ENPHASE

DATA SHEET

IQ8H-240 Microinverters

Our newest IQ8 Microinverters are the industry's first microgrid-forming, software-defined microinverters with split-phase power conversion capability to convert DC power to AC power efficiently. The brain of the semiconductor-based microinverter is our proprietary application-specific integrated circuit (ASIC) which enables the microinverter to operate in grid-tied or off-grid modes. This chip is built in advanced 55nm technology with high speed digital logic and has super-fast response times to changing loads and grid events, alleviating constraints on battery sizing for home energy systems.

Part of the Enphase Energy System, IQ8 Series Microinverters integrate with the Enphase IQ Battery, Enphase IQ Gateway, and the Enphase App monitoring and analysis software.

Enphase 25 year limited warranty

IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.

Connect PV modules quickly and easily to IQ8 Series Microinverters using the included Q-DCC-2 adapter cable with plug-n-play MC4 connectors.

UL CERTIFIED SAFETY

IQ8 Series Microinverters are UL Listed as PV Rapid Shut Down Equipment and conform with various regulations, when installed according to manufacturer's instructions.

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power Line Communication (PLC) between components
- Faster installation with simple two-wire cabling

High productivity and reliability

- IQ8H-240V can produce power even when the grid is down*
- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Optimized for the latest high-powered PV modules

Microgrid-forming

- 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) requirements

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* When installed with IQ System Controller 2, meets UL 1741.

** IQ8H-240 support split phase, 240V.

IQ8H-240 Microinverters

INPUT DATA (DC)		IQ8H-240-72-2-US
Commonly used module pairings[1]	W	320 – 540+
Module compatibility		60-cell/120 half-cell, 66-cell/132 half-cell and 72-cell/144 half-cell
MPPT voltage range	V	38 – 45
Operating range	V	25 – 58
Min/max start voltage	V	30 / 58
Max input DC voltage	V	60
Max DC current[2] [module Isc]	A	15
Overvoltage class DC port		II
DC port backfeed current	mA	0
PV array configuration		1x1 Ungrounded array; No additional DC side protection required; AC side protection requires max 20A per branch circuit
OUTPUT DATA (AC)		**IQ8H-240-72-2-US**
Peak output power	VA	384
Max continuous output power	VA	380
Nominal (L-L) voltage/range[3]	V	240 / 211 – 264
Max continuous output current	A	1.58
Nominal frequency	Hz	60
Extended frequency range	Hz	50 – 68
AC short circuit fault current over 3 cycles	Arms	2
Max units per 20 A (L-L) branch circuit[4]		10
Total harmonic distortion		<5%
Overvoltage class AC port		III
AC port backfeed current	mA	30
Power factor setting		1.0
Grid-tied power factor (adjustable)		0.85 leading – 0.85 lagging
Peak efficiency	%	97.6
CEC weighted efficiency	%	97
Night-time power consumption	mW	60
MECHANICAL DATA		
Ambient temperature range		-40°C to +60°C (-40°F to +140°F)
Relative humidity range		4% to 100% (condensing)
DC Connector type		MC4
Dimensions (HxWxD)		212 mm (8.3”) x 175 mm (6.9”) x 30.2 mm (1.2”)
Weight		1.08 kg (2.38 lbs)
Cooling		Natural convection – no fans
Approved for wet locations		Yes
Pollution degree		PD3
Enclosure		Class II double-insulated, corrosion resistant polymeric enclosure
Environ. category / UV exposure rating		NEMA Type 6 / outdoor
COMPLIANCE		
Certifications		CA Rule 21 (UL 1741-SA), 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 Shut Down 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) No enforced DC/AC ratio. See the compatibility calculator at https://link.enphase.com/module-compatibility
(2) Maximum continuous input DC current is 10.6A (3) Nominal voltage range can be extended beyond nominal if required by the utility. (4) Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.