

GOODWE

# ESA Series (14A)

5kW / 10.8kWh | Single Phase  
LV Home Storage Solution  
(Inverter + Battery)

GoodWe ESA Series is an all-in-one solar and storage solution which integrates the inverter, battery charger, UPS and battery enclosure into a pre-wired modular system for easier and faster installation. The compact, elegantly designed and robust unit is IP65 rated so it can be mounted either inside or outside withstanding all weather conditions. Reduction of installation time of up to 50%.



Integrated isolators



Pre-wired



Inbuilt 4.6kVA UPS



5kW AC Output



10.8kWh battery capacity



100A battery current





Technical Data		GW5048-ESA
<b>Battery Enclosure Data</b>		
Weight (kg)		37
Dimension WxHxD (mm)		516 × 1205 × 280
Mounting Method		Wall Mounted
Ingress Protection Rating		IP54
<b>Inverter Data</b>		
<b>Battery Input Data</b>		
Battery Type <sup>*1</sup>		Li-Ion
Nominal Battery Voltage (V)		48
Battery Voltage range (V)		40~60
Max. Continuous Charging Current (A) <sup>*1</sup>		90
Max. Continuous Discharging Current (A) <sup>*1</sup>		100
Max. Charging Power (W)		4600
Max. Discharging Power (W)		4600
<b>PV String Input Data</b>		
Max. Input Power (W)		6500
Max. Input Voltage (V)		580
MPPT Operating Voltage Range (V)		125~550
Start-up Voltage (V)		125
Nominal Input Voltage (V)		360
Max. Input Current per MPPT (A)		14
Max. Short Circuit Current per MPPT (A)		17.5
Number of MPP Trackers		2
Number of Strings per MPPT		1
<b>AC Output Data (On-grid)</b>		
Nominal Apparent Power Output to Utility Grid (VA) <sup>*5</sup>		5000
Max. Apparent Power Output to Utility Grid (VA) <sup>*2</sup>		5000
Max. Apparent Power from Utility Grid (VA)		9200
Nominal Output Voltage (V)		230
Nominal AC Grid Frequency (Hz)		50/60
Max. AC Current Output to Utility Grid (A)		22.8
Max. AC Current From Utility Grid (A)		40
Power Factor		~1 (Adjustable from 0.8 leading to 0.8 lagging)
Max. Total Harmonic Distortion		<3%
<b>AC Output Data (Back-up)</b>		
Back-up Nominal Apparent Power (VA)		4600
Max. Output Apparent Power (VA) <sup>*3</sup>		4600 (6900@10sec)
Max. Output Current (A)		20
Nominal Output Voltage (V)		230
Nominal Output Frequency (Hz)		50/60 (±0.2%)
Output THDv (@Linear Load)		<3%

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<b>Efficiency</b>			<b>General Data</b>		
Max. Efficiency		97.6%	Operating Temperature Range (°C)		-25~+60
European Efficiency		97.0%	Relative Humidity		0~95%
Max. Battery to AC Efficiency		94.0%	Max. Operating Altitude (m)		3000
MPPT Efficiency		99.9%	Cooling Method		Natural Convection
<b>Protection</b>			User Interface		LED & APP
PV Insulation Resistance Detection		Integrated	Communication with BMS <sup>*4</sup>		RS485; CAN
Residual Current Monitoring		Integrated	Communication with Meter		RS485
PV Reverse Polarity Protection		Integrated	Communication with Portal		WiFi
Anti-islanding Protection		Integrated	Weight (kg)		44
AC Overcurrent Protection		Integrated	Dimension (WxHxD mm)		516 × 832 × 290
AC Short Circuit Protection		Integrated	Noise Emission (dB)		<25
AC Overvoltage Protection		Integrated	Topology		Non-isolated
			Self-consumption at Night (W)		<13
			Ingress Protection Rating		IP65
			Mounting Method		Wall Mounted

\*1: The actual charge and discharge current also depends on the battery.

\*2: 4600 for VDE 0126-1-1 & VDE-AR-N4105 & NRS 097-2-1, 5100 for CEI 0-21 (GW5048D-ES).

\*3: Peak output apparent power can be reached only if PV and battery power is enough.

\*4: CAN communication is configured by default. If 485 communication is used, please replace the corresponding communication line.

\*5: 4600 for VDE 0126-1-1 & VDE-AR-N4105 & NRS 097-2-1 & CEI 0-21.

\*: When there is no battery connected, inverter starts feeding in only if string voltage is higher than 200V.

\*: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback.

\*: Please visit GoodWe website for the latest certificates