

BlueSpark Series Residential ESS

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



Safe & Reliable

Powered by CATL and 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



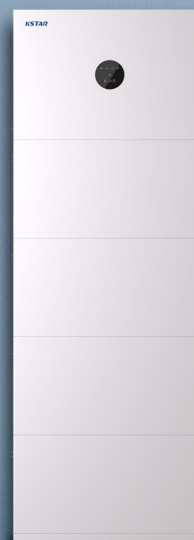
Flexible Expansion

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		BP48100P1-G2 / BP48100PF1-G2 ¹⁾	
Geneneral ParametersI		Operation	
Battery Type	LFP (LiFePO4)	Max. Continuous Charging Current	50 A (single battery pack)
Cell Brand	CATL / EVE (optional)	Max. Continuous Charging Power	2825 W
Energy Capacity	5.12 kWh ²⁾	Max. Continuous Discharging Current	80 A (single battery pack)
Usable Capacity	4.6 kWh ³⁾	Max. Continuous Discharging Power	4096 W
Max.Depth of Discharge	100%	Operating Temperature Range	-10 to 50°C (Charging); -10 to 50°C (Discharging) ⁴⁾
Norminal Voltage	51.2 V	Cooling Type	Natural Cooling
Operating Voltage Range	44.8-57.6 V	Humidity	0~90%
Battery Pack Round-Trip Efficiency	>94%	BMS	
Weight	51 kg	Modules Connection	Max. 8
Dimensions (WxHxD)	725 x 418 x 165 mm	Capacity	100/200/300/400/500/600/700/800 Ah
IP Protection	IP65	Communication	CAN
Warranty	5 Year Product Warranty, 10 Year Performance Warranty	Monitoring Parameters	System voltage,current,battery voltage, Battery temperature,PCBA temperature measurement
Certificate			
Safety and Transportation	Pack:IEC/EN 62619;UN38.3; Cell:IEC/EN 62619;UN38.3;UL1973		

1) Refer to two models of battery pack: BP48100P1-G2 (without heating foil) and BP48100PF1-G2 (with heating foil).

2) Total Energy Capacity is tested under the following conditions: @25°C, 0.5C charging/0.5C discharging, at the beginning of life.

3) Usable Energy Capacity refers to the energy discharged from 100% to the minimum state of energy (SoE).

4) 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).

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 ¹⁾	180 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	13200 VA
Max. Continuous Input Power	16000 W	20000 W	22000 W
Nominal AC Voltage	400 Vac		
Normal Frequency	50 / 60 Hz ± 5 Hz		
Normal Output Current	11.6A (RMS)	14.5A (RMS)	17.4A (RMS)
Max. Output Current	26.1A (RMS)	26.1A (RMS)	26.1A (RMS)
Max. Input Current	38.8A (RMS)	42A (RMS)	42A (RMS)
Power Factor (cos φ)	0.8 leading - 0.8 lagging		
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
Max. Output Current	26.1A (RMS)	26.1A (RMS)	26.1A (RMS)
Normal Output Voltage	400 Vac		
Nominal Output Frequency	50 / 60Hz		
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	160A / 200A	200A / 240A	200 / 240A
Max. 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 × 230 mm		
Weight	43 kg		
Operating Temperature Range	-25°C to +60°C(>40°C derating)		
Cooling Type	Natural Convention		
Max. Operation Altitude	≤ 4000m		
Operation Humidity	0~95%(No Condensation)		
IP Class	IP66		
Topology	Transformerless		
Communication	RS485 / CAN2.0 / WIFI		
Display	LED / WIFI+APP / Web		
Certification & Standard	IEC/EN 62109-1&2;EN61000-6-1;EN61000-6-2;EN61000-6-3;EN61000-6-4;EN61000-3-11;EN61000-3-12; VDE-AR-N4105; EN50549-1;G98/G99/G100;CEI 0-21;		

1) Minimum voltage for inverter to start power output.