CASE STUDY

WattStopper Digital Lighting Management accelerates completion of iPrep Academy

WattStopper Lighting Controls Used:

LMRC-101, LMRC-212 and LMRC-213 digital room controllers;

LMUC-100 and LMDX-100 digital occupancy sensors;

LMDM-101 digital dimming switches and LMRH-105 digital IR remote controls;

LMCT-100 digital wireless configuration tool

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When Miami-Dade County Public Schools set out to create an engaging, high tech learning environment for its new iPrep Academy, Capital Task Force Coordinator Roger Ball turned to WattStopper for lighting controls. Ball, with assistance from WattStopper's local rep, Fletcher Vanyo of FRM, selected Digital Lighting Management (DLM) controls, including dimming devices, personal controls and occupancy sensors. The controls enhance the remodeled Miami school, updated with colorful open spaces incorporating digital teaching tools, while also meeting the requirements of the ASHRAE Standard 90.1-2007 energy code.

The fast track remodeling project challenged the design and construction teams, as the work had to be completed in just three months. Head Electrician Guillermo Lugo had already installed new Cree LR24 LED lighting fixtures before the controls were

specified, and he was delighted to discover how easy it was to connect the DLM products.

Ease of installation

"I've installed a lot of different lighting controls over the years," Lugo explained, "and DLM was the easiest. The wiring is extremely simple, and Plug n' Go automatic configuration is a real time saver. I was able customize several parameters using the handy wireless configuration tool. With this intuitive remote, it will be very simple to maintain the system." Lugo had the controls installed and operational just two weeks after they were specified.

Roger Ball confirms the ease of installation and also praises the functionality of DLM, noting, "The school board, students, teachers and architects are all very happy with the controls. They are easy to use, and operate exactly as we had intended. I couldn't feel better about my decision."

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The open classroom environment is equipped with a dimming room controller, digital dual technology occupancy sensors and dimming wall switches to control the LED lighting.

The personal controls allow students and teachers to easily adjust the lighting levels for different activities, including working on computers and viewing other high tech displays.

Lighting control selection

Ball chose a variety of Digital Lighting Management room controllers and occupancy sensors to switch and dim the lighting, including the LED luminaires, in classrooms, offices, restrooms and the school's iCafé lounge. He specified dimming room controllers for traditional classrooms, an open classroom environment and the lounge, along with wall mount dimming switches and several handheld scene remotes. The personal controls allow students and teachers to easily adjust the lighting levels for different activities, including working on computers and viewing other high tech displays.

In the rooms with wall mount switches, DLM self-configures for manual-on control, meaning that occupants switch lights on only when they are needed. This sequence of operation saves the most energy, and is one of the features that appealed to Ball when he was evaluating products.

Dual technology occupancy sensors, which employ both passive infrared and ultrasonic technology to detect small movements even in large spaces, complete the DLM classroom systems, and ensure that lights are automatically turned off when a room is no longer occupied. Lugo can remotely adjust sensor time delays and other settings using his wireless configuration tool.

Restrooms are equipped with on/off room controllers and ultrasonic occupancy sensors that can detect motion even around the partitions between stalls. There are no switches in these rooms, and so DLM automatically configured the connected devices for automatic-on operation, ensuring that lighting comes on whenever the space is occupied and is turned off automatically when it is vacant.

School district plans

After the success using DLM in the 10,000 square foot iPrep Academy, as well as its Mast Academy, Miami-Dade County Public Schools has specified DLM for eight district schools slated for remodel later in 2010. For the larger schools, the county engineers expect to harness DLM's network capabilities, incorporating lighting control into an intelligent building design.

About the new school

iPrep Academy is an optional program for the district's top 11th grade students, who must interview in order to gain acceptance. Students are challenged by a rigorous curriculum including honors and advanced placement courses. Instruction focuses on leadership and problem-solving skills, and the program offers internships with local corporations and government offices. The school is housed in an administration building, and district superintendent, Alberto Carvalho, serves as its principal.

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