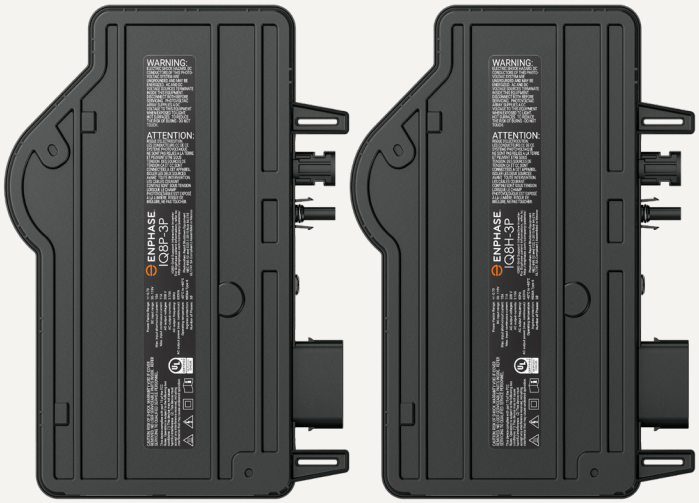
ENPHASE

DATA SHEET



IQ8 Commercial Microinverters

The high-powered, smart grid-ready Enphase IQ8P-3P and IQ8H-3P Microinverters are specifically designed for 208 V 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

* 25-year warranty is valid, provided an Internet-connected IQ Gateway is installed.

IQ8 Commercial Microinverters

INPUT DATA (DC)	UNITS	IQ8P-3P-72-E-US		IQ8H-3P-72-E-US	
Commonly used modules for pairing[1]	W	380–640		320–540	
Module compatibility[1]		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		28.5–45	
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 x 1 ungrounded array; no additional DC side protection required; AC side protection requires max 20A per branch circuit			

OUTPUT DATA (AC)		IQ8P-3P-72-E-US		IQ8H-3P-72-E-US	
Peak output power	VA	480		384	
Maximum continuous output power	VA	475		380	
Nominal (L-L) voltage/range[2]	V	208/183–229	220/198–242	208/183–229	220/198–242
Maximum continuous output current	A	2.28	2.16	1.83	1.73
Nominal frequency	Hz	60			
Extended frequency range	Hz	47–68			
Maximum microinverters per 20A 3 Phase branch circuit[3]		12	12	15	15
Overvoltage class AC port		III			
Power factor setting		1.0			
Power factor (adjustable)		0.85 leading ... 1.0 lagging			

EFFICIENCY		IQ8P-3P-72-E-US	IQ8H-3P-72-E-US
Peak efficiency	%	97.7	97.2
CEC weighted efficiency	%	97.5	97

MECHANICAL DATA	
Ambient temperature range	-40°C to +65°C (-40°F to +149°F)
Relative humidity range	4% to 100% (condensing)
DC connector type[4]	Enphase EN4 bulkhead; ECA-EN4-S22 : EN4 (TE PV4-S SOLARLOK) 150 mm/5.9" to Staubli MC4 adapter cable pair (Default supply)[5]
Dimensions (H x W x D)	265 mm x 200 mm x 35 mm (10.4" x 7.8" x 1.4") without bracket
Weight	1.56 kg (3.4 lbs)
Cooling	Natural convection
Approved for wet locations	Yes
Enclosure	Class II double-insulated, corrosion resistant polymeric enclosure
Environmental category/UV exposure rating	IP67/sunlight resistant

FEATURES	
Communication	Power line communication (PLC)
Monitoring	Enphase App monitoring and analysis software. Both options require 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 and C22.1-2018 Rule 64-218 rapid shutdown of PV systems for AC and DC conductors, when installed according to manufacturer's instructions.

(1) 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. (2) Nominal voltage range can be configured if required by the utility. (3) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area. (4) Enphase IQ8P-3P and IQ8H-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. (5) Qualified per UL subject 9703.

Revision history

REVISION	DATE	DESCRIPTION
DSH-00236-1.0	October 2023	Initial release

Previous releases