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

SE10KUS / SE20KUS / SE30KUS / SE33.3KUS)



INVERTERS

The best choice for SolarEdge enabled systems

- Quick and easy inverter commissioning directly from a smartphone using the SolarEdge SetApp
- Specifically designed to work with power optimizers
- Superior efficiency (98%)
- Fixed voltage inverter for longer strings
- Integrated Safety Switch
- UL1741 SA certified, for CPUC Rule 21 grid compliance
- Integrated arc fault protection and rapid shutdown for NEC 2014 and 2017, per article 690.11 and 690.12
- Built-in module-level monitoring
- Internet connection through Ethernet or Wireless
- Small, lightweight, and easy to install outdoors or indoors on provided bracket
- 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					
OUTPUT					
Rated AC Power Output	10000	20000	30000	33300	VA
Maximum AC Power Output	10000	20000	30000	33300	VA
Output Line Connections	3 phase, 3-wire / PE (L1-L2-L3), TN, TT 3 phase, 4-wire / PE (L1-L2-L3-N), TN, TT				
AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-N)	244-277-305				
AC Output Voltage Minimum-Nominal-Maximum ⁽²⁾ (L-L)	422.5-480-529				
AC Frequency Min-Nom-Max ⁽²⁾	59.3 - 60 - 60.5				
x. Continuous Output Current (per Phase)	12	24	36.5	40	A
GFDI Threshold	1				
Utility Monitoring, Islanding Protection, Country Configurable Set Points	Yes				
THD	≤ 3				
INPUT					
Maximum DC Power (Module STC)	13500	27000	40500	40500	W
Transformer-less, Ungrounded	Yes				
Maximum Input Voltage DC to Gnd	490				
Maximum Input Voltage DC+ to DC-	1000				
Nominal Input Voltage DC to Gnd	420				
Nominal Input Voltage DC+ to DC-	840				
Maximum Input Current	13.5	26.5	39	40	Adc
Maximum Input Short Circuit Current	45				
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		
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 AFCI 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		
Weight with Safety Switch	79.7 / 36.2		106 / 48		
Cooling	Fans (user replaceable)				
Noise	< 50		< 55		
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-US0xxxxx 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>