

GOODWE

ES-US Series

(North America Only) 5-11.4kW

Split phase I up to 4 MPPTs

Hybrid inverter (HV)

UL certified

GoodWe ES-US Series is a split-phase hybrid inverter designed to increase the self-consumption of your generated solar energy. GoodWe ES-US is compatible with high voltage (80-495V) batteries with a power capacity ranging from 5kW to 11.4kW. With up to 4 MPPTs, the ES-US inverter seamlessly adapts to complex residential rooftops. The ES-US Series features an optional EV Charger function, enabling electric vehicles to charge using either self-generated solar power or grid electricity, with scheduling conveniently managed through the SolarGo app.

1: Automatic Backup Device required.



Smart Monitoring

- PV string current monitoring
- Smart home integration with multi-protocol communications



Fully Integrated Design

- 24/7 residential backup solution
- External auto-transformer is not needed



Superb Safety & Reliability

- Battery Arc Fault Detection
- DC Type II SPD



Flexible & Adaptable Applications

- Multiple communication protocols supported
- Fossil fuel generator compatible

Technical Data	GW5000-ES -US20	GW6000-ES -US20	GW7600-ES -US20	GW9600-ES -US20	GW11K4-ES -US20
Battery Input					
Battery Type	Li-Ion				
Nominal Battery Voltage (V)	300				
Battery Voltage Range (V) ¹	80 ~ 495				
Start-up Voltage (V)	80				
Number of Battery Input	1				
Max. Continuous Charging Current (A)	50				
Max. Continuous Discharging Current (A)	50				
Max. Charging Power (W)	5000	6000	7600	9600	11400
Max. Discharging Power (W)	5250	6300	7980	10080	11970
PV Input					
Max. Input Power (W)	7500	9000	11400	14400	17100
Max. Input Voltage (V) ²	600				
MPPT Operating Voltage Range (V) ³	50 ~ 550				
Start-up Voltage (V)	60				
Max. Input Current per MPPT (A)	16				
Max. Short Circuit Current per MPPT (A)	23.4				
Number of MPP Trackers	2	2	4	4	4
AC Output (On-grid)					
Nominal Output Power (W)	5000	6000	7600	9600	11400
Nominal Output Voltage (V)	240				
Output Voltage Range (V)	211 ~ 264				
Nominal AC Grid Frequency (Hz)	50 / 60				
AC Grid Frequency Range (Hz)	58.5 ~ 61.2				
Max. AC Current Output to Utility Grid (A)	20.8	25.0	31.7	40.0	47.5
Max. AC Current From Utility Grid With EV Charger(A)	40.0	40.0	40.0	40.0	47.5
Power Factor	~ 1 (Adjustable from 0.8 leading to 0.8 lagging)				
Max. Total Harmonic Distortion	<3%				
AC Output (Back-up)					
Back-up Nominal Apparent Power (VA)	5000	6000	7600	9600	11400
Max. Output Apparent Power with Grid (VA) ⁴	5000 (10000@10sec)	6000 (12000@10sec)	7600 (12920@10sec)	9600 (17280@10sec)	11400 (17280@10sec)
Max. Output Current (A)	20.8	25.0	31.7	40.0	47.5
Nominal Output Voltage (V)	240 / 120				
Nominal Output Frequency (Hz)	60				
Output THDv (@Linear Load)	<3%				
Efficiency					
Max. Efficiency	97.6%				
Protection					
PV String Current Monitoring	Integrated				
PV Insulation Resistance Detection	Integrated				
Residual Current Monitoring	Integrated				
PV Reverse Polarity Protection	Integrated				
Battery Reverse Polarity Protection	Integrated				
Anti-islanding Protection	Integrated				
AC Overcurrent Protection	Integrated				
AC Short Circuit Protection	Integrated				
AC Overvoltage Protection	Integrated				
DC Switch	Integrated				
DC Surge Protection	Type II				
AC Surge Protection	Type III				
AFCI	Integrated				
Battery Arc Fault Detection	Integrated				
Rapid Shutdown	Integrated				

Technical Data	GW5000-ES-US20	GW6000-ES-US20	GW7600-ES-US20	GW9600-ES-US20	GW11K4-ES-US20
General Data					
Operating Temperature Range	-31°F ~ +140°F (-35°C ~ +60°C)				
Relative Humidity	0 ~ 95%				
Max. Operating Altitude	9842ft (3000m)				
Cooling Method	Natural Convection				
User Interface	LED, APP				
Communication with BMS	RS485, CAN				
Communication with Meter	RS485				
Communication with Portal	LAN (4G Optional) + Bluetooth + WiFi				
Weight (lb)	72.3	72.3	76.7	84.9	84.9
Dimension (W × H × D)	19.1 × 35.4 × 7.5 in (485 × 900 × 191.5 mm)				
Noise Emission (dB)	<20	<20	<40	<40	<40
Topology	Non-isolated				
Self-consumption at Night (W) ⁵	<20				
Ingress Protection Rating	NEMA Type 4X				
Mounting Method	Wall Mounted				
Certification					
Grid Interconnection	UL1741 SB, California Rule 21, HECO Rule 14, IEEE 1547, IEEE 1547.1				
Safety Regulations	UL 1741, CSA 22.2 No. 107.1, UL 1998, UL1699B				
Electromagnetic Compatibility	FCC part15 CLASS B				

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

*2: Inverter will not work when PV input voltage $\geq 585V$.

*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 enough.

*5: No Back-up Output.

*: Please visit GoodWe website for the latest certificates.

EV Charger (Optional) Specifications



AC Output Data	
Charging Level	AC Level 2
Nominal AC Power Output (W)	9600
Nominal AC Frequency (Hz)	60
Maximum Continuous Output Current (A)	40 ^{*1}
EV Charger Configuration & Indicator	APP (WiFi, Bluetooth)
EV Charger Cable Length ^{*2}	7.6m
EV Charger Cable Operating Temperature Range	-31°F ~ +140°F (-35°C ~ +60°C)
Operating Altitude	$\leq$ 9842ft (3000m)
Protection Degree	NEMA Type 4X
Certifications & Standards	
Safety Regulation	UL2594, UL2231-1, UL2231-2, NEC Article 625 compliant
EV Charger	SAE J1772

*1: The Maximum Continuous Output Current can be selected from 40A, 32A, 24A, 16A, and the default current is 16A.

*2: EV charger cable ordered separately.