

# Three Phase Inverters with Synergy Technology

for Australia

SE50K / SE82.8K

# INVERTERS



## Specifically designed to work with power optimisers

- Easy two-person installation – each unit mounted separately, equipped with cables for simple connection between units
- Balance of System and labor reduction compared to using multiple smaller string inverters
- Independent operation of each unit enables higher uptime and easy serviceability
- No wasted ground area: wall/rail mounted or horizontally mounted under the modules (10° inclination)
- Built-in module-level monitoring with Ethernet or cellular GSM
- Fixed voltage inverter for superior efficiency (98.3%) and longer strings
- Integrated Connection Unit with optional integrated DC Safety Switch
- Built-in RS485 Surge Protection, to better withstand lightning events

# / Three Phase Inverter with Synergy Technology for Australia

## SE50K / SE82.8K

	SE50K	SE82.8K	
<b>OUTPUT</b>			
Rated AC Power Output	49900	82800	VA
Maximum AC Power Output	49900	82800	VA
AC Output Voltage — Line to Line / Line to Neutral (Nominal)	400/230		Vac
AC Output Voltage — Line to Line Range; Line to Neutral Range	320 - 460 / 184 - 264.5		Vac
AC Frequency	50 ± 5%		Hz
Maximum Continuous Output Current (per Phase) @Vac,nom	76	120	A
Grids Supported — Three Phase	3 / N / PE (WYE with Neutral)		V
Maximum Residual Current Injection	250 per unit <sup>(1)</sup>		mA
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes		
<b>INPUT</b>			
Maximum DC Power (Module STC), Inverter / Unit	67365 / 33680	111780 / 37260	W
Transformer-less, Ungrounded	Yes		
Maximum Input Voltage DC to GND	415		Vdc
Maximum Input Voltage DC+ to DC-	830		Vdc
Nominal DC Input Voltage DC to GND	375		Vdc
Nominal DC Input Voltage DC+ to DC-	750		Vdc
Maximum Input Current	2 x 37	3 x 40	Adc
Reverse-Polarity Protection	Yes		
Ground-Fault Isolation Detection	350kΩ Sensitivity per Unit		
Maximum Inverter Efficiency	98.3		%
European Weighted Efficiency	98		%
Nighttime Power Consumption	< 8	< 12	W
<b>ADDITIONAL FEATURES</b>			
Supported Communication Interfaces <sup>(2)</sup>	RS485, Ethernet, ZigBee (optional), Cellular (optional), Wi-Fi (optional)		
RS485 Surge Protection	Built-in		
Cable Covers	Ordered separately with part number: DCD-SGY-COVER-LP (for SE50K) DCD-SGY-COVER-HP (for SE82.8K) ; Dimensions (H x W x D) – 314.3 x 343.7 x 134.5 mm		
<b>DC CONNECTION UNIT</b>			
DC Disconnect	830V / 2 x 40A	830V / 3 x 40A	
<b>STANDARD COMPLIANCE</b>			
Safety	IEC-62109, AS3100		
Grid Connection Standards <sup>(3)</sup>	VDE-AR-N-4105, G59/3, AS-4777, EN 50438 , CEI-021, VDE 0126-1-1, CEI-016, BDEW		
Emissions	IEC61000-6-2, IEC61000-6-3 , IEC61000-3-11, IEC61000-3-12		
RoHS	Yes		
<b>INSTALLATION SPECIFICATIONS</b>			
Number of Units	2	3	
AC Output Conduit Size / Max cross section / Max PE Cross Section	40mm / 70mm <sup>2</sup> / 35mm <sup>2</sup>	50mm / 95mm <sup>2</sup> / 50mm <sup>2</sup>	
DC Input Conduit Size / Terminal Block Cross Section Range / Number of PV Arrays	2x25mm / 6 - 35mm <sup>2</sup> / 2x PV Arrays	3x25mm / 6 - 35mm <sup>2</sup> / 3x PV Arrays	
AC Output Wire	Aluminum or Copper; L, N: Up to 70, PE: Up to 35	Aluminum or Copper; L, N: Up to 95, PE: Up to 50	mm <sup>2</sup>
Dimensions (H x W x D)	Primary Unit: 940 x 315 x 260; Secondary Unit: 540 x 315 x 260		mm
Weight	Primary Unit: 48; Secondary Unit: 45		kg
Operating Temperature Range	-40 to +60 <sup>(4)</sup>		°C
Cooling	Fan (user replaceable)		
Noise	< 60		dBA
Protection Rating	IP65 — Outdoor and Indoor		
Mounting	Bracket provided		

<sup>(1)</sup> If an external RCD is required, its trip value must be ≥ 300mA per unit (≥ 600mA for SE50K; ≥ 900mA for SE82.8K)

<sup>(2)</sup> Refer to Datasheets -> Communications category on Downloads page for specifications of optional communication options: <http://www.solaredge.com/groups/support/downloads>

<sup>(3)</sup> For all standards refer to Certifications category on Downloads page: <http://www.solaredge.com/groups/support/downloads>

<sup>(4)</sup> For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf>