

# 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		BP40100PF1-G2/BP48100PF3-G2 <sup>1)</sup>	
<b>General Parameters</b>		<b>Operation</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>
Norminal Voltage	51.2 V	Cooling Type	Natural Cooling
Operating Voltage Range	44.8 ~ 57.6 V	Humidity	0 ~ 95% (no condensation)
Battery Pack Round-Trip Efficiency	> 94%	<b>BMS</b>	
Weight	51 kg / 55.9 kg	Modules Connection	Max. 8
Dimensions (W x H x D)	725 x 370 x 165 mm (PF1) 725 x 350 x 220 mm (PF3)	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: 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°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 .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 Input Power @STC	16 kW	20 kW	22 kW
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		
Norminal Frequency	50 Hz / 60 Hz (±5 Hz)		
Norminal 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	35 A		
Power Factor (cosΦ)	-0.8 (Lagging) ~ 0.8 (Leading)		
THDi	< 3%		
<b>AC Output (Backup)</b>			
Norminal AC Output Power	8000 W	10000 W	12000 W
Max. AC Output Power	8000 VA	10000 VA	12000 VA
Norminal Output Current	11.6 A	14.5 A	17.4 A
Max. Output Current	26.1 A	26.1 A	26.1 A
Norminal Output Voltage	400 Vac		
Nominal 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-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		
<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	Intelligent Air Cooling		
Max. Operation Altitude	≤ 4000 m		
Operation Humidity	0 ~ 95% ( No Convection)		
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; NC RfG:2018; C10/C11		