



IQ7A Microinverter

The high-powered, smart grid-ready IQ7A Microinverter dramatically simplifies the installation while achieving the highest system efficiency for systems with 60-cell and 72-cell modules.



Part of the Enphase Energy System, the IQ7A Microinverter integrates with the IQ Battery, IQ Gateway, and the Enphase App monitoring and analysis software.



Connect PV modules quickly and easily to IQ7 Series Microinverters using the included Q-DCC-2 adapter cable with plug and play MC4 connectors.



IQ7 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.



IQ7 Series Microinverters are UL Listed as PV rapid shutdown equipment and conform with various regulations, when installed according to manufacturer's instructions.

High power

- Peak output power 366 VA @ 240 VAC and 295 VA @ 208 VAC

Easy to install

- Lightweight and simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014, 2017, and 2020)

Efficient and reliable

- Optimized for high powered 60-cell/120-half-cell and 72-cell/144-half-cell PV modules
- Highest CEC efficiency of 97%
- More than a million hours of testing
- Class II double-insulated enclosure
- UL Listed

Smart grid-ready

- Complies with advanced grid support, voltage and frequency ride-through requirements
- Remotely updates to respond to changing grid requirements
- Configurable for varying grid profiles
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547:2018 (UL 1741-SB, 3rd Ed.)

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INPUT DATA (DC)		UNITS	IQ7A-72-2-US	
Commonly used module pairings ¹		W	295–460	
Module compatibility		—	60-cell/120-half-cell and 72-cell/144-half-cell	
MPPT voltage range ²		V	18–43	
Operating range		V	18–58	
Minimum/Maximum start voltage		V	30/58	
Maximum input DC voltage		V	58	
Maximum continuous input DC current		A	10.2	
Maximum input DC short-circuit current		A	25	
Maximum module I _{sc}		A	20	
Overvoltage class DC port		—	II	
DC port backfeed current		mA	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)		UNITS	@ 240 VAC	@ 208 VAC
Peak output power		VA	366	295
Maximum continuous output power		VA	349	290
Nominal (L-L) voltage/range ³		V	240/211–264	208/183–229
Maximum continuous output current		A	1.45	1.39
Nominal frequency		Hz	60	
Extended frequency range		Hz	49–68	
AC short circuit fault current over three cycles		Arms	5.8	
Maximum units per 20 A (L-L) branch circuit ⁴		—	11	11
Total harmonic distortion		%	<5	
Overvoltage class AC port		—	III	
AC port backfeed current		mA	18	
Power factor setting		—	1.0	
Grid-tied power factor (adjustable)		—	0.85 leading ... 0.85 lagging	
Peak efficiency		%	97.7	
CEC weighted efficiency		%	97.0	96.5
Nighttime 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 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)	
Dimensions (H × W × D)			212 mm (8.3 in) × 175 mm (6.9 in) × 30.2 mm (1.2 in) (without bracket)	
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	
Environment category/UV exposure rating			NEMA Type 6/outdoor	
COMPLIANCE				
Certifications	CA Rule 21 (UL 1741-SA), UL 62109-1, IEEE 1547:2018 (UL 1741-SB 3rd Ed.), HEI Rule 14H SRD 2.0, 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 C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according to the 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) CEC peak power tracking voltage range is 38 V to 43 V.

(3) 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.

IQ7A-DSH-00281-1.0-EN-US-2024-02-02

Revision history

REVISION	DATE	DESCRIPTION
DSH-00281-1.0	February 2024	Updated the minimum/maximum start voltage and MPPT voltage value.
Previous releases.		