

GOODWE

ESA Athena S3 Series

0.8kW/3kW | 3-15kWh All-in-One Micro Storage

Professional Micro Storage for Modern Homes

Silent: <20dB

Fanless Design for Quiet Operation

<20dB

Fanless

Smart:

30% Bill Savings*

Hardware Free AI-driven Cloud EMS

Mix Old & New Batteries

Expand Freely as Your Needs Evolve



<60V DC

Touch-safe Security

10000 Cycles

10-Year Warranty

10,000 CYCLES

10-YEAR WARRANTY

Simple:

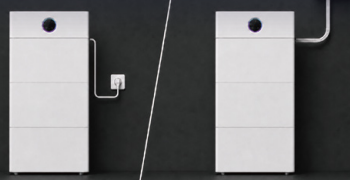
5-min
Installation

Stack. Plug.
Power. Go



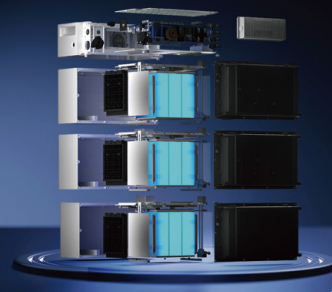
Dual-Mode Setup

Plug-and-Play or Hardwired



Secure:
6-Layer

Protection
from Cell to System



*Based on internal validation, savings vary by system, tariff, usage profile and market conditions

ESA Athena S3 Series / Hybrid Inverter

GOODWE

Technical Data		GW3K-EMA-G10	GW3K-EMA-UK-G10
Battery Side			
Battery Type	LFP (LiFePO ₄)		
Nominal Voltage (V)	54		
Voltage Range (V)	52 ~ 56		
Start-up Voltage (V)	9		
Number of Battery Inputs	1		
Max. Continuous Charging Current (A)	63		
Max. Continuous Discharging Current (A)	64		
Max. Charging Power (kW)	3.4		
Max. Discharging Power (kW)	3.2		
PV Side			
Max. Input Power (kW)	4.8		
Max. Input Voltage (V)	60		
MPPT Operating Voltage Range (V)*1	13 ~ 48		
Start-up Voltage (V)	15		
Nominal Input Voltage (V)	40		
Max. MPPT Current (A)	36 / 36 / 36 / 36		
Max. MPPT Short Circuit Current (A)	40 / 40 / 40 / 40		
Number of MPPTs	4		
Number of Strings per MPPT	1		
AC Side (On-Grid)			
Rated Power (kW)	0.8 (default) /3 ²		
Max. Power (kW)	0.8 (default) /3 ²		
Rated Apparent Power from Grid (kVA)	3.6		
Rated Apparent Power to Grid (kVA)	0.8 (default) /3 ²		
Max. Apparent Power from Grid (kVA)	3.6		
Max. Apparent Power to Grid (kVA)	0.8 (default) /3 ²		
Nominal Voltage (V)	220 / 230 / 240, L / N / PE		
Voltage Range (V)	170 ~ 280		
Nominal Frequency (Hz)	50 / 60		
Frequency Range (Hz)	45 ~ 55 / 55 ~ 65		
Rated Current from Grid (A)	16.0 @ 220V; 15.7 @ 230V; 15.0 @ 240V		
Rated Current to Grid (A)	3.5 @ 220V / 3.5 @ 230V / 3.3 @ 240V (default); 13.7 @ 220V / 13 @ 230V / 12.5 @ 240V ²		
Max. Current from Grid (A)	16		
Max. Current to Grid (A)	3.5 (default) / 15.2 ²		
THDi	<3%		
Back-up Side			
Rated Apparent Power (kVA)	3		
Max. Apparent Power (kVA)	Off-grid:3; On-grid:3.6	Off-grid:3; On-grid:3	
Nominal Voltage (V)	220 / 230 / 240, L / N / PE		
Nominal Frequency (Hz)	50 / 60		
Max. Current (A)	Off-grid: 13.7; On-grid: 16.0	Off-grid:13; On-grid:13	
THDv (@Linear Load)	<3%		
On / Off-grid Switching Time (ms)	10		
Protection			
PV String Current Monitoring	Integrated		
PV Insulation Resistance Detection	Integrated		
Anti-islanding Protection	Integrated		
AC Overcurrent Protection	Integrated		
AC Short Circuit Protection	Integrated		
AC Overvoltage Protection	Integrated		
DC Surge Protection	Type III		
AC Surge Protection	Type II		
Remote Shutdown	Integrated		
General Data			
Operating Temperature Range (°C)	-20 ~ +55		
Relative Humidity	0 ~ 100%		
Max. Operating Altitude (m)	3000		
Cooling Method	Natural Convection		
User Interface	LED, APP		
Communication with BMS	CAN		
Communication	RS485, LAN, WiFi, Bluetooth		
Communication Protocols	Modbus-RTU		
Weight (kg)	≤15		
Dimension (W × H × D mm)	480 × 170 × 290		
Noise Emission (dB)	≤20		
Ingress Protection Rating	IP65		
Mounting Method	Floor stacked		
Power Factor	0.8 leading ~ 0.8 lagging		

*1: Please refer to the user manual for the MPPT Voltage Range at nominal Power.

*2: Default 0.8kW, Shall be adjusted by a qualified electrician in accordance with local regulation

^: Please visit GoodWe website for the latest certificates.

Technical Data		GW3.0-BAT-LVD-G10
Battery Type	LFP (LiFePO ₄)	
Rated Capacity (Ah)	314	
Rated Energy (kWh)	3	
Usable Energy (kWh) ^{*1}	2.75	
Nominal Voltage(V) (Battery)	9.6	
Voltage Range(V) (Battery)	8.61 ~ 10.83	
Operating Voltage Range (V) (single phase system)	52 ~ 56	
Max. Input Current (System) (A)	32	
Max. Output Current (System) (A)	33	
Max. Input Power (System) (kW) ^{*2}	1.7	
Max. Output Power (System) (kW) ^{*2}	1.7	
Charging Temperature Range (°C)	-20 ~ +55 (with heating film)	
Discharging Temperature Range (°C)	-20 ~ +55	
Relative Humidity	4 ~ 100%	
Max. Operating Altitude (m)	3000	
Noise Emission (dB)	≤20	
Communication	CAN	
Weight (kg)	≤29	
Useable Extinguishing Agent	CO ₂ , H ₂ O	
Crucial Material	LiFePO ₄ , C, Cu, LiPF ₆ , Al, (C ₃ H ₆) _n	
Ingress Protection	IP65	
Protective Class	II	
Dimensions (W × H × D mm)	480 × 308.6 × 260	
Max. Storage time	-20°C ~ +35°C ≤ 12 months; +35°C ~ +45°C ≤ 6 months	
Scalability	≤5P	
Mounting Method	Floor stacked	

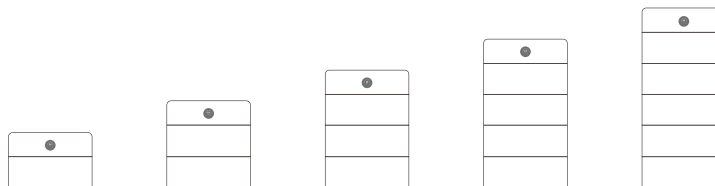
Standard and Certification	Safety	IEC 60673, IEC62619 / IEC63056 REGULATION (EU) 2023 / 1542 article 12 REGULATION (EU) 2023 / 1542 article 10
	EMC	IEC 61000-6-1 / -2 / -3 / -4 (EN IEC 61000-6-1 / -2 / -3 / -4), CISPR 11
	Transportation	UN38.3

*1: Test conditions, 100% DOD (cell 2.87~3.61V voltage range), 850W charge & discharge at 25 ± 2°C for battery system at the beginning of life. Usable energy is defined by its initial design value. Actual available energy may vary depending on charge/discharge rate, environmental conditions (e.g. temperature), transport and storage factors.

*2: Max.Input Power/Max.Output Power derating will occur related to Temperature and SOC.

*3: Based on test data under specific laboratory conditions.

*: Please visit GoodWe website for the latest certificates.



Number of Hybrid Inverter	1	1	1	1	1
Number of Battery Modules (pcs)	1	2	3	4	5
Total Rated Energy (kWh)	3	6	9	12	15
Total Weight (kg)	44	73	102	131	160
Total Dimensions (W × H × D mm)	480 × 290 × 435	480 × 290 × 702	480 × 290 × 969	480 × 290 × 1236	480 × 290 × 1503