

## IQ Battery 10T

The **IQ Battery 10T** all-in-one AC-coupled storage system is reliable, smart, simple, and safe. It is comprised of three base IQ Battery 3T storage units, has a total usable energy capacity of 10.08 kWh and twelve embedded grid-forming microinverters with 3.84 kW power rating. It provides backup capability and installers can quickly design the right system size to meet the needs of both new and retrofit solar customers.



### Reliable

- Proven high reliability IQ Series Microinverters
- 15-years limited warranty
- Three independent IQ Battery base units
- Twelve embedded IQ8X-BAT Microinverters
- Passive cooling (no moving parts/fans)
- UL listed
- Meets CA Rule 21 (UL 1741-SA) and IEEE 1547:2018 (UL 1741-SB, 3rd Ed.)

### Smart

- Grid-forming capability for backup operation
- Remote software and firmware upgrade
- Mobile app-based monitoring and control
- Support for self consumption
- Utility time of use (TOU) optimization

### Simple

- Fully integrated AC battery system
- Quick and easy plug-and-play installation
- Interconnects with standard household AC wiring

### Safe

- Safety tested battery cells and module
- Lithium iron phosphate (LFP) chemistry for maximum safety and longevity

To learn more about Enphase offerings, visit [enphase.com](https://enphase.com)

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# IQ Battery 10T

MODEL NUMBER	
ENCHARGE-10T-1P-NA	IQ Battery 10T with integrated IQ Series Microinverters and battery management unit (BMU). Includes: - Three IQ Battery 3T base units (B03-T01-US00-1-3) - One IQ Battery 10T cover kit with cover, wall mounting bracket, and interconnect cable for wiring between batteries (B10T-C-1290-O)
OUTPUT (AC)	
	@ 240 VAC <sup>1</sup>
Rated (continuous) output power	3.84 kVA
Peak output power	5.76 kVA (10 seconds)
Nominal voltage/Range	240/211 – 264 VAC
Nominal frequency/Range	60/57 – 63 Hz
Rated output current	16 A
Peak output current	24.6 A (10 seconds)
Power factor (adjustable)	0.85 leading ... 0.85 lagging
Maximum units per 20A branch circuit	1 unit (single-phase)
Interconnection	Single-phase
Maximum AC short circuit fault current over three cycles	14.4 Arms
Round trip efficiency <sup>2</sup>	89%
BATTERY	
Total capacity	10.5 kWh
Usable capacity	10.08 kWh
Round trip efficiency	96%
Nominal DC voltage	67.2 V
Maximum DC voltage	75.6 V
Ambient operating temperature range	-15°C to 55°C (5°F to 131°F) non-condensing
Optimum operating temperature range	0°C to 30°C (32°F to 86°F)
Chemistry	Lithium iron phosphate (LFP)
MECHANICAL DATA	
Dimensions (W × H × D)	1283 mm × 775 mm × 188 mm (50.5" × 30.5" × 7.4")
Weight	Three individual 40.5 kg (89.3 lbs) base units plus 22.1 kg (48.7 lbs) cover and mounting bracket; total 143.6 kg (316.5 lbs)
Enclosure	Outdoor – NEMA type 3R
IQ8X-BAT microinverter enclosure	NEMA type 6
Cooling	Natural convection – No fans
Altitude	Up to 2,500 meters (8,200 feet)
Mounting	Wall mount
FEATURES AND COMPLIANCE	
Compatibility	Compatible with grid-tied PV systems. Compatible with M215/M250 and IQ Series Microinverters, IQ System Controller, and IQ Gateway for backup operation.
Communication	Wireless 2.4 GHz
Services	Backup, self-consumption, TOU, demand charge, NEM integrity
Monitoring	Enphase Installer App monitoring options; API integration
Compliance	CA Rule 21 (UL 1741-SA), IEEE 1547:2018 (UL 1741-SB, 3 <sup>rd</sup> Ed.) CAN/CSA C22.2 No. 107.1-16 UL9540, UL9540A <sup>3</sup> , UN 38.3, UL 1998, UL 991, NEMA Type 3R, AC156 EMI: 47 CFR, Part 15, Class B, ICES 003 Cell Module: UL 1973, UN 38.3 Inverters: UL 62109-1, IEC 62109-2
LIMITED WARRANTY	
Limited Warranty	>60% capacity, up to 15-years or 6,000 cycles <sup>4</sup>

1. Supported in both grid-connected and backup operation.

2. AC to Battery to AC at 50% power rating.

3. When installed with Wall Mount SKUs (B10T-AWM-1280-O & B10T-MWM-1280-O). See [IQ Battery 3T/10T Installation Guide](#) for details.

4. Whichever occurs first. Restrictions apply.

To learn more about Enphase offerings, visit [enphase.com](https://enphase.com)



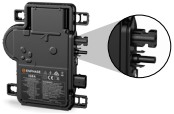
# Revision history

REVISION	DATE	DESCRIPTION
DSH-00085-1.0	June 2023	Revised warranty terms.
Previous releases		



# IQ Gateway

The IQ Gateway is the platform for energy management and integrates with the IQ Microinverters and IQ Batteries to provide complete control and insights into the Enphase Energy System. The IQ Gateway delivers solar production and energy consumption data to the Enphase App monitoring and analysis software for comprehensive, remote maintenance and management of the Enphase Energy System.



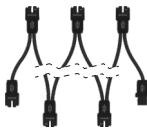
**IQ Microinverters with integrated MC4 connectors**  
Connect PV modules quickly and easily to the IQ Microinverters that has integrated MC4 connectors.



**IQ Relay single-phase and multi-phase**  
Production and storage, circuit integrated, network and system protection device with PLC-phase coupler (multi-phase) and DC current injection monitoring.\*



**IQ Battery**  
IQ Battery is a fully integrated AC battery system with embedded IQ8X-BAT Microinverters. These are designed for maximum safety, longevity and quick and easy plug-and-play installation. (Available in selected countries only).



**IQ Cabling**  
Install microinverters quickly and safely with IQ Cabling. With multi-phase IQ Cabling, the installed capacity is automatically distributed evenly across all three phases.

## Smart

- Enables web-based monitoring and control
- Bidirectional communication with IQ Microinverters, IQ Battery and the Enphase Cloud for remote upgrade

## Simple

- Easy system configuration using the Enphase Installer App
- Flexible networking with Wi-Fi, Ethernet, or cellular data
- DIN rail mounted

## Reliable

- Designed for installation indoors or in an outdoor enclosure
- Five-year warranty



\*IQ Relay is not required in all countries, check local grid connection requirements to confirm.

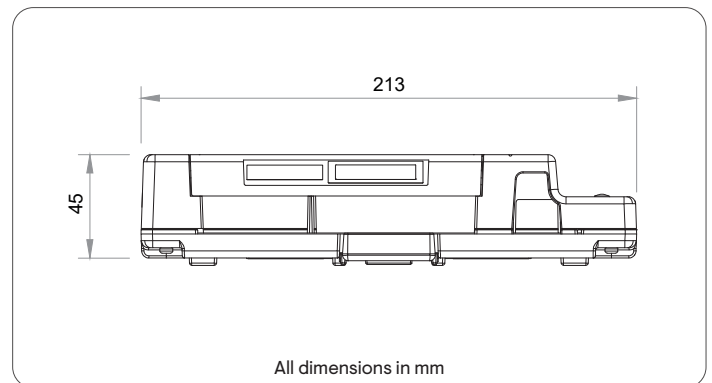
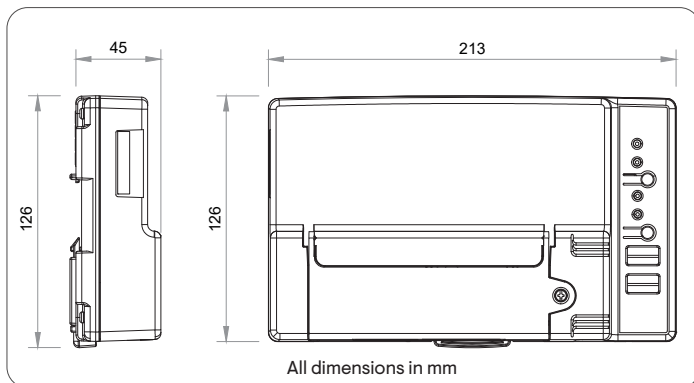
# IQ Gateway

PRODUCT DETAILS		UNITS	ENV-S-WB-230	ENV-S-EM-230
Name			IQ Gateway Standard	IQ Gateway Metered
Description			Communications gateway with basic PV production monitoring (±5%) via PLC	Communications gateway with integrated PV and consumption metering. Includes two CTs (100 A primary circuit current).
Power measurement accuracy			Not supported	Production and consumption meter: ±1% accuracy
POWER REQUIREMENTS		UNITS	ENV-S-WB-230	ENV-S-EM-230
Nominal grid voltage	V		230 (L-N)	230 (L-N), 230/400 (L-N/L-L) Wye
Minimum/Maximum grid voltage	V		184/276	
Nominal frequency	Hz		50	
Minimum/Maximum frequency	Hz		45/55	
Maximum over current protection	A		20 (characteristic B)	
Maximum power consumption	W		5	
Average continuous power consumption	W		3	3 or 4 (with Communications kit)
CAPACITY		UNITS	ENV-S-WB-230	ENV-S-EM-230
Maximum number of microinverters polled			Up to 300**	
Maximum number of IQ Battery			Not supported	12 IQ Battery 3T and 4 IQ Battery 10T
MECHANICAL DATA		UNITS	ENV-S-WB-230	ENV-S-EM-230
Dimensions (H x W x D)	mm		126 x 213 x 45	
Mounting			DIN rail	
DIN rail units width	modules		12	
Weight	kg		0.5	
Ambient air temperature range	°C		-40 to 65 (if installed outdoors), -40 to 46 (if installed in an enclosure)	
Relative humidity	%		85	
Overvoltage class AC port			III	
Overvoltage class relay port			II	
Environmental rating			IP30. If installed outdoors, use an outdoor-rated enclosure.	
Maximum altitude	m		2500	
USB ports			Two USB 2.0 ports, auto-sensing, auto-negotiation	
AC terminal block			N, L1 up to 6 mm <sup>2</sup>	N, L1, L2, L3 up to 6 mm <sup>2</sup>
CT terminal block			Not supported	Six double terminals, up to 1.5 mm <sup>2</sup>
Digital I/O terminal block			Not supported	Five terminals, up to 1.5 mm <sup>2</sup>
COMMUNICATION INTERFACES		UNITS	ENV-S-WB-230	ENV-S-EM-230
Integrated Wi-Fi			802.11b/g/n (2.4 GHz, 5 GHz), for connecting the the Enphase Cloud via the internet.	
Wi-Fi range (recommended)	m		10	
Ethernet			Optional, 802.3, Cat5E (or Cat 6) UTP Ethernet cable (not included), for connecting to the Enphase Cloud via the internet.	
Mobile Connect			Optional, CELLMODEM-02 (not included)	
Digital I/O			Not supported	Digital input/output for grid operator control***
USB 2.0			For Mobile Connect	For Mobile Connect and Communications kit
Access point (AP) mode			For a connection between the IQ Gateway and a mobile device running the Enphase Installer App	
Metering ports			Not supported	Up to three Consumption CTs, Up to three Production CTs
Power line communication			Power line communication (PLC) 110 – 120 kHz (Class B), narrowband 200 Hz, to microinverters, IQ Relay and ACB 1.5	
Web API			Refer to <a href="https://developer-v4.enphase.com">https://developer-v4.enphase.com</a>	
Local API			Refer to <a href="#">guide for local API</a>	
LED indicators			From top to bottom: Cloud connectivity, Wi-Fi access point mode, PV production state, PLC communications state	

\*\* Depends on geographic location and site configuration.

\*\*\* Function activated in Germany, Austria, and Switzerland.

COMMUNICATION INTERFACES	UNITS	ENV-S-WB-230	ENV-S-EM-230
Configured via		Enphase Installer App and Enphase Installer Platform	
STANDARDS	UNITS	ENV-S-WB-230	ENV-S-EM-230
Grid compliance (with IQ Relay)		TOR Erzeuger Typ A, C10/11, PPDS Annex 4, VFR 2019, VDE-AR-N 4105:2018 CEI 0-21, EN 50549-1, UNE206007-1/2	
Grid compliance (without IQ Relay)		G98, G98 NI, G99, G99 NI, G100	
Safety		EN61010-1:2010	EN 61010-1:2010, EN61010-2:2010
EMC		IEC/EN 61010-1:2010, EN50065-1, EN61000-4-5, EN61000-6-1, EN61000-6-2	
RED standard		EN62311:2008	
Product labelling		CE, UKCA & RCM	
SCOPE OF DELIVERY	UNITS	ENV-S-WB-230	ENV-S-EM-230
Package dimensions (H x W x D)	mm	160 x 276 x 98	
Package weight	kg	1	
Aluminium DIN rail	mm	125	
Current Transformers (CTs)		Not supported	Two CT-100-SPLIT-ROW included



## IQ Gateway accessories (order separately)



### CELLMODEM-02 Mobile Connect

Cellular modem with five-year data plan for systems up to 60 microinverters.



### CT-100-SPLIT Current Transformers (CTs)

Pack of four 200 A rated split-core current transformer (CT), with accuracy  $\pm 1\%$ . For use with IQ Gateway Metered in multi-phase applications or with larger section conductors.



### CT-100-SPLIT-ROW Current Transformers (CTs)

Pack of four 100 A rated split-core (CT), with accuracy  $\pm 1\%$ . For use with IQ Gateway Metered in multi-phase applications, designed for smaller main panels with conductors up to 16 mm<sup>2</sup>.



### COMMS-KIT-EU-01 Communications kit

Wireless communication adapter for communication with IQ Battery. Includes USB cable for plugging into the IQ Gateway.



### COMMS-24-EXT-01 Wireless Range Extender

Plug-and-play wireless USB dongle used to extend the range of 2.4 GHz wireless network between the IQ Gateway and IQ Battery units.

**Manufacturer:**  
Enphase Energy, Inc. 47281 Bayside Pkwy.  
Fremont, CA 94538,  
The United States of America

**Importer:**  
Enphase Energy NL B.V, Het Zuiderkruis 65,  
5215MV, 's-Hertogenbosch,  
The Netherlands

# Revision history

REVISION	DATE	DESCRIPTION
DSH-00011-1.0	May 2023	Initial release of consolidated IQ Gateway Datasheet (IQ Gateway Standard and IQ Gateway Metered)
		Previous releases

## Enphase Q Relay (multiphase)

In Enphase IQ installations, the multiphase Q Relay acts as a grid monitoring and disconnection device and includes a built-in phase coupler to distribute power line communication signals across phases. An external phase coupler is not needed when the Q Relay is installed. The Q Relay physically isolates the IQ Series Microinverters from the grid when abnormalities are sensed or as required by grid regulations, and it automatically reconnects when valid grid conditions resume.

The 4-pole Q Relay isolates all phase and neutral lines and works together with the Enphase Envoy-S gateway.

### Easy to Install

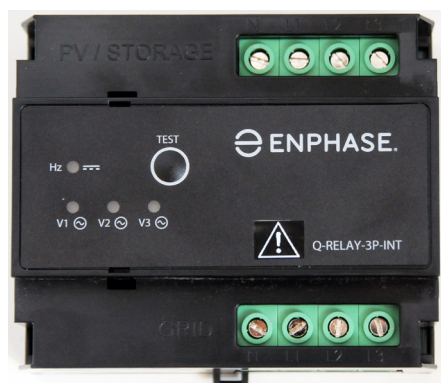
- Lightweight and simple
- DIN rail mount for quick installation

### Reliable

- Dependable control
- Automatically resets when normal voltage resumes

### Smart

- Can be configured to monitor 1, 2, or 3 phases
- Remote upgrade capability
- 25A rating allows more microinverters per AC circuit
- Easy to read status LEDs
- Built-in power line communication phase coupler



# Enphase Q Relay

<b>SPECIFICATIONS</b> Q-RELAY-3P-INT	Multiphase network system relay controller (50 Hz) with support for DC current detection
Over voltage category (EN 61010-1)	III
CAT III	GRID terminal is rated for measurement category III.
Pollution degree (EN 61010-1)	2
Operating AC voltage range for power supply	85 to 265 VAC
Nominal input voltage (Vnom)	230 Vrms
Nominal input frequency	50 Hz
Voltage and frequency acquisition time on valid input during normal operation	100 ms (5 line cycles @ 50Hz)
Number of phases	Single-, 2- or 3-phase modes
Number of Enphase IQ microinverters supported for 3 phase	Up to 48 Enphase IQ 7+ Microinverters or 39 Enphase IQ 7A Microinverters with 25A breaker for 3 phase interconnection
Number of Q Relays per system	Limit of 10 active Q Relay devices per system
Output	Four pole normally open relay (L1, L2, L3, and N)
Output rating (typical)	230 Vrms, 25A
Built-in phase coupler	Suitable for 2- or 3-phase systems with line-to-line voltages up to 440 VAC
Power consumption	18 VA
LEDs	Four red/green LEDs: three for under/over voltage trip, one for under/over frequency and DC current
Mounting	35 mm DIN rail (standard)
Width	107 mm
Surge - L1 N output	Combination (1kV 2Ω)
Ambient temperature range	-40 °C to 50 °C
IP rating	IP 20 (Must be used in a protected environment)
Relative humidity	0 to 95 non-condensing
Compliance	IEC 61010, EN 61010-1, AS/NZS 61010.1, CEI 0-21, NRS097-2-1: 2017
Conducted and radiated EMI	IEC 61326-1, BS EN 61000-3-11/12, BS EN 50065-1 and 2-2, BS EN 61326-1

To learn more about Enphase offerings, visit [enphase.com/southafrica](https://enphase.com/southafrica)

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