

# BlueSpark Series Residential ESS NEW

Three Phase / All-in-one Hybrid System / 8–12 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
- ▶ 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 <sup>1)</sup>	
<b>General Parameters</b>			
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 <sup>2)</sup>	Max. Continuous Discharging Current	80 A (single battery pack)
Usable Capacity	4.6 kWh <sup>3)</sup>	Max. Continuous Discharging Power	4096 W
Max.Depth of Discharge	100%	Operating Temperature Range	-10 to 50°C (Charging); -10 to 50°C (Discharging) <sup>4)</sup>
Normal 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%	<b>BMS</b>	
Weight	51 kg	Modules Connection	Max. 8
Dimensions (W x H x D)	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	Monitoring Parameters	System voltage,current,battery voltage, Battery temperature,PCBA temperature measurement
<b>Certificate</b>			
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).  
 5) Minimum voltage for inverter to start power output.  
 6) According to the C10/11 of Synergrid, the maximum AC apparent output power is 10 kVA and the maximum AC output current is 14.5A.The applicable hybrid inverter model is E10KTBE-D22.

Hybrid Inverter Model	E8KT-D22	E10KT-D22	E12KT-D22
<b>PV Input</b>			
Recommended Max.PV Array	16 kW	20 kW	22 kW
Input Power @STC			
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 <sup>5)</sup>		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	
<b>AC Output &amp; Input (Grid)</b>			
Max. AC Continuous Output Power	8000 W	10000 W	12000 W
Max. AC Apparent Output Power	8800 VA	11000 VA <sup>6)</sup>	13200 VA
Max. Continuous Input Power	16000 W	20000 W	22000 W
Nominal AC Voltage		400 Vac	
Normal Frequency		50 Hz / 60 Hz (±5 Hz)	
Normal Output Current	11.6 A	14.5 A	17.4 A
Max. Output Current	26.1 A	26.1 A	26.1 A
Max. Input Current	38.8 A	42 A	42 A
Power Factor (cosΦ)		-0.8 (Lagging) ~ 0.8 (Leading)	
THDi		< 3%	
<b>AC Output (Backup)</b>			
Normal AC Output Power	8000 W	10000 W	12000 W
Max. AC Output Power	8000 VA	10000 VA	12000 VA
Normal Output Current	11.6 A	14.5 A	17.4 A
Max. Output Current	26.1 A	26.1 A	26.1 A
Normal Output Voltage		400 Vac	
Normal Output Frequency		50 Hz / 60 Hz	
Output THDv (@Linear Load)		2% (Linear Load)	
<b>Battery Input</b>			
Battery Type		LFP (LiFePO4)	
Nominal Battery Voltage		51.2 V	
Charging Voltage Range		44 ~ 58 V	
Max. Charging / Discharging Current	160 A / 200 A	200 A / 240 A	200 A / 240 A
Rated Charging / Discharging Power	8000 W	10000 W	10000 W / 12000 W
Battery Capacity		100 ~ 800 Ah	
<b>Efficiency</b>			
Max. PV Efficiency		97.2 %	
Euro. Efficiency		95.5 %	
<b>Protection</b>			
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	
<b>General Specification</b>			
Dimensions (W x H x D)		725 × 490 × 245 mm	
Weight		43 kg	
Operating Temperature Range		-25°C to + 60°C (> 40°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		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		