

Three Phase Inverter with Synergy Technology

SE50K / SE55K / SE82.8K



INVERTERS

Specifically designed to work with power optimizers

- 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 – eliminates the need for external DC isolators
- Built-in RS485 Surge Protection, to better withstand lightning events
- Advanced safety features - integrated arc fault protection and optional rapid shutdown

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| | SE50K ⁽¹⁾ | SE55K | SE82.8K | |
|--|--|---------------|--|-----------------|
| OUTPUT | | | | |
| Rated AC Power Output | 50000 ⁽²⁾ | 55200 | 82800 | VA |
| Maximum AC Power Output | 50000 ⁽²⁾ | 55200 | 82800 | VA |
| AC Output Voltage — Line to Line / Line to Neutral (Nominal) | 380/220 ; 400/230 | | | Vac |
| AC Output Voltage — Line to Line Range / Line to Neutral Range | 304 - 437 / 176 - 253 ; 320 - 460 / 184 - 264.5 | | | Vac |
| AC Frequency | 50/60 ± 5 | | | Hz |
| Maximum Continuous Output Current (per Phase) @Vac,nom | 76 | 80 | 120 | A |
| Grids Supported — Three Phase | 3 / N / PE (WYE with Neutral) | | | V |
| Maximum Residual Current Injection | 250 per unit ⁽³⁾ | | | mA |
| Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds | Yes | | | |
| INPUT | | | | |
| Maximum DC Power (Module STC), Inverter / Unit | 67500 / 33750 | 74520 / 37260 | 111750 / 37250 | W |
| Transformer-less, Ungrounded | Yes | | | |
| Maximum Input Voltage | 1000 | | | Vdc |
| Nominal DC Input Voltage | 750 | | | Vdc |
| Maximum Input Current | 2 x 37 | 2 x 40 | 3 x 40 | Adc |
| Reverse-Polarity Protection | Yes | | | |
| Ground-Fault Isolation Detection | 350kΩ Sensitivity per Unit ⁽⁴⁾ | | | |
| Maximum Inverter Efficiency | 98.3 | | | % |
| European Weighted Efficiency | 98 | | | % |
| Nighttime Power Consumption | < 12 | | | W |
| ADDITIONAL FEATURES | | | | |
| Supported Communication Interfaces ⁽⁵⁾ | RS485, Ethernet, GSM plug-in (optional) | | | |
| RS485 Surge Protection | Built-in | | | |
| Rapid Shutdown | Optional ⁽⁶⁾ (Automatic upon AC Grid Disconnect) | | | |
| CONNECTION UNIT | | | | |
| DC Disconnect (optional) | 1000V / 2 x 40A | | 1000V / 3 x 40A | |
| STANDARD COMPLIANCE | | | | |
| Safety | IEC-62109, AS3100 | | | |
| Grid Connection Standards ⁽⁷⁾ | VDE-AR-N-4105, G99, 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 Cable | Cable gland — diameter 22-32; PE gland diameter 10-16 | | Cable gland — diameter 30-38; PE gland diameter 10-16 | mm |
| DC Input ⁽⁸⁾ | 6 strings, 4-10mm ² DC wire, gland outer diameter 5-10mm / 3 MC4 pairs per unit | | 9 strings, 4-10mm ² DC wire, gland outer diameter 5-10mm / 3 MC4 pairs per unit | |
| 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 ⁽⁹⁾ | | | °C |
| Cooling | Fan (user replaceable) | | | |
| Noise | < 60 | | | dBA |
| Protection Rating | IP65 — Outdoor and Indoor | | | |
| Mounting | Bracket provided | | | |

(1) Available in some countries. Refer to: https://www.solaredge.com/sites/default/files/se_inverters_supported_countries.pdf

(2) 49990 in the UK

(3) If an external RCD is required, its trip value must be ≥ 300mA per unit (≥ 600mA for SE50K/SE55K; ≥ 900mA for SE82.8K)

(4) Where permitted by local regulations

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

(6) Inverter with rapid shutdown part number: SExxK-RW/Rxxxxxx; Available for SE55K and SE82.8K

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

(8) The DC input type, MC4 or glands, and DC switch depends on the part number ordered. Inverter with glands and without DC switch P/N: SExxK-xx0P0BNG4, inverter with glands and without DC switch P/N: SExxK-xx0P0BNU4, inverter with MC4 and with DC switch P/N: SExxK-xx0P0BNU4, inverter with MC4 and without DC switch P/N: SExxK-xx0P0BNU4

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