

# Bi-Directional PLC Filter For Narrow-Band Communication

Firewall for your PLC network protects integrity of your power line communication

Narrow-band power line communication (PLC) is widely used for communication and control of equipment over power lines. The problem is, because power lines connect all equipment together, PLC signals from different sources can conflict with each other and cause malfunction of equipment and erroneous data. Equally, EMI on power lines can also interfere, or even disable communication.

OnFILTER' unique bi-directional PLC filter blocks propagation of narrow-band PLC communication without disabling it, allowing for two independent PLC networks to coexist on the same power lines without interference. The filter resolves communication conflicts and optimizes the network architecture. Each of PLC networks now can operate on the same power lines on different sides of the filter. Consider these filters as a firewall for your PLC networks.



## Applications

- Industrial control
- Utilities
- Oil and gas industry
- Water management
- Robotics
- Buildings
- Wherever PLC c is a problem

## Features

- Two independent PLC areas on the same AC mains
- Blocks PLC from certain area or to create separate PLC domains
- Blocks interfering EMI
- Majority of narrow-band standards

### Blocks But Doesn't Disable

AM2015NG filter blocks propagation of narrow-band PLC signals while preserving communication for the areas where it is needed

### Two Independent PLC Domains

AM2015NG splits AC mains into two different areas where separate power line communication is possible without affecting PLC in another area

### Majority of Narrow Band PLC Standards

AM2015NG works with most of narrow-band PLC standard—please check the back of this brochure

### Blocks Interfering EMI

Use this filter to block interfering EMI from your PLC domain and improve its operability

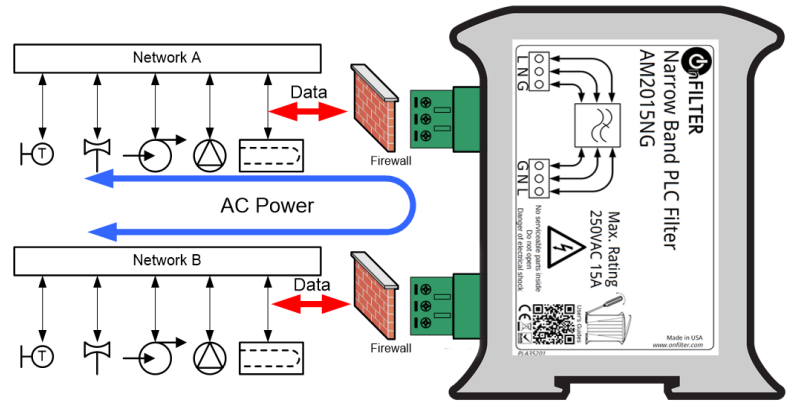
Bi-Directional PLC Filter  
Narrow-Band Communication  
AM2015NG  
DIN-Rail Mounted

## PLC Filter Performance

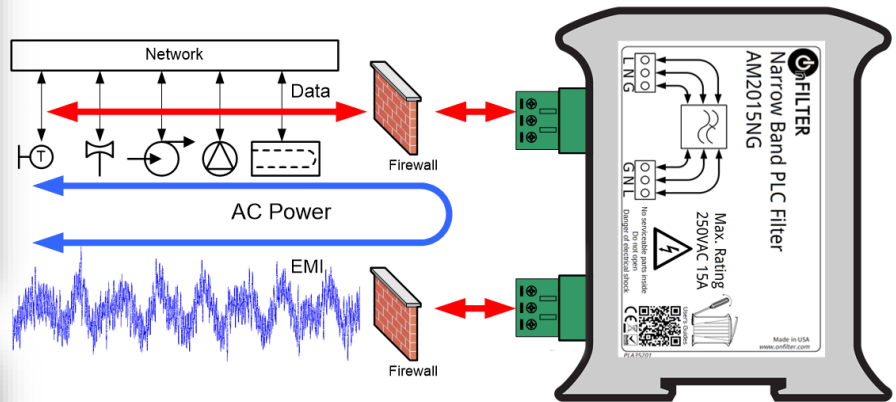
Narrow-band bi-directional PLC filter PLF020N allows AC power to pass unimpeded, while non-destructively stopping high-frequency communication signals riding on these power lines from passing through. You can use PLF020N to either block PLC signals from a particular circuit, or allow simultaneous operation of two independent PLC networks on the same power line. PLF020N filters work with the majority of worldwide narrow-band PLC standards. Please examine typical frequency charts below to determine whether it will work for your applications. The best signal isolation for dual PLC networks requires at least 50 dB (300 times) attenuation.

## Specification

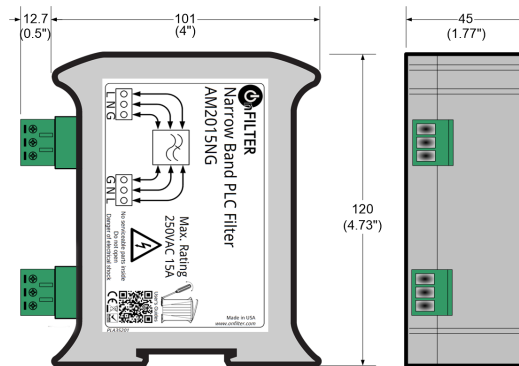
Parameter	Value
Rated Voltage	250VAC RMS Max.
Rated Current	20A RMS Max.
Enclosure width	45mm (1.77") wide
Termination	Removable terminal block inserts
Wire Gauge	AWG 24...12



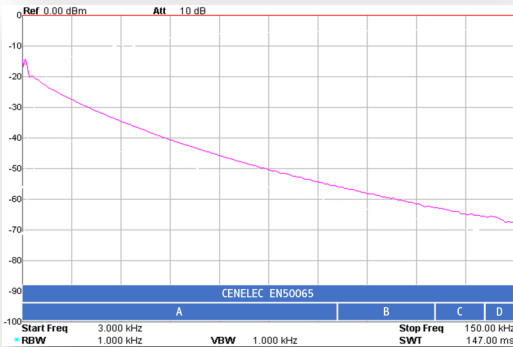
PLN020N allows two independent PLC networks on the same power line



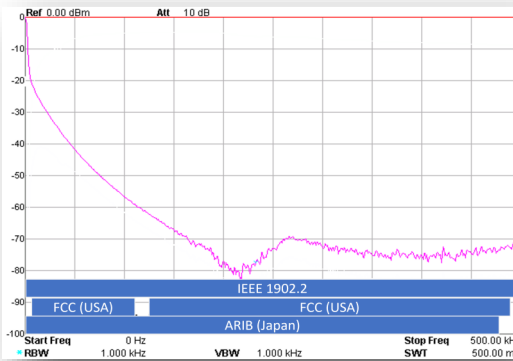
PLN020N blocks interfering EMI from PLC network



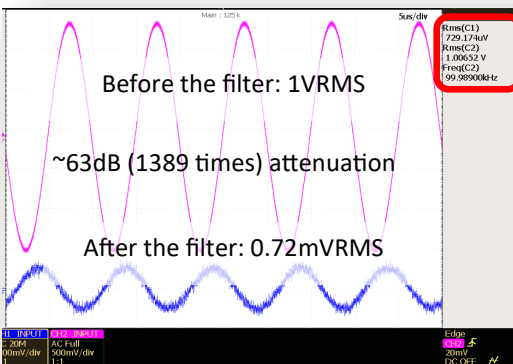
AM2015NG Dimensions



Typical Attenuation at Lower Frequencies



Typical Attenuation at Higher Frequencies



Example of attenuation at 100kHz



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## Ordering Information

### AM2015NG PLC Filter

