BlueArk X5

Commercial & Industrial Energy Storage System

POWER
50 kW Hybrid Inverter

CAPACITY
100 kWh

Versatile Energy & Grid-Free Capability

- Multi-energy integration for diverse applications;
- Seamless transition: on/off-grid switching under 20ms, uninterrupted power for critical loads;
- Black start: self-starting in extreme conditions without grid or solar power.

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.

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).

Enhanced Safety & Multiple Protection

- IP55 rating: C3/C4 corrosion resistance, adapt to extreme environments;
- Cooling system in battery compartment: ensures stability and longevity;
- 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;
- 5 Year Warranty: Comprehensive lifecycle safety assurance.

Technical 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 Current	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
Max. Charging/Discharging Current	150A

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 Outpet 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%

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

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
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	5 Years

BC100

Optional

Parameters

Model	Battery Storage Cabinet
Battery	LiFePO4-314Ah
Capacity	100kWh
Maximum Charge/Discharge Current	150A
Voltage Range	275V~355V
Battery Configuration	20S*5
Firefighting System	Smoke & temperature sensors + aerosol
Dimensions (H*W*D)	1900*682*1340mm
Weight	1100kg