

## ES Uniq Series

8-12kW | Single Phase | 2 MPPTs  
Hybrid Inverter (LV)

The ES Uniq Series is a dedicated single-phase hybrid inverter engineered for residential applications, delivering cost-effective energy storage solutions with capacities of 8, 10, and 12kW. This inverter is designed to work seamlessly with 182mm modules, providing a 200% oversizing capacity. Crucially, it can manage up to a 200% overload, ensuring dependable performance, especially during peak usage. It facilitates the parallel connection of up to 16 inverters for both on-grid and off-grid operations, making it well-suited for expanding energy requirements. Moreover, the ES Uniq inverter facilitates generator management and allows for the storage of energy generated by generators.



### Flexible & Adaptable Applications

- Integrated generator control and energy storage functionality
- Parallel connection capability for on-grid and off-grid operations



### Higher Power Generation

- Max. 16A DC input current per string
- Up to 200% DC input oversizing



### Superb Safety & Reliability

- Optional AFCI<sup>1</sup>
- IP66 ingress protection



### Smart Control & Monitoring

- Smart load control
- Backup with UPS-level switching <10ms

| Technical Data                                                | GW8000-ES-C10                                   | GW10K-ES-C10         | GW12K-ES-C10         |
|---------------------------------------------------------------|-------------------------------------------------|----------------------|----------------------|
| Battery Input Data                                            |                                                 |                      |                      |
| Battery Type                                                  | Li-Ion / Lead-acid                              |                      |                      |
| Nominal Battery Voltage (V)                                   | 48                                              |                      |                      |
| Battery Voltage Range (V)                                     | 40 ~ 60                                         |                      |                      |
| Max. Continuous Charging Current (A)                          | 160                                             | 200                  | 240                  |
| Max. Continuous Discharging Current (A) <sup>*1</sup>         | 160 (176 at 10min)                              | 200 (220 at 10min)   | 240 (264 at 10min)   |
| Max. Charging Power (W)                                       | 8000                                            | 10000                | 12000                |
| Max. Discharging Power (W)                                    | 8800                                            | 11000                | 13200                |
| PV String Input Data                                          |                                                 |                      |                      |
| Max. Input Power (W)                                          | 16000                                           | 20000                | 24000                |
| 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) <sup>*2</sup>                 | 32 / 16                                         | 32 / 32              | 32 / 32              |
| Max. Short Circuit Current per MPPT (A)                       | 48 / 24                                         | 48 / 48              | 48 / 48              |
| Number of MPP Trackers                                        | 2                                               |                      |                      |
| Number of Strings per MPPT                                    | 2 / 1                                           | 2 / 2                | 2 / 2                |
| AC Output Data (On-grid)                                      |                                                 |                      |                      |
| Nominal Output Power (W)                                      | 8000                                            | 10000                | 12000                |
| Nominal Apparent Power Output to Utility Grid (VA)            | 8000                                            | 10000                | 12000                |
| Max. AC Active Power (W) <sup>*3</sup>                        | 8800                                            | 11000                | 13200                |
| Max. Apparent Power Output to Utility Grid (VA) <sup>*3</sup> | 8800                                            | 11000                | 13200                |
| Max. Apparent Power from Utility Grid (VA)                    | 16500                                           |                      |                      |
| Nominal Output Voltage (V)                                    | 220 / 230 / 240                                 |                      |                      |
| Output Voltage Range (V)                                      | 170 ~ 280                                       |                      |                      |
| Nominal AC Grid Frequency (Hz)                                | 50 / 60                                         |                      |                      |
| AC Grid Frequency Range (Hz)                                  | 45 ~ 55 / 55 ~ 65                               |                      |                      |
| Max. AC Current Output to Utility Grid (A)                    | 40                                              | 50                   | 60                   |
| Max. AC Current From Utility Grid (A)                         | 75                                              | 75                   | 75                   |
| 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)                           | 8000                                            | 10000                | 12000                |
| Max. Output Apparent Power (VA)                               | 8800 (16000 at 10s)                             | 11000 (20000 at 10s) | 13200 (24000 at 10s) |
| Max. Output Current (A)                                       | 40                                              | 50                   | 60                   |
| Nominal Output Voltage (V)                                    | 220 / 230 / 240                                 |                      |                      |
| Nominal Output Frequency (Hz)                                 | 50 / 60                                         |                      |                      |
| Output THDv (@Linear Load)                                    | <3%                                             |                      |                      |
| AC Data (Generator)                                           |                                                 |                      |                      |
| Nominal Apparent Power from AC generator (VA)                 | 8000                                            | 10000                | 12000                |
| Max. Apparent Power from AC generator (VA)                    | 11000                                           | 12000                | 12000                |
| Nominal Input Voltage (V)                                     | 220 / 230 / 240                                 |                      |                      |
| Input Voltage Range (V)                                       | 170 ~ 280                                       |                      |                      |
| Nominal AC generator Frequency (Hz)                           | 50 / 60                                         |                      |                      |
| AC generator Frequency Range (Hz)                             | 45 ~ 55 / 55 ~ 65                               |                      |                      |
| Max. AC Current From AC generator (A)                         | 50.0                                            | 54.5                 | 54.5                 |
| Nominal AC Current From AC generator (A)                      | 36.4 / 34.8 / 33.3                              | 45.5 / 43.5 / 41.7   | 54.5 / 52.2 / 50.0   |
| Nominal Input Current (A)                                     | 36.4 / 34.8 / 33.3                              | 45.5 / 43.5 / 41.7   | 54.5 / 52.2 / 50.0   |
| Efficiency                                                    |                                                 |                      |                      |
| Max. Efficiency                                               | 97.6%                                           |                      |                      |
| European Efficiency                                           | 96.2%                                           |                      |                      |
| 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 III                                        |                      |                      |
| AC Surge Protection                                           | Type III                                        |                      |                      |
| AFCI                                                          | Optional                                        |                      |                      |
| Remote Shutdown                                               | Integrated                                      |                      |                      |
| General Data                                                  |                                                 |                      |                      |
| Operating Temperature Range (°C)                              | -35 ~ +60                                       |                      |                      |
| Relative Humidity                                             | 0 ~ 95%                                         |                      |                      |
| Max. Operating Altitude (m)                                   | 3000                                            |                      |                      |
| Cooling Method                                                | Smart Fan Cooling                               |                      |                      |
| User Interface                                                | LED, WLAN + APP                                 |                      |                      |
| Communication with BMS                                        | CAN                                             |                      |                      |
| Communication with Meter                                      | RS485                                           |                      |                      |
| Communication with Portal                                     | LAN / WiFi                                      |                      |                      |
| Weight (kg)                                                   | 27                                              | 29                   | 29                   |
| Dimension (W × H × D mm)                                      | 560 × 444.5 × 226                               |                      |                      |
| Topology                                                      | Non-isolated                                    |                      |                      |
| Self-consumption at Night (W)                                 | <10                                             |                      |                      |
| Ingress Protection Rating                                     | IP66                                            |                      |                      |
| Mounting Method                                               | Wall Mounted                                    |                      |                      |

\*1. The maximum continuous discharging current is especially based on the off-grid scenario.

\*2. The maximum input current per string is 16A. Or For the MPPT with two strings, the current of each string is 16A.

\*3. For Brazil and Chile, the max. AC output power is Pn, such as the max. AC output power of GW8000-ES-C10 is 8000W(VA).

\*: Please visit GoodWe website for the latest certificates.