

Jinko ESS 5 MWh

ENERGY STORAGE SYSTEM

This next-generation liquid-cooled energy storage system from Jinko ESS integrates 314 Ah LFP cells, delivering high safety, efficiency, and reliability. Designed for modern grid applications, it combines strong performance and long service life within a compact 20-foot container.



Key Features



Efficient by Design

Optimized container and system design delivering high energy density and efficient use of space. System-level efficiency optimization, supporting reduced auxiliary power consumption and stable performance.



Safe & Reliable

Multi-layer protection architecture from cell to system, combining thermal, electrical and fire protection. Integrated fire and gas safety concept, with multi-sensor detection and controlled gas handling to enable early fault detection and safe system response.



Flexible Deployment & Operation

Containerized, modular architecture enabling flexible system layouts (back-to-back or side-by-side) and efficient site utilization. Smart monitoring and remote supervision, supporting real-time diagnostics, reduced on-site maintenance effort and scalable project deployment.



Reliable Long-term Performance

High-capacity 314 Ah LFP cells ensuring stable operation, consistent performance and long service life in large-scale energy storage applications. Uniform thermal behavior at cell level, minimizing temperature differences and reducing long-term degradation risks.

Typical Applications



Renewable Integration & Output Stabilization

Smooths solar and wind generation, manages ramp rates, and reduces curtailment, supporting grid compliance and improving renewable asset performance.



Grid Congestion Management

Stores excess energy during network constraints and releases it during peak demand, optimizing grid utilization and deferring infrastructure upgrades.



Capacity & Ancillary Services

Provides fast-response power for capacity markets, frequency regulation, and balancing services, enhancing system stability and flexibility.



Energy Arbitrage & Revenue Optimization

Charges during low-price periods and discharges at peak prices, enabling participation in wholesale markets and maximizing project revenue potential.

Battery Parameters

Cell Type	Lithium Iron Phosphate (LFP)
Cell Parameters	3.2 V / 314 Ah
Max. Charge / Discharge Power	0.5P (JKE-5015K-2H-LAA) / 0.25P (JKE-5015K-4H-LAA)
Configuration	1P416S × 12
Nominal Capacity	5.01 MWh
Nominal Voltage	1331.2 V
Operating Voltage Range	1164.8 - 1497.6 V

System Parameters

Dimension (L×W×H)	6058 × 2438 × 2896 mm
Weight	42,000 kg
Cooling Method	Liquid Cooling
Operating Temperature	-30 ~ 50 °C
Humidity	≤ 95% RH, no condensation
Altitude	< 3000 m (derating above 2000 m)
Noise Level	80 dB(A) @1m / 75 dB (optional)
IP Rating	IP55
Corrosion Class	C4 (C5 optional)
Fire Suppression System	Temperature sensor + Smoke detector + Combustible gas detector + Deflagration venting + Fire extinguishing gas + Water sprinkler
Communication Protocol	Ethernet / Modbus TCP/IP



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