

# Installation

## Warnings:

- This product should be installed by qualified and trained HVAC/R personnel only!
- Disconnect supply voltage and discharge system capacitors before proceeding!
- Follow all applicable electrical codes and safety standards!

Contents: 1 PRO-24 Protection Device; Twist Ties; Tech Note Sticker

## Full Instructions

The best place to install the PRO-24 is at the step-down transformer's output leads. Many of these transformers have 1/4" female quick-connect terminals on their leads where they connect to the circuit board or other device. If so, unplug the "hot" 24V lead from the board and plug it directly into the insulated "male" quick-connect terminal which is about 2" from the PRO-24's fuse. *The "hot" 24V transformer output is the side that usually ends up going to the red wire on the thermostat.*

Now, plug the PRO-24's other "hot" lead (opposite the end spoken about above, same color, with the female quick-connect) into the place where the transformer's "hot" lead used to be. Repeat for the other 24V leg. Secure the ground's ring terminal to a good ground point. Tie off any loose leads with the twist ties so that they are not exposed to damage. Peel and place the "Service Tech Note" sticker nearby. Install the proper fuse: 3A for 40VA transformers, 5A for 75VA transformers.

## Operation

The PRO-24 quietly absorbs transient surges and spikes on the 24V system, normally converting them to harmless heat energy. However, if a surge or spike of *extreme level* is encountered, the 3 MOVs inside will fuse their poles together, shorting all power that was going to the HVAC board and system. This will then "blow" the PRO-24's fuse. This is why it is important to install the protector so its fuse is *in between* the transformer's output and the center section of the PRO-24. (If you need to use an alternate wiring arrangement to connect the PRO-24, keep this in mind when wiring)

A blackening or graying of the inside surface of the shrink tubing on the PRO-24 indicates that the protector has been "sacrificed," or internally shorted to protect your system. Replace the device with a new one for continued protection.

## Notes:

- Also use Zebra Instruments' *ECM Motor Protectors: Models VZPRO and X13PR to protect against surges and spikes in ECM Motors.*