KSTAR
Powering the Future

BluE-S Series (US) Residential ESS

All-in-one Hybrid System / 8–15 kW

Save Your Energy Bill

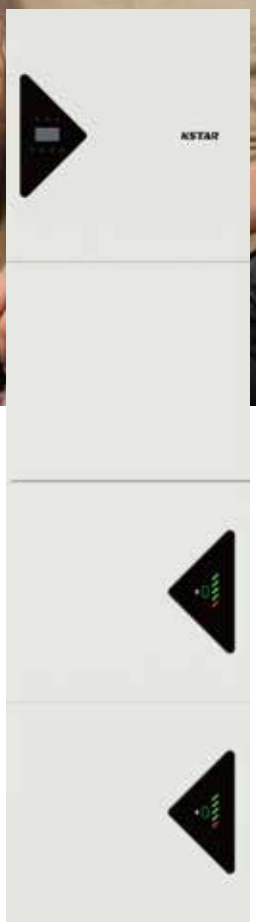
- Optimized Time-of-use Profile
- 10000 Cycles Lifespan
- VPP Ready

Whole Home Energy Solution

- Support On-grid and Off-grid Switching
- AC-coupling or DC-coupling System
- Optional generator connection

Comprehensive Safety

- Alarm and Protection
- Online Monitoring
- AFCI & RSD Compliant



Model Baterie	BP 48100 PF	
Battery Specification		
Battery Capacity	5 kWh	
Usable Capacity	4.5 kWh - Discharge Capacity from 100% to Min SoE	
Battery Type	LFP (LiFePO4)	
Rated Voltage	51.2 V	
Operating Voltage Range	44.8 V ~ 56.5 V	
Communication Interface	CAN & RS-485	
Warranty	10 years performance warranty	
Operations		
Maximum Continuous Charging Current	50 A	
Maximum Continuous Discharging Current	80 A	
Operating Temperature Range	-10℃ ~ +50℃	
Storage Temperature Range	-10℃ ~ +55℃	
Altitude	2000 m	
Relative Humidity	0% ~ 90%	
Cooling Strategy	Natural Cooling	
BMS		
Capacity	200 / 400 / 600 / 800 Ah	
Monitored Item	Current; Cell Voltage; Battery Voltage Accuracy; Ambient Temperature;	
LED User Interface	LED Indication for Battery Status (On, Operational, Standby, Fault , Capacity of SOC)	
Physical		
Weight	56.5 Kg	
Dimensions (W x H x D)	540 × 490 × 240 mm	
Certificate		
Safety	Cell	UL 9540 A
	Battery Pack	FCC Part 15 Class B UL 9540 A; UL 1973 (UL1973)
Certificate	FCC Part 15 Class B; UL 1973; Class 9; UN38.3, IP66 / NEMA 3R	

*Note: 1. Conformity to UL 1741 (Third Edition, September 28, 2021) includes compliance with applicable requirements of UL 1741SB (Supplement SB), IEEE Std 1547TM-2018, 1EEE Std 1547.1TM-2020 and the SRDs of Hawaiian Electric Co. (HECO) SRD-V2.0. The interoperability is verified with IEEE 2030.5-2018 communication protocol.
2. The products have been verified with PVRss function according to NEC-2020 (NFPA 70) Article 690.12 and CEC-2021(CSA C22.1:21)Sec 64-218.
3. The functional safety has been evaluated according to applicable requirement of UL 1998 (Edition 3) and UL 991 (Edition 3) as required by the end products standard.

Hybrid Inverter Model	E8KD	E10KD	E12KD	E15KD
PV Input				
Recommended Max. PV Array Input Power @STC	16 kWp	16 kWp	16 kWp	16 kWp
Max. PV Input Voltage	500 Vdc			
MPPT Voltage Range	120 ~ 425 Vdc			
Start Voltage	120 V			
Nominal Voltage	380 Vdc			
MPPT Voltage Range With Full Load	200 ~ 425 V	240 ~ 425 V	200 ~ 425 V	240 ~ 425 V
Number of MPPT Tracker	2	2	3	3
Max. Input Current	30 A*2	30 A*2	30 A*3	30 A*3
Max. Short-circuit Current	40 A*2	40 A*2	40 A*3	40 A*3
AC Output (On Grid)				
Nominal (L-L) Output Voltage	240 V / 208 V			
Output Voltage Range	160 V ~ 300 Vac (L~L)			
Output Frequency	50 Hz / 60 Hz (±5 Hz), (Adjustable)			
Nominal Output Current	33.4 A	41.7 A	50 A	62.5 A
Max. Output Power	8 kVA	10 kVA	12 kVA	15 kVA
Nominal Output Power	8 kW	10 kW	12 kW	15 kW
Output Connection	Split phase, 2/3 phase, single phase, transformerless			
Power Factor (cosΦ)	-0.8 (Lagging) ~ 0.8 (Leading) (Adjustable)			
THDi	< 3%			
AC Output (Backup Grid -Tied)				
Rated Output Current	150 Aa.c.			
Max. Output Current	200 Aa.c.			
Rated Continuous Output Power	36,000 W			
Max. Output Power	48,000 W			
Backup Load Overcurrent Protection	200 Aa.c.			
AC Output (Backup Off-Grid)				
Nominal (L-L) Output Voltage	240 V / 208 V			
Nominal Output Frequency	50 Hz / 60 Hz (±0.2%)			
Nominal Output Current	33.4 A	41.7 A	50 A	50 A
Nominal Output Power (Daytime)	8 kW	10 kW	12 kW	12 kW
Max. Output Power (Daytime)	8 kVA	10 kVA	12 kVA	12 kVA
Nominal Output Power (Nighttime)	8 kW	10 kW	11.4 kW	11.4 kW
Max. Output Power (Nighttime)	8 kVA	10 kVA	12 kVA	12 kVA
THDv	< 2% (Linear load)			
On / Off Gird Switching Time	< 20 ms			
Over Current Protection	200 A / pole			
Battery Input				
Battery Type	Lithium battery			
Battery Nominal Voltage	51.2 V			
Battery Voltage Range	44 ~ 57 V			
Depth of Discharge	90% DOD (10% ~ 90% Adjustable)			
Max. Discharging Current	200 A	200 A	240 A	240 A
Max. Charging Current	160 A (Adjustable)	160 A (Adjustable)	160 A (Adjustable)	160 A (Adjustable)
Max. Discharging Power	8 kW	10 kW	12 kW	12 kW
Max. Charging Power	8 kW	8 kW	10 kW	10 kW
Battery Switch	Single - pole DC switch (2*200 A / Pole)			
Capacity	200 / 400 / 600 / 800 Ah			
Efficiency				
CEC Efficiency	97% (@240 V) / 96% (@208 V)			
MPPT Efficiency	> 99.9%			
General Specifications				
Cooling Type	Intelligent air cooling			
Communication Port	RS-485 / CAN 2.0 / WIFI			
Protection Class	Class II			
Operating Temperature Range	-20℃ ~ +55℃ (Rated power@40℃)			
Storage Humidity Range	0 ~ 95% (No Condensation)			
Operating Altitude	2000 m			
Overvoltage Type	II (DC side) ; IV (AC side)			
IP Class	IP66 / 4X			
Weight	73 kg			
Dimensions (W x H x D)	540 x 1050 x 240 mm			
Protection & Certifications				
Certifications	Electronics Certified Safety by CSA Labs to NEC & UL Specs - NEC 690.4B & NEC 705.4/6; CSA C22.2 No.107.1-16; Grid Sell Back — UL 1741 - 2010/2018 ; IEEE 1547a - 2003/2014 ; FCC 15 Class B ; UL 1741; UL1741 CRD; UL 1741SB ; CA Rule21 ; HECO Rule 14 H; UL 1699B; CSA C22.2 No.292-18; CSA C22.2 No.330-17;			
Protection	PV DC Disconnect Switch — NEC 240.15 Ground Fault Detection — NEC 690.5 PV Rapid Shutdown Control — NEC 690.12 PV Arc Fault Detection — NEC 690.11		PV Input Lightning Protection PV String Input Reverse Polarity Protection AC Output Breakers Battery Breaker / Disconnect Surge Protection	