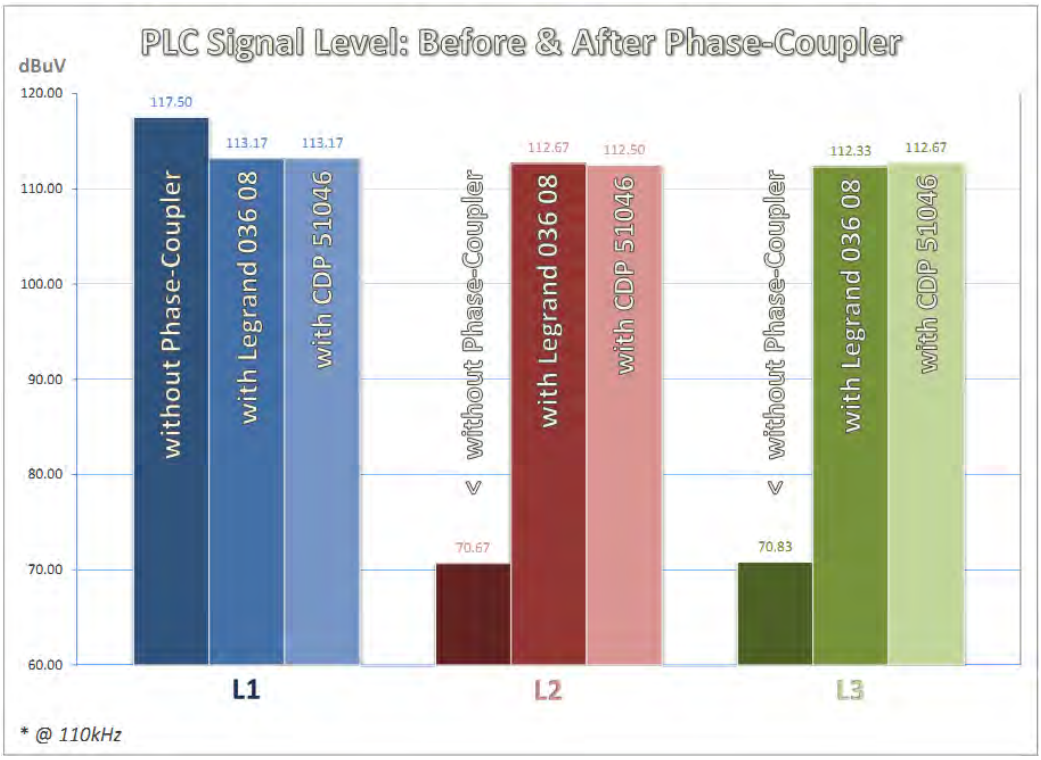
Phase Couplers for Three-Phase Enphase Systems (Europe)

Overview

Enphase® Microinverter systems operate with both single-phase and three-phase applications. In three-phase, 230/400 VAC 50Hz applications, Enphase Microinverters produce 230 VAC output from line to neutral. The Envoy® Communications Gateway uses power line communications to communicate with the microinverters. In a three-phase application, the power line communications are contained to the one phase upon which the Envoy has been installed.

For the Envoy to communicate with all of the microinverters in a three-phase application, the power line communication signal must be "coupled" between the three phases. This requires the addition of an aftermarket phase coupler device.

The following graph shows the difference in the power line communication signal strength in dBµV (decibel microvolt) when a phase coupler is installed.



Options Available

You can achieve phase coupling by purchasing an off-the-shelf phase coupler, or you can wire a capacitor into the system.

With either solution, install the devices on the load side of the over-current protection device.

Option 1: Phase Coupler

The following off-the-shelf phase communication coupling device is easy to use and is readily available at home automation retailers.

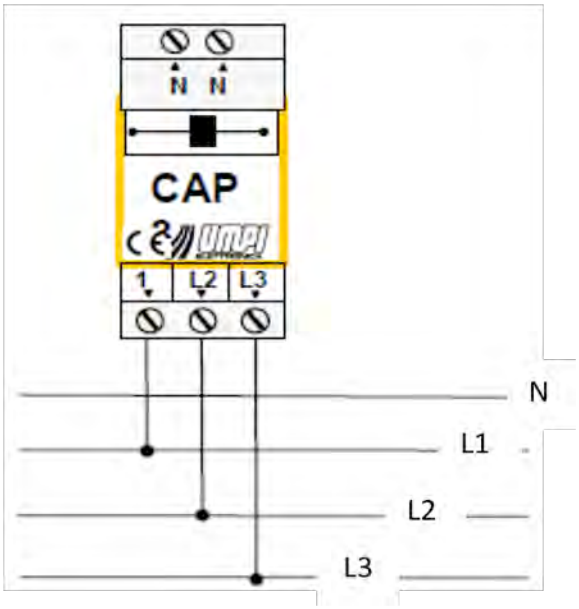
The Legrand unit has been used successfully in Europe. Please contact your local retailer to check for availability and use in your region.

Legrand 036-08 Phase Coupler

Option 2: Installer Configured System with Capacitor for Phase Coupling

Capacitors couple the power line communication signal between three-phases. To do this, install either of the following:

- One three-phase capacitor
- Three single-phase capacitors



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