

IQ7+ and IQ7A Microinverters

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



IQ Gateway

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



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-n-play MC4 connectors.



IQ7 Series Microinverters redefine reliability standards with more than one million cumulative hours of power-on testing, enabling an industryleading limited warranty of up to 10 years**.



IQ Relay 3P

Production and storage, circuit integrated, NS-protection device with PLC-Phase coupler (3P) and DC current injection monitoring*.



IQ Cables

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

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

 $^{^{\}star}$ 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 Enphase team for warranty extension options.

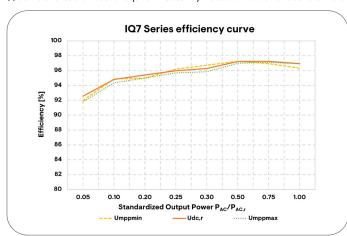
IQ7+ and IQ7A Microinverters

INPUT DATA (DC)		UNITS	IQ7PLUS-72-2-INT	1Q7A-72-2-INT	
			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	
Typical Module compatibility			No enforced DC/AC ratio and maximum input power. Modules can be paired as long as the maximum input voltage is not exceeded and maximum input current of the inverter at the lowest and highest temperatures are respected. See the compatibility calculator at https://www4.enphase.com/en-in/support-module-compatibility-en .		
Minimum/Maximum Input voltage	$\mathbf{U}_{ ext{dcmin}}\mathbf{U}_{ ext{dcmax}}$	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	$\mathbf{U}_{\mathrm{mppmin}}\mathbf{U}_{\mathrm{mppmax}}$	V	27/45	38/43	
Minimum/Maximum operating voltage	$\mathbf{U}_{\mathrm{opmin}}\mathbf{U}_{\mathrm{opmax}}$	V	16/60	18/58	
Maximum Input current	dcmax	Α	12	10.2	
Maximum short-circuit DC input current	I _{scmax}	Α	25	25	
Maximum module Isc		Α	20	20	
Maximum Input power***	P_{dcmax}	W	440	550	
OUTPUT DATA (AC)		UNITS	IQ7PLUS-72-2-INT	1Q7A-72-2-1NT	
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	acmax	Α	1.28	1.59	
Nominal frequency	f_{nom}	Hz	50		
Minimum/Maximum frequency	$f_{min/}f_{max}$	Hz	45/55		
			12 (L+N)/36 (3L+N)	10 (L+N)/30 (3L+N)	
Maximum units per single/ multi-phase 20 A circuit	16 A/I _{acmax}		For IQ Cable with 2.5mm ² stranded conductors and using a 1.25 safety factor, 16 A per phase is calculated as maximum current according to IEC 60364. Safety factor applied may vary based local regulation or best practice, also upon the characteristic the OCPD selected.		
Protective class (all ports)			п		
Total harmonic distortion		%	<5		
Power factor setting			1.0		
Power factor range	cosphi		0.8 leading -	0.8 lagging	
Inverter maximum efficiency	η_{max}	%	97.24	97.23	
European weighted efficiency	$\eta_{\scriptscriptstyle{\sf EU}}$	%	96.	5	
Inverter topology			Isolated (HF T	Isolated (HF Transformer)	
Night-time power loss		mW	50		
MECHANICAL DATA			IQ7PLUS-72-2-INT	107A-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)			

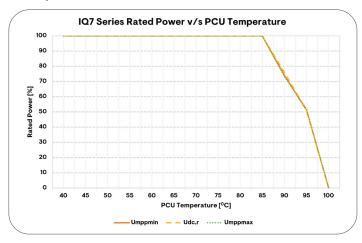
 $[\]hbox{\ensuremath{}^{***}} The\ maximum\ input\ power\ values\ are\ recommended\ to\ address\ region\ specific\ requirements.$

MECHANICAL DATA	IQ7PLUS-72-2-INT	107A-72-2-INT	
Dimensions (HxWxD)	212 mm (8.3") x 175 mm (6.9") x 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 metres		
Calorific value	37.5 MJ/unit		
STANDARDS	IQ7PLUS-72-2-INT	107A-72-2-INT	
STANDARDS Grid compliance (with IQ Relay)	107PLUS-72-2-INT TOR Erzeuger Typ A, C10/11, PPDS Annex 4, VFR 20 EN 50549-1, UNE	D19, VDE-AR-N 4105:2018, CEI 0-21, NEN1010,	
	TOR Erzeuger Typ A, C10/11, PPDS Annex 4, VFR 20	019, VDE-AR-N 4105:2018, CEI 0-21, NEN1010, 206007-1/2	
Grid compliance (with IQ Relay)	TOR Erzeuger Typ A, C10/11, PPDS Annex 4, VFR 20 EN 50549-1, UNE	019, VDE-AR-N 4105:2018, CEI 0-21, NEN1010, 206007-1/2 G99 NI, G100	
Grid compliance (with IQ Relay) Grid compliance (without IQ Relay)	TOR Erzeuger Typ A, C10/11, PPDS Annex 4, VFR 20 EN 50549-1, UNE: G98, G98 NI, G99,	019, VDE-AR-N 4105:2018, CEI 0-21, NEN1010, 206007-1/2 G99 NI, G100	
Grid compliance (with IQ Relay) Grid compliance (without IQ Relay) Safety	TOR Erzeuger Typ A, C10/11, PPDS Annex 4, VFR 20 EN 50549-1, UNE: G98, G98 NI, G99, EN IEC 62109-1, EN	019, VDE-AR-N 4105:2018, CEI 0-21, NEN1010, 206007-1/2 G99 NI, G100 I IEC 62109-2 61000-6-3, EN IEC 50065-1, 50065-2-1	

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



Microinverter communication



Powerline communication (PLC) 110 - 120 kHz (Class B), Narrow band 200 Hz

