GOODWE

ES G2 Series

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

The GoodWe ES G2 inverter, ranging from 3 to 6kW, is a single-phase hybrid inverter designed to increase self-consumption of the generated solar energy, with the ability to control the flow of energy intelligently. The inverter can automatically realize UPS-level switching to the back-up mode in less than 10ms, with strong backup ability to withstand heavy loads like air conditioners. Its smart design also offers great flexibility for demanding scenarios as it supports parallel connection for dependable backup power supply. Featured with plug-and-play, compact design, and minimal weight, PV installations are quicker and easier to complete than ever before. Importantly, ES G2 is compatible with a wide range of low voltage batteries such as GoodWe Lynx Home U battery. For homeowners looking to achieve a high degree of energy autonomy, reliable power supply and affordable energy prices, the ES G2 is the right choice.

Smart Control & Monitoring

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

Friendly & Thoughtful Design

- Plug & Play
- Elegant and compact design

Superb Safety & Reliability

- Optional AFCI on DC side[1]
- Remote Shutdown

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.

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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. Charge Power (W)[*1]	3000	3600	3000	5000	3000	6000	3000
Max. Discharge 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			
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
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 Freqency (Hz)				50 / 60			
Output THDv (@Linear Load)				<3%			
Efficiency							
Max. Efficiency				97.6%			
European Efficiency				96.7%			
Max. Battery to AC Efficiency	95.5%	95.5%	95.5%	95.5%	95.5%	95.7%	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			

*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.