

Enphase IQ 7 and IQ 7+ Microinverters

The high-powered smart grid-ready **Enphase IQ 7 Micro™** and **Enphase IQ 7+ Micro™** dramatically simplify the installation process while achieving the highest system efficiency.

Part of the Enphase IQ System, the IQ 7 and IQ 7+ 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)

Productive and Reliable

- Optimized for high powered 60-cell/120 half-cell and 72-cell/144 half-cell* 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)

* The IQ 7+ Micro is required to support 72-cell/144 half-cell modules.



Enphase IQ 7 and IQ 7+ Microinverters

INPUT DATA (DC)		IQ7-60-2-US		IQ7PLUS-72-2-US	
Commonly used module pairings ¹		235 W - 350 W +		235 W - 440 W +	
Module compatibility		60-cell/120 half-cell PV modules only		60-cell/120 half-cell and 72-cell/144 half-cell PV modules	
Maximum input DC voltage		48 V		60 V	
Peak power tracking voltage		27 V - 37 V		27 V - 45 V	
Operating range		16 V - 48 V		16 V - 60 V	
Min/Max start voltage		22 V / 48 V		22 V / 60 V	
Max DC short circuit current (module Isc)		15 A		15 A	
Overvoltage class DC port		II		II	
DC port backfeed current		0 A		0 A	
PV array configuration		1 x 1 ungrounded array; No additional AC side protection requires max 20A per branch circuit		DC side protection required;	
OUTPUT DATA (AC)		IQ 7 Microinverter		IQ 7+ Microinverter	
Peak output power		250 VA		295 VA	
Maximum continuous output power		240 VA		290 VA	
Nominal (L-L) voltage/range ²		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)
Nominal frequency		60 Hz		60 Hz	
Extended frequency range		47 - 68 Hz		47 - 68 Hz	
AC short circuit fault current over 3 cycles		5.8 Arms		5.8 Arms	
Maximum units per 20 A (L-L) branch circuit ³		16 (240 VAC)	13 (208 VAC)	13 (240 VAC)	11 (208 VAC)
Overvoltage class AC port		III		III	
AC port backfeed current		18 mA		18 mA	
Power factor setting		1.0		1.0	
Power factor (adjustable)		0.85 leading ... 0.85 lagging		0.85 leading ... 0.85 lagging	
EFFICIENCY		@240 V	@208 V	@240 V	@208 V
Peak efficiency		97.6 %	97.6 %	97.5 %	97.3 %
CEC weighted efficiency		97.0 %	97.0 %	97.0 %	97.0 %
MECHANICAL DATA					
Ambient temperature range		-40°C to +65°C			
Relative humidity range		4% to 100% (condensing)			
Connector type		MC4 (or Amphenol H4 UTX with additional Q-DCC-5 adapter)			
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 required by NEC 690.			
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 C22.1-2015 Rule 64-218 Rapid Shutdown of PV Systems, for AC and DC conductors, when installed according manufacturer's instructions.			

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 extended beyond nominal if required by the utility.

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

To learn more about Enphase offerings, visit enphase.com



QIJW.E341165 - Photovoltaic Rapid Shutdown System Equipment

Photovoltaic Rapid Shutdown System Equipment

See General Information for Photovoltaic Rapid Shutdown System Equipment

ENPHASE ENERGY INC

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Petaluma, CA 94954-6515 USA

E341165

Cat. No.	Function	Ratings
Photovoltaic rapid shutdown system equipment		
M190-60, -72	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 190W
M210-84	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 210 W
M215-60	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 215W
M250-60, -72	Inverter/AC Attenuator	Input: 16-48VDC Output: 120/208 or 120/240, 250W
IQ6PLUS-72-X-US*(a)(b) IQ6PLUS-72-ACM*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 280W
IQ6-60-X-US*(a)(b) IQ6-60-ACM-US*(b)	Inverter/AC Attenuator	Input: 16-62VDC Output: 208 or 240, 230W
IQ7-60 (c)	Inverter/AC Attenuator	Input: 27-37DC Output: 208 or 240, 240W
IQ7PLUS-72 (c)	Inverter/AC Attenuator	Input: 27-45VDC Output: 208 or 240, 290W
IQ7X-96 (c)	Inverter/AC Attenuator	Input: 53-64 VDC Output: 208 or 240, 315W
IQ7XS-96 (c)	Inverter/AC Attenuator	Input: 53-64VDC Output: 208 or 240, 315W
IQ7A, may be f/b S, may be f/b 66 or -72 (c)	Inverter/AC Attenuator	Input: 25-79.5VDC Output: 349W (240V) / 290W (208V)
IQ7A-72 (c)	Inverter/AC Attenuator	Input: 25-79.5VDC Output: 349W (240V) / 290W (208V)
IIQ7PD-72-2-US	Inverter/AC Attenuator	Input: 22-40VDC Output: 208 or 240, 190W
IQ7PD-84-2-US	Inverter/AC Attenuator	Input: 31-50VDC Output: 208 or 240, 210W

M175IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 175W
M175IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 175W
M190IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 190W
M190IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 190W
M200IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 200W
M200IQ7-240	Inverter/AC Attenuator	Input: 44-65VDC Output: 240, 200W
M210IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 210W
M210IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 210W
M215IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 215W
M215IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 215W
M250IQ7-208	Inverter/AC Attenuator	Input: 16-60VDC Output: 208, 240W
M250IQ7-240	Inverter/AC Attenuator	Input: 16-60VDC Output: 240, 240W
S230IQ7-208	Inverter/AC Attenuator	Input: 27-45VDC Output: 208, 220W
S230IQ7-240	Inverter/AC Attenuator	Input: 27-45VDC Output: 240, 220W
S280IQ7-208	Inverter/AC Attenuator	Input: 27-45VDC Output: 208, 270W
S280IQ7-240	Inverter/AC Attenuator	Input: 27-45VDC Output: 240, 270W
IQ6IQ7-US	Inverter/AC Attenuator	Input: 27-37VDC Output: 240-120 / 208, 230W
IQ6PLUSIQ7-US	Inverter/AC Attenuator	Input: 27-37VDC Output: 240-120 / 208, 280W

(a) - Where x may be 2, 5, or B.

(b) - Where * may be any combination of letters or numbers or hyphen or none

(c) - May be f/b -2, 5, -E, or -ACM, f/b US, may be f/b -NM, may be f/b -RMA&, where "&" may be optional alphanumeric characters.

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