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

SE20KUS / SE30KUS / SE33.3KUS / SE40KUS

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
- Fixed voltage inverter for superior efficiency (98.5%) and longer strings
- Built-in type 2 DC and AC Surge Protection, to better withstand lightning events
- Small, lightest in its class, and easy to install outdoors or indoors on provided bracket
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- Built-in module-level monitoring with Ethernet, wireless or cellular communication for full system visibility
- Integrated Safety Switch
- UL1741 SA certified, for CPUC Rule 21 grid compliance

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

For North America

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MODEL NUMBER	SE20KUS	SE30KUS	SE33.3KUS	SE40KUS	UNITS
APPLICABLE TO INVERTERS WITH PART NUMBER	SEXXX - USXXXBXXX	SEXXX-USX8IXXXX			
OUTPUT					
Rated AC Power Output	20000	30000	33300	40000	W
Maximum apparent AC output power	20000	30000	33300	40000	VA
AC Output Line Connections	4W + PE	3W + PE, 4W + PE			
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
Maximum Continuous Output Current (per Phase)	24	36.25	40	48.25	Aac
GFDI Threshold	1				A
Utility Monitoring, Islanding Protection, Country Configurable Set Points	Yes				
Total Harmonic Distortion	≤ 3				%
Power Factor Range	+/- 0.85 to 1				
INPUT					
Maximum DC Power (Module STC)	27000	45000	50000	60000	W
Transformer-less, Ungrounded	Yes				
Maximum Input Voltage DC+ to DC-	1000				Vdc
Operating Voltage Range	840 - 1000				Vdc
Maximum Input Current	26.5	36.25	40	48.25	Adc
Maximum Input Short Circuit Current	33	55			Adc
Reverse-Polarity Protection	Yes				
Ground-Fault Isolation Detection	1MΩ Sensitivity	167kΩ Sensitivity ⁽³⁾			
CEC Weighted Efficiency	98	98.5			%
Night-time Power Consumption	<3	<4			W
ADDITIONAL FEATURES					
Supported Communication Interfaces	2 x RS485, Ethernet, Cellular (optional)				
Inverter Commissioning	With the SetApp mobile application using built-in access point for local connection				
Arc Fault Protection	Integrated, User Configurable (According to UL1699B)				
Rapid Shutdown	NEC2014, NEC2017 and NEC2020 compliant/certified				
RS485 Surge Protection Plug-in	Supplied with the inverter, Built-in				
DC Surge Protection	Type II, field replaceable, optional	Type II, field replaceable, Built-in			
AC Surge Protection	-	Type II, field replaceable, Built-in			
DC Fuses (Single Pole)	-	25A, Built-in			
Smart Energy Management	Export Limitation				
DC SAFETY SWITCH					
DC Disconnect	Integrated				
STANDARD COMPLIANCE					
Safety	UL1741, UL1741 SA, UL1699B, CSA C22.2, Canadian AFCI according to T.I.L. M-07				
Grid Connection Standards	IEEE1547, Rule 21, Rule 14 (HI)				
Emissions	FCC part15 class A				
INSTALLATION SPECIFICATIONS					
AC output conduit size / AWG range	3/4" minimum / 12-6 AWG	¾" or 1" / 6 - 10 AWG			
DC input conduit size / AWG range	¾" or 1" / 6 - 12 AWG				
Number of DC inputs pairs	2	4			
Dimensions with Safety Switch (H x W x D)	30.5 x 12.5 x 10.5 / 775 x 315 x 260	31.8 x 12.5 x 11.8 / 808 x 317 x 300			in / mm
Weight with Safety Switch	74.2 / 33.7	78.2 / 35.5			lb / kg
Cooling	Fans (user replaceable)				
Noise	< 50	< 62			dBa
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽⁴⁾				°F / °C
Protection Rating	NEMA 3R				
Mounting	Bracket provided				

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