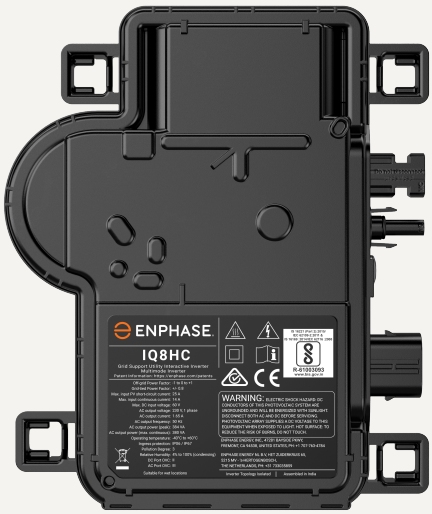


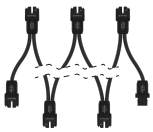
IQ8HC Microinverters

The high-powered, smart grid-ready IQ8HC Microinverters are designed to match the latest generation high output PV modules. The IQ8HC Microinverters have the highest energy production and reliability standards in the industry, and with rapid shutdown functionality, they 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
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).*

IQ8HC with integrated MC4 connectors
Connect PV modules quickly and easily to the IQ8HC Microinverters that have integrated MC4 connectors.



IQ Cabling
Install microinverters quickly and safely with IQ Cabling.

Enphase 15 year limited warranty

IQ8 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industry-leading limited warranty of up to 15 years.**

Compatible with latest generation high-output PV modules

- Supports 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
- New integrated circuit technology enables faster firmware upgrades

High energy production, reliability, and safety

- 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

Note:
(i) Commissioning of IQ8HC Microinverter systems requires Enphase Installer App version 3.31.0 or higher.
(ii) IQ8HC Microinverters cannot be mixed together with previous generations of Enphase microinverters (IQ7 Series, IQ6 Series) on the same IQ Gateway.

* IQ Relay is mandatory to protect the PV system from grid abnormalities.

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

IQ8HC Microinverters

INPUT DATA (DC)		UNITS	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 the 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	18/60
Start-up input voltage	$U_{dcstart}$	V	22
Minimum/Maximum MPP voltage	U_{mppmin}/U_{mppmax}	V	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 being paired with IQ8HC Microinverters: 20 A
Maximum input power [1]	P_{dcmax}	W	560
OUTPUT DATA (AC)		**UNITS**	**IQ8HC-72-M-INT**
Maximum apparent power	$S_{ac,max}$	VA	384
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_{acmax}	A	1.67
Nominal frequency	f_{nom}	Hz	50
Minimum/Maximum frequency	f_{min}/f_{max}	Hz	45/55
Maximum units per single-phase/ three-phase 20 A circuit	16 A/I_{acmax}		9 (L+N)/27 (3L+N) For IQ Cable with 12 AWG stranded conductors designed with NEC 2023 India standard and using a 1.25 safety factor, 16 A per phase is calculated as the maximum current according to NEC 2023 India requirements. Breaker selection should be determined by “Circuit current < Breaker rated current < Cable current capacity”.
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	η_{max}	%	97.4
IS/IEC 61683 weighted efficiency	η	%	96.7
Inverter topology			Isolated (HF transformer)
Nighttime power loss		mW	50

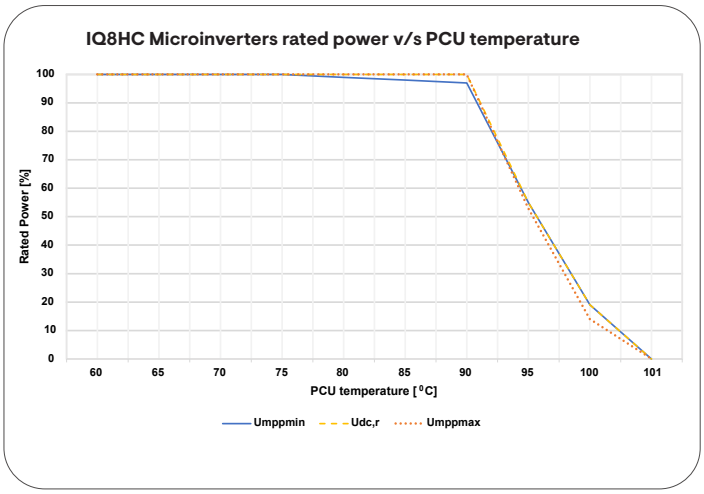
MECHANICAL DATA	IQ8HC-72-M-INT
Ambient air temperature range	-40°C to 65°C (-40°F to 149°F)
Relative humidity range	4% to 100% (condensing)
Overvoltage class AC port	III
Number of input DC connectors (pairs) per single MPP-tracker	1
AC connector type	IQ Cabling (refer to the cable and accessories data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

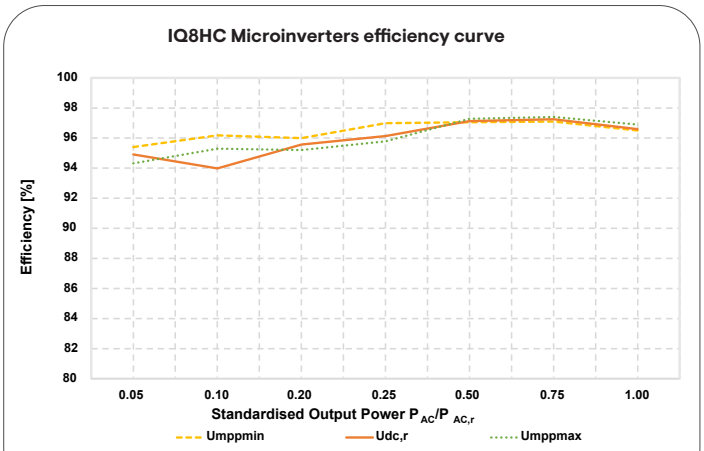
(1) Pairing PV modules with wattage above the limit may result in additional clipping losses. See the compatibility calculator at https://enphase.com/en-in/installers/microinverters/calculator.

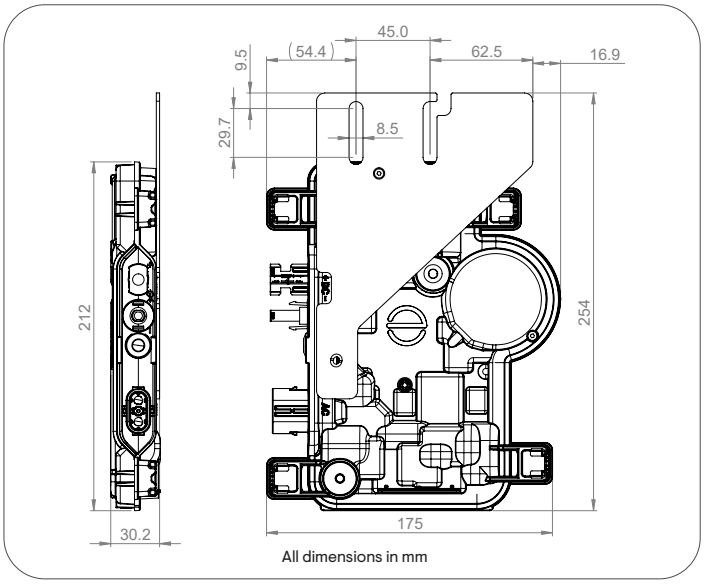
MECHANICAL DATA	IQ8HC-72-M-INT
Cooling	Natural convection – no fans
Enclosure	Class II double-insulated, corrosion-resistant polymeric enclosure
IP rating	Outdoor - IP67
Altitude	< 2,600 m

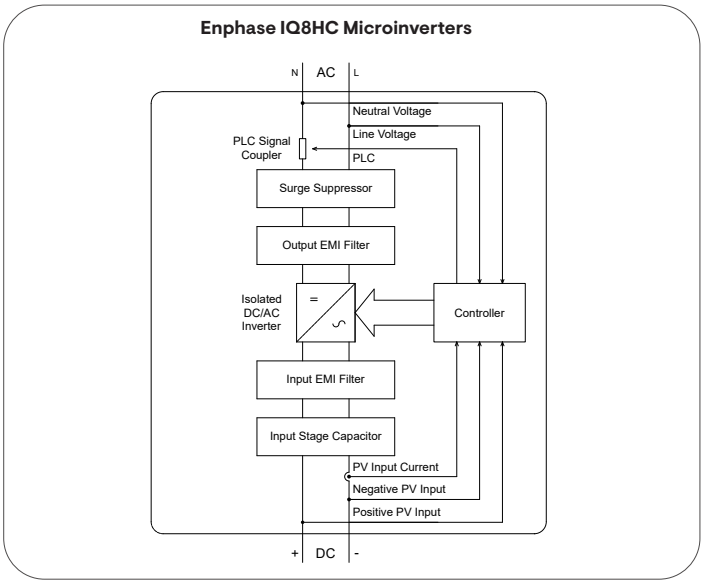
STANDARDS	IQ8HC-72-M-INT
Grid compliance	IEC61727
Safety	EN IEC 62109-1, EN IEC 62109-2
EMC	EN IEC 61000-3-2, 61000-3-3, 61000-6-2, 61000-6-3, EN IEC 50065-1, 50065-2-1, EN55011 [2]
Product labelling	CE, RCM, and BIS
Advanced grid functions [3]	Power export limiting (PEL), phase imbalance management (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), narrowband 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.









Assembled in China, India, and Romania

Manufacturer: Enphase Energy, Inc. 47281 Bayside Pkwy., Fremont, CA 94538, United States, 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. Tel: +91-80-6117-2500

Revision history

REVISION	DATE	DESCRIPTION
DSH-00071-2.0	September 2023	Initial release
DSH-00071-1.0	August 2023	Preliminary release