

Centralized Power Conversion System

HPCS1250N
HPCS1375
HPCS1575
HPCS1725

HPCS1250N-1725 series is based on ANPC, peak efficiency > 99%; The power density of this series is the top in the industry, floor space <1m^2; Intelligent liquid cooling; no derating up to 50 °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 < 1m^2
- ANPC topology, PCS peak efficiency > 99%
- Intelligent liquid cooling, no derating up to 50°C
- Full power operation at DC 1500 V

Grid friendly, stable support

- Support primary frequency regulation and rapid voltage adjustment
- 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
- Supports 0 power operation, no battery loss in hot standby state
- 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: V202504

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Technical Specifications

Model	HPCS1250N	HPCS1375	HPCS1575	HPCS1725
DC Side				
DC voltage range	1000 to 1500V	800 to 1500V	915 to 1500V	1000 to 1500V
Maximum continuous DC-side current @45°C	1403A		1936A	
Number of inputs			1	
AC Side (On-Grid)				
Rated output power @50°C	1250kVA	1375kVA	1575kVA	1725kVA
Maximum continuous output power @45°C	1375kVA	1513kVA	1733kVA	1897kVA
Rated current @50°C	1046A		1443A	
Maximum continuous AC-side current @45°C	1151A		1588A	
Rated AC voltage	690V	550V	630V	690V
AC voltage range	586 to 759V	467 to 605V	535 to 693V	586 to 759V
Rated grid frequency / grid frequency range		50Hz / 45 to 55Hz		
DC injection		< 0.5% (@rated power)		
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	550V	630V	690V
AC voltage range	586 to 759V	467 to 605V	535 to 693V	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 1 minutes at 1.2 times the rated load		
General Data				
Dimensions（W×H×D）		1100 × 2100 × 900 mm		
Weight	1000kg		1100kg	
Operating temperature		-35 to +60°C (> 50°C, derating operation)		
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 actual product shipment

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