

# Installing the IQ Gateway Commercial Pro

To install the IQ Gateway Commercial Pro, read and follow all warnings and instructions in this guide. Safety warnings are listed at the back of this guide.

 **NOTE:** IQ Gateway Commercial Pro complies with IEEE 2030.5 protocol and has been used in IEEE 1547:2018 testing and certification.

## 1. Introduction

The IQ Gateway Commercial Pro delivers solar production and energy consumption data, along with monitoring and analysis software for comprehensive remote maintenance and management of IQ8/IQ9 Commercial Microinverter-based PV systems. The IQ Gateway Commercial Pro is compatible with both 277 V/480 V Wye and 120 V/208 V Wye grid configurations. With integrated revenue-grade production metering and optional consumption monitoring, the IQ Gateway Commercial Pro serves as a platform for total energy management.

Scan the QR code to access the latest version of the quick install guide.



## 2. What's in the box



IQ Gateway Commercial Pro

### Connector kit



1 × voltage connector



2 × meter (CT) connectors



1 × AUX contact connector

Applicable regions: North America

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140-00443-05



3 × 400 A solid-core Production CTs



1 × DIN rail



1 × quick install guide

### 3. Order separately



1 × digital I/O connector



1 × RS485 connector



2 × control connectors



3 × Consumption CTs (CT-600-277-SPLIT)

SKU	Description	Remarks
GW-CONN-KIT-1-000DCR	Includes 1 × digital I/O connector, 1 × RS485 connector, and 2 × control connectors	Connector kit in case demand response management, storage, or RS485 support is required.
GW-CONN-KIT-1-VMA000	1 × voltage connector, 2 × meter (CT) connectors, 1 × AUX contact connector	Ordering SKU in case of replacement for connectors included in gateway packaging
CT-400-277-SOLID	Includes 3 × 400 A solid-core Production CTs	Ordering SKU in case of replacement for CTs included in gateway packaging
CT-600-277-SPLIT	Includes 3 × 600 A split-core Consumption CTs	In case consumption monitoring is required

### 4. Preparation

- To perform consumption metering, ensure you have three split-core CTs specifically designed for this purpose (order CT-600-277-SPLIT).
- Ensure there is sufficient space within the panel board for CT installation. CTs must not be placed in areas where they occupy more than 75% of the wiring space in any cross-sectional section of the panel board.
- Install the IQ Gateway Commercial Pro in an NRTL-certified, NEMA type 3R (or better) enclosure with conduit attachment when installing outdoors. Avoid drilling holes in the top surface of the enclosure or in any location that could allow moisture to enter. Note that metallic enclosures are likely to reduce Wi-Fi, cellular, and Bluetooth signal strength. If installing indoors, ensure the enclosure is appropriately rated for the environment.
- Mount the IQ Gateway horizontally using the DIN rail provided in the packaging.
- Choose an internet connection method for the IQ Gateway Commercial Pro: Wi-Fi, Enphase Mobile Connect (CELLMODEM-07-NA-05-PRO), or Ethernet. For Ethernet connections, a shielded Cat5E or Cat6 cable is required.

### 5. Installation

1. Choose a location for the IQ Gateway Commercial Pro.

**⚠ WARNING:** To prevent equipment damage, install the IQ Gateway Commercial Pro in an enclosure located in an area where the ambient temperature does not exceed 60°C (140°F).

2. Wire the IQ Gateway Commercial Pro for power and metering.

The IQ Gateway Commercial Pro uses Meter 1 and Meter 2 terminals for power and metering connections. Utilize the connectors included in the packaging to wire the gateway and its associated peripherals. Refer to the wiring diagram in section 8 when performing this step.

You must install three solid-core current transformers (CTs) provided in the packaging for production metering. Consumption monitoring is optional and requires that you order and install three additional split-core CTs. Use a protected route in conduit for the CT wires from the main panel board to the IQ Gateway Commercial Pro. The Consumption CT leads are 13 feet long. If you need to extend the leads, refer to the [Guidelines for current transformer \(CT\) installation tech brief](#) at the Enphase documentation center. Do not extend the leads of the Production CT.



**DANGER:** Risk of electric shock. Always de-energize circuits before wiring for power and CTs.



**DANGER:** Risk of electrocution! Do not install CTs when current is flowing in the sensed circuit. Always install CT leads in the terminals of the meter connector and insert the connector in the meter port before energizing the sensed circuit.



**NOTE:** When installing CTs, it is important to match the CT and sensed voltage phases. Be sure to consistently identify the three AC lines at three points: the main panel board feed, the IQ Gateway, and the solar production circuit breaker. Wire colors (typically black, red, and blue) may not always consistently identify L1, L2, and L3. If in doubt, use a multimeter to check.

- a. Before routing the CT leads through the conduit, label each CT and the free ends of its wires using colored tape, assigning a distinct color to each one. You can run multiple CT wires through a single conduit.
- b. To power the IQ Gateway Commercial Pro, ensure that the supply wiring is copper, with a minimum size of 14 AWG, and rated for at least 167°F (75°C). Flip open the connector lock and wire the line, neutral, and ground conductors as shown: Connect Line 1 to L1, Line 2 to L2, Line 3 to L3, Neutral to N, and Ground to PE. Refer to section [IQ Gateway Commercial Pro voltage and CT connections](#).



**NOTE:** Only run active conductors of the same phase through each CT. Each CT can monitor multiple active conductors.

- c. Install the Production CTs on active phases as required:

- Locate the arrow on the CT label.
- To monitor production on Line 1:
  - Connect the white wire to the first terminal from left and the blue wire to the second terminal of the meter connector.
  - Pass Line 1 of the solar production circuit through the CT with the arrow pointing toward the load (away from the solar array).
- To monitor production on Line 2:
  - Connect the white wire to the third terminal and the blue wire to the fourth terminal of the meter connector.
  - Pass Line 2 of the solar production circuit through the CT with the arrow pointing toward the load (away from the solar array).
- To monitor production on Line 3:
  - Connect the white wire to the fifth terminal and the blue wire to the sixth terminal of the meter connector.
  - Pass Line 3 of the solar production circuit through the CT with the arrow pointing toward the load (away from the solar array).
- Insert the meter connector into the Meter 1 port.

- d. Install the Consumption CTs on active phases as required:

- Locate the arrow on the CT label.
- Make sure that the AC mains wire(s) are de-energized until you have secured the CT wires in the terminal blocks.
- To monitor consumption on Line 1:
  - Connect the white wire to the first terminal from left, and the blue wire to the second terminal of the meter connector.
  - Clamp the CT on the main supply Line 1. When the Consumption CT is on the Line 1 conductor, the arrow must point toward the load (away from the grid).
- To monitor consumption on Line 2:
  - Connect the white wire to the third terminal and the blue wire to the fourth terminal of the meter connector.
  - Clamp the CT on the main supply Line 2. When the Consumption CT is on the Line 2 conductor, the arrow must point toward the load (away from the grid).
- To monitor consumption on Line 3:
  - Connect the white wire to the fifth terminal and the blue wire to the sixth terminal of the meter connector.
  - Clamp the CT on the main supply Line 3. When the Consumption CT is on the Line 3 conductor, the arrow must point toward the load (away from the grid).
- Insert the meter connector in the Meter 2 port.

3. Energize and update the IQ Gateway Commercial Pro.

- a. Switch on the power circuit supplying the IQ Gateway Commercial Pro.
- b. After the gateway is powered on, use the Enphase Installer App to update it to the latest software version. The app will automatically prompt a software upgrade if required.



**WARNING:** Do not disconnect power from the IQ Gateway Commercial Pro during the software update.

All four LEDs are solid white during boot-up (approximately three minutes). When boot-up is complete, the device communications LED lights solid red, indicating that devices are not yet detected.

## 6. LED and buttons overview

This table includes communication to PLC devices, CAN-based devices, connectivity via BLE, AP mode, internet, and general function status.

Table 1: All LEDs

All LEDs: Indicates specific states of the gateway		
	Pulsing yellow	Software upgrade is in progress
	Solid white	Gateway is booting up
	Solid red	Gateway is in an error state
	Pulsing green	Application is starting

Table 2: System monitoring

LED 1: Connectivity LED - Indicates the status of internet connectivity, BLE connectivity, and Wi-Fi AP mode connectivity with the gateway		
	Solid green	Enphase Cloud + internet connectivity – connected
	Solid yellow	Wi-Fi AP – connected
	Solid blue	BLE – connected
	Solid red	Enphase Cloud – not connected
	Fast blinking	Enphase Cloud – trying to connect. If successful, moves to green. If not successful, moves to red
	Fast blinking for five minutes	Wi-Fi AP – available for connection
	Fast blinking for ten minutes	BLE – available for connection
	Solid white	Local communications only, no Internet/Enphase Cloud connectivity
	Off	Gateway powered off

LED 2: PLC devices LED - Indicates the status of PLC-based devices, like microinverter		
	Solid green	All microinverters are producing power
	Pulsing yellow	Firmware upgrade of microinverters is in progress
	Solid yellow	One or more microinverters are not producing power
	Solid blue	One or more microinverters are not communicating with the gateway
	Solid red	One or more microinverters are in an error state
	Off	No PLC devices are associated with the gateway

LED 3: Control devices LED - Indicates the status of control-based devices like batteries		
	Solid green	All control devices are communicating
	Pulsing yellow	An upgrade of batteries or control devices is in progress
	Solid blue	One or more batteries or control devices have not been communicating with the gateway
	Solid red	One or more battery/control devices are in an error state
	Off	No control devices are associated with the gateway

**LED 4: Area controller LED - Indicates the status of generic gateway functions**

	Solid yellow	The Wi-Fi strength is low ( $\leq -71$ dBm), or the data rate on Ethernet is low
	Solid green	Wi-Fi strength is good ( $-30$ to $-70$ dBm), or an Ethernet connection is good
	Solid blue	The system is controlled from an external entity

Table 3: Gateway input buttons

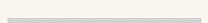
**Gateway input buttons**

<p>Button A: Device scan/CAN scan/Reset gateway button</p>	<ul style="list-style-type: none"> <li>Press and hold the button for five seconds to scan the microinverters over PLC, if you wish to perform the scan without using the Enphase Installer App</li> <li>Press the button twice (double-tap) to initiate a five-minute scan for devices over the control cable</li> <li>Press the button for 10 seconds to reboot the gateway</li> </ul>
<p>Button B: AP mode/BLE/Meter check button</p>	<ul style="list-style-type: none"> <li>Press the button for five seconds to start the gateway's BLE to connect a mobile device</li> <li>Press the button for 15 seconds to start the gateway's wireless Access Point (AP) to connect a mobile device</li> <li>Press the button for 30 seconds to start meter validation and correction for production, consumption, and storage meters on the gateway</li> </ul>

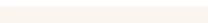
The meter check is activated by pressing button B as described in Table 3

Table 4: Meter check

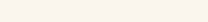
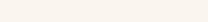
**LED 1: Indicates the progress of the meter check**

	Solid yellow	Meter check initiated
	Slow blinking	Meter check in progress
	Solid white	Meter check output shown in production meter LED (LED 2), consumption meter LED (LED 3), and storage meter LED (LED 4) for the next two minutes

**LED 2: Indicates the status of the production meter**

	Solid green	All Production CTs are installed correctly and working normally
	Solid blue	Production CTs had a phase/polarity issue, which has been fixed by software phase correction
	Slow blinking	One or more of the Production CTs is measuring battery charge/discharge
	Solid red	One or more of the Production CTs have a wiring issue, a loose connection, or no conductor passing through the CT
	Fast blinking	One or more of the Production CTs cannot be checked by the meter check
	Off	No Production CTs are connected to the gateway

**LED 3: Indicates the status of the consumption meter / remote meter**

	Solid green	All Consumption CTs are installed correctly and working normally
	Solid blue	Consumption CTs had a phase/polarity issue and have been fixed by software phase correction
	Slow blinking	Meter configuration is set as Load Only, even though the actual meter is measuring Load + Solar OR Meter configuration is set as Load +Solar Only, even though the actual meter is measuring Solar only on Consumption CTs
	Solid red	One of the Consumption CTs has a wiring issue, a loose connection, or no conduction passing through the CT
	Fast blinking	One or more of the Consumption CTs cannot be checked by the meter check
	Off	No Consumption CTs are connected to the gateway

**LED 4: Indicates the status of the storage meter**

	Solid green	All storage CTs are installed correctly and working normally
	Solid blue	One of the storage CTs had a phase/polarity issue and has been fixed by the gateway software

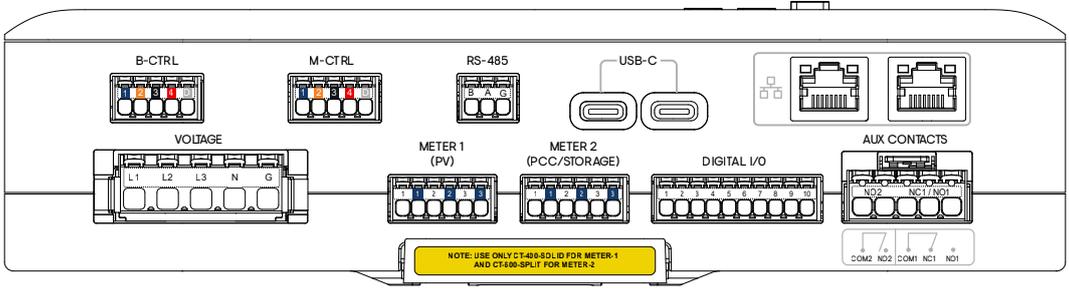
**LED 4: Indicates the status of the storage meter**

— — — —	Slow blinking	One or more of the storage CTs are measuring PV production
————	Solid red	One of the storage CTs has a wiring issue, a loose connection, or no conduction passing through the CT
- - - -	Fast blinking	One or more of the storage CTs cannot be checked by the meter check
=====	Off	No storage CTs are connected to the gateway

**7. IQ Gateway Commercial Pro connectors**

Connectors	Wire sizes
Battery control connector (B-CTRL)	18 AWG
Meter control connector (M-CTRL)	18 AWG
RS-485 connector	22-14 AWG
Digital I/O connector	22-14 AWG
Voltage connector	24-12 AWG
Meter 1 (PV/Production CT) connector	18 AWG
Meter 2 (PCC/Storage/Consumption CT) connector	18 AWG
AUX contacts connector	24-14 AWG

**8. IQ Gateway Commercial Pro external connections**



This image is only for representation.

**8.1 Wiring the Enphase Mobile Connect**

A USB Type-C to USB Type-C cable should be used to connect the Enphase Mobile Connect to the IQ Gateway Commercial Pro through one of the USB Type-C ports on the gateway.

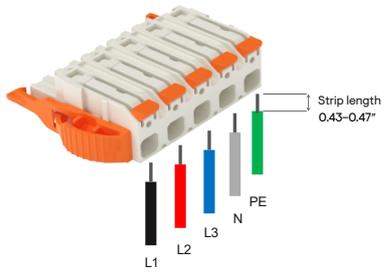
The IQ Gateway Commercial Pro is compatible with CELLMODEM-07-NA-05-PRO.

**8.2 IQ Gateway Commercial Pro voltage and CT connections**

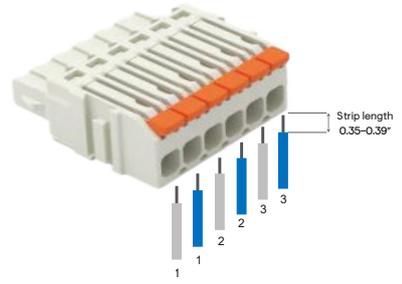
Use voltage connectors and Meter (CT) connectors to terminate the respective wires.

Voltage wire colors (typically black, red, and blue) may not always consistently identify L1, L2, and L3. If in doubt, use a multimeter to check.

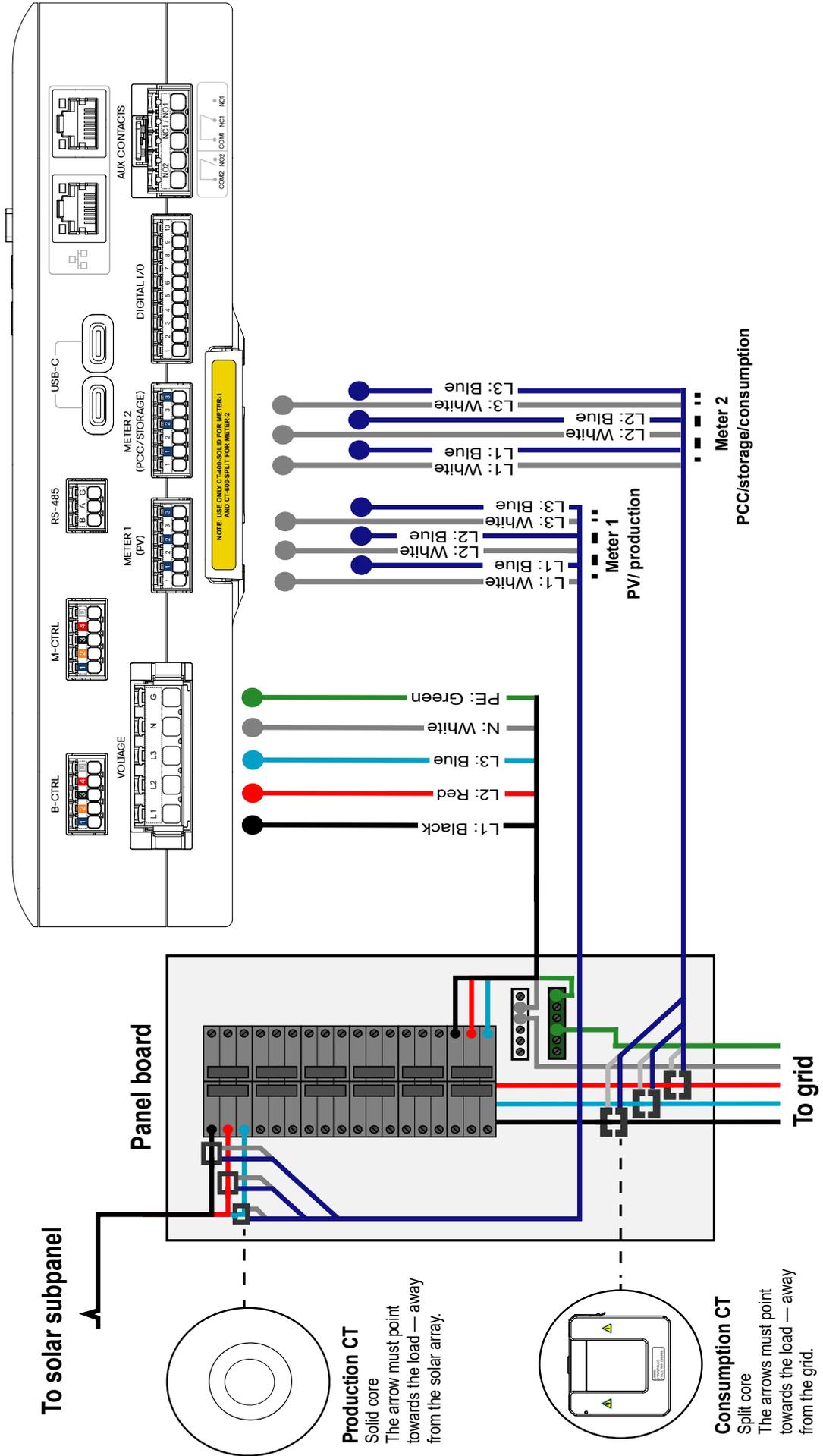
✔ **NOTE:** Voltage wire colors are region-specific. Please verify local color-coding standards before proceeding with the installation.



Voltage connector

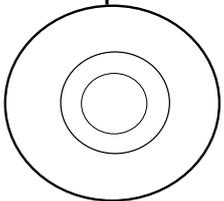


Meter (CT) connector



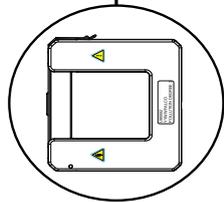
To solar subpanel

Panel board



**Production CT**

Solid core  
The arrow must point towards the load — away from the solar array.



**Consumption CT**

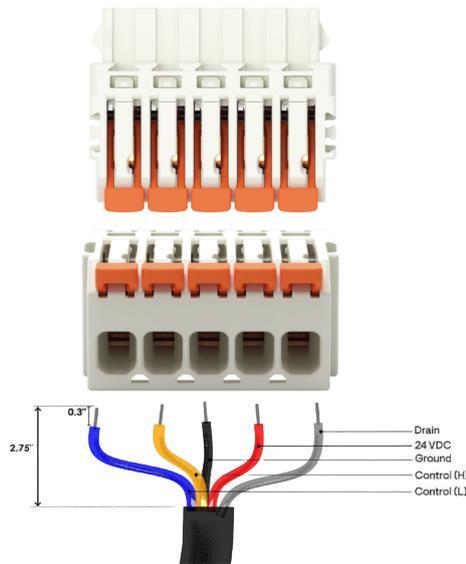
Split core  
The arrows must point towards the load — away from the grid.

To grid

### 8.3 Wiring the control (CTRL) cable to the connectors for battery and meter connections

- The control cable must comply with UL 3003, UL 1277, and UL 83 standards. The Enphase Control Cable (SKU: CTRL-SC3-NA-01) has optimal impedance and has been validated for optimal system performance. Third-party cables may not have the correct characteristic impedance, and consequently, may not work reliably. Enphase cannot guarantee performance when a third-party control cable is used.
- The same conduits can be used for power and control wire routing only when using an Enphase Control Cable.
- Each component at the end of the control network should have one header with a termination resistor installed.
- When the gateway is first or last in the CAN chain, all five pins (CTRL H, CTRL L, GND, voltage, and drain) shall be terminated in the connector; no separate drain connector is required.
- When the gateway is in the middle of the CAN chain (not first/last in the CAN chain), four pins (CTRL H, CTRL L, GND, voltage) shall be terminated. No drain wire connection is needed.
- The drain wire can only be terminated on one end of the control wiring between the system components.
- The total length of CTRL wiring across the system cannot exceed 250 feet to ensure that it operates according to specifications.
  - Make sure the drain wires do not come in contact with any live connection.

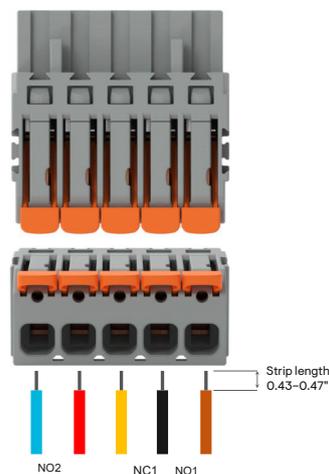
Use the connector as shown below to wire the battery and meter control cable connections.<sup>1</sup>



### 8.4 Wiring the AUX contact cable to the connector

A 2-pole outdoor located safety disconnect can be installed as a PV side disconnect. A 3-pole disconnect or 2-pole disconnect with auxiliary can be installed as a grid-side disconnect.

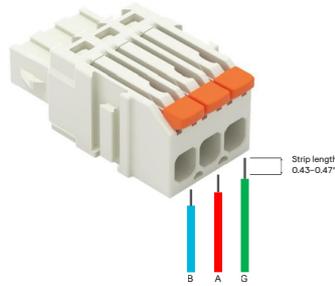
The breaker used for disconnect is driven by the integrated relay of the IQ Gateway Commercial Pro.



<sup>1</sup> Reserved for future use.

## 8.5 Wiring the RS-485 cable to the header

In case of using the RS-485 bus, connect the required devices in daisy chain form. Avoid splicing the connections, as it can create noise in communication. The bus will terminate at the IQ Gateway Commercial Pro.



## 9. Setting up the Enphase Power Control (EPC)

The IQ Gateway Commercial Pro supports the aggregate power export limit feature of the Enphase Power Control. This feature ensures that the aggregate power exported to the grid is limited to the aggregate power export limit (PEL) defined by the installer.

Setting up Enphase Power Control on-site during commissioning:

1. Ensure the availability of the following Enphase products on-site to implement EPC.

Product	SKU
IQ Gateway Commercial Pro	GW0-1CL-1N-D0-OR
Microinverters	IQ9N-3P-277-A-DOM-US, IQ8P-3P-72-E-US, IQ8P-3P-72-EDOM-US, IQ8H-3P-72-E-US

2. The following table shows the required Production and Consumption CT installation scenarios.

CT type	Quantity	Conductor measured	Direction of arrow
Consumption CTs	3	Conductor from the mains breaker to the main panel, or the utility meter	Towards the mains breaker
Production CT	3	L1, L2, and L3 of all PV branch circuits	Away from PV

**NOTE:** When a remote meter is used, all control as well as data presentation in Enphase Installer Portal uses the remote meter's data. In this case, Consumption CTs should not be added to the IQ Gateway's internal meter. The remote meter's data is used to apply the IQ Gateway's secondary control functions at the PCC. This includes Power Export Limiting, if applicable.

For sites with aggregate export power limiting (PEL) enabled, indicate with a label the maximum current setting for backfeed from the solar system to the utility service that is controlled by EPC.

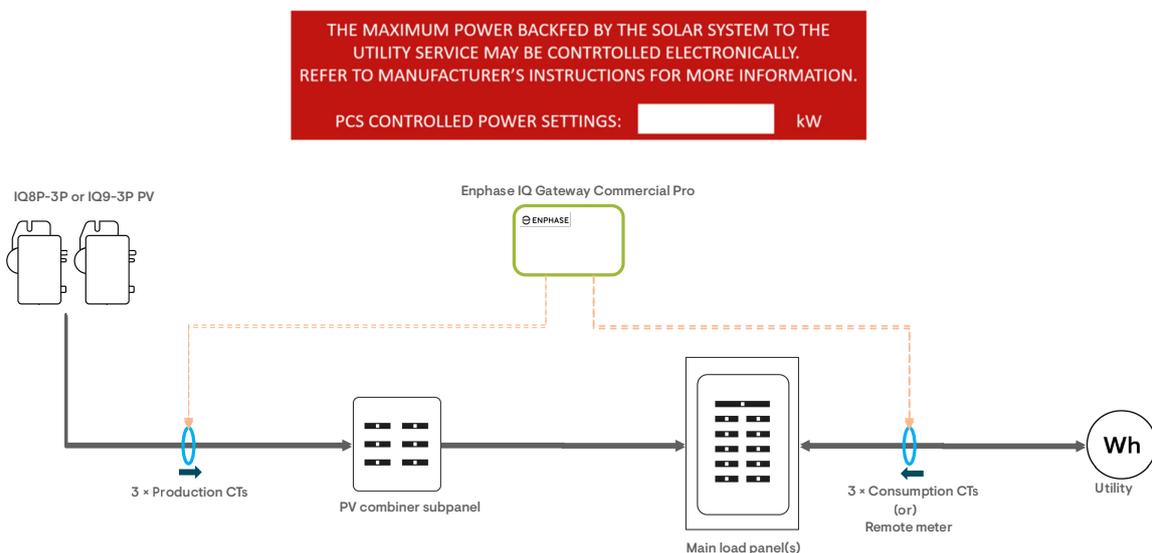


Figure 1: Single-line diagram of PEL

## 10. Safety



**DANGER:** This indicates a hazardous situation, which, if not avoided, will result in death or serious injury.



**WARNING:** This indicates a situation where failure to follow instructions may be a safety hazard or cause equipment malfunction. Use extreme caution and follow instructions carefully.



**NOTE:** This indicates information particularly important for optimal system operation. Follow instructions carefully.

### Safety instructions



**DANGER:** Risk of electric shock. Risk of fire. Do not attempt to repair the IQ Gateway Commercial Pro. It contains no user-serviceable parts. Tampering with or opening the IQ Gateway Commercial Pro will void the warranty. Warranty void if cover removed. If the IQ Gateway Commercial Pro fails, contact Enphase Support for assistance (<https://enphase.com/contact/support>).



**DANGER:** Risk of electric shock. Always open or disconnect the circuit from the power distribution system (or service) of the building before installing or servicing current transformers (CTs).



**DANGER:** Risk of electrocution! Do not install CTs when the current is flowing in the sensed circuit. Always install CT wires in the terminal blocks before energizing the sensed circuit.



**DANGER:** Risk of electric shock. Do not use Enphase equipment in a manner not specified by the manufacturer. Doing so may cause death or injury to persons or damage to equipment.



**DANGER:** Risk of electric shock. Be aware that the installation of this equipment includes the risk of electric shock. Always de-energize the panel board before beginning wiring.



**DANGER:** Risk of electric shock. Risk of fire. Only qualified personnel should troubleshoot, install, or replace the IQ Gateway Commercial Pro.



**DANGER:** Risk of electric shock. Risk of fire. Do not wire unused terminals or terminal blocks on the IQ Gateway.



**WARNING:** Before installing or using the IQ Gateway Commercial Pro: Read all instructions and cautionary markings in the technical description and on the IQ Gateway Commercial Pro.



**WARNING:** Risk of equipment damage. If installing the IQ Gateway Commercial Pro in an enclosure, choose an area for installation where the ambient temperature does not exceed 115°F (46°C).



**NOTE:** Do not install the CTs in a panel where they exceed 75% of the wiring space of any cross-sectional area within the panel, or refer to local standards for guidance.



**NOTE:** Do not install CTs in an area where they will block ventilation openings or in the area of breaker arc venting.



**NOTE:** The CTs are not suitable for Class 2 wiring methods and are not intended for connection to Class 2 equipment.



**NOTE:** Secure the CT and route conductors so that they do not directly contact live terminals or bus.



**NOTE:** Perform all electrical installations following all national and local electrical codes.



**NOTE:** To ensure optimal reliability and to meet warranty requirements, the IQ Gateway Commercial Pro must be installed according to the instructions in this guide.

### FCC statement

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, you are encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment to an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications not expressly approved by the party responsible for compliance may void the user's authority to operate the equipment.

This Class B digital apparatus complies with Industry Canada ICES-003.

## 11. Revision history

Revision	Date	Description
140-00443-05	January 2026	Updated the following sections: <ul style="list-style-type: none"><li>• What's in the box</li><li>• LED and buttons overview</li></ul>

Revision	Date	Description
140-00443-04	December 2025	<p>Updated the following sections:</p> <ul style="list-style-type: none"> <li>• Introduction</li> <li>• What's in the box</li> <li>• IQ Gateway Commercial Pro voltage and CT connections</li> <li>• LED and buttons overview</li> </ul> <p>Removed the "Tools required" section.</p>
140-00443-03	November 2025	Updated the "Wiring the Enphase Mobile Connect" section.
140-00443-02	October 2025	Updated the SKU in the "Setting up the Enphase Power Control (EPC)" section.
140-00443-01	September 2025	Initial release.

Enphase Support: <https://enphase.com/contact/support>.