

EH Series

3.6-6kW | Single Phase HV Hybrid Inverter

The GoodWe EH Series is a single-phase, on-grid inverter that includes a "Battery Ready" option for users who might wish to eventually acquire a full energy storage solution. By simply purchasing an activation code, the EH can easily be upgraded to a complete ESS solution. The EH is compatible with high voltage batteries (85-450V) and can automatically switch to back-up mode in less than 0.01s (UPS level), ensuring that critical loads experience no interruption. With a power deviation lower than 20W, this inverter is designed to maximize self-consumption. In addition, the fact that it takes less than 9 seconds to switch from grid to PV to supply power for heavy loads helps users to avoid expensive intakes from the grid. The communication cables come pre-wired, reducing installation time significantly. The Plug & Play AC connector also makes operation and maintenance much more convenient.



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
Battery Input Data			
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
PV String Input Data			
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) ^{*5}	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
AC Output/Input Data (On-grid)			
Nominal Apparent Power Output to Utility Grid (VA) ^{*2}	3600	5000	6000
Max. Apparent Power Output to Utility Grid(VA) ^{*2}	3600 / 3960 ^{*1}	5000 / 5500 ^{*1}	6000 / 6600 ^{*1}
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 / 220 ^{*6}	230 / 220 ^{*6}	230 / 220 ^{*6}
Nominal Output Frequency (Hz)	50 / 60	50 / 60	50 / 60
Max. AC Current Output to Utility Grid (A)	16 / 18 ^{*1}	21.7 / 24 ^{*1}	26.1 / 28.7 ^{*1} / 27.3 ^{*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%
Back-up Output Data (Back-up)			
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%
Efficiency			
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%
Protection			
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
General Data			
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 ^{*3}	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
Standby Self-Consumption (W) ^{*4}	<10	<10	<10
Topology	Battery Non-Isolation	Battery Non-Isolation	Battery Non-Isolation

*1: For CEI 0-21.

*2: The grid feed in power for VDE-AR-N 4105 and NRS097-2-1 is limited 4600VA.

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

*4: No back-up output.

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

*6: For Brazil, the voltage is 220V.

*7: For Brazil, the current is 27.3A.

*: Please visit GoodWe website for the latest certificates.