

# EH Series

## 3.6-6kW | Single Phase HV Hybrid Inverter

The GoodWe EH Series is a truly battery-ready solar solution with power classes 3.6kW, 5kW and 6kW. An activation code is required to upgrade from a grid-tied inverter into a hybrid inverter. The EH series can be used as a single-phase grid-tied inverter with compatibility to bifacial double-glass modules, allowing 12.5A input current per string. EH has 33% DC oversizing capability to fully maximize capacity and a wide MPPT voltage range. As hybrid inverter EH Series is compatible with high voltage batteries. It can be connected to lithium-ion batteries ranging from 85V to 450V, with an overloading capacity of 20%. The power deviation from inverter's AC output to load consumption can be as low as 20W, maximizing solar energy consumption.



Large loads on back-up



UPS level automatic switch in <10ms



Wide battery voltage range 85~450V



Maximize self-consumption



Pre-wired communication cables

Technical Data	GW3600-EH	GW5000-EH	GW6000-EH
<b>Battery Input Data</b>			
Battery Type	Li-Ion	Li-Ion	Li-Ion
Battery Voltage Range(V)	85~460	85~460	85~460
Start-up Voltage (V)	90	90	90
Max. Charging/Discharging Current (A)	25 / 25	25 / 25	25 / 25
Max. Charging/Discharging Power (W)	3600	5000	6000
Battery Ready Optional Function	YES	YES	YES
<b>PV String Input Data</b>			
Max. DC Input Power (W)	4800	6650	8000
Max. DC Input Voltage (V)	580	580	580
MPPT Range (V)	100~550	100~550	100~550
Start-up Voltage (V)	90	90	90
Min. Feed-in Voltage (V)* <sup>3</sup>	100	100	100
MPPT Range for Full Load (V)	150~550	210~550	250~550
Nominal DC Input Voltage (V)	380	380	380
Max. Input Current (A)	12.5 / 12.5	12.5 / 12.5	12.5 / 12.5
Max. Short Current (A)	15.2 / 15.2	15.2 / 15.2	15.2 / 15.2
Number of MPPTs	2	2	2
Number of Strings per MPPT	1	1	1
<b>AC Output/Input Data (On-grid)</b>			
Nominal Apparent Power Output to Utility Grid (VA)	3600	5000	6000
Max. Apparent Power Output to Utility Grid(VA)	3600	5000	6000
Nominal Apparent Power from Utility Grid (VA)	7200	10000	12000
Max. Apparent Power from Utility Grid (VA)	7200 (Charging 3.6kw, back-up output 3.6kw)	10000 (Charging 5kw, back-up output 5kw)	12000 (Charging 6kw, back-up output 6kw)
Nominal Output Voltage (V)	230	230	230
Nominal Output Frequency (Hz)	50 / 60	50 / 60	50 / 60
Max. AC Current Output to Utility Grid (A)	16 / 18	21.7 / 24	26.1 / 28.7
Max. AC Current From Utility Grid (A)	32	43.4	52.2
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)		
Output THDi (@Nominal Output)	<3%	<3%	<3%
Maximum Output Fault Current	65A, 5μs	65A, 5μs	65A, 5μs
<b>Back-up Output Data (Back-up)</b>			
Back-up Nominal Apparent Power (VA)	3600	5000	6000
Max. Output Apparent Power (VA)	3600	5000	6000
Peak Output Apparent Power (VA)	4320, 60sec	6000, 60sec	7200, 60sec
Max. Output Current (A)	15.7	21.7	26.1
Nominal Output Voltage (V)	230 (±2%)	230 (±2%)	230 (±2%)
Automatic Switch Time (ms)	<10	<10	<10
Nominal Output Frequency (Hz)	50/60 (±0.2%)	50/60 (±0.2%)	50/60 (±0.2%)
Output THDv (@Linear Load)	<3%	<3%	<3%
<b>Efficiency</b>			
PV Max. Efficiency	97.6%	97.6%	97.6%
PV Europe Efficiency	97.0%	97.0%	97.0%
PV Max. MPPT Efficiency	99.9%	99.9%	99.9%
Battery Charged by PV Max. Efficiency	98.0%	98.0%	98.0%
Battery Charge/Discharge from/to AC Max. Efficiency	96.6%	96.6%	96.6%
<b>Protection</b>			
Anti-Islanding Protection	Integrated	Integrated	Integrated
Battery Input Reverse Polarity Protection	Integrated	Integrated	Integrated
Insulation Resistor Detection	Integrated	Integrated	Integrated
Residual Current Monitoring Unit	Integrated	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated	Integrated
Grid Output Short Protection	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated
<b>General Data</b>			
Operating Temperature Range (°C)	-35~60	-35~60	-35~60
Relative Humidity	0~95%	0~95%	0~95%
Operating Altitude (m)	4000	4000	4000
Cooling	Natural Convection	Natural Convection	Natural Convection
Noise (dB)	<35	<35	<35
User Interface	LED & APP	LED & APP	LED & APP
Communication with BMS* <sup>1</sup>	RS485; CAN	RS485; CAN	RS485; CAN
Communication with Meter	RS485	RS485	RS485
Communication with Portal	Wi-Fi / Ethernet (Optional)	Wi-Fi / Ethernet (Optional)	Wi-Fi / Ethernet (Optional)
Weight (Kg)	17	17	17
Size (Width × Height × Depth mm)	354 × 433 × 147	354 × 433 × 147	354 × 433 × 147
Mounting	Wall Bracket	Wall Bracket	Wall Bracket
Protection Degree	IP65	IP65	IP65
Protective Class	III	III	III
Over Voltage Category	OVC III	OVC III	OVC III
Standby Self-Consumption (W)* <sup>2</sup>	<10	<10	<10
Topology	Battery Non-Isolation	Battery Non-Isolation	Battery Non-Isolation
Active Anti-islanding Method	Frequency Shift	Frequency Shift	Frequency Shift

\*1: CAN communication is configured by default. If 485 communication is used, please replace the corresponding communication line.

\*2: No back-up output.

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

\*: Please visit GoodWe website for the latest certificates.