The battery of the future

ECO

Battery Energy Storage System

Outdoor cabinet energy storage system

Specification Sheet

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Battery Energy Storage System

PRODUCT OVERVIEW

The whole system is plug-and-play, easy to be transported, installed and maintained. It is an one-stop integration system and consist of battery module, PCS, STS(optional), control system, fire control system, temperature control system and monitoring system. The synergy of the system components can achieve effective charging and discharging. It adopts AC coupled microgrid structure, PCS, load, grid, and access to AC bus, and the corresponding control strategy is developed according to the actual case to ensure the safety of power supply.

The battery cluster consists of modules connected in series, and the whole battery system is controlled by BCM to monitor the cluster voltage and current in real time. The battery module consists of LiFePo4 battery cells. It adopts distributed BMM control system with functions of collecting the battery voltage, battery temperature and battery equalization to ensure the module works effectively and safely.

PRODUCT FEATURES

➲ Automobile-grade, high-performance LiFePo4 battery to ensure high safety and reliability.

➲ Intelligent temperature control to ensure the optimal temperature environment and lower system power consumption.

➲ Real-time data backup.

➲ Automatic fire fighting system with high safety.

➲ Grid and off-grid switching function.

➲ One-button start, automatic operating and it support multiple parallel connection.

➲ Protection class IP55, suitable for outdoor use.

➲ Four layers of safety protection design for higher safety and reliability.

➲ Remote viewing service.

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◎Model	Eco-2.0-30P	Eco-2.0-60P
◎Battery parameters		
Cell Type	LFP-220Ah	LFP-220Ah
Module Model	IP12S	IP12S
System Configuration	1P96S（8Module）~1P240S（20Module）	1P168S（14Module）~1P240S（20Module）
Battery Capacity（BOL）	67kWh~168kWh	118kWh~168kWh
Battery voltage range	268.8V-864V	470.4V-864V
◎AC on-grid parameters		
Grid Type	3P4W	3P4W
Rated charge/discharge power	30KW	60kW
Rated grid voltage	AC400V	AC400V
Grid Voltage range	-15%~+15%	-15%~+15%
Rated grid frequency	50Hz	50Hz
Frequency range	±5Hz	±5Hz
Rated current	43A	86A
Power Factor	1（Leading）~1（Lagging）	1（Leading）~1（Lagging）
Output Harmonics	≤3%	≤3%
◎AC off-grid parameters		
Rated output power	30KW	60KW
Rated output voltage	AC400V	AC400V
Rated output frequency	50Hz	50Hz
Rated current	43A	86A
Voltage accuracy	1%	1%
Frequency accuracy	0.2Hz	0.2Hz
◎General parameters		
Dimension (W*H*D)	1861*2100*1267mm	1861*2100*1267mm
Weight	2500kg	2500kg
IP Protection Rating	IP55（Battery room）IP53(Electrical room)	IP55（Battery room）IP53(Electrical room)
Seismic Intensity Rating	8 degree（IEC60980）	8 degree（IEC60980）
Anti-corrosion grade	C3	C3
Operating temperature【1】	-20℃~50℃	-20℃~50℃
Relative Humidity	0-95%（Non-condensing）	0-95%（Non-condensing）

Altitude 【2】	< 2000m	< 2000m
Cooling method	Battery room: air conditioning Electrical room: forced air cooling	Battery room: air conditioning Electrical room: forced air cooling
Noise	≤75dB	≤75dB
System efficiency	≥85%	≥85%
Cycle life	5 years or more than 2000 times	5 years or more than 2000 times
Fire Fighting System	Automatic fire extinguishing	Automatic fire extinguishing
Fire extinguishing media	FM200	FM200
Communication Interface	Ethernet	Ethernet
Communication protocols	Modbus TCP/IP	Modbus TCP/IP
Warranty	3 years	3 years
◎Photovoltaic side parameters (Optional)		
Maximum input module power	30KW	60KW
MPPT Voltage Range	200V-850V	200V-850V
Number of MPPT paths	1	1
Number of PV input channels	1	1
Maximum input current	100A	100A
◎STS Static Switch (Optional)		
Rated power	60kW (Grid side 30kW, Load side 30kW)	120kW (Grid side 60kW, Load side 60kW)
Switch time	≤ 20ms	≤ 20ms

◎ Notes：

【1】The system will be derated when the ambient temperature exceeds 45℃.

【2】The system will be derated when the altitude is between 2000 and 3000m.

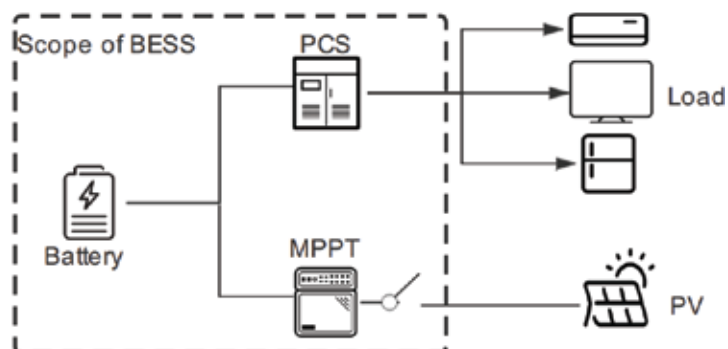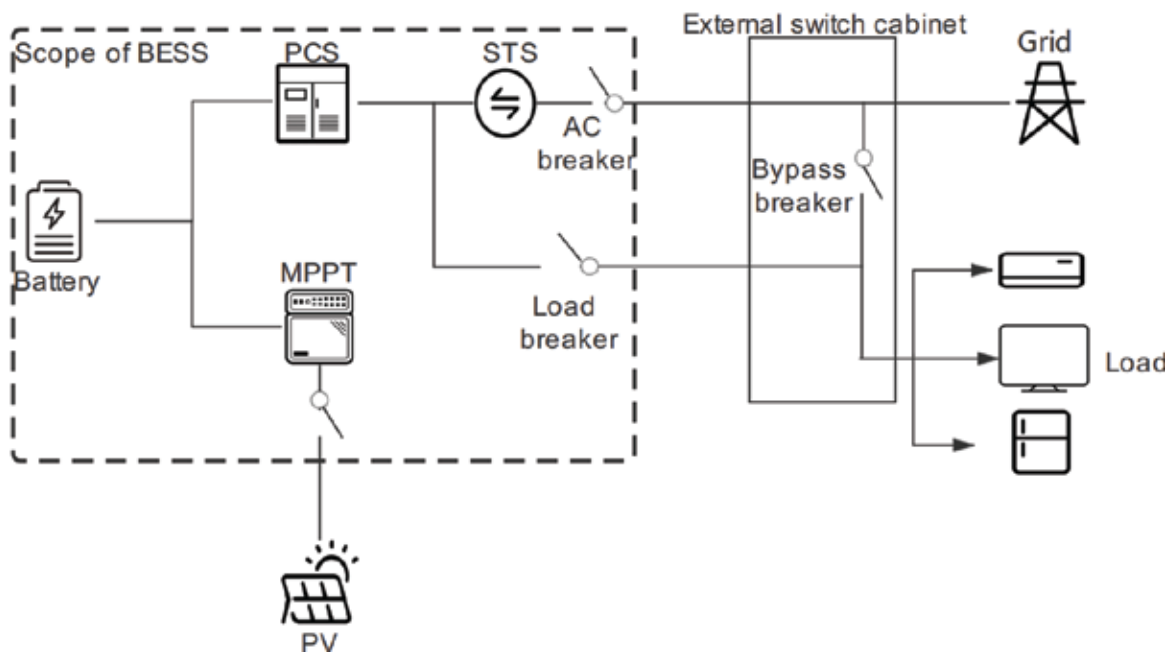◎Standard Certification：

【1】System: GB_T 36558, IEC 62933

【2】PCS: GB_T 34120

TYPICAL LAYOUTS

Off-grid

On and off-grid (seamless switching)

On-grid