

Blue Residential ESS

All In One Energy Storage System

CATL Battery Solutions



CATL LFP Battery, stable and safe
Module, pack, system, triple protection
IP65, outdoor installation, away from living room



Modular design, single person can carry and
install it. Plug and play, 30 min quick installation
Space saving; 0.15 sq. m foot print



Global cloud platform & Mobile APP
anytime and any where
Open API, support power internet applications

| Battery Model | | Blue-PACK5.1 | |
|--------------------------|--|-------------------------------|--|
| Physical | | Operation | |
| Battery type | LFP (LiFePO4) | Max. Charge/Discharge Current | 50A/80A |
| System Weight | 54KG | Rated DC power | 4096W |
| Dimension (W x D x H) | 540*490*240 | Max. Charge/Discharge Power | 2825W/4096W |
| IP Protection | IP65 | Operating Temperature Range | 0 to 50°C charging -10 to 50°C discharging |
| Warranty | 5 Year Product Warranty, 10 Year Performance Warranty | Humidity | 0~95% (No condensation) |
| Electrical | | BMS | |
| Energy Capacity | 5.12kwh | Modules Connection | Max. 4 |
| Usable Capacity | 4.6kwh | Capacity | 100-400Ah |
| Depth of Discharge (DoD) | 90% | Power Consumption | <2W |
| Nominal Voltage | 51.2V | Communication | CAN & RS485 |
| DC Circuit Breaker | 125A | Monitoring Parameters | System voltage, current, cell voltage, cell temperature, PCBA temperature measurement |
| Operating Voltage Range | 44.8-56.5V | Certificate | |
| Internal Resistance | <20mΩ | Safety(Cell) | Pack: IEC/EN 62619;UN38.3 |
| Cycle Life | 10000cycle | | Cell: IEC/EN 62619;UN38.3;UL1973 |

*Maximum 4 battery pack in parallel.

| Hybrid Inverter Model | BluE-S 3680D | BluE-S 5000D |
|--------------------------------------|---|-------------------------------|
| PV String Input | | |
| Max. DC Voltage | 580V | 580V |
| Nominal Voltage | 400V | 400V |
| MPPT Voltage Range | 80V-560V | 80V-560V |
| Start Voltage | 130V | 130V |
| Number of MPPT Tracker | 2 | 2 |
| Strings Per MPPT Tracker | 1 | 1 |
| Max. Input Current Per MPPT | 15A | 15A |
| Max. Short-circuit Current Per MPPT | 18A | 18A |
| AC Output (Grid) | | |
| Nominal AC Output Power | 3680W | 5000W |
| Max. AC Apparent Power | 7360VA (from grid) | 7360VA (from grid) |
| Max. AC Output Power | 3680W | 5000W ¹ |
| Nominal AC Voltage | 230Vac | 230Vac |
| AC Grid Frequency Range | 50 / 60Hz±5Hz | 50 / 60Hz±5Hz |
| Max. Output Current | 16A | 22A ² |
| Max. Input Current | 32A | 32A |
| Power Factor (cosΦ) | 0.8leading-0.8lagging | 0.8leading-0.8lagging |
| THDi | <3% | <3% |
| Battery Input | | |
| Battery Type | LFP (LiFePO4) | LFP (LiFePO4) |
| Nominal Battery Voltage | 48V | 48V |
| Charging Voltage Range | 40-60V | 40-60V |
| Max. Charging Current | 50A | 100A |
| Max. Discharging Current | 80A | 100A |
| Battery Capacity | 100-400Ah | 100-400Ah |
| Charging Strategy for Li-ion Battery | Depend on the BMS | Depend on the BMS |
| AC Output (Backup) | | |
| Max. Output Apparent Power | 4000VA | 5000VA |
| Peak Output Apparent Power | 6900VA 10sec | 6900VA 10sec |
| Max. Output Current | 16A | 20A |
| Nominal Output Voltage | 230V | 230V |
| Nominal Output Frequency | 50/60Hz | 50/60Hz |
| Output THDv (@Linear Load) | <3% (Linear Load) | <3% (Linear Load) |
| Efficiency | | |
| Max. PV Efficiency | 97.6% | 97.6% |
| Euro. PV Efficiency | 97.0% | 97.0% |
| Protection | | |
| DC Switch | Bipolar DC Switch (125A/Pole) | Bipolar DC Switch (125A/Pole) |
| Anti-islanding Protection | Yes | Yes |
| Output Over Current | Yes | Yes |
| DC Reverse Polarity Protection | Yes | Yes |
| String Fault Detection | Yes | Yes |
| AC/DC Surge Protection | DC Type II;AC Type III | DC Type II;AC Type III |
| Insulation Detection | Yes | Yes |
| AC Short Circuit Protection | Yes | Yes |
| General Specifications | | |
| Dimensions W x H x D | 540*590*240mm | |
| Weight | 32kg | |
| Operating Temperature Range | -25°C~+60°C | |
| Noise (dB) | <25 | |
| Cooling Type | Natural Convection | |
| Max. Operation Altitude | 2000m | |
| Operation Humidity | 0~95% (No Condensation) | |
| IP Class | IP65 | |
| Topology | Battery Isolation | |
| Communication | RS485/CAN2.0/WIFI/4G | |
| Display | LCD/APP | |
| Certification & Standard | IEC/EN 62109-1&2;IEC/EN61000-6-1;IEC/EN61000-6-2;EN61000-6-3; IEC/EN61000-6-4;IEC/EN61000-3-11; EN61000-3-12;IEC60529;IEC 60068;IEC61683;IEC62116;IEC61727;EN50549-1; AS 4777.2;NRS 097;VDE-AR-N-4105;CEI0-21;G98;G99;C10/C11 | |

*1. Nominal AC output power is 4999W for Australia and 4600W for Germany and South Africa.

*2. Maximum output current is 21.7A for Australia and 20A for Germany and South Africa.

KSTAR

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