

LARGE SCALE
MODULAR, LARGE SCALE ENERGY STORAGE



20ft ENERGY STORAGE CONTAINER

Extreme Performance with Adaptive Immersion Technology



AVAILABLE VERSIONS:

- BESS 2150-1000

PRODUCT DESCRIPTION

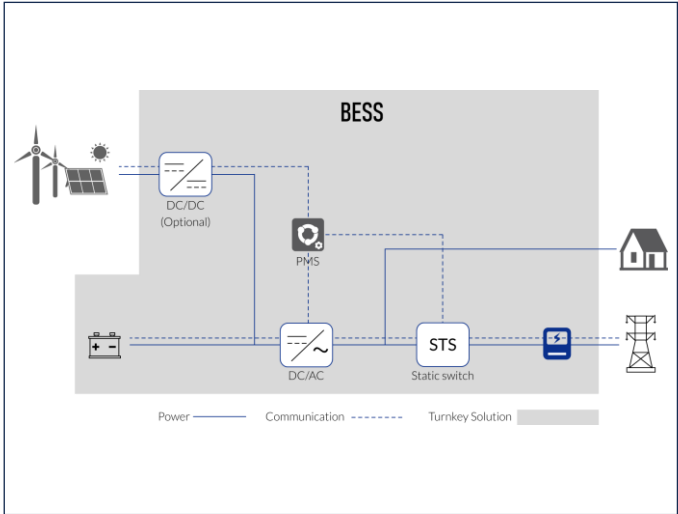
BESS is an intelligent and modular power supply equipment integrating lithium batteries and PCS. According to different application scenarios, lithium battery bidirectional DC /AC converter, bidirectional DC /DC converter, Static switch and Power management system can be flexibly combined to realize grid connected power supply, off grid power supply and off grid uninterrupted power supply, static reactive power compensation, harmonic suppression and other function etc...

It can access new energy, power grid, diesel generator to realize multi-energy reasonable configuration, scientific utilization, to provide users with green, environmental protection, noise free, high reliability and high security power services. With selected LFP batteries for mobile use, it is a robust energy storage solution which could realize ultra mobile, zero-emission, adaptable to different terrains.

SYSTEM FUNCTIONS

Functions	
Voltage Support	✓
Peak Shaving	✓
Grid Support	✓
Arbitrage	✓
PV Self-Consumption	✓
Flexibility Markets	✓
FCAS (Frequency Control Ancillary Services)	✓

SYSTEM TOPOLOGY



SAFETY RELIABILITY

- High Quality Lithium Iron Phosphate Batteries.
- Anodox Adaptive Immersion Thermal Management
- Three level BMS design of module, cabinet and system, multiple state monitoring, hierarchical linkage, comprehensive guarantee of battery system safety.
- Battery module designed with PC Bracket and reinforced steel structure to guarantee the highest of safety of the system, in transportation, installation and operation

EFFICIENCY CONVENIENCY

- Energy system, high energy density, high integration.
- Outstanding high-rate performance, maximum 2C charging and 2C discharging.
- Modular design, convenient for the maintenance, management and expansion.
- Three level BMS design, energy transferring active equalization, to overcome the impact of single cell capacity on system capacity. The equalization accuracy is less than 2%, and the equalization capacity can reach 10% of the rated output.

PRODUCT SPECIFICATIONS

	Model	BESS-2150-1000	
PV Parameter	Maximum Photovoltaic Access Power	800KW	
	Rated Current	1212A	
	Rated Input Voltage	3W+N+PE, 380V/400V	
	Rated Frequency	50Hz/60Hz	
DC Side Parameter	Voltage Range	DC580V~DC900V	
	DC Channel	10	
	Rated Single Channel Current	170A	
AC Parameter (On-Grid)	Rated Output Power	1000kW	
	Rated Grid Voltage	3W+N+PE, 380V/400V	
	Grid Voltage Range	-15%~+10%	
	Rated Grid Frequency	50Hz/60Hz	
	Grid Frequency Range	±2Hz	
	Output Current Harmonics	≤3% (rated power)	
	DC Component	<0.5%In	
AC Parameter (Off-Grid)	Power Factor Range	-0.9 - +0.9	
	AC Parameter (Off Grid)	1000kW	
	Maximum Output Power	1050kVA	
	Rated Output Voltage	3W+N+PE, 380/400V	
	Output Voltage Harmonics	3%	
	Rated Frequency	50Hz/60Hz	
Battery Parameter	Overload Capacity	105%]: continuous operation; (105%—120%]: 10 min; 120%]: 1 min	
	Cell Type	Lithium Iron Phosphate	
	Battery System Electricity	2150.4kWh	
	Rated Running Time	2 h (the duration can be customized by adjusting the number of battery modules)	
	Cycle Life	6,000 times (0.5C @ 25°C charge and discharge @ 90% DOD, EOL 80%)	
Protection	AC Switch	Equipped	
	PV electrically-operated AC Switch	Equipped	
	Grid Monitoring	Equipped	
	Surge Protection	Equipped	
Basic Parameters	Size (W*D*H) (mm)	6058*2438*2591	
	Weight (kg)	28000kg	
	Isolation Mode	Isolation transformer (built-in)	
	On-Grid & Off-Grid Switching Device	Electrically Operated	
	Protection Grade	IP54 for outdoor type	
	Working Temperature Range	-20°C-55°C (derating above 45°C)	
	Relative Humidity (without condensing)	0~95% without condensing	
	Temperature Control Method	Electrical Compartment: Intelligent Air Cooling / Batteries: Adaptive Immersion Technology	
	Maximum Working Altitude	2000m at 45°C; 2000m-4000m without derating Use	
	Display	Touch Screen	
	External Communication Interface	RS485, LAN	
	Communication Protocol	Modbus-RTU, Modbus-TCP	

SAFETY STANDARDS

Safety	IEC/EN 62109-1, IEC/EN 62109-2, IEC/EN 62040-1, IEC/EN 62477, (Batteries) IEC 62619, IEC 62368, UN38.3,		
	RPEQ Mechanically certified for lifting, Load Restraint Guide 2018 for Transportation		
Grid	AS/NZS 4777-2, VDE-AR-N 4105, 50549-1, TF 3.3.3 B1, EREC G99 (others pending)		
EMC	IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4		
Environment	ETSI EN 300 019:2-1 (Class 1.2), ETSI EN 300 019:2-2 (Class 2.3), ETSI EN 300 019:2-3 (Class 3.2)		