Three Phase Inverter with Synergy Technology

For Israel

SE50K / SE55K / SE66.6K / SE90K / SE100K

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	IL00IBNQ4					
	SE50K	SE55K	SE66.6K	SE90K	SE100K	Units
OUTPUT						
Rated AC Active Output Power	50000	55200	66600	90000	100000	W
Maximum AC Apparent Output Power	50000	55200	66600	100000	100000	VA
AC Output Voltage - Line to Line / Line to Neutral (Nominal)	380 / 220; 400 / 230					Vac
AC Output Voltage - Line to Line / Line to Neutral (Range)	304 – 437 / 176 – 253; 320 – 478 / 184 – 264.5					Vac
AC Frequency	50/60 ± 5%					Hz
Maximum Continuous Output Current (per Phase)	72.5	80	96.5	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[1]	200			300		mA
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	87500 / 43750	96600 / 48300	116550 / 58275	157500 / 52500	175000 / 58300	W
Transformer-less, Ungrounded	Yes					
Maximum Input Voltage DC+ to DC-	1000					Vdc
Operating Voltage Range	680 – 1000					Vdc
Maximum Input Current	2 x 36.25	2 x 40	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[2]					
Maximum Inverter Efficiency	98.3					%
European Weighted Efficiency	98					%
Nighttime Power Consumption	< 8			< 12		W
ADDITIONAL FEATURES						
Supported Communication Interfaces[3]	2xRS485, 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)					
Rapid Shutdown	Optional (automatic upon AC Grid Disconnect)					
PID Rectifier	Nighttime, built-in					
Reactive Power at Night	Built-in, optional[4]					
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 Disconnect Switch	Built-in					
STANDARD COMPLIANCE						
Safety	IEC-62109-1, IEC-62109-2					
Grid Connection Standards[5]	VDE-AR-N-4105,AS-4777, EN 50549-1, EN 50549-2, CEI-021, VDE 0126-1-1, CEI-016					
Emissions	IEC61000-6-2, IEC61000-6-3 Class A, IEC61000-3-11, IEC61000-3-12					
RoHS	Yes					

(1) If an external RCD is required, its trip value must be ≥ 2 00mA f or SE50K/SE55K/SE66.6K; ≥ 300mA for SE90K/SE100K.
(2) Where permitted by local regulations.
(3) For specifications of the optional communication options, visit the Communication product page or the Knowledge Center to download the relevant product datasheet.
(4) For details, contact SolarEdge support.
(5) For all standards and certificates download, refer to the Certificates Document Type in the Knowledge Center.

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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[5]	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[6]					°C
Cooling	Fan (user replaceable)					
Noise	< 67					dBA
Protection Rating	IP65 – outdoor and indoor					
Mounting	Brackets provided					

(6) Only MC4 connectors manufactured by Staubli are approved for use.
(7) For power derating information refer to the Temperature Derating Technical Note.

Accessories - SPDs (purchased separately)	SExxK-ILx0Ixxxx
ACCESSORY	**PN**
AC SPD kits for 5 Synergy Managers	SE-AC-SPD-SM

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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