

# GOODWE

## Compact and efficient inverter for optimised solar energy back-up

- ✓ Optimised energy autonomy
- ✓ Smart and efficient operations
- ✓ Modern and compact design
- ✓ Highest safety standards

Meeting the needs of combined PV rooftop and energy storage systems, the ES G2 hybrid inverter provides optimised energy flexibility. By facilitating maximum back-up of generated solar energy, a high degree of autonomy can be achieved. Factor in its modern design and smart home integration abilities, then ES G2 is the ideal choice for residential applications. The ES G2 series is compatible with a range of batteries, including the GoodWe Lynx Home U.

 UPS level switching <10ms

 Smart home integration

 Parallel connection



| Technical Data                                        |                                                 | GW3600-ES-20 | GW3600M-ES-20      | GW5000-ES-20       | GW5000M-ES-20      | GW6000-ES-20       | GW6000M-ES-20 |
|-------------------------------------------------------|-------------------------------------------------|--------------|--------------------|--------------------|--------------------|--------------------|---------------|
| Battery Input Data                                    |                                                 |              |                    |                    |                    |                    |               |
| Battery Type <sup>*1</sup>                            | Li-Ion / Lead-acid                              | Li-Ion       | Li-Ion / Lead-acid | Li-Ion             | Li-Ion / Lead-acid | Li-Ion             |               |
| Nominal Battery Voltage (V)                           | 48                                              |              |                    |                    |                    |                    |               |
| Battery Voltage Range (V)                             | 40 ~ 60                                         |              |                    |                    |                    |                    |               |
| Max. Continuous Charging Current (A) <sup>*1</sup>    | 75                                              | 60           | 120                | 60                 | 120                | 60                 |               |
| Max. Continuous Discharging Current (A) <sup>*1</sup> | 75                                              | 60           | 120                | 60                 | 120                | 60                 |               |
| Max. Charge Power (W) <sup>*1</sup>                   | 3600                                            | 3000         | 5000               | 3000               | 6000               | 3000               |               |
| Max. Discharge Power (W)                              | 3900                                            | 3200         | 5300               | 3200               | 6300               | 3200               |               |
| PV String Input Data                                  |                                                 |              |                    |                    |                    |                    |               |
| Max. Input Power (W) <sup>*2</sup>                    | 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                                | 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)    | 3680                                            | 3680         | 5000 <sup>*3</sup> | 5000 <sup>*3</sup> | 6000 <sup>*3</sup> | 6000 <sup>*3</sup> |               |
| Max. Apparent Power Output to Utility Grid (VA)       | 3680                                            | 3680         | 5000 <sup>*3</sup> | 5000 <sup>*3</sup> | 6000 <sup>*3</sup> | 6000 <sup>*3</sup> |               |
| Max. Apparent Power from Utility Grid (VA)            | 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)            | 16.7                                            | 16.7         | 22.7               | 22.7               | 27.3               | 27.3               |               |
| Max. AC Current From Utility Grid (A)                 | 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)                   | 3680                                            | 3680         | 5000               | 5000               | 6000               | 6000               |               |
| Max. Output Apparent Power (VA)                       | 3680 (7360@10sec)                               | 3680         | 5000 (10000@10sec) | 5000               | 6000 (10000@10sec) | 6000               |               |
| Max. Output Current (A)                               | 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)                                           | 20.8                                            | 20           | 21.5               | 20                 | 21.5               | 20                 |               |
| 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.