

Surge Protection Systems: Tech Basics



Using a fundamental, global approach, John Groninger, Northeast sales manager of Total Protection Solutions (TPS), answers CE Pro's power protection questions.

Many integrators are apprehensive about parallel installation of a unit on a breaker panel. John Groninger of Total Protection Solutions says amperage does not matter in this scenario because current does not flow through the unit.

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11.10.2008 — The category of power protection and filtration has seen a huge surge in interest. All puns aside, the category's growth has coincided with the commodization of the video category. Installers new to the industry (or those who are otherwise apprehensive about selling the products) should take some time to understand the basics of the category.

Using a fundamental, global approach, John Groninger, Northeast sales manager of Total Protection Solutions (TPS), answers CE Pro's power protection questions. He explains the many differences between power protection and power filtration as well as local and whole-house products.

The Basics: Surge protection systems are designed to protect electrically-powered equipment. Strategically, the best and most cost-effective possible approach to providing surge suppression with power filtering is to install a device at the breaker panel.

There are, however, a wide range of products that can be installed locally (in each room) to provide protection and filtration to individual electronics components.

Explain power conditioning and surge protection. How does it apply to the industry?

Power conditioning is a generic term given to many types of power correction devices that modify power to improve the quality or reliability required for sensitive electronic AC equipment.

Surge protection is a term that refers to surge suppression and/or power filtering. Surge protection devices are used to remove surge and transient-related events from the power line.

Can you explain some of the commonly used technologies of this category?

Isolation transformers, voltage regulators, noise filters and uninterruptible power supplies (UPS) are used to improve and maintain signal quality to electrical equipment. Surge suppression and power filtering are used to maintain performance by assuring the protection and longevity of your electronic equipment.

How do power conditioning and surge protection products work?

A power conditioner works by incorporating any one or more of the previously mentioned technologies into a product (including surge protection) in order to get the desired result.

Surge protectors, on the other hand, use surge suppression circuitry and/or power filtering to eliminate surges from the electrical system.

With A/V equipment, power conditioning is typically installed locally. Surge protection can be located just about anywhere, including on all electrical panels, incoming phone and coax lines.

Is an electrician needed to install a power conditioner or surge protector?

High-voltage, hardwired surge protection and power conditioning require an electrician. However, there are plug-and-play power conditioners/surge protectors (along with low-voltage surge suppression for lighting systems, cable, phone, cameras, keypads, pool controls and security systems) that do not require an electrician.

What are some of the performance traits that installers should look for when choosing a product?

Installers must identify the differences between surge protecting electronic equipment in the home and conditioning power for sound and video equipment.

All electronic equipment requires surge suppression and power filtering for removing the damaging effects of surges and extending the life of the electronic equipment.

What sales tips can you offer with regard to these products?

Installers can increase their sales and provide benefits to their customers by understanding when and where to use the correct power protection and filtration technologies.

If electronic equipment is run from clean power, it will last longer than if fed dirty power. If you continually stress equipment, it will lock-up, lose programming, scramble data and, eventually, it could fail.