GOODWE

ES Uniq Series

8-12kW I Single Phase I 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[1]
- IP65 ingress protection

Smart Control & Monitoring

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

1: Optional functions or devices are purchased separately.

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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)*1	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)*2	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)*3	8800	11000	13200
Max. Apparent Power Output to Utility Grid (VA)*3	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 Intput 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-gird 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.