# 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.

# SolarEdge Home Hub Inverter

## Single Phase, for Canada

SE9600H-US

| Applicable to inverters with part number | USExxxxH-USMNBE78 | |
|---|---|---|
| **Model Number(1)** | **SE9600H-US** | |
| **OUTPUT – AC ON GRID** | | |
| Maximum AC Power Output | 9600 @ 240 V<br>8300 @ 208 V | 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 | A |
| Maximum Fault Current / Duration | 90 / 50 | Aac / µs |
| 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(4) | 12,500(5)(6) | W |
| Maximum Continuous Output Current in Standalone Operation | 52 | A |
| Locked Rotor Amperage (LRA)(7) | 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 @ 240 V<br>16,600 @ 208 V | W |
| Maximum Input Current | 51 @ 240 V<br>44 @ 208 V | Adc |
| Number of Ports | 3 | |
| Maximum Current per Port | 40 | Adc |

(1) These specifications apply to inverters with part number USExxxxH-USMNBE78 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 240 V grid.
(4) The Rated AC Power in Standalone Operation is configurable between 11,400 W with a Maximum Continuous Output Current of 47.8 A, or 12,500 W with a Maximum Continuous Output Current of 52 A, from firmware version 4.23.xx.
(5) Operational only at ambient temperatures up to 86°F / 30°C. Above 86°F / 30°C, the Maximum Rated AC Power in Standalone Operation is 11,400 W.
(6) Available only for single inverter installations. In multi-inverter installations, the Maximum Rated AC Power in Standalone Operation is 11,400 W.
(7) For more information about LRA (Locked Rotor Amperage) values, see the SolarEdge Home Hub Inverter LRA application note.

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| Applicable to inverters with part number | USExxxxH-USMNBE78 | |
|---|---|---|
| **Model Number(1)** | **SE9600H-US** | |
| **DC CONNECTION – BATTERY** | | |
| Supported Battery Types | SolarEdge Home Battery 400V | |
| Number of Batteries per Inverter | Up to 3 | |
| Maximum Continuous Power (Charge and Discharge)(8) | 12,500 | 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(9) | |
| 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(10) | |
| **ADDITIONAL FEATURES** | | |
| Supported Communication Interfaces | RS485, Ethernet, Cellular(11), Wi-Fi (optional), SolarEdge Home Network(12) (optional) | |
| Revenue Grade Metering, ANSI C12.20 | Built-in(9) | |
| 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(13) | |
| **INSTALLATION SPECIFICATIONS** | | |
| AC Terminals | L1, L2, N terminal blocks, PE busbar for inverter connection<br>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(14) | ˚F / ˚C |
| Protection Rating | NEMA 4X | |

(8) 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.
(9) 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.
(10) For more information about the SolarEdge Home EV Charger, refer to the SolarEdge Home EV Charger datasheet.
(11) Purchased separately. Information concerning the data plan terms & conditions is available in SolarEdge Communication Plan Terms and Conditions.
(12) SolarEdge Home Network Plugin ENET-HBNP-01. For more information, refer to the SolarEdge Home Network Plugin datasheet.
(13) Only part numbers SExxxxxH-USMNxxx**7**x and USExxxxxH-USMNxx**7**x support the PCS meter. @
(14) 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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