

## 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

- Generator compatibility and charge for battery
- On- and off-grid parallel connection
- Micro-grid solution



### Higher Power Generation

- Max. 16A DC input current per string
- 200% PV 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) <sup>*5</sup>	8000	10000	12000
Max. Discharging Power (W) <sup>*5</sup>	8800	11000	13200
PV String Input Data			
Max. Input Power (W)	16000	20000	24000
Max. Input Voltage (V) <sup>*4</sup>	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 P<sub>n</sub>, such as the max. AC output power of GW8000-ES-C10 is 8000W(VA).

\*4: When the input voltage is 560V-600V, the inverter will enter standby mode. The inverter will return to normal operation state when the voltage returns to the MPPT working voltage range.

\*5: When the PV input voltage is higher than 490V, the battery charging and discharging power will be gradually limited, and the power limitation will be lifted after the input voltage is lowered.

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