Lighting Controls

Honeywell

Energy-Saving Solutions For Efficient Buildings

Honeywell Lighting Controls Deliver Light When You Need It And Energy Savings When You Don't

Businesses, schools and government facilities spend thousands of dollars each month to light unoccupied rooms, offices, warehouses and more. And they spend still more to operate lights in areas that are already bright from natural light. Honeywell Lighting Controls can make lighting much more efficient.

The Honeywell Lighting Controls Solution offers smart scheduling, presence detection and photocells to ensure lights aren't left burning in vacant areas and that lights are off in areas where there's already plenty of natural light. New lighting technologies such as LED fixtures with 0-10v dimming open up lighting control to HVAC contractors to deliver daylight harvesting, demand response and task tuning strategies that previously required expensive, proprietary lighting control equipment.

It all adds up to truly significant energy savings as a standalone solution or as part of an overall integrated energy management plan that can integrate lighting control with Honeywell heating, ventilation and air conditioning (HVAC), security and building automation products.

Building a Lighting Strategy

The goal of a well-designed lighting control system is to reduce energy consumption while providing adequate light for the task at hand. A 2012 study by Lawrence Berkeley National Laboratory (LBNL) showed that individual control strategies save between one-quarter and one-third of lighting energy, while combining multiple controls strategies can drive nearly 40 percent savings.*

KEY LIGHTING CONTROL STRATEGIES

Lighting Zones

Different areas of a building have different lighting needs. A large open office space might need the lights on all day, but could save energy by turning most of the lights off at night. Lighting in a conference room that is only used intermittently could be turned off until someone enters the room. Areas near windows can take advantage of natural daylight by dimming lights during the day. Each of these lighting zones can be managed with one or more lighting strategies. Well-planned lighting zones and the lighting control strategies used to manage them should be identified based on how much light is needed, where and when.

Switching

Switching lights on and off is the most basic form of lighting control. Unfortunately, lights are often left burning when they are not needed. A simple switch connected to a vacancy detector can be a powerful, inexpensive tool to reduce energy use in areas like closets and conference rooms.

Smart Time Scheduling

A smart scheduling system for lighting controls manages light levels based on time of day and day of the week. A typical open office space or retail business might have all lights on during business hours and rely on switches and vacancy detectors after hours.

Occupancy/Vacancy Detection

Vacancy detectors save energy by turning off lights when areas are vacant. Occupancy sensors add convenience by turning lights on when the device senses human presence. These devices can range from a simple passive infrared detector built into a light switch to a networked detector that controls lighting and also contributes to an integrated building automation strategy – sharing occupancy/vacancy information with other components of a building automation system.

Dimming

Dimming can maximize the energy savings of lighting control strategies by dropping light levels to their most effective level. Fluorescent lighting, while efficient, typically does not respond well to dimming. New LED technology offers enhanced 0-10v dimming that not only saves energy but can improve the comfort of a space by bringing lighting to the level that best suits the use of the room.

Daylight Harvesting

Utilizing dimming technology, or on/off switching, daylight harvesting saves energy by reducing light levels where there is enough ambient light through windows, skylights or other sources. Photo sensors for daylight harvesting can be a data point in an integrated lighting control network or work with a standalone system.

Load Shedding/Demand Response

To cut peak demand and reduce stress on the electric power grid, many utilities offer load shedding or demand response programs in exchange for incentives or lower energy costs. Networked lighting control systems can take advantage of these programs by temporarily reducing light levels in response to a signal from the utility.

*http://lightingcontrolsassociation.org/lbnl-estimates-average-energy-savings-for-popular-lighting-control-strategies/

High-End Task Tuning

Commercial buildings are typically over-illuminated. Light levels may have been designed for paperwork, while typical office tasks have switched to self-lit computer screens. High-End Task tuning saves energy by setting light levels to the correct, safe, comfortable level for the task.

Scene Selection/Personal Control

Pre-set lighting scenes allow the occupants of a space to match lighting levels to changing needs during the workday. Lighting scenes may include turning off lights in the front of a classroom for a film, raising light levels for detailed tasks, dimming lights to create a mood, or turning off half the lights to reduce energy use.

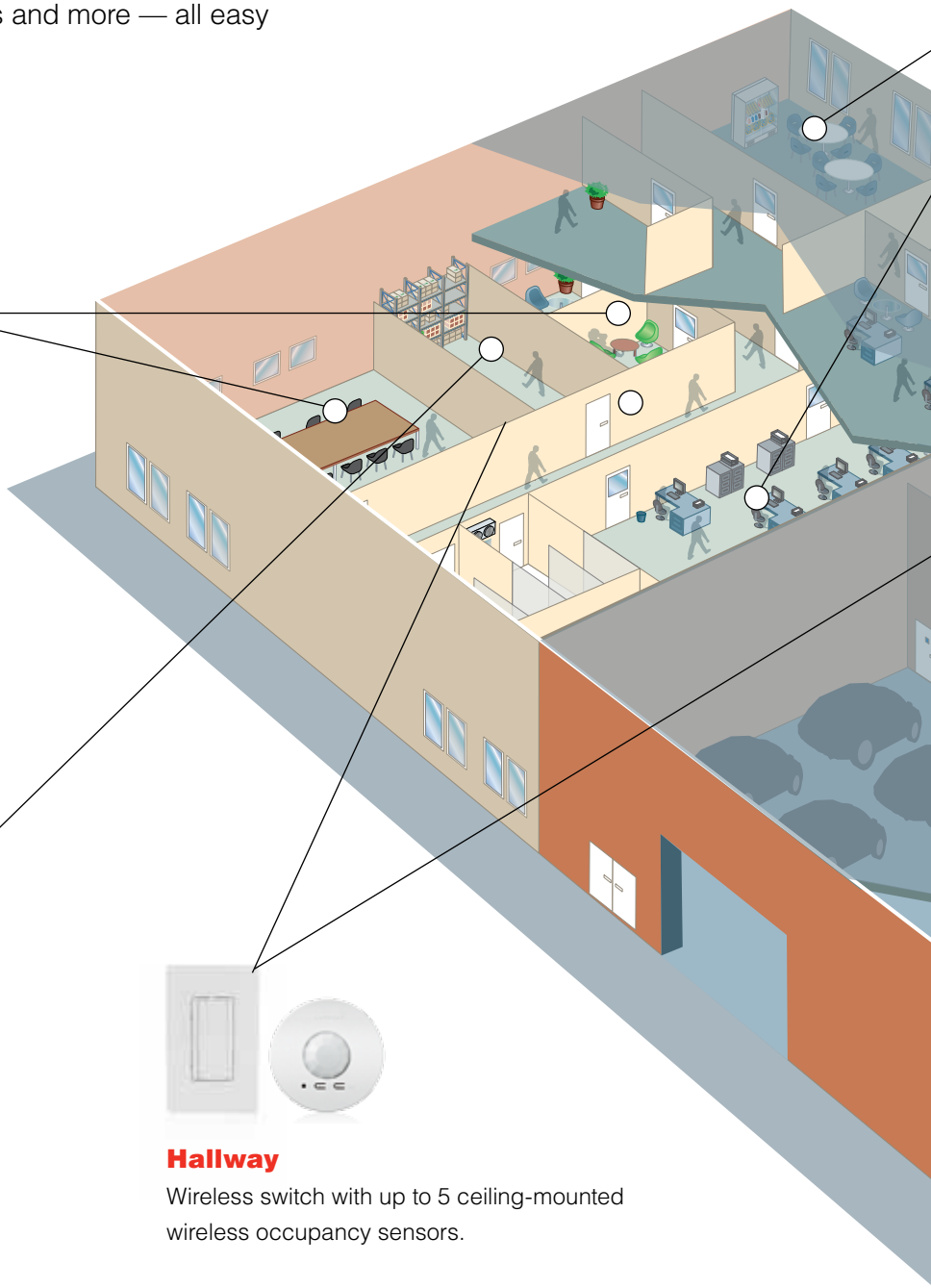
Integration With Building Automation Systems

An open, non-proprietary Lighting Controls network allows Lighting, HVAC and Security systems to share occupancy signals across building control systems and enables off site monitoring, control and optimization for ongoing energy efficiency.

Fewer than 10% of commercial buildings in North America have Lighting Control networks.

Applications Overview

From the office to the warehouse, Honeywell offers a wide range of lighting controls to meet every need. Choose from an array of wired and wireless solutions, control options, dimmers, occupancy/vacancy sensors and more — all easy to install and easy to use.



Conference Room/ Large Office

Photo sensor to balance natural and artificial light for optimal light level. Occupancy detector to keep lights off when not needed. TR75 Zio Plus wall module for end-user control of dimming/scene selection. Optional integration with BACnet Building Control System.

Individual Offices Without Windows

Wireless switch with ceiling-mounted wireless occupancy sensors.

Hallway

Wireless switch with up to 5 ceiling-mounted wireless occupancy sensors.

Storage Closet

Wired Wall Box Occupancy Sensor.

Stairwell

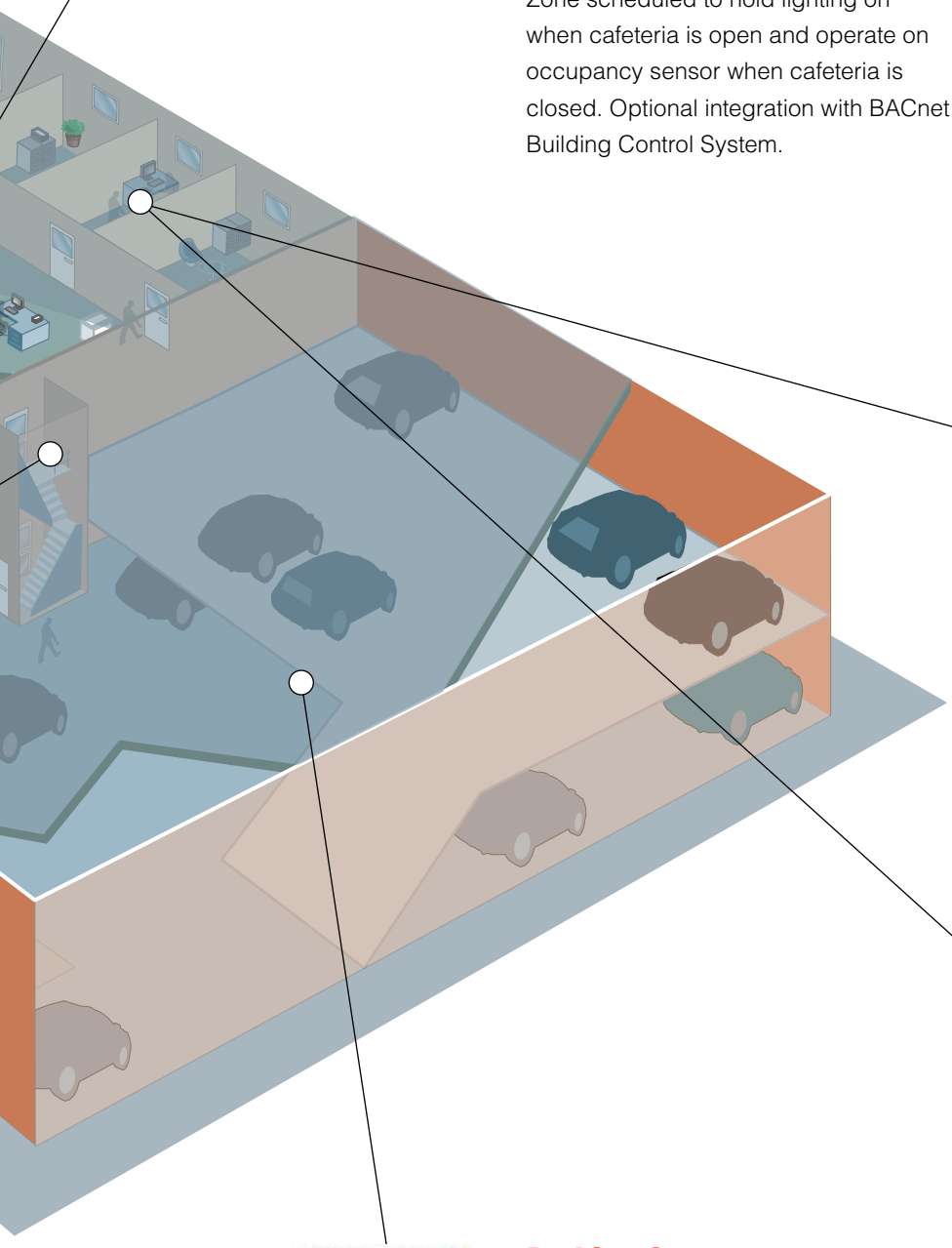
Occupancy detector to hold all stairwell fixtures at minimum required footcandles at floor level when vacant and to brighter, user-defined footcandles when occupied.

Kitchen/Cafeteria

Photo sensor to balance natural and artificial light for optimal light level. TR75 Zio Plus wall module for end-user control of dimming/scene selection. Zone scheduled to hold lighting on when cafeteria is open and operate on occupancy sensor when cafeteria is closed. Optional integration with BACnet Building Control System.

Open Office Area

TR75 Zio Plus wall module for end-user control of dimming/scene selection. Zone scheduled to hold lighting on during office hours. Lights can be switched on or operate on occupancy sensor after hours. Lighting circuit along windows tied to photo sensor for daylight harvesting. Optional integration with BACnet Building Control System.



Individual Offices With Windows

Integrated: Photo sensor to balance natural and artificial light for optimal light level. Occupancy detector to keep lights off when not needed. TR75 Zio Plus wall module for end-user control of dimming/scene selection. Optional integration with BACnet Building Control System.

Standalone: Wireless switch with ceiling-mounted wireless occupancy sensors and wireless daylight sensor for daylight harvesting.

Parking Garage

Photo sensor to balance natural and artificial light for optimal light level. Optional integration with BACnet Building Control System.

Easily Add Lighting Control Into A Building Energy Management System

Integrate lighting control technology with building automation for installation and operational savings.

LIGHTING STRYKER AND ZIO CONTROLLERS

The Honeywell Lighting Stryker applies proven building automation technology to lighting. The Lighting Stryker sends low-voltage signals to lighting relays and 0-10 volt dimming devices to deliver simple, yet powerful lighting control strategies for energy savings.

When used with a TR75 Zio Plus, the Wall Module Configuration Wizard embedded in the Lighting Stryker makes setting up lighting control strategies easy and intuitive. Lighting scenes, switching, smart scheduling, occupancy/vacancy detection, dimming, daylight harvesting, demand response and task tuning can all be easily configured and adjusted with the TR75 Zio Plus. After configuration, the TR75 serves as a scene selection device for personal lighting control.

Installers can set up the system as a standalone lighting control network or integrate to HVAC, security, video and other building automation systems. The Lighting Stryker provides BMS connectivity via BACnet objects for easy integration to WEBs-AX™ or other leading building automation systems.

LIGHTING STRYKER AND ZIO CONTROLLERS

CLB6438S	Lighting Stryker
YCLB6438S	Y-Pack (Lighting Stryker and TR75 Zio Plus Combo)
TR71	Zio (Scene Selector)
TR75	Zio Plus (Configurator/Scene Selector)

Lighting Accessories from Lutron

STANDALONE LIGHTING CONTROLS OFFER EASY SAVINGS

Honeywell partners with Lutron to offer traditional wired sensors and switches for standalone applications. Another option is Honeywell's family of standalone wireless sensors that install in as little as 15 minutes and eliminate the need for costly new wiring. These sensors communicate with compatible dimmers, switches and light control systems using reliable Clear Connect™ RF Technology from Lutron®. The easily accessible buttons make setup easy and the display illuminates during test mode, helping the installer identify optimal mounting locations. Please contact Lutron directly for part availability and pricing.

LUTRON Clear Connect™ Enabled

LOW-VOLTAGE SENSORS FOR LIGHTING CONTROL NETWORKS

LOS-CDT-1000R-WH	Wired Occupancy Sensor - Dual Technology Self-Adaptive 24V With Relay
EC-DIR-WH	Wired Daylight Sensor - 24V
PP-120H	Power Pack (for occupancy/vacancy sensors) 120V
PP-277H	Power Pack (for occupancy/vacancy sensors) 277V

Product Overview

STANDALONE WIRELESS LIGHTING CONTROLS

MRF2-8S-DV-WH	Wireless Wall Box Light Switch 120-277V – No Neutral Wire Required
MRF2-6ANS-WH	Wireless Wall Box Light Switch 120V
MRF2-6ANS-277-WH	Wireless Wall Box Light Switch 277V
LRF2-VCRR2B-P-WH	Wireless Ceiling Mount Vacancy Sensor
LRF2-0CR2B-P-WH	Wireless PIR Ceiling Mount Occupancy/Vacancy Sensor
LRF2-DCR2B-P-WH	Wireless Ceiling Mount Daylight Sensor
RMJ-CC01-24-B	Wireless Power Pack Contact Closure Output Low Voltage 24V Input
RMJ-16R-CC01-DV-B	Wireless Power Pack General Purpose Switch 120V/277V

LINE VOLTAGE WALL BOX LIGHTING CONTROLS

MS-OPS6M-DV-WH
Wall Box Switch with PIR Occupancy/Vacancy Sensor 120V/277V Dual Voltage for 3A Fan
MSCL-OP153M-WH
Wall Box PIR Occupancy/Vacancy Sensor/Switch 120 - 277V

WALLPLATE

CW-1-WH
1-Gang Wallplate

The Honeywell Difference

With the continuing drive to reduce energy consumption in all types of buildings and facilities, choosing Honeywell Lighting Controls can make a substantial contribution toward energy reduction targets. Daylight harvesting, occupancy sensing and extended lamp life combine to lower the cost of your overall lighting solution. In addition, a comprehensive energy management plan incorporating Honeywell, HVAC solutions and building automation products can help you achieve even greater energy efficiencies.

Honeywell is a world leader in the design and manufacture of solutions that make buildings more energy efficient and convenient without sacrificing occupant comfort. Drawing on decades of expertise, Honeywell offers a broad portfolio of products and services to support comprehensive energy management plans in buildings around the globe.

Lighting represents, on average, more than 20% of a building's total energy consumption.

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Lutron and Clear Connect are trademarks of Lutron.

Learn More

For more information on Honeywell's Lighting Controls call **1-800-466-3993** or visit **buildingcontrols.honeywell.com**

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