Hoymiles

Open Energy for All

Power Conversion System

The HPCS460-E series PCS, developed by Hoymiles, is based on ANPC. It achieves a peak efficiency of > 99%.
This product features an intelligent liquid-cooling design, resulting in higher power density, a more compact size, and no derating at 60°C coolant temperature.
With an IP66 protection rating and a C4 anti-corrosion grade, the PCS is built to withstand harsh working environments, including high altitude, salt fog, high temperatures, and extreme cold.

HPCS460-335-1B-E

HPCS460-360-1B-E

HPCS460-385-1B-E



Features

01 ANPC topology, peak efficiency > 99%.

02 Supports constant voltage/current/power modes, equipped with VSG and black start functionalities.

03 PACK-level battery management ensures high battery availability.

04 Millisecond-level response enables multiple system protections.

05 No derating at 60°C coolant temperature.

06 IP66 protection rating and C4 anti-corrosion grade, suitable for outdoor use.

Region: Global Version: REV1.2

Technical Specifications

Model	HPCS460-335-1B-E	HPCS460-360-1B-E	HPCS460-385-1B-E
DC Side			
DC Voltage Range		1000 V - 1500 V	
Max. Continuous DC-Side Current	424 A	455 A	487 A
Number of Inputs		1	
AC Side (On-Grid)			
Rated AC Power	400 kW	430 kW	460 kW
Max. Continuous Output Power	440 kW	473 kW	506 kW
Rated AC Current	335 A	360 A	385 A
Max. AC Current	368.5 A	396 A	423.5 A
Rated AC Voltage		690 V, 3~/PE	
AC Voltage Range		586.5 V - 759 V	
Rated Grid Frequency / Grid Frequency Range		50 Hz / 45 Hz - 55 Hz, 60 Hz / 55 Hz - 65 Hz	
DC Injection		< 0.5%In	
AC Current Harmonic		< 2% (@Rated Power)	
Power Factor		> 0.99 (@Rated Power)	
Power Control Precision		≤ 1%Pn (Output Power > 20% * Pn)	
Reactive Power Adjustment Range		-105% - 105%	
Grid Type		3P3W	
Switching Time			
Charge / Discharge Switching Time		< 10 ms (@Rated charging and discharging power)	
AC Side (Off-Grid)			
Rated AC Voltage		690 V, 3~/PE	
AC Voltage Range		586.5 V - 759 V	
Output Voltage Precision		< 1%	
Rated Grid Frequency / Grid Frequency Range		50 Hz / 45 Hz - 55 Hz, 60 Hz / 55 Hz - 65 Hz	
AC Current Harmonic		< 3% (Linear load)	
DC Injection		< 0.5%Un (Balanced linear load)	
Unbalance Load Capacity		100% (With an isolation transformer)	
Dynamic Range		< 5%Un	
Efficiency			
Peak Efficiency		99%	
Protection and Overload			
DC Input		Load switch + Fuses	
Reverse Polarity Protection		Integrated	
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	
General Data			
Dimensions (W×H×D)		596 mm × 200 mm × 1900 mm	
Weight		≈ 220 kg	
Operating Temperature		-40°C to 60°C	
Operating Humidity		0% - 100%RH (Non-condensing)	
Altitude		≤ 4000 m (> 3000 m, Derating operation)	
IP Rating		IP66, C4	
Protective Class		Class I	
Noise		≤ 75dB	
Cooling Method		Intelligent Liquid Cooling (Cooling Type: Ethylene Glycol Coolant)	
Nominal / Max. Pressure		100 kPa / 400 kPa	
Isolation Method		Transformerless Isolation	
Overvoltage Category		III [AC], II [DC]	
Display and Communication			
Display		PC, LED	
Communication Interface		RS485, CAN, Ethernet	
Communication Protocol		ModbusRTU/TCP, CAN2.0, IEC61850	
Standard and Regulation			
Compliance		IEC/EN 62477, IEC/EN 61000, IEC/EN 50549,VDE-AR-N 4110, VDE-AR-N 4120, FGW TR 8	

* Subject to change without notice.

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