

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 170% (130A) 300ms 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	3.8 kW	5 kW	7.6 kW	9990 W	10 kW	11.4 kW
Max. apparent output power	3.8 kVA	5 kVA	7.6 kVA	9990 VA	10 kVA	11.4 kVA
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		
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	3.8 kW	5 kW	7.6 kW	9990 W	10 kW	11.4 kW
Max. apparent output power	6.1 kVA, 10 sec	8 kVA, 10 sec	12.2 kVA, 10 sec	16 kVA, 10 sec	16 kVA, 10 sec	18.2 kVA, 10 sec
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 sec	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		
Cooling method				Natural convection		
Mounting type				Wall Bracket		
Max. operation altitude				13,120 ft (4000 m)		
Compliance				UL 1741, UL 1741SB, IEEE1547-2018&2020, UL 1699B, UL 1998, California Rule 21, NEC 690.12-2020, CAN/CSA C22.2107.1-1, FCC Part 15 Class B		
Generator support				Yes; up to 25 kW (with a Solis Hub)		
Features						
DC connection				1 in. knockouts for conduit (x2) on the side and bottom; Spring clamp terminals		
AC connection				1.5 in. knockouts for conduit (x3) on the side and bottom; Spring clamp terminals		
Interface				LED indicator lights, Bluetooth/Mobile application		
Monitoring platform				SolisCloud (modbus map and API sharing available upon request)		
Revenue Grade Meter				Integrated ANSI C12.20 option		
Communication				RS485, Cellular, Wi-Fi, Optional: LAN		
Integrated RSD Transmitter Brands				See the MLRSD Compatibility Sheet		