



BlueArk X5

C&I Energy Storage System



Versatile Multi-Energy & Reliable Off-Grid Performance

- Direct PV access and diesel generator interface for flexible deployment.
- Seamless on/off-grid switching within 20ms for critical loads.
- Independent black start without grid or solar input.
- Compatible with mainstream C&I solar-storage systems.



Integrated Design & Flexible Installation

- LFP 314Ah Cells: more stable system, higher energy density;
- Plug-and-play: All-in-one design, quick deployment with factory pre-integration;
- A single cabinet supports system expansion from 2h to 8h (50kW/400kWh);
- The maximum supported number of cabinets for parallel operation is ≤ 10 (500kW/1MWh).



Smart Operation & Cost Efficiency

- Remote OTA: automatic optimization of features and performance;
- Intelligent monitoring: remote diagnostics, visual status display, alerts and analysis;
- Compatible EMS: unified management across multiple sites, reducing operational costs.



Enhanced Safety & Multiple Protection

- Multi-layer protection against overheating, overload, overvoltage, and overcurrent.
- Smart monitoring with cell health alerts for safe, stable operation.
- Fire and aerosol integration: Combustible gas detection with integrated ventilation, Gel fire suppression in battery compartment;
- Intelligent detecting: smart monitoring platform with cell health alerts;

Datasheet	X5-50k-100
DC Input	
Max. PV Array Power @STC	100kWp
Max. DC Voltage	1000V
MPPT Voltage Range	180V~850V
Rated DC Voltage	600V
Start Voltage	200V
Max.DC Input Currtent	6*45A
Max. DC Short Circuit Current	6*55A
MPPT Channels / Strings per Channel	6-way / 2 strings per way,(total 12 strings)
Battery Parameters	
Battery Type	LiFePO4
Rated Energy	100kWh
Battery Voltage Range	275V~355V
Rated Charge/Discharge Current	157A
AC Output [On-grid]	
Rated AC Power	50kW
Max. Apparent Power	55kVA
Rated Output Current@230Vac	72.5A
Max. AC Output Current to Utility Grid	79.8A
Rated AC Voltage	3L+N+PE, 380V/400V
Rated Output Frequency/Range	50Hz, 45Hz~55Hz; 60Hz, 55Hz~60Hz
Power Factor (cos φ)	-0.8~0.8
Total Harmonic Distortion	< 3%
AC Input [On-grid]	
Rated AC Voltage	3L+N+PE, 380V/400V
Rated Input Frequency	50Hz/60Hz
Max. Input Current	200A
AC Output [Back Up]	
Max. Apparent Power	55kVA
Peak Output Apparent Power	75kVA, 5s
Rated AC Voltage	3L+N+PE, 380V/400V
Rated Output Frequency/Range	50Hz, 45Hz~55Hz; 60Hz, 55Hz~60Hz
Total Harmonic Distortion (THDV)@Linear Load)	<3%
On/Off-Grid Switching Time	< 20ms
AC Input [Generator]	
Max. Input Power	138kW
Max. Input Current@230V	200A
Rated AC Voltage	3L+N+PE, 380V/400V
Rated Output Frequency/Range	50Hz, 45Hz~55Hz; 60Hz, 55Hz~60Hz
ESS/DG Switching Time	Off-grid Mode: ≤ 20ms; Grid-connected & Off-grid Switching: Depends on diesel generator startup time / ≤ 20ms (with optional ATS)
Protection	
PV String Current Monitoring	Integrated
PV Insulation Resistance Detection	Integrated
Residual Current Monitoring	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated
DC Switch	Integrated
DC Surge Protection	Type II
AC Surge Protection	Type II
AFCI	Integrated
RSD	Optional
General Parameters	
Communication	Ethernet/WIFI/4G (Optional)
Topology	Transformer-less
Noise level	< 75 dB @ 1 m
Operating Temperature Range	-30°C~50°C (45°C~ 50°C with derating)
Cooling Method	HVAC(Battery)/Smart fan cooling (Inverter)
Ambient Humidity	0~95% Non-condensing
Altitude	≤3000m
Ingress Protection	Battery: IP55; Inverter: IP66
Dimensions (H*W*D)	1900*1020*1340mm
Weight	1200kg
Warranty	Refer to the warranty agreement



BC100

Optional



Parameters	
Model	Battery Storage Cabinet
Battery	LiFePO4-314Ah
Capacity	100kWh
Rated Charge/Discharge Current	157A
Voltage Range	275V~355V
Battery Configuration	20S*5
Firefighting System	Smoke Detection, Temperature Detection, Combustible Gas Detection, Exhaust Ventilation System, Aerosol Fire Suppression, Audible and Visual Alarm
Dimensions (H*W*D)	1900*682*1340mm
Weight	1100kg