

9.9-18K

SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

S6-EH1P(9.9-18)K03-NV-YD-L

Single Phase | Low Voltage



- Supports PV input up to 160% of the inverter's rated DC power, maximising solar utilisation
- Supports up to 20A PV input current, compatible with future higher-power PV modules
- 200% overload for 10s in off-grid mode, ensuring stable startup of motors, water pumps and air conditioners
- Seamless on/off-grid switching in under 10ms, guaranteeing an uninterrupted power supply
- More battery options, compatible with any battery (between 40V-60V)
- Supports existing PV grid-tied power connection for export control and off-grid use
- Multiple methods of generator connection and auto control, enabling flexible local deployment
- Support max 6 units in parallel, expanding system capacity
- Smart Load management, extending backup time for critical loads
- Customizable battery backup level for uninterrupted power
- Supports PV-only off-grid operation, reducing upfront costs
- SolisCloud: Smart remote control, AI optimisation, and instant troubleshooting - all in one platform
- 7-inch industrial-grade LCD screen, providing a larger, user-friendly interface for local operation
- Ingress protection IP66, for operation in harsh conditions

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DATASHEET

Models	9.9K	12K	14K	16K	18K
Input DC (PV side)					
Recommended max. PV array size	19.8 kW	24 kW	28 kW	32 kW	36 kW
Max. usable PV input power	15.8 kW	19.2 kW	22.4 kW	25.6 kW	28.8 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			42 A / 42 A / 42 A
Max. current per DC input		20 A			21 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	208 A	250 A	290 A	290 A	320 A
Number of battery port / Number of BMS port			1 / 1		
Communication			CAN / RS485		
Output AC (Grid side)					
Rated output power	9.9 kW	12 kW	14 kW	16 kW	18 kW
Max. apparent output power	9.9 kVA	12 kVA	14 kVA	16 kVA	18 kVA
Rated grid voltage			L/N/PE, 220 V / 230 V		
Rated grid frequency			50 Hz / 60 Hz		
Rated grid output current	45 A / 43.1 A	54.5 A / 52.2 A	63.6 A / 60.9 A	72.7 A / 69.6 A	81.8 A / 78.2 A
Power factor			> 0.99 (0.8 leading - 0.8 lagging)		
THDi			< 3%		
Input AC (Grid side)					
Max. input power	14.8 kW	18 kW	21 kW	24 kW	27 kW
Input voltage range			187 - 253 V		
Max. input current	67.5 A / 64.5 A	81.8 A / 78.3 A	95.5 A / 91.3 A	109.1 A / 104.3 A	122.7 A / 117.4 A
Output AC (Back-up)					
Rated output power	9.9 kW	12 kW	14 kW	16 kW	18 kW
Max. apparent output power			2 times of rated power, 10 s		
Back-up switch time ^①			< 10 ms		
Rated output voltage			L/N/PE, 220 V / 230 V		
Rated frequency			50 Hz / 60 Hz		
Rated output current	45 A / 43.1 A	54.5 A / 52.2 A	63.6 A / 60.9 A	72.7 A / 69.6 A	81.8 A / 78.2 A
Max. AC passthrough current			90 A		
THDv (@linear load)			< 3%		
Input AC (Generator side)					
Max. input power	9.9 kW	12 kW	14 kW	16 kW	18 kW
Rated input current	45 A / 43.1 A	54.5 A / 52.2 A	63.6 A / 60.9 A	72.7 A / 69.6 A	81.8 A / 78.2 A
Rated input voltage			L/N/PE, 220 V / 230 V		
Rated input frequency			50 Hz / 60 Hz		
Efficiency					
Max. efficiency			97.6%		
EU efficiency			97.0%		
BAT charged by PV / AC max. efficiency			> 94.9% / > 94.33%		
Battery discharged efficiency			93.51%		
Protection					
Surge protection			Yes		
Output over current protection			Yes		
Insulation resistance monitoring			Yes		
Residual current detection			Yes		
Integrated PV switch			Yes		
DC reverse-polarity protection			Yes (PV only)		
Protection class / Over voltage category			I / II (PV and BAT), III (MAINS and BACKUP and GEN)		
Integrated AFCI 2.0			Optional		
Anti-islanding protection			Yes		
General Data					
Dimensions (W × H × D)			459 × 845 × 313 mm		
Weight			55.5 kg		
Inverter topology			Non-isolated (PV), Isolated (Battery)		
Self-consumption			< 40 W		
Operating temperature range			-25 ~ +60°C		
Relative humidity			0 - 100%		
Ingress protection			IP66		
Noise emission (typical)			< 65 dB(A)		
Cooling concept			Intelligent redundant 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					
PV connection			MC4 connector		
Battery connection			Terminal Block		
AC connection			Terminal Block		
Display			7.0" LCD display & Bluetooth + APP		
Communication interface			Standard: WIFI+LAN+Bluetooth, CAN-BMS, CAN-Parallel × 2, RS485-Meter, RS485, DRM, DI, DO × 2; 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.