



solis

20th
ANNIVERSARY



SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

S6-EH3P(30-50)K-H-ND

Three Phase | High Voltage

6 Leading Features

- Support flexible PV connection through DC and AC coupling simultaneously
- Support battery reserve function in multiple scenarios
- Smart Load Prioritizing – Extended support for critical loads
- Seamless on grid/off grid switching time <10ms
- Support max 10 pcs in parallel mode, >6 pcs recommend Solis power distribution cabinet
- SMARTLOAD/GEN/INV port - Flexible connection of multiple energy sources such as Grid-tied inverter, diesel generator, wind turbines, etc.

7 Unique Features

- Usable PV power up to 200% inverter rated power, improve the utilization of PV generation
- Support max 20A PV input current, perfectly match high power PV modules
- Compatible with 100-280Ah battery modules
- Support faster charging with battery current up to 140A
- Powerful backup overload capability – 160% overload
- Support wide power range of generator interaction from 10kVA to 50kVA
- Support 2 independent batteries connection for flexible configuration

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DATASHEET

S6-EH3P(30-50)K-H-ND

Models	30K	40K	49K	50K
Input DC (PV side)				
Recommended max. PV array size	60 kW	80 kW	98 kW	100 kW
Max. usable PV input power	60 kW	80 kW	96 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	40 A / 40 A / 40 A		4 × 40 A	
Max. short circuit current	60 A / 60 A / 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	53.9 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	35 kW
Communication			CAN / RS485	
Output AC (Grid side)				
Rated output power	30 kW	40 kW	49 kW	50 kW
Max. apparent output power	30 kVA	40 kVA	49 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	74.5 A / 70.7 A	76 A / 72.2 A
Max. output current	45.6 A / 43.3 A	60.8 A / 57.7 A	74.5 A / 70.7 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	149 A / 141.4 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	49 kW	50 kW
Rated input current	45.6 A / 43.3 A	60.8 A / 57.7 A	74.5 A / 70.7 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	49 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	74.5 A / 70.7 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	
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 - 95%	
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	LED indicator & Bluetooth + APP			
Communication	CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN			

(1) Supporting parallel 140A input.