

Installing the Power Line Filter

In single-phase applications, the IQ-LCF-040-1P Power Line Filter separates power line communication (PLC) domains across the Enphase IQ7 and IQ8 Series Microinverters installation. The IQ-LCF-040-1P also isolates the PLC domains when multiple Enphase IQ Gateways are located on a single utility transformer or when site loads generate electrical noise that disrupts communications to ensure reliable communication on-site.

SAFETY

IMPORTANT SAFETY INSTRUCTIONS. SAVE THIS INFORMATION.

Follow all safety and assembly instructions when installing the Power Line Filter.

Safety instructions

	DANGER: Risk of electric shock. Risk of fire. Do not attempt to repair the Power Line Filter; it contains no user-serviceable parts. Tampering with or opening the Power Line Filter will void the warranty. Warranty void if cover removed. If the Power Line Filter fails, contact Enphase Support at 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 the Power Line Filter.
	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 electric shock. If you wire the Power Line Filter 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 Power Line Filter.
	WARNING: Risk of electric shock. Always make the PV terminal connections before completing the grid terminal connections. If grid terminals are connected first, the PV terminals become live.
	WARNING: Before installing or using the Power Line Filter, read all instructions and cautionary markings in the technical description and on the Power Line Filter.
	WARNING: Risk of equipment damage. When installing the Power Line Filter in an enclosure, choose an area for installation where the ambient temperature remains between -40°C and 65°C.
	WARNING: The temperature of the terminals may approach 90°C. Use an appropriately temperature-rated cable to connect to the terminals.
	NOTE: Perform all electrical installations in accordance with all national and local electrical codes.
	NOTE: Install a residual current circuit breaker if required by national regulations.
	NOTE: To ensure optimal reliability and to meet warranty requirements, the Enphase Power Line Filter must be installed according to the instructions in this guide.

In case of fire or other emergency, follow the instructions below depending on the system components present on-site.

In all cases:

- If safe to do so, turn off all DC switches on each IQ Battery. Turn off the PV breaker and battery breakers inside the IQ System Controller.
- Turn off the AC breaker for the IQ System Controller circuit.
- If an isolator switch is present, switch off the AC isolator for the IQ System Controller circuit.
- Contact the fire department or other required emergency response team.
- Evacuate the area.

In case of fire:

- When safe, use a fire extinguisher. Suitable types are A, B, and C dry chemical fire extinguishers. Additional extinguishing media include carbon dioxide or alcohol-resistant foams.

In case of flooding:

- Stay out of the water if any part of the IQ System Controller or wiring is submerged.
- If possible, protect the system by finding and stopping the source of the water and pumping it away.
- If water has contacted the unit, call your installer to arrange an inspection. If you are sure that water has never contacted the battery, let the area dry completely before use.

In case of unusual noise, smell, or smoke:

- Ensure nothing is in contact with the IQ System Controller or the venting area on top of the IQ System Controller.
- Ventilate the room.

Contact Enphase Support at enphase.com/contact/support

INSTALLATION

Follow this procedure to install the Power Line Filter.

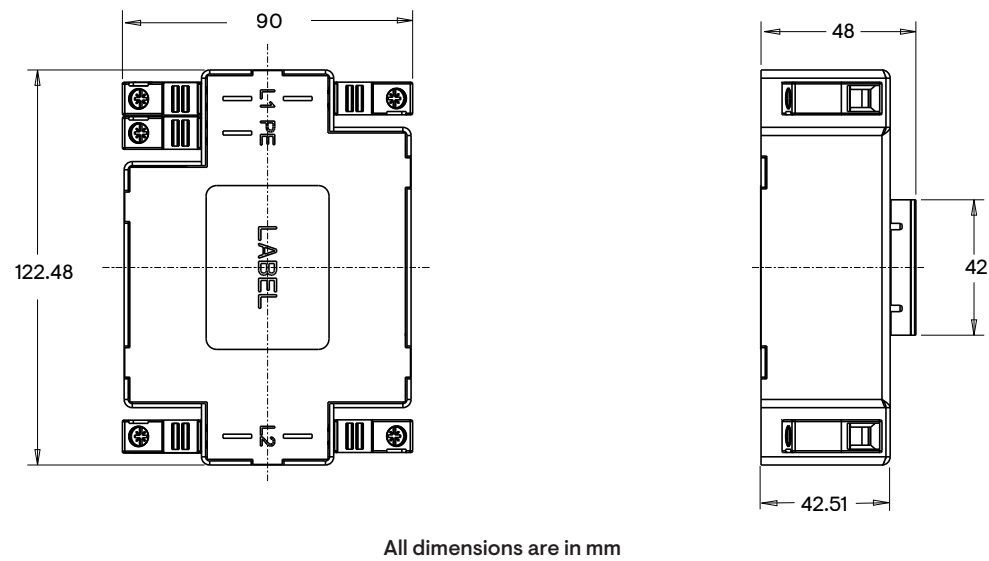
In solar installations, the IQ-LCF-040-1P Power Line Filter, by Radius Power (Astrodyne), separates power line communication domains across the IQ7 and IQ8 Series Microinverters installation when multiple Enphase IQ Gateways are located on a single utility transformer or when site loads generate electrical noise that disrupts communications.

- Connect both the IQ Gateway and IQ Microinverters on the load side of the filter and wire the utility feed to the line side of the filter.
- Mount in an appropriate enclosure using the DIN rails.

Detailed IQ Microinverters system configurations with line filters are captured in the following system planning guide: <https://enphase.com/download/enphase-energy-system-planning-guide-tech-brief>.

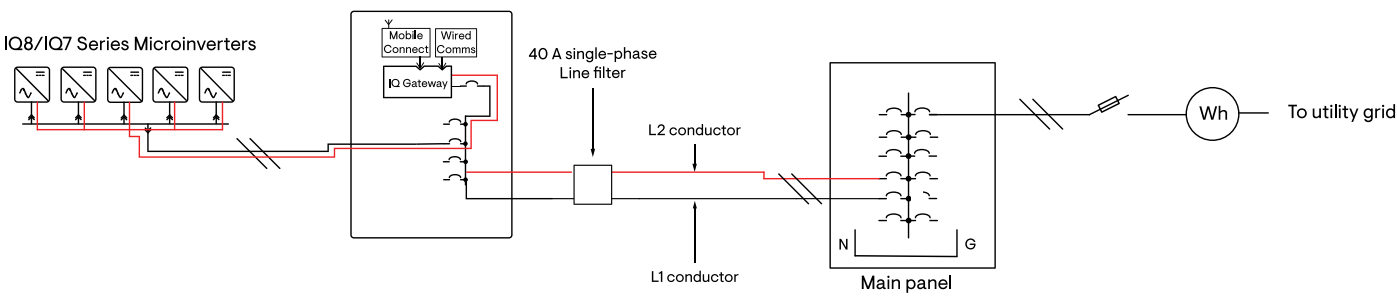


Product dimensions

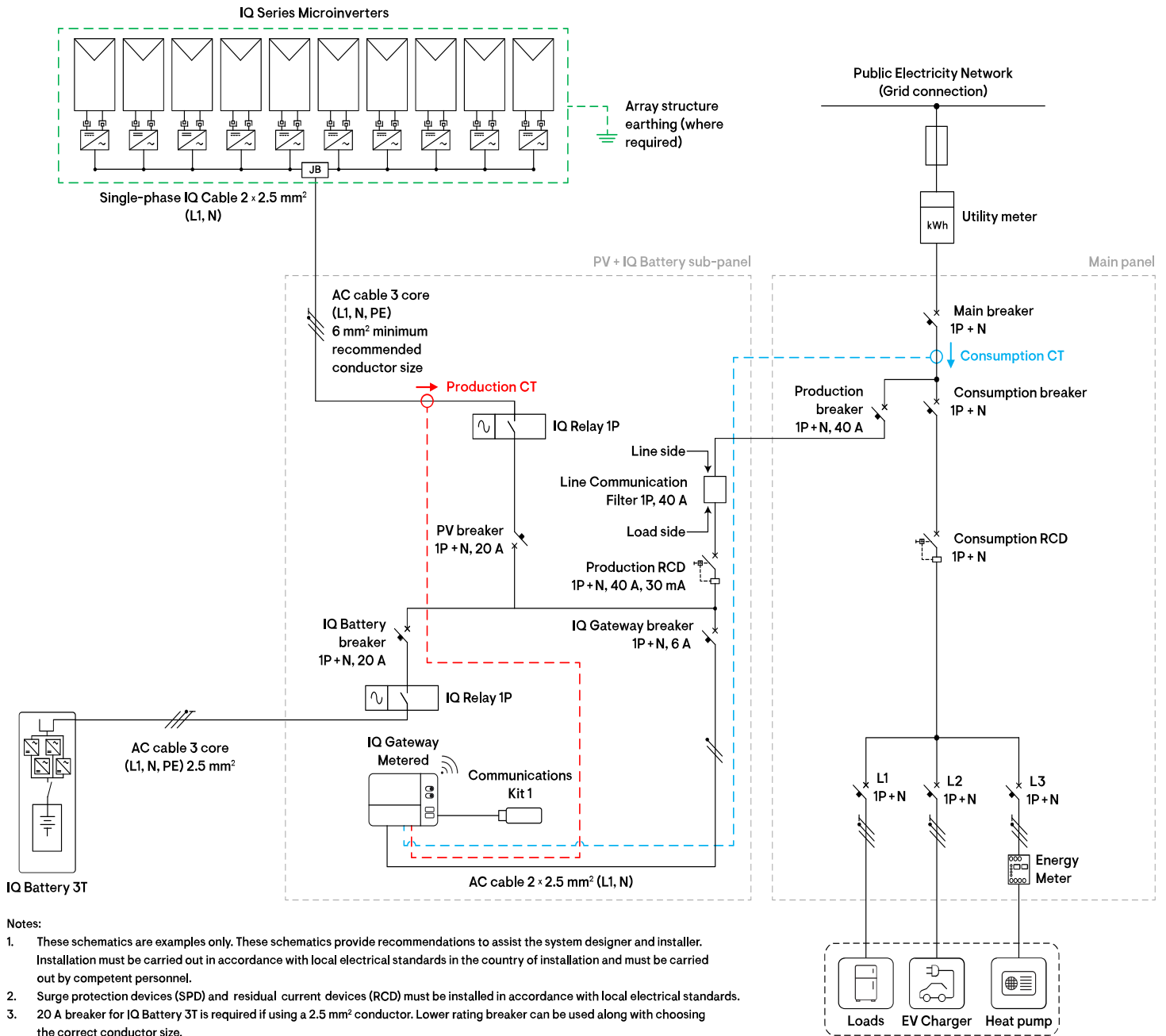


Use cases

Following is the use case for 40 A single-phase line filter with IQ7/IQ8 Series Microinverters for the U.S. region.



Following is the use case for 40 A single-phase line filter with IQ7/IQ8 Series Microinverters for the Europe region.



Revision history

REVISION	DATE	DESCRIPTION
140-01016-01	February 2025	Initial release.

Enphase Support: enphase.com/support/contact