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Douglas Lambert, systems integration manager

Eaton 9390 guards 4D Security's critical systems

Location:

South Plainfield, N.J.

Segment:

Security

Problem:

Frequent power problems were wreaking havoc with 4D's sensitive lab equipment, causing the company to lose money and miss key deadlines.

Solution:

Eaton® 9390 UPS, Software

Results:

The Eaton 9390 safeguards critical systems and ensures they remain up and running even during a power outage.

Background

4D Security Solutions provides security systems to protect assets, facilities and infrastructure anywhere in the world from sabotage, terrorism and theft. The company safeguards some of the most critical assets on earth — providing custom-tailored, turnkey solutions for the world's largest energy production facilities, major urban centers and hundreds of miles of borders.

The firm's structure and approach to reducing the risk of loss or disruption by man-made or natural disasters reflect more than integration and technologies; 4D Security Solutions also conducts world-class risk analysis by analyzing security structures from federal to critical asset levels. Furthermore, its leading laboratories are currently analyzing and developing future, cutting-edge technologies that incorporate unique behavioral threat assessment techniques, thereby anticipating the next generation of security challenges and solutions.

Challenge

Ensuring that the equipment in its South Plainfield test lab remains up and running without interruption is critical to the success of 4D Security Solutions. "We run a system test lab with 20 employees and in the past, when we had power failures, we could be out of business for a day," recalls Douglas Lambert, the company's systems integration manager.

Because its site experiences an average of five to seven power failures a year, 4D found it was not only losing days' worth of testing, but missing important project deadlines, as well. "It takes time to reset all of the equipment," Lambert explains. "Even a five-minute outage could delay work by a day. There was a lot of money being lost in testing and possibly, milestones being missed."

So in the fall of 2011, Lambert sought a high-quality uninterruptible power system (UPS) to safeguard the test lab's server farm, workstations and various sensors. In addition to reliability and a robust capacity, 4D Security Solutions wanted a solution that was capable of expanding if the company were to add more equipment in the future.

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Solution

Based on 4D Security Solutions' capacity requirements and the company's need for an uncompromised level of reliability, the company identified the 120 kVA Eaton 9390 as the ideal bodyguard to thwart potential threats. Offering a best-in-class combination of power performance, battery management, scalable architecture, flexibility, power density, and warranty and service, the 9390 has already proven itself by keeping all of the company's testing equipment up and running through several recent power outages.

"We've had two since the installation, but of course we didn't even notice them," Lambert reveals.

Indeed, the 9390's double-conversion topology shields equipment from all nine of the most common power risks, including outages, sags, surges, spikes, brownouts, line noise, frequency variation, switching transients and harmonic distortion.

Further enhancing reliability is the unit's exceptional battery management system, which relies on advanced technology to extend battery life and optimize recharge time. In addition, an integrated battery management system tests and monitors battery health, relaying the information monthly to a central monitoring station for trending and action, if needed.

With its modular, scalable architecture and the ability to support loads of up to 160 kVA, the 9390 also provides 4D Security Solutions with the option of easily expanding if the company's power needs grow in the future, a scenario that Lambert says is likely. "The scalability is one of the reasons I wanted this particular unit," he shares.

Even more, the 9390's transformer-less design and sophisticated sensing and control circuitry produce an efficiency rating of up to 99 percent — a dramatic improvement over most competitive UPSs, especially when operating at higher capacity loads. Because the 9390 runs so efficiently, it generates less heat, which in turn lowers facility cooling costs.

Lambert also appreciates the unit's ease of monitoring and management, compliments of Eaton Intelligent Power® Software Suite, which is included free of charge with the UPS. The innovative software solution ensures system uptime and data integrity by allowing Lambert to remotely monitor, manage and control the devices on 4D Security Solution's network. Furthermore, the software prevents data loss by automating graceful shutdown of machines during an extended power outage.

"We wanted the capability to shut our systems down safely," Lambert confirms, noting that the company's 9390 configuration provides approximately one hour of runtime, which is plenty sufficient to keep all systems online during most outages, the majority of which are brief, he says.

While big on benefits, the 9390 is surprisingly small in stature. In fact, occupying 35 to 50 percent less space than competitors' models, the 9390 offers the smallest footprint of any UPS in its class. Furthermore, the compact unit provides flexible installation options, with cabling available from either the top or bottom of the cabinet and the ability to easily install against back and side walls.

When 4D Security Solution installed its 9390 in the electrical room at the rear of the building, the unit was started up by an Eaton customer service engineer, who also inspected the electrician's work and completed customer training and a walk-through on the UPS.

Results

4D Security Solutions is reaping a variety of ongoing advantages from its new UPS. With the Eaton 9390 in place, the company is now able to:

- Ensure continuous uptime to the equipment in its test lab, preventing missed deadlines and lost revenue
- Easily expand the power protection solution as its power needs grow, thanks to the scalability of the 9390
- Monitor and manage the equipment across the network with included power management software



Eaton 9390

Learn how the Eaton 9390 can help you at Eaton.com/9390.

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