

Bringing critical power distribution out of the dark

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As the trend towards digitisation becomes pervasive across many industries and operations, the benefits offered to power distribution systems should not be overlooked. However, due to the aging infrastructure of facilities such as hospitals, airports, wastewater treatment plants, etc., electrical distribution has not been keeping up with the latest digitisation trends. As such, most facility teams are still working "in the dark" by not leveraging available, proven IoT-enabled power management technology to its full potential to achieve optimal performance, safety and regulatory compliance.



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Manage complexity

By using the right digital sensors, advanced controls, and analytic capabilities, it becomes easier to manage the increasing complexity and changing requirements of electrical distribution infrastructure. This enables smoother operations by detecting, diagnosing, and correcting issues before they cause mission-critical systems to fail. This greatly adds to system reliability and business continuity and is especially useful for critical applications such as in hospitals and data centres.



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Gain deep insights

Touching every corner of a facility's electrical network, the latest edge control software and mobile apps connect to smart devices to keep facility teams informed and reveal deep insights. These insights can assist operations in every aspect of facilities management including maintenance, compliance and performance.

As an alternative to interval-based maintenance, digitisation enables condition-based maintenance, meaning equipment can be serviced at the right times to improve reliability while saving time and money. A digitised power network also simplifies energy and emissions tracking and reporting for regulatory compliance, to support participation in carbon markets, or to publicly showcase energy performance.

Improve safety

Visibility into enterprise-wide power and equipment conditions means that it is easier to detect and mitigate hazards before harm is caused to staff or equipment. For example, electrical fires are commonly caused by improper maintenance. Fortunately, digitisation brings a sophisticated and continuous approach to monitoring. Wireless sensors installed in strategic locations can detect abnormal temperature rises due to high impedance connections on bus bars or in conductors, transformers, or breakers. Temperature data can then be wirelessly transmitted to the software or to an asset monitoring service bureau. This allows for near real-time alarming in case of a thermal problem before it results in an electrical fire destroying equipment or injuring people.



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Boost efficiency and reliability

There are countless ways that a digitised distribution network can improve operational efficiency and reliability of not just the network, but of the business itself. For example, by constantly monitoring load trends through a facility, active load management can be used to prevent overloads and, in turn, business disruptions. This information can also be used to uncover unused capacity and for capacity planning for new facility expansions, avoiding overbuilding and minimising CAPEX.

Migration made easy

A deterrent in embracing new technology often lies in its adoption and implementation. However, the good news for facilities teams is that most newer power distribution systems already have the connectivity available, it just hasn't been implemented yet. Installed devices simply need to be networked together. Working with older infrastructure? Well, even legacy systems have simple retrofit possibilities to add the appropriate devices and sensors. Migration to a digital system does not have to be complicated. What's more, these upgrades are extremely cost-effective when considering the long list of benefits to the facility.

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