

SolarEdge TerraMax™ Inverter

600Vac for North America

SE250KUS / SE285KUS



Specially designed for ground mount community solar, agricultural, and floating installations, featuring a virtual central topology with single DC input architecture and module-level MPPTs

More Energy

- 99% efficiency
- 200% DC oversizing
- 100% power at high temperature levels
- Granular MPPT with DC optimization

Higher BoS Savings

- Longer and fewer strings, with up to 80 modules per string
- Enables virtual central topology
- Up to 50% BoS savings

Lower O&M Costs

- Fewer truck rolls with continuous and granular monitoring
- 100% visibility into system issues
- Reduced project schedule risks with pre-commissioning feature

Safe and Secure

- Designed with cybersecurity features and Multilayered protection from inverter to cloud
- Built-in SafeDC™: designed to automatically reduce high DC voltage to touch-safe levels in the event of faults and maintenance activities

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	SE250KUS	SE285KUS	Units
OUTPUT			
Rated AC Active Output Power	250,000 @ 45°C / 113°F	285,000 @ 45°C / 113°F	W
Maximum Apparent AC Power Output	285,000 @ 45°C / 113°F	285,000 @ 45°C / 113°F	VA
AC Output Voltage - Line to Line (Nominal)	600		Vac
AC Output Voltage - Line to Line (Range)	510 – 660		Vac
AC Frequency	60 ± 5%		Hz
Maximum Continuous Output Current (per Phase) @Nominal Voltage	276.1		Aac
AC Output Line Connections	3PH 3W + PE		
Total Harmonic Distortion	≤3		%
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes		
Power Factor Range	0.2 – 1 / leading, lagging		
INPUT			
Maximum DC Power (Module STC)	570,000	570,000	W
Maximum Input Voltage DC+ to DC-	1500		Vdc
Nominal DC Input Voltage DC+ to DC-	1250		Vdc
Maximum Input Current	203	231	Adc
Module-Level Optimization	Yes		
EFFICIENCY			
Maximum Efficiency / CEC Efficiency	99.2 / 99.0		%
PROTECTION FEATURES			
DC Reverse Polarity Protection	Yes		
Ground Fault Isolation Detection	Yes		
AC Surge Protection	Type 2, monitored and field replaceable		
DC Surge Protection	Type 2, monitored and field replaceable		
CAN, RS485 Surge Protection	Yes		
DC Disconnect	Yes, integrated		
RCD Protection	Yes		
AC Overcurrent Protection	Yes		
ADDITIONAL FEATURES			
Supported Communication Interfaces	CAN bus; RS485; Ethernet; WiFi; Cellular (optional)		
PID Protection	PID Rectifier		
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi access point for local connection		
Pre-Commissioning	Inverter activation and validation powered by PV modules		
Central Commissioning	Automated easy commissioning for several inverters at once		
VAR at Night	Yes		
STANDARD COMPLIANCE			
Safety	UL 1741; UL 1998; CSA C22.2#107.1		
Grid Connection Standards	UL 1741 SA; UL 1741 SB; IEEE 1547, Rule 21, Rule 14		
Emissions	FCC Part 15, Class A		
Advanced Grid Support Capabilities	L/HFRT; L/HVRT; VOLT-VAR; VOLT-Watt; Frequency-Watt; Ramp Rate Control; Fixed Power Factor; Fixed Q; Cos (Phi) / Watt		
RoHS	Yes		
GENERAL DATA			
Dimensions (W x H x D)	1090 x 914 x 416 / 42.9 x 35.9 x 16.4		mm / in
Weight	163 / 359		kg / lb
Operating Temperature Range ⁽¹⁾	-40 to +60 / -40 to +140		°C / °F
Relative Humidity	0 – 100		%
Cooling	Fans (field replaceable)		
Noise Emission	< 72		dBA
Protection Rating	IP66		
Mounting	Bracket provided		
Topology	Transformerless, ungrounded		
AC Connection ⁽²⁾	Up to 2 x 2.5" conduit, terminal lugs, maximum 600 kcmil per wire, Al or Cu		
DC Connection ⁽³⁾	Up to 2 x 3" conduit, terminal lugs, maximum 600 kcmil per wire, Al or Cu		

(1) For ambient temperatures above 113°F / +45°C power derating is applied. Refer to the [Temperature Derating](#) technical note for details.

(2) Two AC terminals per phase are available.

(3) Up to two DC terminals (+, -) are available.