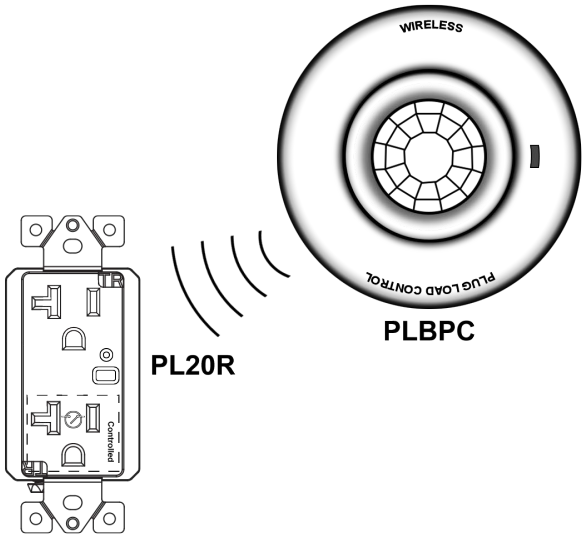
ENERLITES®

General Specification

Wireless Plug Load Control



Model No.: PL20R & PLBPC

Description: Enerlites Wireless Plug Load Controller is designed with simplicity, and helps to make plug load control requirements easy to understand, implement, and operate. Plug Load Control requirements are being driven by expanded codes and standards with the common goal of energy efficiency. These requirements often pose challenges when planning the layout of a building, constructing electrical systems, and identifying controlled receptacles. Plug load control can be easily achieved by installing the Enerlites Controlled Plug Load into the branch existing wiring system and paired with the Plug Load Controller Wireless PIR Occupancy Sensor. The two are bound by a reliable wireless, RF connection. The Controlled Receptacle features an internal relay for switching the plug load on/off according to the sensor's occupancy or vacancy detection. Plug Load Receptacle should be installed to switch outlets used for task lighting, monitor, flat screen TV, and non-essential equipment in private offices, conference rooms, open offices, lunch rooms and break rooms and other areas in commercial buildings.

Features:

- RF low profile Passive Infrared Ceiling Sensor
- Operates in a quiet 315MHz
- Compliant with Part 15 of FCC rules
- One PIR Sensor can pair up to 6 smart receptacles
- Simple three steps pairing process
- Controls both 120VAC and 240VAC split receptacles
- LED indicator light and manual override
- Tamper Resistant Shutters

Benefits:

- Wireless PIR Sensor powered by two AA Lithium battery for zero utility cost and making it easy to install with little to no interruption to operations -- ideal for retrofits
- Split duplex receptacle with one uncontrolled and one wireless controlled for ON/ OFF control of lamps, electronic devices, and appliances
- Easy Retrofit installation with No Additional Control Wiring
- Controlled receptacles with permanent marking to differentiate them from uncontrolled receptacles
- Vacancy sensing controls 30 minutes after the guest room has been vacated, power is switched off.
- There is no need for remotes, computers, software and any other device to set up the controlled receptacle and the sensor.

What is "Plug Load"?

A plug load is energy consumed by a device that is plugged in to a receptacle. It is not uncommon to see task lighting, flat panel TV's and monitors left on when a building is not occupied. These plug loads are largely ignored and are drawing power even when in standby. Plug loads consume roughly 25% of commercial electricity use and provide large opportunities for building manager to cut energy consumption, decrease costs, and increase bottom line. Examples include task lighting, monitors, cell phone chargers, A/V equipment, and other electronic devices that can be switched OFF at night without causing harmful consequences.

Understanding the Code Requirements

- Plug loads are now the third highest contributor to electricity usage in most office buildings, and this is expected to increase as more occupants use personal computers and other electronics.
- The new codes are designed to automatically reduce electricity use in unoccupied spaces by requiring automatic receptacle control for 50% of the receptacles in commercial buildings.
- Controlled receptacles shall have a permanent marking to differentiate them from uncontrolled receptacles

Testing & Code Compliance

- California Title 24 2013 Section 130.5
- ASHRAE 90.1-2010
- UL/CUL Listed Device
- FCC Approved
- NEMA WD-6

California Title 24 2013

Circuit control is required for 125V 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 shall be installed within 6 feet from each uncontrolled receptacle or a split wired duplex receptacle with one controlled and one uncontrolled receptacle shall be installed
- For hotel and motel guest rooms at least one-half of the 120-volt receptacles in each guest room shall be controlled receptacles that comply with Section 130.5(d)1, 2, and 3. Electric circuits serving controlled receptacles shall have captive card key controls, occupancy sensing controls, or automatic controls such that, no longer than 30 minutes after the guest room has been vacated, power is switched off.
- Plug-in strips and other plug-in devices that incorporate an occupancy sensor shall not be used to comply with this requirement

ASHRAE 90.1-2010

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:

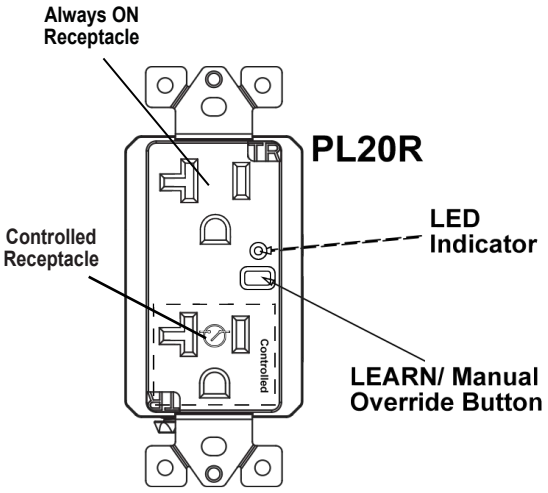
-- An occupancy sensor that will turn receptacles OFF within 30 minutes of all occupants leaving a space

-- 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

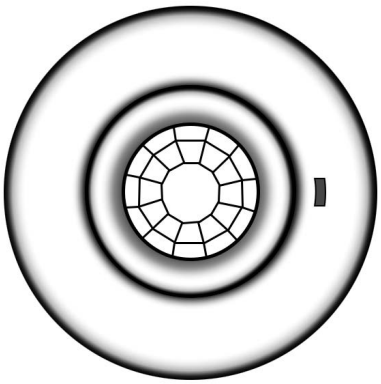
MWS–120/240 Smart Receptacle Specifications:

Voltage ……120 or 240VAC, 60Hz
Load Rating……...15A or 20A
Operating Temperature……..……..…30 F to 120 F
Relative Humidity……..……20% t 90% non-condensing
Operating Frequency……315 MHz
Reception Sensitivity…… -105dBm
Sensor Standby Current ……< 5uA
Wireless Transmitting current …….…….. 40 mA
Max Wireless Range (direct) ……...…within 24 feet in an open air environment
Occupancy state monitored by a wireless occupancy sensor
Receptacle Material……...ABS, Flammability UL94 – V2



MWS–BPC Occupancy Ceiling Sensor Specifications:

Operating Temperature……..30 F to 120 F
Relative Humidity……20% to 90%
Non-condensing
Operating Frequency……315 MHz
Sensor Standby Current ……200uA
Wireless Transmitting current ……. 5 mA
Max Wireless Range ……..…within 24 feet in an open air environment



PIR Sensor Wireless Powered by Batteries

PIR Occupancy Sensor (MWS-BPC).....2 AA battery

Wireless Working Current..... 5 mA

PIR Stand-by Current.....80 uA

PIR Working Voltage .....3.0 V

PIR Cut-off Voltage .....2.5 V

End of battery life indication..... LED of Receptacle blinking

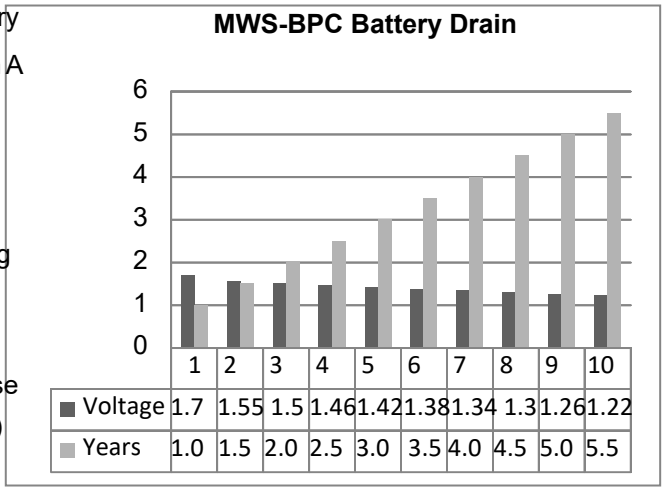
Batteries Drain

Battery Classification: .....Cylindrical Lithium, 1.5V each

Max Discharge: .....2.0 Amp Continuous, 3.0 Amps Pulse

Shelf Life: .....15 years (90% of rated capacity)

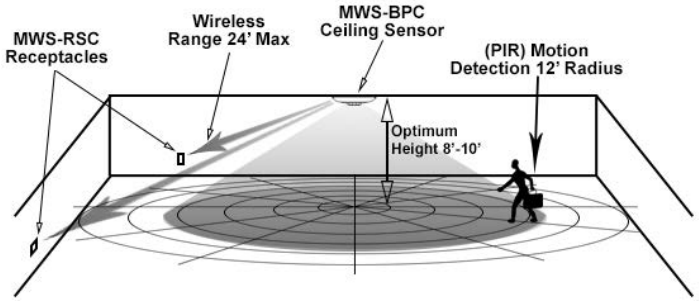
Simulate Drain Test: .....5 years



Description:

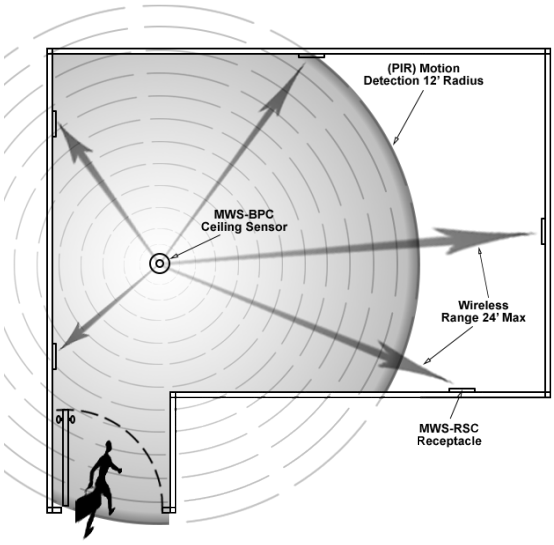
The passive infrared ceiling sensor works by detecting the difference between heat emitted from the human body in motion and the background space. Through wireless networking, a Smart Receptacle automatically turns OFF within 30 minutes of all occupants leaving a space.

PIR Coverage:



Note: For building spaces with lower levels and barriers, coverage size may decrease

Installation: Easy mounting of adhesive pad and screws with the following placement guide:



Enerlites Inc.
www.enerlites.com
Phone: 949-756-0536 Fax: 949-756-0528 e-mail: sales@enerlites.com