



solis

20th
ANNIVERSARY**30-50K**

SOLARATOR SERIES

Operates Seamlessly with Generators: Experience Uninterrupted Power, Even in Areas with Grid Instability

S6-EH3P(30-50)K-H

Three Phase | High Voltage

9 Unique Advantages

- ★ Supports PV input up to 200% of the inverter's rated DC power, maximising solar utilisation
- ★ Supports up to 20A PV input current, compatible with the latest high-power PV modules
- ★ Compatible with 100-280Ah battery cells, helping reduce energy storage system costs
- Supports battery charge/discharge current up to 140A, ideal for peak-valley arbitrage and frequency regulation applications
- 160% overload for 2s in off-grid mode, ensuring stable startup of motors and water pumps
- Supports generator input across a wide range (20%–100% of rated power), reducing investment costs
- Two independent battery connections, allowing more flexible system configuration
- SolisCloud: Smart remote control, AI optimisation, and instant troubleshooting – all in one platform
- 7-inch industrial-grade screen, providing a larger, user-friendly interface for local operation

6 Leading Advantages

- Supports DC and AC coupling for PV, allowing flexible system expansion and retrofitting
- Battery reserve function across multiple scenarios, ensuring reliable backup power
- Smart Load management with prioritisation, extending backup time for critical loads
- Smart port enables multiple energy source inputs, including grid-tied inverters, diesel generators, and wind turbines
- Seamless on/off-grid switching in under 10ms, guaranteeing uninterrupted power supply
- Supports up to 10 units in parallel. For systems with more than 6 units, use of a Solis power distribution cabinet is recommended

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DATASHEET

S6-EH3P(30-50)K-H

Models	30K		40K		50K	
Input DC (PV side)						
Recommended max. PV array size	60 kW		80 kW		100 kW	
Max. usable PV input power	60 kW		80 kW		96 kW	
Max. input voltage			1000 V			
Rated voltage			600 V			
Start-up voltage			180 V			
MPPT voltage range			150 - 850 V			
Max. input current	3 × 40 A				4 × 40 A	
Max. short circuit current	3 × 60 A				4 × 60 A	
MPPT number / Max. input strings number	3 / 6				4 / 8	
Battery						
Battery type			Li-ion			
Battery voltage range			150 - 800 V			
Max. charge / discharge power	33 kW		44 kW		55 kW	
Max. charge / discharge current			70 A × 2 ^①			
Number of battery ports			2			
Max. charge / discharge power of each input	33 kW		35 kW		35 kW	
Communication			CAN / RS485			
Output AC (Grid side)						
Rated output power	30 kW		40 kW		50 kW	
Max. apparent output power	30 kVA		40 kVA		50 kVA	
Rated grid voltage			3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated grid frequency			50 Hz / 60 Hz			
Rated grid output current	45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
Max. output current	45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
Power factor			> 0.99 (0.8 leading - 0.8 lagging)			
THDi			< 3%			
Input AC (Grid side)						
Max. AC passthrough current	91.2 A / 86.6 A		121.6 A / 115.4 A		152 A / 144.4 A	
Rated input voltage			3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated input frequency			50 Hz / 60 Hz			
Input Generator						
Max. input power	30 kW		40 kW		50 kW	
Rated input current	45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
Rated input voltage			3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated input frequency			50 Hz / 60 Hz			
Output AC (Back-up)						
Rated output power	30 kW		40 kW		50 kW	
Max. apparent output power			1.6 times of rated power, 2 s			
Back-up switch time			< 10 ms			
Rated output voltage			3/N/PE, 220 V / 380 V, 230 V / 400 V			
Rated frequency			50 Hz / 60 Hz			
Rated output current	45.6 A / 43.3 A		60.8 A / 57.7 A		76 A / 72.2 A	
THDv (@linear load)			< 2%			
Efficiency						
Max. efficiency			97.8%			
EU efficiency			97.4%			
BAT charged by PV max. efficiency			98.5%			
BAT charged / discharged to AC max. efficiency			97.5%			
Protection						
Anti-islanding protection			Yes			
Output over current protection			Yes			
Insulation resistance monitoring			Yes			
Short circuit protection			Yes			
Integrated DC switch			Yes			
DC reverse-polarity protection			Yes			
Surge protection			DC Type II / AC Type II			
Integrated AFCI 2.0			Optional			
General Data						
Dimensions (W × H × D)			530 × 880 × 290 mm			
Weight			73 kg			
Topology			Transformerless			
Self-consumption (night)			< 35 W			
Operating ambient temperature range			- 25 ~ +60°C			
Relative humidity			0 - 100%			
Ingress protection			IP66			
Cooling concept			Intelligent fan-cooling			
Max. operation altitude			4000 m			
Grid connection standard			G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1/EN 50549-10, VDE 0126/UTE C 15/VFR:2019, NTS 631/RD 1699/RD 244/UNE 206006/UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA,PORTARIA Nº 140, DE 21 DE MARÇO DE 2022			
Safety / EMC standard			IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011			
Features						
PV connection			MC4 Quick connection plug			
Battery connection			Terminal connector			
AC connection			Terminal Block			
Display			7.0" LCD display & Bluetooth + APP			
Communication			CAN, RS485, Ethernet, Optional: S3-WiFi-ST, Cellular, LAN			

① Supporting parallel 140A input.