

GROUNDING THE SKYCONNECTOR

Correct ground connections in a SkyConnector installation provides protection of both the SkyConnector and the customer equipment indoors.

For the surge protection circuitry built into the SkyConnector to be effective, grounding of the unit is necessary. This is especially true if the SkyConnector is to be located in an area prone to lightning storms or if the unit is located on a tall structure.

Protection of the indoor equipment and personnel is mandatory. This is accomplished by installing and grounding an inline surge protection device (SPD) at the point of entry into the building. SkyPilot recommends the Citel model C2MJ8-505RJ. <http://www.citelprotection.com/POE.htm>

Installing a second SPD at the SkyConnector will provide incremental additional protection for the unit above and beyond what is afforded by the integral protection circuitry. In areas with frequent lightning activity, the customer can at their option install two surge suppressors, one at the SkyConnector and one at the point of entry into the building for maximum protection at both ends. Both surge suppressors must be properly grounded. If only one surge suppressor is installed, it must be located at the point of entry to the building.

To ensure the highest degree of reliability, both the metal enclosure of the SkyConnector and the Surge protection device must be properly grounded. The best way to achieve a reliable ground is to connect an 8 GA or larger wire to the nearest ground point on the structure.

The three most popular ground connection points are:

- A cold water pipe. (be sure it is well connected to Earth)
- A copper clad ground rod of at least 8 inch length driven into the ground
- The primary grounding point of the AC electrical system of the building

Regardless of where you connect the ground wire, it is necessary that all connections are “gas tight,” retaining their low resistance and integrity over time and exposure to the elements. Use of anti-oxide compound and proper sealing against the elements is essential. Wrapping connections with Scotch® 130-C tape is recommended. If using a cold water pipe, verify the integrity of the ground. Sometimes the metal-cold water pipes have been repaired and/or extended with PVC piping elsewhere in the system. The introduction of PVC material or a dielectric union renders the cold water pipe ground unacceptable.

There should be no more than 5 ohms of resistance between any two ground points in the entire system. It is also crucial that all ground points within the structure be tied together. For example, if there is a ground rod and a cold water pipe used for grounding, they must be tied together (see Figure 1).

TechGuide

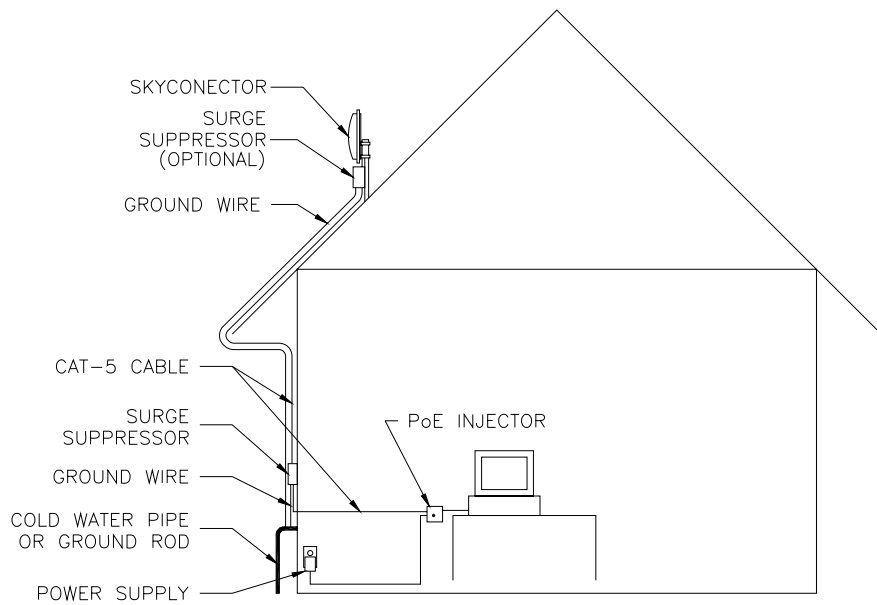


Figure 1: Insuring proper grounding to cold water pipe or ground rod

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