

PV-ESS-Diesel On-Line System

* Online UPS * 0 ms transfer time * Green energy priority

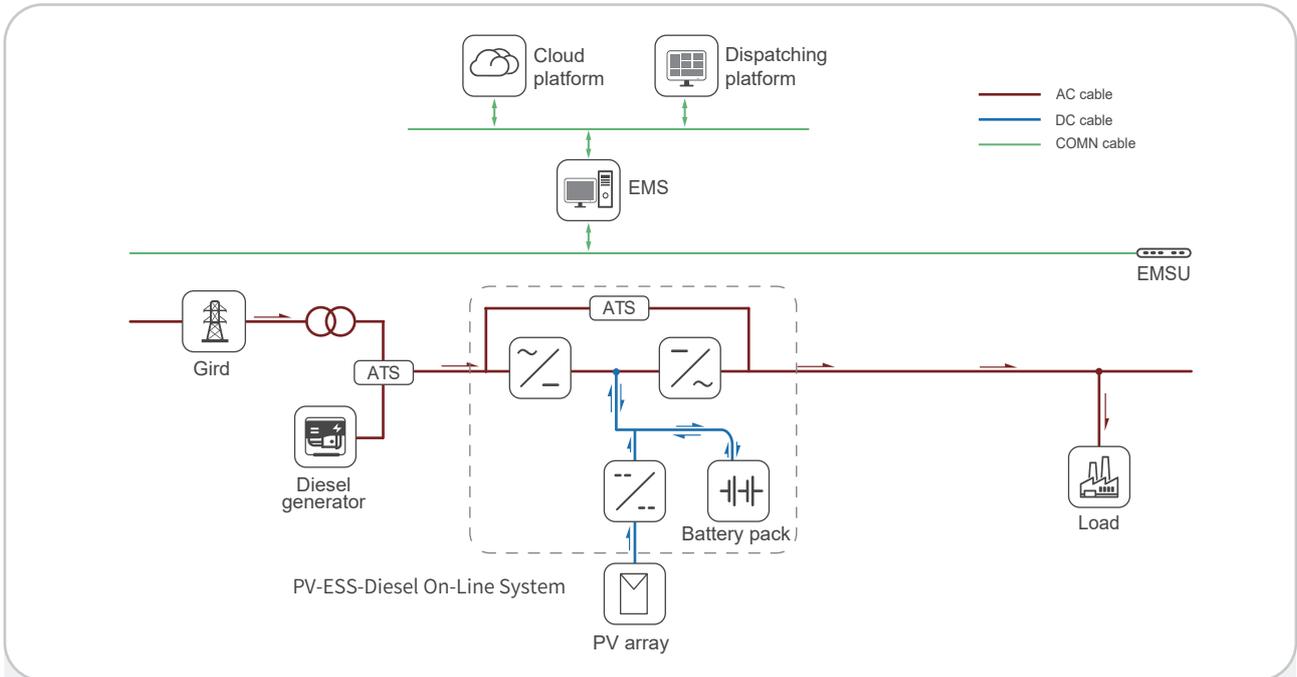


• Overview

The PV-ESS-Diesel On-Line System solution is a zero-interruption smart energy system designed for scenarios with extremely high demands on power supply continuity (such as precision manufacturing, critical medical departments, and core communication center). Its core innovation lies in its "online" structure, where PV and energy storage systems operate continuously as the primary power source, while the grid and diesel generators serve as backup power. Through real-time control of the power electronic conversion system, it achieves true zero-uninterrupted switching during grid fluctuations, momentary outages, or failures, completely eliminating the risk of power interruptions. The "online" design physically eliminates switching time; regardless of any disturbances in the external power grid, the voltage and frequency on the load side remain stable, providing the highest level of protection for critical equipment, like a "power safe box". The system prioritizes solar and energy storage as the primary power sources, maximizing the utilization of green electricity and achieving peak shaving and valley filling. The diesel generator is used only as a backup, significantly reducing its operating time and fuel consumption, thus ensuring reliability while substantially lowering energy costs and carbon emissions. The pv-ess-diesel on-line system redefines the power supply standards for critical loads, upgrading the traditional "backup power" concept to an active energy assurance system that is "permanently online and always stable." It is a high-end energy option that perfectly combines high reliability, high economic efficiency, and high sustainability.



• System Topology



Applicable Equipment:



Distribution Cabinet

+



PV-ESS-Diesel On-Line System

• Applications



Back Up



Diesel-Electric Hybrid System



Emergency Power Supply



High-Power Portable Power Station

BESS-L

PV-ESS-Diesel On-Line System

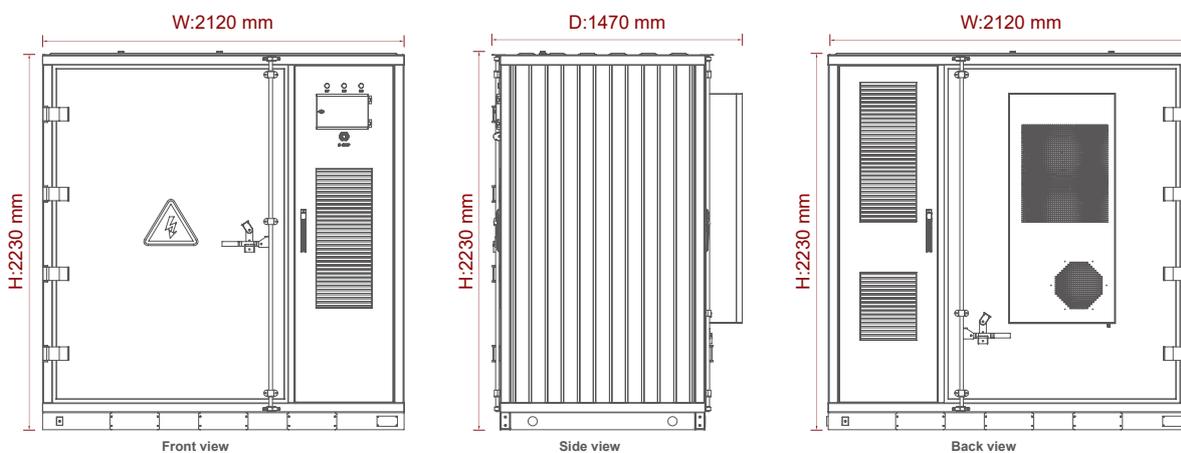
BESS-L 125D-271-120



• Features

- Status Indication: Shows system status, including load, storage capacity, and power.
- Multi-Mode Operation: Supports multi-level priority control for reliable power from PV, energy storage, grid, diesel generators and loads.
- Battery Management: Integrated BMS for battery monitoring and protection.
- Remote Monitoring: Multi-end remote access via self-service platform and device-side protocols.
- Easy Installation: IP54 cabinet with flexible installation options.

• Product Dimensions




• Technical Parameter

BESS-L 125D-271-120		
Battery Parameters		
Battery Module	Voltage	57.6V
	Capacity	314 Ah
	Energy	18 kWh
	Cooling method	Dry Self-Cooling
Battery Cluster	Rated voltage	864V
	Grouping method	1P 270 S
	Rated capacity	314 Ah
	Output voltage range	756V~950V
	Rated energy	271kWh
	Max continuous charging current	157 A
	Max continuous discharge current	157 A
Work Environment	Charging operation temperature range	0~45°C
	Working humidity	RH≤80%
	Storage humidity	RH≤80%
AC side		
PCS Parameter	Rated current	181A
	PCS overload capacity	x1.1 continuous;x1.25(30ms)
	PCS output power	125kW
	AC-side voltage of PCS	3P/N/PE, 230 V / 400 V
	Frequency	50Hz/60Hz
	Power factor	-1~1
	Battery side voltage	680V-950 V
Parallel	Parallel	Max 8 PCS
System Parameters		
System Parameters	Dimension(W*D*H)	2120*1470*2230mm
	Weight(kg)	3210kgs
	Display	7-inch Resistive Touch Screen
	Fire protection systems	Aerosol Fire Module
	Degree of protection	IP54
	Certification	CE;IEC62619;UN38.3
	Working temperaturerange	-30~60°C(> 45°C derating)
	Cooling	Dry Self-Cooling
	Relative humidity	5~95%(No Condensing)
	Highest altitude	4000m(>2000m derating)