

# Installing EMI line filter with IQ Gateway

The EMI line filter is required for installations in Europe with the IQ Gateway (Standard or Metered) and IQ7 Series Microinverters to prevent Electromagnetic Interference (EMI) noise above permissible limits from reaching home loads and the utility grid.

This document only provides details on how to install the EMI line filter with the IQ Gateway and IQ7 Series Microinverters. Refer to the IQ Gateway (Standard or Metered) Quick Install Guide (QIG) for detailed installation instructions.

## Preparation

A) The following Enphase SKUs contain the EMI line filter:

Kit model	
ENV-S-WB-230-LF-KIT	This kit includes the IQ Gateway Standard and the EMI line filter (ELF-020-1P)
ENV-S-EM-230-LF-KIT	This kit includes the IQ Gateway Metered and the EMI line filter (ELF-020-1P)

B) For three-phase installations, ensure three EMI line filters are available on-site.

## Installation

### 1 Installations in Europe that use IQ7 Series Microinverters

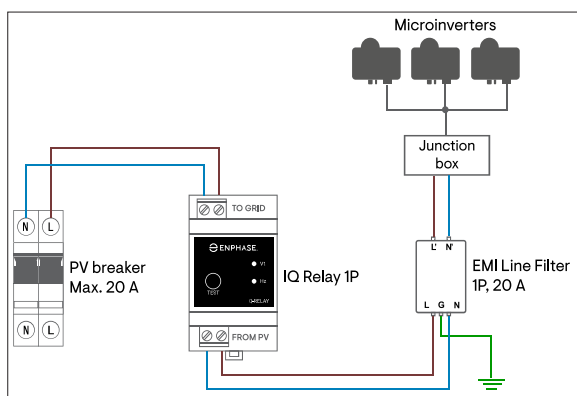
For installations in Europe using IQ7 Series Microinverters, Enphase requires the installation of an EMI line filter (ELF-020-1P) to prevent Electromagnetic Interference (EMI) noise above permissible limits from reaching home loads and utility grid. The device is rated for 20 A, 50 Hz, and up to 250 VAC operation.

**NOTE:** This EMI line filter does not improve power line communication between the gateway and the microinverters; it suppresses the Electro-magnetic Interference (EMI) noise.

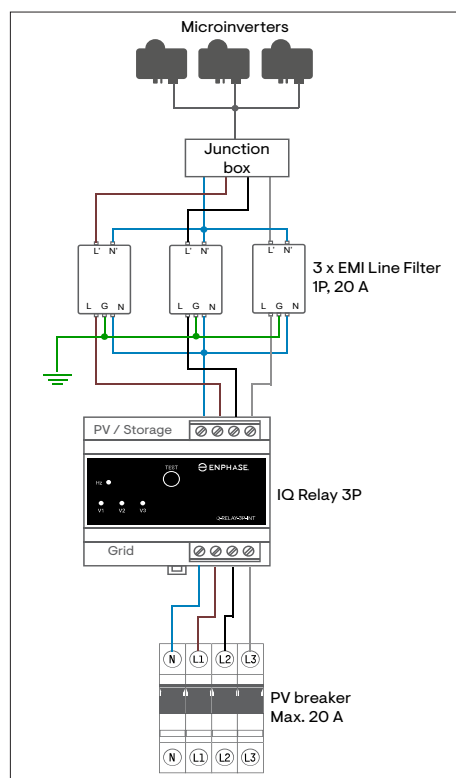
- A) Ensure the EMI line filter is installed indoors or in an IP54 or higher rated enclosure.
- B) To minimize noise coupling, do not place incoming and outgoing cables for the EMI line filter next to each other.
- C) Refer to the wiring diagrams provided below to plan the installation of the EMI line filter.

**NOTE:** For three-phase systems, three EMI line filters are required to be installed on the site.

### Single-phase installation






### Three-phase installation









# SAFETY

## Safety and advisory symbols

	<b>DANGER:</b> This indicates a hazardous situation, which, if not avoided, will result in death or serious injury.
	<b>WARNING:</b> 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.
	<b>NOTE:</b> This indicates information particularly important for optimal system operation. Follow instructions carefully.

## Safety instructions

	<b>DANGER:</b> 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.
	<b>DANGER:</b> Risk of electric shock. Be aware that installation of this equipment includes risk of electric shock.
	<b>DANGER:</b> Risk of electric shock. Risk of fire. Only qualified personnel should troubleshoot, install, or replace the IQ Gateway.
	<b>WARNING:</b> Before installing or using the IQ Gateway, read all instructions and cautionary markings in the technical description and on the IQ Gateway.
	<b>NOTE:</b> Perform all electrical installations in accordance with all national and local electrical codes.
	<b>NOTE:</b> To ensure optimal reliability and to meet warranty requirements, the IQ Gateway must be installed according to the instructions in this manual.

### 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 EEA (European Economic Area). It is the responsibility of the installer to confirm that all such products are labeled correctly and have the required compliant supporting documentation.

### Compliance with EU Directives

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

- Low voltage directive (LVD) 2014/35/EU
- Restriction of Hazardous Substances (RoHS) 2011/65/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>.

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## Revision history

REVISION	DATE	DESCRIPTION
140-00276-03	December 2023	Updated product names.
140-00276-02	October 2023	Editorial updates.
Previous releases.		