

Three Phase Inverter

For the 277/480V Grid

SE40K



Specifically designed to work with power optimizers

- / Fixed voltage inverter for superior efficiency (98.1%) and longer strings
- / Quick and easy inverter commissioning directly from a smartphone using SolarEdge SetApp
- / Small, lightest in its class, and easy to install
- / Integrated type 2 DC Surge Protection, to better withstand lightning events
- / Optional RS485 and type 2 AC Surge Protection
- / Designed to automatically reduce high DC voltage to touch-safe levels, upon grid/inverter shutdown, with SafeDC™
- / Advanced safety features - integrated arc fault protection and optional rapid shutdown
- / Built-in module-level monitoring with Ethernet, wireless or cellular communication for full system visibility
- / Smart Energy Management control
- / IP65 outdoor and indoor installation
- / Optional integrated DC Safety Unit eliminates the need for external DC isolators
- / Future-ready for SolarEdge energy storage solution

/ Three Phase Inverter for the 277/480V Grid

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Applicable to inverters with part number	SEXXX-XXX8IXXXX	Units
SE40K		
OUTPUT		
Rated AC Power Output	40,000 ⁽¹⁾	W
Maximum Apparent AC Output Power	40,000	VA
AC Output Voltage – Line to Line / Line to Neutral (Nominal)	480 / 277	Vac
AC Output Voltage – Line to Neutral Range	244 – 305	Vac
AC Frequency	50/60 ± 5%	Hz
Maximum Continuous Output Current (per Phase)	48.25	Aac
AC Output Line Connections	3W + PE, 4W + PE	
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)	70,000	W
Transformer-less, Ungrounded	Yes	
Maximum Input Voltage DC+ to DC-	1000	Vdc
Operating Voltage Range	680 – 1000	Vdc
Maximum Input Current	48.25	Adc
Reverse-Polarity Protection	Yes	
Ground-Fault Isolation Detection	167kΩ Sensitivity ⁽²⁾	
Maximum Inverter Efficiency	98.1	%
European Weighted Efficiency	98	%
Nighttime Power Consumption	< 4	W
ADDITIONAL FEATURES		
Supported Communication Interfaces	2 x RS485, Ethernet, Wi-Fi (requires an antenna), 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	Integrated, User Configurable (according to UL1699B)	
Rapid Shutdown	Optional ⁽³⁾ (automatic upon AC grid disconnect)	
RS485 Surge Protection	Optional	
DC Surge Protection	Type II, field replaceable, integrated	
AC Surge Protection	Type II, field replaceable, optional	
DC SAFETY UNIT (OPTIONAL)		
2-pole Disconnection	1000 V / 48.25 A	
DC Fuses (Single Pole)	Optional, 25 A / 30 A	
Compliance	UTE-C15-712-1	
STANDARD COMPLIANCE		
Safety	IEC 62103 (EN50178), IEC 62109, AS3100	
Grid Connection Standards ⁽⁴⁾	VDE-AR-N-4110, CEI-016	
Emissions	IEC 61000-6-2, IEC 61000-6-3 Class A, IEC 61000-3-11, IEC 61000-3-12	
RoHS	Yes	
INSTALLATION SPECIFICATIONS		
AC Output Gland Diameter / Line Cross Section / PE Cross Section	Cable diameter 19 – 28 mm / 4 – 16 mm ² / 4 – 16 mm ²	
Inverter with Safety Unit AC Output Gland Diameter / Line Cross Section / PE Cross Section	Cable diameter 19 – 28 mm / 6 – 16 mm ² / 6 – 16 mm ²	
DC Input ⁽⁵⁾⁽⁶⁾	4 MC4 pairs	
DC Input with Safety Unit ⁽⁵⁾⁽⁶⁾	4 MC4 pairs	
	4 Strings: Gland: Cable outer diameter, 5 – 10 mm / Wire cross section 2.5 – 16 mm ²	
Dimensions (H x W x D)	550 x 317 x 273	
Dimensions with Safety Unit (H x W x D)	836 x 317 x 300 (DC MC4); 819 x 317 x 300 (DC Gland)	
Weight	32	
Weight with Safety Unit	36.5	
Operating Temperature Range	-40 to +60	
Cooling	Fan (user replaceable)	
Noise	< 62	
Protection Rating	IP65	
Mounting	Bracket Provided	

(1) For sites under VDE-AR-N 4110, consider this as a 36 kW (at 90% Unom) inverter for site capacity calculations.

(2) Where permitted by local regulations.

(3) Inverter with rapid shutdown part number: SEXXX-xxRxxxxxx.

(4) For all standards, refer to the [Knowledge Center](#).

(5) Only MC4 connectors manufactured by Staubi are approved for use.

(6) DC input available with MC4 or Gland connectors under the inverter part number. For more information, contact SolarEdge.