

Project Profile: Perris Distribution Facility Whirlpool Corporation



Profile

Occupied in the later part of '07, the most recent addition to Whirlpool Corporation's line of manufacturing centers is a warehouse distribution facility measuring just under 1.7 million square feet. The building is a big-box structure which principally consists of a warehouse, with a portion set aside for offices.

Lighting Control & Design's (LC&D) GR2400 system was installed to handle lighting controls in the warehouse portion where primary illumination comes from high-bay fluorescent lamps and skylights.

Here, an advanced daylighting system offers the best solution for energy savings by minimizing electricity use when daylight is sufficient.

Project at a Glance

- Building Type: Warehouse
- Location: Perris, CA
- Size: 1.7 million sq. feet

Objective

- Minimize energy use without distraction to warehouse workers while providing remote access to ceiling-mounted (high bay) sensors for programming flexibility

Solutions

- Remotely-programmable occupancy sensors and photocells
- Switching schedule that coordinates both types of sensors



Lighting Control & Design
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Pushing the Green Envelope

Smart sensors improve upon modern warehouse daylighting standards.

The first step to reducing any building's energy consumption is to minimize the need for electric lighting. In this case, the scope of this project needed even more of an innovative approach to lighting control.

Objectives

As a result of state energy codes and the size of the warehouse, utilizing over 20,000 lamps, the need for a customized lighting control system was unavoidable.

The objective was to provide the highest energy savings possible by utilizing the skylights for daylight harvesting, linking manual switch controls to photocell determined levels and switching intermittently occupied areas with occupancy sensors.

Solution

The lighting control system chosen integrates remotely programmed photocells and occupancy sensors to advance traditional daylight harvesting methods; this system actually goes beyond current daylight harvesting standards. In the intermittently occupied sections, occupancy sensors now turn lamps ON and OFF with a remotely programmable delay time to optimize savings.

Prior to the current remotely programmed occupancy sensors, changing the time delays involved specialized lifts to reach the sensors and with 600 sensors in use, optimizations just would not have been done. Now the schedules and settings can be adjusted remotely using the GR 2400 DTC programmer or via dial up or internet. LC & D provides free programming support for the life of the system.

Ultimately, it took three iterations to get the optimum time out for the Occupancy sensors to 7 minutes. A considerable savings over the default of 10 Minutes.

About Whirlpool

Whirlpool Corporation is the world's leading manufacturer and marketer of major home appliances, with annual sales of more than \$19 billion, more than 73,000 employees, and more than 72 manufacturing and technology research centers around the world. The company markets Whirlpool, Maytag, KitchenAid, Jenn-Air, Amana, Brastemp, Bauknecht and other major brand names to consumers in nearly every country around the world.

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We're seeing more and more of these integrated occ-sensor/ photocell combinations in our projects. It works in a lot of different daylighting scenarios - especially with our standard commissioning - and generally gets great feedback from the end user.

”

Kim Ford
Field Services Manager
Lighting Control & Design



Southern California's sunny climate made this building an excellent candidate for daylight harvesting.



Skylights are the primary source of illumination, with lamps switching on as a secondary option.



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