

12-18K

SOLARATOR SERIES

Operates Seamlessly with Generator: Experience Uninterrupted Power, Even in Areas with Grid Instability

S6-EH1P(12-18)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	12K	14K	16K	18K
Input DC (PV side)				
Recommended max. PV array size	24 kW	28 kW	32 kW	36 kW
Max. usable PV input power	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	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	12 kW	14 kW	16 kW	18 kW
Max. apparent output power	12 kVA	14 kVA	16 kVA	18 kVA
Rated grid voltage	1/N/PE, 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	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	18 kW	21 kW	24 kW	27 kW
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	122.7 A / 117.4 A
Output AC (Back-up)				
Rated output power	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	1/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	81.8 A / 78.2 A
Max. AC passthrough current	90 A			
THDv (@linear load)	< 3%			
Input AC (Generator side)				
Max. input power	12 kW	14 kW	16 kW	18 kW
Rated input current	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	1/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.