

## FUNCTION

The Noise Filter – Attenuation Isolator, model ZNF, is used to reduce or eliminate noise or attenuating/capacitive devices that interfere with the transmission of UPB, X10, HOMEPLUG® and other powerline signals. Switching power supplies and other devices that run at frequencies above 4 kHz may interfere with UPB signals (or 120 K Hz and higher for X10 and other powerline technologies). Rack-mount surge suppressors, uninterruptible power supplies (UPS), battery chargers, large flat-screen TVs and other devices can have capacitive impedances that reduce or attenuate power line signals. When many of these capacitive loads are in a home they can added up and begin to affect powerline communication. The ZNF isolates and eliminates powerline noise and the negative effects of capacitive loads.



The ZNF Noise Filter – Attenuation Isolators are installed between the noise or attenuation source and line power or the UPB (or X10) device controlling noisy load. Multiple ZNF10A-W filters can be installed in parallel for loads greater than 10 Amps, and on each line feeding 240 VAC loads (see Application Notes, under Service and Support, at <http://www.Simple-Automated.com> for more details). The filter - isolators block noise above 4 kHz and are compatible with all power line technologies.

The two models are:  
 ZNF10A-W 10 Amp, Wire-in  
 ZNF10A-P 10 Amp, Plug-in

## IMPORTANT SAFETY INSTRUCTIONS

When using electrical products, basic safety precautions should always be followed, including the following:

1. READ AND FOLLOW ALL SAFETY INSTRUCTIONS.
2. Installation should be performed by a qualified electrician.
3. Keep away from water. If product comes into contact with water or other liquid, unplug or shut off breaker immediately.
4. Never use products that have been dropped or damaged.
5. Do not use this product outdoors.
6. Do not use this product for other than its intended use.
7. To avoid risk of fire, burns, personal injury and electric shock, install this product out of reach of small children.
8. Do not cover the product with cloth, paper or any material when in use.
9. The plug-in models use polarized plugs and sockets (one blade is wider than the other) as a feature to reduce the risk of electric shock. These plugs and sockets fit only one way. If they do not fit, contact a qualified technician. Do not use with an extension cord unless plugs can be fully inserted. Do not alter or replace plugs.
10. SAVE THESE INSTRUCTIONS.

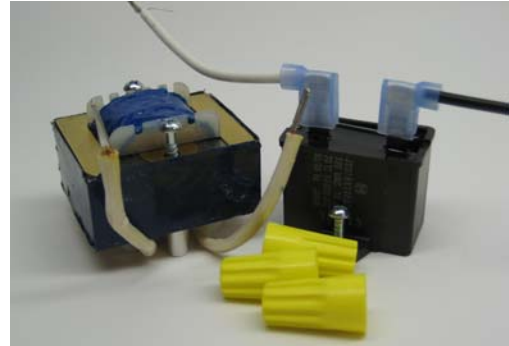
## INSTALLATION

Plug-in model:

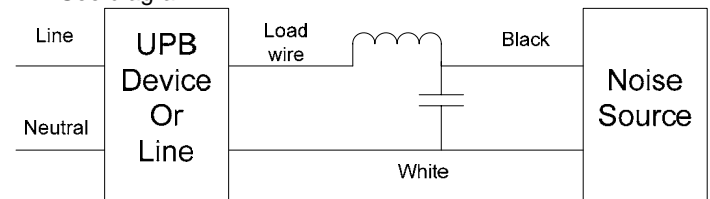
1. Plug the noise producing or attenuating device into the receptacle on the filter.
2. Plug the filter into the wall receptacle.

Wired-in model:

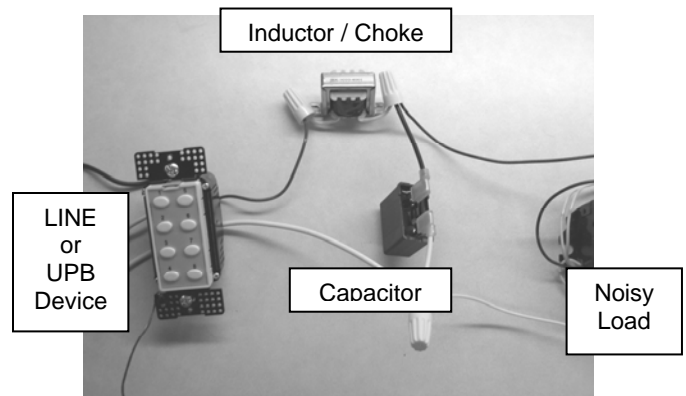
1. Turn off the appropriate circuit breaker.
2. Check to make sure all parts are available: 1 inductor (10A), 1 capacitor (15µF), 3 wire nuts, 3 mounting screws, capacitor with 'quick connect' lead wires (1 black, 1 white) and 2 standoffs for mounting the 10A inductor.



3. The filter assembly can be mounted in the lighting housing (ceiling mounted fluorescent fixtures) or in a junction box.
4. See diagram:



5. Using a wire nut connect one end of the inductor to the load wire from the UPB device or Line.
6. Connect the black and white 'quick-connect' lead wires to the capacitor.
7. Using a wire nut connect the other end of the inductor to the black wire from the capacitor and the black wire coming from the noise source.
8. Connect all white wires together with a wire nut.
9. Turn on the circuit breaker and test.



US2-40-W with ZNF10A-W