

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).



Optional AC Bypass Switch



Seamless UPS Switch Function



4 MPPTs & 150% DC Input Oversizing



AFCI & Rapid Shutdown



Smart Meter Integrated

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. Charging Current (A)	50	50	50	50	50	50
Max. Discharging Current (A)	50	50	50	50	50	50
Charging Method for Li-Ion Battery	Self-adaption to BMS					
PV String Input Data						
Max. DC Input Power (W)	7500	9000	10500	11400	12900	15000
Max. DC Input Voltage (V)*2	600	600	600	600	600	600
MPPT 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
MPPT Range for Full Load (V)	300~500	360~500	210~500	230~500	260~500	300~500
Nominal DC Input Voltage (V)	380	380	380	380	380	380
Max. Input Current (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 Current (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)						
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 Output Frequency (Hz)	60	60	60	60	60	60
Max. Apparent Power Output to Grid (VA)	5000	6000	7000	7600	8600	9600
Max. Apparent Power from Grid (VA)	6000	7200	8400	9120	9600	9600
Max. AC Current Output to Grid (A)	20.8	25	29.2	31.7	35.8	40
Max. AC Current From Grid (A)	25	30	35	38	40	40
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)					
Output THDi (@Nominal Output)	<3%	<3%	<3%	<3%	<3%	<3%
AC Output Data (Back-up)						
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%
Max. Output Apparent Power@240V (VA)	5000	6000	7000	7600	8600	9600
Peak Output Apparent Power@240V (VA)*4	6000, 60sec	7200, 60sec	8400, 60sec	9120, 60sec	10320, 60sec	11520, 60sec
Max. Continuous Output Current @240V (A)	20.8	25	29.2	31.7	35.8	40
Efficiency						
PV Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
PV CEC Efficiency	97.0%	97.0%	97.0%	97.0%	97.0%	97.0%
Battery Charged By PV Max. Efficiency	98.1%	98.1%	98.1%	98.1%	98.1%	98.1%
Battery Charge/discharge to AC Max. Efficiency	96.6%	96.6%	96.6%	96.6%	96.6%	96.6%
Protection						
PV Arc Fault Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV String Input Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Insulation Resistor Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring Unit	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Back-up Output Short Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Battery Input Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
General Data						
Operating Temperature Range	-31°F~140°F (-35°C~60°C)					
Relative Humidity	0~95%	0~95%	0~95%	0~95%	0~95%	0~95%
Operating Altitude	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)	≤13123ft (4000m)
Cooling	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan	Intelligent Fan
Noise (dB)	<45	<45	<45	<45	<45	<45
User Interface	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 EMS	RS485 (Insulated)	RS485 (Insulated)	RS485 (Insulated)	RS485 (Insulated)	RS485 (Insulated)	RS485 (Insulated)
Communication with Portal	Wi-Fi; LAN, 4G (Optional)					
Communication with RSD	SUNSPEC	SUNSPEC	SUNSPEC	SUNSPEC	SUNSPEC	SUNSPEC
Weight	62.8lb (28.5Kg)	62.8lb (28.5Kg)	70.5lb (32Kg)	70.5lb (32Kg)	70.5lb (32Kg)	70.5lb (32Kg)
Size (Width x Height x Depth)	16.3in x 31.1in x 6.9in (415mm x 791mm x 175mm)					
Mounting	Wall Bracket	Wall Bracket	Wall Bracket	Wall Bracket	Wall Bracket	Wall Bracket
Protection Degree	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X	NEMA Type 4X
Standby Self-Consumption (W)*5	<20	<20	<20	<20	<20	<20
Topology	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless	Transformerless

*1: Battery discharge/charge power limited by voltage.

*2: Inverter will shut off 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: Can be reached only if PV and battery power is high enough.

*5: No Back-up Output.

*: Please visit GoodWe website for the latest certificates.