



Intelligent Solar Inverter







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 deliver the future world of intelligent energy.

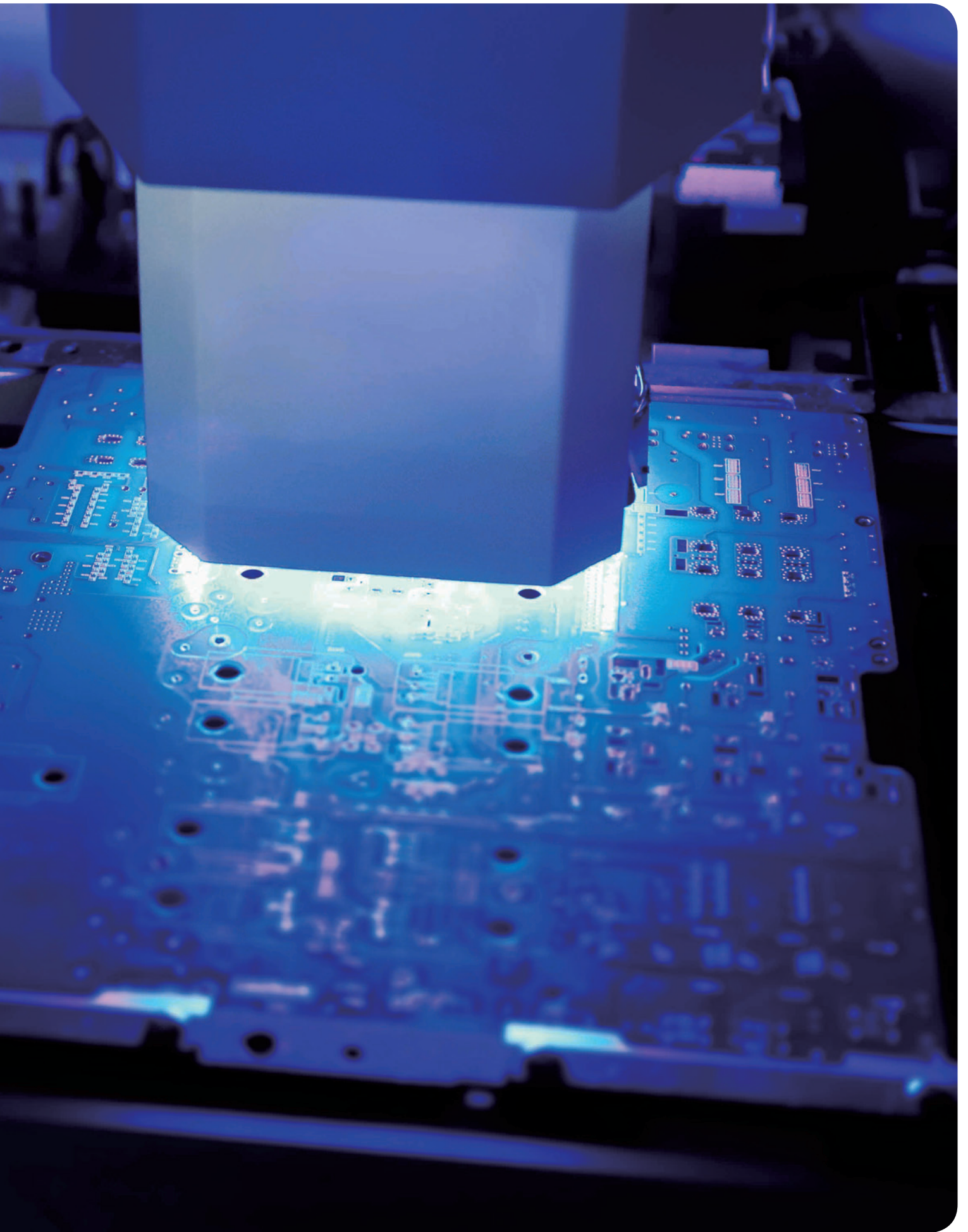
Enter a world where safety and efficiency combine perfectly into intelligent solutions integrating the most advanced safety features, intuitive data monitoring, and effortless, timely energy choices.



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.



GEP 3-5kW

2 MPPT | Single-phase

GEP3.6-1-10

GEP4.2-1-10

GEP5.0-1-10

With beautiful aesthetics and user friendly design, GEP 3-5kW has an elegant screen and is light and easy to install. Despite its reduced size, this petite model is capable of 50% DC oversizing, 10% AC overloading and 98.3% max efficiency, which gives it a unique competitive edge. With 13A max. input current per string, it is compatible with different types of modules. The latest and most advanced safety features are intelligently integrated and packed in this compact albeit powerful model.



Inbuilt DC Isolator

With a built-in PV II switch and an internal plastic board ensuring insulation, the inverter doesn't require an external DC disconnect for installation in Australia, reducing costs while ensuring safety.



Inbuilt Export Control

Inbuilt export control enables the inverter to adjust AC output according to local DNSP (Distributed Network Service Provider) requirements.

Elegant Aesthetic Design

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





Plug & Play

The Plug & Play AC connectors enhance the system's flexibility, making operation and maintenance more convenient. It does not require cover removal during wiring, for maximum comfort and ease of installation.



Superior Efficiency

This inverter allows 50% DC oversizing and 10% AC overloading to maximize yields, and enhance system efficiency. Its max efficiency of 98.3% is truly exceptional and gives it a unique competitive edge in the single-phase residential solar segment.



GEP 4.6-10kW

3 MPPT | Single-phase

GEP5.0-1C-10

GEP8.5-1-10

GEP10-1-10

The GEP 4.6-10kW is the ultimate solution to cater for the residential segment's rising expectations. This powerful single-phase model boasts 3 MPPT for maximum power retention and absolute minimum power loss. With a startup voltage of only 80V, 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 100% DC oversizing, allowing for up to 10% AC overloading. All these features intelligently packed into a light-weight model for a comfortable installation.



**Inbuilt DC
Isolator**



**Inbuilt Export
Control**



13A Per String



MPPT
MPPT
MPPT
3

3 MPPT

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. With up to 100% DC oversizing capability, this inverter can harvest a lot more solar energy for customers.

Compatible with High Power Modules



With 13A max. input current per string, GEP 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.

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 29.9-60kW

Up to 6 MPPT | Three-phase

GEP29.9-10

GEP50-10

GEP60-10

The GEP 29.9-60kW has been designed to meet the increasing expectations from the C&I segment. The GEP 29.9-60kW offers up to 6 MPPT and is the ultimate solution for commercial rooftop PV systems. This future-ready machine comes with incorporated I-V curve diagnosis, film capacitor and fuse-free design, optional anti-PID function, Type I surge protection on the DC side and AC terminal temperature detection, ensuring faster trouble-shooting, longer life-span and maximum safety. The GEP 29.9-60kW requires minimum O&M and offers an improved overall user experience for maximum comfort and minimum operation. All these intelligent features make the GEP 29.9-60kW one of the most future-proof inverters in its class.



Inbuilt DC Isolator



Inbuilt Export Control



13A Per String



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 O&M costs.

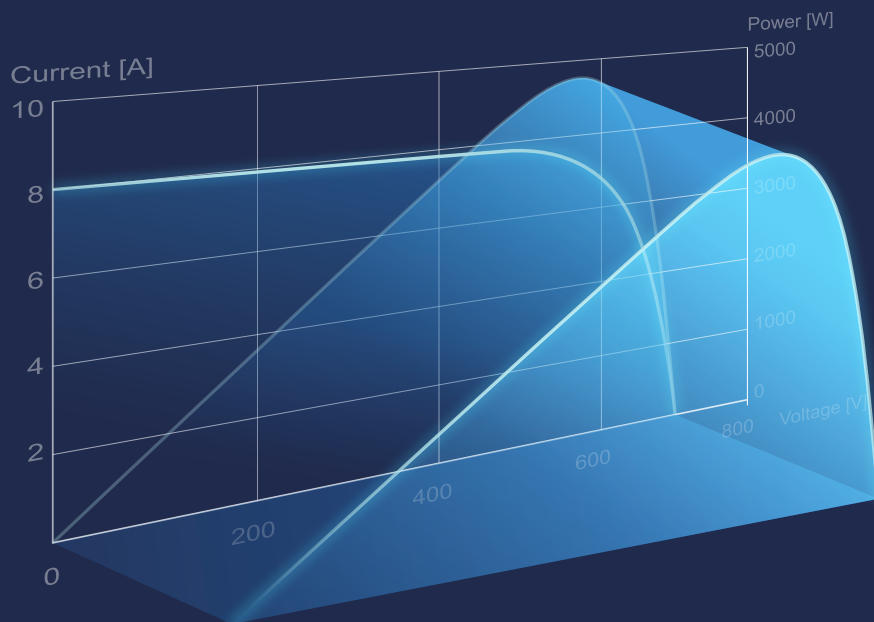


Full-load Running at 50°C

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 hot regions.

IV-Curve Diagnosis

This intelligent inverter performs remote scanning of all PV strings and monitors the entire system at string level. By diagnosing the curve of I (current) and V (voltage), the monitoring platform allows intelligent detection of voltage and current issues, ensuring instant and accurate fault location and greatly improving O&M efficiency, as well as bringing down maintenance costs.



GEH 5-10kW

Up to 4 MPPT | Single-phase Hybrid

GEH5.0-1U-10

GEH8.6-1U-10

GEH10-1U-10

Discover this 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 5kW to 10kW. Homeowners can now experience the ultimate solution for maximizing generation and self-consumption in comfort and security. Intelligent mechanisms are timely activated to ensure power supply to critical loads when most needed. With up to 4 MPPTs, this inverter seamlessly adapts to complex rooftops on large residential properties. It is equipped with rapid battery charge and is perfectly capable of powering large loads in back-up mode. This champion of energy independence integrates intelligent safety features that are second to none. When the grid is compromised, UPS-level switching allows the inverter to switch to back-up mode in less than 10ms. Loads connected to the back-up stay powered on and ensure the safety of your electrical appliances. AFCI (Arc-fault current interrupter) and rapid shutdown likewise ensure the safety of the whole PV system, offering freedom and security all in one.



**Maximum
Safety**



**Rapid
Installation**



**Full Backup Capacity
up to 10 kW**



Don't Settle for Less

Complex rooftop management - The GEH is equipped with up to 4 MPPTs – the measured solution that can feed solar power to large residential properties and enables flexible PV string configurations for rooftop of different azimuth or tilt, maximizing total solar generation for the homeowner. We understand that not all roofs were originally designed to accommodate solar arrays. That is why we have designed intelligent solutions that read and analyze your rooftop area and respond in the most energy-efficient way.



Intelligent Safety – AFCI & RSD

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

Rapid shutdown (RSD): Safety First. GEH Series is embedded with Tigo RSS Transmitter, which 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 MPPT | Single-phase

Technical Data	GEP3.6-1-10	GEP4.2-1-10	GEP5.0-1-10
PV String Input Data			
Max. DC Input Power (W)	5500	6300	7500
Max. DC Input Voltage (V)	600	600	600
MPPT Range (V)	80~550	80~550	80~550
Start-up Voltage (V)	80	80	80
Min. Feed-in Voltage(V)	100	100	100
Nominal DC Input Voltage (V)	360	360	360
PV Input Operating Voltage range (V)	80~600	80~600	80~600
Max. Inverter Backfeed Current To The array (A)	0	0	0
Max. Input Current (A)	13/13	13/13	13/13
Max. Short Current (A)	16.3/16.3	16.3/16.3	16.3/16.3
No. of MPP Trackers	2	2	2
No. of Input Strings per Tracker	1	1	1
AC Output Data			
Nominal Output Power (W)	3600	4200	4999
Max. Output Apparent Power (VA)	3960	4620	4999
Nominal Output Voltage (V)	230	230	230
Nominal Output Frequency (Hz)	50	50	50
Max. Output Current (A)	18	21	21.7
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)		
Output THDi (@Nominal Output)	<3%	<3%	<3%
Current (inrush)	130	130	130
Maximum Output Fault Current	155	155	155
Maximum Output Over Current Protection (A)	50	50	50
Efficiency			
Max. Efficiency	98.3%	98.3%	98.3%
European Efficiency	97.5%	97.6%	97.8%
Protection			
Anti-islanding Protection	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated
Insulation Resistor Detection	Integrated	Integrated	Integrated
DC SPD Protection	Integrated (Type II)	Integrated (Type II)	Integrated (Type II)
AC SPD Protection	Integrated (Type II)	Integrated (Type II)	Integrated (Type II)
Residual Current Monitoring Unit	Integrated	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated	Integrated
Output Short Protection	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated
Protective Class	DC II; AC III	DC II; AC III	DC II; AC III
Decisive Voltage Classification (DVC)	C	C	C
General Data			
Operating Temperature Range (°C)	-25~60	-25~60	-25~60
Relative Humidity	0~100%	0~100%	0~100%
Cooling	Natural Convection	Natural Convection	Natural Convection
User Interface	LCD&LED	LCD&LED	LCD&LED
Communication	Wi-Fi / RS485 / LAN(Optional)	Wi-Fi / RS485 / LAN(Optional)	Wi-Fi / RS485 / LAN(Optional)
Weight (kg)	11	11	11
Size (Width*Height*Depth mm)	336*400*124	336*400*124	336*400*124
Protection Degree	IP65	IP65	IP65
Night Self Consumption (W)	<1	<1	<1
Topology	Transformerless	Transformerless	Transformerless



GEP 4.6-10kW

3 MPPT | Single-phase

Technical Data	GEP5.0-1C-10	GEP8.5-1-10	GEP10-1-10
PV String Input Data			
Max. DC Input Power (W)	10000	13500	13500
Max. DC Input Voltage (V)	600	600	600
MPPT Range (V)	80~550	80~550	80~550
Start-up Voltage (V)	80	80	80
Min. Feed-in Voltage(V)	120	120	120
Nominal DC Input Voltage (V)	360	360	360
PV Input Operating Voltage range (V)	80~600	80~600	80~600
Max. Inverter Backfeed Current To The array (A)	0	0	0
Max. Input Current (A)	13/13/13	13/13/13	13/13/13
Max. Short Current (A)	16.3/16.3/16.3	16.3/16.3/16.3	16.3/16.3/16.3
No. of MPP Trackers	3	3	3
No. of Input Strings per Tracker	1/1/1	1/1/1	1/1/1
AC Output Data			
Nominal Output Power (W)	4999	8500	10000
Max. Output Apparent Power (VA)	4999	9350	10000
Nominal Output Voltage (V)	230	230	230
Nominal Output Frequency (Hz)	50	50	50
Max. Output Current (A)	21.7	42.5	45.5
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)		
Output THDi (@Nominal Output)	<3%	<3%	<3%
Current (inrush)	150	150	150
Maximum Output Fault Current	120	120	120
Maximum Output Over Current Protection (A)	80	90	90
Efficiency			
Max. Efficiency	97.7%	97.8%	97.8%
European Efficiency	97.3%	97.5%	97.5%
Protection			
Anti-islanding Protection	Integrated	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated	Integrated
Insulation Resistor Detection	Integrated	Integrated	Integrated
DC SPD Protection	Integrated (Type II)	Integrated (Type II)	Integrated (Type II)
AC SPD Protection	Integrated (Type II)	Integrated (Type II)	Integrated (Type II)
Residual Current Monitoring Unit	Integrated	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated	Integrated
Output Short Protection	Integrated	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated	Integrated
Protective Class	DC II; AC III	DC II; AC III	DC II; AC III
Decisive Voltage Classification (DVC)	C	C	C
General Data			
Operating Temperature Range (°C)	-25~60	-25~60	-25~60
Relative Humidity	0~100%	0~100%	0~100%
Cooling	Natural Convection	Natural Convection	Natural Convection
User Interface	LCD&LED	LCD&LED	LCD&LED
Communication	Wi-Fi / RS485 / LAN(Optional)	Wi-Fi / RS485 / LAN(Optional)	Wi-Fi / RS485 / LAN(Optional)
Weight (kg)	22.5	22.5	22.5
Size (Width*Height*Depth mm)	511*415*175	511*415*175	511*415*175
Protection Degree	IP65	IP65	IP65
Night Self Consumption (W)	<1	<1	<1
Topology	Transformerless	Transformerless	Transformerless



GEP 12-36kW

3 MPPT | Three-phase

Technical Data		GEP29.9-10
PV String Input Data		
Max. DC Input Power (W)		45000
Max. DC Input Voltage (V)		1100
MPPT Range (V)		200~950
Start-up Voltage (V)		180
Nominal DC Input Voltage (V)		600
Max. Input Current (A)		26/26/26
Max. Short Current (A)		33/33/33
No. of MPP Trackers		3
No. of Input Strings per Tracker		2/2/2
AC Output Data		
Nominal Output Power (W)		29900
Max. Output Power (W)		29900
Max. Output Apparent Power (VA)		29900
Nominal Output Voltage (V)		400, 3L/N/PE or 3L/PE
Nominal Output Frequency (Hz)		50/60
Max. Output Current (A)		43.3
Output Power Factor		~1 (Adjustable from 0.8 leading to 0.8 lagging)
Output THDi (@Nominal Output)		<3%
Efficiency		
Max. Efficiency		98.3%
European Efficiency		98%
Protection		
Anti-islanding Protection		Integrated
Input Reverse Polarity Protection		Integrated
PV String Current Monitoring		Integrated
Anti-PID Function for Module		Optional
DC Surge Protection		Type II
AC Surge Protection		Type II
Residual Current Monitoring Unit		Integrated
Output Over Current Protection		Integrated
Output Short Protection		Integrated
Output Over Voltage Protection		Integrated
General Data		
Operating Temperature Range (°C)		-30~60
Relative Humidity		0~100%
Operating Altitude (m)		≤3000
Cooling		Fan Cooling
User Interface		LCD & LED or APP & LED
Communication		RS485, WiFi
Weight (kg)		40
Size (Width*Height*Depth mm)		480*590*200
Protection Degree		IP65
Night Self Consumption (W)		<1
Topology		Transformerless



GEP 30-60kW

Up to 6 MPPT | Three-phase

Technical Data	GEP50-10	GEP60-10
PV String Input Data		
Max. DC Input Power (W)	75000	90000
Max. DC Input Voltage (V)	1100	1100
MPPT Range (V)	200~950	200~950
Start-up Voltage (V)	180	180
Nominal DC Input Voltage (V)	600	600
Max. Input Current (A)	26/26/26/26/26	26/26/26/26/26/26
Max. Short Current (A)	33/33/33/33/33	33/33/33/33/33/33
No. of MPP Trackers	5	6
No. of Input Strings per Tracker	2/2/2/2/2	2/2/2/2/2/2
AC Output Data		
Nominal Output Power (W)	50000	60000
Max. Output Power (W)	55000	66000
Max. Output Apparent Power (VA)	55000	66000
Nominal Output Voltage (V)	400, 3L/N/PE or 3L/PE	400, 3L/N/PE or 3L/PE
Nominal Output Frequency (Hz)	50/60	50/60
Max. Output Current (A)	80	96
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)	
Output THDi (@Nominal Output)	<3%	<3%
Efficiency		
Max. Efficiency	98.3%	98.3%
European Efficiency	98%	98.0%
Protection		
Anti-islanding Protection	Integrated	Integrated
Input Reverse Polarity Protection	Integrated	Integrated
PV String Current Monitoring	Integrated	Integrated
Anti-PID Function for Module	Optional	Optional
DC Surge Protection	Type II(Type I optional)	Type II(Type I optional)
AC Surge Protection	Type II	Type II
Residual Current Monitoring Unit	Integrated	Integrated
Output Over Current Protection	Integrated	Integrated
Output Short Protection	Integrated	Integrated
Output Over Voltage Protection	Integrated	Integrated
General Data		
Operating Temperature Range (°C)	-30~60	-30~60
Relative Humidity	0~100%	0~100%
Operating Altitude (m)	≤3000	≤3000
Cooling	Fan Cooling	Fan Cooling
User Interface	LCD & LED or APP & LED	LCD & LED or APP & LED
Communication	RS485, WiFi	RS485, WiFi
Weight (kg)	55	55
Size (Width*Height*Depth mm)	520*660*220	520*660*220
Protection Degree	IP65	IP65
Night Self Consumption (W)	<1	<1
Topology	Transformerless	Transformerless



GEH 5-10kW

Up to 4 MPPT | Single-phase Hybrid

Technical Data	GEH5.0-1U-10		GEH8.6-1U-10	GEH10-1U-10*7
Battery Input Data				
Battery Type	Li-Ion (BYD HVM&HVS, LG RESH10-TypeR, GOODWE LX S-H)			
Battery Voltage Range (V)*1	80~495			
Max. Charging Current (A)	50			
Max. Discharging Current (A)	50			
Charging Strategy for Li-Ion Battery	Self-adaption to BMS			
PV String Input Data				
Max. DC Input Power (W)	7500	12900	15000	
Max. DC Input Voltage (V)*2	600			
MPPT Range (V)*3	80~550			
Start-up Voltage (V)	95			
MPPT Range for Full Load (V)	200~500	255~500	300~500	
Nominal DC Input Voltage (V)	380			
Max. Input Current (A)	13/13/13	13/13/13/13		
Max. Short Current (A)	16.3/16.3/16.3	16.3/16.3/16.3/16.3		
No. of MPP Trackers	3	4		
No. of Strings per MPP Tracker	1/1/1	1/1/1/1		
AC Output Data (On-grid)				
Nominal Output Voltage (V)	230 Australia/220 Brazil			
Nominal Output Frequency (Hz)	50 Australia/60 Brazil			
Max. Apparent Power Output to Grid (VA)*4	5000	8600	9500 (@220Vac); 10000 (@240Vac)	
Max. Apparent Power from Grid (VA)	6000	10000	10000	
Max. AC Current Output to Grid (A)*4	23	39	43.5	
Max. AC Current From Grid (A)	27	45.5	45.5	
Output Power Factor	~1 (Adjustable from 0.8 leading to 0.8 lagging)			
Output THDi (@Nominal Output)	<3%			
AC Output Data (Back-up)				
Nominal Output Voltage (V)	230 (±2%)			
Nominal Output Frequency (Hz)	50 Australia/60 Brazil (±0.2%)			
Automatic Switch Time (ms)	<10			
Output THDv (@Linear Load)	<3%			
Max. Continuous Output Apparent Power (VA)	5000	8600	9500 (@220Vac); 10000 (@230Vac)	
Peak Output Apparent Power (VA)*5	6000, 60sec	10320, 60sec	12000, 60sec	
Max. Continuous Output Current (A)	23	39	43.5	
Efficiency				
PV Max. Efficiency	97.6%			
PV CEC Efficiency	97.0%			
Battery Charged By PV Max. Efficiency	98.2%			
Battery Charge/discharge to AC Max. Efficiency	96.5%			
Protection				
PV Arc Fault Detection	Optional			
Rapid Shutdown System (RSS) Transmitter	Optional			
DC&AC Breaker, AC Bypass Switch	Integrated			
AC&DC SPD Type II	Integrated			
Anti-islanding Protection	Integrated			
PV String Input Reverse Polarity Protection	Integrated			
Insulation Resistor Detection	Integrated			
Residual Current Monitoring Unit	Integrated			
Output Over Current Protection	Integrated			
Back-up Output Short Protection	Integrated			
Output Over Voltage Protection	Integrated			
Battery Input Reverse Polarity Protection	Integrated			
General Data				
Operating Temperature Range (°C)	-35~60			
Relative Humidity	0~95%			
Operating Altitude (m)	≤4000			
Cooling	Intelligent Fan			
Noise (dB)	<50			
User Interface	LED & APP (WiFi & Bluetooth)			
DC&AC Power Connect Port	MC4 & ADAPTER WIELAND			
Communication with BMS	RS485; CAN			
Communication with Meter	RS485			
Communication with EMS	RS485 (Insulated)			
Communication with Portal	Wi-Fi			
Communication with RSD	SUNSPEC			
Weight	28.8kg	32.3kg		
Size (Width*Height*Depth mm)	415*791*175			
Mounting	Wall Bracket			
Protection Degree	IP65			
Standby Self Consumption (W)*6	<20			
Topology	Transformerless			

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

*6: No Back-up Output.

*7: The model name does not represent the rated power, please refer to the marked parameters for details.



Intelligence Switched On

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