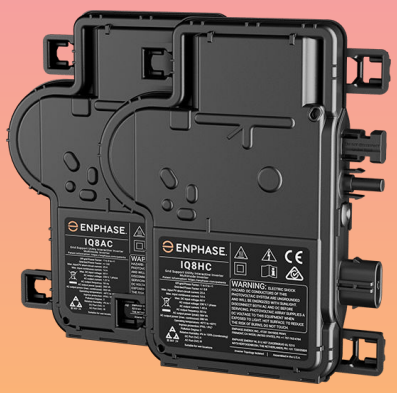
IQ8AC and IQ8HC Microinverters

Our newest IQ8 Series Microinverters[1],[2] are the industry's first microgrid-forming[3] microinverters. The high-powered, smart grid-ready IQ8 Series Microinverters are designed to match the latest-generation high-output PV modules. IQ8 Series Microinverters have the highest energy production and reliability standards in the industry, and with rapid shutdown functionality, they meet the highest safety standards.[4]

Enphase 25 year limited warranty



Key specifications	IQ8AC-72-M-INT	IQ8HC-72-M-INT
Maximum AC output power	366 VA	384 VA
Nominal grid voltage	230 V	230 V
Nominal frequency	50 Hz	50 Hz
European weighted efficiency	96.6%	96.8%
Minimum/Maximum input voltage	18/60 V	18/60 V
Minimum/Maximum MPP voltage	28/45 V	29.5/45 V
Maximum short-circuit DC input current	25 Maximum short-circuit current for modules (I_{sc}) allowed being paired with IQ8 Series Microinverters: 20 A (calculated with 1.25 safety factor as per IEC 62548).	
Ambient temperature range	–40°C to 60°C (–40°F to 140°F)	

Compatible

- Supports latest high-current PV modules
- IQ8 Series Microinverters support all common PV module powers and cell architectures.

Easy

- Compatible with existing IQ7 systems. Seamlessly expand your solar capacity as your energy requirements increase
- Lightweight and compact with integrated Stäubli MC4 connectors for easy installation
- Fast installation with simple AC cabling
- New integrated circuit technology enables faster firmware upgrades

Reliable

- Produces power even when the grid is down[5]
- 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

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

Input data (DC)	Parameters	Units	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 temperatures is respected. See the module compatibility calculator at: https://enphase.com/en-au/installers/microinverters/calculator.[6]	
Minimum/Maximum input voltage	$U_{dc,min}$/ $U_{dc,max}$	V	18/60	
Start-up input voltage	$U_{dc,start}$	V	22	
Rated input voltage	$U_{dc,r}$	V	36.5	37.0
Minimum/Maximum MPP voltage	$U_{mpp,min}$/ $U_{mpp,max}$	V	28/45	29.5/45
Minimum/Maximum operating voltage	$U_{op,min}$/ $U_{op,max}$	V	18/58	
Maximum input current	$I_{dc,max}$	A	14	
Maximum short-circuit DC input current	$I_{sc,max}$	A	25 Maximum short-circuit current for modules (I_{sc}) allowed being paired with IQ8 Series Microinverters: 20 A (calculated with 1.25 safety factor as per IEC 62548).	
Maximum input power [6,7]	$P_{dc,max}$	W	480	505

Output data (AC)	Parameters	Units	IQ8AC- 72 -M-INT	IQ8HC- 72 -M-INT
Maximum apparent power	$S_{ac,max}$	VA	366	384
Rated apparent power	$P_{ac,r}$	VA	360	380
Nominal grid voltage	$U_{ac,nom}$	V	230	
Minimum/Maximum grid voltage	$U_{ac,min}$/ $U_{ac,max}$	V	184/276	
Rated/Maximum output current	$I_{ac,max}$	A	1.57/1.59	1.65/1.67
Nominal frequency	f_{nom}	Hz	50	
Minimum/Maximum frequency	f_{min}/f_{max}	Hz	45/55	
Maximum units per single-phase 20 A circuit	—	—	11 (L+N) Single-phase	10 (L+N) Single-phase
Maximum units per multi-phase 25 A circuit	—	—	39 (3L+N) Multi-phase	36 (3L+N) Multi-phase
			For IQ Cable with 2.5 mm^2 stranded conductors and using a 1.20 safety factor. The safety factors applied may vary based on local regulations or best practices, as well as upon the characteristics the OCPD selected.	
Recommended maximum units per single/multi-phase IQ Cable section to reduce voltage rise in IQ Cable	—	—	8 (L+N) Single-phase 18 (3L+N) Multi-phase	8 (L+N) Single-phase 18 (3L+N) Multi-phase

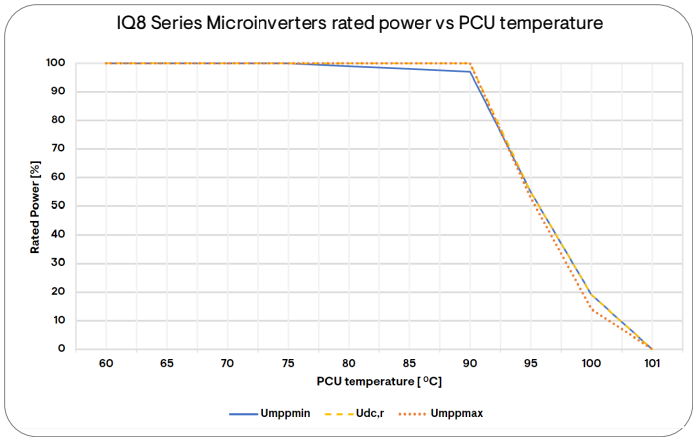
[6] The installer should not exceed the small-scale technology certificate (STC) limit on PV module wattage for claiming the STC.
[7] Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at https://enphase.com/en-au/installers/microinverters/calculator.

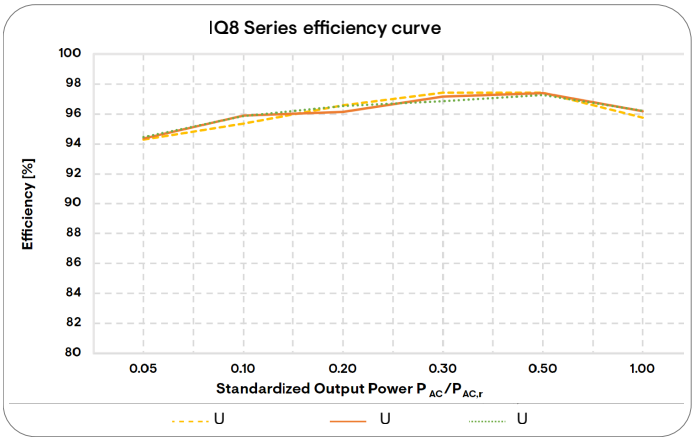
Output data (AC)	Parameters	Units	IQ8AC- 72 -M-INT	IQ8HC- 72 -M-INT
			It is recommended to centre-feed the IQ Cable within microinverter branch circuits to minimize the voltage rise. These design limits should ensure voltage rise and line conductor resistance on the IQ Cable are maintained within acceptable 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	cos phi	—	0.8 leading ... 0.8 lagging	
Inverter maximum efficiency	ηmax	%	97.3	97.4
European weighted efficiency	ηEU	%	96.6	96.8
Inverter topology	—	—	Isolated (HF transformer)	
Nighttime power loss	—	mW	50	

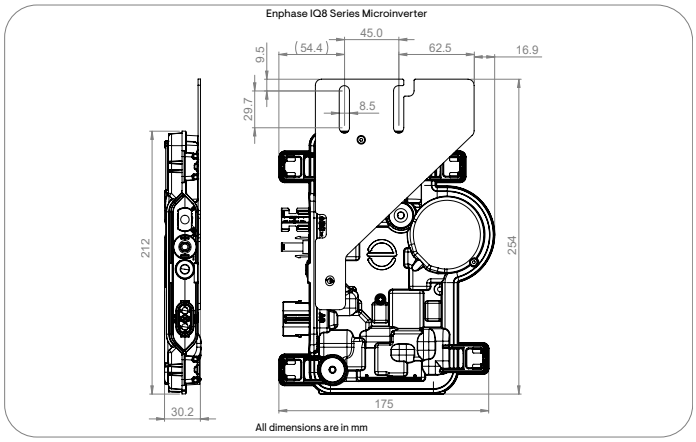
Mechanical data	IQ8AC- 72 -M-INT	IQ8HC- 72 -M-INT
Ambient air temperature range	–40°C to 60°C (–40°F to 140°F)	
Relative humidity range	4% to 100% (condensing)	
Overvoltage class AC port/DC port	III/II	
Number of input DC connectors (pairs) per single MPP-tracker	1	
AC connector type	IQ Cabling (refer to the IQ Cable and accessories data sheet)	
DC connector type	Stäubli MC4	
Dimensions (H × W × D)	212 mm (8.3") × 175 mm (6.9") × 30.2 mm (1.2") (without mounting brackets)	
Weight (with mounting plate)	1.1 kg (2.4 lb)	
Cooling	Natural convection – no fans	
Enclosure	Class II double-insulated, corrosion-resistant polymeric enclosure	
IP rating	Outdoor - IP67	
Altitude	<2,600 m (8530 ft)	
Calorific value	37.5 MJ/unit	

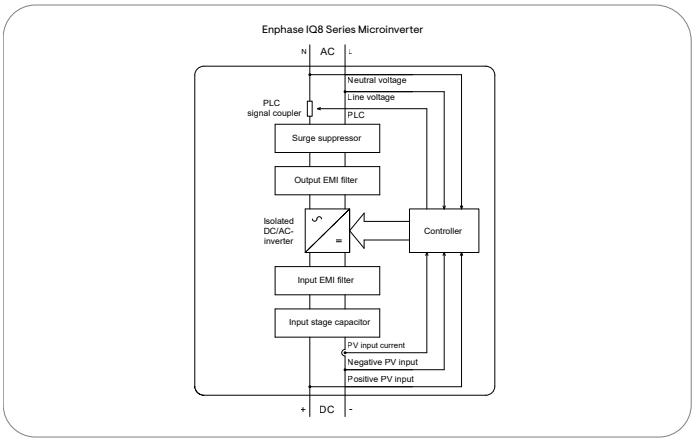
Standards	IQ8AC- 72 -M-INT	IQ8HC- 72 -M-INT
Grid compliance (with IQ Relay)	AS/NZS 4777.2:2020 + A2	
Safety	EN IEC 62109-1, EN IEC 62109-2	
EMC	EN IEC 61000-3-2, 61000-3-3, 61000-6-2, 61000-6-3, EN IEC 50065-1, 50065-2-1, EN 55011[8]	
Product labelling	CE, RCM	
Advanced grid functions[9]	Power export 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	

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









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Importer: Enphase Energy Aust. Pty/Ltd., 88 Market St., South Melbourne VIC 3205. PH: +61 386691679

Components of the Enphase Energy System

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 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.

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.

IQ Battery 5P

Part of the Enphase Energy System, the IQ Battery 5P integrates with the IQ8 Series Microinverters, IQ System Controller 3 INT, and the Enphase App monitoring and analysis software.

Revision history

Revision	Date	Description
DSH-00004-5.0	July 2025	Added the compatibility of IQ8 Series Microinverters with the existing IQ7 systems.
DSH-00004-4.0	October 2024	Updated the warranty from 15 to 25 years.
DSH-00004-3.0	July 2023	• Added rated apparent power, rated output current, and over-voltage class DC port details. • Modified ambient air temperature range: -40°C to 60°C. • Removed extended warranty details from the data sheet. For an extended warranty, contact Enphase Support.
DSH-00004-2.0	May 2023	Initial release.
DSH-00004-1.0	April 2023	Preliminary release.