



GEH 20-30kW

Three phase | Up to 3 MPPTs

GEH20-3U-10

GEH25-3U-10

GEH29.9-3U-10

GEH30-3U-10



Incessant Power Supply

- Parallel connection supported
- UPS-level switching



High Power Generation

- Max. 15A DC input per string
- Up to 150% DC oversizing



Maximum Safety

- Type II surge protection on DC side
- IP66 protection

The GEH 20-30kW hybrid inverters, available in sizes from 20kW to 30kW, are tailored for expansive homes as well as small commercial and industrial applications. Depending on the model, they can support up to three MPP trackers. With their peak shaving capabilities, these inverters assist smaller commercial businesses in managing load peaks effectively, leading to reduced demand charges.

Additionally, their dry contact feature provides adaptability, enabling the activation of external devices like heat pumps to enhance energy efficiency. Designed for compatibility with high-voltage batteries, these inverters can be integrated with a variety of battery capacities and brands, offering flexibility to create tailored energy storage solutions.



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Up to 3 MPPTs | Three phase

Technical Data	GEH20-3U-10	GEH25-3U-10	GEH29.9-3U-10	GEH30-3U-10
Battery Input Data				
Battery Type	Li-Ion	Li-Ion	Li-Ion	Li-Ion
Nominal Battery Voltage (V)	500	500	500	500
Battery voltage range (V)	200 ~ 800	200 ~ 800	200 ~ 800	200 ~ 800
Start-up Voltage (V)	180	180	180	180
Number of Battery Input	1	2	2	2
Max. Continuous Charging Current (A)	50	50 × 2	50 × 2	50 × 2
Max. Continuous Discharging Current (A)	50	50 × 2	50 × 2	50 × 2
Max Charge Power (W)	20000	25000	30000	30000
Max Discharge Power (W)	20000	25000	30000	30000
PV String Input Data				
Max. Input Power (W) ¹	30000	37500	45000	45000
Max. Input Voltage (V) ²	1000	1000	1000	1000
MPPT Operating Voltage Range (V)	200 ~ 850	200 ~ 850	200 ~ 850	200 ~ 850
Start-up Voltage (V)	200	200	200	200
Nominal Input Voltage (V)	620	620	620	620
Max. Input Current per MPPT (A)	30	30	30	30
Max. Short Circuit Current per MPPT (A)	38	38	38	38
Number of MPPT	2	3	3	3
Number of Strings per MPPT	2 / 2	2 / 2 / 2	2 / 2 / 2	2 / 2 / 2
AC Output Data (On-grid)				
Nominal Output Power (W)	20000	25000	29900	30000
Nominal Apparent Power Output to Utility Grid (VA)	20000	25000	29900	30000
Max. Apparent Power Output to Utility Grid (VA) ³	22000	27500	29900	33000
Max. Apparent Power from Utility Grid (VA) ¹⁰	20000	25000	30000	30000
Nominal Output Voltage (V)	380 / 400, 3L / N / PE			
Output Voltage Range (V) ⁴	0 ~ 300	0 ~ 300	0 ~ 300	0 ~ 300
Nominal AC Grid Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60
AC Grid Frequency Range (Hz)	45 ~ 65	45 ~ 65	45 ~ 65	45 ~ 65
Max. AC Current Output to Utility Grid (A) ⁹	31.9	39.9	43.3	47.8
Max. AC Current From Utility Grid (A) ¹¹	29	36.2	43.3	43.5
Power Factor	~1 (Adjustable from 0.8 leading ~ 0.8 lagging)			
Max. Total Harmonic Distortion	≤3.05%	≤3.05%	≤3.05%	≤3.05%
AC Output Data (Back-up)				
Back-up Nominal Apparent Power (VA)	20000	25000	29900	30000
Max. Output Apparent Power without Grid (VA) ⁸	20000 (24000@60s, 32000@3s)	25000 (30000@60s)	30000 (36000@60s)	30000 (36000@60s)
Max. Output Apparent Power with Grid (VA)	20000	25000	29900	30000
Max. Output Current (A)	30.3 (36.4@60s, 48.5@3s)	37.9 (45.5@60s)	45.5 (54.5@60s)	45.5 (54.5@60s)
Nominal Output Voltage (V)	380 / 400	380 / 400	380 / 400	380 / 400
Nominal Output Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60
Output THDv (@Linear Load)	<3%	<3%	<3%	<3%
Efficiency				
Max. Efficiency	98.0%	98.0%	98.0%	98.0%
European Efficiency	97.5%	97.5%	97.5%	97.5%
Max. Battery to AC Efficiency	97.5%	97.5%	97.5%	97.5%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%
Protection				
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
Battery Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated
DC Switch ⁷	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type II	Type II	Type II	Type II
AC Surge Protection	Type III	Type III	Type III	Type III
AFCI	Integrated	Integrated	Integrated	Integrated
Remote Shutdown	Integrated	Integrated	Integrated	Integrated
General Data				
Operating Temperature Range (°C)	-35 ~ +60	-35 ~ +60	-35 ~ +60	-35 ~ +60
Relative Humidity	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%
Max. Operating Altitude (m)	4000	4000	4000	4000
Cooling Method	Smart Fan Cooling			
User Interface	LED, WLAN + APP			
Communication with BMS	RS485 / CAN	RS485 / CAN	RS485 / CAN	RS485 / CAN
Communication with Meter	RS485	RS485	RS485	RS485
Communication with Portal	WiFi + LAN + Bluetooth (4G optional)			
Weight (kg)	48	54	54	54
Dimension (W × H × D mm)	520 × 660 × 220	520 × 660 × 220	520 × 660 × 220	520 × 660 × 220
Topology	Non-isolated	Non-isolated	Non-isolated	Non-isolated
Ingress Protection Rating	IP66	IP66	IP66	IP66
Mounting Method	Wall Mounted	Wall Mounted	Wall Mounted	Wall Mounted

*1: In Australia, for most of the PV module, the max. Input power can achieve 2*Pn, Such as the max. input power of GEH20-3U-10 can achieve 40000W. Besides, Max. Input Power, not continuous for 1.5*normal power.

*2: For 1000V system, Maximum operating voltage is 950V.

*3: According to the local grid regulation.

*4: Output Voltage Range: phase voltage.

*5: For 380V grid, the Nominal Output Current is 30.3A for GEH20-3U-10, 37.9A for GEH25-3U-10, 45.3A GEH29.9-3U-10, and 45.5A for GEH30-3U-10.

*6: Can be reached only if PV and battery power is enough.

*7: DC Switch: GHX6-55P (for Australia).

*8: No Back-up Output.

*9: For 380V grid, the Max. AC Current Output to Utility Grid is 33.3A for GEH20-3U-10, 41.7A for GEH25-3U-10, 49.8A for GEH29.9-3U-10, 50A for GEH30-3U-10.

*10: When the load is connected to the inverters backup port, the Max. Apparent Power from Utility Grid can reach to 30K for GEH20-3U-10, 33K for GEH25-3U-10, 33K for GEH29.9-3U-10, and 33K for GEH30-3U-10 respectively.

*11: When the load is connected to the inverters backup port, the Max. AC Current From Utility Grid can reach to 45A for GEH20-3U-10, 50A for GEH25-3U-10, 50A for GEH29.9-3U-10, and 50A for GEH30-3U-10 respectively.

*: Optional functions are purchased separately.

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