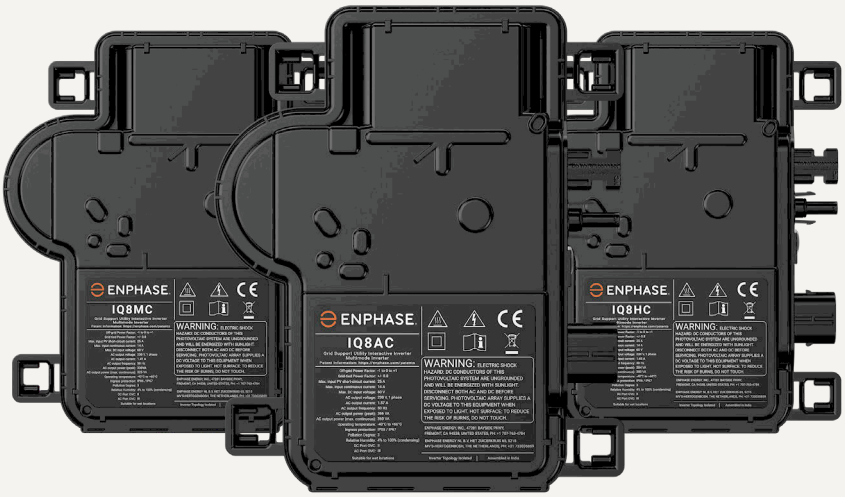
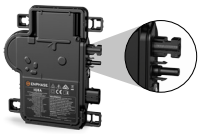


IQ8 Series Microinverters

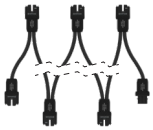
The high-powered, smart grid-ready IQ8 Series Microinverters are designed to match the latest generation high output PV modules. The IQ8 Series Microinverter has the highest energy production and reliability standards in the industry, and with rapid shutdown functionality, it meets the highest safety standards. The brain of the semiconductor-based microinverter is our proprietary, application specific integrated circuit (ASIC) that enables the microinverter to operate in a grid-connected mode.

IQ Gateway
The IQ Gateway is the platform for energy management and integrates with the IQ Microinverters to provide complete control and insights into the Enphase Energy System.

IQ Relay single-phase and multi-phase
Production and storage circuit, integrated network and system-protection device with PLC-Phase coupler (multi-phase) and DC current injection monitoring.*



IQ8 Series with integrated MC4 connectors
Connect PV modules quickly and easily to the IQ8 Series Microinverters that have integrated MC4 connectors.



IQ Cabling
Install microinverters quickly and safely with IQ Cabling. With multi-phase IQ Cabling, the installed capacity is automatically distributed evenly across all three phases.

Enphase 25 year limited warranty

IQ8 Series Microinverters redefine reliability standards with more than 1 million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 25 years.**

Compatible with latest generation high-output PV modules

- Supports the latest high-current PV modules
- Supports all common PV module powers and cell architectures

Easy to install and commission

- Lightweight and compact with integrated Stäubli MC4 connectors for easy installation
- Fast installation with simple AC cabling
- Faster firmware upgrades enabled by the new integrated circuit technology

High energy production, reliability, and safety

- More than 1 million power-on hours of reliability testing
- Patented Burst Mode technology provides increased energy production
- Low-voltage DC and rapid shutdown for the ultimate fire safety

Note:
(i) Commissioning of IQ8 Series Microinverter systems requires Enphase Installer App version 3.31.0 or higher.
(ii) IQ8 Series Microinverters cannot be mixed together with previous generations of Enphase microinverters (IQ7 Series, IQ6 Series and so on) on the same IQ Gateway.

*IQ Relay is not required in all countries; check local grid connection requirements to confirm.
**25-year warranty is valid, provided an internet-connected IQ Gateway is installed.

IQ8 Series Microinverters

INPUT DATA (DC)		UNITS	IQ8MC-72-M-INT	IQ8AC-72-M-INT	IQ8HC-72-M-INT
Typical module compatibility			54-cell/108-half-cell, 60-cell/120-half-cell, 66-cell/132-half-cell, 72-cell/144-half-cell No enforced DC/AC ratio and maximum input power. Modules can be paired as long as the maximum input voltage is not exceeded and the maximum input current of the inverter at the lowest and highest temperature is respected. See the compatibility calculator at https://enphase.com/en-gb/installers/microinverters/calculator.		
Minimum/maximum input voltage	U_{dcmin}/U_{dcmax}	V	18/60		
Start-up input voltage	$U_{dcstart}$	V	22		
Rated input voltage	$U_{dc,r}$	V	35.0	36.5	37.0
Minimum/maximum MPP voltage	U_{mppmin}/U_{mppmax}	V	25/45	28/45	29.5/45
Minimum/maximum operating voltage	U_{opmin}/U_{opmax}	V	18/49		
Maximum input current	I_{dcmax}	A	14		
Maximum short-circuit DC input current	I_{scmax}	A	25 Maximum short circuit current for modules (I_{sc}) allowed to be paired with IQ8 Series Microinverters: 20 A (calculated with 1.25 safety factor as per IEC 62548).		
Maximum input power [1]	P_{dcmax}	W	480	530	560
OUTPUT DATA (AC)		**UNITS**	**IQ8MC-72-M-INT**	**IQ8AC-72-M-INT**	**IQ8HC-72-M-INT**
Maximum apparent power	$S_{ac,max}$	VA	330	366	384
Rated power	$P_{ac,r}$	W	325	360	380
Nominal grid voltage	U_{acnom}	V	230		
Minimum/maximum grid voltage	U_{acmin}/U_{acmax}	V	184/276		
Maximum output current	I_{acmax}	A	1.43	1.59	1.67
Nominal frequency	f_{nom}	Hz	50		
Minimum/maximum frequency	f_{min}/f_{max}	Hz	45/55		
Maximum units per single/ multi-phase 20 A circuit	16 A/I_{acmax}		11 (L+N)/33 (3L+N)	10 (L+N)/30 (3L+N)	9 (L+N)/27 (3L+N)
			For IQ Cable with 2.5 mm^2 stranded conductors and using a 1.25 safety factor, 16 A per phase is calculated as the maximum current according to IEC 60364. Safety factor applied may vary based on local regulations or best practices, also upon the characteristic the OCPD selected.		
Maximum units per single/ multi-phase IQ Cable section			8 (L+N)/18 (3L+N)	8 (L+N)/18 (3L+N)	8 (L+N)/18 (3L+N)
			Centre feeding is the best practice. These design limits should ensure voltage rise and line conductor resistance on the IQ Cable are maintained within acceptable limits. In locations with a risk of high grid voltage at the point of connection, it may be necessary to decrease the maximum number of microinverters on the IQ Cable section by as much as 50%.		
Protective class (all ports)			II		
Total harmonic distortion		%	< 5		
Power factor setting			1.0		
Power factor range	cosphi		0.8 leading – 0.8 lagging		
Inverter maximum efficiency	η_{max}	%	97.5	97.3	97.4
European weighted efficiency	η_{EU}	%	96.7	96.6	96.8
Inverter topology			Isolated (HF transformer)		
Night-time power loss		mW	50		

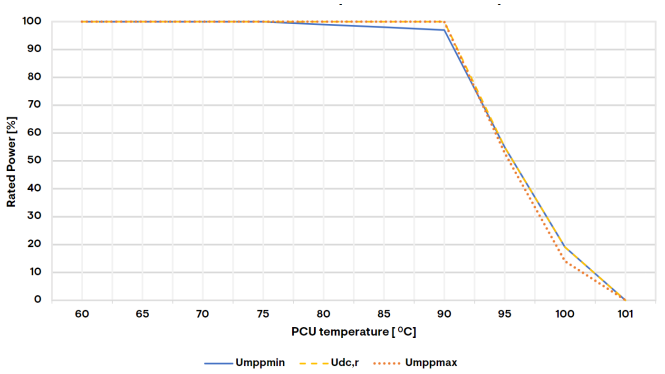
MECHANICAL DATA	IQ8MC-72-M-INT	IQ8AC-72-M-INT	IQ8HC-72-M-INT
Ambient air temperature range	-40°C to 65°C (-40°F to 149°F)		
Relative humidity range	4% to 100% (condensing)		
Overvoltage class AC port	III		
Number of input DC connectors (pairs) per single MPP tracker	1		
AC connector type	IQ Cabling (refer to the cable accessories datasheet)		

(1) Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at https://enphase.com/en-gb/installers/microinverters/calculator.

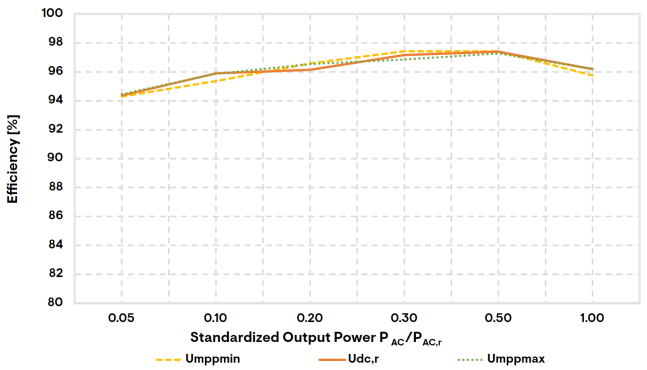
MECHANICAL DATA	IQ8MC-72-M-INT	IQ8AC-72-M-INT	IQ8HC-72-M-INT
DC connector type	Stäubli MC4		
Dimensions (H x W x D)	212 mm (8.3") x 175 mm (6.9") x 30.2 mm (1.2") (without mounting brackets)		
Weight (with mounting plate)	1.1 kg (2.4 lbs)		
Cooling	Natural convection – no fans		
Enclosure	Class II double-insulated, corrosion-resistant polymeric enclosure		
IP rating	Outdoor - IP67		
Altitude	< 2600 m		
Calorific value	37.5 MJ/unit		
STANDARDS	**IQ8MC-72-M-INT**	**IQ8AC-72-M-INT**	**IQ8HC-72-M-INT**
Grid compliance	G98, G98 NI, G99, G99 NI, G100		
Safety	EN IEC 62109-1, EN IEC 62109-2		
EMC	EN IEC 61000-3-2, 61000-3-3, 61000-6-2, 61000-6-3, EN IEC 50065-1, 50065-2-1, EN55011 [2]		
Product labelling	CE		
Advanced grid functions [3]	Power export limiting (PEL), phase imbalance management (PIM), loss of phase detection (LOP), power factor control Q (U), cos (phi) (P)		
Microinverter communication	Power line communication (PLC) 110 – 120 kHz (Class B), narrow band 200 Hz		

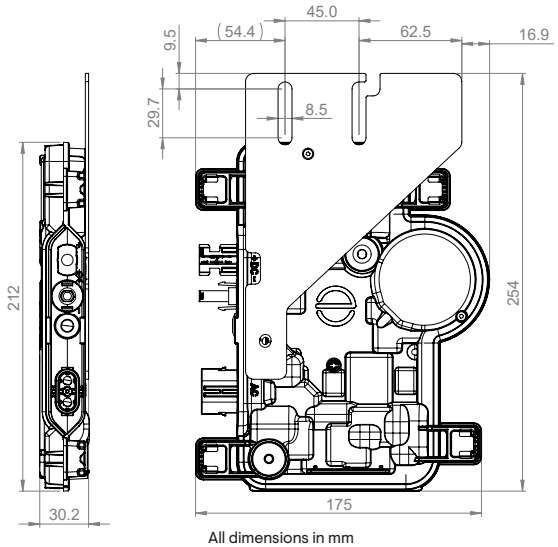
(2) At STC within MPP range.
(3) Some of these functions require IQ Gateway Metered with current transformers and/or IQ Relay installed.

IQ8 Series Microinverters rated power v/s PCU temperature



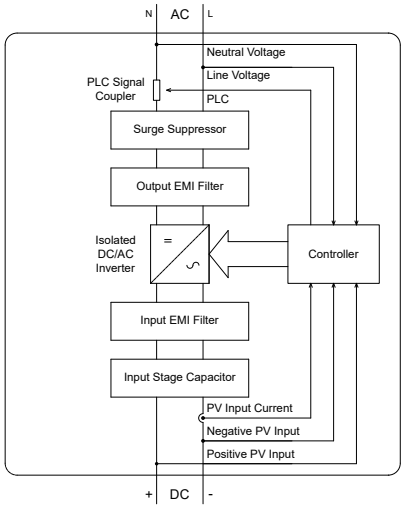
IQ8 Series Microinverters efficiency curve





All dimensions in mm

Enphase IQ8 Series Microinverters



Assembled in China, India, or Romania.

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Importer: Enphase Energy NL B.V., Het Zuiderkruis 65, 5215MV, 's-Hertogenbosch, Netherlands, Tel: +31 73 3035859