

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 | |
|--|--|--|-----------------|
| OUTPUT | | | |
| 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 ⁽¹⁾ | | mA |
| Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds | Yes | | |
| INPUT | | | |
| 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 |
| ADDITIONAL FEATURES | | | |
| Supported Communication Interfaces ⁽²⁾ | 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 | | |
| DC CONNECTION UNIT | | | |
| DC Disconnect | 830V / 2 x 40A | 830V / 3 x 40A | |
| STANDARD COMPLIANCE | | | |
| Safety | IEC-62109, AS3100 | | |
| Grid Connection Standards ⁽³⁾ | 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 | | |
| INSTALLATION SPECIFICATIONS | | | |
| Number of Units | 2 | 3 | |
| AC Output Conduit Size / Max cross section / Max PE Cross Section | 40mm / 70mm ² / 35mm ² | 50mm / 95mm ² / 50mm ² | |
| DC Input Conduit Size / Terminal Block Cross Section Range / Number of PV Arrays | 2x25mm / 6 - 35mm ² / 2x PV Arrays | 3x25mm / 6 - 35mm ² / 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 ² |
| 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 ⁽⁴⁾ | | °C |
| Cooling | Fan (user replaceable) | | |
| Noise | < 60 | | dBA |
| Protection Rating | IP65 — Outdoor and Indoor | | |
| Mounting | Bracket provided | | |

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

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

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

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