

ES Series

Single Phase Hybrid Inverter (LV Battery)



| Technical Data | | GW3648D-ES | GW5048D-ES |
|---|---|---|---|
| Battery Input Data | Battery Type | Li-Ion | |
| | Nominal Battery Voltage (V) | 48 | |
| | Max. Charging Voltage (V) | ≤60 (Configurable) | |
| | Max. Charging Current (A) | 75 | 100 |
| | Max. Discharging Current (A) | 75 | 100 |
| | Battery Capacity (Ah)*1 | 50~2000 | |
| | Charging Strategy for Li-Ion Battery | Self-adaption to BMS | |
| PV String Input Data | Max. DC Input Power (W)*2 | 4600 | 6500 |
| | Max. DC Input Voltage (V) | 580 | |
| | MPPT Range (V) | 125~550 | |
| | Start-up Voltage (V)*3 | 150 | |
| | Nominal DC Input Voltage (V) | 360 | |
| | Max. Input Current (A) | 11/11 | |
| | Max. Short Current (A) | 13.8/13.8 | |
| | No. of MPP Trackers | 2 | |
| | No. of Strings per MPP Tracker | 1 | |
| | AC Output Data (On-grid) | Nominal Apparent Power Output to Utility Grid (VA) | 3680 |
| Max. Apparent Power Output to Utility Grid (VA)*4 | | 3680 | 5100 |
| Max. Apparent Power from Utility Grid (VA) | | 7360 | 9200 |
| Nominal Output Voltage (V) | | 230 | |
| Nominal Output Frequency (Hz) | | 50/60 | |
| Max. AC Current Output to Utility Grid (A) | | 16 | 24.5*5 |
| Max. AC Current from Utility Grid (A) | | 32 | 40 |
| Output Power Factor | | ~1 (Adjustable from 0.8 leading to 0.8 lagging) | |
| AC Output Data (Back-up) | Output THDi (@Nominal Output) | <3% | |
| | Max. Output Apparent Power (VA) | 3680 | 4600 |
| | Peak Output Apparent Power (VA)*6 | 5520,10sec | 6900,10sec |
| | Max. Output Current (A) | 16 | 20 |
| | Nominal Output Voltage (V) | 230 (±2%) | |
| | Nominal Output Frequency (Hz) | 50/60 (±0.2%) | |
| Efficiency | Output THDv (@Linear Load) | <3% | |
| | Max. Efficiency | 97.6% | |
| | Max. Battery to Load Efficiency | 94.0% | |
| Protection | European Efficiency | 97.0% | |
| | Anti-Islanding Protection | Integrated | |
| | PV String Input Reverse Polarity Protection | Integrated | |
| | Insulation Resistor Detection | Integrated | |
| | Residual Current Monitoring Unit | Integrated | |
| | Output Over Current Protection | Integrated | |
| | Output Short Protection | Integrated | |
| General Data | Output Over Voltage Protection | Integrated | |
| | Operating Temperature Range (°C) | -25~60 | |
| | Relative Humidity | 0~95% | |
| | Operating Altitude (m) | ≤4000 | |
| | Cooling | Natural Convection | |
| | Noise (dB) | <25 | |
| | User Interface | LED & APP | |
| | Communication with BMS*7 | RS485; CAN | |
| | Communication with Meter | RS485 | |
| | Communication with Portal | Wi-Fi | |
| | Weight (kg) | 28 | 30 |
| | Size (Width*Height*Depth mm) | 516*440*184 | |
| | Mounting | Wall Bracket | |
| Protection Degree | IP65 | | |
| Standby Self-Consumption (W) | <13 | | |
| Topology | High Frequency Isolation | | |
| Certifications & Standards | Grid Regulation | VDE-AR-N 4105, VDE0126-1-1, AS4777.2, G83/2, CEI 0-21, NRS 097-2-1, EN50438 | VDE-AR-N 4105, VDE0126-1-1, AS4777.2, G59/3, CEI 0-21, NRS 097-2-1, EN50438 |
| | Safety Regulation | IEC/EN62109-1&-2, IEC62040-1 | |
| | EMC | EN61000-6-1, EN61000-6-2, EN61000-6-3, EN61000-6-4, EN61000-4-16, EN61000-4-18, EN 61000-4-29 | |

*1: Under off-grid mode, then battery capacity should be more than 100Ah.

*2: For South Africa, Max. DC Input ranges from 6kW to 6.5kW.

*3: When there is no battery connected, inverter starts feeding in only if string voltage is higher than 200V.

*4: 4600W for VDE 0126-1-1 & VDE-AR-N4105, 4950W for AS4777.2(GW5048D-ES); 4050W for CEI 0-21 (GW3648D-ES).

*5: 21.7A for AS4777.2.

*6: Can be reached only if PV and battery power are enough.

*7: The standard configuration is CAN.