

Receptacle Control Solutions

One of the simplest and most efficient ways to improve lighting efficiency is to automatically turn off the lights when not in use. A simple strategy involves Receptacle Control, also known as Plug Load Control, which automatically turns off plug loads when a space is vacated.

What are Plug Loads?

Plug loads include devices that plug into a standard electrical outlet, often called “standby” or “vampire” loads. Products not in use or on standby account for as much as 25% of total electrical consumption in commercial buildings. These products typically still draw power even in an off state. Examples include task lighting, computers, monitors, cell phone chargers, personal fans or heaters, A/V equipment, and other electronic devices that can be switched off at night without causing harmful consequences.

Interpreting the Codes

Energy codes now require Receptacle Control or Plug Load Control. IECC, ASHRAE 90.1, and 2022 California Title 24 require controlled receptacles to have the same automatic shutoff function as lighting using occupancy sensing or schedule based control. Plug-in strips and devices cannot be used for code compliance. Title 24 and NEC also require the controlled receptacles to be permanently marked to differentiate them from uncontrolled receptacles.

Receptacle Control Strategies

Occupancy Sensing Based Receptacle Control

Controls that monitor a space’s occupancy state will energize and de-energize a controlled receptacle based on occupancy.

Schedule-Based Sensing Control

Controls that allow the user to set the day and time that a circuit will be energized and de-energized.

IECC, Section C405.11.1

Automatic Receptacle Control

- Controlled receptacles are required to be located within 12” of each uncontrolled receptacle
- Receptacles must be controlled by time of day, occupancy sensors, or a signal from another control or alarm system
- An automated signal from another control or alarm system that shall turn off receptacles within 20 minutes after determining that the area is unoccupied

ASHRAE 90.1, Section 8.4.2

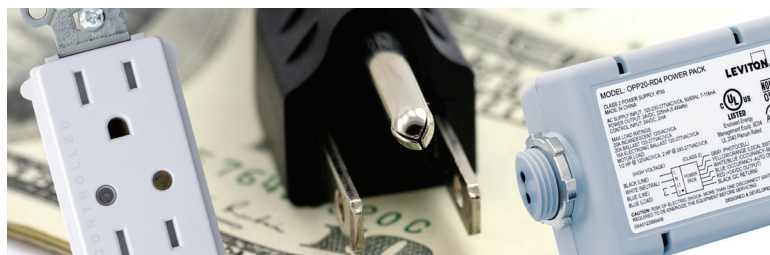
Automatic Receptacle Control

- At least 50% of all receptacles in private offices, open office areas (including modular partition receptacles), and computer classrooms must be controlled by an automatic control device:
 - An occupancy sensor that will turn receptacles off within 30 minutes of all occupants leaving a space
 - On a scheduled basis, using a time-of-day operated control device that turns receptacles off at specific programmed times
- Plug-in strips and devices cannot be used for compliance - the receptacle must be controlled

2022 California Title 24, Section 130.5(d)

Automatic Receptacle Control, Circuit Controls for 120 VAC Receptacles

- Both controlled and uncontrolled 120V receptacles shall be provided in each private office, open office area, reception lobby, conference room, kitchenette in office spaces, and copy room
 - Electric circuits serving controlled receptacles must be equipped with automatic shutoff controls such as occupancy sensors or an automatic time switch
 - At least one controlled receptacle must be installed within 6 feet of each uncontrolled receptacle, or a split duplex receptacle. Controlled receptacles must have a permanent marking to differentiate them from uncontrolled receptacles
- Hotel and motel guest rooms require at least 50 percent of receptacles to be auto-off via an occupancy sensor, captive key switch, or automatic control



Leviton Receptacle and Lighting Control Solutions Marked Controlled Receptacles and Labels

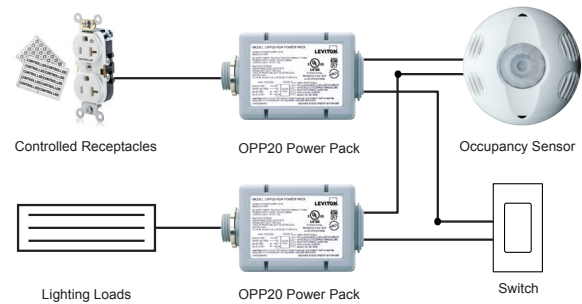
- Largest offering of marked controlled receptacles and labels - choose top or duplex marking

Receptacle and Lighting Control with OPP20 Super Duty Power Pack

- OPP20 models support plug load control, switched daylighting, sensing control, and bi-level switching
- UL/cUL 916 Listed for Energy Management
- Exclusive self-detect configurable local switch input
- Robust and reliable with mechanical latching relays and industry-exclusive “fail-safe” design

What You Will Need

	Description
	OPP20 Super Duty Power Pack OPP20-0D2 OPP20-RD4
	Occupancy Sensor OSCxx-M
	Marked Controlled Receptacles and Labels 5362-S1W

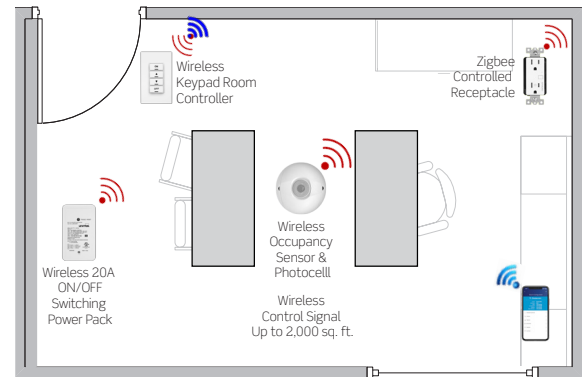


Wireless Occupancy Sensing and Plug Load Control

- Receptacle top outlet is always ON, bottom outlet is controlled for control of lamps, electronic devices, and appliances
- Wireless devices are easily expandable and can be used for ON/OFF or occupancy sensing control solutions

What You Will Need

	Description
	GreenMAX DRC 4-Button Wireless Keypad Room Controller DRKDN-U4W
	Wireless 20A ON/OFF Switching Power Pack LU20W-DNW
	Zigbee Wireless Passive Infrared (PIR) Occupancy Sensor & Photocell ZC015-BIW
	Zigbee Controlled Wireless Receptacle ZSTLR-1HW

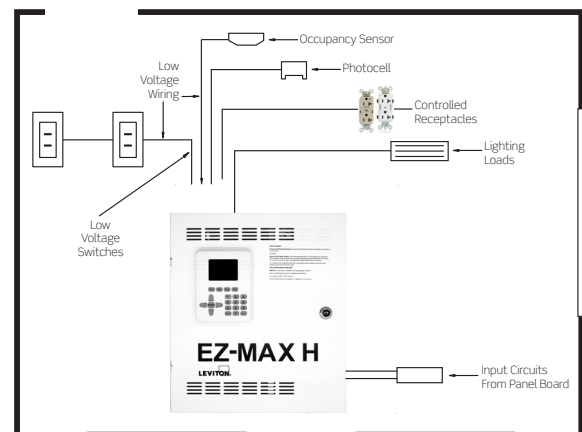


Schedule-Based Receptacle and Lighting Control with EZ-MAX® H Relay Panels

- Compact design engineered to be contractor friendly, quick to install, and simple to configure
- Built-in astronomical and real time clock for scheduling
- Easy programming configurations
- Integrates low voltage inputs such as occupancy sensors and photocells

What You Will Need

	Description
	EZ-MAX H 8-Circuit or 24-Circuit Relay Panels R08BD-H00 R24BD-H00
	Marked Controlled Receptacles and Labels 16352-2PW



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