KSTAR
Powering the Future

BlueSpark Series Residential ESS NEW

Single Phase / All-in-one Hybrid System / 3.68-6 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. 4 battery packs per system

High Performance

- DC / AC ratio up to 2
- Long battery cycle life

Smart O&M

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

Battery Model		BP40100PF1-G2/BP48100PF3-G2 [1]	
Genenral Parametersl		**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 Disharging Current	80 A (single battery pack)
Usable Capacity	4.6 kWh [3]	Max. Continuous Disharging Power	4096 W
Max.Depth of Discharge	100%	Operating Temperature Range	-10 to 50℃ (Charging); -10 to 50℃ (Discharging) [4]
Norminal Voltage	51.2 V		
Operating Voltage Range	44.8 ~ 57.6 V	Cooling Type	Natural Cooling
Battery Pack Round-Trip Efficiecy	> 94%	Humidity	0 ~ 95% (no condensation)
Weight	51 kg / 55.9 kg	**BMS**	
Dimensions (W x H x D)	725 x 370 x 165 mm (PF1) 725 x 350 x 220 mm (PF3)	Modules Connection	Max. 8
		Capacity	100 / 200 / 300 / 400 Ah
IP Protection	IP65	Communication	CAN
Warranty	5 Year Product Warranty, 10 Year Performance	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: BP48100PF1-G2 (EVE cell) and BP48100PF3-G2 (CATL cell).
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).
5) Max. AC continuous output power is 4999 W for Australia and 4600 W for Germany and South Africa.
6) Max. AC apparent output power is 4999 VA for Australia and 4600 VA for Germany and South Africa
7) Max. output current is 21.7 A for Australia and 20 A for Germany and South Africa.

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 [5]	6000 W
Max. AC Apparent Output Power	3680 VA	5000 VA [6]	6000 VA
Max. Continuous Input Power	7360 W	9200 W	9200 W
Nominal AC Voltage		230 Vac	
Norminal Frequency		50 Hz / 60 Hz (±5 Hz)	
Norminal Output Current	16 A	21.7 A	26.1 A [2]
Max. Output Current	16.7 A	22.7 A [7]	27.3 A [2]
Max. Input Current	32 A	40 A	40 A
Power Factor (cosΦ)		-0.8 (Lagging) ~ 0.8 (Leading)	
THDi		< 3%	
AC Output (Backup)			
Norminal 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
Norminal Output Voltage		230 Vac	
Nominal 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	80 A / 80 A	120 A / 120 A	125 A / 125 A
Rated Charging / Discharging Power	3600 W / 3900 W	5000 W / 5400 W	6000 W / 6400 W
Battery Capacity		100 ~ 400 Ah	
Efficiency			
Max. PV Efficiency		97.2%	
Euro. Efficiency	95.9%	96.4%	96.5%
Protection			
DC Switch		Integrated	
Anti-islanding Protection		Integrated	
Residual Current Monitoring		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 × 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 Convection	
Max. Operation Altitude		≤ 4000 m	
Operation Humidity		0 ~ 95% (no condensation)	
IP Class		IP66	
Topology		High Frequency Isolation	
Communication		RS485 / WIFI / (4G / Ethernet optional)	
Display		LED+Bluetooth / 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.
2) Nominal Output current and Maximum output current is 25A for Ireland

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