solis

29.9-50K

SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

S6-EH3P(29.9-50)K-H

Three Phase | High Voltage

9 Unique Advantages

- ★ Supports up to 2x rated PV input, maximizing solar energy utilization
- ★ Supports a maximum string input current of 20A, ensuring compatibility with high-power PV modules
- ★ Compatible with 100–280Ah battery modules, reducing overall system costs
- ★ Supports fast battery charging with a maximum charging current of 140A
- ★ Two independent battery ports for flexible configurations and easy capacity expansion
- ★ Delivers 160% overload for 2s in off-grid mode, ensuring stable startup of heavy loads
- ★ Supports generator input across a wide range (20%–100% of rated power), reducing investment costs
- ★ 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 both DC and AC coupling, for flexible retrofits and system expansions
- Ensures reliable backup power across diverse scenarios through battery reserve management
- Extends supply time for critical loads with intelligent load prioritization
- Offers a versatile three-in-one interface for seamless integration of on-grid PV, wind power, and diesel generators
- Achieves on- and off-grid transitions in less than 10ms, ensuring an uninterrupted power supply
- Supports multi-unit parallel operation up to 500kW (Solis STS cabinet recommended for systems over 6 units)

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DATASHEET

Models	29.9K	30K	40K	50K
Input DC (PV side)				
Recommended max. PV array size	59.8 kW	60 kW	80 kW	100 kW
Max. usable PV input power	59.8 kW	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	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	32.1 kW	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	32.1 kW	33 kW	35 kW	35 kW
Communication	CAN / RS485			
Output AC (Grid side)				
Rated output power	29.9 kW	30 kW	40 kW	50 kW
Max. apparent output power	29.9 kVA	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	45.4 A / 43.2 A	45.6 A / 43.3 A	60.8 A / 57.7 A	76 A / 72.2 A
Max. output current	45.4 A / 43.2 A	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	90.8 A / 86.4 A	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	29.9 kW	30 kW	40 kW	50 kW
Rated input current	45.4 A / 43.2 A	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	29.9 kW	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	45.4 A / 43.2 A	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			
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: Wi-Fi, Cellular, LAN			

① Supporting parallel 140A input.