



IQ Combiner 2 EU 3P

The IQ Combiner 2 EU 3P consolidates interconnection equipment into a single enclosure and streamlines solar and storage installations, leading to significant installation time savings. It includes the IQ Gateway Metered, two IQ Relays, a Communications Kit, two 4-pole circuit breakers, an IQ Gateway circuit breaker, a residual current device (RCD), and supporting components pre-installed on a 3 DIN rail assembly.

Components of Enphase Energy System



IQ Microinverters

IQ Series Microinverters pack more power into less space than other rooftop solar systems and make rooftop solar more productive, reliable, smart, and safe.



IQ Gateway

The IQ Gateway with Current Transformers provides complete control and insight into the Enphase Energy System.



IQ Battery 5P with FlexPhase

All-in-one AC-coupled storage system is reliable, smart, simple, and safe. It has a total usable energy capacity of 5 kWh.



Communications Kit 2 INT

The Communications Kit 2 INT enables wired communication between the battery and gateway for grid-tied operation.

Benefits

All-in-one solution

- A pre-wired plug-and-play solution with IQ Gateway Metered, three-phase IQ Relays, Communications Kit 2, circuit breakers, and RCD
- Consolidates required system components into one box

Installation simplified

- Easy wall mounting
- Top cable entry for all field wiring
- Significant installation time savings
- Push-in terminals for quick and safe termination
- IP54 rated, and suitable for indoor usage

Hassle-free metering

- Pre-installed and pre-wired Production CTs
- Quick installation of Consumption CTs with push-in terminals



IQ Combiner 2 EU 3P

ELECTRICAL SPECIFICATIONS		UNITS	ORDER CODE: X-IQ-EURO-230-3P-4-2
Rated frequency (fn)	Hz		50
Related diversity factor			1
System voltage (U _n)	VAC		400 Y/230
Maximum circuit rating (each circuit)	A		16
Maximum circuit rating (assembly)	A		32
Configurations supported	—	1 PV + 1 storage circuit, or 2 PV circuits, or 2 storage circuits (maximum 16 A each)	
Rated insulation voltage (U _i)	V		500
Rated impulse withstand voltage (U _{imp})	V		6000
Rated peak withstand current (I _{pk})	A		1000
Rated conditional short-circuit current (I _{cc})	A		6000
DBO Type (distribution boards intended to be operated by ordinary persons)	—	Type B (for use by ordinary person)	
EMC Classification	—	Installation class 3, Class B	
MECHANICAL DATA		UNITS	
Dimensions (H × W × D)	mm		600 × 400 × 132
IP rating	—		IP54
Weight	kg		12
Mechanical impact rating	—		IK08
Pollution degree	—		2
ENVIRONMENTAL SPECIFICATIONS		UNITS	
Altitude	m		Up to 2500
Operating temperature range	°C		-25 to 40
Storage temperature range	°C		-25 to 60
Installation location	—		Indoor
Humidity	%		Up to 85
COMMUNICATION INTERFACES		UNITS	
Communication	—	Wired control communication (Communications Kit 02)	
Integrated Wi-Fi	—	802.11 b/g/n (2.4 GHz, 5 GHz) for connecting to the Enphase Cloud through the internet	
Wi-Fi range (recommended)	m		10
Ethernet	—	Optional 802.3, Cat5E (or Cat6) UTP Ethernet cable (not included) for connecting to the Enphase Cloud through the internet	
Mobile Connect	—	Optional, CELLMODEM-M1-06-AT-05 (not included)	
Digital I/O	—	Digital input/output for grid operator control	
USB 2.0	—	For Mobile Connect	
Metering ports	—	Up to three Consumption CTs, up to three Production CTs	
Power line communication (PLC)	—	110–120 kHz (Class B), narrowband 200 Hz, to IQ Microinverters and IQ Relay	
Web API	—	Refer to developer-v4.enphase.com	
Local API	—	Refer to the guide for local API	
LED indicators	—	From top to bottom: Cloud connectivity, Wi-Fi access point mode, PV production state, PLC communications state	
Configured through	—	Enphase Installer App, Enphase Installer Platform	

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IQ RELAY		UNITS	ORDER CODE: X-IQ-EURO-230-3P-4-2
Overvoltage category (EN 61010-1)	—	3	
CAT III	—	GRID terminal is rated for measurement category III	
Voltage and frequency acquisition time on valid input	ms	100 (5 line cycles @50 Hz)	
Output rating (typical)	—	230 V _{rms} , 25 A	
LEDs	—	Four red/green LEDs: three for under/overvoltage trip, one for under/over frequency and DC current	
RESIDUAL CURRENT DEVICE		UNITS	
RCD type	—	Type A	
Number of poles	—	4	
Current rating	A	63	
Sensitivity	mA	30	
METERING SPECIFICATIONS		UNITS	
Production metering	—	±1% accuracy, three Production CTs pre-installed	
Consumption metering	—	±1% accuracy, three Consumption CTs provided with the product	
Consumption CT lead cable length	m	4	
FIELD WIRING SPECIFICATIONS		UNITS	
Mains input terminals	mm ²	4–6	
IQ Relay input terminals	mm ²	2.5–6	
CTRL header	mm ²	0.5–1.5	
Communications Kit 2	mm ²	0.5–2.5	
COMPLIANCE			
IQ Combiner	IEC 61439-1, IEC 61439-3		
Breaker and RCD	IEC 60947-2		
Enclosure	DIN EN 60670-24		
IQ Gateway	IEC/EN 61010-1:2010, EN 50065-1, EN 61000-4-5, EN 61000-6-1, EN 61000-6-2, EN 61000-6-3		
IQ Relay	IEC 61010-1, EN 61010-1, AS/NZS 61010.1,		
Product labeling	CE		
WHAT'S IN THE BOX		QUANTITY	
IQ Gateway Metered (ENV-S-EM-230)	1	IQ Gateway is the platform for total energy management for comprehensive remote maintenance and management of the IQ Microinverters and IQ Batteries	
IQ Relays (Q-RELAY-3P-INT)	2	Network and system protection device with PLC-phase coupler (multi-phase) and DC current injection monitoring	
Communications Kit 2 (COMMS-KIT-INT-02)	1	Enables wired control communication between IQ Gateway Metered and the IQ Batteries	
Productions CTs (CT-100-SPLIT-ROW)	3	Pre-wired Production CTs for metering PV production with ±1% accuracy	
Consumption CTs (CT-100-SPLIT-ROW)	3	Enables home-load metering with ±1% accuracy, provided with the product	
IQ Gateway breaker	1	16 A, 4-pole, B-curve breakers pre-wired to power up the IQ Gateway	
PV/storage breaker	2	20 A, 4-pole, B-curve breakers pre-wired for IQ Microinverter and/or IQ Battery	
Residual current device	1	30 mA, 63 A, Type A, 4-pole RCD for ground fault protection	
ACCESSORIES (TO BE ORDERED SEPARATELY)			
CELLMODEM-M1-06-AT-05	Plug-and-play industrial-grade cellular modem with a 5-year data plan		
COMPATIBILITY			
Microinverters	IQ7 and IQ8 Series Microinverters		
IQ Battery	IQ Battery 5P with FlexPhase (configured in three-phase)		

Assembled in China.

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Revision history

REVISION	DATE	DESCRIPTION
DSH-00476-1.0	June 2024	Preliminary release.