SOSEN

SSE-HL8~12K-P3SA-S

Three Phase | 2 MPPTs Hybrid Inverter (LV)

The SSE-HL8~12K-P3SA-S series is a leading three-phase low-voltage hybrid inverter designed for residential and small commercial applications, supporting 8~12kW systems. It features up to 250A charge/discharge current and three battery inputs for versatile energy storage solutions. Built with advanced SiC technology and a robust full aluminum IP66-rated enclosure, it delivers high efficiency, reliability, and durability. The inverter supports automatic 50/60Hz frequency adaptation, strong surge resistance, and 150% unbalanced three-phase output.



Extreme Climate Adaptability

Full-load operation, 45°C without derating

High Battery Compatibility

Max. 250A charge/discharge, supports three battery inputs

Wide Grid Adaptability

50/60Hz autoadaptation, built-in SPD

High Surge & Unbalanced Output

2× load surge for 10s, 150% three-phase unbalanced output

Flexible System Expansion

supports AC coupling for retrofit

SiC + Full Aluminum + IP66

High efficiency, lightweight, IP66 protection

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TECHNICAL SPECIFICATION			
Model	SSE-HL8K-P3SA-S	SSE-HL10K-P3SA-S	SSE-HL12K-P3SA-S
INVERTER INPUT / OUTPUT (GRID)			
Rated Power (kW)	8/8	10/10	12/12
Rated Voltage	127 / 220 V a.c., 3W+N+PE		
Rated Frequency (Hz)	50 / 60		
Power Factor Range	0.8 leading ~ 0.8 lagging		
Switch Time (ms)	< 20		
Current (Continuous) (A a.c.)	21	26	31
Max Output Overcurrent Protection	220 V a.c. / 100 A a.c.		
BATTERY			
Battery Type	Lithium / Lead-acid		
Battery Voltage Range (V d.c.)	40 ~ 60		
Rated Battery Voltage (V d.c.)	51.2		
Max Charge Current (A d.c.)	180	220	250
Max Discharge Current (A d.c.)	180	220	250
PV INPUT			
No. of MPPT Tracker / Strings	2 / 2+2		
Max. PV Array Power (kW)	16	20	24
Max DC Voltage (V d.c.)	1000		
MPPT Voltage Range (V d.c.)	150 ~ 850		
Start-up Voltage (V d.c.)	180		
Max. Input Current (A d.c.)	4*20		
Isc PV (Absolute Maximum) (A d.c.)	4*30		
AC OUTPUT (EPS)			
EPS Rated Output Voltage	127 / 220 V a.c., 3W+N+PE		
EPS Rated Output Frequency (Hz)	50 / 60		
EPS Rated Output Active Power (kW)	8	10	12
EPS Rated Output Apparent Power (kVA)	8	10	12
EPS Rated Output Current (A a.c.)	21	26	31
Overload Capacity (Off Grid)	110% 600s / 120% 300s / 150% 60s / 200% 10s		
EFFICIENCY			
MPPT Efficiency	99.90%		
Euro-efficiency	97.00%		
Max. Efficiency	97.50%		
PROTECTION & FEATURE			
Insulation Monitoring	Yes		
Residual Current Monitoring	Yes		
Parallel Function	Yes		
Protection Degree	IP66		
Certifications	EN/IEC 62109-1/2, EN/IEC 60529, EN IEC 61000-6-1, EN IEC 61000-6-3, EN IEC 61000-3-12, EN IEC 61000-3-11		
Other Protection	Output over voltage, Output over current, Short circuit, Surge, Temperature, Anti-Islandmg		
GENERAL PARAMETER			
Storage Temperature	-25°C ~ +60°C		
Operating Temperature	-25℃ ~ +60℃ (Linely derating to 60% when exceed +45℃ ~ +60℃)		
Humidity	0-95% (Non-condensing)		
Altitude (m)	4000 (>2000 Derating)		
Noise (dB)	<65		
Machine Dimension(W*H*D) (mm)	448*660*265		
Machine Weight / N.W. (kg)	45		
DISPLAY & COMMUNICATION			
Display	LCD + APP		
Interface	RS485 / WiFi / CAN / DRM (Optional:Bluetooth / LAN / Meter)		

- The AC voltage and frequency range can differ according to the grid standards of each country.
- Please note that all specifications are subject to change without prior notice.