

BlueSpark Series Residential ESS

Single Phase / All-in-one Hybrid System / 5 kW



Save Your Energy Bill

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⁾	
Genenral ParametersI		Operation	
Battery Type	LFP (LiFePO4)	Max. Continuous Charging Current	50 A (single battery pack)
Cell Brand	EVE / CATL (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 (W x H x D)	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	E5KS-D22
PV Input	
Recommended Max.PV Array Input Power @STC	10 kW
Max PV Voltage	500 V
Nominal Voltage	360 V
MPPT Voltage Range	120 ~ 480 V
MPPT Voltage Range with Full Load	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	5000 W
Max. AC Apparent Output Power	5000 VA
Max. Continuous Input Power	9200 W
Nominal AC Voltage	230 Vac
Normal Frequency	50 Hz / 60 Hz (±5 Hz)
Normal Output Current	21.7 A
Max. Output Current	22.7 A
Max. Input Current	40 A
Power Factor (cos φ)	-0.8 (Lagging) ~ 0.8 (Leading)
THDi	< 3%
AC Output (Backup)	
Normal AC Output Power	5000 W
Max. AC Output Power	5000 VA
Max. Output Current	21.7 A
Normal Output Voltage	230 Vac
Normal Output Frequency	50 Hz / 60 Hz
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	120 A / 120 A
Rated Charging / Discharging Power	5000 W / 5400 W
Battery Capacity	100 ~ 400 Ah
Efficiency	
Max. PV Efficiency	97.0 %
Euro. Efficiency	96.3 %
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	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/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; G98/G99; NC RfG:2018; C10/C11; CEI-021

1) Minimum voltage for inverter to start power output.