Three Phase Inverter with Synergy Technology

For the 400/480V Grid for India

SE66.6K / SE90K / SE100K / SE120K

INVERTERS

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 2 or 3 Synergy Units and one 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 and optional rapid shutdown
- 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: integrated RS485 and Type 2 DC SPDs, optional Type 2 AC SPD
- Optional integrated DC safety switch eliminates the need for external DC isolators
- Built-in module-level monitoring with Ethernet or cellular communication for full system visibility

*Applicable only for DC and AC SPDs

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Applicable to inverter with part number	SExxK-xxxxIxxxx			SExxK-xxx8Ixxxx	
	SE66.6K for 400V Grid	SE90K for 400V Grid	SE100K for 400V Grid	SE120K for 480V Grid	UNIT
OUTPUT					
Rated AC Active Output Power(1)	66600	90000	100000	120000	W
Maximum AC Apparent Output Power(1)	66600	90000	100000	120000	VA
AC Output Voltage – Line to Line / Line to Neutral (Nominal)	400 / 230			480 / 277	Vac
AC Output Voltage – Line to Line Range / Line to Neutral Range	320 – 478 / 184 – 276			432 – 529 / 249 – 305	Vac
AC Frequency	50/60 ± 5%				Hz
Maximum Continuous Output Current (per Phase)	96.5	130.5	145	145	Aac
AC Output Line Connections	3W + PE, 4W + PE				
Supported Grids	WYE: TN-C, TN-S, TN-C-S, TT, IT; Delta: IT				
Maximum Residual Current Injection(2)	200	300			mA
Utility Monitoring, Islanding Protection, Configurable Power Factor, Country Configurable Thresholds	Yes				
Total Harmonic Distortion	≤ 3				%
Power Factor Range	+/-0.8 to 1				
INPUT					
Maximum DC Power (Module STC) Inverter / Synergy Unit	116550 / 58275	157500 / 52500	175000 / 58300	210000 / 70000	W
Transformer-less, Ungrounded	Yes				
Maximum Input Voltage DC+ to DC-	1000				Vdc
Operating Voltage Range	680 – 1000				Vdc
Maximum Input Current	2 x 48.25	3 x 43.5	3 x 48.25		Adc
Reverse-Polarity Protection	Yes				
Ground-Fault Isolation Detection	167kΩ Sensitivity per Synergy Unit(3)				
Maximum Inverter Efficiency	98.3			98.1	%
European Weighted Efficiency	98				%
Night Time Power Consumption	< 8	< 12			W
ADDITIONAL FEATURES					
Supported Communication Interfaces(4)	2 x RS485, Ethernet, Wi-Fi(5)				
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)				
Rapid Shutdown	Optional (automatic upon AC Grid Disconnect)				
PID Rectifier	Night time, built-in				
RS485 Surge Protection (ports 1+2)	Type II, field replaceable, integrated				
DC Surge Protection	Type II, field replaceable, integrated				
AC Surge Protection	Type II, field replaceable, optional				
DC Fuses (Single Pole)	25A, optional				
DC Disconnect Switch	Optional				
Pre-commissioning	Built-in(6)				
STANDARD COMPLIANCE					
Safety	IEC-62109-1, IEC-62109-2				
Grid Connection Standards(7)	VDE-AR-N-4105, AS-4777, EN 50549-1, EN 50549-2, CEI-021, VDE 0126-1-1, CEI-016, IEC61727, IEC62116				
Other	BIS, IEC61683, IEC61000-1, IEC61000-2, IEC61000-14, IEC61000-30, IEC60529				
Emissions	IEC61000-6-2, IEC61000-6-3 Class A, IEC61000-3-11, IEC61000-3-12				
RoHS	Yes				

(1) Maximum values at 400V / 230V.
(2) If an external RCD is required, its trip value must be ≥ 200mA for SE66.6K; ≥ 300mA for SE90K/SE100K/SE120K.
(3) Where permitted by local regulations.
(4) For specifications of the optional communication options, visit https://www.solaredge.com/products/communication or the Resource Library webpage: https://www.solaredge.com/resource-library, to download the relevant product datasheet.
(5) Wi-Fi connectivity requires an external antenna. For more information refer to: https://www.solaredge.com/sites/default/files/se-wifi-zigbee-antenna-datasheet.pdf.
(6) Not available for P/Ns SEXXK-XXXXBPXX.
(7) For all standards and certificates download, refer to the Certifications category on the Resource Library webpage: https://www.solaredge.com/resource-library.

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Applicable to inverter with part number	SExxK-xxxxIxxxx			SExxK-xxx8Ixxxx	
	SE66.6K for 400V Grid	SE90K for 400V Grid	SE100K for 400V Grid	SE120K for 480V Grid	UNIT
INSTALLATION SPECIFICATIONS					
Number of Synergy Units per Inverter	2	3			
AC Wire Cross Section and Outer Diameter: Line/PE (Aluminum or Copper)	Cross section up to 120 / 70 mm^2; outer diameter 30 – 50 / 12 – 20 mm				
DC Input: Inverter / Synergy Unit(8)	8 / 4 MC4 pairs	12 / 4 MC4 pairs			
Dimensions (H x W x D)	Synergy Unit: 558 x 328 x 273 Synergy Manager: 360 x 560 x 295				mm
Weight	Synergy Unit: 32 Synergy Manager: 18				kg
Operating Temperature Range	-40 to +60(9)				˚C
Cooling	Fan (user replaceable)				
Noise	< 67				dBA
Protection Rating	IP65 – outdoor and indoor				
Mounting	Brackets provided				

(8) Only MC4 connectors manufactured by Staubli are approved for use.
(9) For power de-rating information refer to: https://www.solaredge.com/sites/default/files/se-temperature-derating-note.pdf.

Accessories (purchased separately)	
Accessory	**P/N**
AC SPD kit for Synergy Manager (5 units per box)	SE-AC-SPD-SM
Antenna for Wi-Fi and ZigBee Wireless Communications	SE-ANT-ZB-WIFI-03

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.

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