GOODWE

EH Series

3.6-6kW I 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



Maximize self-consumption



Wide battery voltage range 85~450V



Pre-wired communication cables



Selbert Nipor Li-lon Li-	Technical Data	GW3600-EH	GW5000-EH	GW6000-EH
Selbert Nipor Li-lon Li-	Battery Input Data			
Normanic Battery, Voltage (V) 850 850 850 850 850 850 85-40		Lilon	Lilon	Lilon
Selety Voltage Range (V)				
Mac. Continuous Energing Current (A) 25 25 25 Mac. Continuous Energing Current (A) 25 25 25 Mac. Discharging Power (W) 3600 5000 6000 Wisc. Discharging Power (W) 3600 5000 6000 W String Input Data 3600 5600 5600 Mac. Input Power (W) 4800 6600 560 Mac. Input Power (W) 580 560 560 Mac. Input Power (W) 4800 560 560 Mac. Input Voltage (W) 100-550 100-550 100-550 Stanting Voltage (W) 90 90 90 90 Mac. Input Voltage (W) 380 380 380 380 Mac. Input Voltage (W) 125/12.5				
Mac. Continuous Discharging Current (A) 25 25 Mac. Charging Power (W) 3600 5000 6000 Mac. Discharging Power (W) 3600 5000 6000 Was. Discharging Power (W) 3600 5000 6000 Was. Input Voltage Power (W) 4800 6660 8000 Mar. Input Voltage (Y) 50 50 50 MEPT Charalting Voltage Angue (Y) 90 90 90 Voltage (Y) 90 90 90 Voltage (Y) 90 90 90 Voltage (Y) 150 215.2 12.215.2 15.215.2 Voltage (Y) 90 90 90 90 Voltage (Y) 150 380 380 380 Voltage (Y) 152 (15.2 15.215.2 15.215.2 15.215.2 Voltage (Y) 152 (15.2 15.215.2 15.215.2 15.215.2 Value (Principle (A) 15.215.2 15.215.2 15.215.2 15.215.2 Value (Principle (A) 20 <t< td=""><td></td><td></td><td></td><td></td></t<>				
Max. Charging Power (W) 3600 5000 6000	Max. Continuous Discharging Current (A)			
Max. Display Description				
Max. Input Voltage (Y)	Max. Discharging Power (W)			
Max. Input Voltage (V)	PV String Input Data			
Max. Injut Voltage (V)	Max. Input Power (W)	4800	6650	8000
Start-up Voltage (V) 90 90 90 90 90 90 90 9	Max. Input Voltage (V)	580	580	580
Start-up Voltage (V) 90 90 90 90 90 90 90 9	MPPT Operating Voltage Range (V)	100~550	100~550	100~550
Max. Input Current per MPPT (A) 12.5/12.5 12.5/12.5 12.5/12.5 12.5/12.5 12.5/12.5 15.2/15.2 15.	Start-up Voltage (V)	90	90	90
Wax. Short Circuit Current per MPT (A) 15.2/15.2 15.2/15.2 15.2/15.2 Number of Strings per MPT 1 1 1 1 AC Output Data (On-grid) Section of Strings per MPT 1 1 1 1 Nominal Apparent Power Output to Utility Grid (VA)* 36000 5000 6000 6000 Max. Apparent Power Output to Utility Grid (VA)* 36000 5000 6000 6000 Vorminal Apparent Power Output to Utility Grid (VA)* 2000/3960* 50000 10000 12000 Vorminal AC Grid Frequency (Ptz) 2002/20* 230/220* 230/220* 230/220* Max. AC Current Frem Utility Grid (A) 1618* 21.7724* 26.128.71/27.3* 65.22 Power Factor Agilyastable from D.8 leading to 0.8 lagging 43.4 23.4 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.4 23.2 43.2 43.4 23.2 43.2	Nominal Input Voltage (V)	380	380	380
Number of MPPTs	Max. Input Current per MPPT (A)	12.5/12.5	12.5/12.5	12.5/12.5
Number of Strings per MPPT	Max. Short Circuit Current per MPPT (A)	15.2/15.2	15.2/15.2	15.2/15.2
Norminal Apparent Power Output to Utility Grid (VA)	Number of MPPTs	2	2	2
Nominal Apparent Power Output to Utility Grid (VA) 3800 5000 6000	Number of Strings per MPPT	1	1	1
Max. Apparent Power Output to Unitry Grid (VA) \$600/3960¹ 5000/5500¹ 6000/6600¹ Max. Apparent Power from Unitry Grid (VA) 7200 10000 12000 Nominal Cutput Voltage (V) 230/220³ 230/220° 230/220° Nominal AC Grid Frequency (Hz) 50/60 50/60 50/60 Max. AC Current Toru Unitry Grid (A) 16/18¹ 21.7724¹ 26.1728.7*1/27.3° Max. AC Current From Unitry Grid (A) 32 Adjustable from 0.8 leading to 0.8 lagging 36.2° Max. Total Harmonic Distortion 4.3% 43.4 36.0° 36.0° AC Output Data (Back-up) 3600 5000 6000 6000 70.0° Max. Output Current (A) 3600 5000 6000 6000 70.0° <	AC Output Data (On-grid)			
Max. Apparent Power Output to Utility Grid (VA) 3600/3860* 5000/5500* 6000/6600* Max. Apparent Power from Utility Grid (VA) 7200 10000 12000 Nominal Output Voltage (V) 230/220* 230/220* 230/220* Nominal AC Grid Frequency (Hz) 50/60 50/60 50/60 Max. AC Current From Utility Grid (A) 18/18** 21.7/24** 26.1/28.7*1/27.3* Max. AC Current From Utility Grid (A) 32 43.4 52.2 Power Factor Adjustable from 0.8 leading to 0.8 lagging 43% Max. District Output Data (Back-up) 360 Adjustable from 0.8 leading to 0.8 lagging Max. District District Output Data (Back-up) 3600 5000 6000 Back-up Nominal Apparent Power (VA) 3600 5000 6000 Max. Culty Unterent (A) 3600 5000 6000 (7200@60sec) Max. Culty Unterent (A) 3600 5000 6000 (7200@60sec) Max. Culty Unterent (A) 230 (42%) 230 (42%) 230 (42%) Volminal Culty United (Provent (A) 230 (42%) 230 (42%) 230 (42%)	Nominal Apparent Power Output to Utility Grid (VA)*2			
Max. Apparent Power from Utility Grid (VA) Nominal al Qued Voltage (V) Nominal AC Grid Frequency (Hz) So/60 S	Max. Apparent Power Output to Utility Grid (VA) ²	3600/3960 ^{*1}	5000/5500 ^{*1}	6000/6600 ^{*1}
Nominal AC Grid Frequency (Hz)	Max. Apparent Power from Utility Grid (VA)			12000
Max. AC Current Output to Utility Grid (A) 16/18¹¹ 21.7/24¹¹ 26.1/28.7*1/27.3° Max. AC Current From Utility Grid (A) 32 43.4 52.2 Power Factor Adjustable from 0.8 leading to 0.8 lagging Max. Total Harmonic Distortion <3%	Nominal Output Voltage (V)	230/220 ^{*5}	230/220 ^{*5}	230/220 ^{*5}
Max. AC Current From Utility Grid (A) 32 43.4 52.2 Power Factor Adjustable from 0.8 leading to 0.8 lagging Max. Total Harmonic Distortion <3% <3% <3% AC Output Data (Back-up) 3600 5000 6000 Max. Output Apparent Power (VA) 3600 5000 6000 (6000@60sec) 6000 (7200@60sec) Max. Output Qurrent (A) 15.7 21.7 22.1 280 (±2%) 230 (±2%)				
Adjustable from 0.8 leading to 0.8 lagging	Max. AC Current Output to Utility Grid (A)	16/18 ^{*1}	21.7/24 ^{*1}	26.1/28.7*1/27.3 ^{*6}
Max. Total Harmonic Distortion <3% <3% AC Output Data (Back-up) 38 <3% 3ack-up Nominal Apparent Power (VA) 3600 5000 6000 Max. Output Apparent Power (VA) 3600 (4320@60sec) 5000 (6000@60sec) 6000 (7200@60sec) Max. Output Current (A) 15.7 21.7 26.1 7 Nominal Output Voltage (V) 230 (42%) 230 (42%) 230 (42%) Nominal Output Frequency (Hz) 50/60 (40.2%) 50/60 (40.2%) 50/60 (40.2%) Support The Volumer Load) <3%	Max. AC Current From Utility Grid (A)			52.2
AC Output Data (Back-up) 3a600 5000 6000	Power Factor		ole from 0.8 leading to 0.8 lagging	
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Max. Output Apparent Power (VA) 3600 (4320@60sec) 5000 (6000@60sec) 6000 (7200@60sec) Max. Output Current (A) 15.7 21.7 26.1 Nominal Output Voltage (V) 230 (±2%) 230 (±2%) 230 (±2%) Nominal Output Frequency (Hz) 50/60 (±0.2%) 50/60 (±0.2%) 50/60 (±0.2%) Dutput THD (Elinear Load) 3% 3% <3%	AC Output Data (Back-up)			
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Max. Output Current (A) 15.7 21.7 26.1 Nominal Output Voltage (V) 230 (±2%) 230 (±2%) 230 (±2%) Nominal Output Frequency (Hz) 50/60 (±0.2%) 50/60 (±0.2%) 50/60 (±0.2%) Dutput Frequency (Hz) 50/60 (±0.2%) 50/60 (±0.2%) 50/60 (±0.2%) Dutput Frequency (Hz) 50/60 (±0.2%) 50/60 (±0.2%) 50/60 (±0.2%) Surppean Efficiency 97.6% 97.6% 97.6% Burder (Green Controll) 97.0% 97.0% 97.0% Max. Battery to AC Efficiency 96.6% 96.6% 96.6% MFPT Efficiency 99.9% 99.9% 99.9% Protection Integrated Integrated Integrated Integrated Protection Integrated Integrated Integrated AC Overourent Protection Integra				
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Support				
Max. Efficiency 97.6% 97.6% 97.6% European Efficiency 97.0% 97.0% 97.0% Max. Battery to AC Efficiency 96.6% 96.6% 96.6% MPPT Efficiency 99.9% 99.9% 99.9% Protection Protection Integrated Integrated Integrated All Integrated Integrated Integrated Anti-islanding Protection Integrated Integrated Integrated AC Short Circuit Protection Integrated Integrated Integrated AC Overcurrent Protection Integrated Integrated Integrated AC Overvoltage Protection Integrated Integrated Integrated AC Overvoltage Protection Integrated Integrated Integrated Betative Humidity 0~95% 0~95% 0~95% Wax. Operating Altitude (m) 4000° 4000° 0~95% Cooling Method Nature Convection Nature Convection Nature Convection Display LED & APP <td>Output THDv (@Linear Load)</td> <td></td> <td></td> <td></td>	Output THDv (@Linear Load)			
Properties Pro	Efficiency			
Properties Pro	Max. Efficiency	97.6%	97.6%	97.6%
Max. Battery to AC Efficiency 96.6% 96.6% 99.9% 99.9% 99.9% Protection Protection Protection Protection Protection Protection Integrated	,			
Protection PV Insulation Resistance Detection Integrated Integrat				
Protection PV Insulation Resistance Detection Integrated Integrat	MPPT Efficiency			
PV Insulation Resistance Detection Integrated Integrate				
Residual Current Monitoring Integrated Integ		Integrated	Integrated	Integrated
Battery Reverse Polarity Protection Integrated Integrated Integrated Integrated Integrated Anti-islanding Protection Integrated Inte				
Anti-islanding Protection Integrated Integrated Integrated Integrated AC Overcurrent Protection Integrated Int				
AC Overcurrent Protection Integrated Integra			0	
AC Short Circuit Protection Integrated Integrated Integrated Integrated Integrated AC Overvoltage Protection Integrated Integrated Integrated General Data Departing Temperature Range (°C) -35~60 -35~60 -35~60 Relative Humidity 0~95% 0~95% 0~95% 0~95% Max. Operating Altitude (m) 4000°7 4000°7 4000°7 Cooling Method Nature Convection Nature Convection Nature Convection Display LED & APP LED & APP LED & APP Communication with BMS°3 RS485; CAN 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) Wi-Fi/Ethernet(Optional) Wi-Fi/Ethernet(Optional) Noise Emission (dB) <35 <35 <35 Topology Non-isolated Non-isolated Non-isolated Self-consumption at Night (W)°4 <10 <10 <10 Ingress Protection Rating	AC Overcurrent Protection			
AC Overvoltage Protection Integrated Integrated Integrated General Data Section 1 As - 60 -35~60 -35~60 -35~60 -35~60 -35~60 -35~60 -95% 0~95%	AC Short Circuit Protection			
Operating Temperature Range (°C) -35~60 -35~60 -35~60 Relative Humidity 0~95% 0~95% 0~95% Max. Operating Altitude (m) 4000°7 4000°7 4000°7 Cooling Method Nature Convection Nature Convection Nature Convection Display 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 Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35	AC Overvoltage Protection			
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Max. Operating Altitude (m) 4000 ⁷ 4000 ⁷ 4000 ⁷ Cooling Method Nature Convection Nature Convection Nature Convection Display LED & APP LED & APP LED & APP Communication with BMS ⁷³ 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 17 Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35				
Cooling Method Nature Convection Nature Convection Nature Convection Display 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 Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35	· · · · · · · · · · · · · · · · · · ·			
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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 Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35				
Communication with Portal Wi-Fi/Ethernet(Optional) Wi-Fi/Ethernet(Optional) Wi-Fi/Ethernet(Optional) Weight (kg) 17 17 17 Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35				
Weight (kg) 17 17 17 Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35				
Dimension WxHxD (mm) 354 x 433 x 147 354 x 433 x 147 354 x 433 x 147 Noise Emission (dB) <35			` ' ' '	
Noise Emission (dB) <35 <35 <35 Topology Non-isolated Non-isolated Non-isolated Self-consumption at Night (W) ⁻⁴ <10	0 1 07			
Topology Non-isolated Non-isolated Non-isolated Self-consumption at Night (W) ⁻⁴ <10	. ,			
Self-consumption at Night (W) ⁻⁴ <10 <10 <10 Ingress Protection Rating IP65 IP65 IP65	,			
ngress Protection Rating IP65 IP65 IP65				
Mounting Method Wall Bracket Wall Bracket Wall Bracket Wall Bracket				
	Mounting Method	Wall Bracket	Wall Bracket	Wall Bracket

Mounting Meuricu

*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: For Brazil, the voltage is 220V.

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

*7: 2000m for Australia.

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

*3: AFDPF: Active Frequency Drift with Positive Feedback, AQDPF: Active Q Drift with Positive Feedback..

*3: Please visit GoodWe website for the latest certificates