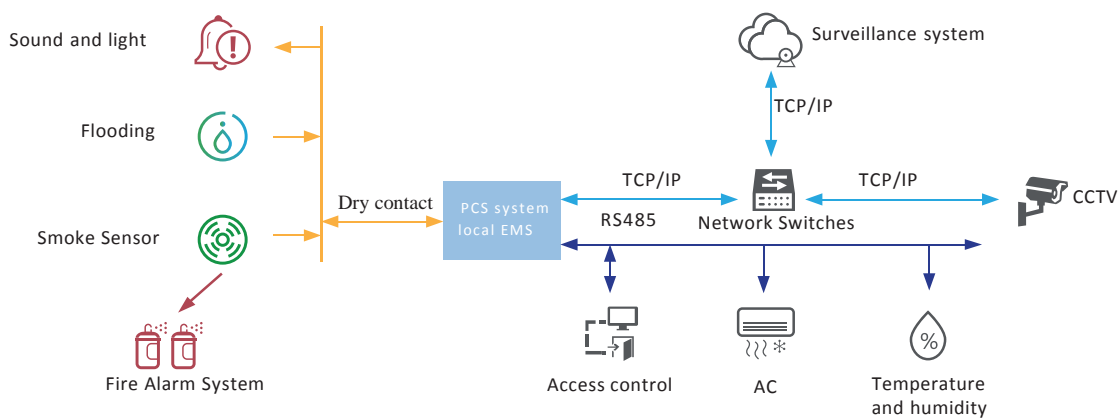


Security Systems

- Modular structure, flexible configuration of system capacity.
- Standard container, turnkey system.
- Intelligent battery management, within local EMS.
- Support the access of other micro-sources to realize the intelligent and efficient management of the system.
- Outdoor IP55 protection level
- Dustproof, waterproof and corrosion-proof
- Constant temperature design in the warehouse, the battery works in the best temperature environment
- Intelligent fire fighting system, automatic fire extinguishing
- Intelligent sound and light alarm and remote upload function, high security

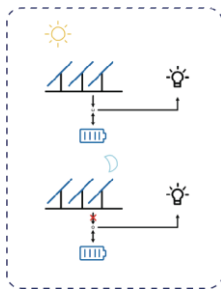
Security System ▶

The security system in the container, including sound and light, water immersion, smoke and other alarm systems, fire protection systems, temperature and humidity, access control, temperature control systems and monitoring systems, etc., the internal EMS conducts centralized monitoring and dispatching via dry contacts, RS485 and TCP/IP.





▶ Application 1: PV Microgrid



Through the mode of photovoltaic + energy storage, power supply can be realized in areas without electricity.

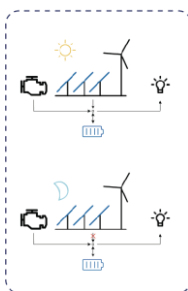
When the photovoltaic is sufficient during the day, it can be used by the load, and the excess power is stored in the battery.

When the photovoltaic is insufficient at night, the energy stored in the battery is released to the load to continue supplying power.

It can solve the small power supply needs of remote areas, such as communication base stations, border posts, small villages, etc.



▶ Application 2: PV+Diesel Microgrid



Through the combined operation of photovoltaic energy storage diesel engines, continuous power supply in areas without electricity and weak electricity can be realized.

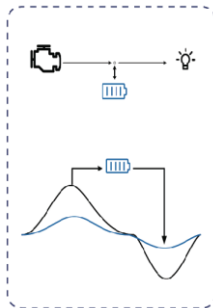
When the photovoltaic is sufficient during the day, it can be used by the load, and the excess power is stored in the battery. When the photovoltaic is insufficient at night, the stored electric energy of the battery is released to the load to continue supplying power.

Under the diesel engine is working in standby mode, when the new energy generation is insufficient during the day or night, the diesel engine is started to supplement the power supply.

It can solve the needs of medium-sized power supply in remote areas, such as islands, large villages, and factories in weak current areas.



▶ Application 3: Diesel replacement and optimized control



The combined operation of energy storage diesel engines can achieve maximum efficiency utilization of diesel engines and solve the problem of diesel engine wear.

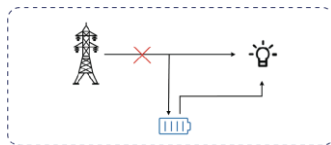
When the load is large, the diesel engine and energy storage can operate together, and the energy storage can quickly respond to load jitter, so that the diesel engine can be kept in the best operating state.

When the load is very small, the diesel engine stops working, and energy storage supplies power to the load, saving fuel.

It can solve the large-scale power supply demand in weak current areas, construction sites, oil extraction rigs, large villages, etc.



▶ Application 4: Emergency power supply and backup power



The energy storage system is connected to the original power system through a quick switch.

When the mains power fails, it can quickly switch to the energy storage system to ensure the reliability of power supply.

Moving the system to a place without electricity, through black start and virtual synchronous machine control can ensure emergency load power supply.

It can solve temporary electricity demand, large-scale events, plant backup, transformer expansion, power supply reliability guarantee, etc.

ZR-BESS-100-300-01

Regular Technical Features

Grid Voltage	400Vac
Grid Frequency	50/60Hz (±2.5Hz)
Rated Power	50kW/100kW
Rated Energy	96.8kWh-387kWh
Protection Level	IP54
Working Temp Range	-10°C~50°C
Humidity Range	0~95%
Altitude	3000m

Battery Cluster(Cabinet) Features

Model	ZR-EP100-02
Chemistry	LiFePO4
Rated Voltage	460.8Vdc
Rated Energy	96.7kWh
Size(W*H*D)	2991mm ×2591mm×2438mm
Weight	4.7t-6.7t
Batteries Connection	12 sets of ZR-FE38210-1235R1 in series

Energy Converter Features

Qty of Battery Cluster(s)	1 or more	2 or more
Model	ZR-BP50-02	ZR-BP100-02
Battery Voltage Range	250~520V	
Maximum DC Current	130A	260A
PV Voltage Range	520~900V	
PV Maximum Current	220A	440A
Connection	3P4S	
Power Factor	-1~1	
Communication	RS485,CAN,Ethernet	
Isolation	Power-line Frequency Isolation	
Certifications	CE LVD,IEC 62109	
	EMC, AS/NZS61000	
	AS4777	



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