

**3-6K****Energy Storage Inverters****S5-EH1P(3-6)K-L (Smart)**

Single Phase | Low 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

 **High Performance**

- 160% PV input capacity to maximize solar energy utilization

 **Flexible & Scalable**

- Compatible with mainstream lithium and lead-acid batteries

 **Simple & Fast Configuration**

- 7-inch large screen uses U.S.-made ZEITLER industrial-grade components



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	5.7 kW	8 kW	8 kW	8 kW
Max. input voltage	600 V				
Rated voltage	330 V				
Start-up voltage	120 V				
MPPT voltage range	90 - 520 V				
Max. input current	15 A / 15 A				
Max. short circuit current	22.5 A / 22.5 A				
MPPT number / Max. input strings number	2 / 2				
Battery					
Battery type	Li-ion / Lead-acid				
Battery voltage range	42 - 58 V				
Battery capacity	50 - 2000 Ah				
Max. charge / discharge power	3 kW				5 kW
Max. charge / discharge current	62.5 A				100 A
Communication	CAN				
Output AC (Back-up)					
Rated output power	3 kW				5 kW
Max. apparent output power	4.5 kVA, 10 s				7 kVA, 10 s
Back-up switch time	< 20 ms				
Rated output voltage	1/N/PE, 220 V / 230 V				
Rated frequency	50 Hz / 60 Hz				
Rated output current	14 A / 13.5 A				23 A / 22 A
THDv (@linear load)	< 2%				
Input AC (Grid side)					
Input voltage range	187 - 265 V				
Max. input current	20.5 A / 20 A	25 A / 23.5 A	31.5 A / 30 A	34.5 A / 33 A	34.5 A / 33 A
Frequency range	45 - 55 Hz / 55 - 65 Hz				
Output AC (Grid side)					
Rated output power	3 kW	3.6 kW	4.6 kW	5 kW	6 kW
Max. apparent output power	3.3 kVA	4 kVA	4.6 kVA	5.5 kVA	6.6 kVA
Operation phase	1/N/PE				
Rated grid voltage	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 / 21.7 A	27.3 A / 26.1 A
Max. output current	15 A	18.5 A	21 A	25 A	30 A
Power factor	> 0.99 (0.8 leading - 0.8 lagging)				
THDi	< 2%				
Efficiency					
Max. efficiency	> 97.1%				
EU efficiency	> 96.5%				
Protection					
DC reverse-polarity protection	Yes				
Short circuit protection	Yes				
Output over current protection	Yes				
Surge protection	DC Type II / AC Type II				
Ground fault monitoring	Yes				
Integrated AFCI	Yes ^①				
Protection class / Over voltage category	I / II				
General Data					
Dimensions (W × H × D)	333 × 505 × 249 mm				
Weight	17.9 kg				18.1 kg
Topology	High frequency isolation (for battery)				
Operating ambient temperature range	-25 ~ +60°C				
Ingress protection	IP65				
Cooling concept	Natural cooling				
Max. operation altitude	3000 m				
Grid connection standard	G98 or G99, VDE-AR-N 4105/VDE V 0124, EN 50549-1, VDE 0126/UTE C 15/VFR:2019, RD 1699/RD 244/UNE 206006/UNE 206007-1, CEI 0-21, C10/11, NRS 097-2-1, EIFS 2018.2, IEC 62116, IEC 61727, IEC 60068, IEC 61683, EN 50530, MEA, PEA				
Safety / EMC standard	IEC/EN 62109-1/-2, EN 61000-6-2/-3				
Features					
DC connection	MC4 connector				
AC connection	Quick connection plug				
Display	7.0" LCD display				
Communication	RS485, Optional: Wi-Fi, GPRS				

^① Activation required.