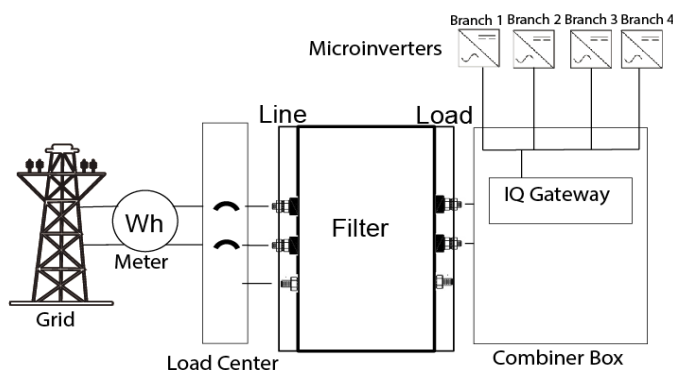


Power Line Filter IQ-LCF-040-1P and IQ-LCF-040-3P

In solar installations, Power Line Filters are essential for ensuring reliable communication between Enphase Microinverters in complex electrical environments. By isolating PLC domains, these filters prevent interference between different communication networks, guaranteeing system stability. This is particularly important when multiple IQ Gateways are installed on a single utility transformer or when significant electrical noise from site loads disrupts communication signals. Power Line Filters play a vital role in maintaining the integrity of the Enphase microinverter communication network, ensuring optimal performance and reliability. Suitable for use with IQ7 and IQ8 Series Microinverters.

Wiring diagram

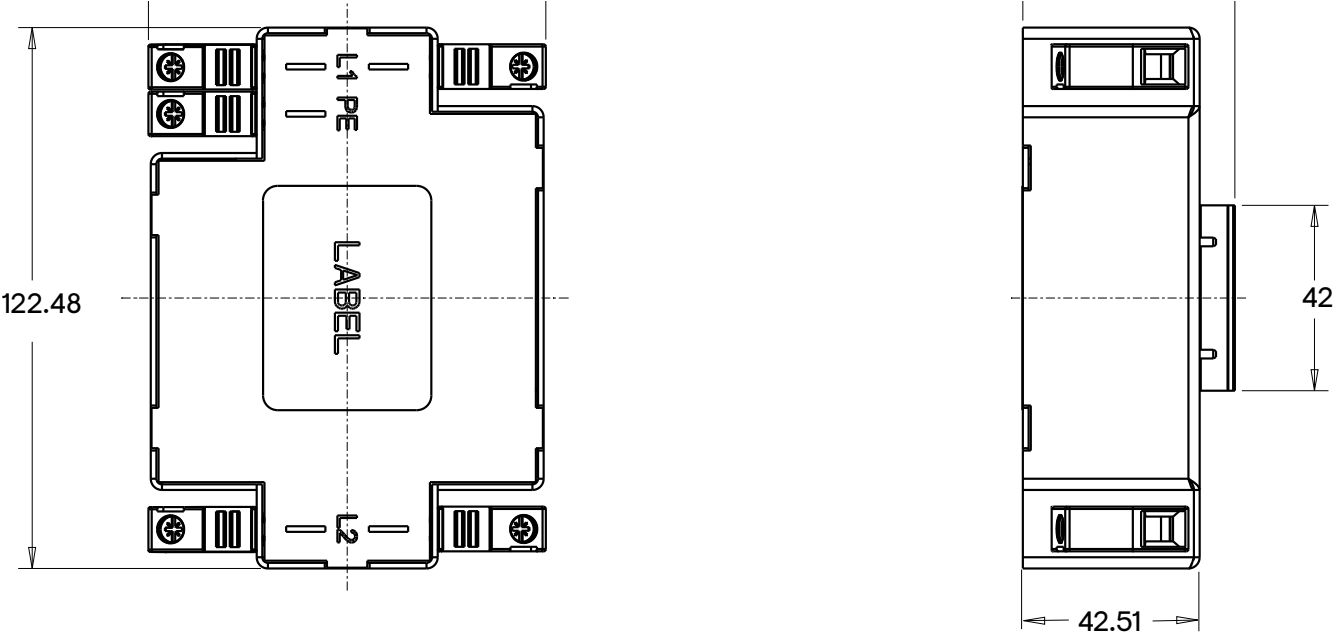


Connect both Enphase IQ Gateway and Enphase microinverters on the array or load side of the filter, and wire the utility feed to the line side of the filter.

Power Line Filter

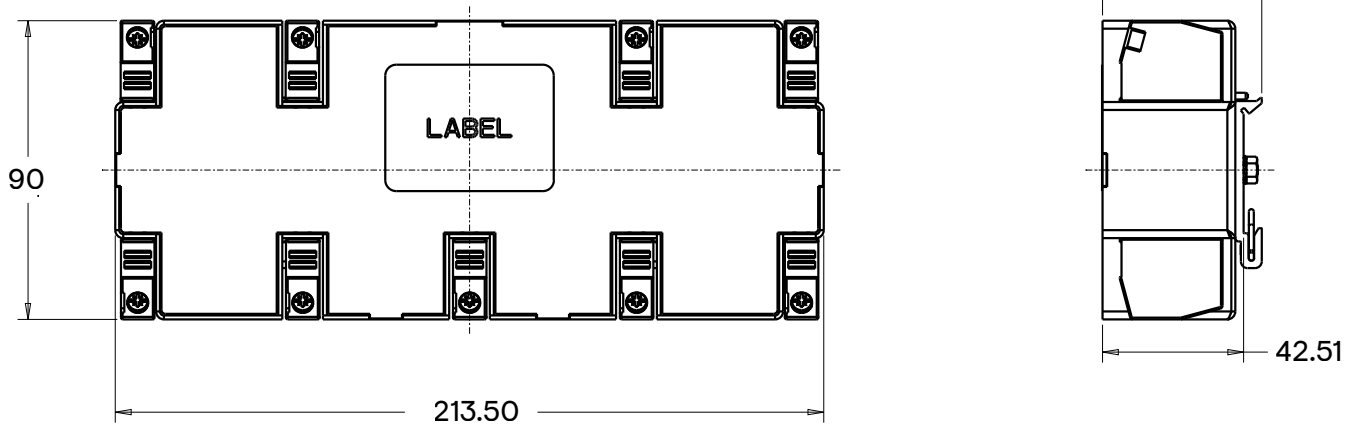
MODEL NUMBER	IQ-LCF-040-1P		IQ-LCF-040-3P	
Description	Single-phase line communication filter, 40 A, suitable for use with IQ7 and IQ8 Series Microinverters		Three-phase line communication filter, 40 A, suitable for use with IQ7 and IQ8 Series Microinverters	
SPECIFICATIONS	IQ-LCF-040-1P		IQ-LCF-040-3P	
Maximum current per line	40 A			
Maximum voltage	300 VAC		277/480 VAC	
Frequency	50-60 Hz			
Maximum DCR	1.5 mΩ			
Isolation at 110 kHz	45 db			
Impedance (L1 - L2)	20 Ω minimum @ 100-120kHz			
IL (Differential mode)	45 dB minimum @ 100-120kHz			
IL (Common mode)	50 dB minimum @ 100-120kHz			
Ambient temperature range	-40°C to 60°C (-40°F to 149°F)			
Weight	1.32 lb		4.84 lb	
Dimensions (h × w × d)	123.2 mm × 48.2 mm × 90 mm (4.85" × 1.90" × 3.54")		213.5 mm × 48.2 mm × 90 mm (8.4" × 1.90" × 3.54")	
Certification	EN 60939-3:2015			
MECHANICAL FITTINGS				
Cable size	24-6 AWG (0.5-16 mm²)			
Terminal block screw torque	1.5 N m			

IQ-LCF-040-1P Power Line Filter



All dimensions are in mm

IQ-LCF-040-3P Power Line Filter



All dimensions are in mm

Revision history

REVISION	DATE	DESCRIPTION
DSH-00673-2.0	December 2025	Editorial updates.
DSH-00673-1.0	February 2025	Initial release.