Liquid-cooled Power Unit

Huawei’s liquid-cooled power unit is a high-power charging architecture designed for new energy vehicles, featuring a fully liquid-cooled ultra-fast charging system that enables energy conversion and power distribution. Compared to traditional solutions, it innovatively employs a new liquid cooling technology and DC bus architecture. It can support up to 720 kW of power output (fully configured) and includes built-in 120 kW AC/DC and 60 kW DC/DC liquid-cooled modules along with a power sharing unit, allowing for expansion to support 12 charging connector outputs (fully configured).



Power Unit Specification

Basic Specifications	Model	DS720-720LEUA5	DS720-720LEUA5	DS720-720LEUA5	DS720-720LEUA5	DS720-720LEUA5
	Power Configuration (AC/DC-DC/DC)	720kW-720kW	600kW-720kW	480kW-600kW	240kW-360kW	240kW-720kW
	Dimensions (W x D x H)	1700mm × 800mm × 2150mm				
	Weight	1500kg (including coolant)	1500kg (including coolant)	1400kg (including coolant)	1250kg (including coolant)	1350kg (including coolant)
	Installation Mode	Floor-mounted				
	Efficiency (Maximum)	96%				
	Cooling	Liquid cooling				
	IP Rating	IP55				
	Communication Interface	4G,Ethernet(Northbound communication)				
	Standby Power *1	45W				
Input Specifications	Rated Input Voltage	400Vac±10%Vac, three-phase five-wire system				
	Rated Frequency	45-66 Hz				
	Rated Input Current	≤1117 A	≤931 A	≤745 A	≤373 A	≤373A
	Input Module	120kW AC/DC liquid-cooled module				
	Power Factor	≥0.99 (Load≥50%)				
	THDi	≤5% (Load≥50%)				
Output Specifications	Output Voltage	150~1000 Vdc				
	Output Module	60kW DC/DC liquid-cooled module				
	Current Ripple	≤ 1.5A @frequency<10Hz; ≤ 6A@frequency<5000Hz; ≤ 9A@frequency<150kHz				
	Voltage Ripple	≤ ±5V				
	Charging Connector Number	Max. 12	Max. 12	Max. 10	Max. 6	Max. 12
Environmental Specifications	Operating Temperature	-35 ℃ to +50 ℃				
	Storage Temperature	-40 ℃ to +70 ℃				
	Altitude	≤ 4000m				
	Relative Humidity	5%~95% (Non-condensing)				
	Noise	≤ 55 dB(A)@25℃ (silent Mode)				
Other Specifications	Compliance	IEC 61851-1, IEC 61851-23, IEC 61851-21-2				

*1: Not enable the reactive power compensation function