



Power. Made Perfect.SM

THE SEMI- CONDUCTOR INDUSTRY VERSUS VOLTAGE SAGS

THE CASE FOR AGGRESSIVE INTERVENTION

SITUATION

A large, stylized lightning bolt strikes down from the top center of the page, branching out as it descends. The bolt is rendered in shades of yellow, orange, and red, with a bright white core. The background is a dark, deep blue with subtle, wispy white and light blue patterns that suggest a stormy sky or a digital data stream.

TRUE STORY: A California semiconductor manufacturer was experiencing consistent seasonal disturbances from lightning and other weather-related incidents, mostly between January and May each year, exposing production equipment to volatile sags and risking costly down time.

Facility engineers needed a way to manage risk and deal with numerous unavoidable sags.

They also needed to compensate for sags caused by their utility's routine redirection of power on the grid (switching).

SOLUTION

The semiconductor manufacturer turned to UST, a world leader in industrial-grade voltage regulation, to help them minimize the impact of these unavoidable voltage irregularities.

UST recommended installation of its SagFighter.

The UST SagFighter™ is purpose-designed for the semiconductor and other power-critical manufacturing industries.

loads where high inrush conditions can occur. It offers continuous protection with a failsafe bypass design where the primary emphasis is on maintaining quality power to the load.

SagFighter arrived fully assembled and required no programming, testing, measuring or setting of switches. The facility engineer simply placed the unit and made the input and output wiring connections. With no maintenance schedule other than routine inspection

UST RECOMMENDED INSTALLATION OF ITS SAGFIGHTER.™

SagFighter monitors and corrects incoming voltage, lowering the risk of production errors and downtime due to sags. Unlike computer-grade products or uninterruptible power supplies (UPS), the industrial-grade SagFighter is designed for production environment

and cleaning, there was very little more to do other than wait and watch. The SagFighter monitored and recorded all sag events, making it easy to identify when sags occurred and confirmed the SagFighter made the appropriate voltage correction.



ABOUT SAGFIGHTER™

- SEMI F47 compliant
- Battery free and near-zero maintenance – no service/maintenance contracts needed
- Full sag correction within 2 milliseconds
- Sag correction duration independent of load or power factor
- Sag correction for a minimum of 100 seconds
- Robust industrial design – offering continuous protection for industrial loads (motors, production machinery, etc.), with no need for bypass operation even during adverse inrush (high current) conditions
- Continuous protection without the need to recharge or reset
- Input circuit breaker provided as standard, optional maintenance bypass arrangements also available
- Custom enclosure designs available to meet indoor or outdoor site conditions
- Non-continuous inverter operation that increases reliability and provides 99% efficiency during normal operation

FUTURE



No matter where in the world a manufacturing facility is located, from California to Asia, semiconductor manufacturers face the same challenge: protecting critical equipment from unexpected voltage sags.

Lightning and other seasonal power disturbances create havoc everywhere, and semiconductor manufacturing is one of most susceptible industries. A sag on one piece of machinery can impact manufacturing across a facility, having a significant financial impact, lost production time, materials and productivity. As demand for semiconductors increases globally, the semiconductor manufacturing processes

have become more sophisticated, and the need to protect machinery from voltage events has become a key focus as companies implement new production equipment.

When manufacturers install the SagFighter on a trial program, it generally leads to acquisition of multiple units in the future. One leading semiconductor manufacturer has grown their SagFighter installed base from a few specific sites to more than 20 critical areas of the facility.

SagFighter is available in a full range of sizes, from 50 kVA to 2,500 kVA to meet any power demand.

Contact: sales@ustpower.com

UST DELIVERS PERFECT POWER TO INDUSTRIES WORLDWIDE

POWER-CRITICAL MANUFACTURING

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Utility Systems Technologies, Inc. (UST) is a world-leading designer and manufacturer of electronic voltage control and power-conditioning products. UST's products are in use worldwide at hospitals, factories, refineries, embassies, data centers and other critical facilities, mitigating the risk of damaging electrical surges, sags and swells, bridging brownouts, and providing a safe connection to the local grid.