

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

Battery Data

Cell Type	LFP (LiFePO4)
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.