

**12-20K**

SOLARATOR SERIES

Experience Uninterrupted Power with Solis Energy Storage Inverters

S6-EH3P(12-20)K-H

Three Phase | High Voltage



Smart Energy Management

- AI intelligently manages charging and discharging based on TOU (Time-of-Use) tariffs
- Seamless integration with VPP and EMS platforms for enhanced energy optimization
- Built-in control for SG-ready heat pumps

High Performance

- Supports three-phase unbalanced output, allowing up to 40% of rated inverter power per phase
- 160% PV input capacity to maximize solar energy utilization
- Switching time < 10ms

Flexible & Scalable

- Compatible with mainstream lithium batteries
- Easily expand system capacity using parallel connections and AC coupling

Simple & Fast Configuration

- 7-inch large screen uses U.S.-made ZEITLER industrial-grade components
- Bluetooth app support for quick and easy setup

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DATASHEET

Models	12K	15K	20K
Input DC (PV side)			
Recommended max. PV array size	24 kW	30 kW	40 kW
Max. usable PV input power	19.2 kW	24 kW	32 kW
Max. input voltage		1000 V	
Rated voltage		600 V	
Start-up voltage		160 V	
MPPT voltage range		200 - 850 V	
Max. input current		4 × 20 A	
Max. current per DC input		20 A	
Max. short circuit current		4 × 30 A	
MPPT number / Max. input strings number		4 / 4	
Battery			
Battery type		Li-ion	
Battery voltage range		120 - 800 V	
Max. charge / discharge current		50 A	
Number of battery port / Number of BMS port		1 / 1	
Communication		CAN / RS485	
Output AC (Grid side)			
Rated output power	12 kW	15 kW	20 kW
Max. apparent output power	12 kVA	15 kVA	20 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	18.2 A / 17.3 A	22.8 A / 21.7 A	30.4 A / 28.9 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 3%	
Input AC (Grid side)			
Max. input power	18 kW	22.5 kW	30 kW
Input voltage range		304 - 437 V / 320 - 460 V	
Max. input current	27.3 A / 26.0 A	34.2 A / 32.5 A	45.6 A / 43.3 A
Output AC (Back-up)			
Rated output power	12 kW	15 kW	20 kW
Max. apparent output power		1.6 time of rated power, 10 s	
Back-up switch time ^①		< 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	18.2 A / 17.3 A	22.8 A / 21.7 A	30.4 A / 28.9 A
Max. AC passthrough current	27.3 A / 26.0 A	34.2 A / 32.5 A	45.6 A / 43.3 A
THDv (@linear load)		< 3%	
Input AC (Generator side)			
Max. input power	12 kW	15 kW	20 kW
Rated input current	18.2 A / 17.3 A	22.8 A / 21.7 A	30.4 A / 28.9 A
Rated input voltage		3/N/PE, 220 V / 380 V, 230 V / 400 V	
Rated input frequency		50 Hz / 60 Hz	
Efficiency			
Max. efficiency		97.7%	
EU efficiency		97.5%	
BAT charged by PV / AC max. efficiency		98.5% / 97.2%	
Battery discharged efficiency		97.2%	
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)	
Anti-islanding protection		Yes	
General Data			
Max. power per phase		40% rated power	
Dimensions (W × H × D)		563 × 546 × 250 mm	
Weight		35.2 kg	
Inverter topology		Transformerless	
Self-consumption		< 25 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		2000 m	
Grid connection standard		EN 50549-1/-10, VDE4105, CEI 0-21, CEI 0-16, NC-RFG TypeB, NRS 097-2-1, LTU-1, G99, PEA	
Safety / EMC standard		IEC/EN 62109-1/-2, IEC/EN 61000-6-1/-2/-3/-4	
Features			
PV connection		MC4 connector	
Battery connection		Lever terminal	
AC connection		OT 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×3	

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.