

Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America
(Ground Mount Installation)

SE110KUS / SE120KUS



Powered by unique pre-commissioning process for rapid system installation

- Pre-commissioning feature for automated validation of system components and wiring during the site installation process and prior to grid connection
- Easy 2-person installation with lightweight, modular design (each inverter consists of 3 Synergy units and 1 Synergy Manager)
- Independent operation of each Synergy unit enables higher uptime and easy serviceability
- Built-in thermal sensors detect faulty wiring ensuring enhanced protection and safety
- Built-in arc fault protection
- Built-in PID mitigation for maximized system performance
- Monitored* and field-replaceable surge protection devices, to better withstand surges caused by lightning or other events
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

/ Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America (Ground Mount Installation)

SE110KUS / SE120KUS

MODEL NUMBER	SE110K	SE120K	UNITS
OUTPUT			
Rated AC Active Output Power	110000	120000	W
Maximum AC Apparent Output Power	120000	120000	VA
AC Output Line Connections	3W + PE, 4W + PE		
Supported Grids	WYE: TN-C, TN-S, TN-C-S, TT, IT; Delta: IT		
AC Output Voltage Minimum-Nominal-Maximum ⁽¹⁾ (L-N)	244 – 277 – 305		Vac
AC Output Voltage Minimum-Nominal-Maximum ⁽¹⁾ (L-L)	422.5 – 480 – 529		Vac
AC Frequency Min-Nom-Max ⁽¹⁾	59.5 – 60 – 60.5		Hz
Maximum Continuous Output Current (per Phase, PF=1)	144.3		Aac
GFDI Threshold	1		A
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes		
Total Harmonic Distortion	≤ 3		%
Power Factor Range	+/-0.2 to 1		
INPUT			
Maximum DC Power (Module STC) Inverter / Synergy Unit	210000 / 70000		W
Transformer-less, Ungrounded	Yes		
Maximum Input Voltage DC+ to DC-	1000		Vdc
Operating Voltage Range	840 – 1000		Vdc
Maximum Input Current	3 x 48.25		Adc
Reverse-Polarity Protection	Yes		
Ground-Fault Isolation Detection	167kΩ sensitivity per Synergy Unit ⁽²⁾		
CEC Weighted Efficiency	98.5		%
Nighttime Power Consumption	< 12		W
ADDITIONAL FEATURES			
Supported Communication Interfaces ⁽³⁾	2 x RS485, Ethernet, Wi-Fi (optional), Cellular (optional)		
Smart Energy Management	Export Limitation		
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection		
Arc Fault Protection	Built-in, User Configurable (According to UL1699B)		
PID Rectifier	Nighttime, built-in		
RS485 Surge Protection (ports 1+2)	Type II, field replaceable, integrated		
AC, DC Surge Protection	Type II, field replaceable, integrated		
DC SAFETY SWITCH			
DC Disconnect	Built-in		
STANDARD COMPLIANCE			
Safety	UL1699B, UL1741, UL1741 SA, UL1741 SB, UL1998, CSA C22.2#107.1, Canadian AFCI according to T.I.L. M-07		
Grid Connection Standards	IEEE 1547-2018, Rule 21, Rule 14 (HI)		
Emissions	FCC part 15 class A		

(1) For other regional settings please contact SolarEdge support.

(2) Where permitted by local regulations.

(3) For specifications of the optional communication options, visit the [Communication product page](#) or the [Resource Library](#) to download the relevant product datasheet.

/ Three Phase Inverter with Synergy Technology

For the 277/480V Grid for North America (Ground Mount Installation)

SE110KUS / SE120KUS

MODEL NUMBER	SE110K	SE120K	UNITS
INSTALLATION SPECIFICATIONS			
Number of Synergy Units per Inverter	3		
AC Max Conduit Size	2 1/2"		in
Max AC AWG Line / PE	4/0 / 1/0		
DC Max Conduit Size	1 x 3"; 2 x 2"		in
DC Inputs Inverter / Synergy Unit	12 / 4 pairs; 6 – 12 AWG		
	3 pairs / 1 pair, Max 2 AWG; copper or aluminum		
Dimensions (H x W x D)	Synergy Unit: 22 x 12.9 x 10.75 / 558 x 328 x 273 Synergy Manager: 14.17 x 22.4 x 11.6 / 360 x 560 x 295		in / mm
Weight	Synergy Unit: 70.4 / 32 Synergy Manager: 39.6 / 18		lb / kg
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽⁴⁾		°F / °C
Cooling	Fan (user replaceable)		
Noise	< 67		dBA
Protection Rating	NEMA 3R		
Mounting	Brackets provided		

(4) For power de-rating information refer to the [Temperature De-rating - Technical Note \(North America\)](#).

SolarEdge is a global leader in smart energy technology. By leveraging world-class engineering capabilities and with a relentless focus on innovation, SolarEdge creates smart energy solutions that power our lives and drive future progress.

SolarEdge developed an intelligent inverter solution that changed the way power is harvested and managed in photovoltaic (PV) systems. The SolarEdge DC optimized inverter maximizes power generation while lowering the cost of energy produced by the PV system.

Continuing to advance smart energy, SolarEdge addresses a broad range of energy market segments through its PV, storage, EV charging, UPS, and grid services solutions.

-  SolarEdge
-  @SolarEdgePV
-  @SolarEdgePV
-  SolarEdgePV
-  SolarEdge
-  www.solaredge.com/corporate/contact

solaredge.com

© SolarEdge Technologies, Ltd. All rights reserved. SOLAREEDGE, the SolarEdge logo, OPTIMIZED BY SOLAREEDGE are trademarks or registered trademarks of SolarEdge Technologies, Inc. All other trademarks mentioned herein are trademarks of their respective owners. Date: November 27, 2022 DS-000021-NAM Subject to change without notice.

Cautionary Note Regarding Market Data and Industry Forecasts: This brochure may contain market data and industry forecasts from certain third-party sources. This information is based on industry surveys and the preparer's expertise in the industry and there can be no assurance that any such market data is accurate or that any such industry forecasts will be achieved. Although we have not independently verified the accuracy of such market data and industry forecasts, we believe that the market data is reliable and that the industry forecasts are reasonable.



solaredge