

Enphase IQ 8D Microinverter

Dual PV module support

The high-powered, smart-grid-ready **Enphase IQ 8D™** microinverter is our most advanced microinverter to date.

Each IQ 8D microinverter supports two series-connected PV modules and integrates with the Enphase IQ Commercial Envoy and the Enphase Enlighten monitoring and analysis software.

With simplified design, improved energy harvest, and advanced monitoring, the IQ 8D microinverter offers true peace of mind during operation and maintenance.



Safe

- All AC cabling system without high-voltage DC that can cause arc-fault fires
- Built-in rapid shutdown capability allows microinverters to shutdown safely and automatically
- Safer in extreme outdoor conditions, with NEMA 6 rating

Powerful

- Higher energy production with distributed architecture
- Patented burst mode for additional energy generation in low light conditions
- 8th generation, software-driven inverter architecture with SWIFT ASIC

Reliable

- Higher system uptime with no single point of failure
- Industry-leading 25-year standard warranty
- Million hours of rigorous power-on testing

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INPUT DATA (DC)		IQ8D-72-E-US
Commonly used modules for pairing ¹		235 W - 440 W + (two modules per microinverter)
Module compatibility ¹		60-cell and 72-cell PV modules with full or split cell configuration
Maximum input DC voltage		119 V
Peak power tracking voltage		60 V - 95 V
Operating range		30 V - 119 V
Min/Max start voltage		35 V / 119 V
Max DC short circuit current (module Isc)		15 A
Overvoltage class DC ports		II
DC port backfeed current		0 A
PV array configuration		2 x 1 ungrounded array; No additional DC side protection required; AC side protection requires max 20 A per three-phase branch circuit
OUTPUT DATA (AC)		
Peak output power		640 VA
Maximum continuous output power		633 VA
Nominal (L-L) voltage/range ²		208 V / 183-229 V
Maximum continuous output current		3.04 A (208 V)
Nominal frequency		60 Hz
Extended frequency range		50 - 68 Hz
AC short circuit fault current over 3 cycles		5.8 Arms
Maximum microinverters per 20 A branch circuit ³		9
Overvoltage class AC port		III
AC port backfeed current		18mA
Power factor setting		1.0
Power factor (adjustable)		0.7 - 1.0, leading or lagging
EFFICIENCY @208 V		
MPPT efficiency		99.5 %
CEC weighted efficiency		97.5 %
MECHANICAL DATA		
Ambient temperature range		-40°C to +60°C (-40°F to +140°F) ⁴
Relative humidity range		4% to 100% (condensing)
DC connector type		Enphase EN4 bulkhead
Dimensions (HxWxD)		287 mm x 250 mm x 38 mm (11.2" x 9.8" x 1.5") without bracket
Weight		1.55 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		Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Commercial Envoy.
Disconnecting means		The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect required by NEC 690 and C22.1-2018 Rule 64-220.
Compliance (pending)		CA Rule 21 (UL 1741-SA) UL 62109-1, UL1741/IEEE1547, FCC Part 15 Class B, ICES-0003 Class B, UL 3741 UL Standard for Safety, Photovoltaic Hazard Control (Pending), UL 1699B UL Standard for Safety, Photovoltaic (PV) Arc-Fault Circuit Protection (Pending), CAN/CSA-C22.2 NO. 107.1-01 This product will be UL listed as PV Hazard Reduction System Component. When installed in accordance with the rapid shutdown PV array listing or field labeling instructions the resulting array complies with the requirements for rapid shutdown in accordance with NEC Section 690.12 (B) (2) (1).

1. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/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. Full power to 50°C, derate after.



To learn more about Enphase offerings, visit enphase.com

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