

Scalable and reliable hybrid inverter for on- and off-grid operations

- ✓ Flexible & Adaptable Applications
- ✓ Higher Power Generation
- ✓ Superb Safety & Reliability
- ✓ Smart Control & Monitoring

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 support up to 200% oversizing capacity. It can manage up to a 200% overload, ensuring dependable performance, especially during peak usage. It facilitates the parallel connection of up to 6 inverters for both on-grid and off-grid operations, making it well-suited for expanding energy requirements. Moreover, the ES Uniq inverter supports micro-grid operation, providing the ideal choice for residential self-consumption applications and micro-grid scenarios, from self-consumption to energy self-sufficiency. ES uniq is compatible with a range of batteries, including the GoodWe batteries.



UPS level switching <4ms



Smart home integration



Parallel connection & Micro-grid operation

Technical Data		GW8000-ES-C10	GW10K-ES-C10	GW12K-ES-C10
Battery Input Data				
Battery Type ^{*1}		Li-Ion / Lead-acid		
Nominal Battery Voltage (V)		48		
Battery Voltage Range (V)		40 ~ 60		
Start-up Voltage (V)		44.2		
Number of Battery Input		1		
Max. Continuous Charging Current (A)		160	200	240
Max. Continuous Discharging Current (A)		160	200	240
Max. Charging Power (kW)		8.0 ^{*2}	10.0 ^{*2}	12.0 ^{*2}
Max. Discharging Power (kW)		8.8 ^{*2}	11.0 ^{*2}	13.2 ^{*2}
PV String Input Data				
Max. Input Power (kW)		16	20	24
Max. Input Voltage (V) ^{*3}		600		
MPPT Operating Voltage Range (V) ^{*4}		60 ~ 550		
Start-up Voltage (V)		58		
Nominal Input Voltage (V)		360		
Max. Input Current per MPPT (A)		32 / 16 ^{*5}	32 / 32 ^{*5}	32 / 32 ^{*5}
Max. Short Circuit Current per MPPT (A)		48 / 24	48 / 48	48 / 48
Number of MPPT Trackers		2		
Number of Strings per MPPT		2 / 1	2 / 2	2 / 2
AC Output Data (On-grid)				
Nominal Output Power (kW)		8.0	10.0	12.0
Nominal Apparent Power Output to Utility Grid (kVA)		8.0	10.0	12.0
Max. AC Active Power (kW)		8.8	11.0	13.2
Max. Apparent Power Output to Utility Grid (kVA)		8.8	11.0	13.2
Max. Apparent Power from Utility Grid (kVA)		16.5		
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		
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 (kVA)		8.0	10.0	12.0
Max. Output Apparent Power without Grid (kVA)		8.8 (16, 10s)	1.1 (20, 10s)	1.32 (24, 10s)
Max. Output Apparent Power with Grid (kVA)		16.5		
Max. Output Current without Grid (A)		40	50	60
Max. Output Current with Grid (A)		75		
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 (kVA)		8.0	10.0	12.0
Max. Apparent Power from AC generator (kVA)		8.8	11.0	13.2
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 at 220V 34.8 at 230V 33.3 at 240V	45.5 at 220V 43.5 at 230V 41.7 at 240V	54.5 at 220V 52.2 at 230V 50.0 at 240V
Nominal Input Current (A)		36.4 at 220V 34.8 at 230V 33.3 at 240V	45.5 at 220V 43.5 at 230V 41.7 at 240V	54.5 at 220V 52.2 at 230V 50.0 at 240V
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		Integrated		
Rapid Shutdown		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		LCD, WLAN + APP		
Communication with BMS		CAN		
Communication		RS485, WiFi + LAN + Bluetooth		
Communication Protocols		Modbus-RTU, Modbus-TCP		
Weight (kg)		27	29	29
Dimension (W x H x D mm)		560 x 444.5 x 226		
Topology		Non-isolated		
Ingress Protection Rating		IP66		
Mounting Method		Wall Mounted		

*1: The Li-Ion battery usually contain two mainstream type: LFP and Ternary Lithium battery.

*2: 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.

*3: 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.

*4: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.

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

†: Please visit GoodWe website for the latest certificates.