

S6-EH1P(3.8-11.4)K-H-US

Solis Single Phase High Voltage Energy Storage Inverters

Features:

- Up to 4 MPPTs and 16A of DC input current allows for PV array design flexibility
- Optimization, module-level monitoring, and rapid shutdown options available
- External RSD, EPO signal and BYPASS switch are available
- UL 9540 certified with multiple different battery brands (LG, BYD, Pylontech. ect)
- Bluetooth connection to mobile phone, make the setting and operation easier
- Automatic UPS switching and up to 180% 10s surge power back up overload capacity support industrial air conditioner
- Intelligent AC coupling scheme, easily upgrade existing grid-connected systems
- Whole-home backup, generator integration, and load shading function with the new SolisHub
- Supports 1ph and 3ph flexible connection on both the Grid and Backup Port

Models:

S6-EH1P3.8K-H-US / S6-EH1P5K-H-US

S6-EH1P7.6K-H-US / S6-EH1P9.9K-H-US

S6-EH1P10K-H-US / S6-EH1P11.4K-H-US

Please consult the Ordering Guide for details on how to order the inverter with different accessories.



DATASHEET

S6-EH1P(3.8-11.4)K-H-US

Models	3.8K	5K	7.6K	9.9K	10K	11.4K
DC Input (PV)						
Max. input voltage				600 V		
Rated voltage				380 V		
Start-up voltage				80 V		
MPPT voltage range				80 - 520 V		
Max. input current per string				16 A		
Max. short circuit current per string				25.6 A		
Number of MPPTs / Number of strings per MPPT	2 / 1	3 / 1			4 / 1	
Energy Storage						
Battery type				Lithium-ion		
Battery voltage range				120 - 500 V		
Maximum charge / discharge current		25 A			50 A	
Battery communication				CAN / RS485		
Number of batteries per inverter				See Battery Compatibility Sheet		
AC Output (Grid)						
Rated output power	3800 W	5000 kW	7600 W	9990 W	10000 W	11400 W
Max. apparent output power	3800 VA	5000 kVA	7600 VA	9990 VA	10000 VA	11400 VA
Rated output voltage				240 V		
Rated frequency				60 Hz		
Rated output current	15.8 A	20.8 A	31.7 A	41.7 A	41.7 A	47.5 A
Max. output current	15.8 A	20.8 A	31.7 A	41.7 A	41.7 A	47.5 A
THDi				< 3%		
AC Input (Grid)						
Input voltage range				211 - 264 V		
Grid pass through power	15.8 A	20.8 A	31.7 A	41.7 A	41.7 A	47.5 A
Max. input current	23.8 A	31.2 A	47.6 A	62.6 A	62.6 A	71.3 A
Frequency range				58.8 - 61.2 Hz		
AC Output (Backup and Off-grid)						
Rated output power	3800 W	5000 kW	7600 W	9990 W	10000 W	11400 W
Max. apparent output power	6.8 kVA, 10 s	9 kVA, 10 s	13.7 kVA, 10 s	18 kVA, 10 s	18 kVA, 10 s	20.5 kVA, 10 s
Back-up switch time				< 10 ms		
Phase power				240 V Split-Phase		
Rated output voltage (L1-L2)				240 V		
AC output voltage range				211 - 264 V		
Rated grid frequency				60 Hz		
Frequency range				55 - 65 Hz		
Rated AC output current	15.8 A	20.8 A	31.7 A	41.7 A	41.7 A	47.5 A
Max. output overcurrent protection, 10 s	25.4 A	33.3 A	50.7 A	66.7 A	66.7 A	76 A
Max. allowable phase imbalance				100%		
Backup support configurations				Whole-home and dedicated loads		
Power factor				> 0.99 (0.8 leading - 0.8 lagging)		
THDv (@linear load)				< 3%		
Efficiency						
PV Max. efficiency		97.0%		97.6%		
PV CEC efficiency		96.5%		97.0%		
Battery charged by PV max. efficiency				98.5%		
Battery charged / discharged to AC max. efficiency				97.0%		
Protection						
Ground fault detection				Yes		
Residual (leakage) current detection				Yes		
Integrated AFCI				Yes		
DC reverse-polarity protection				Yes (PV only)		
Manual inverter bypass switch				Yes		
Rapid shutdown NEC 2017				Integrated SunSpec-certified Transmitter		
Compatible RSD receivers				See MLRSD Compatibility Sheet		
Protection class / Over voltage category				I / II		
General Data						
Dimensions (W × H × D)	19.21 × 28.35 × 8.66 in (490 × 720 × 220 mm)		22.05 × 29.53 × 8.66 in (560 × 750 × 220 mm)			
Weight	52.43 lbs (23.78 kgs)		71.74 lbs (32.54 kgs)			
Topology				Transformerless		
Self-consumption (night)				< 20 W		
Operating ambient temperature range				-13°F to 140°F (-25°C to 60°C)		
Ingress protection				TYPE 4X		
Noise emission (typical)				< 30 dB(A)		
Self-consumption (night)				< 20 W		
Cooling method				Natural cooling		
Mounting type				Wall Bracket		
Max. operation altitude				13,120 ft (4000 m)		
Compliance				UL1741SB, IEEE1547-2018, UL1699B, UL1998, FCCPart15ClassB, California Rule21, NEC 690.12-2020, CAN/CSA C22.2107.1-1, HECO Rule 14H, Luma Listed		
Generator support				Yes; up to 25 kW (with a Solis Power Hub)		
Features						
DC connection		1 in. knockouts for conduit (×2) on the side and bottom; Spring clamp terminals				
AC connection		1.5 in. knockouts for conduit (×3) on the side and bottom; Spring clamp terminals				
Interface		LED indicator & Bluetooth + APP				
Integrated revenue grade meter		Optional				
Monitoring platform		SolisCloud (modbus map and API sharing available upon request)				
Revenue grade meter		Integrated ANSI C12.20 option				
Communication		RS485, Optional: Cellular, Wi-Fi, LAN				