

BlueSpark Series Residential ESS

Single Phase / All-in-one Hybrid System / 3.68-6 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



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. 4 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. 4
Dimensions (WxHxD)	725 x 418 x 165 mm	Capacity	100/200/300/400 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	E3.68KS-D22	E5KS-D22	E6KS-D22
PV Input			
Recommended Max.PV Array Input Power @STC	7.2 kW	10 kW	10 kW
Max PV Voltage	500 V		
Nominal Voltage	360 V		
MPPT Voltage Range	120 ~ 480 V		
MPPT Voltage Range with Full Load	200 ~ 425 V	250 ~ 425 V	250 ~ 425 V
Start Voltage ¹⁾	120 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	3680 W	5000 W	6000 W
Max. AC Apparent Output Power	3680 VA	5000 VA	6000 VA
Max. Continuous Input Power	7360 W	9200 W	9200 W
Nominal AC Voltage	230 Vac		
Normal Frequency	50 / 60 Hz ± 5 Hz		
Normal Output Current	16 A	21.7 A	26.1 A
Max. Output Current	16.7 A	22.7 A	27.3 A
Max. Input Current	32 A	40 A	40 A
Power Factor (cos ϕ)	0.8 leading - 0.8 lagging		
THDi	<3%		
AC Output (Backup)			
Normal AC Output Power	3680 W	5000 W	6000 W
Max. AC Output Power	3680 VA	5000 VA	6000 VA
Max. Output Current	16 A	21.7 A	26.1 A
Normal Output Voltage	230 Vac		
Nominal Output Frequency	50 / 60Hz		
Output THDv (@Linear Load)	<3% (Linear Load)		
Battery Input			
Battery Type	LFP (LiFePO4)		
Nominal Battery Voltage	48 V		
Charging Voltage Range	42 ~ 58 V		
Max. Charging/Discharging Current	80 A / 80 A	120 A / 120 A	125 A / 125 A
Max. Charging/Discharging Power	3600 W / 3900 W	5000 W / 5400 W	6000 W / 6400 W
Battery Capacity	100 ~ 400 Ah		
Efficiency			
Max. PV Efficiency	97.0 %		
Euro. Efficiency	96.5 %		
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 × 390 × 230 mm		
Weight	24.8 kg	25.5 kg	25.5 kg
Operating Temperature Range	-25°C to +60°C(>45°C derating)		
Cooling Type	Natural Convention		
Max. Operation Altitude	≤ 4000m		
Operation Humidity	0~95%(No Condensation)		
IP Class	IP66		
Topology	High Frequency Isolation		
Communication	RS485 / CAN2.0 / WIFI		
Display	LED / 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;IEC 60068;IEC 61683;IEC 62116;IEC 61727;C10/11;NC Rfg		

1) Minimum voltage for inverter to start power output.