

GOODWE

ESA Series

125kW/261kWh
C&I Energy Storage System

The GoodWe ESA Series (125kW/261kWh) is a fully integrated, all-in-one energy storage system tailored for commercial and industrial (C&I) scenarios such as industrial parks and commercial complexes. Combining PCS, battery, EMS, and BMS in a single unit, it offers a modular and scalable design that supports flexible capacity expansion, faster installation, and simplified operation and maintenance. Engineered for safety and reliability, the system features multi-layer protection from cell to cabinet, delivering stable and secure energy storage across diverse applications.



Flexible & Adaptable Applications

- Support up to 20 units in parallel (2.5MW/5.22MWh)
- Support storage+PV solution



Friendly & Thoughtful Design

- Highly integrated cabinet for easy transportation and installation
- High energy density: 177.6kWh/m²



Superb Safety & Reliability

- Six-level active & passive fire protection
- Pack-level humidity monitoring with auto-dehumidification



Smart Control & Monitoring

- AI-driven battery diagnosis and health prediction
- "3S" Coordination with self-developed PCS, BMS & EMS

Technical Data		GW125/261-ESA-LCN-G10	GW125/261-ESA-LCN-G11
Battery Data			
Cell Type		LFP (LiFePO ₄)	
Cell Capacity (Ah)		314	
Module Nominal Energy (kWh)		52.25	
Number of Packs		5	
Rack Nominal Energy (kWh)		261.25	
Rack Usable Energy (kWh)		261.25	
Nominal Voltage (V)		832	
Operating Voltage Range (V)		676 ~ 936	
Max. Continuous Charge / Discharge Current (A)		188	
Max. Charge / Discharge Current (A)		198.5	
Max. Charge / Discharge Rate		0.5P	
Depth of Discharge		90% ~ 100% (90% Recommended)	
AC Output Data (On-grid)			
Nominal Output Power (kW)		125	
Max. Output Power (kW)		137.5@400V AC; 130.6@380V AC	
Nominal Apparent Power (kVA)		125	
Nominal Apparent Power Output to Utility Grid (kVA)		125	
Nominal Apparent Power from Utility Grid (kVA)		125	
Max. Apparent Power (kVA)		137.5@400V AC; 130.6@380V AC	
Max. Apparent Power Output to Utility Grid (kVA)		137.5@400V AC; 130.6@380V AC	
Max. Apparent Power from Utility Grid (kVA)		137.5@400V AC; 130.6@380V AC	
Nominal Output Voltage (V)		400 / 380, 3L / N / PE	
Output Voltage Range (V)		340 ~ 440 / 323 ~ 418	
Nominal AC Grid Frequency (Hz)		50 / 60	
AC Grid Frequency Range (Hz)		47.5 ~ 52.5 / 57.5 ~ 62.5	
Max. AC Output Current (A)		198.5	
Max. AC Current Output to Utility Grid (A)		198.5	
Max. AC Current from Utility Grid (A)		198.5	
Nominal Output Current (A)		180.4@400V AC; 189.9@380V AC	
Power Factor		~1 (0.8 lag to 0.8 lead)	
Max. Total Harmonic Distortion		<3%	
AC Output Data (Off-grid)			
Nominal Output Power (kW)		125	
Max. Output Power (kW)		137.5@400V AC; 130.6@380V AC	
Nominal Apparent Power (kVA)		125	
Nominal Output Apparent Power to Grid (kVA)		125	
Nominal Input Apparent Power from Grid (kVA)		125	
Max. Apparent Power (kVA)		137.5@400V AC; 130.6@380V AC	
Max. Output Apparent Power to Grid (kVA)		137.5@400V AC; 130.6@380V AC	
Max. Input Apparent Power from Grid (kVA)		137.5@400V AC; 130.6@380V AC	
Nominal Output Voltage (V)		400 / 380, 3L / N / PE	
Output Voltage Range (V)		340 ~ 440 / 323 ~ 418	
Nominal Output Frequency (Hz)		50 / 60	
AC Grid Frequency Range (Hz)		47.5 ~ 52.5 / 57.5 ~ 62.5	
Max. AC Output Current (A)		198.5	
Max. AC Current Output to Grid (A)		198.5	
Max. AC Current from Grid (A)		198.5	
Nominal Output Current (A)		180.4@400V AC; 189.9@380V AC	
Power Factor		~1 (0.8 lag to 0.8 lead)	
Output THDi (@Linear Load)		<3%	
Efficiency			
Max. PCS Efficiency		98.6%	
Max. System Efficiency		92.0%	
Protection			
Battery Reverse Polarity Protection		Integrated	
Anti-islanding Protection		Integrated	
AC Overcurrent Protection		Integrated	
AC Short Circuit Protection		Integrated	
AC Surge Protection		Type II	
General Data			
Operation Temperature Range (°C)		-25 ~ +55	
Derating Temperature (°C)		45	
Storage Temperature (°C)		-20 ~ +45 (One Month); 0 ~ +35 (One Year)	
Relative Humidity		10% ~ 95%	
Max. Operating Altitude (m)		4000 (2000 derating)	
Cooling Method		Pack: Liquid Cooling; PCS: Smart Fan Cooling	
User Interface		LED, WLAN + APP	
Communication Protocol		Modbus TCP, Modbus RTU	
Weight (kg)		2580	
Dimension (W x H x D mm)		1050 x 2250 x 1400	
Noise Emission (dB)		≤70	
Topology		Non-isolated	
Ingress Protection Rating		IP54	
Anti-Corrosion		C4 (C5 optional)	
Configuration of Safety		Aerosol + water-based fire suppression, explosion-proof fan + explosion-proof plates (optional)	
Charge / Discharge Switching Time		<60ms	

*: Please visit GoodWe website for the latest certificates.