

S6-EH3P(5-10)K-H

Solis Three Phase High Voltage Energy Storage Inverters

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
- 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
- AI-Powered & VPP-Ready - maximise savings, unlock additional income
- Ingress protection IP66, adapting to harsh ambient conditions

Models:

S6-EH3P5K2-H / S6-EH3P6K2-H

S6-EH3P8K2-H / S6-EH3P10K2-H

S6-EH3P5K-H-EU / S6-EH3P6K-H-EU

S6-EH3P8K-H-EU / S6-EH3P10K-H-EU



360° View

DATASHEET

Models	5K2	6K2	8K2	10K2	5K-EU	6K-EU	8K-EU	10K-EU
Input DC (PV side)								
Recommended max. PV array size	10 kW	12 kW	16 kW	20 kW	10 kW	12 kW	16 kW	20 kW
Max. usable PV input power	8 kW	9.6 kW	12.8 kW	16 kW	8 kW	9.6 kW	12.8 kW	16 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		4 × 16 A
Max. short circuit current	24 A / 24 A					24 A / 24 A / 24 A		4 × 24 A
MPPT number / Max. input strings number	2 / 2					3 / 3		4 / 4
Battery								
Battery type	Li-ion							
Battery voltage range	120 - 600 V ^①							
Max. charge / discharge power	5 kW	6 kW	8 kW	10 kW	5 kW	6 kW	8 kW	10 kW
Max. charge / discharge current	25 A		50 A		25 A		50 A	
Communication	CAN / RS485							
Output AC (Grid side)								
Rated output power	5 kW	6 kW	8 kW	10 kW	5 kW	6 kW	8 kW	10 kW
Max. apparent output power	5 kVA	6 kVA	8 kVA	10 kVA	5 kVA	6 kVA	8 kVA	10 kVA
Rated grid voltage	3/N/PE, 380 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	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A
Max. 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	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)							
THDi	< 3%							
Input AC (Grid side)								
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	11.4 A / 10.9 A	13.6 A / 13.0 A	18.2 A / 17.4 A	22.7 A / 21.7 A
Rated grid frequency	50 Hz / 60 Hz							
Frequency range	45 - 55 Hz / 55 - 65 Hz							
Output AC (Back-up)								
Rated output power	5 kW	6 kW	8 kW	10 kW	5 kW	6 kW	8 kW	10 kW
Max. apparent output power	1.6 times of rated power, 60 s							
Back-up switch time	< 10 ms							
Rated output voltage	3/N/PE, 380 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	7.6 A / 7.2 A	9.1 A / 8.7 A	12.2 A / 11.5 A	15.2 A / 14.4 A
THDv (@linear load)	< 2%							
Efficiency								
Max. efficiency	96.50%	97.00%	97.50%	97.90%	96.50%	97.00%	97.50%	97.90%
EU efficiency	96.77%	97.10%	97.41%	97.51%	96.77%	97.10%	97.41%	97.51%
BAT charged by PV max. efficiency	98.37%	98.45%	98.22%	98.31%	98.37%	98.45%	98.22%	98.31%
BAT charged / discharged to AC max. efficiency	97.32%	97.34%	97.50%	97.50%	97.32%	97.34%	97.50%	97.50%
Protection								
Anti-islanding protection	Yes							
Output over current protection	Yes							
Short circuit protection	Yes							
Surge protection	/			DC Type II / AC Type II (optional)				
Integrated AFCI 2.0	Optional							
Integrated DC switch	Yes							
DC reverse-polarity protection	Yes							
PV over voltage protection	Yes							
Battery reverse protection	Yes							
General Data								
Max. allowable phase imbalance (grid & back-up)	100%							
Max. power per phase (grid & back-up)	50% rated power							
Dimensions (W × H × D)	600 × 500 × 210 mm		600 × 500 × 230 mm		600 × 500 × 210 mm		600 × 500 × 230 mm	
Weight	27.6 kg		30.2 kg		27.6 kg		30.2 kg	
Topology	Transformerless							
Self-consumption (night)	< 25 W							
Operating ambient 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	CAN, RS485, Optional: Wi-Fi, Cellular, LAN							

① Supports max. battery voltage to 700 V.