

SolarEdge Home Hub Inverter

Single Phase, for Canada

SE9600H-US



12-25
YEAR
WARRANTY

HOME BACKUP

SolarEdge's residential single-phase inverter for storage and backup applications

- ✓ The ultimate home energy manager in charge of PV production, battery storage, backup operation during a power outage*, EV Charging, and smart energy devices
- ✓ Record-breaking 99% weighted efficiency with up to 200% DC oversizing
- ✓ Able to start high LRA HVAC systems during backup operation
- ✓ Integrates seamlessly with the complete SolarEdge Home Smart Energy Ecosystem, through SolarEdge Home Network
- ✓ Module-level monitoring and visibility of battery status, PV production, and self-consumption data
- ✓ Fast and easy installation – small and lightweight, with reduced commissioning time
- ✓ A scalable solution that supports future homeowner needs through easy connection to a growing ecosystem of products
- ✓ Advanced safety features with integrated arc fault protection and rapid shutdown for 690.11 and 690.12
- ✓ Advanced reliability with automotive-grade components
- ✓ Embedded revenue grade production data, ANSI C12.20 Class 0.5
- ✓ NEMA 4X-rated, for indoor and outdoor installations
- ✓ Embedded Power Control System (PCS) – install larger systems while avoiding main panel upgrade

* Requires additional hardware and firmware version upgrade.

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Applicable to inverters with part number	SExxxxxH-USMNxBLx5 / USExxxxxH-USMNB75	
Model Number ⁽¹⁾	SE9600H-US	
OUTPUT – AC ON GRID		
Maximum AC Power Output	9600 @ 240V	W
AC Output Voltage (Nominal)	208 / 240	Vac
AC Output Voltage (Range)	183 – 264	Vac
AC Frequency Range (min - nom - max)	59.3 – 60 – 60.5 ⁽²⁾	Hz
Maximum Continuous Output Current	40 @ 240V	A
GFDI Threshold	1	A
Total Harmonic Distortion (THD)	< 3	%
Power Factor	1, adjustable -0.85 to 0.85	
Utility Monitoring, Islanding Protection, Country Configurable Thresholds	Yes	
Charge Battery from AC (if allowed)	Yes	
Typical Nighttime Power Consumption	< 2.5	W
OUTPUT – AC STANDALONE (BACKUP)⁽³⁾		
Rated AC Power in Standalone Operation	11,400	W
Maximum Continuous Output Current in Standalone Operation	48	A
Locked Rotor Amperage (LRA) ⁽⁴⁾	Up to 106	A
AC L-L Output Voltage Range in Standalone Operation	211 – 264	Vac
AC L-N Output Voltage Range in Standalone Operation	105 – 132	Vac
AC Frequency Range in Standalone Operation (min - nom - max)	55 – 60 – 65	Hz
GFDI	1	A
THD	< 5	%
INPUT – DC (PV AND BATTERY)		
Transformer-less, Ungrounded	Yes	
Maximum Input Voltage	480	Vdc
Nominal DC Input Voltage	380	Vdc
Reverse-Polarity Protection	Yes	
Ground-Fault Isolation Detection	600kΩ Sensitivity	
Maximum Input Short Circuit Current	45	Adc
Maximum Inverter Efficiency	99.2	%
CEC Weighted Efficiency	99	%
2-Pole Disconnection	Yes	
DC CONNECTION – PV		
Maximum Input Power	19,200 @ 240V	W
Maximum Input Current	51 @ 240V	Adc
Number of Ports	3	
Maximum Current per Port	40	Adc

(1) These specifications apply to inverters with part number SExxxxxH-USMNxBLx5 and USExxxxxH-USMNB75 and connection unit model number DCD-1PH-US-PxH-F-x.

(2) For other regional settings please refer to the [SolarEdge Inverters, Power Control Options](#) application note.

(3) Not designed for non-grid connected applications and requires AC for commissioning. Standalone (backup) functionality is only supported for the 240V grid.

(4) For more information about LRA (Locked Rotor Amperage) values, see the [SolarEdge Home Hub Inverter LRA](#) application note.

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DC CONNECTION – BATTERY		
Supported Battery Types	SolarEdge Home Battery 400V	
Number of Batteries per Inverter	Up to 3	
Maximum Continuous Power (Charge and Discharge) ⁽⁵⁾	11,400	W
Number of Ports	2	
Maximum Current per Port	40	Adc
2-pole Disconnection	Up to the inverter's rated standalone power	
SMART ENERGY CAPABILITIES		
Consumption Metering	Built-in ⁽⁶⁾	
Standalone & Battery Storage	With Backup Interface (purchased separately) for service up to 200A; up to 3 inverters	
EV Charging	Direct connection to the SolarEdge Home EV Charger ⁽⁷⁾	
ADDITIONAL FEATURES		
Supported Communication Interfaces	RS485, Ethernet, Cellular ⁽⁸⁾ , Wi-Fi ⁽⁹⁾ (optional), SolarEdge Home Network ⁽⁹⁾ (optional)	
Revenue Grade Metering, ANSI C12.20	Built-in ⁽⁶⁾	
Integrated AC, DC, and Communication Connection Unit	Yes	
Inverter Commissioning	With the SetApp mobile application using built-in Wi-Fi Access Point for local connection	
DC Voltage Rapid Shutdown (PV and Battery)	Yes, NEC 690.12	
STANDARD COMPLIANCE		
Safety	UL 1741, UL 1741SA, UL 1741SB, UL 1699B, CSA 22.2#107.1, C22.2#330, C22.3#9, ANSI/CAN/UL 9540	
Grid Connection Standards	IEEE1547-2018 and IEEE-1547.1 Rule 21, Rule 14H	
Emissions	FCC Part 15 Class B	
Power Control System (PCS)	UL 1741 PCS ⁽¹⁰⁾	
INSTALLATION SPECIFICATIONS		
AC Terminals	L1, L2, N terminal blocks, PE busbar for inverter connection L1, L2 terminal blocks, PE busbar for EV Charger AC connection	
DC Terminals	3 x terminal block pairs for PV input, 2 x terminal block pair for battery input	
AC Output and EV AC Output Conduit Size / AWG Range	1" maximum / 14 – 4 AWG	
DC Input (PV and Battery) Conduit Size / AWG Range	1" maximum / 14 – 6 AWG	
Dimensions with Connection Unit (H x W x D)	21.06 x 14.6 x 8.2 / 535 x 370 x 208	in / mm
Weight with Connection Unit	44.9 / 20.3	lb / kg
Noise	< 50	dBA
Cooling	Natural Convection	
Operating Temperature Range	-40 to +140 / -40 to +60 ⁽¹¹⁾	°F / °C
Protection Rating	NEMA 4X	

(5) Discharge power is limited up to the inverter's rated AC power for on-grid and standalone applications, as well as up to the installed batteries' rating.

(6) For consumption metering current transformers should be ordered separately: SECT-SPL-225A-T-20 or SEACT1250-400NA-20. Revenue grade metering is only for production metering.

(7) For more information about the SolarEdge Home EV Charger, refer to the [SolarEdge Home EV Charger](#) datasheet.

(8) Information concerning the data plan terms & conditions is available in [SolarEdge Communication Plan Terms and Conditions](#).

(9) SolarEdge Home Network Plugin ENET-HBNP-01 and Wi-Fi Antenna SE-ANT-ZBWIFI-KIT purchased separately. For more information, refer to the [SolarEdge Home Network Plugin](#) datasheet and the [Antenna for Wi-Fi and ZigBee Wireless Communications](#) datasheet.

(10) Only part numbers SExxxxxH-USMNxxx7x and USExxxxxH-USMNxxx7x support the PCS meter.

(11) Full power up to at least 122°F / 50°C; for power derating information refer to the [Temperature Derating for North America](#) technical note.

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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