BUSINESS insights

Protect your Business with High-Quality Surge Protection

It's ironic that our businesses today are so dependent on devices that use electricity: computers, phones, printers, copiers, scanners, point-of-sale systems, and much more. The irony is that, with a power surge, it takes only seconds for the same power that runs our technology to stop it from working.

Power surges can do a lot of damage. Tom Harris, writing in HowStuffWorks, explains:
[URL that links to this article: http://www.howstuffworks.com/everyday-tech/surge-protector.htm]

"Power surges occur when something boosts the electrical charge at some point in the power lines. This causes an increase in the electrical potential energy, which can increase the current flowing to your wall outlet. A number of different things can cause this to happen.

The most familiar source is probably lightning, though it's actually one of the least common causes. A more common cause of power surges is the operation of high-power electrical devices, such as elevators, air conditioners and refrigerators. These high-powered pieces of equipment require a lot of energy to switch on and turn off components like compressors and motors. This switching creates sudden, brief demands for power, which upset the steady voltage flow in the electrical system. While these surges are nowhere near the intensity of a lightning surge, they can be severe enough to damage components, immediately or gradually, and they occur regularly in most buildings' electrical systems.

Other sources of power surges include faulty wiring, problems with the utility company's equipment, and downed power lines. The system of transformers and lines that brings electricity from a power generator to the outlets in our homes or offices is extraordinarily complex. There are dozens of possible points of failure, and many potential errors that can cause an uneven power flow. In today's system of electricity distribution, power surges are an unavoidable occurrence."

It's vital to protect the technology and equipment in your business, and that means protecting the flow of electricity that runs it. That's why it's critical to have high-quality surge protection.

You must be careful, however, when purchasing a device that claims to provide surge protection. A power strip that says it has surge protection on its packaging is not going to do the job. Here's why:

Selecting Reliable Surge Protectors
There are two types of power issues that can damage your equipment:

1. **Low-Level Power Fluctuations:** The power fed to your equipment is always fluctuating. Over time, these low-level fluctuations can damage your equipment.

2. **Major Power Surges:** These, as described above, tend to be single-instance increased surges of power that do immediate damage.

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To fully protect your investment in computers, printers, copiers, and the many other pieces of equipment in your business, you need surge devices that cover both types of power issues. One that protects equipment from the daily fluctuations and another that blocks the major surges when they happen.

Protect Individual Equipment with Point-of-Use Surge Protection

Solid surge protection equipment that will protect your electronic devices against fluctuating surges should follow these rules:

- Alerts you with a warning light and/or sound when a high-level surge has occurred
- Allows you to turn the power on and off to each individual piece of equipment connected to it
- Blocks the surge effectively using a clamping voltage of 400V or lower (the lower the better)
- Filters electromagnetic interference or line noise
- Has a joule rating of at least 600 to 700 (the higher the better)
- Protects all three wire combinations: L-G, N-G, L-N
- Provides a high total energy dissipation or absorption (the higher the better) — this identifies how much energy the device can absorb before it fails
- Provides a point-of-use surge protector that has an indicator light and/or audible alarm to show when the device needs to be replaced
- Provides enough ports to handle the equipment you need to connect to it
- Responds in 10 nanoseconds or less

You should also make sure that any surge protectors you purchase are listed as UL Standard 1449. This is a national benchmark that means the product has been thoroughly tested. A device with packaging that says only "UL Listed" will not provide the protection you need.

In addition, as with any business operational equipment, make sure the protector you buy has a warranty against damage to any connected equipment. You should check to see what is and is not covered, and how you can file a warranty claim if the surge protector fails. Some warranties cover only the device; others also cover any damaged equipment connected to the device.

Remember that no surge protector is fully warranted against lightning strikes. So the best surge protection you can have in a lightning storm is to unplug equipment from the wall.

Protect Your Entire Electrical System with Service Entrance Surge Protection

In addition to the individual equipment protection, you also need what is referred to as Service Entrance Surge Protection. Devices providing this type of protection are usually mounted on your main electrical panel or at the base of the electric meter.

These protect your entire electrical system and all the other hard-wired items that do not plug into an electrical outlet, such as motors, lights, outlets, and light switches. When a lightning strike or other power surge comes from the outside of your business, service entrance surge protection lowers the level of the power on the utility lines before it gets to the point-of-use surge protectors.

There are several types of service entrance protection units. To determine which might be best for your facility, you should seek the advice of an electrician.

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