

The Fabulous
Lighting Maven
Unexpectedly Illuminating

ACTION-ORIENTED PEARLS OF WISDOM FOR INDUSTRIAL MANAGERS AND CONTRACTORS
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Dear Reader:

Many electrical systems experience voltage surges, caused by any of a variety of reasons including electrical overload, faulty wiring, lightning strikes, and the restoration of power after an outage or blackout. The prudent Facilities Manager will take steps to provide for solutions to maximize her/his LED lighting fixture protection and continuity of service as these are occurring.

SURGE PROTECTION

Let's face it .. your lighting system is vulnerable. It is dependent upon whatever electricity is being provided by someone else (unless you've got your own renewable energy plant), and is therefore susceptible to whatever occurs upstream of the actual fixtures.

Study.com features a quick video that describes the difference between voltage surges and spikes, and you can find it here: [Causes of Voltage Spikes & Power Surges](#).

You can ward off damage that might otherwise occur to your fixtures in the event of a power surge by ensuring your fixtures include surge suppression. But first, let's start with a primer on what surge suppression does, and how it does it.

Color Kinetics, a Signify brand, describes it this way in their [Understanding Surge Suppression for LED Lighting Systems](#):

“Surge over-voltage protection is provided by installing a surge protection device (SPD) on the vulnerable line. In the event of a surge over-voltage, the protective device will divert excess energy to earth/ground, thus limiting the peak voltage to a tolerable level for the electrical equipment connected downstream.

“When the SPD is connected in series it acts like a fuse. So, when the priority is to protect the electronic components down the line from further damage, as is the case in most outdoor applications, series connection is preferred.

“When connected in parallel, the luminaire continues to function even after the SPD is damaged, leaving the electronic components down the line unprotected. So, when continuity of functioning is preferred over protection of components down the line, parallel connection can be used.”

With lighting system surge protection, the standard for 24,000 lumen output fixtures is 6kV of surge protection, and for 18,000 lumens and lower it's 3kV. Savvy Facilities Managers are aware of this performance standard, and ensure any fixtures they purchase are in compliance with this minimum.



U.S. Power is an industrial energy services company that specializes in the reduction of energy consumption across a broad array of manufacturing and food processing facilities located in Michigan, Ohio, Indiana, Illinois and Wisconsin. In addition, the company publishes a useful curation of lighting-oriented information from the marketplace, and consolidates it into this concise, twice per month letter known as The Fabulous Lighting Maven, distributed to Facilities Managers throughout the nation.

While the company prides itself in its diversity, it owns and operates a niche lighting contracting firm as well, known as U.S. Power Vision, LLC. With a core business in and around industrial LED lighting, it keeps itself and its clients at the cutting edge of illuminating technologies, all aimed at providing – from the eyes to the fingertips – exceptional illumination, superb control and intuitive simplicity.

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You can't clearly see your innovations when your eyes are out of focus.

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*Building and Managing a Suite of
The Most Productive and Admired
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