GOODWE

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 16 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, provinding the ideal choice for residential self-consumption applications and micro-grid scearios, 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

ES Uniq Series   8 - 12kW I Single Phase I 2 MPPTs I Hybrid Inverter (LV)   **EMEA**

ES Uniq Series

GOODWE

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)[2]	160	200	240
Max. Charging Power (kW)	8.0[3]	10.0[3]	12.0[3]
Max. Discharging Power (kW)	8.8[3]	11.0[3]	13.2[3]
PV String Input Data			
Max. Input Power (kW)	16	20	24
Max. Input Voltage (V)		600[4]	
MPPT Operating Voltage Range (V)[5]		60 ~ 550	
Start-up Voltage (V)		58	
Nominal Input Voltage (V)		360	
Max. Input Current per MPPT (A)	32 / 16[6]	32 / 32[6]	32 / 32[6]
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	10	12
Nominal Apparent Power Output to Utility Grid (kVA)	8	10	12
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	10	12
Max. Output Apparent Power without Grid (kVA)	8.8 (16000, 10s)	1.1 (20000, 10s)	1.32 (24000, 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	10	12
Max. Apparent Power from AC generator (kVA)	8.8	11.0	13.2
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 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		Optional	
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 × H × D mm)		560 × 444.5 × 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: The maximum continuous discharging current is especially based on the off-gird scenario.
*3: 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.
*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: Please refer to the user manual for the MPPT Voltage Range at Nominal Power.
*6: 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.