

BlueSpark Series Residential ESS

Three Phase / All-in-one Hybrid System / 8-12 kW



Safe & Reliable

Powered by EVE
Human safe low-voltage solution
Optional AFCI



Smart Home Energy

Supports Self Consumption, Peak Shaving,
Time-of-use, and Battery Priority operation modes
SG Ready Heat Pump compatible



High Performance

DC / AC ratio up to 2
Long battery cycle life
100% three-phase unbalanced output



Easy Installation

Stackable design, no wiring required
Compact and space-saving
IP66 rating for protection



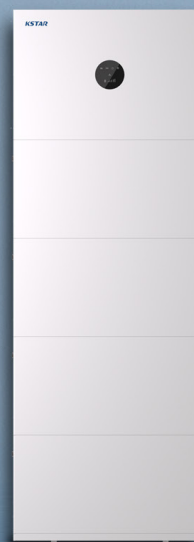
Flexible Expansion

Supports both on-grid and off-grid parallel configurations
Max. 8 battery packs per system



Smart O&M

24 / 7 cloud monitoring
Easy commissioning via Bluetooth
Remote firmware upgrades



Battery Model		BP48100PF1A-G2	
General Parameters		Operation	
Battery Type	LFP (LiFePO4)	Max. Continuous Charging Current	80 A (single battery pack)
Cell Brand	EVE	Max. Continuous Charging Power	4096 W
Energy Capacity	5.12 kWh ¹⁾	Max. Continuous Discharging Current	80 A (single battery pack)
Max. Depth of Discharge	100%	Max. Continuous Discharging Power	4096 W
Normal Voltage	51.2 V	Operating Temperature Range	-10 to 50°C (Charging); -10 to 50°C (Discharging) ²⁾
Operating Voltage Range	44.8 ~ 57.6 V	Cooling Type	Natural Cooling
Battery Pack Round-Trip Efficiency	> 94%	Humidity	0 ~ 90%
Weight	51 kg	BMS	
Dimensions (WxHxD)	725 x 370 x 165 mm	Modules Connection	Max. 8
IP Protection	IP65	Capacity	100 / 200 / 300 / 400 / 500 / 600 / 700 / 800 Ah
Certificate		Communication	CAN
Safety and Transportation	Pack: IEC/EN 62619; UN38.3; Cell: IEC/EN 62619; UN38.3; UL1973	Monitoring Parameters	System voltage, current, battery voltage, Battery temperature, PCBA temperature measurement

1) Total Energy Capacity is tested under the following conditions: Using a single battery pack (with new cells) in a laboratory environment, @25°C, 0.5C charging/discharge rate with a cutoff voltage of 2.5V per cell, at the beginning of life.

2) The operating temperature parameters only apply to battery pack models with heating function. For battery pack models without heating function, the operating temperature range will be: 0 to 50°C (Charging), -10 to 50°C (Discharging).

3) Minimum voltage for inverter to start power output.

4) According to the C10/11 of Synergrid, the maximum AC apparent output power is 10 kVA and the maximum AC output current is 14.5A. The applicable hybrid inverter model is E10KTBE-D22.

Hybrid Inverter Model	E8KT-D22	E10KT-D22	E12KT-D22
PV Input			
Recommended Max.PV Array Input Power @STC	16 kW	20 kW	22 kW
Max PV Voltage	1000 V		
Nominal Voltage	720 V		
MPPT Voltage Range	140 ~ 950 V		
MPPT Voltage Range with Full Load	290 ~ 800 V	320 ~ 800 V	350 ~ 800 V
Start Voltage ³⁾	200 V		
Number of MPPT Tracker	2		
String per MPPT Tracker	1		
Max. Input Current per MPPT	20 A		
Max. Short-Circuit Current per MPPT	25 A		
AC Output & Input (Grid)			
Max. AC Continuous Output Power	8000 W	10000 W	12000 W
Max. AC Apparent Output Power	8800 VA	11000 VA ⁴⁾	13200 VA
Max. Continuous Input Power	16000 W	20000 W	22000 W
Nominal AC Voltage	400 Vac		
Normal Frequency	50 Hz / 60 Hz (±5 Hz)		
Normal Output Current	11.6 A (RMS)	14.5 A (RMS)	17.4 A (RMS)
Max. Output Current	26.1 A (RMS)	26.1 A (RMS)	26.1 A (RMS)
Max. Input Current	38.8 A (RMS)	42 A (RMS)	42 A (RMS)
Power Factor (cos φ)	-0.8 (Lagging) ~ 0.8 (Leading)		
THDi	<3%		
AC Output (Backup)			
Normal AC Output Power	8000 W	10000 W	12000 W
Max. AC Output Power	8000 VA	10000 VA	12000 VA
Normal Output Current	11.6 A	14.5 A	17.4 A
Max. Output Current	26.1 A (RMS)	26.1 A (RMS)	26.1 A (RMS)
Normal Output Voltage	400 Vac		
Nominal Output Frequency	50 Hz / 60 Hz		
Output THDv (@Linear Load)	2% (Linear Load)		
Battery Input			
Battery Type	LFP (LiFePO4)		
Nominal Battery Voltage	51.2 V		
Charging Voltage Range	44 ~ 58 V		
Max. Charging / Discharging Current	160 / 200 A	200 / 240 A	200 / 240 A
Rated Charging / Discharging Power	8000 W	10000 W	10000W / 12000W
Battery Capacity	100 ~ 800 Ah		
Efficiency			
Max. PV Efficiency	97.2 %		
Euro. Efficiency	95.5 %		
Protection			
DC Switch	Integrated		
Anti-islanding Protection	Integrated		
Residual Current Monitoring	Integrated		
PV Reverse Polarity Protection	Integrated		
AC Short Circuit Protection	Integrated		
AC Overvoltage Protection	Integrated		
DC/AC Surge Protection	DC Type II; AC Type III		
Remote Shutdown	Integrated		
AFCI	Optional		
General Specifications			
Dimensions W x H x D	725 × 490 × 245 mm		
Weight	43 kg		
Operating Temperature Range	-25°C to +60°C (> 40°C derating)		
Cooling Type	Natural Convection		
Max. Operation Altitude	≤ 4000m		
Operation Humidity	0 ~ 95% (No Condensation)		
IP Class	IP66		
Topology	Transformerless		
Communication	RS485 / 4G / Ethernet / Bluetooth / WIFI		
Display	LED / WIFI+APP / Web		
Certification & Standard	IEC/EN62109-1&2; IEC/EN 61000-6-1; IEC/EN 61000-6-2; EN 61000-6-3; IEC/EN 61000-6-4; IEC/EN 61000-3-11; EN 61000-3-12; IEC 60529; IEC 61727; IEC 62116; IEC 60068; IEC 61683; EN 50549-1; EN 50549-10; VDE-AR-N 4105; NC RfG:2018; C10/C11		