

**12-20K**

SOLARATOR SERIES

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

S6-EH3P(12-20)K-H-AU

Three Phase | High Voltage



- Supports up to 4 MPPTs, suitable for multi-orientation and occlusion, to improve power generation
- 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 the latest high-power PV modules
- 160% overload for 60s in off-grid mode, ensuring stable startup of motors, water pumps and air conditioner
- Seamless on/off-grid switching in under 10ms, guaranteeing uninterrupted power supply
- 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 SG-Ready heat pump connectivity for more intelligent home applications
- Support max 6 pcs in parallel, expanding system capacity
- Customizable battery backup level for uninterrupted power
- PV only off grid mode, to reduce the initial investment cost
- AI-Powered & VPP-Ready - maximise savings, unlock additional income
- 7-inch industrial-grade LCD screen, providing a larger, user-friendly interface for local operation
- Ingress protection IP66, adapting to harsh ambient conditions

AUSTRALIA

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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. input voltage		1000 V	
Rated voltage		600 V	
Start-up voltage		160 V	
MPPT voltage range		200 - 850 V	
MPPT max. input current		4 × 20 A	
Max. inverter backfeed current to the array		0 A	
Max. current per DC input		20 A	
MPPT 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	
Max. short circuit current		200A 1us	
Number of battery port / Number of BMS port		1 / 1	
Max. charge / discharge current of each port		50 A	
Communication		CAN / RS485	
Output AC (Grid side)			
Rated output power	12 kW	15 kW	20 kW
Max. / Rated apparent output power	12 kVA	15 kVA	20 kVA
Rated grid voltage		3/N/PE, 230 V / 400 V	
Rated grid frequency		50 Hz	
Rated grid output current	17.3 A	21.7 A	28.9 A
Power factor		> 0.99 (0.8 leading - 0.8 lagging)	
THDi		< 3%	
Input AC (Grid side)			
Max. input current	26.0 A	32.5 A	43.3 A
Max. short circuit current		452 A 121 ms	
Output AC (Back-up)			
Rated output power	12 kW	15 kW	20 kW
Rated apparent output power	12 kVA	15 kVA	20 kVA
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, 230 V / 400 V	
Rated frequency		50 Hz	
Rated output current	17.3 A	21.7 A	28.9 A
Max. AC passthrough current	26.0 A	32.5 A	43.3 A
THDv (@linear load)		< 3%	
Input AC (Generator side)			
Max. input power	12 kW	15 kW	20 kW
Rated input current	17.3 A	21.7 A	28.9 A
Rated input voltage		3/N/PE, 230 V / 400 V	
Rated input frequency		50 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 III / AC Type III	
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)	
General anti-islanding method		Frequency Shift	
General Data			
Dimensions (W × H × D)		563 × 546 × 250 mm	
Weight		35.2 kg	
Inverter topology		Transformerless	
Self-consumption		< 25 W	
Operation 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		AS 4777.2:2020	
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	
Country of manufacture		China	

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.