A lighting system is one of the largest energy users in a building. To optimize the lighting system, facility managers have relied on code requirements and past experience to set control strategies. What if there was a way to optimize the system by locating system inefficiencies and providing an easy way to change them?

Lighting makes up a significant portion of energy consumption in commercial buildings. Measuring that energy usage is the first step to understanding how a system is operating. CheckLight measures loads to report their energy use. Measured data from each load is compiled and presented by CheckLight, providing the user with dashboard views and overall system use on a daily, weekly, monthly, yearly, and lifetime system reporting period.

Individual zones can be viewed to help interpret usage in particular areas. CheckLight can also report on a portfolio of buildings making it a valuable tool for benchmarking energy use and optimizing energy costs.

To reduce commercial lighting energy demands, some utilities and jurisdictions are requiring demand response, and in some cases open demand response (OpenADR), capabilities from networked lighting controls. CheckLight is OpenADR ready, providing users with a demand response setup table for setting standard and customized configurations. Users can either manually execute a demand response initiative or work with a utility by registering for OpenADR actions that are driven by commands from the utility.

Implementation

Implementation is coordinated with Douglas’ Technical Support Team. Dialog relay panels are field-upgradable, so whether energy management is needed for a new project or as an upgrade to an existing system, the Technical Support Team can provide CheckLight equipped devices and easily enable CheckLight to measure, report, and control the lighting system.
System Optimization

Control
Forget about making trips to the electrical room and the lighting system control panel(s) to make system setting adjustments. With CheckLight, facility managers can access the web-based platform from their desk or anywhere they have an internet connection in order to make system configuration changes. Users who are already familiar with Douglas Lighting Controls’ user interface will recognize the configuration menu, while new users will find the menu structure easy to understand and use.

CheckLight offers the same control and configuration options found on the Dialog LCU (lighting control unit):
- Manual control for ON/OFF and dimming
- Configuration of outputs, groups, presets, modes, behaviors, constant light control (CLC), schedules and system settings

Reporting
Critical to any energy management program is the ability to visualize the system’s performance and identify areas for improvement. Using CheckLight’s energy use dashboard, users can see their system’s performance and make decisions around the optimization of the system, such as adjusting schedules, modifying trim levels, adding additional occupancy sensors to large areas, or making zone adjustments. CheckLight can also look at different buildings within a portfolio of facilities and use the data benchmark to compare building performance. Uncover energy conservation opportunities, create energy conservation strategies, analyze lighting load inefficiencies, and optimize the system.

Data Sharing
System data can also be shared with building management software for complete facility energy usage. Data is shared through RESTful API’s or can be exported in common file formats.

Alerts
Consistent, real-time system performance data is critical to optimizing energy use. It’s rare for a lighting system to fail; however, there are instances when a relay or control point may fail. Knowing about that failure when it happens rather than when it is needed not only saves repair time by identifying where the problem is, it can also give you time to reconfigure settings or fix the failure point before there is a critical need for those lights. An email is sent to the user to alert him/her of the issue when it happens.

Hardware
Look for the CheckLight equipped logo for systems and devices that have energy management capabilities. CheckLight equipped devices report data through the LCU and up to the cloud server. Systems that are CheckLight equipped include the Dialog® Centralized system with relay panels, Dialog Room Controllers, and Bluetooth wireless load controllers.

Security
CheckLight is a cloud-based platform that uses security provided by Microsoft Azure, which employs all the latest and highest security standards. Data security follows the AES (Advanced Encryption Standard) 128-bit encryption for wireless data transmission and TLS encryption for TCP/IP. Along with the use of a 2048-bit certificate and SHA-256 cipher, it enables the highest standards of Corporate Data Security requirements. The CradlePoint Router can filter out unwanted IP and ensure that only allowed devices and allowed users combinations can remote control the lighting connected to the CradlePoint and LCUs. The cloud database is also secured by Microsoft with IP firewall to only allow the CheckLight Cloud server to access to it.
Secure Cloud Platform

System Architecture

CheckLight equipped devices provide data to the LCU. The LCU provides data to the cloud through a cellular router where it can be reported or shared.

About Douglas Lighting Controls

Douglas Lighting Controls, a member of the Panasonic group and a subsidiary of Panasonic Lighting Americas Inc., engineers, manufactures, and markets digital lighting controls for commercial buildings, campuses, parking garages, and sports complexes across North America. Douglas systems include networked and stand-alone solutions using wired and wireless technology to optimize lighting for building code compliance, energy efficiency, ease-of-use, and comfort. With over 50 years of experience, the company is recognized for its expertise in lighting control systems and its ability to provide energy efficient solutions for specific applications.

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