IQ9S Commercial Microinverter

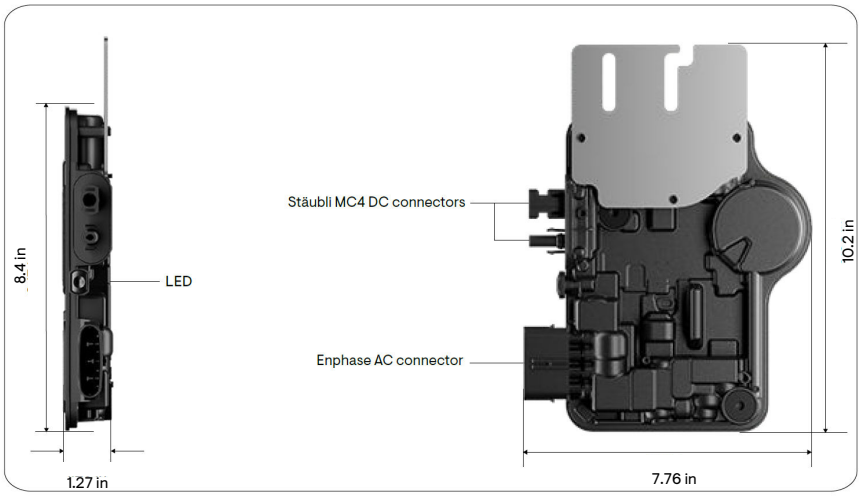
The high-powered, smart grid-ready IQ9S Commercial Microinverter supports 480 VAC three-phase commercial PV systems. It boosts energy harvesting and integrates with the IQ Gateway Commercial Pro, Enphase App, and analysis software for easy operation and maintenance.[1]



Enphase 25 year limited warranty

Intertek 5034331

Key specifications	IQ9S Commercial Microinverter
Order code	IQ9S-3P-277-B-DOM-US
Peak output power	548 VA
Nominal grid voltage	277 V_{L-N}
Nominal frequency	60 Hz
CEC weighted efficiency	97.5%
Operating voltage	18–65 V
Peak power tracking voltage	32–55 V
Maximum short-circuit DC input current	30 A
Ambient air temperature range	–40°F to 149°F (–40°C to 65°C)



The microinverter image above is for representation only.

Easy

- Lightweight design with easy plug-and-play connectors
- Power line communication (PLC) for quick and hassle-free setup

Smart

- Complies with the latest advanced grid support standards
- Remote automatic updates for current grid requirements
- Configurable to support a wide range of grid profiles
- Meets CA Rule 21 and IEEE 1547 (UL 1741-SA/SB) requirements

Reliable

- Over one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules
- Tailored solutions for different grid configurations, including 480 VAC WYE
- Industry-leading limited warranty of up to 25 years

[1] IQ9S-3P Microinverters are made in the U.S. The PCBA, electrical parts, and enclosure are domestically manufactured to meet the eligibility requirements for the ITC domestic content bonus adder.

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Input data (DC)	Units	IQ9S-3P-277-B-DOM-US
Commonly used module power for pairing	W	500–770[2]
Operating voltage	V	18–65
Minimum/Maximum startup input voltage	V	21/65
Maximum DC input voltage	V	70[3]
Peak power tracking voltage	V	32–55
Maximum DC continuous current (module I_{mp})	A	18
Maximum DC short-circuit current (module I_{sc})	A	24
Maximum short-circuit DC input current	A	30
DC port backfeed current	mA	0

Output data (AC)		
Peak output power[4]	VA	548
Maximum continuous output power[4]	VA	548
Nominal grid voltage[5]	V_{L-N}	277
Minimum/Maximum grid voltage	V_{L-N}	243/305
Maximum continuous output current	A	1.98
Nominal frequency	Hz	60
Maximum microinverters per 20 A 480 V WYE (277 L-N) three-phase branch circuit	—	24
Total harmonic distortion	%	<5
Power factor setting	—	1
Power factor range	—	0.85 leading ... 0.85 lagging
CEC weighted efficiency	%	97.5
Nighttime power consumption (tare loss)	mW	<250

Mechanical data	
Ambient air temperature range	–40°F to 149°F (–40°C to 65°C)
Relative humidity range	4% to 100% (condensing)
Overvoltage class AC port	III
AC connector type	Enphase QD 4-pin connector
DC connector type	MC4
Dimensions (H × W × D)	8.4" × 7.76" × 1.27" (215.1 mm × 197.3 mm × 32.3 mm) (without mounting brackets)
Weight	2.65 lb (1.2 kg)
Cooling	Natural convection—no fans
Enclosure	Class II double-insulated, corrosion-resistant polymeric enclosure
Environmental category/UV exposure rating	NEMA Type 6; outdoor
Altitude	Up to 9842 ft (3000 m)

[2] Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at https://enphase.com/installers/microinverters/calculator.
[3] When the ambient microinverter temperature is above 32°F (0°C), the maximum input voltage is limited to 65 V. Consider this when pairing the IQ9S-3P-277-B-DOM-US with solar panels with a VOC >60 V.
[4] IQ9 Commercial Microinverters generate a single-phase AC output. A three-phase configuration with phase balancing is achieved through the use of a three-phase QD Cable.
[5] The nominal voltage range can be configured if required by the utility. For interconnection with other system voltages, a transformer is required to connect to the grid.

Mechanical data	
Approved for wet locations	Yes

Communication	
Communication	Power line communication (PLC)
Monitoring	Enphase App monitoring and analysis software
Gateway compatibility	IQ Gateway Commercial Pro (GW0-1CL-1N-D0-0R)

Standards	
Grid compliance	CA Rule 21 and IEEE 1547 (UL 1741-SA/SB), UL 62109-1, UL 1741/IEEE 1547, FCC Part 15 Class B, ICES-0003 Class B, CAN/CSA-C22.2 No. 107.1-01. This product is UL Listed as PV rapid shutdown equipment and conforms with NEC 2014, NEC 2017, NEC 2020, and NEC 2023 section 690.12 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems for AC and DC conductors, when installed according to the manufacturer's instructions

Revision history

Revision	Date	Description
DSH-00913-6.0	October 2026	Removed footnote 1.
DSH-00913-5.0	July 2026	Corrected the SKU on footnote 4 to IQ9S-3P-277-B-DOM-US.
DSH-00913-4.0	June 2026	Initial release.
DSH-00913-3.0	March 2026	Updated the product image.
DSH-00913-2.0	February 2026	Added the maximum DC input voltage.
DSH-00913-1.0	January 2026	Preliminary release.