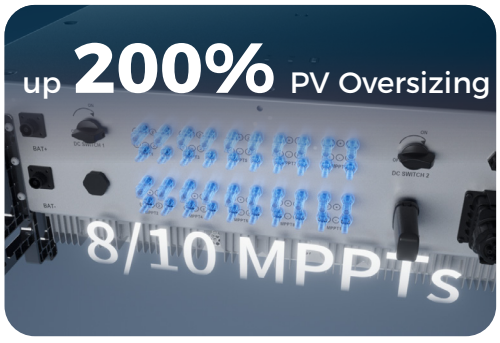
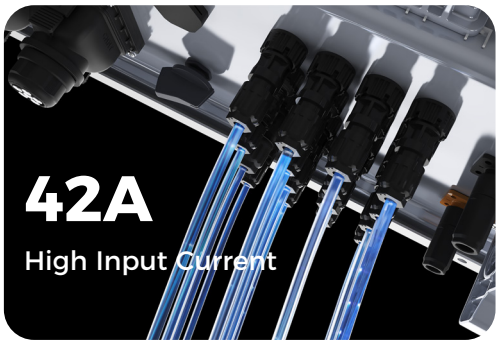
GOODWE

# ETR Series 50-125kW

Three Phase Hybrid Inverter (HV)

High-Efficiency, Stability, Reliability & Fast



| Technical Data | GW50K-ETR-L-G10 | GW75K-ETR-L-G10 | GW75K-ETR-G10 | GW80K-ETR-G10 | GW99.99K-ETR-G10 | GW100K-ETR-G10 | GW110K-ETR-G10 | GW124.99K-ETR-G10 | GW125K-ETR-G10 |
|---|---|---|---|---|---|---|---|---|---|
| **Battery Side**[*12] | | | | | | | | | |
| Battery Type | LFP ($LiFePO_4$) | | | | | | | | |
| Nominal Voltage (V) | 480 | 480 | 750 | 750 | 750 | 750 | 750 | 750 | 750 |
| Voltage Range (V) | 440 ~ 700 | 440 ~ 700 | 700 ~ 1000 | 700 ~ 1000 | 700 ~ 1000 | 700 ~ 1000 | 700 ~ 1000 | 700 ~ 1000 | 700 ~ 1000 |
| Start-up Voltage (V) | 440 | 440 | 700 | 700 | 700 | 700 | 700 | 700 | 700 |
| Battery Connection Ports | 1 | | | | | | | | |
| Max. Continuous Charging / Discharging Current (A) | 113.6 | 170.4 | 107.1 | 125.7 | 142.8 | 157.1 | 172.8 | 178.5 | 180.0 |
| Max. Charging / Discharging Power (kW) | 50.0 | 75.0 | 75.0 | 88.0 | 99.99 | 110.0 | 121.0 | 124.99 | 137.5 |
| **PV Side** | | | | | | | | | |
| Max. Input Power (kW) | 100 | 150 | 150 | 160 | 200 | 200 | 220 | 250 | 250 |
| Max. Input Voltage (V)[*1*5] | 850 | 850 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 | 1100 |
| MPPT Operating Voltage Range (V)[*2] | 160 ~ 800 | 160 ~ 800 | 160 ~ 1000 | 160 ~ 1000 | 160 ~ 1000 | 160 ~ 1000 | 160 ~ 1000 | 160 ~ 1000 | 160 ~ 1000 |
| Start-up Voltage (V) | 200 | | | | | | | | |
| Nominal Input Voltage (V) | 420 | 420 | 620 | 620 | 620 | 620 | 620 | 620 | 620 |
| Max. MPPT Current (A) | 42 | | | | | | | | |
| Max. MPPT Short Circuit Current (A) | 55 | | | | | | | | |
| Number of MPPTs | 8 | 10 | 8 | 8 | 10 | 10 | 10 | 10 | 10 |
| Number of Strings per MPPT | 2 | | | | | | | | |
| **AC Side (On-Grid)** | | | | | | | | | |
| Rated Power (kW) | 50.0 | 75.0 | 75.0 | 80.0 | 99.99 | 100 | 110.0 | 124.99 | 125.0 |
| Max. Power (kW) | 50.0 | 75.0 | 75.0 | 88[*7] | 99.99 | 110[*7] | 121[*3] | 124.99 | 137.5 |
| Rated Apparent Power (kVA) | 50.0 | 75.0 | 75.0 | 80.0 | 99.99 | 100.0 | 110.0 | 124.99 | 125.0 |
| Max. Apparent Power (kVA) | 50.0 | 75.0 | 75.0 | 88[*8] | 99.99 | 110[*8] | 121[*3] | 124.99 | 137.5 |
| Nominal Voltage (V) | 127 / 220, 3L / N / PE | | 220 / 380, 230 / 400, 240 / 415, 3L / N / PE | | | | | | |
| Voltage Range (V) (according to local standard) | 114 ~ 139 | 114 ~ 139 | 180 ~ 280 | 180 ~ 280 | 180 ~ 280 | 180 ~ 280 | 180 ~ 280 | 180 ~ 280 | 180 ~ 280 |
| Nominal Frequency (Hz) | 50 / 60[*10] | 50 / 60[*10] | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 |
| Frequency Range (Hz) | 45 ~ 55 / 55 ~ 65[*11] | | 45 ~ 55 / 55 ~ 65 | | | | | | |
| Rated Current (A) | 131.3 | 196.9 | 114.0 @ 380V<br>108.3 @ 400V<br>104.4 @ 415V | 121.6 @ 380V<br>115.5 @ 400V<br>111.3 @ 415V | 152.0 @ 380V<br>144.4 @ 400V<br>139.2 @ 415V | 152.0 @ 380V<br>144.4 @ 400V<br>139.2 @ 415V | 167.2 @ 380V<br>158.8 @ 400V<br>153.1 @ 415V | 190.0 @ 380V<br>180.5 @ 400V<br>174.0 @ 415V | 190.0 @ 380V<br>180.5 @ 400V<br>174.0 @ 415V |
| Max. Current (A)[*9] | 131.3 | 196.9 | 114.0 @ 380V<br>108.3 @ 400V<br>104.4 @ 415V | 133.8 @ 380V<br>127.1 @ 400V<br>122.5 @ 415V | 152.0 @ 380V<br>144.4 @ 400V<br>139.2 @ 415V | 167.2 @ 380V<br>158.8 @ 400V<br>153.1 @ 415V | 183.9 @ 380V<br>174.7 @ 400V[*13]<br>168.4 @ 415V | 190.0 @ 380V<br>180.5 @ 400V<br>174.0 @ 415V | 209.0 @ 380V<br>198.5 @ 400V<br>191.3 @ 415V |
| Power Factor | ~1 (Adjustable from 0.8 leading to 0.8 lagging) | | | | | | | | |
| THDi | <3% | | | | | | | | |
| **Backup Side**[*4] | | | | | | | | | |
| Nominal Output Apparent Power (kVA) | 50.0 | 75.0 | 75.0 | 80.0 | 99.99 | 100.0 | 110.0 | 124.99 | 125.0 |
| Max. Output Apparent Power (kVA) | 50.0 | 75.0 | 75.0 | 88.0 | 99.99 | 110.0 | 121[*3] | 124.99 | 137.5 |
| Peak Output Power without Grid (kW) | 120% @ 60s<br>150% @ 10s | | | 110%@continuous<br>120% @ 60s<br>150% @ 10s | 120% @ 60s<br>150% @ 10s | 110% @ continuous<br>120% @ 60s<br>150% @ 10s | | 120% @60s<br>150% @10s | 110%@continuous<br>120% @ 60s<br>150% @ 10s |
| Nominal Output Voltage (V) | 127 / 220, 3L / N / PE | | 220 / 380, 230 / 400, 240 / 415, 3L / N / PE | | | | | | |
| Nominal Output Frequency (Hz) | 50 / 60[*10] | 50 / 60[*10] | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 | 50 / 60 |
| Nominal Output Current (A) | 131.3 | 196.9 | 114.0 @ 380V<br>108.3 @ 400V<br>104.4 @ 415V | 121.6 @ 380V<br>115.5 @ 400V<br>111.3 @ 415V | 152.0 @ 380V<br>144.4 @ 400V<br>139.2 @ 415V | 152.0 @ 380V<br>144.4 @ 400V<br>139.2 @ 415V | 167.2 @ 380V<br>158.8 @ 400V<br>153.1 @ 415V | 190.0 @ 380V<br>180.5 @ 400V<br>174.0 @ 415V | 190.0 @ 380V<br>180.5 @ 400V<br>174.0 @ 415V |
| Max. Output Current (A) | 131.3 | 196.9 | 114.0 | 133.8 | 152.0 | 167.2 | 183.9 | 190.0 | 209.0 |
| THDv (@Linear Load) | <3% | | | | | | | | |
| On / Off-grid Switching Time | <10ms (one-unit) | | | | | | | | |

GoodWe-Single page-20260610-EN-V2.1. Information may be subject to change without notice during product improving.

| Technical Data | GW50K-ETR-L-G10 | GW75K-ETR-L-G10 | GW75K-ETR-G10 | GW80K-ETR-G10 | GW99.99K-ETR-G10 | GW100K-ETR-G10 | GW110K-ETR-G10 | GW124.99K-ETR-G10 | GW125K-ETR-G10 |
|---|---|---|---|---|---|---|---|---|---|
| **Efficiency** | | | | | | | | | |
| Max. Efficiency | 97.4% | 97.4% | 98.1% | 98.1% | 98.1% | 98.1% | 98.1% | 98.1% | 98.1% |
| European Efficiency | 96.8% | 96.8% | 97.7% | 97.7% | 97.7% | 97.7% | 97.7% | 97.7% | 97.7% |
| Max. Battery to AC Efficiency[*6] | 97.7% | 97.7% | 98.2% | 98.2% | 98.2% | 98.2% | 98.2% | 98.2% | 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 | Optional | | | | | | | | |
| **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 | 98 | 82 | 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 GW50K-ETR-L-G10/GW75K-ETR-L-G10, when the input voltage ranges from 800V to 850V, the inverter will enter the standby mode, and the voltage returns to 800V to enter the normal operation state. For GW75K-ETR-G10/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: For Australia is 110kW/kVA.
*4: The STS Box or STS Cabinet is needed.
*5: When connecting the GW261.2-BAT-LCD-G10 battery, the open-circuit voltage input of the PV strings needs to be greater than 813V.
*6: This efficiency refers to the efficiency from the battery port of the inverter to the AC output port of the inverter.
*7: For Chile, Max. Power (kW): GW80K-ETR-G10: 80kW, GW100K-ETR-G10: 100kW.
*8: For Chile, Max. Apparent Power to Grid (kVA)/Max. Apparent Power from Grid (kVA): GW80K-ETR-G10: 80kVA, GW100K-ETR-G10: 100kVA.
*9: For Chile, Max. Current to Grid (A)/Max. Current from Grid (A): GW80K-ETR-G10: 121.6@380Vac, 115.5@400Vac, 111.3@415Vac; GW100K-ETR-G10: 152.0@380Vac, 144.4@400Vac, 139.2@415Vac.
*10: For Mexico and Colombia, the Nominal Frequency of GW50K-ETR-L-G10 and GW75K-ETR-L-G10 is 60Hz.
*11: For Mexico and Colombia, the Frequency Range of GW50K-ETR-L-G10 and GW75K-ETR-L-G10 is 55~65Hz.
*12: Battery-side parameters are only applicable with proprietary battery systems or DC/DC-supported battery interface.
*13: For Australia, Max. Current from Grid/Max. Current to Grid is 158.8A@400V.
*: Please visit GoodWe website for the latest certificates.