

ES G2 Series

3-6kW | Single Phase | 2 MPPTs Hybrid inverter (LV)

The GoodWe ES G2 inverter, ranging from 3 to 6kW, is a single-phase hybrid inverter designed to increase self-consumption of the generated solar energy, with the ability to control the flow of energy intelligently. The inverter can automatically realize UPS-level switching to the back-up mode in less than 10ms, with strong backup ability to withstand heavy loads like air conditioners. Its smart design also offers great flexibility for demanding scenarios as it supports parallel connection for dependable backup power supply. Featured with plug-and-play, compact design, and minimal weight, PV installations are quicker and easier to complete than ever before. Importantly, ES G2 is compatible with a wide range of low voltage batteries such as GoodWe Lynx Home U battery. For homeowners looking to achieve a high degree of energy autonomy, reliable power supply and affordable energy prices, the ES G2 is the right choice.



Smart Control & Monitoring

- Smart load control with dry contacts
- Smart home integration with multi-protocol communications



Friendly & Thoughtful Design

- Plug & Play
- Elegant and compact design



Superb Safety & Reliability

- Optional AFCI on DC side¹
- Remote Shutdown



Flexible & Adaptable Applications

- Maximum 16A DC input current per string and high-power module compatibility
- Strong backup power supply

¹: Optional functions or devices are purchased separately.

| Technical Data | GW3000-ES-20 | GW3600-ES-20 | GW3600M-ES-20 | GW5000-ES-20 | GW5000M-ES-20 | GW6000-ES-20 | GW6000M-ES-20 |
|--|---|-------------------|---------------|--------------------|-------------------|--------------------|-------------------|
| Battery Input Data | | | | | | | |
| Battery Type ¹ | Li-Ion | | | | | | |
| Nominal Battery Voltage (V) | 48 | | | | | | |
| Battery Voltage Range (V) | 40 ~ 60 | | | | | | |
| Max. Continuous Charging Current (A) ¹ | 60 | 75 | 60 | 120 | 60 | 120 | 60 |
| Max. Continuous Discharging Current (A) ¹ | 60 | 75 | 60 | 120 | 60 | 120 | 60 |
| Max. Charge Power (W) ¹ | 3000 | 3600 | 3000 | 5000 | 3000 | 6000 | 3000 |
| Max. Discharge Power (W) | 3200 | 3900 | 3200 | 5300 | 3200 | 6300 | 3200 |
| PV String Input Data | | | | | | | |
| Max. Input Power (W) ² | 4500 | 5400 | 5400 | 7500 | 7500 | 9000 | 9000 |
| Max. Input Voltage (V) | 600 | | | | | | |
| MPPT Operating Voltage Range (V) | 60 ~ 550 | | | | | | |
| Start-up Voltage (V) | 58 | | | | | | |
| Nominal Input Voltage (V) | 360 | | | | | | |
| Max. Input Current per MPPT (A) | 16 | | | | | | |
| Max. Short Circuit Current per MPPT (A) | 23 | | | | | | |
| Number of MPP Trackers | 1 | 2 | 2 | 2 | 2 | 2 | 2 |
| Number of Strings per MPPT | 1 | | | | | | |
| AC Output Data (On-grid) | | | | | | | |
| Nominal Apparent Power Output to Utility Grid (VA) | 3000 | 3680 | 3680 | 5000 ³ | 5000 ³ | 6000 ³ | 6000 ³ |
| Max. Apparent Power Output to Utility Grid (VA) | 3000 | 3680 | 3680 | 5000 ³ | 5000 ³ | 6000 ³ | 6000 ³ |
| Max. Apparent Power from Utility Grid (VA) | 6000 | 7360 | 3680 | 10000 | 5000 | 10000 | 6000 |
| Nominal Output Voltage (V) | 220 / 230 / 240 | | | | | | |
| Nominal AC Grid Frequency (Hz) | 50 / 60 | | | | | | |
| Max. AC Current Output to Utility Grid (A) | 13.6 | 16.7 | 16.7 | 22.7 | 22.7 | 27.3 | 27.3 |
| Max. AC Current From Utility Grid (A) | 27.3 | 33.5 | 16.7 | 43.5 | 22.7 | 43.5 | 27.3 |
| Power Factor | ~1 (Adjustable from 0.8 leading to 0.8 lagging) | | | | | | |
| Max. Total Harmonic Distortion | <3% | | | | | | |
| AC Output Data (Back-up) | | | | | | | |
| Back-up Nominal Apparent Power (VA) | 3000 | 3680 | 3680 | 5000 | 5000 | 6000 | 6000 |
| Max. Output Apparent Power (VA) | 3000 (6000@10sec) | 3680 (7360@10sec) | 3680 | 5000 (10000@10sec) | 5000 | 6000 (10000@10sec) | 6000 |
| Max. Output Current (A) | 13.6 | 16.7 | 16.7 | 22.7 | 22.7 | 27.3 | 27.3 |
| Nominal Output Voltage (V) | 220 / 230 / 240 | | | | | | |
| Nominal Output Frequency (Hz) | 50 / 60 | | | | | | |
| Output THDv (@Linear Load) | <3% | | | | | | |
| Efficiency | | | | | | | |
| Max. Efficiency | 97.6% | | | | | | |
| European Efficiency | 96.7% | | | | | | |
| Max. Battery to AC Efficiency | 95.5% | | | | | | |
| MPPT Efficiency | 99.9% | | | | | | |
| Protection | | | | | | | |
| PV String Current Monitoring | Integrated | | | | | | |
| PV Insulation Resistance Detection | Integrated | | | | | | |
| Residual Current Monitoring | Integrated | | | | | | |
| PV 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 | Optional | | | | | | |
| Remote Shutdown | Integrated | | | | | | |
| General Data | | | | | | | |
| Operating Temperature Range (°C) | -25 ~ +60 | | | | | | |
| Relative Humidity | 0 ~ 95% | | | | | | |
| Max. Operating Altitude (m) | 3000 (>2000 Derating) | | | | | | |
| Cooling Method | Natural Convection | | | | | | |
| Display | LED, WLAN + APP | | | | | | |
| Communication with BMS | CAN | | | | | | |
| Communication with Meter | RS485 | | | | | | |
| Communication with Portal | WiFi / WiFi + LAN / 4G | | | | | | |
| Weight (kg) | 19.6 | 20.8 | 20.0 | 21.5 | 20.0 | 21.5 | 20.0 |
| Dimension (W x H x D mm) | 505.9 x 434.9 x 154.8 | | | | | | |
| Topology | Non-isolated | | | | | | |
| Self-consumption at Night (W) | <10 | | | | | | |
| Ingress Protection Rating | IP65 | | | | | | |
| Mounting Method | Wall Mounted | | | | | | |

*1: The actual charge and discharge current / power also depends on the battery.

*2: The max power is the actual power of PV.

*3: 4600 for VDE-AR-N4105 & NRS 097-2-1.

*: Please visit GoodWe website for the latest certificates.

*: All pictures shown are for reference only. Actual appearance may vary.