ETR Series

80-125kW I Three Phase Hybrid Inverter (HV)

Designed for evolving Commercial and Industrial (C&I) energy needs, the GoodWe ETR battery ready inverter combines PV generation and future-ready energy storage in one flexible platform. Its Battery-Ready design allows businesses to start with solar today and seamlessly add storage whenever needed, reducing upfront investment while simplifying future expansion. Compatible with the GoodWe BAT-C 261kWh battery system, ETR supports intelligent energy management for applications such as self-consumption, peak shaving, backup power, and microgrid support. With reliable on/off-grid switching and scalable architecture, ETR delivers a flexible and dependable solution for modern C&I energy systems.

Battery-Ready Flexible Platform

- Battery-ready architecture enables seamless ESS upgrade

High-Efficiency PV Performance

- MPPT efficiency up to 99.9% for optimized energy yield
- High MPPT input current (up to 42A per string) for flexible PV design

Industrial-Grade Stability

- IP66 protection for outdoor installation reliability
- Operating temperature range -35°C to +60°C
- Low-noise design (<60dB) for commercial deployment scenarios

Fast Response

- <10ms on/off-grid seamless switching
- Advanced grid support capability for stable operation
- High-speed response ensures uninterrupted power supply

GOODWE

Technical Data	GW80K-ETR-G10	GW99.99K-ETR-G10	GW100K-ETR-G10	GW110K-ETR-G10	GW124.99K-ETR-G10	GW125K-ETR-G10
Battery Side[*6]						
Battery Type	LFP ($LiFePO_4$)					
Nominal Voltage (V)	750					
Voltage Range (V)	700 ~ 1000					
Start-up Voltage (V)	700					
Battery Connection Ports	1					
Max. Continuous Charging / Discharging Current (A)	125.7	142.8	157.1	172.8	178.5	180.0
Max. Charging / Discharging Power (kW)	88.0	99.99	110.0	121.0	124.99	137.5
PV Side						
Max. Input Power (kW)	160	200	200	220	250	250
Max. Input Voltage (V)[*1*4]	1100					
MPPT Operating Voltage Range (V)[*2]	160 ~ 1000					
Start-up Voltage (V)	200					
Nominal Input Voltage (V)	620					
Max. MPPT Current (A)	42					
Max. MPPT Short Circuit Current (A)	55					
Number of MPPTs	8	10	10	10	10	10
Number of Strings per MPPT	2					
AC Side (On-Grid)						
Rated Power (kW)	80.0	99.99	100	110.0	124.99	125.0
Max. Power (kW)	88	99.99	110	121	124.99	137.5
Rated Apparent Power (kVA)	80.0	99.99	100.0	110.0	124.99	125.0
Max. Apparent Power (kVA)	88	99.99	110	121	124.99	137.5
Nominal Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE					
Voltage Range (V) (according to local standard)	180 ~ 280					
Nominal Frequency (Hz)	50 / 60					
Frequency Range (Hz)	45 ~ 55 / 55 ~ 65					
Rated Current (A)	121.6 @ 380V 115.5 @ 400V 111.3 @ 415V	152.0 @ 380V 144.4 @ 400V 139.2 @ 415V	152.0 @ 380V 144.4 @ 400V 139.2 @ 415V	167.2 @ 380V 158.8 @ 400V 153.1 @ 415V	190.0 @ 380V 180.5 @ 400V 174.0 @ 415V	190.0 @ 380V 180.5 @ 400V 174.0 @ 415V
Max. Current (A)	133.8 @ 380V 127.1 @ 400V 122.5 @ 415V	152.0 @ 380V 144.4 @ 400V 139.2 @ 415V	167.2 @ 380V 158.8 @ 400V 153.1 @ 415V	183.9 @ 380V 174.7 @ 400V 168.4 @ 415V	190.0 @ 380V 180.5 @ 400V 174.0 @ 415V	209.0 @ 380V 198.5 @ 400V 191.3 @ 415V
Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)					
THDi	<3%					
Backup Side[*3]						
Nominal Output Apparent Power (kVA)	80.0	99.99	100.0	110.0	124.99	125.0
Max. Output Apparent Power (kVA)	88.0	99.99	110.0	121	124.99	137.5
Peak Output Power without Grid (kW)	110%@continuous 120% @ 60s 150% @ 10s	120% @ 60s 150% @ 10s	110% @ continuous 120% @ 60s 150% @ 10s		120% @60s 150% @10s	110%@continuous 120% @ 60s 150% @ 10s
Nominal Output Voltage (V)	220 / 380, 230 / 400, 240 / 415, 3L / N / PE					
Nominal Output Frequency (Hz)	50 / 60					
Nominal Output Current (A)	121.6 @ 380V 115.5 @ 400V 111.3 @ 415V	152.0 @ 380V 144.4 @ 400V 139.2 @ 415V	152.0 @ 380V 144.4 @ 400V 139.2 @ 415V	167.2 @ 380V 158.8 @ 400V 153.1 @ 415V	190.0 @ 380V 180.5 @ 400V 174.0 @ 415V	190.0 @ 380V 180.5 @ 400V 174.0 @ 415V
Max. Output Current (A)	133.8	152.0	167.2	183.9	190.0	209.0
THDv (@Linear Load)	<3%					
On / Off-grid Switching Time	<10ms (one-unit)					

Technical Data	GW80K-ETR-G10	GW99.99K-ETR-G10	GW100K-ETR-G10	GW110K-ETR-G10	GW124.99K-ETR-G10	GW125K-ETR-G10
Efficiency						
Max. Efficiency	98.1%					
European Efficiency	97.7%					
Max. Battery to AC Efficiency*5	98.2%					
MPPT Efficiency	99.9%					
Protection						
PV String Current Monitoring	Integrated					
Internal Humidity Monitoring	Integrated					
PV Insulation Resistance Detection	Integrated					
Residual Current Monitoring	Integrated					
PV Reverse Polarity Protection	Integrated					
Battery 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 II (Type I + II Optional)					
AC Surge Protection	Type II					
AFCI	Optional					
Emergency Power Off	Optional					
Rapid Shutdown	Optional					
Remote Shutdown	Integrated					
General Data						
Operating Temperature Range (°C)	-35 ~ +60					
Relative Humidity	0 ~ 100%					
Max. Operating Altitude (m)	4000					
Cooling Method	Intelligent Air Cooling					
User Interface	LED, LCD (Optional), WLAN + APP					
Communication with BMS	CAN					
Communication	RS485, WIFI, LAN, Bluetooth, 4G					
Communication Protocols	Modbus TCP (SunSpec Compatible)					
Weight (kg)	82	96	96	96	98	98
Dimension (W × H × D mm)	995 × 758 × 358					
Noise Emission (dB)	60					
Ingress Protection Rating	IP66					
Mounting Method	Wall Mounted					

*1: For GW80K-ETR-G10/GW99.99K-ETR-G10/GW100K-ETR-G10/GW110K-ETR-G10/GW124.99K-ETR-G10/GW125K-ETR-G10, when the input voltage ranges from 1000V to 1100V, the inverter will enter the standby mode, and the voltage returns to 1000V to enter the normal operation state.
*2: Please refer to the user manual for the MPPT Voltage Range at nominal Power.
*3: The STS Box or STS Cabinet is needed.
*4: When connecting the GW261.2-BAT-LCD-G10 battery, the open-circuit voltage input of the PV strings needs to be greater than 813V.
*5: This efficiency refers to the efficiency from the battery port of the inverter to the AC output port of the inverter.
*6: Battery-side parameters are only applicable with proprietary battery systems or DC/DC-supported battery interface.
*: Please visit GoodWe website for the latest certificates.