



Scan and follow GoodWe

Copyright © GoodWe Technologies Co., Ltd. 2024. All rights reserved.

Disclaimer

The technical data above mentioned may be modified in order to reflect continuous technical innovation and improvements achieved by GoodWe's R&D team. GoodWe has the sole right to make such modification at any time without further notice. GoodWe's customers have the right to request the latest version of GoodWe product datasheets and any commercial contracts that may be signed will be based on the most recent version of the datasheet at the moment of signing the contract.

www.goodwe.com.au

ESA Series

29.9kW/60kWh
C&I Energy Storage System



GoodWe's ESA 29.9kW/60kWh all-in-one outdoor cabinet, designed for small to medium size commercial and industrial (C&I) energy storage applications, is a compact, easy-to-install, and high-performance turnkey solution energy storage system. The ESA Series seamlessly integrates battery, inverter*, and BMS/EMS components into a single cabinet, complemented by air-conditioning units, along with fireproof and explosion-proof features.

Its modular design ensures minimal disruption in case of local failures, facilitating quick and effortless module replacement. Multiple cabinets can be connected in parallel to expand the size of the energy storage system, enabling flexible configurations.



Smart Control & Monitoring

- Remote monitoring & updates
- Smart energy management system



All-in-one Design

- Compact, easy-to-install design for reduced installation and O&M costs
- Modular design with high power and energy density



Superb Safety & Reliability

- Reliable LFP technology with high cycle stability for long-term performance
- IP55 and C4 corrosion protection for indoor & outdoor installation
- Fire suppression and explosion prevention design



Efficient & Flexible Applications

- Supports a multi-cabinet parallel connection and easy system expansion
- Integrated BMS/EMS, suitable for various applications

ESA Series

Technical Data		GW29.9/60-ESA-ACPN-G10
Battery System Data		
Cell Type		LFP (LiFePO4)
Module Nominal Energy (kWh)		5.76
Number of Modules		11
System Usable Energy (kWh)		60
Nominal Voltage (V)		633.6
Operating Voltage Range (V)		554.4 ~ 712.8
PV String Input Data		
Max. Input Power (kW) ²		45
Max. Input Voltage (V) ³		1000
MPPT Operating Voltage Range (V) ⁴		200 ~ 850
Start-up Voltage (V)		200
Nominal Input Voltage (V)		620
Max. Input Current per MPPT (A)		30
Max. Short Circuit Current per MPPT (A)		38
Number of MPP Trackers		3
Number of Strings per MPPT		2 / 2 / 2
AC Output Data (On-grid)		
Nominal Output Power (kW)		29.9
Nominal Apparent Power Output to Utility Grid (kVA)		29.9
Max. Apparent Power Output to Utility Grid (kVA)		29.9
Max. Apparent Power from Utility Grid (kVA)		30
Nominal Output Voltage (V)		380 / 400, 3L / N / PE
Output Voltage Range (V) ⁴		0 ~ 300
Nominal AC Grid Frequency (Hz)		50 / 60
AC Grid Frequency Range (Hz)		45 ~ 65
Max. AC Current Output to Utility Grid (A)		43.3
Max. AC Current from Utility Grid (A) ⁵		43.3
Power Factor		~1 (Adjustable from 0.8 leading~0.8 lagging)
Max. Total Harmonic Distortion		≤3.05%
AC Output Data (Back-up)		
Back-up Nominal Apparent Power (kVA)		29.9
Max. Output Apparent Power without Grid (kVA) ⁶		30 (36@60s)
Max. Output Apparent Power with Grid (kVA)		29.9
Max. Output Current (A)		45.5 (54.5@60s)
Nominal Output Voltage (V)		380 / 400
Nominal Output Frequency (Hz)		50 / 60
Output THDv (@Linear Load)		<3%
Efficiency		
Max. Efficiency		98.0%
European Efficiency		97.5%
Protection		
PV String Current Monitoring		Integrated
PV Insulation Resistance Detection		Integrated
Residual Current Monitoring		Integrated
PV Reverse Polarity Protection		Integrated
Battery Reverse Polarity Protection		Integrated
Anti-islanding Protection		Integrated
AC Overcurrent Protection		Integrated
AC Short Circuit Protection		Integrated
AC Overvoltage Protection		Integrated
DC Switch ⁷		Integrated
DC Surge Protection		Type II
AC Surge Protection		Type III
AFCI		Optional
Rapid Shutdown		Optional
Remote Shutdown		Integrated

Technical Data		GW29.9/60-ESA-ACPN-G10
General Data		
Environment Temperature (°C)		-25 ~ +55
Relative Humidity		0 ~ 95%
Max. Operating Altitude (m)		3000
Cooling Method		Smart Fan Cooling
User Interface		LED
Communication		RS485, WiFi + LAN + Bluetooth
Communication Protocol		Modbus-RTU, Modbus-TCP / IP
Weight (kg)		1029.5 972 (Expansion)
Dimension (W x H x D mm)		1108 x 2050 x 1111.5 808 x 2050 x 1111.5 (Expansion)
Topology		Non-isolated
Ingress Protection Rating		IP55 (Battery Cabinet)
Anti-Corrosion Class ¹		C4 (Optional upgrade to C5)
Fire Safety Equipment		Package level aerosol, Cluster level perfluorohexane

¹: Excluding locks.

²: In Australia, for most of the PV module, the max. Input power can achieve 2*Pn, Such as the Max. Input Power of GW29.9 / 60-ESA-ACPN-G10 can achieve 60kW. Besides, Max. Input Power, not continuous for 1.5*normal power.

³: For 1000V system, Maximum operating voltage is 950V.

⁴: Output Voltage Range: phase voltage.

⁵: When the load is connected to the inverter's backup port, the Max. AC Current From Utility Grid can reach to 50A.

⁶: Can be reached only if PV and battery power is enough.

⁷: DC Switch: GHX6-55P (for Australia).

^{*}: Please visit GoodWe website for the latest certificates.

^{**}: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.

C&I Energy Storage Solution

The energy storage system of the ESA 29.9kW / 60kWh series is composed of the GoodWe hybrid inverter ET 29.9kW series and GWH60KWH-D-10 battery system.



Extension of the Energy Storage Solution

The energy storage system can be expanded by connecting up to two additional extension batteries (model GW60KWH-D-10-Extension), resulting in 180kWh battery capacity.



Parallel connection of the hybrid inverter will enable further system expansions.

