

Centralized Power Conversion System

HPCS2500

HPCS2500, a newly launched high - power conversion system by Hoymiles along with the HPCS1250N-HPCS1725 products, provides customers with a more comprehensive energy storage system solution. This PCS is based on the ANPC topology, peak efficiency > 99%; The power density of HPCS2500 is the top in the industry, floor space <1.5m^2; Intelligent liquid cooling; no derating up to 45 °C; Full power operation at DC 1500V; IP65 and C5 anti-corrosion，adapting to many complex and harsh scenarios.

Compact construction, efficient conversion

- Industry-leading power density, floor space < 1.5m^2
- ANPC topology, PCS peak efficiency > 99%
- Intelligent liquid cooling, no derating up to 45°C
- Full power operation at DC 1500 V

High compatibility, quick adjustment

- Equipped with grid-forming and inertia support capabilities, stable voltage establishment and regulation can be achieved within milliseconds
- Support L/HVRT, stable operation in weak grid, efficient and adaptable
- Charge/discharge switching time <20ms, support GOOSE

Multi-scene applications

- Supports on-grid, off-grid, and hybrid (on/off-grid) modes
- Operable in high-altitude, high-salt, high-temperature and extremely-low-temperature scenarios
- Four-quadrant operation, constant voltage, constant current and constant power in battery charge/discharge
- Supports VSG control

Comprehensive protection, safe and reliable

- IP65 and C5 anti-corrosion
- Over-voltage and over-current protection, linkable with BMS and EMS, realization of multiple protections
- 250kA short circuit breaking capacity on DC side
- Graded protection for over/under voltage and over/under frequency

Region: Global Version: V202506

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Technical Specifications

Model	HPCS2500
DC Side	
DC voltage range	1000 to 1500V
Maximum continuous DC-side current	2806A
Number of inputs	1
AC Side (On-Grid)	
Rated output power	2500kVA
Maximum continuous output power	2750kVA
Rated current	2092A
Maximum continuous AC-side current	2301A
Rated AC voltage	690V
AC voltage range	586 to 759V
Rated grid frequency / grid frequency range	50Hz / 45 to 55Hz
DC injection	< 0.5% In
AC current harmonic	< 3% (@rated power)
Power factor	> 0.99 (@rated power)
Power control precision	≤1%Pn (output power > 20% * Pn)
Reactive power adjustment range	-105% to +105%
Grid type	3P3W
Charge/discharge switching time	< 20ms
AC Side (Off-Grid)	
Rated AC voltage	690V
AC voltage range	586 to 759V
Rated grid frequency / grid frequency range	50Hz / 45 to 55Hz
Output voltage imbalance	< 2% (< 4% in short time)
AC voltage harmonic	< 3% (Linear load)
DC component of AC-side voltage	< 0.5% Un (balanced linear load)
Efficiency	
Peak efficiency	> 99%
Protection and Overload	
DC input / reverse polarity protection	Load switch + Fuses
AC output protection	Circuit breaker
Surge protection	DC Type II / AC Type II
Grid monitoring and grounding fault monitoring	Integrated
Insulation monitoring	Integrated
Overheat and overtemperature protection	Integrated
Short circuit protection	Integrated
DC overvoltage and undervoltage protection	Integrated
AC line phase sequence error protection	Integrated
Cooling system failure protection	Integrated
Communication failure protection	Integrated
Anti-islanding protection	Integrated, Combination of active and passive
Overload capacity	Operate for a long time at 1.1 times the rated load. Operate for no less than 2 minutes at 1.2 times the rated load. Operate for no less than 10 seconds at 1.5 times the rated load.
General Data	
Dimensions（W×H×D）	1250 × 2530 ×1150 mm
Weight	1800kg
Operating temperature	-35 to +60°C
Operating humidity	0 to 100%RH (non-condensing)
Altitude	≤5000m
IP rating	IP65, C5
Cooling method	Intelligent liquid cooling
Isolation method	Transformerless isolation
Overvoltage degree	DC port : II, AC port : III
Display and Communication	
Display	HMI + LED
Communication interface	RS485, CAN, Ethernet
Communication protocol	MODBUS-RTU, CAN, MODBUS-TCP, IEC61850
Standard and Regulation	
Compliance	GB/T 34120 - 2023, GB/T 34133 - 2023

* Subject to change without notice.

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