



Lightning Strikes & Power Outages

5 Tips on Preventing Equipment Failure

Natural disasters are inevitable. Power outages, lightning, storms, and flooding are common causes for equipment failure. Unwanted current surges up to 10kA and voltages as much as 20,000 to 30,000 kV can damage and interrupt system operations. System maintenance personnel should have a prevention plan to avoid costly repairs and downtime.

Tips that will Help you Prepare for the Worst:

1. Memory Backup

Periodically check your battery backup. Equipment such as PLCs are susceptible to user configuration loss. A simple battery voltage check can prevent this.

2. Circuit Protection

The most common equipment failures are caused by short circuits or underrated circuit protection such as fuses and circuit breakers. Make sure that the circuit is properly rated to avoid total equipment loss.

3. Transient Voltage Surge Suppressor (TVSS)

No one knows when lightning strikes will happen. Installing a TVSS helps protect equipment from voltage spikes. When lightning strikes, an increase in voltage causes an arc to be formed across the TVSS spark gap causing the lightning current to be diverted to the ground.

4. Electromagnetic Interference Filters (EMI Filters)

Electromagnetic Interference develops due to electromagnetic induction given off by an external source such as electric motors. In events such as lightning storms, a single lightning strike is capable of delivering huge amounts of current as high as 10kA. Currents of this magnitude produce electromagnetic pulses which potentially affect operations on equipment such as PLCs. EMI filters with lightning strike protection are available and help prevent damage due to lightning

5. Uninterruptible Power Supply Battery Backup (UPS)

Protecting valuable data is critical to a networked system. System configurations, algorithms, and system performance can be compromised during a power outage. Installing a UPS on systems such as Building Management Systems (BMS) prevents data loss during a power outage.

Equipment that has been damaged due to power outages and or lightning strikes can often be repaired. Though the equipment is not repairable in the field, it can be sent to Acme Controls to be inspected by an experienced technician to determine if your equipment can be repaired.

**For assistance contact Acme Controls Technical Support
800.621.6427 ext. 2 or info@acmecontrols.com**

