solis

5-18K

SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

S6-EH3P(5-18)K02-NV-YD-L

Three Phase | Low Voltage

- 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
- 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
- Support three-phase unbalanced output, each phase supports output max. 50% rated inverter power
- Supports both DC and AC coupling—making it easy to expand PV, charge batteries, and power loads reliably, even in off-grid conditions
- Multiple methods of generator connection and auto control, enabling flexible local deployment
- Support max 6 units in parallel, expanding system capacity
- Smart Load management with prioritisation, 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	5K	6K	8K	10K	12K	15K	18K
Input DC (PV side)							
Recommended max. PV array size	10 kW	12 kW	16 kW	20 kW	24 kW	30 kW	36 kW
Max. usable PV input power	9 kW	9.6 kW	12.8 kW	16 kW	19.2 kW	24 kW	28.8 kW
Max. input voltage	1000 V						
Rated voltage	550 V						
Start-up voltage	160 V						
MPPT voltage range	200 - 850 V						
Max. input current	20 A / 20 A	20 A / 20 A	20 A / 40 A			40 A / 40 A	42 A / 42 A
Max. current per DC input	20 A						21 A
Max. short circuit current	30 A / 30 A	30 A / 30 A	30 A / 50 A			50 A / 50 A	50 A / 50 A
MPPT number / Max. input strings number	2 / 2		2 / 3			2 / 4	
Battery							
Battery type	Li-ion / Lead-acid						
Battery voltage range	40 - 60 V						
Max. charge / discharge current	125 A	150 A	180 A	220 A	250 A	290 A	320 A
Number of battery port / Number of BMS port	2 / 1						
Max. charge / discharge current of each port	150 A						175 A
Communication	CAN / RS485						
Output AC (Grid side)							
Rated output power	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW	18 kW
Max. apparent output power	5 kVA	6 kVA	8 kVA	10 kVA	12 kVA	15 kVA	18 kVA
Rated grid voltage	3/N/PE, 220 V / 380 V; 3/N/PE, 230 V / 400 V						
Rated grid frequency	50 Hz / 60 Hz						
Rated grid output current	7.6 A / 7.3 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	22.8 A / 21.7 A	27.3 A / 26.1 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	12kW	15 kW	18 kW	22.5 kW	27 kW
Input voltage range	323 - 437 V / 340 - 460 V						
Max. input current	11.4 A / 10.9 A	13.7 A / 13.1 A	18.3 A / 17.3 A	22.8 A / 21.7 A	27.3 A / 26.0 A	34.2 A / 32.5 A	41 A / 39.2 A
Output AC (Back-up)							
Rated output power	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW	18 kW
Max. apparent output power	2 times of rated power, 10 s						
Back-up switch time ①	< 10 ms						
Rated output voltage	3/N/PE, 220 V / 380 V; 3/N/PE, 230 V / 400 V						
Rated frequency	50 Hz / 60 Hz						
Rated output current	7.6 A / 7.3 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	22.8 A / 21.7 A	27.3 A / 26.1 A
Max. AC passthrough current	50 A						
THDv (@linear load)	< 3%						
Input AC (Generator side)							
Max. input power	5 kW	6 kW	8 kW	10 kW	12 kW	15 kW	18 kW
Rated input current	7.6 A / 7.3 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	22.8 A / 21.7 A	27.3 A / 26.1 A
Rated input voltage	3/N/PE, 220 V / 380 V; 3/N/PE, 230 V / 400 V						
Rated input frequency	50 Hz / 60 Hz						
Efficiency							
Max. efficiency	97.5%						
EU efficiency	97.0%						
BAT charged by PV / AC max. efficiency	95.0% / 94.4%						
Battery discharged efficiency	94.5%						
Protection							
Surge protection	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 and GEN)						
Integrated AFCI 2.0	Optional						
Anti-islanding protection	Yes						
General Data							
Max. power per phase	50% rated power						40% rated power
Dimensions (W × H × D)	430 × 660 × 305 mm						
Weight	42 kg						
Inverter topology	Non-isolated (PV), Isolated (Battery)						
Self-consumption	< 30 W						
Operating temperature range	-25 ~ +60°C						
Relative humidity	0 - 100%						
Ingress protection	IP66						
Noise emission (typical)	< 65 dB(A)						
Cooling concept	Intelligent fan-cooling						
Max. operation altitude	4000 m						
Grid connection standard	EN 50549-1/-10, VDE 4105&VDE 0124, NRS 097-2-1, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, SriLanka, EN 50438L, Vietnam, MEA, PEA, CEI 0-21						
Safety / EMC standard	IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4						
Features							
PV connection	MC4 Quick connection plug						
Battery connection	Screw terminal						
AC connection	Screw terminal						
Display	7.0" LCD display & Bluetooth + APP						
Communication interface	Standard: WIFI+LAN+Bluetooth, CAN-BMS, CAN-Parallel×2, RS485-Meter, RS485, DRM, DI, DO×4; Optional: 2G/3G/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.