SAFETY

Safety and Advisory Symbols

⚠	**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 is essential for optimal system operation. Follow instructions carefully.

Safety Instructions

⚠	**DANGER**: Risk of electric shock. Risk of fire. Please do not attempt to repair the IQ Gateway; it contains no user-serviceable parts. Tampering with or opening the IQ Gateway will void the warranty. Warranty void if cover removed. If the IQ Gateway fails, contact Enphase customer support for assistance (https://enphase.com/contact/support).
⚠	**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 installation of this equipment includes the risk of an electric shock. If you wire the IQ Gateway at the sub-board, always de-energize the sub-board before beginning.
⚠	**DANGER**: Risk of electric shock. Risk of fire. Only qualified personnel should troubleshoot, install, or replace the IQ Gateway.
⚠	**DANGER**: Risk of electric shock. Risk of fire. Do not wire unused terminals or terminal blocks on the IQ Gateway.
⚠	**DANGER**: Risk of electric shock. Risk of fire. Only qualified personnel should clean and service the IQ Gateway.
⚠	**WARNING**: Before installing or using the IQ Gateway, read all instructions and cautionary markings in the technical description and on the IQ Gateway.
⚠	**WARNING**: Risk of equipment damage. If installing the IQ Gateway in an enclosure, choose an area where the ambient temperature does not exceed 46°C.
✓	**NOTE**: Perform all electrical installations by all national and local electrical codes.
✓	**NOTE**: To ensure optimal reliability and to meet warranty requirements, the IQ Gateway must be installed according to the instructions in this manual.

Wireless module details

Module type: WG7837V0 WLAN- und Bluetooth-Modul 13.4 x 13.3 mm, LGA-100
Frequency band: 2.4 GHz und 5.0 GHz
Max power transmitted: 20 dBm

Compliance with EU Directives

This product complies with the following EU Directives and can be used in the European Union without any restrictions.

- Electro Magnetic Compatibility (EMC) directive 2014/30/EU
- Low Voltage Directive (LVD) 2014/35/EU
- Restriction of Hazardous Substances (RoHS) 2011/65/EU

RED Directive Compliance

Hereby, Enphase Energy Inc. declares that the radio equipment type IQ Gateway Standard follows Directive 2014/53/EU.

The full text of the EU declaration of conformity (DoC) is available at the following internet address https://enphase.com/en-gb/installers/resources/documentation

Manufacturer:
Enphase Energy Inc., 47281 Bayside Pkwy,Fremont, CA 94538, The United States of America, PH: +1 (707) 763-4784
Importer:
Enphase Energy NL B.V., Het Zuiderkruis 65, 5215MV, 's-Hertogenbosch, The Netherlands, PH: +31 73 3035859

Enphase customer support: https://enphase.com/contact/support

Troubleshooting

a LED overview

LED	State	Description
All	Flashing red in unison	The IQ Gateway is booting up
	Flashing green sequentially	Software upgrade in progress
Network communications	Solid green	Communicating with the Enphase Installer App
	Flashing green	WPS connection in progress, or the IQ Gateway is attempting to connect to the Enphase Installer App
	Solid red	Local network connection only
	Off	No network connection
AP mode	Solid green	AP mode enabled: IQ Gateway Wi-Fi network is available
	Off	AP mode disabled: IQ Gateway Wi-Fi network is unavailable
Power production	Solid green	All communicating microinverters are producing
	Flashing green	Microinverter upgrade in progress
	Solid red	At least one microinverter is not producing
	Off	Microinverters are not communicating (low light or nighttime)
Microinverter communications	Solid green	All microinverters are communicating
	Flashing green	Device scan in progress
	Solid red	At least one microinverter is not communicating
	Off	Microinverters are not communicating (low light or nighttime)

b Microinverter detection issues

If the microinverter communications LED ⇆ lights are solid red, they may result from low light levels. If there is insufficient sunlight to power up the microinverters, they cannot communicate with the IQ Gateway.

If there is sufficient daylight for the microinverters to power up, the issue may be that the IQ Gateway is having difficulty communicating over the power lines. To troubleshoot this issue:

- Check the Enphase Installer App to see which microinverters are not communicating.
- Check that the circuit breaker(s) for the PV array are in the "ON" position.
- Verify that the PV modules are connected to the microinverters.
- Verify that the PV module DC voltage is within the allowable range for the microinverter.

c Power production issues

If the power production LED ⚡ lights are solid red, check the Enphase Installer App to see which microinverters are not producing:

- If none of the microinverters are producing power, there may be a grid or wiring issue. First, verify the proper input voltage and frequency from the grid. Next, check the breaker and wiring, starting at the switchboard.
- If all of the non-productive microinverters are on the same branch, check the breaker and wiring starting at the junction box for the affected branch.
- If only one or scattered microinverters are not producing power, first check to see that the AC connectors are fully seated in the IQ Cable connectors. Next, check that each module provides the required startup voltage for the microinverter. A PV module that is failing or that is undersized may not generate enough power for AC conversion.

d Internet connection issues

If you are using Wi-Fi and the network communications LED ☁ remains off:

- The WPS connection window may have timed out. Retry the connection steps.
- Make sure that the broadband router is operational and check that other devices at the site can access the network.
- Be aware that metal enclosures or obstructions impede wireless communication.
- If you cannot see your router or access point in the list on the IQ Gateway, or cannot maintain a connection, it may be necessary to add a wireless repeater to extend the network range.

If you are using Wi-Fi and the network communications LED lights solid red, make sure that the broadband router is connected to the internet by checking that other devices at the site can access the internet.

If you are using the Mobile Connect modem and the network communications LED remains off or lights solid red, see Troubleshooting in the *Mobile Connect Installation Guide.*

You can troubleshoot network issues with the Enphase Installer App by tapping the network button, then diagnostic tools for any connection method.

If you replace the broadband router, configure the IQ Gateway Wi-Fi settings for the new Wireless Network Name (SSID) and password.

Note for third-party products

Any third-party manufacturer or importer product(s) used to install or commission Enphase product(s) shall comply with the applicable EU Directive(s) and requirements in the European Economic Area (EEA). It is the responsibility of the installer to confirm that all such products are labeled correctly and have the required compliant supporting documentation.

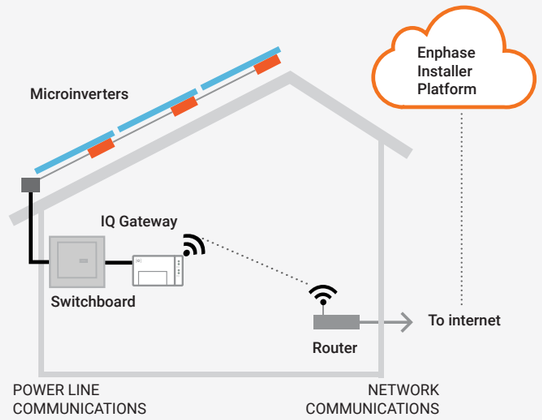
QUICK **INSTALL** GUIDE (Model ENV-S-WB-230)

ENPHASE

Installing the **IQ Gateway Standard**

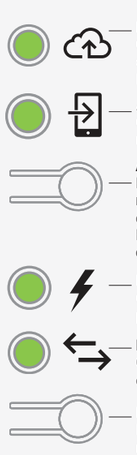
To install the IQ Gateway Standard, read and follow all warnings and instructions in this guide and the *IQ Gateway Installation and Operation Manual* at: https://enphase.com/contact/support. Safety warnings are listed at the end of this guide.

How it works



IQ Gateway display and controls

Track system installation progress with the **Enphase Installer App**. The LEDs on the IQ Gateway are solid green when a function is enabled or performing as expected, flashing when an operation is in progress, or solid red when troubleshooting with Enphase Installer App is required. For a legend of all LED states, see *Troubleshooting* a.



Network communications LED
Green when IQ Gateway is connected to Enphase Installer Platform.

AP mode LED
Green when IQ Gateway's AP Wi-Fi network is available.

AP mode button
Press to enable IQ Gateway's AP mode for connecting with a mobile device.
Hold for 5-seconds to start WPS connection to a router.

Power production LED
Green when microinverters are producing power.

Microinverter communications LED
Green when microinverters are communicating with IQ Gateway.

Device scan button
Press to start/stop 15-minute scan for microinverters over the power line.

Enphase Installer App

PREPARATION

A) Download the latest version of the Enphase Installer App and open it to log in to your Enphase Installer Platform account. With this app, you can connect to the IQ Gateway to track system installation progress. To download, go to https://enphase.com/installers/apps or scan the QR code at right.

B) Check the box for the following items:
- IQ Gateway Standard
- Quick Install Guide (this document)
- DIN rail for mounting
- Ferrite bead to attach to your Ethernet Cable, if used

C) When installing outdoors, you must install the IQ Gateway Standard in an IP54-rated, or better enclosure with conduit attachment. Do not drill holes on the top of the section or anywhere that allows moisture ingress. Use an appropriately rated enclosure if you are hard-wiring the IQ Gateway indoors.

D) If you are installing the IQ Gateway in a multi-phase application, install a phase coupler on the load side of the over-current protection device. See the Technical Brief on Phase Coupling for your region at https://enphase.com/contact/support. Consult Enphase support for compatible devices.

E) Decide how to connect the IQ Gateway to the internet: Wi-Fi, Mobile Connect, or Ethernet.

F) Make sure you have the following optional items if needed:
- Mobile Connect (order CELLMODEM-02)
- Ethernet cable (802.3, Cat5E or Cat6, unshielded)
- Ethernet cable [802.3, Cat5E or Cat6, unshielded twisted pair (UTP)]. Do not use shielded twisted pair (STP) cable.

G) Install the PV modules and microinverters as directed by the installation manuals.

H) Create a paper installation map to record microinverter serial numbers and positions in the array. You will scan this map later using the Enphase Installer App and your mobile device.
- Peel the removable serial number label from each microinverter and affix it to the respective location on the paper installation map.
- Peel the removable label from the bottom of the IQ Gateway and affix it to the paper installation map.
- Always keep a copy of the installation map for your records and upload it to Enphase Installer Platform.

NOTE: If needed, you can find an installation map at the end of any microinverter Quick Install Guide.

NOTE: The IQ Gateway Standard (ENV-S-WB-230) does not support metering and consequently does not support phase imbalance management and loss of phase management. It must not be used in systems wherein these are required by regulations.

NOTE: RCD is recommended to be installed on-site for fault protection. Follow local regulations on installing RCD on-site with IQ Gateway and IQ Microinverters.

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INSTALLATION

1 Choose a location for the IQ Gateway

A) Install the IQ Gateway in a dry location near the switchboard. If installing indoors, choose a protected space. You must install it outdoors inside an IP54-rated or better enclosure with conduit attachment

NOTE: Metallic enclosures may impair Wi-Fi signal strength.

B) Mount the IQ Gateway horizontally using the included DIN rail.

2 Hardwire the IQ Gateway for power

When you wire the terminal block connections, you must use a protected route using conduit for the wires to the IQ Gateway.

Note: If phase imbalance management (PIM) and loss of phase (LoP) management are required in three-phase systems, use IQ Gateway Metered. IQ Gateway Standard does not support these functions.

A) Use a single-pole/Ph+N, 20 A maximum circuit breaker for the supply wiring.

B) Ensure supply wiring is 1.5 mm^2 copper rated at 75°C or better.

C) Locate the screw on the left side of the terminal block door, and loosen it with a screwdriver to unlock the door.

D) Flip open the terminal block door and move the shutter to the left. Connect Line (active) to A and Neutral to N. Tighten to 0.56 N m.

E) If you are not using a DNO device, check that the 15k ohm resistor is placed between terminals 7 and 9 of the terminal block.

F) If you use a DNO device, move the resistor between terminals 8 and 10, and install the DNO device between terminals 7 and 10.

G) Close the terminal block door, and secure it with the screw.

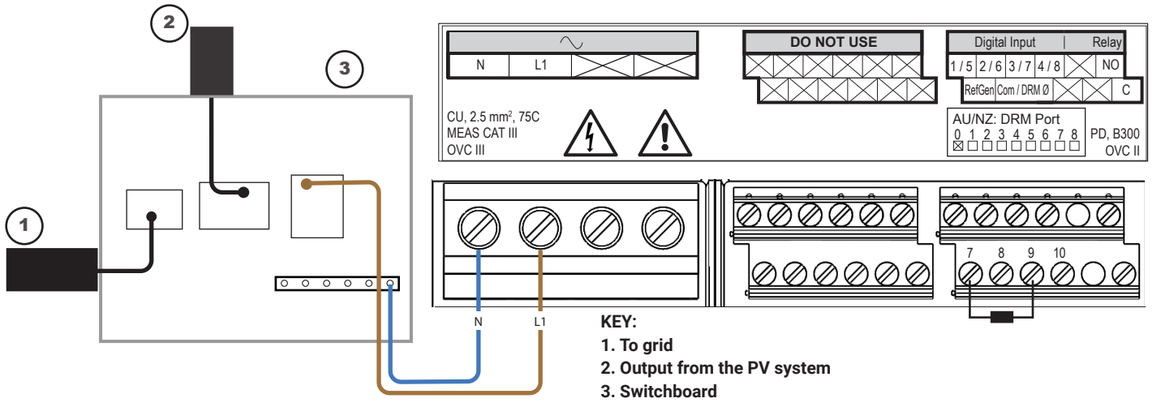
H) Turn on the circuit feeding the IQ Gateway.

All four LEDs flash red during boot-up (approximately 3 minutes). When boot-up is complete, the microinverter communications LED ⇆ lights solid red, indicating that microinverters are not yet detected.

DANGER! Risk of electric shock. Always de-energise circuits before beginning wiring.

For more information on DNO devices, see the Technical Brief on compliance with G98 and G99 at https://enphase.com/contact/support

If you are installing in a multi-phase application, install a phase coupler on the load side of the over-current protection device. For more information, see the Technical Brief on Phase Coupling for your region at https://enphase.com/contact/support



KEY:
1. To grid
2. Output from the PV system
3. Switchboard

3 Launch Enphase Installer App and start the system activation

A) Launch Enphase Installer App. To create an activation for a new system, tap the plus button on the bottom right corner of the screen.

B) Tap "System Details" to enter the required information.

C) Complete the system activation in Enphase Installer App by filling in the details. The "System created successfully" message will display at the bottom of your screen, and system details will appear now as complete.

4 Adding devices and array to the system

This step is used to enter the unique serial numbers of all on-site devices. You should enter the serial number by scanning the barcode/QR code.

A) Tap "Devices and Array" on the home page.

B) Add the total number of devices installed in your system.

C) Scan device serial numbers through bar code or QR code in respective device sections.

In addition to using your device's camera to scan serial numbers, you can enter the serial numbers manually. Manual entry should be used only when you cannot scan any device's bar code or QR code.

D) After scanning microinverters, you can use Array Builder to assign your scanned microinverters to an array or build an array manually.

5 Setting the tariff details (optional)

This step is used to enter the electricity rate structure of the utility.

A) Tap "Tariff & Storage Configuration" on the home page.

B) Subsequently, tap on the "Tariff Editor" to enter the electricity import or export rate. Ensure that the device is connected to the internet to complete this step.

6 IQ Gateway connectivity

This step is used to establish/monitor IQ Gateway connectivity to Enphase Cloud and the Enphase Installer App. You can also update IQ Gateway in this step if it is needed for successful commissioning.

A) Tap the "IQ Gateway Connectivity" on the installer home page.

B) If the 'IQ Gateway' and the Enphase Installer App (or the phone icon) are not connected, follow these steps:

- On the IQ Gateway, press the AP mode button (first button from the top) for about one second. The LED will light solid green.
- Go to your phone's settings and connect to IQ Gateway's Wi-Fi network.
- Return to the Enphase Installer App IQ Gateway Connectivity page and connect.

C) If the "IQ Gateway" and "Enphase Cloud" (or the Cloud icon) are not connected, follow these steps:

- The IQ Gateway can connect to Enphase Cloud through Wi-Fi, Ethernet, or cellular.
- If Wi-Fi is selected, input the username and password for the home/office Wi-Fi.
- If connecting using Ethernet, plug the cable into the IQ Gateway.

7 Provisioning the devices

To provision your devices, the Enphase Installer App should be connected to IQ Gateway via AP mode as described in the IQ Gateway connectivity section.

A) If a green checkmark displays between the IQ Gateway and Enphase Installer App, tap "START PROVISIONING DEVICES". The Provisioning Devices screen displays the steps executed by Enphase Installer App. The Enphase Installer App verifies and updates the grid profile in IQ Gateway and provisions all the connected devices.

B) When provisioning is complete, tap "DONE".

8 Send summary report and complete homeowner walkthrough

This step downloads the summary report of all the devices installed and reports to IQ Gateway. You can share this report using email, text, or airdrop. It contains details of each provisioned device and the commissioned status of the system.

A) Tap "Summary" on the Enphase Installer App Home Page. The system report is displayed on the screen, which consists of a list of devices, serial numbers, last reports, and information about the grid profile applied to the devices.

B) Tap "SHARE" on the top right corner to share the report as needed.

C) Open the "Homeowner Walkthrough" and discuss all listed points with the homeowner. You can also show the videos embedded in the links to the homeowner for a better experience.

Revision history

REVISION	DATE	DESCRIPTION
140-00070-10	June 2023	Updated the document for product names and editorial changes.