29.9-60K

SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

S6-EH3P(29.9-60)K-H(21A)

Three Phase | High Voltage

10 Unique Advantages

- ★ Supports PV input up to 100kW, maximising solar utilisation
- ★ Supports a maximum string input current of 21A, ensuring compatibility with high-power PV modules
- ★ Compatible with 100–314Ah battery modules, reducing overall system costs
- ★ Supports fast battery charging with a maximum charging current of 168A
- ★ 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
- ★ Offers flexible control for weak grid and genset-hybrid scenarios, reducing investment costs
- ★ SolisCloud: Smart remote control, AI optimisation, and instant troubleshooting - all in one platform
- ★ Integrates PV and storage for demand management and anti-reverse flow functions
- ★ Provides dynamic reactive power compensation to improve grid power factor and reduce reactive power charges

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 600kW (Solis STS cabinet recommended for systems over 6 units)

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DATASHEET

Models	29.9K	30K	40K	49K	50K	60K
Input DC (PV side)						
Recommended max. PV array size	59.8 kW	60 kW	80 kW	98 kW	100 kW	100 kW
Max. usable PV input power	59.8 kW	60 kW	80 kW	98 kW	100 kW	100 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 × 42 A		4 × 42 A			
Max. current per DC input	42 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 current	80 A × 2					84 A × 2
Number of battery port / Number of BMS port	2					
Max. charge / discharge current of each port	80 A					84 A
Communication	CAN					
Output AC (Grid side)						
Rated output power	29.9 kW	30 kW	40 kW	49 kW	50 kW	60 kW
Max. apparent output power	29.9 kVA	30 kVA	40 kVA	49 kVA	50 kVA	60 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	74.5 A / 70.7 A	76 A / 72.2 A	91.2 A / 86.6 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)					
THDi	< 3%					
Input AC (Grid side)						
Max. input power	59.8 kW	60 kW	80 kW	98 kW	100 kW	100 kW / 105 kW
Input voltage range	304 - 460 V					
Max. input current	90.8 A / 86.4 A	91.2 A / 86.6 A	121.6 A / 115.4 A	149 A / 141.4 A	152 A / 144.4 A	152 A / 152 A
Output AC (Back-up)						
Rated output power	29.9 kW	30 kW	40 kW	49 kW	50 kW	60 kW
Max. apparent output power	1.6 times of rated power, 2 s; 1.5 times of rated power, 10 s					
Back-up switch time ①	< 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	74.5 A / 70.7 A	76 A / 72.2 A	91.2 A / 86.6 A
Max. AC passthrough current	45.4 A / 43.2 A	45.6 A / 43.3 A	60.8 A / 57.7 A	74.5 A / 70.7 A	76 A / 72.2 A	91.2 A / 86.6 A
THDv (@linear load)	< 2%					
Input AC (Generator side)						
Max. input power	29.9 kW	30 kW	40 kW	49 kW	50 kW	60 kW
Rated input current	45.4 A / 43.2 A	45.6 A / 43.3 A	60.8 A / 57.7 A	74.5 A / 70.7 A	76 A / 72.2 A	91.2 A / 86.6 A
Rated input voltage	3/N/PE, 220 V / 380 V, 230 V / 400 V					
Rated input frequency	50 Hz / 60 Hz					
Efficiency						
Max. efficiency	97.7%					
EU efficiency	97.3%					
BAT charged by PV / AC max. efficiency	98.5% / 97.8%					
Battery discharged efficiency	97.5%					
Protection						
Surge protection	DC Type II / AC Type II					
Output over current protection	Yes					
Insulation resistance monitoring	Yes					
Residual current detection	Yes					
Integrated PV switch	Yes					
DC reverse-polarity protection	Yes					
Protection class / Over voltage category	I / PV II, battery II, AC III					
Integrated AFCI 2.0	Optional					
Anti-islanding protection	Yes					
General Data						
Max. power per phase (grid & back-up)	33% rated power					
Dimensions (W × H × D)	530 × 880 × 290 mm					
Weight	76 kg					
Inverter topology	Non-isolated					
Self-consumption	< 35 W					
Operating temperature range	-25 ~ +60°C					
Relative humidity	0 - 100%					
Ingress protection	IP66					
Cooling concept	Intelligent redundant fan-cooling					
Max. operation altitude	4000 m					
Grid connection standard ②	G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1/EN 50549-10, PTPiREE, VDE 0126/XP C15/VFR:2019, NTS 631/RD 1699/UNE 217002, CEI 0-21, CEI 0-16, C10/11, NRS 097-2-1, TOR, EIFS 2018.2, IEC 62116, IEC 61727, DEWA, MEA, PEA, PORTARIA Nº 140/PORTARIA Nº 515					
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-2/-4, EN 55011					
Features						
PV connection	MC4 connector					
Battery connection	Terminal connector					
AC connection	OT terminal					
Display	7.0" LCD display & Bluetooth + APP					
Communication interface	Standard: WIFI+LAN+Bluetooth, CAN-BMS×2, CAN-Parallel×2, RS485-Meter, RS485, DRM, DI×3, DO×3; Optional: 4G					

① From On-Grid Mode to Off-Grid Mode: For a single inverter system, switchover time <10ms. For a parallel system which consists of up to 6 inverters, switchover time <20ms. If customer wishes to connect more than 6 inverters in parallel, please contact Solis Technical Team.

② This column only shows the planned certification standards. Please confirm the specific time of obtaining the standards with the local team.