



Let your Electronics be Protected and Safeguarded



Leader in Electronic Protection System

UPS and Transient Surge Suppression; A Case of Risk Management

The power outage is the most notable and dramatic electrical aberration of all. A UPS is the best system available to handle these devastating events. The UPS also controls many other less noticeable power problems by providing voltage and frequency regulation, isolation, noise and transient filtering.

There are two areas that are common to basically all UPS systems that warrant some consideration for increased reliability and total protection of the critical load.

All on-line UPS systems must have some means of converting alternating current (AC) to direct current (DC). The battery charger or rectifier is the first line of defense connected to the power line. It also charges the battery and feeds the inverter which ultimately supplies power to the protected load. While the rectifier is generally capable of handling a wide variety of electrical aberrations and voltage fluctuations, a large lightning-induced transient or surge, for example, may exceed its capabilities and cause damage. protection modes.

The other critical portion of an on-line UPS system is the bypass circuits. The bypass or static switch is designed to supply the critical load with utility power without interruption when the UPS inverter is unable, due to a system problem or severe extended overload. The bypass or external maintenance bypass is often used to supply the critical load with utility power during UPS maintenance. Time spent on bypass is always kept at a minimum; however, just two hours on bypass for maintenance may expose the critical load to damaging voltage transients from the utility or other source within the facility.

To address these concerns, LEPS set up the following design criteria for a transient voltage surge protector:

- * Protection must be field installable for existing UPS sites.
- * Complies with most international standards in all applicable protection modes.
- * Tested per existing industry guidelines such as ANSI/IEEE C62.1, C62.45 for category C3 of C62.41 (Rev 1991) High Exposure Environments.
- * Compatible with all linear and nonlinear computer and critical loads.
- * Compatible with all other manufacturers' UPS systems.
- * Economically priced.
- * Capable of protecting the UPS input and maintenance bypass/critical load with one system.
- * High reliability / five year warranty.
- * Redundant protection circuits.