



HPR-261-125

PV-energy storage integrated system

An all-in-one integrated system of photovoltaic and energy storage, which perfectly meets the application requirements on the industrial and commercial user side.



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Features



Safe & Stable

- The high-strength anti-corrosion cabinet can adapt to harsh environments, and the interior of the cabinet is isolated by functional zones.
- Combustible gas / smoke / temperature monitoring, explosion-proof exhaust device, and aerosol fire extinguishing technology ensure the safety and controllability of the system.
- Built-in isolation transformer realizes electrical isolation and increases the safety of electricity consumption.



Economical & Efficient

- One cluster, one management, zero parallel capacity loss.
- Multichannel MPPT design increases photovoltaic power generation efficiency.
- Intelligent thermal management control algorithm effectively increases system conversion efficiency.



Intelligent Control

- The EMS is embedded with strategies such as anti-reverse flow, peak shaving and valley filling, demand control, and photovoltaic-storage integration. The operation data can be accessed to the background through 4G to realize cloud-based duty.
- The end + cloud + AI control technology realizes full life cycle safety management.
- Seamless switching between grid-connected and off-grid realizes the backup power function for important loads.



Convenient & Fast

- All-in-one photovoltaic-storage-diesel power, one-stop delivery for microgrids.
- The product can be applied in single cabinet / multi-cabinet combinations for convenient installation and maintenance.
- The PV has a wide voltage input range and can meet the renovation requirements of existing photovoltaic power stations.



Specification

DC Side Parameters

Battery Type	Lithium Iron Phosphate (LFP)
Combination Mode	1P260S
Rated Capacity	314 Ah (0.5C、25°C)
Rated Energy	261.248 kWh (0.5C、25°C)
Rated Voltage	832 V
Rated Power	125 kW
Rated Charge / Discharge Rate	0.5 C
Operating Voltage Range	728-949 V
Standard Charge / Discharge Current	157 / 157 A
Cooling Method	Liquid Cooling
Fire Protection System	Aerosol

PCS Parameters

Grid-Connected Mode	Rated AC Power	125 kW
	Maximum AC Overload Capacity	150 kW
	Rated Charge / Discharge Current	182 A
	Maximum Charge-Discharge Current	218 A
	Allowed Grid Voltage Range	300~460 Vac
	Allowed Grid Frequency	50/60 Hz
	Total Harmonic Distortion of Current	<3% (at Rated Power)
Off-Grid Mode	Power Factor	-0.99~+0.99
	Rated Output Voltage	400 V
	*Off-Grid Load Start Power ¹	≤75 kW
	Voltage Deviation	<2%
	Total Harmonic Distortion of Voltage	<3% (for Pure Resistive Load)
Wiring Method	Three-Phase Three-Wire/Three-Phase Four-Wire	
Cooling Method	Intelligent Air Cooling	

¹ For motor-type loads, the recommended load power is ≤ 25kW. For the mixed-type load of inductive and resistive, the recommended load power is ≤ 75kW.

STS Parameters (Optional)

Grid Port Power	250 kW
Grid End Rated Current	380 A
PCS End Power	125 kW
Load End Power	125 kW
Rated Grid Voltage	380V / 400V
Rated Frequency	50/60 Hz
Grid-Connected to Off-Grid Switching Time	<10 ms
Wiring Method	3W+N+PE

DC / DC Module Parameters

PV Input	Rated Power	60 kW*2
	Rated Current	180 A*2
	Rated Voltage	350 V
	Maximum Voltage	1000 V
	*Working Voltage Range ²	340 V
	Minimum Voltage for Full Power	150 V ~ 950 V
	PV Connection Quantity	4*2
DC Output	PV Input Interface	MC4
	Rated Power	60 kW*2
	Rated Current	90 A*2
	Rated Voltage	700 V
	Full Power Voltage Range	650 V ~ 950 V

²The voltage range of Voc for photovoltaic modules is from 150V to 950V, and the voltage of photovoltaic modules for full power output should be greater than 340V

System Parameters

Charging / Discharging Efficiency	≥ 94%
Operating Temperature	Charging 0°C ~ 55°C Discharging -20°C ~ 55°C
Storage Temperature	Short-Term(within one month) -30°C ~ 60°C Long-Term(within one year) 0°C ~ 35°C
Noise	< 75dB
Weight	3,500 kg
Dimensions(W*D*H)	1,800 x 1,350 x 2,280 mm
Corrosion Protection Grade	C5
Protection Level	Battery Compartment IP 55 Electrical Compartment IP 54
Allowed Relative Humidity	0 ~ 95% (without Condensation)
Allowed Altitude	≤ 4000 m (Derating above 2000m)
Communication Methods	RS485、LAN
Grid-Connected to Off-Grid Switching Time	<20 ms

Certification Standards (Battery)

IEC 62619、IEC 62620、UL 9540A、UL 1973
UN38.3、RoHS、REACH

Compliance Standards (Rack)

IEC 62619、IEC 60730-1、IEC 62477-1、IEC 61000 (2025 Q2)