

S6-EH1P(12-16)K03-NV-YD-L

Solis Single Phase Low Voltage Energy Storage Inverters

Features:

- Generator-compatible to extend backup duration during grid power outage
- Multiple inverters can operate together to form a microgrid
- Supports dual backup ports for intelligent control of critical and non-critical loads
- 10 seconds of 200% overload capability
- Automatic switchover time is < 4ms, providing seamless transitions from grid to backup
- Supports a maximum input current of 20A, making it ideal for all high-power PV modules of any brand
- Ensures excellent power supply stability, keeping the load unaffected by a weak grid or generator supply fluctuations
- The battery's DC side can handle a maximum charge/discharge current of up to 290A, allowing it to store more surplus energy generated by PV systems

Models:

S6-EH1P12K03-NV-YD-L

S6-EH1P14K03-NV-YD-L

S6-EH1P16K03-NV-YD-L



DATASHEET

S6-EH1P(12-16)K03-NV-YD-L

Models	12K	14K	16K
Input DC (PV side)			
Recommended max. PV array size	24 kW	28 kW	32 kW
Max. usable PV input power	19.2 kW	22.4 kW	22.4 kW
Max. input voltage		550 V	
Rated voltage		380 V	
Start-up voltage		100 V	
MPPT voltage range		80 - 520 V	
Max. input current		40 A / 40 A / 40 A	
Max. short circuit current		50 A / 50 A / 50 A	
MPPT number / Max. input strings number		3 / 6	
Battery			
Battery type		Li-ion / Lead-acid	
Battery voltage range		40 - 60 V	
Max. charge / discharge current	250 A	290 A	290 A
Communication		CAN / RS485	
Output AC (Grid side)			
Rated output power	12 kW	14 kW	16 kW
Operation phase		L/N/PE	
Rated grid voltage		220 V / 230 V	
Rated grid frequency		50 Hz / 60 Hz	
Rated grid output current	54.5 A / 52.2 A	63.6 A / 60.9 A	72.7 A / 69.6 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 3%	
Input AC (Grid side)			
Input voltage range		187 - 253 V	
Max. input current	81.8 A / 78.3 A	95.5 A / 91.3 A	109.1 A / 104.3 A
Frequency range		45 - 55 Hz / 55 - 65 Hz	
Output AC (Back-up)			
Rated output power	12 kW	14 kW	16 kW
Max. apparent output power		2 times of rated power, 10 s	
Back-up switch time		< 4 ms	
Rated output voltage		L/N/PE, 220 V / 230 V	
Rated frequency		50 Hz / 60 Hz	
Rated output current	54.5 A / 52.2 A	63.6 A / 60.9 A	72.7 A / 69.6 A
THDv (@linear load)		< 3%	
Input Generator			
Max. input power	12 kW	14 kW	16 kW
Max. input current	54.5 A / 52.2 A	63.6 A / 60.9 A	72.7 A / 69.6 A
Rated input frequency		50 Hz / 60 Hz	
Efficiency			
Max. efficiency		97.6%	
EU efficiency		97.0%	
BAT charged by PV max. efficiency		> 94.9%	
BAT charged / discharged to AC max. efficiency		> 94.33% / 93.51%	
Protection			
Surge protection		Yes	
DC reverse-polarity protection		Yes (PV only)	
Ground fault monitoring		Yes	
Integrated AFCI 2.0		Optional	
Protection class / Over voltage category		I / II (PV and BAT), III (MAINS and BACKUP and GEN)	
General Data			
Dimensions (W × H × D)		464 × 763 × 282 mm	
Weight		48.5 kg	
Topology		Transformerless	
Operating ambient temperature range		-25 ~ + 60°C	
Ingress protection		IP66	
Noise emission (typical)		< 65 dB(A)	
Cooling concept		Intelligent fan-cooling	
Max. operation altitude		4000 m	
Grid connection standard	NRS 097-2-1, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, EN50549-1		
Safety / EMC standard	IEC/EN 62109-1/-2, EN 61000-6-2/-3		
Features			
DC connection	MC4 plug (PV port) / Terminal Block (BAT port)		
AC connection	Terminal Block		
Display	7.0" LCD display & Bluetooth + APP		
Communication	RS485, Optional: Cellular, Wi-Fi, LAN		

Solis Solarator Series

Experience Uninterrupted Power with Solis Energy Storage Inverters

Energy Storage Inverters

S6-EH3P(29.9-50)K-H

Three Phase | High Voltage



Smart Energy Management

- AI intelligently manages charging and discharging based on TOU (Time-of-Use) tariffs
- Adapt to third party VPP platform, frequency service provider



High Performance

- Supports 100% three-phase unbalanced output
- 200% PV input capacity to maximize solar energy utilization
- Max. 160% overload capability in off-grid mode
- Charging and discharging currents up to 140A
- Switching time < 10ms



Flexible & Scalable

- Compatible with mainstream lithium batteries
- Support Solis C&I battery solution
- Easily expand system capacity using parallel connections and AC coupling



Simple & Fast Configuration

- 7-inch LCD screen for an intuitive user experience
- Bluetooth app support for quick and easy setup

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DATASHEET

S6-EH3P(29.9-50)K-H

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 - 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	7.0" LCD display & Bluetooth + APP			
Communication	CAN, RS485, Ethernet, Optional: Wi-Fi, Cellular, LAN			

(1) Supporting parallel 140A input.