PHILIPS
dynalite

Application notes

Shopping Center

Until recent times, shopping centers typically utilized lighting controls that comprised mains switching, contactors and time control from a dedicated clock. While such a system will provide basic lighting controls, it does not allow for active management of the lighting. With switching only, there is no inherent flexibility to achieve different lighting effects, and the system is difficult and costly to modify once installed. By comparison, a Dynalite lighting control solution is based on an Ethernet or proprietary backbone for site-wide communications – all on a single LAN, if required. This simplifies maintenance, enables BMS integration and delivers a real-time ability to manage and monitor all system components and power usage.

- Modbus gateways for power metering
- DALI emergency monitoring
- Real-time management and scheduling, with ultimate flexibility in light source control and remote access
- Highly reliable topology with distributed intelligence and no single point of failure
- The ability to control any light source
- Dedicated lighting management software provides greater support for maintenance activities
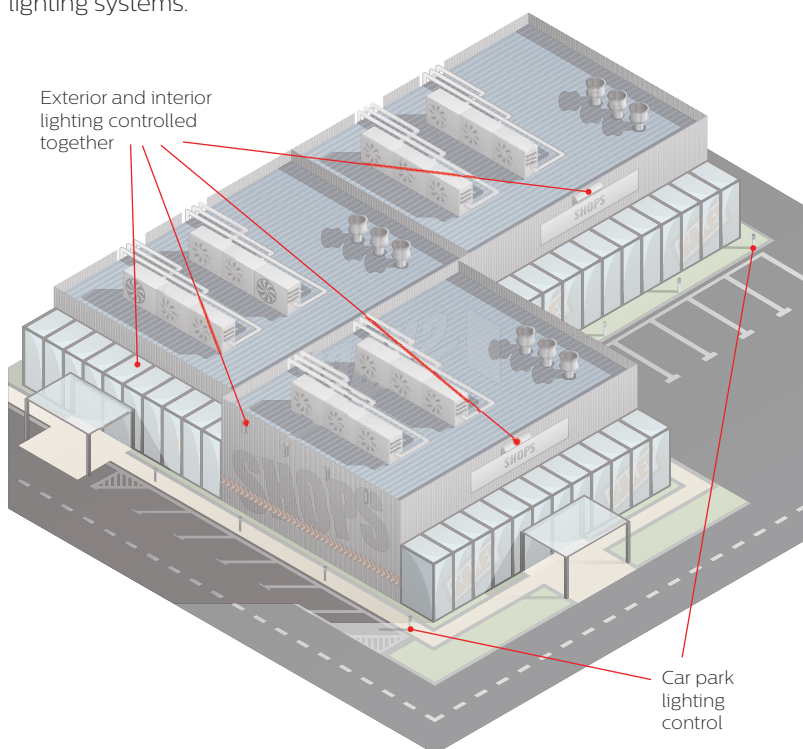
Typical layout

The Dynalite solution offers extremely flexible infrastructure design options to meet the needs of a wide variety of shopping center and mall applications. It comprises a broad selection of load management and user interfaces in order to tailor the lighting effects to the precise requirements of each installation, all supervized by Dynalite's sophisticated EnvisionManager software. Moreover, the system has been designed to easily accommodate expansion options to meet the evolving needs as a shopping center develops over time.

The Dynalite lighting control solution can encompass wireless capabilities that enable onsite teams to tune the lighting scenes from a laptop, or tablet/smartphone to support green building requirements and to adjust the ambience from a laptop or tablet/smartphone in real time to achieve the perfect retail experience.

The EnvisionManager edge

A key component of Dynalite's lighting control portfolio for the shopping-center market is EnvisionManager. Not only does this groundbreaking software solution guide the design of the entire system, but it also incorporates all the tools a shopping center facilities manager could want for management, monitoring, maintenance, testing and reporting of the lighting systems.

Exterior and interior lighting controlled together

Car park lighting control

Supporting DALI protocols, EnvisionManager can complete mandatory DALI emergency lighting testing, visualize energy usage via Dashboard and monitor system component health, to streamline ballast replacement and manage relamping schedules.

System outline

Each component within the Dynalite lighting control system is independent, operating on a peer-to-peer level. This topology enables the system to be expanded at any time without disruption to existing operations.

The solution makes extensive use of gateways to facilitate integration with third-party products and systems. For example, metering can be achieved through a Modbus gateway, while OPC/BACnet interfaces connect the lighting network to a BMS. Ethernet gateways enable the use of a LAN backbone or DyNet gateways can be used to support a proprietary backbone if required.

This approach allows the Dynalite system to be designed around best-of-breed components to enhance operational efficiency and practicality, while removing functional limitations and compromises that can arise from one vendor providing all services.

Daylight harvesting through light sensors reduce lighting costs for atrium areas

Occupancy monitoring for back of house/low traffic areas

Single network with distributed intelligence and no single point of failure

Multiple sensors provide valuable building status feedback

Local control

Global monitoring

Pro-active maintenance tools

Highly reliable, energy-efficient system with long life

Color-changing integration with Philips ColorKinetics

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