

# Best Practices for Installation & Grounding



The conductor length between the SPD and the equipment being protected should be a minimum of 3 feet in length to allow enough time for the SPD to react. The conductors can be greater than 3 feet as long as they are isolated and are not subjected or directly exposed to internally- or externally-generated transient voltage spikes and/or surges.

The use of a grounding bus bar is strongly recommended as a means of terminating SPD ground wires to existing electrical grounding leads. This will ensure a solid mechanical connection of all grounding wires. The use of twist-on wire connectors ("wire nuts") is not recommended for termination of SPD ground wires to existing electrical grounding leads. Twist-on wire connectors can increase ground resistance, may become loose and/or corroded over time, and can also unnecessarily extend the length of the grounding conductor. This would degrade the performance of the SPD due to the lack of a short, low impedance ground path.



When installing multiple SPD's and terminating to a common electrical ground, a dedicated ground wire running from each individual SPD to a common grounding bus bar is strongly recommended. "Daisy-chaining" multiple SPD ground wires together via the SPD grounding terminals, or by using twist-on wire connectors, is not recommended as this increases the resistance and extends the length of the ground path.

Always make sure that the field wiring (unprotected wires) and the protected wiring occupy separate conduit feeds. When unprotected and protected wires occupy the same conduit, surge energy can be induced on to the protected wiring and completely bypass the surge protective device.



Whenever possible, Surge Protective Devices should be installed in a dedicated enclosure outside of the equipment being protected. This will prevent physical damage to the electronic circuit board, power supply and/or wiring inside of the equipment panel due to a potential catastrophic failure of the SPD.

## Contact Us

For assistance in selecting the right surge protection devices for your specific application, please visit our website at [www.ditekssurgeprotection.com](http://www.ditekssurgeprotection.com)

**Technical Support Staff: 888-472-6100**

