

HD-Wave Genesis Inverter

for Australia

SE3000H, SE5000H, SE6000H, SE8250H, SE10000H

INVERTERS



DC-optimised residential PV system that easily fits any roof

- Single string design for inverters up to 5kW AC
- Rapid inverter commissioning via smartphone using SetApp
- Faster, simpler installations with maximum design flexibility
- Advanced safety features including SafeDC™ and integrated arc fault protection
- Record-breaking inverter efficiency for more energy production
- Compact, lightweight and easy to install
- Specifically designed to work with SolarEdge power optimisers for higher energy yield
- Supports Wi-Fi communications (sold separately)
- Battery-ready solution supporting on-grid storage
- IP65-rated, suitable for outdoor and indoor installation

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	SE3000H	SE5000H	SE6000H	SE8250H	SE10000H	
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXXXH-AULXXBXX4					
OUTPUT						
Rated AC Power Output	3000	5000	6000	8250	10000	VA
Maximum AC Power Output	3000	5000	6000	8250	10000	VA
AC Output Voltage (Nominal)	220/230					Vac
AC Output Voltage Range	184 - 264.5					Vac
AC Frequency (Nominal)	50/60 ± 5%					Hz
Maximum Continuous Output Current	14	23	27.5	37.5	45.5	A
Total Harmonic Distortion (THD)	< 3					%
Power Factor	1, adjustable -0.8 to 0.8					
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes					
Short Circuit Current from the PV Array	14	23	27.5	37.5	45.5	A
INPUT						
Maximum DC Power	4650	7750	9300	12785	15500	W
Transformer-less, Ungrounded	Yes					
Maximum Input Voltage	480					Vdc
Nominal DC Input Voltage	380		400			Vdc
Maximum Input Current	9	13.5	16.5	22	25.5	Adc
Reverse-Polarity Protection	Yes					
Ground-Fault Isolation Detection	600kΩ sensitivity per unit					
Maximum Inverter Efficiency	99.2					%
European Weighted Efficiency	98.8	99				%
Nighttime Power Consumption	< 2.5					W
ADDITIONAL FEATURES						
Supported Communication Interfaces	RS485, Ethernet, Wi-Fi (optional) ⁽¹⁾					
Smart Energy Management ⁽²⁾	Export limitation					
Arc Fault Protection	Integrated, user configurable (according to UL1699B)					
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection					
STANDARD COMPLIANCE						
Safety	IEC62109, AS/NZS3100					
Grid Connection Standards	AS/NZS4777:2015					
Emissions	IEC61000-6-2, IEC61000-6-3, IEC61000-3-11, IEC61000-3-12, FCC Part 15 Class B					
INSTALLATION SPECIFICATIONS						
AC Output Conduit Size / Wire Cross Section	25mm maximum / 1-13 mm ²					
DC Input Conduit Size / # of Strings / Wire Cross Section	25mm maximum / 1-2 strings / 1-13 mm ²			25mm maximum / 1-3 strings / 1-13 mm ²		
Dimensions with Safety Switch (H x W x D)	450 x 370 x 174			540 x 370 x 185		mm
Weight with Safety Switch	10	11.4	11.9	17.6		kg
Noise	< 25			< 50		dBA
Cooling	Natural convection					
Operating Temperature Range	-40 to +60 ⁽³⁾					°C
Protection Rating	IP65, suitable for outdoor and indoor installations					
Maximum Altitude	3000					m

(1) Wi-Fi connectivity requires connection of an additional Wi-Fi component, ordered separately. For more details ask your SolarEdge sales person or refer to: <https://www.solaredge.com/aus/products/communication>

(2) To support export limitation, the SolarEdge energy meter is required. For more details ask your SolarEdge sales person or refer to: <https://www.solaredge.com/aus/products/metering-and-sensors/solaredge-modbus-meter#/>

(3) Full power up to at least 50°C. For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf>

Power Optimiser For Australia

S440, S500



POWER OPTIMISER

PV power optimisation at the module-level

- Specifically designed to work with SolarEdge inverters
- Detects abnormal PV connector behavior, preventing potential safety issues*
- Module-level voltage shutdown for installer and firefighter safety
- Superior efficiency (99.5%)
- Mitigates all types of modules mismatch-loss, from manufacturing tolerance to partial shading
- Flexible system design and compatible with bifacial PV modules for maximum space utilization
- Faster installations with simplified cable management and easy assembly using a single bolt
- Next generation maintenance with module safety

* Functionality subject to inverter model and firmware version

/ Power Optimiser For Australia

S440, S500

	S440	S500	Unit
INPUT			
Rated Input DC Power ⁽¹⁾	440	500	W
Absolute Maximum Input Voltage (Voc)	60		Vdc
MPPT Operating Range	8 - 60		Vdc
Maximum Short Circuit Current (Isc) of connected PV Module	14.5	15	Adc
Maximum Efficiency	99.5		%
Weighted Efficiency	98.8		%
Overvoltage Category	II		
Input Overcurrent Protection	15		Adc
OUTPUT DURING OPERATION			
Maximum Output Current	15		Adc
Maximum Output Voltage	60		Vdc
OUTPUT DURING STANDBY (POWER OPTIMISER DISCONNECTED FROM INVERTER OR INVERTER OFF)			
Safety Output Voltage per Power Optimiser	1		Vdc
STANDARD COMPLIANCE			
EMC	FCC Part 15 Class B, IEC61000-6-2, IEC61000-6-3		
Safety	IEC62109-1 (class II safety), UL1741		
RoHS	Yes		
Fire Safety	VDE-AR-E 2100-712:2013-05		
INSTALLATION SPECIFICATIONS			
Maximum Allowed System Voltage	1000		Vdc
Dimensions (W x L x H)	129 x 155 x 30		mm
Weight (including cables)	655 / 1.5		gr / lb
Input Connector	MC4 ⁽²⁾		
Input Wire Length	0.1		m
Output Connector	MC4		
Output Wire Length	(+) 2.3, (-) 0.10		m
Operating Temperature Range ⁽³⁾	-40 to +85		°C
Protection Rating	IP68 / NEMA6P		
Relative Humidity	0 - 100		%

(1) Rated power of the module at STC will not exceed the Power Optimiser Rated Input DC Power. Modules with up to +5% power tolerance are allowed

(2) For other connector types please contact SolarEdge

(3) For ambient temperature above +70°C / +158°F power de-rating is applied. Refer to Power Optimisers Temperature [De-Rating Technical Note](#) for more details

PV System Design Using a SolarEdge Inverter	Genesis / Energy Hub	Three Phase Residential	Three Phase Commercial	
Minimum String Length	8	9	16	
Maximum String Length	25		50	
Maximum nominal power per string ⁽⁴⁾	5700 (6000 with SE8250H / SE10000H)	5625	11250 ⁽⁵⁾	W

4) If the inverters rated AC power \leq maximum nominal power per string, then the maximum power per string will be able to reach up to the inverters maximum input DC power

Refer to: <https://www.solaredge.com/sites/default/files/se-single-string-power-optimizer-application-note-aus.pdf>

5) When using more than a single string, it is allowed to install up to 13500W per string when the maximum power difference between each string is up to 2000W

6) It is not allowed to mix S-series and P-series Power Optimisers in new installations

