

Date: 10-07

Case Study Proposal for saving money and reducing maintenance costs and down time at Jefferson County Facilities.

Transient Voltage Surge Suppression (Tvss) protection with filters for courtroom lighting and new transformer and electrical panel at HSB

With today's advancements in electronic technology, everyone seems to be reaping the benefits. Everyone that is, except the electrical field.

As computers become faster and electronics are used more and more in a multitude of applications, i.e. laser printers, variable frequency drives (VFD's) for HVAC systems, electronic ballasts for lighting, faster computers with more memory, the electrical systems are taking a beating from voltage spikes caused by transient voltage surges.

Every time a laser printer prints, or an electronic lighting system is turned on or off or dimmed, or a fan motor in a roof top unit is made to change speeds by a VFD, a voltage spike occurs and more times than not, microscopic pits are produced in circuit boards and motor parts that are on the same power supply. One single spike related pit on it's own will probably not do enough damage to cripple an electronic component. But bare in mind that these spikes or surges occur hundreds if not thousands of times a day. It's not a matter of if, but when it will cause an equipment failure.

Our proposal is to test the TVSS with filter system on a smaller scale to determine whether or not this is the correct action to take for battling transient voltage surges.

The Lutron lighting (dimming) system for the courts and hearing rooms at the Courts and Admin Bldg. create a perfect scenario for testing the TVSS's, along with the protection of a new transformer and distribution panel installed at the HSB.

Currently, customer service replaces over 300 lamps a month at the Courts and Admin Bldg. About 100 of which are replaced in the courtrooms alone, we feel this number is too high and can be corrected with this product.

These two areas are great candidates for a test, as they represent an older system that we are currently having problems with (court rooms and hearing rooms), and a new system that supplies power to equipment that creates the surges and spikes we are faced with (new transformer and panel at HSB)

We can test these areas for a relatively low cost before determining if we want to use this product as a "total protection solution" for battling our ever growing transient surge problem.

Innovative Control Systems, Inc. is the only distributor that offers the TVSS product with true transient surge filtering, and are willing to give us a 10% discount for this test. We can do the installation ourselves.

Attached are some of the available case studies, demonstrating impressive results as far as fewer equipment failures, longer equipment life, and extremely quick returns on investments (ROI).

In our case this would also result in lower maintenance costs. We feel that this technology could allow us to achieve significant short and long term savings, and increase the reliability and longevity of all the electrical and electronic equipment throughout the county.

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Proposed cost:

HSB (transformer and panel)

1) 277/480 volt TVSS TK-ST120-3Y480-FL \$ 1735.00

1) 120/208 volt TVSS TK-LP120-3Y208-FL \$ 1625.00

Gov. Center (dimming system)

1) 120/208 volt TVSS TK-LP120-3Y208-FL \$ 1625.00

\$ 4985.00

Less 10%

498.50

4486.50 + shipping

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