# **Enphase** IQ 6 and IQ 6+ **Microinverters**

The high-powered smart grid-ready Enphase IQ 6 Micro™ and Enphase IQ 6+ Micro™ dramatically simplify the installation process while achieving the highest efficiency for module-level power electronics.

Part of the Enphase IQ System, the IQ 6 and IQ 6+ Micro integrate seamlessly with the Enphase IQ Envoy™, Enphase Q Aggregator™, Enphase IQ Battery<sup>™</sup>, and the Enphase Enlighten<sup>™</sup> monitoring and analysis software.

The IQ 6 and IQ 6+ Micro 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 two-wire cabling
- Built-in rapid shutdown compliant (NEC 2014 & 2017)

#### Productive and Reliable

- · Optimized for high powered 60-cell and 72-cell\* modules
- More than a million hours of testing
- · Class II double-insulated enclosure
- UL listed

# Smart Grid Ready

- Complies with fixed power factor, 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 6+ Micro is required to support 72-cell modules



# Enphase IO 6 and IO 6+ Microinvertors

INPUT DATA (DC)	IQ6-60-2-US		IQ6PLUS-72-2-US	
Commonly used module pairings <sup>1</sup>	195 W - 330 W +		235 W - 400 W +	
Module compatibility	60-cell PV modules only		60-cell and 72-cell PV modules	
Maximum input DC voltage	48 V		62 V	
Peak power tracking voltage	27 V - 37 V		27 V - 45 V	
Operating range	16 V - 48 V		16 V - 62 V	
Min/Max start voltage	22 V / 48 V		22 V / 62 V	
Max DC short circuit current (module lsc)	15 A		15 A	
Overvoltage class DC port	II		II	
DC port backfeed under single fault	0 A		0 A	
PV array configuration		ay; No additional DC side quires max 20A per brand		
OUTPUT DATA (AC)	IQ 6 Microinverter		IQ 6+ Microinverte	r
Peak output power	240 VA		290 VA	
Maximum continuous output power	230 VA		280 VA	
Nominal (L-L) voltage/range <sup>2</sup>	240 V / 211-264 V	208 V / 183-229 V	240 V / 211-264 V	208 V / 183-229 V
Maximum continuous output current	0.96 A	1.11 A	1.17 A	1.35 A
Nominal frequency	60 Hz		60 Hz	
Futondod fraguency range	47 - 68 Hz		47 - 68 Hz	
Extended frequency range			1.0	
	1.0		1.0	
Power factor at rated power	1.0 16 (240 VAC)		13 (240 VAC)	
Power factor at rated power				
Power factor at rated power Maximum units per 20 A (L-L) branch circuit	16 (240 VAC)		13 (240 VAC)	
Extended frequency range Power factor at rated power Maximum units per 20 A (L-L) branch circuit  Overvoltage class AC port AC port backfeed under single fault	16 (240 VAC) 14 (208 VAC)		13 (240 VAC) 11 (208 VAC)	
Power factor at rated power  Maximum units per 20 A (L-L) branch circuit  Overvoltage class AC port	16 (240 VAC) 14 (208 VAC) III	jing	13 (240 VAC) 11 (208 VAC) III	ging

MECHANICAL DATA	
Ambient temperature range	-40°C to +65°C
Relative humidity range	4% to 100% (condensing)
Connector type	MC4 locking type
Dimensions (WxHxD)	219 mm x 191 mm x 37.9 mm (without bracket)
Weight	1.29 kg (2.84 lbs)
Cooling	Natural convection - No fans
Approved for wet locations	Yes
Pollution degree	PD3
Enclosure	Class II double-insulated
Environmental category / UV exposure rating	NEMA Type 6 / outdoor
FEATURES	

97.0 %

97.0 %

97.0 %

97.0 %

FEATURES	
Communication	Power line
Monitoring	Enlighten Manager and MyEnlighten monitoring options Compatible with 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 and NEC-2017 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 <a href="https://enphase.com/en-us/support/module-compatibility">https://enphase.com/en-us/support/module-compatibility</a>.
- 2. Nominal voltage range can be extended beyond nominal if required by the utility.

# To learn more about Enphase offerings, visit enphase.com

CEC weighted efficiency

MECHANICAL DATA

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# **Enphase IQ Combiner+**

(X-IQ-AM1-240-2)

The Enphase IQ Combiner+™ with Enphase IQ Envoy™ consolidates interconnection equipment into a single enclosure and streamlines PV and storage installations by providing a consistent, pre-wired solution for residential applications. It offers up to four 2-pole input circuits and Eaton BR series busbar assembly.



### Smart

- Includes IQ Envoy for communication and control
- Flexible networking supports Wi-Fi, Ethernet, or cellular
- Provides production metering and optional consumption monitoring
- Supports installation of the Enphase Q Aggregator  $^{\text{\tiny TM}}$

# Simple

- Eaton BR series panelboard interior
- Up to four 2-pole branch circuits for 240 VAC plug-in breakers (not included)
- 80 A total PV or storage branch circuits

### Reliable

- Durable NRTL-certified NEMA type 3R enclosure
- Five-year warranty
- UL listed





# **Enphase IQ Combiner+**

IQ Combiner+ X-IQ-AM1-240-2	IQ Combiner+ with Enphase IQ Envoy™ for integrated revenue grade PV production metering	
	(ANSI C12.20 +/- 0.5%) and optional* consumption monitoring (+/- 2.5%).	
ACCESSORIES (order separately)		
Enphase Mobile Connect™ CELLMODEM-03 (4G / 12-year data plan) CELLMODEM-01 (3G / 5-year data plan) CELLMODEM-M1 (4G LTE CAT-M1 / 5-year data plan)	Plug and play industrial grade cellular modem with data plan for systems up to 60 microinverters. (Available in the US, Canada, Mexico, Puerto Rico, and the US Virgin Islands where there is adequate cellular service in the installation area.)	
Consumption Monitoring CT CT-200-SPLIT	Split core current transformers enable whole home consumption metering* (+/- 2.5%).	
Circuit Breakers BRK-15A-2-240 BRK-20A-2-240	Breaker, 2 pole, 15A, Eaton BR215 Breaker, 2 pole, 20A, Eaton BR220	
ELECTRICAL SPECIFICATIONS		
Rating	Continuous duty	
System voltage	240 VAC, 60 HZ	
Eaton BR series busbar rating	125 A	
Max. continuous current rating (output to grid)	65 A	
Max. fuse/circuit rating (output)	90 A	
Branch circuits (solar and/or storage)	Up to four 2-pole Eaton BR series Distributed Generation (DG) breakers only (not included)	
Max. continuous current rating (input from PV)	64 A	
Max. total branch circuit breaker rating (input)	80 A (any combination)	
Production Metering CT	200 A solid core pre-installed and wired to IQ Envoy	
MECHANICAL DATA		
Dimensions (WxHxD)	49.3 x 46.5 x 16.0 cm (19.4" x 18.3" x 6.3")	
Weight	7.5 kg (16.5 <b>l</b> bs)	
Ambient temperature range	-40° C to +46° C (-40° to 115° F)	
Cooling	Natural convection, plus heat shield	
Enclosure environmental rating	Outdoor, NRTL-certified, NEMA type 3R, polycarbonate construction	
Wire sizes	<ul> <li>20 A to 50 A breaker inputs: 14 to 4 AWG copper conductors</li> <li>60 A breaker branch input: 3 to 1/0 AWG copper conductors</li> <li>Main lug combined output: 10 to 2/0 AWG copper conductors</li> <li>Neutral and ground: 14 to 1/0 copper conductors</li> <li>Always follow local code requirements for conductor sizing.</li> </ul>	
Altitude	To 2000 meters (6,560 feet)	
INTERNET CONNECTION OPTIONS		
Integrated Wi-Fi	802.11b/g/n	
Ethernet	802.3, Cat5E (or Cat 6) UTP Ethernet cable - not included	
Cellular	Optional, CELLMODEM-01 (3G) or CELLMODEM-03 (4G) (not included)	
COMPLIANCE		
Compliance, Combiner	UL 1741 CAN/CSA C22.2 No. 107.1 47 CFR, Part 15, Class B, ICES 003 Production metering: ANSI C12.20 accuracy class 0.5 (PV production)	
Compliance, IQ Envoy	UL 916	

<sup>\*</sup> Consumption monitoring is required for Enphase Storage Systems.

# To learn more about Enphase offerings, visit enphase.com

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