TCL

BlueArk X5

Commercial & Industrial Energy Storage System



POWER
29.9/30/50 kW Hybrid Inverter

CAPACITY
60~100 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

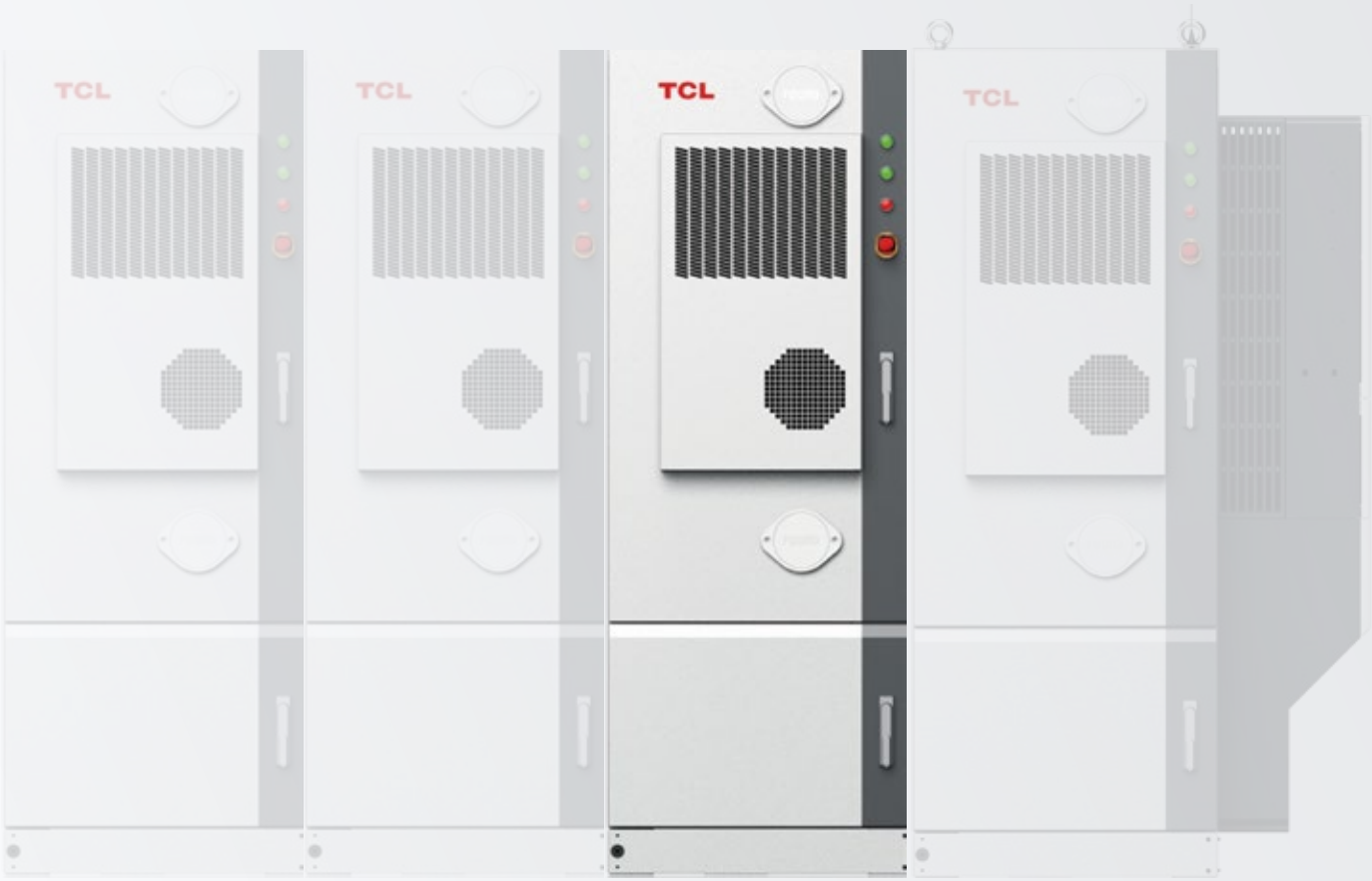
- IP55 rating: C3/C4 corrosion resistance, adapt to extreme environments;
- Cooling system in battery compartment: ensures stability and longevity;
- Fire and aerosol integration: Combustible gas detection with integrated ventilation, Gel fire suppression in battery compartment;
- Intelligent detecting: smart monitoring platform with cell health alerts;
- 5 Year Warranty: Comprehensive lifecycle safety assurance.

Technical Datasheet	X5-29.9k-60/100	X5-30k-60/100	X5-50k-100
DC Input			
Max. PV Array Power@STC	59.8kWp	60kWp	100kWp
Max. DC Voltage	1000V		
MPPT Voltage Range	180V~850V		
Rated DC Voltage	600V		
Max. DC Input Current	200V		
Max. DC Input Current Of a Single String	4*45A	4*45A	6*45A
Max. DC Short Circuit Current	4*55A	4*55A	6*55A
MPPT Channels / Strings per Channel	4-way / 2 strings per way,(total 8 strings)	4-way / 2 strings per way,(total 8 strings)	6-way / 2 strings per way,(total 12 strings)
Battery Parameters			
Battery Type	LiFePO4		
Rated Energy	60/100kWh	60/100kWh	100kWh
Battery Voltage Range	165V~213V/275V~355V	165V~213V/275V~355V	275V~355V
Max. Charging/Discharging Current	150A		
AC Output [On-grid]			
Rated AC Power		30kW	50kW
Max. Apparent Power	29.9kW	33kVA	55kVA
Rated Output Current@230Vac	29.9kVA	43.5A	72.5A
Max. AC Output Current to Utility Grid	43.3A	47.9A	79.8A
Rated AC Voltage	43.3A	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		80A	200A
	80A		
AC Output [Back Up]			
Max. Apparent Power		33kVA	55kVA
Peak Outpet Apparent Power	29.9kVA	45kVA, 5s	75kVA, 5s
Rated AC Voltage	29.9kVA	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		

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BC100

Optional



Parameters

Model	DC Expansion Cabinet
Battery	LiFePO4-314Ah
Capacity	100kWh
Maximum Charge/Discharge Current	150A
Voltage Range	280V~360V
Battery Configuration	IP20S*5
Firefighti System	Smoke & temperature sensors + aerosol
Dimensions (H*W*D)	1900*682*1340mm
Weight	1100kg