GOODWE

A-ES Series

(Americas Only) 5-9.6kW | Split-phase Hybrid Inverter | HV Battery | up to 4 MPPTs

The GoodWe A-ES is a split-phase hybrid inverter designed to increase self-consumption of your generated solar energy. Our A-ES is compatible with high voltage (80-495V) batteries with a power capacity ranging from 5kW to 9.6kW. With up to 4 MPPTs, the A-ES inverter seamlessly adapts to complex residential rooftops. Equipped with rapid battery charge functionality and perfectly capable of powering large loads in back-up mode (up to 9.6kW).

- Seamless UPS Switch Function
- AFCI & Rapid Shutdown
- 4 MPPTs & 150% DC Input Oversizing
- Smart Meter Integrated

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Technical Data	GW5000A-ES	GW6000A-ES	GW7000A-ES	GW7600A-ES	GW8600A-ES	GW9600A-ES
Battery Input Data						
Battery Type	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion
Battery Voltage Range (V)*1	80~495	80~495	80~495	80~495	80~495	80~495
Max. Continuous Charging Current (A)	50	50	50	50	50	50
Max. Continuous Discharging Current (A)	50	50	50	50	50	50
PV String Input Data						
Max. Input Power (W)	7500	9000	10500	11400	12900	15000
Max. Input Voltage (V)*2	600	600	600	600	600	600
MPPT Operating Voltage Range (V)*3	80~550	80~550	80~550	80~550	80~550	80~550
Start-up Voltage (V)	95	95	95	95	95	95
Nominal Input Voltage (V)	380	380	380	380	380	380
Max. Input Current per MPPT (A)	12.5/12.5	12.5/12.5	12.5/12.5/12.5/12.5	12.5/12.5/12.5/12.5	12.5/12.5/12.5/12.5	12.5/12.5/12.5/12.5
Max. Short Circuit Current per MPPT (A)	15.2/15.2	15.2/15.2	15.2/15.2/15.2/15.2	15.2/15.2/15.2/15.2	15.2/15.2/15.2/15.2	15.2/15.2/15.2/15.2
Number of MPPTs	2	2	4	4	4	4
Number of Strings per MPPT	1/1	1/1	1/1/1/1	1/1/1/1	1/1/1/1	1/1/1/1
AC Output Data (On-grid)						
Max. Apparent Power Output to Utility Grid (VA)	5000	6000	7000	7600	8600	9600
Max. Apparent Power from Utility Grid (VA)	6000	7200	8400	9120	9600	9600
Output Voltage Range (Vac)	211 to 264 @240	211 to 264 @240	211 to 264 @240	211 to 264 @240	211 to 264 @240	211 to 264 @240
Nominal AC Grid Frequency (Hz)	60	60	60	60	60	60
Max. AC Current Output to Utility Grid (A)	20.8	25	29.2	31.7	35.8	40
Max. AC Current From Utility Grid (A)	25	30	35	38	40	40
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)					
Max. Total Harmonic Distortion	<3%	<3%	<3%	<3%	<3%	<3%
AC Output Data (Back-up)						
Max. Output Apparent Power@240V (VA)	5000 (6000@60sec)	6000 (7200@60sec)	7000 (8400@60sec)	7600 (9120@60sec)	8600 (10320@60sec)	9600 (11520@60sec)
Max. Output Current@240V (A)	20.8	25	29.2	31.7	35.8	40
Nominal Output Voltage L1-L2/L-N (Vac)	240/120	240/120	240/120	240/120	240/120	240/120
Nominal Output Frequency (Hz)	60	60	60	60	60	60
Output THDv (@Linear Load)	<3%	<3%	<3%	<3%	<3%	<3%
Efficiency						
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
CEC Efficiency	97.3%	97.4%	97.1%	97.1%	97.1%	97.1%
Max. Battery to AC Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%
Protection						
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Battery Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV Arc Fault Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
General Data						
Operating Temperature Range (°F)	-31°F~140°F (-35°C~60°C)					
Relative Humidity	0~95%	0~95%	0~95%	0~95%	0~95%	0~95%
Max. Operating Altitude (ft)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)
Cooling Method	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan
Display	LED & APP(WiFi, Bluetooth)					
Communication with BMS	RS485; CAN	RS485; CAN	RS485; CAN	RS485; CAN	RS485; CAN	RS485; CAN
Communication with Meter	RS485	RS485	RS485	RS485	RS485	RS485
Communication with Portal	Wi-Fi; LAN(Optional)					
Weight (lb)	62.8lb (28.5kg)	62.8lb (28.5kg)	70.5lb (32kg)	70.5lb (32kg)	70.5lb (32kg)	70.5lb (32kg)
Dimension W×H×D (inch)	16.3in × 33.1in × 6.9in (415mm × 841mm × 175mm)					
Noise Emission (dB)	<45	<45	<45	<45	<45	<45
Topology	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless
Self-consumption at Night (W)*4	<20	<20	<20	<20	<20	<20
Ingress Protection Rating	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X
Mounting Method	Wall Bracket	Wall Bracket	Wall Bracket	Wall Bracket	Wall Bracket	Wall Bracket
Certification						
Grid Standards	UL1741 SA, California Rule 21, HECO Rule 14, IEEE 1547, IEEE 1547.1					
Safety Regulation	UL 1741, CSA 22.2 No. 107-01, UL 1998, UL1699B					
EMC	FCC part15 CLASS B					

*1: Battery discharge/charge power limited by voltage.
*2: Inverter will not work when PV input voltage ≥585V.
*3: When there is no battery connected, inverter starts feeding in only if string voltage is higher than 200V.
*4: No Back-up Output.
*: Peak output apparent power@240V can be reached only if battery power is enough.
*: Please visit GoodWe website for the latest certificates.