

Enphase IQ 7, IQ 7+, and IQ 7X Microinverters

with EN4 bulkhead

The high-powered smart grid-ready **Enphase IQ 7 Series Microinverters™** with Enphase EN4 bulkhead dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7, IQ 7+, and IQ 7X Microinverters integrate with the Enphase IQ Envoy™, Enphase IQ Battery™, and the Enphase Enlighten™ monitoring and analysis software.

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 simple
- Faster installation with improved, lighter two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014, 2017, & 2020)
- Integrated Enphase EN4 bulkhead allows for direct connection to PV modules with TE PV4S SOLARLOK connectors or other intermatable connectors¹

Productive and Reliable

- Optimized for high-powered 60-cell, 72-cell², and 96-cell³ modules
- 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)

1. Enphase adapters are available for use with other connectors. Consult Enphase for more information..

2. The IQ 7+ Microinverter is required to support 72-cell modules.

3. The IQ 7X Microinverter is required to support 96-cell modules.



To learn more about Enphase offerings, visit enphase.com



Enphase IQ 7 and IQ 7+ Microinverters with EN4 bulkhead

INPUT DATA (DC)	IQ7-60-E-US		IQ7PLUS-72-E-US		IQ7X-96-E-US	
Commonly used module pairings ⁴	235 W - 350 W +		235 W - 440 W +		320 W - 460 W +	
Module compatibility	60-cell PV modules only		60-cell and 72-cell PV modules		96-cell PV modules	
Maximum input DC voltage	48 V		60 V		79.5 V	
Peak power tracking voltage	27 V - 37 V		27 V - 45 V		53 V - 64 V	
Operating range	16 V - 48 V		16 V - 60 V		25 V - 79.5 V	
Min/Max start voltage	22 V / 48 V		22 V / 60 V		33 V / 79.5 V	
Max DC short circuit current (module I _{sc})	15 A		15 A		10 A	
Overvoltage class DC port	II		II		II	
DC port backfeed current	0 A		0 A		0 A	
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)	IQ 7 Microinverter		IQ 7+ Microinverter		IQ 7X Microinverter	
Peak output power	250 VA		295 VA		320 VA	
Maximum continuous output power	240 VA		290 VA		315 VA	
Nominal (L-L) voltage/range ⁵	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	1.0 A (240 V)	1.15 A (208 V)	1.21 A (240 V)	1.39 A (208 V)	1.31 A (240 V)	1.51 A (208 V)
Nominal frequency	60 Hz		60 Hz		60 HZ	
Extended frequency range	47 - 68 Hz		47 - 68 Hz		47-68 Hz	
AC short circuit fault current over 3 cycles	5.8 Arms		5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit ⁶	16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)	12 (240 VAC)	10 (208 VAC)
Overvoltage class AC port	III		III		III	
AC port backfeed current	18mA		18mA		18 mA	
Power factor setting	1.0		1.0		1.0	
Power factor (adjustable)	0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	
EFFICIENCY	@240 V	@208 V	@240 V	@208 V	@240 V	@208 V
Peak efficiency	97.6 %	97.6 %	97.5 %	97.3 %	97.5 %	97.3 %
CEC weighted efficiency	97.0 %	97.0 %	97.0 %	97.0 %	97.5 %	97.0 %
MECHANICAL DATA						
Ambient temperature range	-40°C to +65°C (-40°F to +149°F)		-40°C to +65°C (-40°F to +149°F)		-40°C to +60°C (-40°F to +140°F)	
Relative humidity range	4% to 100% (condensing)					
Connector type	Enphase EN4 bulkhead					
Adapters ⁷ (optional)	1. ECA-EN4-S22: DC adapter, EN4 to Multi-Contact MC4 type, 150 mm (5.9in) 2. ECA-EN4-S22-L: DC adapter, EN4 to Multi-Contact MC4 type, 600 mm (23.6in) 3. ECA-EN4-FW: DC adapter, EN4 to unterminated cable, 150 mm (5.9in), for wiring of any DC connector type.					
Dimensions (HxWxD)	212 mm x 175 mm x 30.2 mm (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					
Environmental category / UV exposure rating	NEMA Type 6 / outdoor					
FEATURES						
Communication	Power Line Communication (PLC)					
Monitoring	Enlighten Manager and MyEnlighten monitoring options. Both options require installation of an Enphase IQ Envoy.					
Disconnecting means	The AC and DC connectors have been evaluated and approved by UL for use as the load-break disconnect means required by NEC 690 and C22.1-2018 Rule 64-220.					
Compliance	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 manufacturer's instructions.					

4. No enforced DC/AC ratio. See the compatibility calculator at <https://enphase.com/en-us/support/module-compatibility>.

5. Nominal voltage range can be extended beyond nominal if required by the utility.

6. Limits may vary. Refer to local requirements to define the number of microinverters per branch in your area.

7. Adapters 1 and 2 are qualified per UL subject 9703. Adapter 3 requires installers to field install their choice of connector.

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