

# BluE-S Series Residential ESS

Three Phase / All-in-one Hybrid System / 8–12 kW

## Save Your Energy Bill

- ▶ Optimized Time-of-use Profile
- ▶ 10000 Cycles Lifespan
- ▶ VPP Ready

## Whole Home Energy Solution

- ▶ Support On-grid and Off-grid Switching
- ▶ AC-coupling or DC-coupling System
- ▶ Optional Generator Connection

## Comprehensive Safety

- ▶ Alarm and Protection
- ▶ Online Monitoring
- ▶ Compliant with Global Grid Standards



| Battery Model            |                                                          | BluE-PACK 5.1                 |                                                                                       |
|--------------------------|----------------------------------------------------------|-------------------------------|---------------------------------------------------------------------------------------|
| Physical                 |                                                          | Operation                     |                                                                                       |
| Battery Type             | LFP (LiFePO4)                                            | Max. Charge/Discharge Current | 50 A / 80 A                                                                           |
| Weight                   | 54 kg                                                    | Rated DC power                | 4096 W                                                                                |
| Dimensions (W x H x D)   | 540 x 490 x 240 mm                                       | Max. Charge/Discharge Power   | 2825 W / 4096 W                                                                       |
| IP Protection            | IP65                                                     | Operating Temperature Range   | -10 to 50°C (Charging); -10 to 50°C (Discharging) <sup>1)</sup>                       |
| Warranty                 | 5 Year Product Warranty,<br>10 Year Performance Warranty | Humidity                      | 0 ~ 95% (No condensation)                                                             |
| Electrical               |                                                          | BMS                           |                                                                                       |
| Energy Capacity          | 5.12 kWh                                                 | Modules Connection            | Max. 8                                                                                |
| Usable Capacity          | 4.6 kWh                                                  | Capacity                      | 200 / 400 / 600 / 800 Ah                                                              |
| Depth of Discharge (DoD) | 90%                                                      | Power Consumption             | < 2 W                                                                                 |
| Nominal Voltage          | 51.2 V                                                   | Communication                 | CAN & RS-485                                                                          |
| DC Circuit Breaker       | 125 A                                                    | Monitoring Parameters         | System voltage, current, cell voltage, cell temperature, PCBA temperature measurement |
| Operating Voltage Range  | 44.8 ~ 56.5 V                                            | Certificate                   |                                                                                       |
| Internal Resistance      | < 20 mΩ                                                  | Safety(Cell)                  | Pack: IEC/EN 62619; UN 38.3<br>Cell: IEC/EN 62619; UN 38.3; UL 1973                   |
| Cycle Life               | 10000 cycle                                              |                               |                                                                                       |

| Hybrid Inverter Model                      | E8KT                                                                                                                                                                                                                                                                        | E10KT                | E12KT         |
|--------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------|---------------|
| PV String Input                            |                                                                                                                                                                                                                                                                             |                      |               |
| Recommended Max. PV Array Input Power @STC | 16 kWp                                                                                                                                                                                                                                                                      | 20 kWp               | 20 kWp        |
| Max. DC Voltage                            | 1100 V                                                                                                                                                                                                                                                                      |                      |               |
| Nominal Voltage                            | 720 V                                                                                                                                                                                                                                                                       |                      |               |
| MPPT Voltage Range                         | 140 V ~ 1000 V                                                                                                                                                                                                                                                              |                      |               |
| MPPT Voltage Range (Full Load)             | 380 V ~ 850 V                                                                                                                                                                                                                                                               | 420 V ~ 850 V        | 480 V ~ 850 V |
| Start Voltage <sup>1)</sup>                | 200 V                                                                                                                                                                                                                                                                       |                      |               |
| Number of MPPT                             | 2                                                                                                                                                                                                                                                                           |                      |               |
| Strings per MPPT                           | 1                                                                                                                                                                                                                                                                           |                      |               |
| Max. Input Current per MPPT                | 15 A                                                                                                                                                                                                                                                                        |                      |               |
| Max. Short-circuit Current per MPPT        | 20 A                                                                                                                                                                                                                                                                        |                      |               |
| AC Output (Grid)                           |                                                                                                                                                                                                                                                                             |                      |               |
| Nominal AC Output Power                    | 8 kW                                                                                                                                                                                                                                                                        | 10 kW                | 12 kW         |
| Max. AC Apparent Power                     | 8.8 kVA                                                                                                                                                                                                                                                                     | 11 kVA <sup>2)</sup> | 13.2 kVA      |
| Nominal AC Voltage                         | 400 Vac                                                                                                                                                                                                                                                                     |                      |               |
| AC Grid Frequency Range                    | 50 / 60Hz ±5Hz                                                                                                                                                                                                                                                              |                      |               |
| Nominal Output Current                     | 11.6 A                                                                                                                                                                                                                                                                      | 14.5 A               | 17.4 A        |
| Max. Output Current                        | 12.8 A                                                                                                                                                                                                                                                                      | 16 A <sup>2)</sup>   | 19.2 A        |
| Power Factor (cosΦ)                        | 0.8 leading ~ 0.8 lagging                                                                                                                                                                                                                                                   |                      |               |
| THDi                                       | < 3%                                                                                                                                                                                                                                                                        |                      |               |
| Battery Input                              |                                                                                                                                                                                                                                                                             |                      |               |
| Battery Type                               | LFP (LiFePO4)                                                                                                                                                                                                                                                               |                      |               |
| Nominal Battery Voltage                    | 51.2 V                                                                                                                                                                                                                                                                      |                      |               |
| Charging Voltage Range                     | 44 ~ 58 V                                                                                                                                                                                                                                                                   |                      |               |
| Max. Charging Current                      | 160 A                                                                                                                                                                                                                                                                       |                      |               |
| Max. Discharging Current                   | 160 A                                                                                                                                                                                                                                                                       | 200 A                | 200 A         |
| Battery Capacity                           | 200 / 400 / 600 / 800 Ah                                                                                                                                                                                                                                                    |                      |               |
| AC Output (Backup)                         |                                                                                                                                                                                                                                                                             |                      |               |
| Nominal AC Output Power                    | 7.36 kW                                                                                                                                                                                                                                                                     | 9.2 kW               | 9.2 kW        |
| Max. AC Output Power                       | 8 kVA                                                                                                                                                                                                                                                                       | 10 kVA               | 10 kVA        |
| Nominal Output Current                     | 10.7 A                                                                                                                                                                                                                                                                      | 13.3 A               | 13.3 A        |
| Max. Output Current                        | 11.6 A                                                                                                                                                                                                                                                                      | 14.5 A               | 14.5 A        |
| Nominal Output Voltage                     | 400 V                                                                                                                                                                                                                                                                       |                      |               |
| Nominal Output Frequency                   | 50 / 60 Hz                                                                                                                                                                                                                                                                  |                      |               |
| Output THDv (@Linear Load)                 | < 2% (Linear Load)                                                                                                                                                                                                                                                          |                      |               |
| Efficiency                                 |                                                                                                                                                                                                                                                                             |                      |               |
| Max. PV Efficiency                         | 97.60%                                                                                                                                                                                                                                                                      |                      |               |
| Euro. PV Efficiency                        | 97.00%                                                                                                                                                                                                                                                                      |                      |               |
| Protection                                 |                                                                                                                                                                                                                                                                             |                      |               |
| Anti-islanding Protection                  | Yes                                                                                                                                                                                                                                                                         |                      |               |
| Output Over Current Protection             | Yes                                                                                                                                                                                                                                                                         |                      |               |
| DC Reverse Polarity Protection             | Yes                                                                                                                                                                                                                                                                         |                      |               |
| String Fault Detection                     | Yes                                                                                                                                                                                                                                                                         |                      |               |
| DC / AC Surge Protection                   | DC Type II; AC Type III                                                                                                                                                                                                                                                     |                      |               |
| Insulation Detection                       | Yes                                                                                                                                                                                                                                                                         |                      |               |
| AC Short Circuit Protection                | Yes                                                                                                                                                                                                                                                                         |                      |               |
| General Specifications                     |                                                                                                                                                                                                                                                                             |                      |               |
| Dimensions (W x H x D)                     | 540 x 980 x 240 mm                                                                                                                                                                                                                                                          |                      |               |
| Weight                                     | 49 kg                                                                                                                                                                                                                                                                       |                      |               |
| Operating Temperature Range                | -25°C ~+ 60°C                                                                                                                                                                                                                                                               |                      |               |
| Cooling Type                               | Natural Convection                                                                                                                                                                                                                                                          |                      |               |
| Max. Operating Altitude                    | 2000 m                                                                                                                                                                                                                                                                      |                      |               |
| Operating Humidity                         | 0 ~ 95% (No Condensation)                                                                                                                                                                                                                                                   |                      |               |
| IP Class                                   | IP66                                                                                                                                                                                                                                                                        |                      |               |
| Topology                                   | Battery Isolation                                                                                                                                                                                                                                                           |                      |               |
| Communication                              | RS-485 / CAN 2.0 / WIFI / 4G                                                                                                                                                                                                                                                |                      |               |
| Display                                    | LCD / APP                                                                                                                                                                                                                                                                   |                      |               |
| Certification & Standard                   | IEC/EN 62109-1&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 60068; IEC 61683; IEC 62116; IEC 61727; EN 50549-1; VDE-AR-N 4105; C10/11; VDE 0126-1-1; CEI 0-21; NC Rfg; G98; EIFS; NTS&UNE 217001 |                      |               |

1) Minimum voltage for inverter to start power output.

2) According to the C10/11 of Synergrid, the maximum AC output power is 10 kVA and the maximum AC output current is 14.5A.  
The applicable hybrid inverter model is E10KTBE.



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