

TECH NOTE

From Zero Surge Inc.

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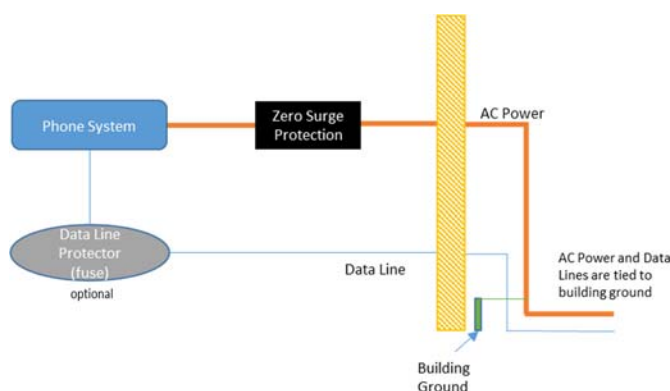
Protecting Phone Systems: Service Entrance Data Line Issues

Our technical support department is frequently asked how to protect a phone system. Modern phone systems for small to medium size businesses, have an AC powered central phone station that feeds the internal network of handsets. To protect this station from electric surge damage, a Zero Surge plug-in unit is the best solution. But what about the data line?

In addition to AC power, a wired data transmission line enters the phone station via a coax cable, copper phone wire, or fiber optic cable. Nationally, 25% of buildings have fiber optics cable service to the building which need NO protection on these data lines. Fiber optic lines are not susceptible to electrical disturbances.

A data line is a DC line which does not experience electric surges. The threats to these phone stations via the data line are via external threats like near lightning strikes and from MOV based surge protection inside a building causing the ground line potential to rise. Removing MOV based surge protection will remove the threat of ground line potential rise.

If your building has copper wires entering the building, then you can use a data line protector plugged in separately from a Zero Surge unit to protect against some near lightning strikes. But your phone station may already have this fuse inside and data protectors may cause poor data transmission on high speed data lines.



If lightning should induce a current towards your building, the copper wire is grounded at the service entrance (along with your AC power) which provides a path for the current to return to Earth without ever entering your building. If lightning strikes the building or the wires directly, nothing will protect from the extreme energy which would melt the wires.



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