



# GEH 3-6kW

Single phase | 2 MPPTs

GEH3.0-1LU-20

GEH3.6-1LU-20

GEH3.6M-1LU-20

GEH5.0-1LU-20

GEH5.0M-1LU-20

GEH6.0-1LU-20

GEH6.0M-1LU-20



## Uninterrupted Energy Flow

- Parallel connection
- UPS-level switching



## High Power Generation

- Max. 16A DC input per string
- Up to 150% DC oversizing



## Maximum Safety

- Type II SPD on DC side
- IP65 protection

The GEH 3-6kW, a single-phase hybrid inverter designed to maximize self-consumption of solar energy while intelligently controlling energy flow. This inverter boasts automatic UPS-level switching in under 10ms, ensuring that critical loads stay powered on during power outages. Its smart design enables parallel connection for dependable backup power supply and compatibility with a wide range of low voltage batteries. Additionally, this inverter integrates intelligent safety features, including AFCI (Arc-fault current interrupter) and Type II Surge Protection Device (SPD) on DC side, ensuring the safety of the whole PV system and providing freedom and security all in one.

With its plug-and-play, compact design, and minimal weight, the GEH 3-6kW is easy to install and operate. Homeowners can experience the ultimate solution for maximizing generation and self-consumption in comfort and security.



# GEH 3-6kW

2 MPPTs | Single phase

Technical Data	GEH3.0-1LU-20	GEH3.6-1LU-20	GEH3.6M-1LU-20	GEH5.0-1LU-20	GEH5.0M-1LU-20	GEH6.0-1LU-20	GEH6.0M-1LU-20
<b>Battery Input Data</b>							
Battery Type <sup>1</sup>	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion	Li-Ion
Nominal Battery Voltage (V)	48	48	48	48	48	48	48
Battery Voltage Range (V)	40 ~ 60	40 ~ 60	40 ~ 60	40 ~ 60	40 ~ 60	40 ~ 60	40 ~ 60
Start-up Voltage (V)	40	40	40	40	40	40	40
Number of Battery Input	1	1	1	1	1	1	1
Max. Continuous Charging Current (A) <sup>1</sup>	60	75	60	120	60	120	60
Max. Continuous Discharging Current (A) <sup>1</sup>	60	75	60	120	60	120	60
Max. Charging Power (W) <sup>1</sup>	3000	3600	3000	5000	3000	6000	3000
Max. Discharging Power (W)	3200	3900	3200	5300	3200	6300	3200
<b>PV String Input Data</b>							
Max. Input Voltage (V)	600	600	600	600	600	600	600
MPPT Operating Voltage Range (V)	60 ~ 550	60 ~ 550	60 ~ 550	60 ~ 550	60 ~ 550	60 ~ 550	60 ~ 550
Start-up Voltage (V)	58	58	58	58	58	58	58
Nominal Input Voltage (V)	360	360	360	360	360	360	360
Max. Input Current per MPPT (A)	16	16	16	16	16	16	16
Max. Short Circuit Current per MPPT (A)	23	23	23	23	23	23	23
Number of MPP Trackers	1	2	2	2	2	2	2
Number of Strings per MPPT	1	1	1	1	1	1	1
<b>AC Output Data (On-grid)</b>							
Nominal Output Power (W)	3000	3680	3680	5000	5000	6000	6000
Nominal Apparent Power Output to Utility Grid (VA)	3000	3680	3680	5000 <sup>2</sup>	5000 <sup>2</sup>	6000 <sup>2</sup>	6000 <sup>2</sup>
Max. Apparent Power Output to Utility Grid (VA)	3000	3680	3680	5000 <sup>2</sup>	5000 <sup>2</sup>	6000 <sup>2</sup>	6000 <sup>2</sup>
Max. Apparent Power from Utility Grid (VA)	6000	7360	3680	10000	5000	10000	6000
Nominal Output Voltage (V)	220 / 230 / 240						
Output Voltage Range (V)	170 ~ 280	170 ~ 280	170 ~ 280	170 ~ 280	170 ~ 280	170 ~ 280	170 ~ 280
Nominal AC Grid Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
AC Grid Frequency Range (Hz)	45 ~ 55 / 55 ~ 65						
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%	<3%	<3%	<3%	<3%	<3%	<3%
<b>AC Output Data (Back-up)</b>							
Back-up Nominal Apparent Power (VA)	3000	3680	3680	5000	5000	6000	6000
Max. Output Apparent Power without Grid (VA)	3000 (6000@10sec)	3680 (7360@10sec)	3680	5000 (10000@10sec)	5000	6000 (10000@10sec)	6000
Max. Output Apparent Power with Grid (VA)	3000	3680	3680	5000	5000	6000	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 Frequency (Hz)	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60	50 / 60
Output THDv (@Linear Load)	<3%	<3%	<3%	<3%	<3%	<3%	<3%
<b>Efficiency</b>							
Max. Efficiency	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%	97.6%
European Efficiency	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%	96.7%
Max. Battery to AC Efficiency	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%	95.5%
MPPT Efficiency	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%	99.9%
<b>Protection</b>							
PV String Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type II	Type II	Type II	Type II	Type II	Type II	Type II
AC Surge Protection	Type III	Type III	Type III	Type III	Type III	Type III	Type III
AFCI	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
Remote Shutdown	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated	Integrated
<b>General Data</b>							
Operating Temperature Range (°C)	-25 ~ +60	-25 ~ +60	-25 ~ +60	-25 ~ +60	-25 ~ +60	-25 ~ +60	-25 ~ +60
Relative Humidity	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%	0 ~ 95%
Max. Operating Altitude (m)	3000 (>2000 derating)						
Cooling Method	Natural Convection						
User Interface	LED, WLAN + APP						
Communication with BMS	CAN	CAN	CAN	CAN	CAN	CAN	CAN
Communication with Meter	RS485	RS485	RS485	RS485	RS485	RS485	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						
Noise Emission (dB)	<30	<30	<30	<30	<30	<30	<30
Topology	Non-isolated						
Self-consumption at Night (W)	<10	<10	<10	<10	<10	<10	<10
Ingress Protection Rating	IP65	IP65	IP65	IP65	IP65	IP65	IP65
Mounting Method	Wall Mounted						

\*1: The actual charge and discharge current / power also depends on the battery.

\*2: 4600 for VDE-AR-N4105 & NRS 097-2-1.

\*\* Optional functions or devices are purchased separately.

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