CASE STUDY

Design Firm Sets Green Example for Clients with Watt Stopper Lighting Controls

The Lighting Practice

Philadelphia, PA

Watt Stopper Products Used:

CX-100, W-2000 and WPIR Occupancy Sensors

Lighting Integrator Lighting Control Panel with Dataline Switches

LS-301 Daylighting Photosensors

Principals and associates at The Lighting Practice, a design firm based in Philadelphia, Pennsylvania, have long advocated sustainable design, and have recently had the opportunity to take their own advice. While planning a move that was completed in June 2007, they designed tenant improvements incorporating energy saving lighting controls that exceeded code requirements and let them demonstrate best practices to customers.

Associate Principal Julie Panassow and Lighting Designer Pomme Suchato were responsible for lighting the new space, and they selected a lighting control panel, occupancy sensors and daylighting controls from Watt Stopper/Legrand to achieve their goals. They succeeded in reducing the firm's demand for energy, and set a green example for clients.

Additionally, all of the company's designers gained valuable real-world experience with the products they specify, and customers have benefitted from seeing and using a range of lighting and control solutions.

Lighting control applications

A Lighting Integrator Panel and Dataline Switches were specified to control a variety of fluorescent, LED and low voltage lighting in the reception area, the kitchen and a conference room. The system is set up for manual-on control with scheduled off times preceded by a warning sweep.

The manual-on control strategy saves more energy than strict scheduling, because people arrive at different times each day. This solution ensures that lighting is not turned on in each room until it is needed. Dimmers have been installed downstream of the panel for the conference room.

Private offices, the office library and a support area housing archives were equipped with passive infrared (PIR) occupancy sensors set for manual-on operation.

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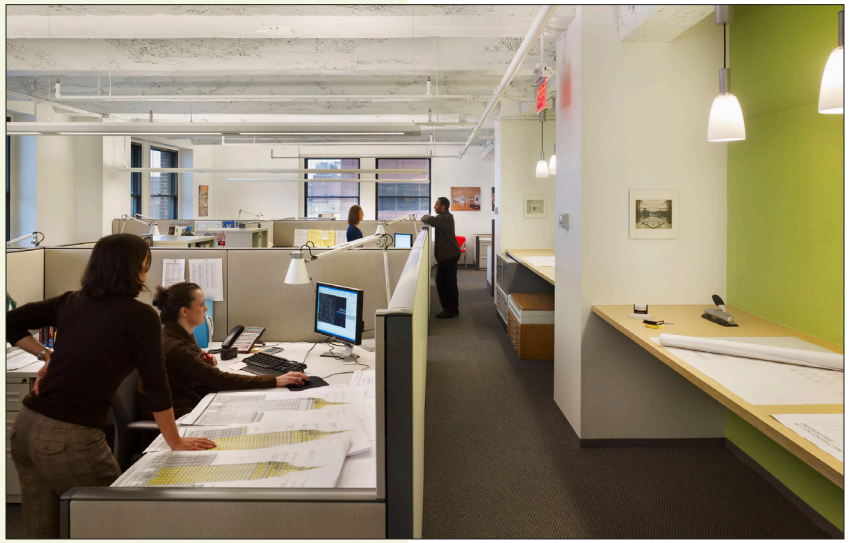

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Sensors were specified for these spaces because they experience very sporadic occupancy. CX-100 sensors were chosen for the library and archives, while WPIRs were selected for the offices.

A different time delay was set for each application, with a longer delay for the offices, which experience relatively long periods of occupancy and small movements, and shorter delays for the other spaces that typically experience transient occupancy. The sensors control fluorescent fixtures, and program start ballasts were specified to ensure long lamp life.

W-2000 Ultrasonic Occupancy Sensors are layered with LS-301 Dimming Photosensors to control two-lamp direct/indirect fixtures with Advance Mark VII ballasts in an open office area. The space has windows on three sides of the building and is split into north, south and west control zones because each side of the building receives significantly different amounts of daylight.

This solution allows the lighting in each zone to automatically adjust itself relative to the available daylight contribution, providing a balanced light level throughout the space. Lights in the south and west zones often dim to very low levels, while the north zone experiences less dimming. All of the dimming contributes to overall energy savings.

Choosing Watt Stopper/Legrand

Watt Stopper products were selected because of the company's excellent track record, both for product quality and service. Ms. Suchato notes, "The sales and technical support are superb. They are always happy to help us and work with us to find the best solutions for every space."

The Lighting Practice recently used its new office to host a client open house that showcased the company's work and illustrated to customers the kinds of solutions they could enjoy on their projects.

Exceeding code requirements

The lighting design for this new space, which is on the seventh floor of an historic building in downtown Philadelphia, had to meet the ASHRAE 90.1-2004 energy standard. However, The Lighting Practice personnel felt compelled to exceed code requirements and earn LEED certification for the project. An application for LEED Silver certification is pending.

Final calculations show that the designers managed to bring in the project with a connected load that is 20% less than was allowed by code. "The controls help us save even more energy by keeping the lights off until they're needed and ensuring that they don't stay on unnecessarily," concludes Suchato.