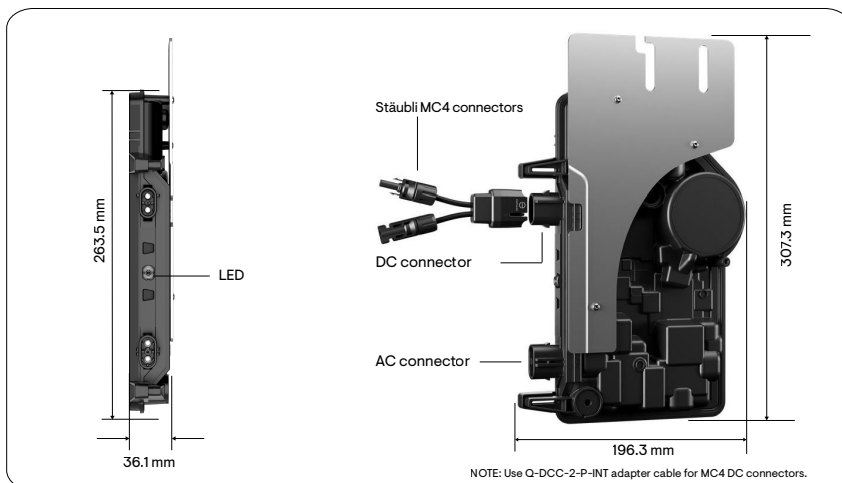


IQ8P Microinverter

The IQ8P Microinverter 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.



Key specifications	IQ8P-72-2-INT
Maximum AC output power	480 W
Nominal grid voltage	230 V
Nominal frequency	50 Hz
IS/IEC 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

- Lightweight and compact
- Fast installation with simple AC cabling
- New integrated circuit technology enables faster firmware upgrades

Reliable

- 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 15 years¹

Compatible

- Supports the latest high-current PV modules up to 670 Wp
- Supports all common PV module powers and cell architectures
- Compatible with existing IQ7 systems. Seamlessly expand your solar capacity as your energy requirements increase²

¹15-year warranty is valid, provided an internet-connected IQ Gateway is installed. Get in touch with the Enphase team for warranty extension options.

²For details, see the "Compatibility with IQ7 Series Microinverter" section.

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/en-in/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 Microinverter: 20 A (calculated with 1.25 safety factor as per IEC 62548).
Maximum input power ³	P_{dcmax}	W	670
Output data (AC)	Parameters	Units	IQ8P-72-2-INT
Maximum apparent power	$S_{ac,max}$	VA	480
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%.
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-in/installers/microinverters/calculator>.

Output data (AC)	Parameters	Units	IQ8P-72-2-INT
Total harmonic distortion	—	%	<5
Power factor setting	—	—	1.0
Power factor range	cos (phi)	—	0.80 leading ... 0.80 lagging
Inverter maximum efficiency	$\eta_{\max}$	%	97.3
IS/IEC efficiency	η	%	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 (3.5)
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)	IEC 61727
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, RCM, BIS
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	Power line communication (PLC) 110–120 kHz (Class B), narrowband 200 Hz

Compatibility with IQ7 Series Microinverter
• IQ8 Series Microinverter 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. • IQ7 Series Microinverter cannot be added to a site with existing IQ8 Series Microinverter on the same gateway. • Mixed system of IQ7 and IQ8 will not support the IQ8-specific Sunlight Jump Start feature.

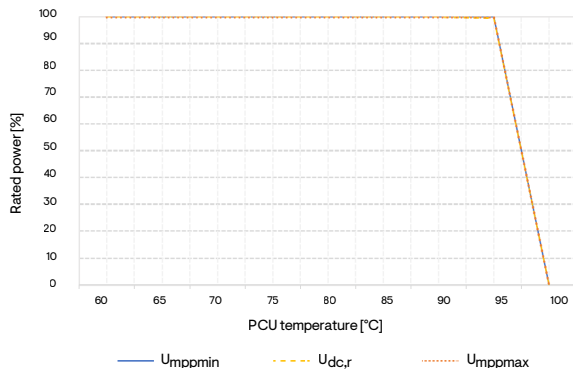
⁴ At STC within MPP range.

⁵ Some of these functions require IQ Gateway Metered with current transformers and/or IQ Relay installed.

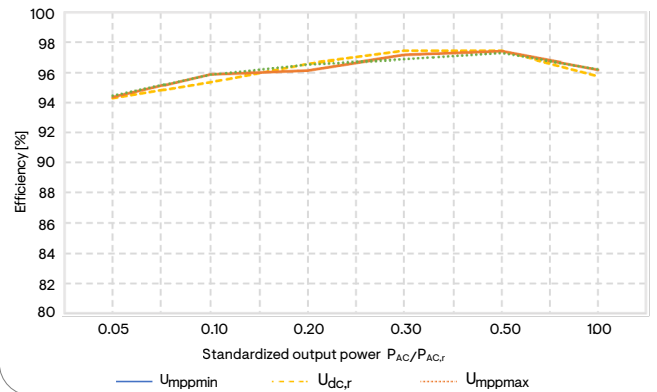
Compatibility with IQ7 Series Microinverter

- The peak power output of the IQ7, IQ8 Microinverter arrays must not exceed 150% of the IQ Battery's total rated power output. If the microinverter array exceeds this ratio, PV shedding must be implemented to shed excess PV when the system transitions to off-grid mode.

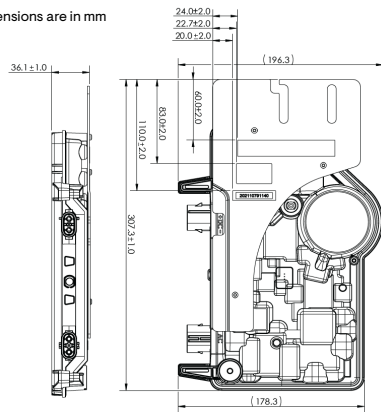
IQ8P Microinverter rated power vs. PCU temperature



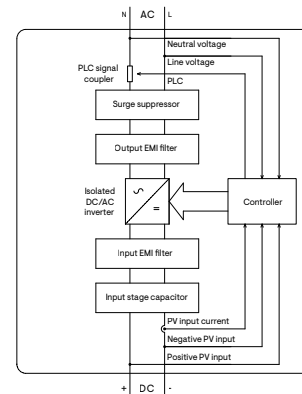
IQ8P Microinverter efficiency curve



All dimensions are in mm



IQ8P Microinverter



Assembled in India

Manufacturer: Enphase Energy, Inc. 47281 Bayside Pkwy., Fremont, CA 94538, United States of America, PH: +1 (707) 763-4784

Importer: Enphase Solar Energy Pvt. Ltd., IndiQube Golf View Homes, Ward No: 73 Airport, NAL Wind Tunnel Main Road, Bangalore-560017. PH: +91-8061172500

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 a device that performs energy management, provides internet connectivity, and integrates with the IQ Series Microinverters to provide complete control and insights into the Enphase Energy System.⁶



IQ Cable

IQ Cable enables IQ Series Microinverters to be installed quickly and safely.



IQ Relay 3P

For production circuits in both single-phase and three-phase systems. IQ Relay acts as a grid monitoring and disconnection device and includes a built-in PLC-phase coupler (three-phase).⁷

⁶ 15-year warranty is valid, provided an internet-connected IQ Gateway is installed. Get in touch with the Enphase team for warranty extension options.

⁷ IQ Relay is required to protect the PV system from grid abnormalities.

Revision history

Revision	Date	Description
DSH-00055-6.0	May 2026	Updated information on backward compatibility with IQ7/IQ8 Series Microinverters.
DSH-00055-5.0	June 2025	Updated the introduction and components information.
DSH-00055-4.0	May 2025	Updated information on backward compatibility with IQ7 Series Microinverters.
DSH-00055-3.0	March 2024	Removed the preliminary tag and updated the Enphase App version to 3.34.x on page 1.
DSH-00055-2.0	September 2023	Updated Maximum short-circuit DC input current parameter to correctly reference to IQ8P.
DSH-00055-1.0	August 2023	Preliminary release.