

# Intelligent Solar Inverters

http://au.gesolarinverter.com



# The Generation of Tomorrow

Backed by advanced knowledge and experience in researching, developing and creating state-of-the-art PV inverters and energy storage solutions, we integrate the finest technological components into carefully crafted solar solutions that shape the present to de-liver the future world of intelligent energy.

Enter a world where safety and efficiency combine perfectly into intelligent solutions integrating the most advanced safety features, intuitive data monitoring, and effortless, timely energy choices.



# The Energy Choices of Today

This is a space where flawless design and sophisticated technological components take the shape of solar inverters that enable the most intelligent use and distribution of solar energy to power the generations of tomorrow.

Tomorrow is a place where energy distribution is perfectly timed and effortlessly delivered by advanced switches powered by electric neurons. That place is today.





# Intelligence Switched On

Discover the intelligent features that shape the present to deliver the future world of smart energy.







Inbuilt Export Control



Consumption Monitoring



## GEP 3-5kW

#### Single-phase | 2 MPPTs

GEP3.6-1-10

GEP4.2-1-10

GEP5.0-1-10

The GEP 3-5kW boasts beautiful aesthetics and a user friendly design from an elegant screen interface. Despite its small size, the GEP 3-5kW is capable of 150% DC oversizing, 110% AC overloading and 98.3% max efficiency, which gives it a unique competitive edge. The latest and most advanced safety features are intelligently integrated and packed in to this compact, but powerful model that is lightweight and and easy to install.



- Elegant aesthetic look

- Colour LED screen
- Plug & Play Installation

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3500

Wh 93.3kWh 4×4

High Power Generation

- 98.3% maximum efficiency

- 150% DC oversizing & 110% AC overloading
- Compatible with bifacial modules

## Elegant Aesthetic Design



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ESC

Elegance and power combine perfectly in this compact, yet powerful inverter complete with a color LED screen interface.

## Easy Installation



The Plug & Play AC connectors and light wall-mounted design enhance the system's flexibility, making operation and maintenance more convenient. The GEP 3-5kW does not require cover removal during wiring, providing efficient installation.

## Superior Efficiency

Cores



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This inverter allows 150% DC oversizing and 110% AC overloading to maximize yields, and enhance system efficiency. Its maximum efficiency of 98.3% is truly exceptional offering a unique, competitive edge in the single phase residential solar market.



98.3%

## GEP 5-10kW

#### Single-phase | 3 MPPTs

GEP5.0-1C-10

GEP8.5-1-10

GEP10-1-10

The GEP 5-10kW is the ultimate solution for residential systems. This powerful single-phase model boasts 3 MPPTs for maximum power retention and absolute minimum power loss. With a startup voltage of only 80 V, this superior, intelligently efficient inverter is specifically designed to harness solar power from sunrise to sunset, regardless of irradiation and weather conditions. Extra reflections from the backside of bifacial panels drive the inverter to its maximum capacity and unleash its full potential of 200% DC oversizing, allowing for up to 110% AC overloading. All these features intelligently packed into a lightweight model for a simple installation.



- 3 MPPTs - Up to 200% DC oversizing - Start-up voltage of only 80 V

MPPTs D



- Load consumption monitoring
- Smart Shadow Scan
- Inbuilt Export Control

3 MPPTs

A single phase on-grid inverter for residential applications. This versatile inverter is equipped with 3 MPP trackers, which makes it perfectly suited to complex rooftops, covering all rooftop corners and maximizing total solar generation.



# Up to 200% DC oversizing



Up to 200% DC oversizing & 110% AC overloading exerting maximum output capacity for higher power generation.

## Smart Shadow Scan (=)

With Shadow Scan function activated, the MPP tracker scans the maximum power point regularly to make sure the inverter works at the maximum power of PV strings, minimizing the impact of partial shadows caused by occasional debris, dirt or chimney or tree shading on solar systems, thus producing more electricity when shading occurs.



# GEP 5-20kW

#### Three-phase | 2 MPPTs

GEP5.0-3-10	GEP8-3-AU10	GEP10-3-AU10
GEP15-3-10	GEP20-3-10	

Intelligent safety features and unmatched efficiency place this model into a league of its own. This three phase inverter is a perfect choice for small business needs and a wider scale of residential applications, with the capability of 200% oversizing, incredible efficiency, and compatibility with the latest high power & bifacial modules. The most advanced safety features are intelligently integrated for maximum security and peace of mind. The modular design makes operation and maintenance much easier, providing upgraded safety and reliability. Welcome to the future of intelligent energy. Say hello to GEP 5-20kW.



- Up to 200% DC oversizing & 110% AC overloading
- Max. 15A per string



 AFCI & module-levell rapid shutdown for safest solar\*
 Type II SPD now exchangeable\*



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User & Installer Friendly

- A pleasant living environment thanks to excellent noise control: 5-10kW < 25dB

- 24h real-time consumption monitoring\*



Excellent noise control: 5-10kW < 25dB



## Flexibility for Complex Solar Requirements



Up to two strings per MPPT (8-10K) caters for various locations and complex rooftops.



## GEP 29.9-60kW

#### Three-phase | Up to 6 MPPTs

GEP29.9-10

GEP50-10

GEP60-10

The GEP 29.9-60kW has been designed to meet the increasing expectations from the Commercial sector. The GEP 29.9-60kW offers up to 6 MPPTs and is the ultimate solution for commercial rooftop PV systems. This future-ready machine uses a film capacitor and fuse-free design, optional Type I surge protection on the DC side, ensuring faster trouble-shooting, longer life-span and maximum safety. The GEP 29.9-60kW Series requires minimum O&M and offers an improved overall user experience. These intelligent features make the GEP 29.9-60kW one of the most future-proof inverters in its class.



- Up to 6 MPPTs
- Full-load running at 50°C



- Maximum Safety
- Type II SPD for both AC & DC
- Optional AFCI protecting circuits from arc faults\*
- Intelligent O&M
- Precise string current monitoring
- PID recovery optional\*



## Upgraded Safety

Optional Type I surge protection on the DC side (default Type II for both AC & DC sides) can limit the impact of lightning on the inverter, providing all-round protection for the PV system and upgraded safety and reliability. The application of high-tech fuse-free design provides reliability while reducing system operation and maintenance costs.



## Full-load Running at 50°C



With a wide operating temperature ranging from -30°C to 60°C, this inverter has a truly outstanding temperature tolerance range. Its ability to run at full load even when temperatures reach 50°C, bring increased power generation and long-term returns, especially for operation in tough Australian climates

## Compatible with High Power Modules

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With 15A max. input current per string, GEP 29.9-60kW Series is compatible with different types of modules, which ensures more solar power absorption and makes it one of the most productive inverters on the market.



# **GEH 5-10kW**

#### Single-phase Hybrid | Up to 4 MPPTs

GEH5.0-1U-10

GEH8.6-1U-10 GEH10-1U-10

The GEH series is a unique single-phase hybrid inverter that offers up to four MPPTs, is compatible with high voltage (80-495V) batteries and has a power capacity ranging from 5 kW to 10 kW. Homeowners can now experience the ultimate solution for maximising generation and self-consumption in comfort and security. Intelligent mechanisms are timely activated to ensure power supply to critical loads when most needed. AFCI (Arc-fault current interrupter) and rapid shutdown options likewise ensure the safety of the whole PV system, offering freedom and security all in one.



Incessant Power Supply

- Full backup capacity up to 10 kW
- UPS-level switching



- Up to 4 MPPTs
- Up to 150% DC oversizing



- AC bypass switch
- AFCI & RSD for system safety\*





for Less

Complex rooftop management - The GEH is equipped with up to 4 MPPTs to feed solar power to large residential properties and enables flexible PV string configurations for complex rooftops to maximise solar generation for the homeowner. The GEH series has been designed with intelligent solutions that read and analyse your rooftop area and respond in the most energy-efficient way.



## Intelligent Safety – AFCI & RSD Optional\*



Active Arc Protection: Detects arc fault failure, sends alarms through the monitoring system and breaks the circuit simultaneously, delivering efficiency and reliability.

Rapid shutdown (RSD): Safety First. GEH Series facilitates module-level rapid shutdown and ensures safe conditions on the roof in any situation.

## Keep Smiling When the Grid is Down



UPS-level Switch Time: Protect your appliances with UPS-level Switching. When the grid is down or compromised, loads connected to the backup receive continuous power supply with zero interruptions. When operating in backup function, this inverter provides you with 120% of peak output overloading for 60s.



## GEP 3-5kW

### 2 MPPTs | Single-phase

Technical Data	GEP3.6-1-10	GEP4.2-1-10	GEP5.0-1-10		
Input					
Max. Input Voltage (V)	600	600	600		
MPPT Operating Voltage Range (V)	80~550	80~550	80~550		
Start-up Voltage (V)	80	80	80		
Nominal Input Voltage (V)	360	360	360		
Max. Input Current per MPPT (A)	13/13	13/13	13/13		
Max. Short Circuit Current per MPPT (A)	16.3/16.3	16.3/16.3	16.3/16.3		
Number of MPP Trackers	2	2	2		
Number of Strings per MPPT	1	1	1		
Output					
Nominal Output Power (W)	3600	4200	5000		
Nominal Output Apparent Power (VA)	3600	4200	5000		
Max. AC Apparent Power (VA)	3960	4620	5500		
Nominal Output Voltage (V)	220/230	220/230	220/230		
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60		
Max. Output Current (A)	18	21	25		
Power Factor	~1 (Ad	justable from 0.8 leading to 0.8 la	gging)		
Max. Total Harmonic Distortion	<3%	<3%	<3%		
Efficiency					
Max. Efficiency	98.3%	98.3%	98.3%		
European Efficiency	97.5%	97.6%	97.8%		
Protection					
Residual Current Monitoring	Integrated	Integrated	Integrated		
PV Reverse Polarity Protection	Integrated	Integrated	Integrated		
Anti-islanding Protection	Integrated	Integrated	Integrated		
AC Overcurrent Protection	Integrated	Integrated	Integrated		
AC Short Circuit Protection	Integrated	Integrated	Integrated		
AC Overvoltage Protection	Integrated	Integrated	Integrated		
DC Surge Protection	Integrated (Type II)				
AC Surge Protection	Integrated (Type II)				
General Data					
Operating Temperature Range (°C)	-25~60	-25~60	-25~60		
Relative Humidity	0~100%	0~100%	0~100%		
Max. Operating Altitude (m)	≤4000	≤4000	≤4000		
Cooling Method	Natural Convection	Natural Convection	Natural Convection		
Display	LCD&LED	LCD&LED	LCD&LED		
Communication		Wi-Fi / RS485 / LAN (Optional)			
Weight (kg)	11	11	11		
Dimension (W × H × D mm)	336 × 400 × 124				
Topology		Transformerless			
Self-consumption at Night (W)	<1	<1	<1		
Ingress Protection Rating	IP65	IP65	IP65		
Country of Manufacture	China	China	China		



GEP 5-10kW

### 3 MPPTs | Single-phase

Technical Data	GEP5.0-1C-10	GEP8.5-1-10	GEP10-1-10	
Input				
Max. Input Voltage (V)	600 600		600	
MPPT Operating Voltage Range (V)	80~550	80~550	80~550	
Start-up Voltage (V)	80	80	80	
Nominal Input Voltage (V)	360	360	360	
Max. Input Current per MPPT (A)	13/13/13	13/13/13	13/13/13	
Max. Short Circuit Current per MPPT (A)		16.3/16.3/16.3		
Number of MPP Trackers	3	3	3	
Number of Strings per MPPT	1	1	1	
Output				
Nominal Output Power (W)	5000	8500	10000	
Nominal Output Apparent Power (VA)	5000	8500	10000	
Max. AC Apparent Power (VA)	5500	9350	10000	
Nominal Output Voltage (V)	220/230	220/230	220/230	
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60	
Max. Output Current (A)	23.9	42.5	45.5	
Power Factor	~1 (Ad	djustable from 0.8 leading to 0.8 la	gging)	
Max. Total Harmonic Distortion	<3%	<3%	<3%	
Efficiency				
Max. Efficiency	97.7%	97.8%	97.8%	
European Efficiency	97.3%	97.5%	97.5%	
Protection				
Residual Current Monitoring	Integrated	Integrated	Integrated	
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	
Anti-islanding Protection	Integrated	Integrated	Integrated	
AC Overcurrent Protection	Integrated	Integrated	Integrated	
AC Short Circuit Protection	Integrated	Integrated	Integrated	
AC Overvoltage Protection	Integrated	Integrated	Integrated	
DC Surge Protection	Integrated (Type II)			
AC Surge Protection	Integrated (Type II)			
General Data				
Operating Temperature Range (°C)	-25~60	-25~60	-25~60	
Relative Humidity	0~100%	0~100%	0~100%	
Max. Operating Altitude (m)	≤4000	≤4000	≤4000	
Cooling Method	Natural Convection	Natural Convection	Natural Convection	
Display	LCD&LED	LCD&LED	LCD&LED	
Communication	Wi-Fi / RS485 / LAN (Optional)			
Weight (kg)	22.5	22.5	22.5	
Dimension (W × H × D mm)		511 × 415 × 175		
Тороlоду	Transformerless			
Self-consumption at Night (W)	<1	<1	<1	
Ingress Protection Rating	IP65	IP65	IP65	
Country of Manufacture	China	China	China	





#### 2 MPPTs | Three-phase

Technical Data	GEP5.0-3-10	GEP8-3-AU10	GEP10-3-AU10	GEP15-3-10	GEP20-3-10
Input					
Max.Input Voltage (V)	1100	1100	1100	1100	1100
MPPT Operating Voltage Range (V)	140~950	140~950	140~950	140~950	140~950
Start-up Voltage (V)	180	180	180	180	180
Nominal Input Voltage (V)	620	620	620	620	620
Max. Input Current per MPPT (A)	15/15	30/30	30/30	30/30	30/30
Max. Short Circuit Current per MPPT (A)	18.7/18.7	37.5/37.5	37.5/37.5	37.5/37.5	37.5/37.5
Number of MPP Trackers	2	2	2	2	2
Number of Strings per MPPT	1	2	2	2	2
Output					
Nominal Output Power (W)	5000	8000	10000	15000	20000
Max. AC Active Power (W)	5500	8800	11000	16500	22000
Max. AC Apparent Power (VA)	5500	8800	11000	16500	22000
Nominal Output Voltage (V)	3/N/PE, 220/380 3/N/PE, 230/400 3/N/PE, 240/415				
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60	50/60	50/60
Max. Output Current (A)	8.0	12.8	16.0	24.0	32.0
Power Factor		~1 (Adjusta	ble from 0.8 leading to	0.8 lagging)	
Max. Total Harmonic Distortion	<3%	<3%	<3%	<3%	<3%
Efficiency					
Max. Efficiency	98.3%	98.3%	98.3%	98.4%	98.4%
European Efficiency	97.6%	97.6%	97.6%	97.8%	97.8%
Protection					
PV Insulation Resistance Detection	Integrated	Integrated	Integrated	Integrated	Integrated
Residual Current Monitoring	Integrated	Integrated	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated	Integrated	Integrated
Anti-islanding Protection	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated	Integrated	Integrated
DC Switch	Integrated	Integrated	Integrated	Integrated	Integrated
DC Surge Protection	Type II	Type II	Type II	Туре II	Type II
AC Surge Protection		Т	ype III (Type II Optiona	I)	
AFCI	Optional	Optional	Optional	Optional	Optional
General Data					
Operating Temperature Range (°C)	-30~60	-30~60	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	≤4000	≤4000	≤4000	≤4000	≤4000
Cooling Method	Natural Covection		Fan C	ooling	
Display	LED; LCD (Optional); WiFi+APP/Bluetooth+APP				
Communication	RS485/WiFi/LAN/4G				
Weight (Kg)	20.5	24	24	26	26
Dimension (W × H × D mm)		415 × 511 × 175		415 × 5	11 × 198
Noise Emission (dB)		<25		<4	45
Тороlоду			Transformerless		
Self-consumption at Night (W)	<1	<1	<1	<1	<1
Ingress Protection Rating	IP65	IP65	IP65	IP65	IP65
DC Connector	MC4 (2.5~4mm²)			1	
AC Connector	OT Terminal				
Country of Manufacture	China				



## GEP 29.9-60kW

#### Up to 6 MPPTs | Three-phase

Technical Data	GEP29.9-10	GEP50-10	GEP60-10
Input			
Max. Input Voltage (V)	1100	1100	1100
MPPT Operating Voltage Range (V)	200~950	200~950	200~950
Start-up Voltage (V)	180	180	180
Nominal Input Voltage (V)	600	600	600
MPPT Operating Voltage Range (V)	180~1100	180~1100	180~1100
Max. Input Current per MPPT (A)	30	30	30
Max. Short Circuit Current per MPPT (A)	37.5	37.5	37.5
Number of MPP Trackers	3	5	6
Number of Strings per MPPT	2	2	2
Output			
Nominal Output Power (W)	29900	50000	60000
Nominal Output Apparent Power (VA)	29900	50000	60000
Max. AC Active Power (W)	29900	55000	66000
Max. AC Apparent Power (VA)	29900	55000	66000
Nominal Output Voltage (V)	400, 3L/N/PE or 3L/PE	400, 3L/N/PE or 3L/PE	400, 3L/N/PE or 3L/PE
Nominal AC Grid Frequency (Hz)	50/60	50/60	50/60
Max. Output Current (A)	43.3	80	96
Power Factor	~1 (Ad	justable from 0.8 leading to 0.8 la	igging)
Max. Total Harmonic Distortion	<3%	<3%	<3%
Efficiency			
Max. Efficiency	98.3%	98.3%	98.3%
European Efficiency	98.0%	98.0%	98.0%
Protection			
Anti-islanding Protection	Integrated	Integrated	Integrated
PV Reverse Polarity Protection	Integrated	Integrated	Integrated
PV String Current Monitoring	Integrated	Integrated	Integrated
Anti-PID	Optional	Optional	Optional
DC Surge Protection	Туре II	Type II (Type I optional)	Type II (Type I optional)
AC Surge Protection	Туре II	Туре II	Type II
Residual Current Monitoring	Integrated	Integrated	Integrated
AC Overcurrent Protection	Integrated	Integrated	Integrated
AC Short Circuit Protection	Integrated	Integrated	Integrated
AC Overvoltage Protection	Integrated	Integrated	Integrated
General Data			
Operating Temperature Range (°C)	-30~60	-30~60	-30~60
Relative Humidity	0~100%	0~100%	0~100%
Max. Operating Altitude (m)	≤3000	≤3000	≤3000
Cooling Method	Smart Fan Cooling	Smart Fan Cooling	Smart Fan Cooling
Display	LCD&LED or APP&LED	LCD&LED or APP&LED	LCD&LED or APP&LED
Communication	RS485 or WiFi, PLC (Optional)		
Communication Protocols	Modbus-RTU (SunSpec compliant)		
Weight (kg)	40	55	55
Dimensions (W × H × D mm)	480 × 590 × 200	520 × 660 × 220	520 × 660 × 220
Ingress Protection Rating	IP65	IP65	IP65
Self-consumption at Night (W)	<1	<1	<1
Тороlоду		Transformerless (Non-isolated)	
Country of Manufacture	China	China	China



### GEH 5-10kW

#### Up to 4 MPPTs | Single-phase Hybrid

Technical Data	GEH5.0-1U-10	GEH8.6-1U-10	GEH10-1U-10* <sup>5</sup>	
Battery Input Data				
Battery Type	Li-Ion (BYD HVM&HVS, LG	RESU 10H-Type R″, RESU	16H Prime, GOODWE LX S-H)	
Nominal Battery Voltage (V)	350			
Battery Voltage Range (V) <sup>*</sup>		80~495		
Max. Continuous Charging Current (A)		50		
Max Charge Power (W)	5000	8600	9600	
Max Discharge Power (W)	5250	9030	10080	
PV String Input Data				
Max. Input Power (W)	7500	12900	15000	
Max. Input Voltage (V)*2		600		
MPPT Operating Voltage Range (V)*3		80~550		
Start-up Voltage (V)		95		
Max Input Current per MPPT (A)	13/13/13	13	/13/13/13	
Max. Short Circuit Current per MPPT (A)	16.3/16.3/16.3	16.3/1	6.3/16.3/16.3	
Number of MPP Trackers	3		4	
Number of Strings per MPPT	1/1/1	· · · · · · · · · · · · · · · · · · ·	1/1/1/1	
AC Output Data (On-grid)				
Nominal Output Voltage (V)		230		
Nominal AC Grid Frequency (Hz)	5000	50	0500 (@220)/62); 10000 (@220)/62)	
Max Apparent Power Output to Utility Grid (VA)	5000	8600	9500 (@220 Vac), 10000 (@230 Vac)	
Max Apparent Power from Utility Grid (VA)	6000	10000	10000	
Max. AC Current Output to Utility Grid (A)*4	23	39	43.5	
Max. AC Current From Utility Grid (A)	27	45.5	45.5	
Max. Output Overcurrent Protection (A)	56.5	95	95	
Power Factor	~1 (	Adjustable from 0.8 leading to 0.8 l	agging)	
Max. Total Harmonic Distortion		<3%		
AC Output Data (Back-up)		220 (12%)		
Nominal Output Frequency (Hz)		50 (+0.2%)		
Output THDy (@Linear Load)		<3%		
Max. Output Apparent Power (VA)	5000(6000@60sec)	8600(10320@60sec)	9500(@220Vac); 10000(@230Vac)(12000@60sec)	
Max. Output Current (A)	23	39	43.5	
Efficiency				
Max. Efficiency		97.6%		
MPPT Efficiency		97.0%		
Max. Battery to AC Efficiency		96.5%		
Protection				
AFCI		Optional		
Rapid Shutdown		Optional		
DC&AC Switch		Integrated		
DC Surge Protection				
AC Surge Protection		Type II		
PV Reverse Polarity Protection		Integrated		
PV Insulation Resistance Detection		Integrated		
Residual Current Monitoring	Integrated			
AC Overcurrent Protection	Integrated			
AC Short Circuit Protection		Integrated		
AC Overvoilage Protection		Integrated		
General Data		Integrated		
Operating Temperature Range (°C)		-35~60		
Relative Humidity	0~95%			
Max. Operating Altitude (m)	≤4000			
Cooling Method	Intelligent Fan			
Noise Emission (dB)	<50			
Communication with BMS		RS485 CAN		
Communication with Meter		RS485		
Communication with Portal		Wi-Fi		
Weight (kg)	28.8		32.3	
Dimensions (W × H × D mm)		415 × 791 × 175		
Mounting Method		Wall Bracket		
Ingress Protection Rating		IP65		
	<20 Transformations			
Country of Manufacture		China		

\*1: Battery discharge/charge power limited by voltage.
\*2: Inverter will not work when PV input voltage ≥585V.
\*3: When there is no battery connected, inverter starts feeding in only if string voltage is higher than 200V.

\*4: The grid feed in power for AS/NZS 4777.2 is limited to 4950VA & 21.7A.
 \*5: The model name does not represent the rated power, please refer to the marked parameters for details.



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