

Transient, Surge, Lightning, & Spike Protection

# ZAP-PRO™

A fast and convenient way to protect expensive Units & Circuit Boards from 'dirty' incoming power and spikes.

CONDENSING UNIT

CIRCUIT BOARD

HEAT PUMP

PROTECTION

**Zebra Instruments™**  
HVAC Monitoring, Protection, & Control



*“The most common cause of electronic board failure is damage to the electronics module as a result of poorly conditioned power.”*

**Model: ZAPPRO**



## DIRTY VOLTAGE? CLEAN IT UP.



### Easy-To-Use

Simply plug the ZAP-PRO™ onto the incoming 1/4" power terminals of the unit you want to protect



### Convenient

Automatically resets in all but the most extreme spikes, in which the ZAP-PRO™ will short permanently, tripping the breaker



### Saves Money

Quick and easy to install, effectively protecting expensive equipment

**By Techs, For Techs**



[Learn More](#)  
Product Info, Flyers, Manuals,  
& Instructions



**Zebra Instruments™**  
.com



# ZAP-PRO™



## How it Works

The ZAP-PRO™ protectors are plug-in devices that intercept most voltage problems BEFORE they get a chance to do any damage to the circuit boards or components. They react only when the voltage is above 135 volts on that leg with respect to ground. They convert the excess voltages into heat. Since the devices are usually near the airstream, they are actually able to be more effective than what their ratings claim. The ZAP-PRO is pre-wired to protect both (either) 120 VAC and 240 VAC systems.

**"I try to install on every job I go to. Customers love it!"**

**-Customer Review**

## FAQ's

### What exactly are their ratings?

These devices are able to dissipate (turn into harmless heat) voltages as high as 8000 volts for one cycle of voltage (this is normally called a spike). They can dissipate lower voltages for much longer, say, a 2 second increase from 125 volts to 190 volts (commonly called a surge). Electrical items downstream from these protection devices simply never see the excess voltages.

### What happens when voltages exceed the thresholds mentioned above?

When that happens, these MOV's will fail. Their breakdown will cause the devices to short their poles together, permanently, and will cause discoloration of the device and its clear plastic package. This short will, in turn, cause the circuit breakers supplying the equipment to trip. They will continue to trip if reset. The sticker included with each product tells a Technician that if the device has failed and repeatedly trips the breaker, to not just remove the protector - but replace it - it has sacrificed itself so the system would not be damaged.

### So, it will protect the units many times, right?

Yes, it can block voltages thousands of times as long as they don't exceed the thresholds above.

### Can it protect against a lightning strike to the building?

A direct lightning hit to the building the equipment is installed in would probably arc over the device (and everything else there) and ruin other parts. A general rule is that if the lightning strike is on the other side of the utility transformer (i.e.: not struck between the utility transformer and the house or building), our devices usually save the circuit boards and parts.



**Learn More**

Find product info, instructions, and more online by following the QR Code.



**Zebra Instruments™**  
ZebraInstruments.com



Visit us on YouTube  
@ZebraInstruments