GOODWE

ESA Series

5kW+10.8kWh | Single phase Home storage solution (LV)

GoodWe ESA Series is an all-in-one solar and storage solution that integrates the inverter, battery charger, UPS-level switching, 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 and brings a reduction of installation time of up to 50%.

Smart Control & Monitoring
· <10ms UPS-level switching
· Smart home integration with multi-protocol communications

Flexible & Adaptable Applications
· 10.8kWh battery capacity with 100A maximum discharging current
· Expandable storage

Superb Safety & Reliability
· Reliable LFP technology with high cycle stability
· IP65 ingress protection

Friendly & Thoughtful Design
· All-in-one modularized design
· Pre-wired components

ESA Series (14A)

GOODWE

Technical Data	GW5048-ESA
Battery Enclosure Data	
Weight (kg)	37
Dimension (W × H × D mm)	516 × 1205 × 280
Mounting Method	Wall Mounted
Ingress Protection Rating	IP54
Inverter Data	
Battery Input Data	
Battery Type[*1]	Li-Ion
Nominal Battery Voltage (V)	48
Battery Voltage range (V)	40 ~ 60
Max. Continuous Charging Current (A)[*1]	90
Max. Continuous Discharging Current (A)[*1]	100
Max. Charging Power (W)	4600
Max. Discharging Power (W)	4600
PV String Input Data	
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
AC Output Data (On-grid)	
Nominal Apparent Power Output to Utility Grid (VA)[*5]	5000
Max. Apparent Power Output to Utility Grid (VA)[*2]	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%
AC Output Data (Back-up)	
Back-up Nominal Apparent Power (VA)	4600
Max. Output Apparent Power (VA)[*3]	4600 (6900@10sec)
Max. Output Current (A)	20
Nominal Output Voltage (V)	230 (±2%)
Nominal Output Frequency (Hz)	50 / 60 (±0.2%)
Output THDv (@Linear Load)	<3%

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Efficiency	
Max. Efficiency	97.6%
European Efficiency	97.0%
Max. Battery to AC Efficiency	94.0%
MPPT Efficiency	99.9%
Protection	
PV Insulation Resistance Detection	Integrated
Residual Current Monitoring	Integrated
PV Reverse Polarity Protection	Integrated
Anti-islanding Protection	Integrated
AC Overcurrent Protection	Integrated
AC Short Circuit Protection	Integrated
AC Overvoltage Protection	Integrated

Technical Data	GW5048-ESA
General Data	
Operating Temperature Range (°C)	-25 ~ +60
Relative Humidity	0 ~ 95%
Max. Operating Altitude (m)	3000
Cooling Method	Natural Convection
User Interface	LED, APP
Communication with BMS[*4]	RS485, CAN
Communication with Meter	RS485
Communication with Portal	WiFi
Weight (kg)	44
Dimension (W × H × D mm)	516 × 832 × 290
Noise Emission (dB)	<25
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.
*: Please visit GoodWe website for the latest certificates