

GOODWE

ES G2 Series

3-6kW | Single Phase | 2 MPPTs
Hybrid inverter (LV)

The GoodWe ES G2 inverter is a single-phase hybrid inverter designed to increase self-consumption of generated solar energy, with the ability to control the flow of energy intelligently. The inverter has the functionality of providing backup modes with quick switching time in less than 10ms, that can cover heavy loads such as air conditioning. Its smart design also supports parallel connection for a dependable backup power supply. Installation is also easier and quicker thanks to a compact, lightweight design, with plug and play connection. The ES G2 is compatible with a wide range of low voltage batteries such as the GoodWe Lynx Home U Series battery. The ES G2 is the ideal inverter for homeowners looking to achieve a high degree of energy autonomy, reliable power supply, and lower energy bills.



Smart Control & Monitoring

- Smart load control with dry contacts
- Smart home integration with multi-protocol communications



Superb Safety & Reliability

- Optional AFCI on DC side¹
- Remote Shutdown



Friendly & Thoughtful Design

- Plug & Play
- Elegant and compact design



Flexible & Adaptable Applications

- Maximum 16A DC input current per string and high-power module compatibility
- Strong backup power supply

¹: Optional functions or devices are purchased separately.

Technical Data		GW3000-ES-20	GW3600-ES-20	GW3600M-ES-20	GW5000-ES-20	GW5000M-ES-20	GW6000-ES-20	GW6000M-ES-20
Battery Input Data								
Battery Type ^{*1}					Li-Ion			
Nominal Battery Voltage (V)					48			
Battery Voltage Range (V)					40 ~ 60			
Max. Continuous Charging Current (A) ^{*1}	60	75	60	120	60	120	60	
Max. Continuous Discharging Current (A) ^{*1}	60	75	60	120	60	120	60	
Max. Charging Power (W) ^{*1}	3000	3600	3000	5000	3000	6000	3000	
Max. Discharging Power (W)	3200	3900	3200	5300	3200	6300	3200	
PV String Input Data								
Max. Input Power (W) ^{*2}	4500	5400	5400	7500	7500	9000	9000	
Max. Input Voltage (V)					600			
MPPT Operating Voltage Range (V)					60 ~ 550			
Start-up Voltage (V)					58			
Nominal Input Voltage (V)					360			
Max. Input Current per MPPT (A)					16			
Max. Short Circuit Current per MPPT (A)					23			
Number of MPP Trackers	1	2	2	2	2	2	2	
Number of Strings per MPPT					1			
AC Output Data (On-grid)								
Nominal Apparent Power Output to Utility Grid (VA)	3000	3680	3680	5000 ^{*3}	5000 ^{*3}	6000 ^{*3}	6000 ^{*3}	
Max. Apparent Power Output to Utility Grid (VA)	3000	3680	3680	5000 ^{*3}	5000 ^{*3}	6000 ^{*3}	6000 ^{*3}	
Max. Apparent Power from Utility Grid (VA)	6000	7360	3680	10000	5000	10000	6000	
Nominal Output Voltage (V)					220 / 230 / 240			
Output Voltage Range (V)					170 ~ 280			
Nominal AC Grid Frequency (Hz)					50 / 60			
Max. AC Current Output to Utility Grid (A)	13.6	16.7	16.7	22.7	22.7	27.3	27.3	
Max. AC Current From Utility Grid (A)	27.3	33.5	16.7	43.5	22.7	43.5	27.3	
Nominal Output Current (A)	13.0	16.0	16.0	21.7	21.7	26.1	26.1	
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 (VA)	3000	3680	3680	5000	5000	6000	6000	
Max. Output Apparent Power (VA)	3000 (6000@10sec)	3680 (7360@10sec)	3680	5000 (10000@10sec)	5000	6000 (10000@10sec)	6000	
Max. Output Current (A)	13.6	16.7	16.7	22.7	22.7	27.3	27.3	
Nominal Output Voltage (V)					220 / 230 / 240			
Nominal Output Frequency (Hz)					50 / 60			
Output THDv (@Linear Load)					<3%			
Efficiency								
Max. Efficiency					97.6%			
European Efficiency					96.7%			
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 II			
AC Surge Protection					Type III			
AFCI					Optional			
Remote Shutdown					Integrated			
General Data								
Operating Temperature Range (°C)					-25 ~ +60			
Relative Humidity					0 ~ 95%			
Max. Operating Altitude (m)					3000 (>2000 Derating)			
Cooling Method					Natural Convection			
Display					LED, WLAN + APP			
Communication with BMS					CAN			
Communication with Meter					RS485			
Communication with Portal					WiFi / WiFi + LAN / 4G			
Weight (kg)	19.6	20.8	20.0	21.5	20.0	21.5	20.0	
Dimension (W × H × D mm)					505.9 × 434.9 × 154.8			
Topology					Non-isolated			
Self-consumption at Night (W)					<10			
Ingress Protection Rating					IP65			
Mounting Method					Wall Mounted			
Country of Manufacture					China			

*1: The actual charge and discharge current / power also depends on the battery.

*2: The max power is the actual power of PV.

*3: 4600 for VDE-AR-N4105 & NRS 097-2-1.

*: Please visit GoodWe website for the latest certificates.

*: All pictures shown are for reference only. Actual appearance may vary.