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



Smart:
30% Bill Savings *

Hardware Free AI-driven Cloud EMS



<60V DC

Touch-safe Security



10000 Cycles
10-Year Warranty



Mix Old & New Batteries

Expand Freely as Your Needs Evolve



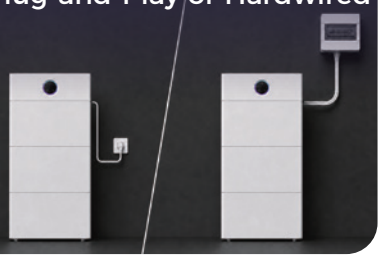
Simple:
5-min Installation

Stack. Plug.
Power. Go



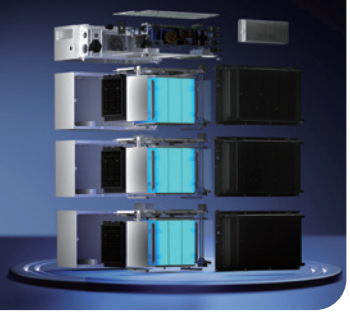
Dual-Mode Setup

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

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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.

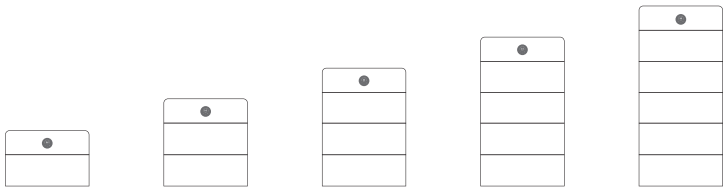
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ESA Athena S3 Series / Battery Module

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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_2O
Crucial Material		$LiFePO_4$, C, Cu, $LiPF_6$, Al, $(C_3H_6)_n$
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

This datasheet provides information about products offered in the EMEA region.

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