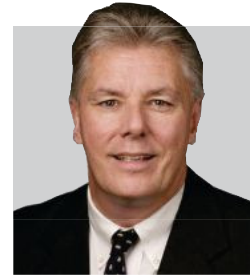


GIVE YOUR STANDBY POWER PRACTICES A JOLT *by Bob Stockwell*

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In today's landscape of security integration, standby power requirements can vary drastically based on the type of system being installed. Customers rely on these standby power systems to protect and secure their premises during manmade or natural disasters.

During the design process, integrators are often directed to follow strict federal and state regulatory compliance requirements, or must adhere to additional, minimum standards of operation set by presiding local authorities when primary power sources are not available. Standby power systems must be transparent and allow seamless operation from primary to secondary sources to avoid any interruption in service.

Standby power supplies are designed and specified based on the maximum draw specifications of each device connected to an individual power supply. As a general rule, most engineers only specify an 80% load ratio per supply to avoid overloading issues, taking into account additions or changes during future expansions.

PREVENTATIVE MAINTENANCE CAN PAY DIVIDENDS

So when and how do things go wrong? Customers often discover during a power outage that some or all of the expected standby time has been greatly reduced, causing systems to lose power and collapse much sooner than expected. This can create a serious potential breach of security — with intrusion systems unable to report alarms to the central station; magnetic locking devices or fail-safe electric strikes no longer being secure; and life-safety platforms unable to detect or report life-threatening situations.

In most cases, the responding service integrators discover a lack of preventative maintenance as the root cause. Most commonly, issues are reported because the backup battery itself is out of date and needs to be replaced, or problems arise involving devices that are directly attached to the power supply itself. It's very common to find magnetic locks or electric strikes that are still completely functional, but drawing three times the normal current load. These are often signs of future component failure and should be replaced as soon as possible; each defective device may reduce the original engineered standby time by 30% per device operating outside the OEM specification. Security installers should institute annual preventative maintenance programs, including regular battery replacement and complete load testing of each device attached to single power supply.

In large-scale campus deployments, mapping out power supply locations — including the devices they support — is critical. Oftentimes, many are overlooked during a preventative maintenance visit, due to poor location planning or because they are

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installed in areas that may not be readily accessible to receive preventative updates. Make sure your customers are wary of plug-in, 120VAC transformers that may be used to power the power supply itself; these can be overtaxed easily. Always request a dedicated, 120V circuit — preferably with UPS or surge protection, when available — to support all the security-related hardware.

NETWORKED FUNCTIONALITY FUELS NEXT-GEN POTENTIAL

Many commonly used “power supplies” are undergoing a transformation to become more like Internet reporting appliances, opening up a new world of possibilities. These include capabilities to report real-time, critical information via E-mail or text when issues arise. The next generation will incorporate remote diagnostics that can be used to more accurately anticipate when a device is starting to fail; or, when a locking mechanism is beginning to show signs of stress, end users can elect receive E-mail or SMS messages directly from the power supply warning issues like a charging circuit that may be failing.

Preventative maintenance will evolve, becoming a more virtual inspection. Real-time load testing will be achieved using advanced, remote diagnostics software, saving the need to roll trucks for every inspection. This will lower end-user operating expenses and create an archive of information that can be readily accessed for regulatory reporting.

The industry will also see a consolidation of power supplies by category. Traditionally, supplies were and still are listed by use, often leading to multiple power supplies installations in a single closet. The next generation will likely be modular and cross-capable of supporting multiple system types, saving dramatically on hardware and wall space.

As the industry approaches this digital transformation from analog power, customers can receive real-time access to information to make better decisions in times of crises ... and integrators will have yet another potential hosted service to offer. ssi