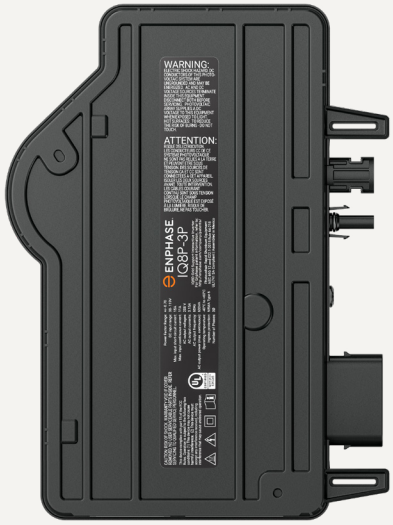

IQ8P-3P Microinverter

The high-powered, smart grid-ready Enphase IQ8P-3P Microinverter is specifically designed for 208Y VAC* three-phase interconnection for small commercial solutions.

Each microinverter integrates with the IQ Gateway Commercial 2 and the Enphase App monitoring and analysis software.

With simplified design, improved energy harvesting, and advanced monitoring, microinverters offer true peace of mind during operation and maintenance.

Enphase 25 year limited warranty

The IQ Series Microinverters extend the reliability standards set forth by previous generations and undergo over a million hours of power-on testing, enabling Enphase to provide an industry-leading warranty of up to 25 years.**

Easy to install

- Lightweight and compact with plug-and-play connectors
- Power line communication (PLC) between components
- Faster installation

High productivity and reliability

- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Smart grid-ready

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

* For more information refer to "Connecting IQ8 Commercial Microinverters to other voltages."
** 25-years warranty is valid, provided an internet-connected IQ Gateway is installed.

IQ8P-3P Microinverter

INPUT DATA (DC)	UNITS	IQ8P-3P-72-E-US/IQ8P-3P-72-E-DOM-US[1]	
Commonly used modules for pairing[2]	W	380–640	
Module compatibility[2]	–	54-cell/108-half-cell, 60-cell/120-half-cell, 66-cell/132-half-cell and 72-cell/144-half-cell	
Maximum input DC voltage	V	63	
Peak power tracking voltage	V	35.5–53	
Operating range	V	16–63	
Min./Max. start voltage	V	21/63	
Max. DC continuous current (module I_{mp})	A	14	
Max. input DC short-circuit current	A	25	
Max. DC short-circuit current (module I_{sc})	A	20	
Overvoltage class DC ports	–	II	
DC port backfeed current	A	0	
PV array configuration	–	1 × 1 ungrounded array; no additional DC side protection required; AC side protection requires max. 20 A per branch circuit	
OUTPUT DATA (AC)		**IQ8P-3P-72-E-US/IQ8P-3P-72-E-DOM-US[1]**	
Peak output power	VA	480	
Maximum continuous output power	VA	475	
Nominal (L-L) voltage/range[3]	V	208/183–229	220/198–242
Maximum continuous output current	A	2.28	2.16
Nominal frequency	Hz	60	
Extended frequency range	Hz	47–68	
AC short circuit fault current over three cycles	Arms	2.29	
Maximum microinverters per 20 A three-phase branch circuit[4]	–	12	
Overvoltage class AC port	–	III	
Power factor setting	–	1.0	
Power factor (adjustable)	–	0.85 leading ... 0.85 lagging	
EFFICIENCY		**IQ8P-3P-72-E-US/IQ8P-3P-72-E-DOM-US[1]**	
Peak efficiency	%	97.8	
CEC weighted efficiency	%	97.5	
MECHANICAL DATA		**IQ8P-3P-72-E-US/IQ8P-3P-72-E-DOM-US[1]**	
Ambient temperature range		–40°C to 65°C (–40°F to 149°F)	
Relative humidity range		4% to 100% (condensing)	
DC connector type[5]		Enphase EN4 bulkhead; ECA-EN4-S22-12 : EN4 (TE PV4-S SOLARLOK) 150 mm/5.9" to Stäubli MC4 adapter cable pair (default supply)[6]	
Dimensions (H × W × D)		265 mm × 200 mm × 35 mm (10.4" × 7.9" × 1.4") without bracket	
Weight		1.6 kg (3.5 lb)	
Cooling		Natural convection	
Approved for wet locations		Yes	
Enclosure		Class II double-insulated, corrosion-resistant polymeric enclosure	
Environmental category/UV exposure rating		Outdoor—NEMA Type 6/IP67	

FEATURES	IQ8P-3P-72-E-US/IQ8P-3P-72-E-DOM-US[1]
Communication	Power line communication (PLC)
Monitoring	Enphase App monitoring and analysis software. Both options require the installation of an IQ Gateway Commercial 2.
Compliance	CA Rule 21 (UL 1741-SB), UL 62109-1, UL1741/IEEE1547, 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, and NEC 2020 section 690.12, C22.1-2018 Rule 64-218 rapid shutdown of PV systems for AC and DC conductors, when installed according to manufacturer's instructions, and Build America, Buy America Act (BABA) and Buy American Act (BAA) compliance for IQ8P-3P-72-E-DOM-US.

[1] IQ8P-3P-72-E-DOM-US is made in the USA. The PCBA, electrical parts, and enclosure are domestically manufactured to meet the eligibility requirements for the ITC domestic content bonus adder.
[2] Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at https://link.enphase.com/module-compatibility.
[3] Nominal voltage range can be configured if required by the utility. For interconnection to system voltages other than 208Y VAC three-phase, a transformer is required to connect to the grid.
[4] Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.
[5] Enphase IQ8P-3P Microinverter bulkhead and adapter cable male, female DC connectors must only be mated with the identical type and manufacturer brand of male/female connector.
[6] Qualified per UL subject 9703.

Revision history

REVISION	DATE	DESCRIPTION
DSH-00450-2.0	January 2025	Added the foot note for the SKU IQ8P-3P-72-E-DOM-US and the Build America, Buy America Act (BABA) and Buy American Act (BAA) compliance for IQ8P-3P-72-E-DOM-US.
DSH-00450-1.0	May 2024	Initial release.