SOSEN

SSE-HH30K-P3SA Series

Three Phase | 4 MPPTs Hybrid Inverter | 127/220V (HV)

The SSE-HH30K-P3SA series is a powerful 30kW hybrid inverter engineered for residential, commercial, and off-grid applications in regions using 127/220V split-phase grids—such as Latin America. It supports dual AC input (grid and diesel generator), seamless on/off-grid switching, and intelligent energy management. With dual high-voltage battery ports, enhanced 2× bypass capacity for heavy startup loads, and IP66-rated durability, it delivers exceptional flexibility, resilience, and performance in complex and remote energy environments.



Superior Performance & Efficiency

- 100% unbalanced three-phase output
- 4 MPPTs, up to 99.9% efficiency
- Supports 1.67× PV oversizing

Dual AC Input for Grid & Generator

- Supports grid and diesel generator
- Automatic seamless input switching
- Stable power in weak grids

2X Enhanced Bypass Capability

- Bypass current up to 60kW (2× rating)
- Handles high inrush loads easily
- Stable during peak demand

Native 127/220V Grid Compatibility

- For LATAM and Caribbean split-phase grids
- No external transformers needed
- Meets local standards efficiently

Dual Battery Inputs & High Current

- 2 independent HV battery inputs
- 100A charge/discharge per port
- Ready for large LFP battery systems

Robust Safety & Outdoor Durability

- All-SiC tech for better efficiency
- IP66-rated for harsh outdoors
- Compact, plug & play design

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TECHNICAL SPECIFICATION	
Model	SSE-HH30K-P3SA / SSE-HH30K-P3SA-S
INVERTER INPUT / OUTPUT(GRID)	
Rated Power (Input/Output) (kW)	60 / 30
Rated Voltage	127/220Va.c.,3W+N+PE
Rated Frequency (Hz)	50 / 60
Power Factor Range	0.8 leading~0.8 lagging
Switch Time (ms)	<20
Max.Continuous Current (Input/Output) (A a.c.)	157.4 / 78.7
Max.Output Overcurrent Protection (A a.c.)	118.1
BATTERY	
Battery Type	Lithium / Lead-acid
Battery Voltage Range (V d.c.)	150～850
Rated Battery Voltage (V d.c.)	150
Max.Charge Current (A d.c.)	2*100
Max.Discharge Current (A d.c.)	2*100
Reverse Connect Protection	Yes
PV INPUT	
No.of MPPT Tracker / Strings	4 / 2+2+2+2
Max.PV Input Power (kW)	60
Max.DC Voltage (V d.c.)	1000
MPPT Voltage Range (V d.c.)	150~950
Start-up Voltage (V d.c.)	200
Max.Input Current / sring (A d.c.)	8*20
Isc PV (Absolute Maximum) / sring (A d.c.)	8*30
AC OUTPUT(EPS) / GENERATOR	
EPS Rated Output Voltage	127 / 220Va.c.,3W+N+PE
EPS Rated Output Frequency (Hz)	50 / 60
EPS Rated Output Active Power (kW)	30
EPS Rated Output Apparent Power (kVA)	30
EPS Rated Output Current (A a.c.)	78.7
Overload Capacity (Off Grid)	110% 30s / 120% 10s / 150% 0.2s
EFFICIENCY	
MPPT Efficiency	99.90%
Euro-efficiency	97.00%
Max.Efficiency	98.00%
PROTECTION & FEATURE	
Insulation Monitoring	Yes
Residual Current Monitoring	Yes
Parallel Function	Yes,up to 8pcs
Protection Degree	IP66
Other Protection	Ground fault current monitoring, Earth fault detection, Residual current(RCD)Detection etc.
GENERAL PARAMETER	
Storage Temperature	-25℃~+60℃
Operating Temperature	-25℃~+60℃ (>+45℃ Derating)
Humidity	0%~95% (Non-condensing)
Max.operating altitude (m)	4000 (>2000 Derating)
Noise (dB)	<65
Machine Dimensions(W*H*D) (mm)	544*880*278
Machine Weight / N.W. (kg)	88
DISPLAY & COMMUNICATION	
Display	App+ LED / LCD (-S version)
Interface	RS485 / WiFi / CAN / DRM / Bluetooth (Optional: 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.