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.
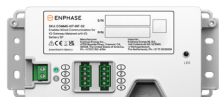

IQ Battery 5P with FlexPhase
All-in-one AC-coupled storage system is reliable, smart, simple, and safe. It has a total usable energy capacity of 5 kWh.

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

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

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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 https://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

IQ Combiner 2 EU 3P

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	mm²	4–6
IQ Relay input terminals	mm²	2.5–6
CTRL header	mm²	0.5–1.5
Communications Kit 2	mm²	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)

Revision history

REVISION	DATE	DESCRIPTION
DSH–00476-2.0	January 2025	Initial version.
DSH–00476-1.0	June 2024	Preliminary release.