

# GOODWE

## A-ES Series

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

The GoodWe A-ES Series is a split-phase hybrid inverter designed to increase self-consumption of your generated solar energy. GoodWe 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

| Technical Data                                  | GW5000A-ES  | GW6000A-ES        | GW7000A-ES                | GW7600A-ES                | GW8600A-ES                | GW9600A-ES                |
|---|---|-------------------|---------------------------|---------------------------|---------------------------|---------------------------|
| <b>Battery Input Data</b>                       |   |                   |                           |                           |                           |                           |
| Battery Type                                    | Li-Ion  |                   |                           |                           |                           |                           |
| Battery Voltage Range (V) <sup>1</sup>          | 80 ~ 495  |                   |                           |                           |                           |                           |
| Max. Continuous Charging Current (A)            | 50  |                   |                           |                           |                           |                           |
| Max. Continuous Discharging Current (A)         | 50  |                   |                           |                           |                           |                           |
| <b>PV String Input Data</b>                     |   |                   |                           |                           |                           |                           |
| Max. Input Power (W)                            | 7500  | 9000              | 10500                     | 11400                     | 12900                     | 15000                     |
| Max. Input Voltage (V) <sup>2</sup>             | 600   |                   |                           |                           |                           |                           |
| MPPT Operating Voltage Range (V) <sup>3</sup>   | 80 ~ 550  |                   |                           |                           |                           |                           |
| Start-up Voltage (V)                            | 95  |                   |                           |                           |                           |                           |
| Nominal Input Voltage (V)                       | 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             |
| <b>AC Output Data (On-grid)</b>                 |   |                   |                           |                           |                           |                           |
| 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   |                   |                           |                           |                           |                           |
| Nominal AC Grid Frequency (Hz)                  | 60  |                   |                           |                           |                           |                           |
| Max. AC Current Output to Utility Grid (A)      | 20.8  | 25.0              | 29.2                      | 31.7                      | 35.8                      | 40.0                      |
| 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%   |                   |                           |                           |                           |                           |
| <b>AC Output Data (Back-up)</b>                 |   |                   |                           |                           |                           |                           |
| 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  | 25.0              | 29.2                      | 31.7                      | 35.8                      | 40.0                      |
| Nominal Output Voltage L1-L2 / L-N (Vac)        | 240 / 120   |                   |                           |                           |                           |                           |
| Nominal Output Frequency (Hz)                   | 60  |                   |                           |                           |                           |                           |
| Output THDv (@Linear Load)                      | <3%   |                   |                           |                           |                           |                           |
| <b>Efficiency</b>                               |   |                   |                           |                           |                           |                           |
| Max. Efficiency                                 | 97.6%   |                   |                           |                           |                           |                           |
| CEC Efficiency                                  | 97.3%   | 97.4%             | 97.1%                     | 97.1%                     | 97.1%                     | 97.1%                     |
| Max. Battery to AC Efficiency                   | 96.6%   |                   |                           |                           |                           |                           |
| <b>Protection</b>                               |   |                   |                           |                           |                           |                           |
| 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  |                   |                           |                           |                           |                           |
| PV Arc Fault Detection                          | Integrated  |                   |                           |                           |                           |                           |
| <b>General Data</b>                             |   |                   |                           |                           |                           |                           |
| Operating Temperature Range (°F)                | -31°F ~ 140°F (-35°C ~ 60°C)  |                   |                           |                           |                           |                           |
| Relative Humidity                               | 0 ~ 95%   |                   |                           |                           |                           |                           |
| Max. Operating Altitude (ft)                    | ≤13123ft (4000m)  |                   |                           |                           |                           |                           |
| Cooling Method                                  | Intelligent Fan   |                   |                           |                           |                           |                           |
| Display   | LED & APP (WiFi, Bluetooth)   |                   |                           |                           |                           |                           |
| Communication with BMS                          | RS485; CAN  |                   |                           |                           |                           |                           |
| Communication with Meter                        | 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 x H x D (inch)                      | 16.3 x 31.1 x 6.9 in (415 x 790 x 175 mm)                           |                   |                           |                           |                           |                           |
| Noise Emission (dB)                             | <45   |                   |                           |                           |                           |                           |
| Topology  | Transformerless   |                   |                           |                           |                           |                           |
| Self-consumption at Night (W) <sup>4</sup>      | <20   |                   |                           |                           |                           |                           |
| Ingress Protection Rating                       | NEMA Type 4X  |                   |                           |                           |                           |                           |
| Mounting Method                                 | Wall Bracket  |                   |                           |                           |                           |                           |
| <b>Certification</b>                            |   |                   |                           |                           |                           |                           |
| 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.