KSTAR
Powering the Future

BlueSpark Series Residential ESS NEW

Three Phase / All-in-one Hybrid System / 4-6 kW

Save Your Energy Bill

- Powered by CATL and EVE
- Human safe low-voltage solution
- Optional AFCI

Easy Installation

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

Smart Home Energy

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

Flexible Expansion

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

High Performance

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

Smart O&M

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

Battery Model	BP48100P1-G2 / BP48100PF1-G2 [1]
Genenral Parametersl	**Operation**
Battery Type	LFP (LiFePO4)
Cell Brand	EVE / CATL(optional)
Energy Capacity	5.12 kWh [2]
Usable Capacity	4.6 kWh [3]
Max.Depth of Discharge	100%
Norminal Voltage	51.2 V
Operating Voltage Range	44.8 ~ 57.6 V
Battery Pack Round-Trip Efficiecy	> 94%
Weight	51 kg
Dimensions (W x H x D)	725 x 418 x 165 mm
IP Protection	IP65
Warranty	5 Year Product Warranty, 10 Year Performance
Certificate	
Safety and Transportation	Pack: IEC/EN 62619; UN38.3; Cell:IEC/EN 62619; UN38.3; UL1973

Operation	
Max. Continuous Charging Current	50 A (single battery pack)
Max. Continuous Charging Power	2825 W
Max. Continuous Disharging Current	80 A (single battery pack)
Max. Continuous Disharging Power	4096 W
Operating Temperature Range	-10 to 50℃ (Charging); -10 to 50℃ (Discharging) [4]
Cooling Type	Natural Cooling
Humidity	0 ~ 90%
BMS	
Modules Connection	Max. 8
Capacity	100 / 200 / 300 / 400 / 500 / 600 / 700 / 800 Ah
Communication	CAN
Monitoring Parameters	System voltage,current,battery voltage, Battery temperature,PCBA temperature measurement

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℃(Charging), -10 to 50℃ (Discharging).

Hybrid Inverter Model	E4KT-D22	E5KT-D22	E6KT-D22
PV Input			
Recommended Max.PV Array Input Power @STC	10 kW	11 kW	12 kW
Max PV Voltage	1000 V		
Nominal Voltage	720 V		
MPPT Voltage Range	140 ~ 950 V		
MPPT Voltage Range with Full Load	200 ~ 800 V	230 ~ 800 V	250 ~ 800 V
Start Voltage [1]	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	4000 W	5000 W	6000 W
Max. AC Apparent Output Power	4400 VA	5500 VA	6000 VA
Max. Continuous Input Power	10000 W	11000 W	12000 W
Nominal AC Voltage	400 Vac		
Norminal Frequency	50 Hz / 60 Hz (±5 Hz)		
Norminal Output Current	5.8 A	7.3 A	8.7 A
Max. Output Current	13.1 A	13.1 A	13.1 A
Max. Input Current	21.0 A	22.6 A	22.6 A
Power Factor (cosΦ)	-0.8 (Lagging) ~ 0.8 (Leading)		
THDi	< 3%		
AC Output (Backup)			
Norminal AC Output Power	4000 W	5000 W	6000 W
Max. AC Output Power	4000 VA	5000 VA	6000 VA
Norminal Output Current	5.8 A	7.3 A	8.7 A
Max. Output Current	13.1 A	13.1 A	13.1 A
Norminal 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	100 A / 100 A	120 A / 120 A	120 A / 150 A
Rated Charging / Discharging Power	4000 W	5000 W	6000 W
Battery Capacity	100 ~ 800 Ah		
Efficiency			
Max. PV Efficiency	96.6 %		
Euro. Efficiency	94.5 %		
Protection			
DC Switch	Integrated		
Anti-Islanding-Schutz	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 Specification			
Dimensions (W x H x D)	725 × 490 × 245 mm		
Weight	40 kg		
Operating Temperature Range	-25°C to + 60°C (> 40°C derating)		
Cooling Type	Natural Convention		
Max. Operation Altitude	≤ 4000 m		
Operation Humidity	0 ~ 95% (No Condensation)		
IP Class	IP66		
Topology	High Frequency Isolation		
Communication	RS-485 / 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; NC RfG:2018; C10/C11		

1) Minimum voltage for inverter to start power output.