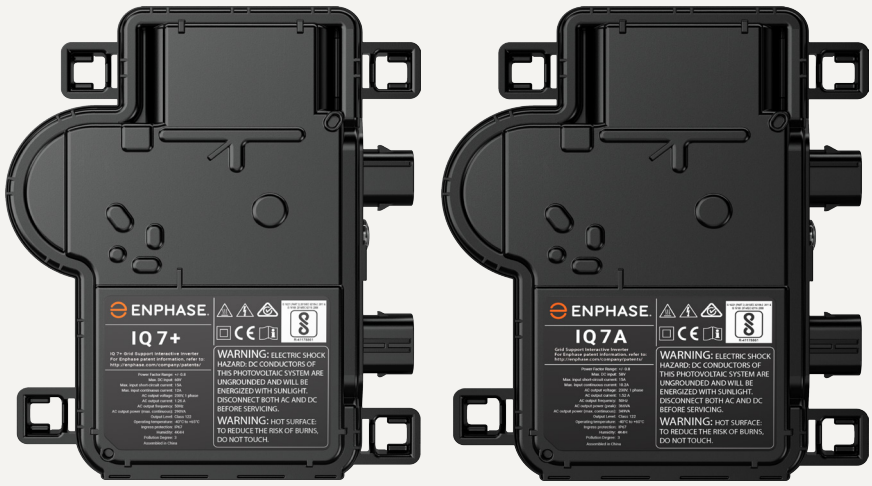
INDIA

DATA SHEET



IQ7+ and IQ7A Microinverters

The high-powered smart grid-ready IQ7+ and IQ7A Microinverters dramatically simplify the installation process while achieving the highest system performance.

IQ Gateway

Part of the Enphase Energy System, IQ7 Microinverters integrate with the IQ Gateway and the Enphase App monitoring and analysis software.

IQ Relay three-phase

For production circuit in both single-phase and three-phase systems, integrated NS-protection device with PLC-Phase coupler (three-phase).

Q-DCC-2 Adapter Cable

Connect PV modules quickly and easily to IQ7 Series Microinverters using the included Q-DCC-2 adapter cable with plug-and-play MC4 connectors.

IQ Cables

The IQ Cables allow quick and safe connection of the microinverters.

Enphase 10 year limited warranty

IQ7 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 10 years**.

Easy to install

- Lightweight and compact with plug-n-play connectors
- Power line communication (PLC) between components
- Familiar AC cabling architecture

High productivity and reliability

- More than one million cumulative hours of testing
- Class II double-insulated enclosure
- Safer AC cabling methods

Smart grid-ready

- Complies with the latest advanced grid support
- Remote automatic updates for the latest grid requirements
- Configurable to support a wide range of grid profiles

*IQ Relay is required to protect the PV system from grid abnormalities.
**10 years warranty is valid, provided an internet-connected IQ Gateway is installed. Get in touch with the Enphase team for warranty extension options.

IQ7+ and IQ7A Microinverters

INPUT DATA (DC)		UNITS	IQ7PLUS-72-2-INT	IQ7A-72-2-INT
Typical module compatibility			60-cell/120 half-cell 66-cell/132 half-cell 72-cell/144 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 compatibility calculator at https://www4.enphase.com/en-in/support-module-compatibility-en.	
Minimum/Maximum input voltage	U_{dcmin}/U_{dcmax}	V	16/60	18/58
Start-up input voltage	$U_{dcstart}$	V	22	33
Rated input voltage	$U_{dc,r}$	V	36	40.5
Minimum/Maximum MPP voltage	U_{mppmin}/U_{mppmax}	V	27/45	38/43
Minimum/Maximum operating voltage	U_{opmin}/U_{opmax}	V	16/60	18/58
Maximum input current	I_{dcmax}	A	12	10.2
Maximum short-circuit DC input current	I_{scmax}	A	25	25
Maximum module Isc		A	20	20
Maximum input power***	P_{dcmax}	W	440	550

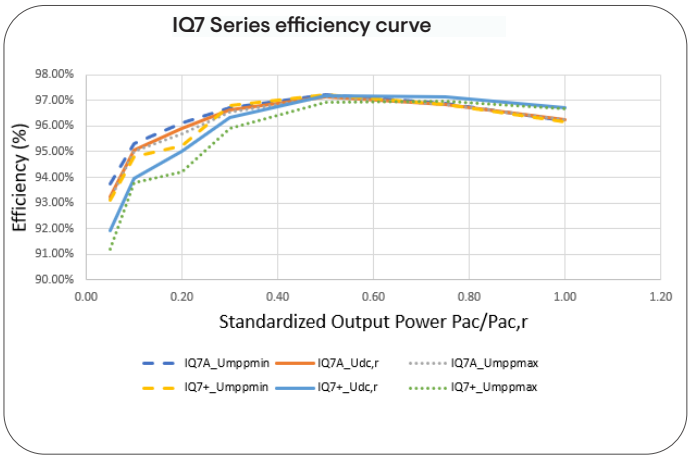
OUTPUT DATA (AC)		UNITS	IQ7PLUS-72-2-INT	IQ7A-72-2-INT
Maximum apparent power	$S_{ac,max}$	VA	295	366
Rated power	$P_{ac,r}$	W	290	349
Nominal grid voltage	U_{acnom}	V	230	
Minimum/Maximum grid voltage	U_{acmin}/U_{acmax}	V	184/276	
Maximum output current	I_{acmax}	A	1.28	1.59
Nominal frequency	f_{nom}	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}		12 (L+N)/36 (3L+N)	10 (L+N)/30 (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 maximum current according to IEC 60364. The Safety factors applied may vary based on local regulations or best practices, also upon the characteristic the OCPD selected.	
Protective class (all ports)			II	
Total harmonic distortion		%	<5	
Power factor setting			1.0	
Power factor range	cosphi		0.8 leading–0.8 lagging	
Inverter maximum efficiency	η_{max}	%	97.2	
IS/IEC 61683 efficiency	η_{IS}	%	97	96.6
Inverter topology			Isolated (HF Transformer)	
Night-time power loss		mW	50	

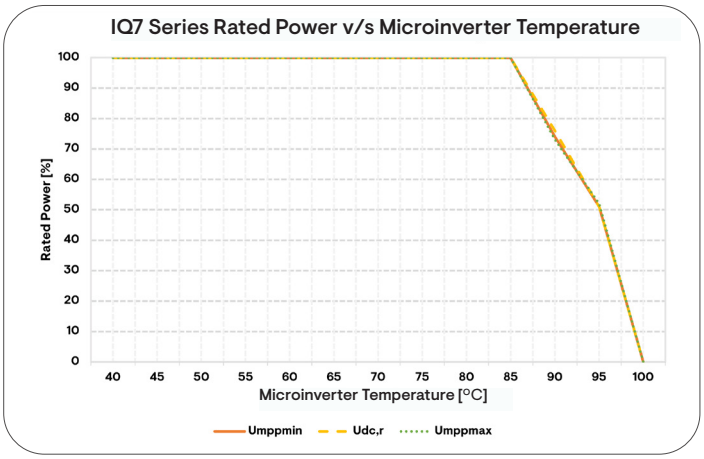
MECHANICAL DATA	IQ7PLUS-72-2-INT	IQ7A-72-2-INT
Ambient air temperature range	-40°C to 65°C (-40°F to 149°F)	-40°C to 60°C (-40°F to 140°F)
Relative humidity range	4% to 100% (condensing)	
Overvoltage class AC port	III	
Number of input DC connectors (pairs) per single MPP-tracker	1	
AC connector type	Enphase IQ Cabling (refer to separate datasheet for cable and accessories)	
DC connector type	Staubli MC4 (using Q-DCC-2 adapter)	

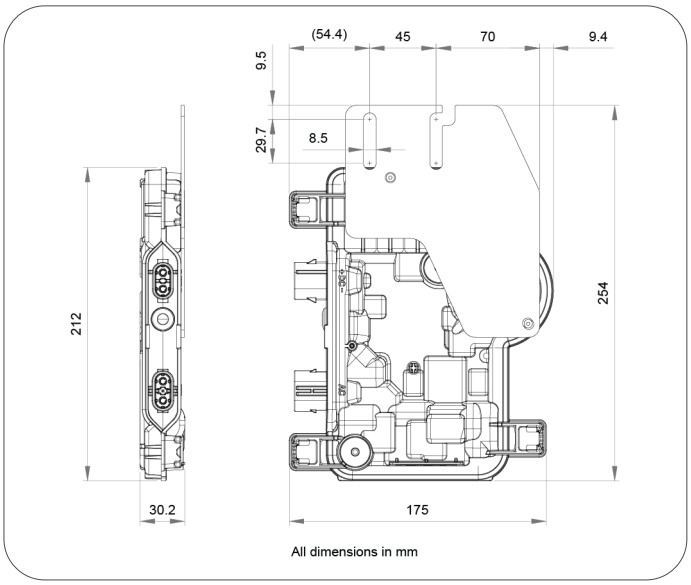
***The maximum input power values are recommended to address region-specific requirements.

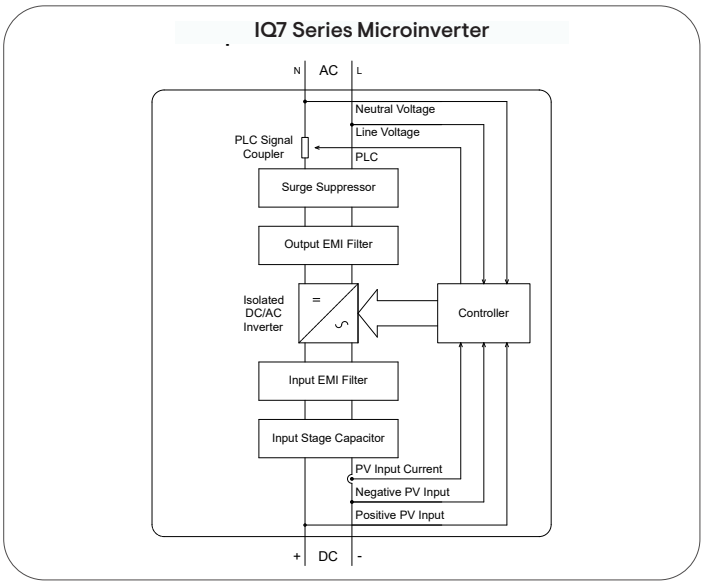
MECHANICAL DATA	IQ7PLUS-72-2-INT	IQ7A-72-2-INT
Dimensions (H×W×D)	212 mm (8.3") × 175 mm (6.9") × 30.2 mm (1.2") (without mounting brackets)	
Weight (with mounting plate)	1.08 kg (2.38 lbs)	
Cooling	Natural convection–no fans	
Enclosure	Class II double-insulated, corrosion-resistant polymeric enclosure	
IP Rating	Outdoor-IP67	
Maximum altitude	2,600 m	
Calorific value	37.5 MJ/unit	
COMPLIANCE	**IQ7PLUS-72-2-INT**	**IQ7A-72-2-INT**
Grid compliance	IEC 62109-1, IEC 62109-2/IS 16221; IEC 61727	
Safety	EN IEC 62109-1, EN IEC 62109-2	
Anti-Islanding	IEC 62116/IS 16169	
EMC	EN IEC 61000-3-2, 61000-3-3, 61000-6-2, 61000-6-3, EN IEC 50065-1, 50065-2-1	
Product labelling	CE & BIS	
Advanced grid functions[1]	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), Narrow band 200 Hz	

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









Assembled in China, India, and Mexico.
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