



Three Phase Inverters for the 277/480V Grid for North America

SE10KUS / SE20KUS / SE30KUS / SE33.3KUS



INVERTERS

The best choice for SolarEdge enabled systems

- Specifically designed to work with power optimizers
- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Superior efficiency (98%)
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Built-in module-level monitoring
- Internet connection through Ethernet or Wireless
- Small, lightweight, and easy to install outdoors or indoors on provided bracket
- Fixed voltage inverter for longer strings
- Integrated Safety Switch
- Supplied with RS485 Surge Protection Device, to better withstand lightning events



Three Phase Inverters for the 277/480V Grid⁽¹⁾ for North America

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| | SE10KUS | SE20KUS | SE30KUS | SE33.3KUS | |
|---------------------------------------------------------------------------|--------------------------------------------------------------------------------------|---------|----------------------------------|-----------|---------|
| APPLICABLE TO INVERTERS WITH PART NUMBER | SEXXX-XXXXXBXX4 | | | | |
| OUTPUT | | | | | |
| Rated AC Power Output | 10000 | 20000 | 30000 | 33300 | VA |
| Maximum AC Power Output | 10000 | 20000 | 30000 | 33300 | VA |
| AC Output Line Connections | 3 phase, 4-wire / PE (L1-L2-L3-N), TN, TT | | | | |
| AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-N) | 244-277-305 | | | | Vac |
| AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-L) | 422.5-480-529 | | | | Vac |
| AC Frequency Min-Nom-Max ⁽²⁾ | 59.3 - 60 - 60.5 | | | | Hz |
| Max. Continuous Output Current (per Phase) | 12 | 24 | 36.5 | 40 | A |
| GFDI Threshold | 1 | | | | A |
| Utility Monitoring, Islanding Protection, Country Configurable Set Points | Yes | | | | |
| THD | ≤ 3 | | | | % |
| INPUT | | | | | |
| Maximum DC Power (Module STC) | 13500 | 27000 | 40500 | 45000 | W |
| Transformer-less, Ungrounded | Yes | | | | |
| Maximum Input Voltage DC to Gnd | 490 | | | | Vdc |
| Maximum Input Voltage DC+ to DC- | 1000 | | | | Vdc |
| Nominal Input Voltage DC to Gnd | 420 | | | | Vdc |
| Nominal Input Voltage DC+ to DC- | 840 | | | | Vdc |
| Maximum Input Current | 13.5 | 26.5 | 39 | 40 | Adc |
| Maximum Input Short Circuit Current | 45 | | | | Adc |
| Reverse-Polarity Protection | Yes | | | | |
| Ground-Fault Isolation Detection | 1MΩ Sensitivity | | 350kΩ Sensitivity ⁽³⁾ | | |
| CEC Weighted Efficiency | 98 | | 98.5 | | % |
| Night-time Power Consumption | < 3 | | < 4 | | W |
| ADDITIONAL FEATURES | | | | | |
| Supported Communication Interfaces | 2 x RS485, Ethernet, Built-in GSM (optional) | | | | |
| Inverter Commissioning | With the SetApp mobile application using built-in Wi-Fi station for local connection | | | | |
| Rapid Shutdown – NEC 2014 and 2017 690.12 | Automatic Rapid Shutdown upon AC Grid Disconnect ⁽⁴⁾ | | | | |
| RS485 Surge Protection | Supplied with the inverter | | | | |
| Smart Energy Management | Export Limitation | | | | |
| STANDARD COMPLIANCE | | | | | |
| Safety | UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCl according to T.I.L. M-07 | | | | |
| Grid Connection Standards | IEEE1547, Rule 21, Rule 14 (HI) | | | | |
| Emissions | FCC part15 class B | | | | |
| INSTALLATION SPECIFICATIONS | | | | | |
| AC output conduit size / AWG range | 3/4" minimum / 12-6 AWG | | 3/4" minimum / 8-4 AWG | | |
| DC input conduit size / AWG range | 3/4" minimum / 12-6 AWG | | | | |
| Number of DC inputs | 2 pairs | | 3 pairs ⁽⁵⁾ | | |
| Dimensions (H x W x D) | 21 x 12.5 x 10.5 / 540 x 315 x 260 | | | | |
| Dimensions with Safety Switch (H x W x D) | 30.5 x 12.5 x 10.5 / 775 x 315 x 260 | | | | |
| Weight | 73.2 / 33.2 | | 99.5 / 45 | | lb / kg |
| Weight with Safety Switch | 79.7 / 36.2 | | 106 / 48 | | lb / kg |
| Cooling | Fans (user replaceable) | | | | |
| Noise | < 50 | | < 55 | | dBA |
| Operating Temperature Range | -40 to +140 / -40 to +60 ⁽⁶⁾ | | | | |
| Protection Rating | NEMA 3R | | | | |

⁽¹⁾ For 120/208V inverters refer to: <https://www.solaredge.com/sites/default/files/se-three-phase-us-inverter-208v-setapp-datasheet.pdf>

⁽²⁾ For other regional settings please contact SolarEdge support

⁽³⁾ Where permitted by local regulations

⁽⁴⁾ P/Ns SE10K/SE20K-US0xxxxxx have Manual Rapid Shutdown for NEC 2014 compliance (NEC 2017 compliance with outdoor installation)

⁽⁵⁾ Field replacement kit for 1 pair of inputs P/N: DCD-3PH-1TBK; Field replacement kit for 3 pairs of fuses and holders P/N: DCD-3PH-6FHK-S1

⁽⁶⁾ For power de-rating information refer to: <https://www.solaredge.com/sites/default/files/se-temperature-derating-note-na.pdf>

