Protect Your Equipment — and Your Business — from Power Surges

You don't often think about electricity until there's a problem, but you need it for even the most basic functions of your business. The reason most of us are able to take electricity for granted is because it often does its job without causing damage. But what happens when it doesn't? Your business halts, your productivity crashes, and your profits start to sink. While the continuity of power at your facility is dependent on a number of factors outside your control — weather and infrastructure strength among them — you can help avoid costly damage to your equipment by installing the proper safeguards in your electrical system.

What Could Go Wrong?

Power surges are among the most common causes of interruption and damage in a building's electrical system. These incredibly short bursts — also called spikes or transients — come from external sources like high-power switching at substations or lightning strikes and internal sources like equipment activation. The extra current or voltage damages the complex and fragile circuitry in modern electronic equipment, having effects that can be immediately apparent, or that can cause less visible harm to the longevity of a piece of equipment.

What Are Zones of protection?

Power surges are largely preventable. Surge protection devices (SPDs) are designed to decrease the electrical load from power surges. Most electrical professionals employ a zoned approach to divert extra energy before it reaches outlets.

Zone 1 — SPDs at the service entrance panel discharge extra energy as it enters the system. The main function of this zone is to reduce energy from external sources.

Zone 2 — SPDs at the distribution panel continue to reduce energy as it travels through the system and branch circuits. These handle surges from internal and external sources.

Zone 3 — SPDs at the points of use, such as power strips or devices built into equipment, reduce energy from internal sources.

Who needs SPDs?

The total U.S. cost of sustained power interruptions is estimated at about $44 billion per year with a majority of these costs in the commercial sector.* While the majority of power surges are generated internally, most businesses could benefit from all three zones of protection — especially ones that use computer-controlled equipment.

Consider hiring an electrical professional to assess your business's surge protection. While installation costs can vary widely depending on equipment requirements, the price could prove small in comparison to ignoring power surges until it's too late.

*"Improving the estimated cost of sustained power interruptions to electricity customers." Kristina Hamachi LaCommare, Joseph H. Eto, Laurel N.Dunn, Michael D.Sohn. Energy Analysis Department, Ernest Orlando Lawrence Berkeley National Laboratory, June 2018. https://doi.org/10.1016/j.energy.2018.04.082.