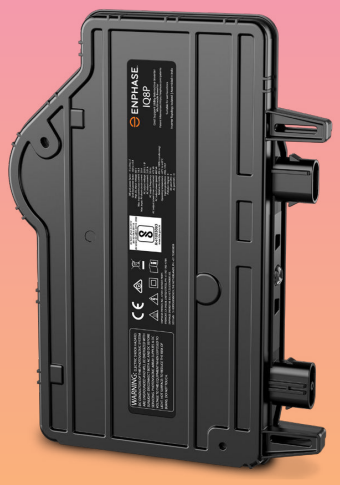
DATA SHEET

IQ8P Microinverter

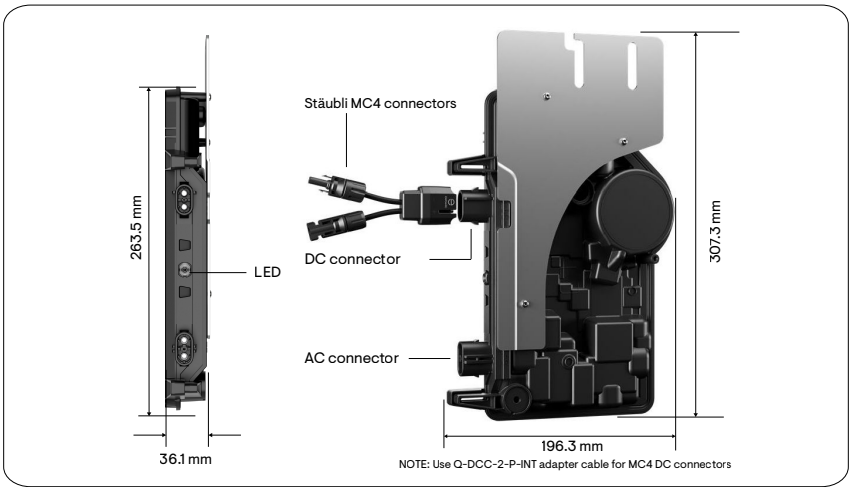
The IQ8P Microinverter[1, 2] is a high-powered, 480 VA rated, smart-grid ready microinverter designed to match the larger format residential and commercial PV modules. The IQ8P Microinverter has the highest energy production and reliability standards in the industry, and with Rapid Shutdown functionality, it meets the highest safety standards.



Enphase 25 year warranty

CE

Key specifications	IQ8P-72-2-INT
Maximum AC output power	480 W
Nominal grid voltage	230 V
Nominal frequency	50 Hz
European weighted efficiency	97.0%
Minimum/Maximum input voltage	16/65 V
Minimum/Maximum MPP voltage	36/55 V
Maximum short-circuit DC input current	25 A
Ambient temperature range	–40°C to 65°C (–40°F to 149°F)



Simple

- Compatible with existing IQ7 systems. Seamlessly expand your solar capacity as your energy requirements increase[1, 2]
- Lightweight and compact
- Fast installation with simple AC cabling
- New integrated circuit technology enables faster firmware upgrades

Reliabile

- More than one 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
- Industry-leading limited warranty of up to 25 years[3]

Compatible

- Supports the latest high-current PV modules up to 670 Wp
- Supports all common PV module powers and cell architectures

[1] IQ8 Series Microinverters can be added to existing IQ7 systems on the same IQ Gateway only in the following grid-tied configurations: Solar Only or Solar + Battery (IQ Battery 3T/10T and IQ Battery 5P) without backup.
[2] IQ7 Series Microinverters cannot be added to a site with existing IQ8 Series Microinverters on the same gateway.
[3] 25-year warranty is valid, provided an internet-connected IQ Gateway is installed.

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Input data (DC)	Parameters	Units	IQ8P-72-2-INT
Typical module compatibility	–	–	60-cell/120-half-cell, 66-cell/132-half-cell, 72-cell/144-half-cell, 78-cell/156-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 temperatures is respected. See the compatibility calculator at https://enphase.com/fr-fr/installers/microinverters/calculator.
Minimum/Maximum input voltage	U_{dcmin}/U_{dcmax}	V	16/65
Start-up input voltage	$U_{dcstart}$	V	22
Rated input voltage	$U_{dc,r}$	V	45.5
Minimum/Maximum MPP voltage	U_{mppmin}/U_{mppmax}	V	36/55
Minimum/Maximum operating voltage	U_{opmin}/U_{opmax}	V	16/65
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 IQ8P Microinverters: 20 A (calculated with 1.25 safety factor as per IEC 62548).
Maximum input power[4]	P_{dcmax}	W	670

Output data (AC)	Parameters	Units	IQ8P-72-2-INT
Maximum AC output power	$P_{ac,max}$	W	480
Maximum apparent power	$S_{ac,max}$	VA	475
Rated power	$P_{ac,r}$	W	475
Nominal grid voltage	U_{acnom}	V	230
Minimum/Maximum grid voltage	$U_{ac,min}/U_{ac,max}$	V	184/276
Maximum output current	$I_{ac,max}$	A	2.09
Nominal frequency	f_{nom}	Hz	50
Minimum/Maximum frequency	f_{min}/f_{max}	Hz	47/55
Maximum units per single/ multi-phase 20 A circuit	16 A/I_{acmax}	–	7 (L+N)/21 (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 factor applied may vary based on the local regulations or best practices, as well as upon the characteristics the OCPD selected.
Maximum units per single/ multi-phase IQ Cable section	–	–	7 (L+N)/15 (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%.

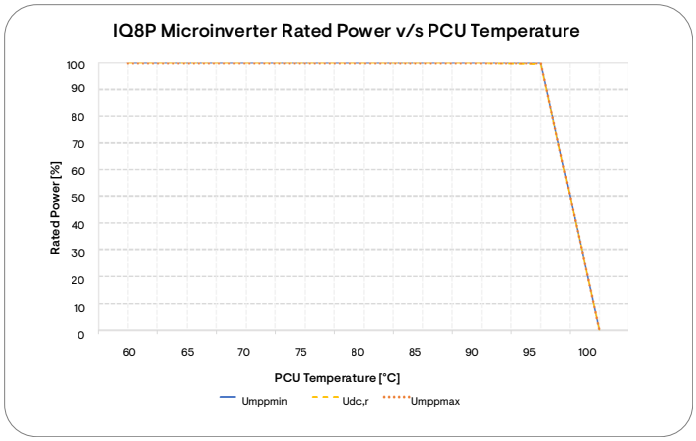
[4] Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at https://enphase.com/fr-fr/installers/microinverters/calculator.

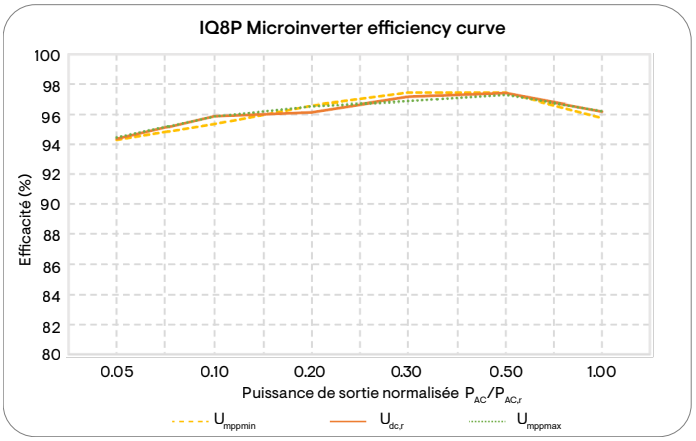
Output data (AC)	Parameters	Units	IQ8P-72-2-INT
Protective class (all ports)	—	—	II
Total harmonic distortion	—	%	<5
Power factor setting	—	—	1.0
Power factor range	cos phi	—	0.80 leading ... 0.80 lagging
Inverter maximum efficiency	η_{max}	%	97.3
European weighted efficiency	η_{EU}	%	97.0
Inverter topology	—	—	Isolated (HF Transformer)
Nighttime power loss	—	mW	100

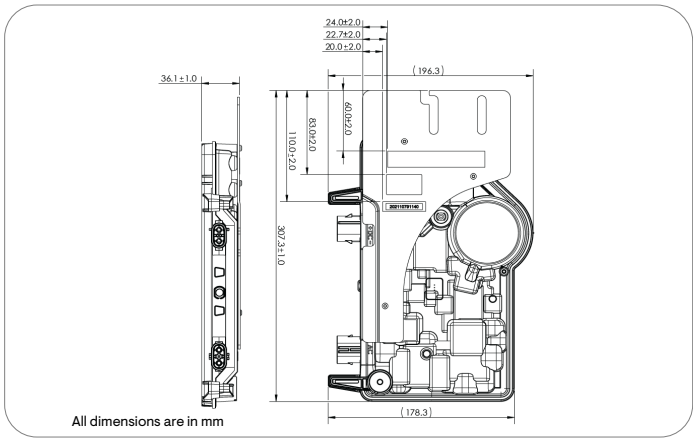
Mechanical data	Units	IQ8P-72-2-INT
Ambient air temperature range	°C (°F)	-40 to 65 (-40 to 149)
Relative humidity range	%	4 to 100 (condensing)
Overvoltage class AC port	—	III
Number of input DC connectors (pairs) per single MPP-tracker	—	1
AC connector type	—	IQ Cabling (refer to the IQ Cabling and accessories data sheet)
DC connector type	—	Supplied with Stäubli MC4 adapter (Q-DCC-2-P-INT)
Dimensions (H × W × D)	mm (in)	263,5 (10,4) × 196,3 (7,7) × 36,1 (1,4) (without mounting brackets)
Weight (with mounting plate)	kg (lb)	1,6 kg (3,5 lb)
Cooling	—	Natural convection – no fans
Enclosure	—	Class II double-insulated, corrosion-resistant polymeric enclosure
IP rating	—	Outdoor - IPX6/IP67
Altitude	m (ft)	2600 (8530)
Calorific value	MJ/unit	59.25

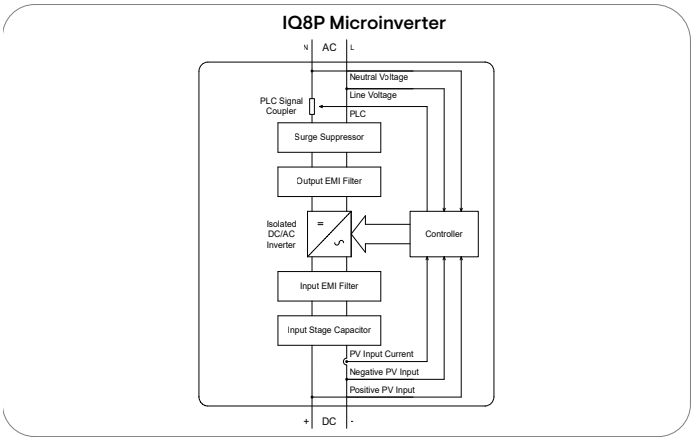
Standards	IQ8P-72-2-INT
Grid compliance (with IQ Relay)	EN 50549-1
Safety	EN IEC 62109-1, EN IEC 62109-2
EMC	EN IEC 61000-3-2, 61000-3-3, 61000-6-2, 61000-6-3, EN IEC 50065-1, 50065-2-2, EN55011[5]
Product labelling	CE
Advanced grid functions[6]	Power export limiting (PEL), phase imbalance management (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), narrowband 200 Hz

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









Assembled in China, India, and USA.
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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 Combiner/IQ Gateway

The IQ Combiner[7], in conjunction with the IQ Gateway, combines interconnection equipment in a single box. It simplifies the installation of IQ Microinverters and storage systems, offering a coherent, pre-wired solution for the residential sector.



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.



IQ Relay, single-phase and multi-phase

Production and storage circuit, integrated neutral sensing-protection device with PLC-phase coupler (multi-phase) and DC current injection monitoring[8].

[7] 25-year warranty is valid, provided an internet-connected IQ Gateway is installed.
[8] IQ Relay is not required in all countries. Check local grid connection requirements to confirm.

Revision history

Revision	Date	Description
DSH-00491-3.0	February 2025	Updated information on backward compatibility with IQ7 Series Microinverters.
DSH-00491-2.0	September 2024	Editorial updates.
DSH-00491-1.0	May 2024	Initial release.