

**3-6K**

Residential Low Voltage Single Phase Hybrid Inverter

S7-EH1P(3-6)K02-NV-YD-L



Wide compatibility

- Works with a wide range of third-party batteries, giving installers more flexibility when designing residential storage systems
- Grid-adaptive control technology helps the system operate reliably in both weak and strong grid conditions
- Built-in Ethernet supports fast communication with VPP platforms and EMS systems
- 200% overload capability for 10 seconds helps start high-demand appliances such as motors, water pumps and air conditioners
- Seamless on/off-grid switching in under 4ms helps keep power running during grid outages



Easy to use

- 4.3-inch touchscreen and physical buttons make operation simple and reliable
- Fast commissioning allows plant creation and system setup to be completed in under 5 minutes
- Side-opening design, similar to a distribution box, makes installation and maintenance quicker and easier



High safety

- Battery and grid terminal temperature monitoring helps detect poor connections or installation issues early, reducing fire risk



DATASHEET

Models	3K	3.6K	4.6K	5K	6K
Input DC (PV side)					
Recommended max. PV array size	6 kW	7.2 kW	9.2 kW	10 kW	12 kW
Max. usable PV input power	4.8 kW	5.76 kW	7.36 kW	8 kW	9.6 kW
Max. input voltage			500 V		
Rated voltage			330 V		
Start-up voltage			100 V		
MPPT voltage range			90 - 435 V		
Max. input current			21 A / 21 A		
Max. current per DC input			21 A		
Max. short circuit current			24 A / 24 A		
MPPT number / Max. input strings number			2 / 1 + 1		
Battery					
Battery type			Li-ion / Lead-acid		
Battery voltage range			40 - 60 V		
Max. charge / discharge current	70 A	80 A	105 A	112 A	135 A
Number of battery port / Number of BMS port			1 / 1		
Communication			CAN / RS485		
Output AC (Grid side)					
Rated output power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW
Max. apparent output power	3 kVA	3.6 kVA	4.6 kVA	5 kVA	6 kVA
Rated grid voltage			1/N/PE, 220 V / 230 V		
Rated grid frequency			50 Hz / 60 Hz		
Rated grid output current	13.7 A / 13.1 A	16.4 A / 15.7 A	20.9 A / 20 A	22.8 A / 21.8 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	4.5 kW	5.4 kW	6.9 kW	7.5 kW	9 kW
Input voltage range			187 - 253 V		
Max. input current	20.5 A / 19.6 A	24.5 A / 23.5 A	31.4 A / 30 A	34.1 A / 32.6 A	40 A / 39.1 A
Output AC (Back-up)					
Rated output power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW
Max. apparent output power			2 times of rated power, 10 s		
Back-up switch time ^①			< 4 ms		
Rated output voltage			1/N/PE, 220 V / 230 V		
Rated frequency			50 Hz / 60 Hz		
Rated output current	13.7 A / 13.1 A	16.4 A / 15.7 A	20.9 A / 20 A	22.8 A / 21.8 A	27.3 A / 26.1 A
Max. AC passthrough current			40 A		
THDv (@linear load)			< 3%		
Input AC (Generator side)					
Max. input power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW
Rated input current	13.7 A / 13.1 A	16.4 A / 15.7 A	20.9 A / 20 A	22.8 A / 21.8 A	27.3 A / 26.1 A
Rated input voltage			1/N/PE, 220 V / 230 V		
Rated input frequency			50 Hz / 60 Hz		
Efficiency					
Max. efficiency			97.5%		
EU efficiency			96.0%		
BAT charged by PV / AC max. efficiency			95.0%/92.9%		
Battery discharged efficiency			93.8%		
Protection					
Surge protection			DC Type II / AC Type II		
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)			354 × 454 × 174 mm		
Weight			14.5 kg		
Inverter topology			Non-isolated (PV), Isolated (Battery)		
Self-consumption			< 20 W		
Operating temperature range			-25 ~ +60°C		
Relative humidity			0 - 100%		
Ingress protection			IP66		
Noise emission (typical)			< 45 dB(A)		
Cooling concept			Intelligent redundant fan-cooling		
Max. operation altitude			4000 m		
Grid connection standard		IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, EN 50549-1/-10, MEA, PEA			
Safety / EMC standard		IEC/EN 62109-1/-2, IEC 61000-6-1/-2/-3/-4			
Features					
PV connection			MC4 connector		
Battery connection			Terminal Block		
AC connection			Terminal Block		
Display			4.3" touchable LCD display & Bluetooth + APP		
Communication interface		Standard: WIFI+LAN+Bluetooth, CAN-BMS, CAN-Parallel×2, RS485-Meter, RS485, DRM, DI, DO; Optional: 4G			

① From On-Grid Mode to Off-Grid Mode: For a single inverter system, switchover time <4ms. 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.