

# Hand-Held EMI Adapter For Power Lines

## Measure Noise on Live Power Lines with Your Oscilloscope or Spectrum Analyzer

Power lines often carry high-frequency noise (EMI). This noise causes multiple problems for equipment operation and sometimes leads to component damage. OnFILTER' plug-in EMI Adapter MSN12 provides easy way to observe noise on power lines with your oscilloscope, spectrum analyzer or any other instrument without exposing them to high voltage from the power lines

OnFILTER' MSN12 plugged into your AC power outlet completely blocks 50/60Hz AC mains voltage and provides only high frequency signals from power line via its 50 Ohms output. You can observe waveforms of noise on the screen of your oscilloscope or analyze noise spectrum with your spectrum analyzer.

MSN12 utilized true balanced input— you can measure high-frequency signals between different ground points without influence of grounding of your instrument. Complete galvanic insulation from input terminals allows for measurements on live power lines up to ~380VAC.



### Applications

- Electronic manufacturing
- Semiconductor fabrication
- Test and measurements
- Power line communication (PLC)
- Data centers
- Industrial robotics
- Medical
- Military and aerospace
- Wherever EMI is an issue

### Features

- Measurements of high-frequency signals on live power lines and ground
- Galvanic isolation from power line
- True balanced input
- Overvoltage protection
- 50 Ohms output

### EMI Power Line "Probe"

Your oscilloscope, spectrum analyzer or signal strength meter is now capable of measuring high-frequency signals riding on live power lines

### Power Line Isolation

MSN12 provides complete galvanic isolation from high voltage on power lines so that your instrument is not exposed to high voltage

### Balanced Input

MSN12 offers true balanced input reducing errors from ground coupling of your oscilloscope or spectrum analyzer

### Differential and Common Modes

Connect test leads of MSN12 between live and neutral to measure differential mode noise; connect leads between either live or neutral to ground to measure common mode noise

### Overvoltage Protection

Noise on power lines, especially transient spikes, can reach significant amplitude. MSN12 has special protective circuit limiting such spikes to no more than 15V of either polarity without sacrificing its performance at lower amplitudes

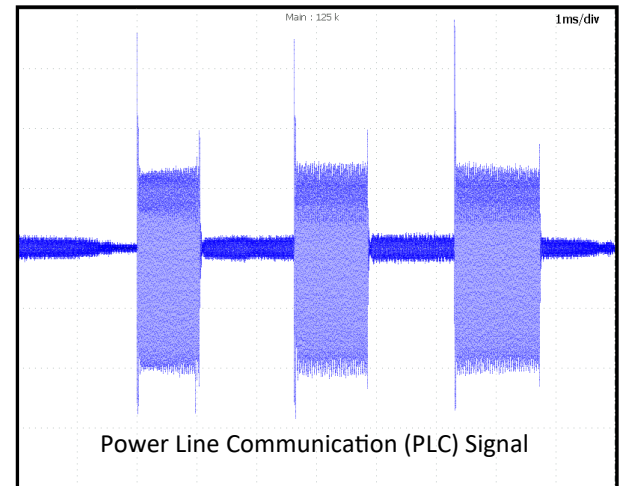
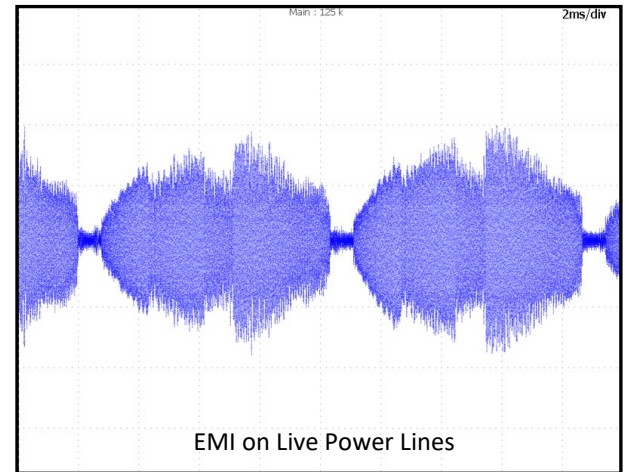
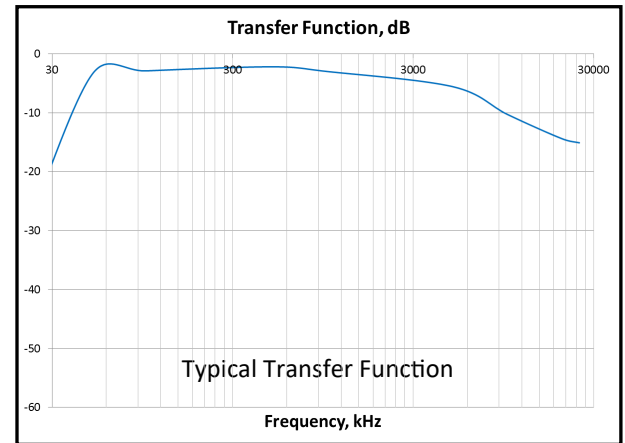
## Hand-Held EMI Adapter For Power Lines Model MSN12



## Specification

MSN12 power line EMI adapters enable measurements of high frequency signals on live power lines

Parameter	MSN12
Rated Voltage, RMS	380VAC Max.
Frequency Response	30kHz...30MHz
Output Impedance	50 Ohms
Output Connector	BNC
Output Signal Limiter	<15V Peak
High Voltage Indication	LED



## Application Note

If you looking at this datasheet on a computer, you can click on the link below to the Application Note which is available in the [Library](#) on our web site:

[App Note: Measurement and Management of Power Line Communication](#)

## Ordering Information

Order model **MSN12**.

MSN12 comes with the following:

- Test leads
- BNC cable
- BNC 50 Ohms terminator
- BNC T-connector
- User's Guide

If you are planning to use MSN12 with a spectrum analyzer, you may want to consider optional 20dB attenuator since peak EMI signals on power lines may exceed input capabilities of your spectrum analyzer. This is not a problem for oscilloscopes which should be set to 1M input.



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