

Enphase IQ 8D Microinverter

Dual PV module support

The high-powered, smart-grid-ready **Enphase IQ 8D™** microinverter is the most reliable and intelligent component of the Enphase small commercial PV solution.

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.



Reliable

- Best in class defect rate of less than 0.05%
- World's only 8th generation inverter
- High power density with millions of hours of testing

Easy

- Plug and play
- Dual module support per microinverter
- Higher power with fewer balance of system components
- Flexible, modular design
- Best in class customer support¹

Advanced

- IQ8-based, technologically advanced, software-driven inverter architecture
- Highest powered Enphase microinverter to date
- CEC efficiency of 97.5%
- UL listed as PV Hazard Reduction System Component (Pending)
- Additional value creation over life of system

1. Average wait time for North America technical support was 0.8 minutes in Q1 2020.

INPUT DATA (DC)	IQ8D-72-E-US
Commonly used modules for pairing ²	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	30 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 ³	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 20A 3 Phase branch circuit ⁴	9
Overvoltage class AC port	III
AC port backfeed current	18mA
Power factor setting	1.0
Power factor (adjustable)	0.85 leading ... 0.85 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) ⁵
Relative humidity range	4% to 100% (condensing)
DC connector type	Enphase EN4 bulkhead
Adapters (Optional)	ECA-EN4-S22 : EN4 (TE PV4-S SOLARLOK) 150mm/5.9" to MC4 adapter cable pair (Default Supply) ⁶ 1. ECA-EN4-S22-12: EN4 (TE PV4-S SOLARLOK) 150mm/5.9" to MC4 (Pack of 12 pairs - Optional) ⁶ 2. ECA-EN4-S22-L-12: EN4 (TE PV4-S SOLARLOK) 600mm/23.6" to MC4 (Pack of 12 pairs - Optional) ⁶ 3. ECA-EN4-FW-12: DC adapter, EN4 (TE PV4-S SOLARLOK) to 150mm/5.9" non-terminated cable (Pack of 12 pairs - Optional) ⁷
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).

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 2. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>.
 3. Nominal voltage range can be configured if required by the utility.
 4. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.
 5. Full power up to 50°C, derate after.
 6. Qualified per UL subject 9703.
 7. For field wiring of UL certified DC connectors.

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