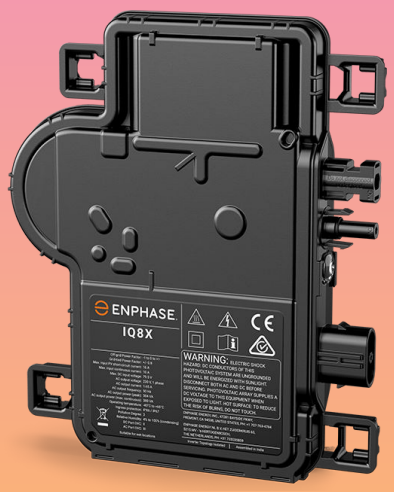
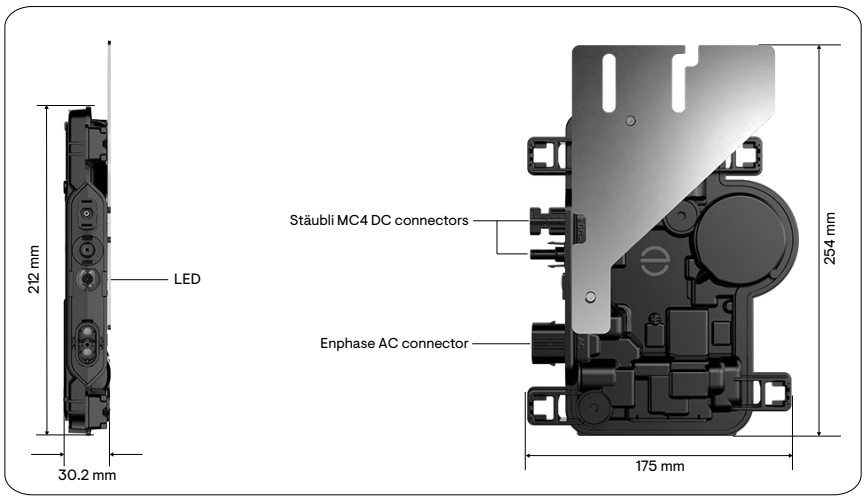
IQ8X Microinverters

The smart grid-ready IQ8X Microinverters are designed to match the latest generation high-output PV modules. These microinverters have the best-in-class energy production and highest reliability standards in the industry, and with rapid shutdown functionality, they meet the highest safety standards.



Enphase 25 year warranty

Key specifications	IQ8X-80-M-INT
Maximum AC output power	384 W
Nominal grid voltage	230 V
Nominal frequency	50 Hz
European weighted efficiency	96.7%
Minimum/Maximum input voltage	25/79.5 V
Minimum/Maximum MPP voltage	43/60 V
Maximum short-circuit DC input current	16 A
Ambient air temperature range	–40°C to 65°C (–40°F to 149°F)



Simple

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

Reliable

- More than one million cumulative hours of testing
- Patented Burst Mode technology provides increased energy production
- Low-voltage DC and rapid shutdown for ultimate fire safety
- Industry-leading warranty of up to 25 years[1]

Compatible

- Supports higher-voltage, typically 80-half-cell, 88-half-cell, 96-cell, PV modules
- Compatible with existing IQ7 systems, allowing seamless expansion of your solar capacity as energy requirements grow[2]

[1] A 25-year warranty is valid, provided an internet-connected IQ Gateway is installed.
[2] For details, see the "Compatibility with IQ7 Series Microinverters" section.

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Input data (DC)	Parameters	Units	IQ8X-80-M-INT
Typical module compatibility	–	–	80-half-cell,88-half-cell, 96-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 is respected at the lowest and highest temperatures. See the compatibility calculator at https://enphase.com/en-gb/installers/microinverters/calculator.
Minimum/Maximum input voltage	U_{dcmin}/U_{dcmax}	V	25/79.5
Startup input voltage	$U_{dcstart}$	V	30
Rated input voltage	$U_{dc,r}$	V	51.5
Minimum/Maximum MPP voltage	U_{mppmin}/ U_{mppmax}	V	43/60
Minimum/Maximum operating voltage	U_{opmin}/U_{opmax}	V	25/79.5
Maximum input current	I_{dcmax}	A	10
Maximum short-circuit DC input current	I_{scmax}	A	16 Maximum short-circuit current for modules (I_{sc}) allowed to be paired with IQ8X Microinverters: 13 A (calculated with 1.25 safety factor as per IEC 62548).
Maximum input power[3]	P_{dcmax}	W	560

Output data (AC)	Parameters	Units	IQ8X-80-M-INT
Maximum AC output power	$P_{ac,max}$	W	384
Maximum apparent power	$S_{ac,max}$	VA	380
Rated power	$P_{ac,r}$	W	380
Nominal grid voltage	U_{acnom}	V	230
Minimum/Maximum grid voltage	U_{acmin}/U_{acmax}	V	184/276
Maximum output current	$I_{ac,max}$	A	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}	–	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. The safety factors applied may vary based on local regulations or best practices, as well as upon the characteristics of the OCPD selected.
Maximum units per single/Multi-phase IQ Cable section	–	–	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

[3] 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.

Output data (AC)	Parameters	Units	IQ8X-80-M-INT
Total harmonic distortion	—	%	<5
Power factor setting	—	—	1.0
Power factor range	cos (phi)	—	0.8 leading ... 0.8 lagging
Inverter maximum efficiency	η_{max}	%	97.5
European weighted efficiency	η_{EU}	%	96.7
Inverter topology	—	—	Isolated (HF transformer)
Night-time power loss	—	mW	50

Mechanical data	Units	IQ8X-80-M-INT
Ambient air temperature range	°C (°F)	–40 to 65 (–40 to 149)
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 IQ Cable and accessories data sheet)
DC connector type	—	Stäubli MC4
The decisive voltage class (DVC)	—	AC: DVC C DC: DVC B
Dimensions (H × W × D)	mm (in)	212 × 175 × 30.2 (8.3 × 6.9 × 1.2) (without mounting brackets)
Weight (with mounting plate)	kg (lb)	1.1 (2.4)
Cooling	—	Natural convection—no fans
Enclosure	—	Class II double-insulated, corrosion-resistant polymeric enclosure
IP rating	—	Outdoor- IP67
Altitude	m (ft)	<2600 (8530)
Calorific value	MJ/unit	37.5

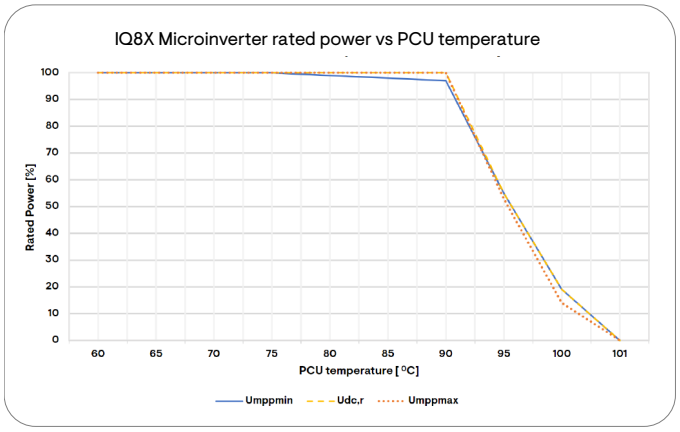
Standards	IQ8X-80-M-INT
Grid compliance	G98, G99, G100
Safety	EN IEC 62109-1, EN IEC 62109-2
EMC	EN IEC 61000-3-2, EN IEC 61000-3-3, EN IEC 61000-6-2, EN IEC 61000-6-3, EN IEC 50065-1, EN IEC 50065-2-2, EN 55011[4]
Product labelling	CE
Advanced grid functions[5]	Power export limiting (PEL), phase imbalance management (PIM), loss of phase detection (LOP), power factor control Q (U), cos (phi) (P)
Microinverter communication	Powerline communication (PLC) 110–120 kHz (Class B), narrowband 200 Hz

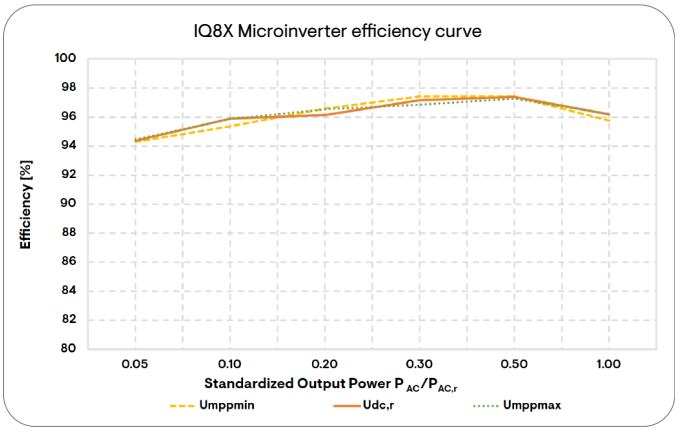
Compatibility with IQ7 Series Microinverters
• IQ8 Series Microinverters can be added to existing IQ7 systems on the same IQ Gateway/IQ Combiner/IQ System Controller only in the following configurations: (i) Solar Only or (ii) Solar + Battery (IQ Battery 3T/10T or IQ Battery 5P) grid-tied or Solar + Battery (IQ Battery 5P) with backup with IQ System Controller 3 INT.

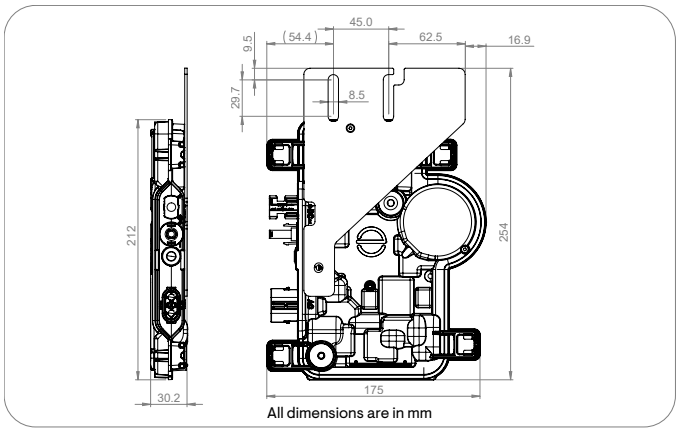
[4] At STC within the MPP range.
[5] Some of these functions require IQ Gateway Metered with current transformers and/or IQ Relay installed.

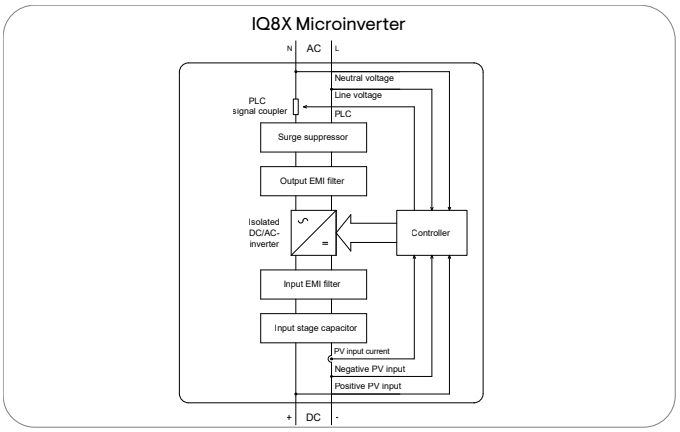
Compatibility with IQ7 Series Microinverters

- IQ7 Series Microinverters cannot be added to a site with existing IQ8 Series Microinverters on the same gateway.
- A mixed system with both IQ7 Series Microinverters and IQ8 Series Microinverters does not support the IQ8-specific Sunlight Jump Start feature.
- The peak power output of the IQ7 Series Microinverters, IQ8 Series Microinverters arrays must not exceed 150% of the IQ Battery's rated power output. If the microinverter array exceeds this ratio, PV shedding must be implemented to shed excess PV when the system transitions to the off-grid mode.









Assembled in India, U.S., or China.
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Importer: Enphase Energy NL B.V., Het Zuiderkruis 65, 5215MV, 's-Hertogenbosch, The Netherlands, Tel: +31 73 3035859

Components of the Enphase Energy System



IQ Battery

All-in-one AC-coupled storage solution that integrates seamlessly with your solar energy system, providing reliable backup power and intelligent energy management for maximum performance and energy savings.



IQ Gateway

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



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.

Revision history

Revision	Date	Description
DSH-00394-4.0	May 2026	Updated information on backward compatibility for IQ8/IQ7 Series Microinverters.
DSH-00394-3.0	June 2025	Editorial updates.
DSH-00394-2.0	February 2025	Updated information on backward compatibility with IQ7 Series Microinverters.
DSH-00394-1.0	March 2024	Initial release.