

Rhode Island College Slashes Energy Costs in Classrooms and Library with Watt Stopper Occupancy Sensors

To actively participate in the conservation of energy and take advantage of its consequential economic gain, Bryant College made a commitment to reduce the energy consumed on campus. Located in Smithfield, Rhode Island, the independent college of business took great strides in implementing a variety of energy saving programs. Bill Gilmore, energy coordinator for Bryant College, recognized that one of the major sources of energy waste was lighting left on in unoccupied areas. Electrical consumption in classrooms was excessively high since professors would forget to turn the lights off upon dismissal of class.

Typically, classroom lights were turned on at 7:00 a.m.. Classroom lights would remain on throughout the day until the end of the last class period at 11:00 p.m. Oftentimes, the late night cleaning crew would neglect to turn the lights off. This created a problem since lighting remained on all the time regardless of occupancy.

Bryant College's strong pledge to conserve energy led to the decision of using occupancy sensors to control lighting. A comprehensive search of market alternatives led to a site testing of several manufacturer's occupancy sensors. The Watt Stopper's DT-100L emerged as the occupancy sensor that would provide the best fit for Bryant College classrooms. Specifically designed for classrooms, the DT-100L offered trouble-free application and performance reliability. The dual technology sensors also promised to deliver substantial energy savings.

The DT-100L combines both ultrasonic and passive infrared (PIR) tech-



nologies into one unit to provide reliable lighting control of areas that are difficult for single technologies. The combination allows the sensor to take advantage of the best features of each technology while eliminating the weaknesses. The ultrasonic portion of the unit provides high sensitivity to small movement, such as when students are taking a test, and eliminates false offs. The PIR portion helps to eliminate false on problems.

Approximately sixty classrooms totalling 51,840 sq ft were outfitted with one dual technology sensor each. The assistance of the manufacturer with wiring instructions and a layout plan led to a smooth and quick installation. Staff electricians at Bryant College were especially pleased with the clear and detailed format of the wiring instructions.

Due to negative experiences with two other sensor manufacturers, occupants were initially skeptical of having occupancy sensors installed. The professors were concerned that they would have to wave their arms around to turn the lights on. However, this was not necessary. Every sensor has been in place for over a year and not a single complaint or failure has occurred. These days, when individuals forget to turn off the lights, the sensor does it automatically for them.

As a result of the successful application of DT-100L sensors in classrooms, Bryant College also outfit its library with occupancy sensors. Before the sensors were installed, all the lights in Hodgson Memorial Library were turned on and off through a master control panel. Lighting would remain on throughout library hours, approximately 14 hours per day regardless of how much time each space was actually occupied. Ultrasonic and Passive Infrared (PIR)

ceiling sensors, manufactured by The Watt Stopper, were chosen to control lighting in the library. About 20 ultrasonic W-1000 units were used in group seating areas of Hodgson Memorial Library and approximately 100 WPIR passive infrared units were used in library stack areas. In addition to the reduction in energy consumption and the savings that the sensors provide, Bryant College's Public Safety personnel also found benefits of using occupancy sensors in the library. Since the exterior of the library is encased in glass, campus security can easily detect suspicious behavior if they see interior lights on after library hours.

Bryant College estimates that classroom lighting has been reduced



by six hours per day or 26% since installing The Watt Stopper dual technology sensors. Savings is even greater in Hodgson Memorial Library where the reduction in the library stack lighting is almost 41%.

According to Bill Gilmore, occupancy sensors have been the number one energy saving measure at Bryant College. With this in mind, Gilmore continues to aggressively pursue applications for sensors that will effectively turn lights off in unoccupied areas. Currently, wall switch sensors are being installed into the offices of professors and other faculty. Other campus locations from walk-in refrigeration units to mechanical rooms are just part of a progressive plan of implementation that is already underway.