

3-12K

Energy Storage Inverters

S6-EH3P(3-10)K-H
S6-EH3P12K-H-EU(21A)

Three Phase | High Voltage

Unique Advantages

★ Supports up to 4 MPPTs, suitable for multi-orientation and occlusion, to improve power generation

Leading Advantages

- Supports PV input up to 160% of the inverter's rated DC power, maximising solar utilisation
- Supports up to 21A PV input current, compatible with future higher-power PV modules
- 160% overload for 60s in off-grid mode, ensuring stable startup of motors, water pumps and air conditioner
- Seamless on/off-grid switching in under 10ms, guaranteeing an uninterrupted power supply
- Support three-phase unbalanced output, each phase supports output max. 50% rated inverter power
- Supports existing PV grid-tied power connection for export control and off-grid use
- Support grid side generator access, adapting to scenarios with insufficient power supply
- Support max 6 units in parallel, for expanding system capacity
- Customizable battery backup level for uninterrupted power
- PV only off grid mode, to reduce the initial investment cost
- SolisCloud: Smart remote control, AI optimisation, and instant troubleshooting - all in one platform
- Ingress protection IP66, adapting to harsh ambient conditions

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DATASHEET

Models	5K2	6K2	8K2	10K2	3K-EU	4K-EU	5K-EU	6K-EU	8K-EU	10K-EU	12K-EU(21A)
Input DC (PV side)											
Recommended max. PV array size	10 kW	12 kW	16 kW	20 kW	6 kW	8 kW	10 kW	12 kW	16 kW	20 kW	24 kW
Max. usable PV input power	8 kW	9.6 kW	12.8 kW	16 kW	4.8 kW	6.4 kW	8 kW	9.6 kW	12.8 kW	16 kW	19.2 kW
Max. input voltage	1000 V										
Rated voltage	600 V										
Start-up voltage	160 V										
MPPT voltage range	200 - 850 V										
Max. input current	16 A / 16 A				16 A / 16 A		16 A / 16 A / 16 A		4 × 16 A		4 × 21 A
Max. current per DC input	16 A										21 A
Max. short circuit current	24 A / 24 A				24 A / 24 A		24 A / 24 A / 24 A		4 × 24 A		4 × 31.5 A
MPPT number / Max. input strings number	2 / 2				2 / 2		3 / 3		4 / 4		
Battery											
Battery type	Li-ion										
Battery voltage range	120 - 600 V ①										120 - 700 V
Max. charge / discharge current	25 A		50 A		25 A				50 A		
Number of battery port / Number of BMS port	1 / 1										
Communication	CAN / RS485										
Output AC (Grid side)											
Rated output power	5 kW	6 kW	8 kW	10 kW	3 kW	4 kW	5 kW	6 kW	8 kW	10 kW	12 kW
Max. apparent output power	5 kVA	6 kVA	8 kVA	10 kVA	3 kVA	4 kVA	5 kVA	6 kVA	8 kVA	10 kVA	12 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	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A	4.6 A / 4.3 A	6.1 A / 5.8 A	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A	18.2 A / 17.3 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)										
THDi	< 3%										
Input AC (Grid side)											
Max. input power	7.5 kW	9 kW	12 kW	15 kW	4.5 kW	6 kW	7.5 kW	9 kW	12 kW	15 kW	18 kW
Input voltage range	304 - 437 V / 320 - 460 V										
Max. input current	11.4 A / 10.9 A	13.6 A / 13.0 A	18.2 A / 17.4 A	22.7 A / 21.7 A	6.8 A / 6.5 A	9.1 A / 8.7 A	11.4 A / 10.9 A	13.6 A / 13.0 A	18.2 A / 17.4 A	22.7 A / 21.7 A	27.3 A / 26.0 A
Output AC (Back-up)											
Rated output power	5 kW	6 kW	8 kW	10 kW	3 kW	4 kW	5 kW	6 kW	8 kW	10 kW	12 kW
Max. apparent output power	1.6 times of rated power, 60 s										
Back-up switch time ②	< 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	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A	4.6 A / 4.3 A	6.1 A / 5.8 A	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A	18.2 A / 17.3 A
Max. AC passthrough current	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A	4.6 A / 4.3 A	6.1 A / 5.8 A	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A	18.2 A / 17.3 A
THDv (@linear load)	< 2%										< 3%
Efficiency											
Max. efficiency	96.50%	97.00%	97.50%	97.90%	95.50%	96.00%	96.50%	97.00%	97.50%	97.90%	97.85%
EU efficiency	96.77%	97.10%	97.41%	97.51%	95.51%	96.03%	96.77%	97.10%	97.41%	97.51%	97.51%
BAT charged by PV / AC max. efficiency	98.37% / 97.32%	98.45% / 97.34%	98.22% / 97.50%	98.31% / 97.50%	95.96% / 97.04%	96.57% / 97.29%	98.37% / 97.32%	98.45% / 97.34%	98.22% / 97.50%	98.31% / 97.50%	98.31% / 97.50%
Battery discharged efficiency	97.32%	97.34%	97.50%	97.50%	97.04%	97.29%	97.32%	97.34%	97.50%	97.50%	97.50%
Protection											
Surge protection	DC Type III / AC Type III				DC Type II / AC Type II (optional)						
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 / II (PV and BAT), III (MAINS and BACKUP)										
Integrated AFCI 2.0	Optional										
Anti-islanding protection	Yes										
General Data											
Max. power per phase	50% rated power										
Dimensions (W × H × D)	563 × 412 × 209 mm		563 × 412 × 230 mm		563 × 412 × 209 mm				600 × 500 × 230 mm		
Weight	27.6 kg		30.2 kg		26.4 kg		27.6 kg		30.2 kg		34.5 kg
Inverter topology	Transformerless										
Self-consumption	< 25 W										
Operating temperature range	-25 ~ +60°C										
Relative humidity	0 - 100%										
Ingress protection	IP66										
Noise emission (typical)	< 46.9 dB(A)										
Cooling concept	Natural cooling										
Max. operation altitude	4000 m										
Grid connection standard	G98 or G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1, VDE 0126/UTE C 15/VFR:2019, 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										
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-3										
Features											
PV connection	MC4 connector										
Battery connection	Quick connection plug										
AC connection	Quick connection plug										
Display	LED indicator & Bluetooth + APP										
Communication interface	Standard: WIFI+LAN+Bluetooth, CAN-BMS, CAN-Parallel×2, RS485-Meter, RS485, DRM, DI, DO										

① Supports max. battery voltage to 700 V.

② 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.