

# 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/m<sup>2</sup>



### 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 <sub>4</sub> )                                                                      |                       |                       |
| 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.