

Ceiling Mount Occupancy Sensors

Uses The Latest Passive Infrared And Ultrasonic Technologies



MSCD



MSCU

DESCRIPTION

MSC Series Occupancy Sensors employ passive infrared (PIR) and/or ultrasonic technologies to accurately detect occupancy and automatically switch room lighting.

The low-profile sensor is ceiling-mounted to maximize motion sensitivity in large areas with obstructions. With a 360 degree field of view, and up to 2000 square feet of coverage area, the ceiling-mounted occupancy sensor is ideal for conference rooms, classrooms, multi-stall bathrooms, and large office areas.

The MSC series also incorporates an integral photosensor to prevent lights from switching on when sufficient ambient light is present, as commonly found in windowed areas.

Installation and configuration are simple. The sensor readily mounts to drop ceilings, and it features front adjustments for setting sensitivity and time delay. The sensor also features an auxiliary relay for use with building automation and HVAC systems.

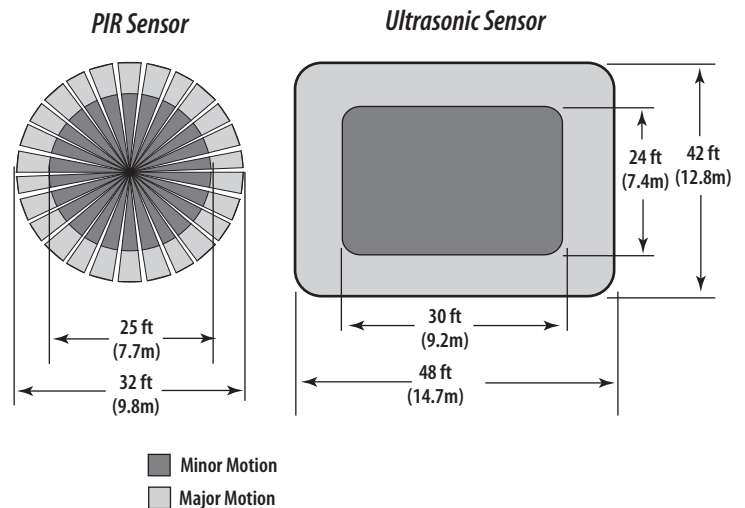
APPLICATIONS

- Lighting control based on occupancy
- Reducing energy usage
- Key component for LEED* certification programs
- MSC1000 – best for conference rooms, classrooms, and other general applications
- MSCD2000 – best for multi-stall bathrooms, large conference rooms, and warehouses
- MSCU2000 – best for lobbies, aisles, and great for multi-stall bathrooms

FEATURES

- Up to 2000 square foot coverage area
- 360 degree field of view
- Daylight level sensing (from 0.5 to 250 foot-candles)...eliminates unnecessary lighting
- Adjustable time delay (preset time delays from 15 seconds [test] to 30 minutes)...provides ultimate flexibility
- Adjustable coverage sensitivity (from 60-100%)
- Auxiliary relay...easily communicates with building control system
- Adjustment compartment cover
- LED motion indicator...provides quick visual status
- Manual bypass...for easy commissioning

Coverage Patterns for 9 ft (2.8m) Ceiling Height



■ Minor Motion
■ Major Motion

SPECIFICATIONS



Standards

UL and cUL Listed; FCC part 15 (Class B) for Home and Office Use

Input Voltage

24VDC

Current Consumption@24VDC*:

PIR	21mA nominal
Ultrasonic	34mA nominal
Dual	37mA nominal

Isolated Relay

Contact rating: 1A@24VDC Resistive

Temperature

0° to 50°C (32° to 122°F)

Humidity

Max. 90% RH noncondensing

Dimensions:

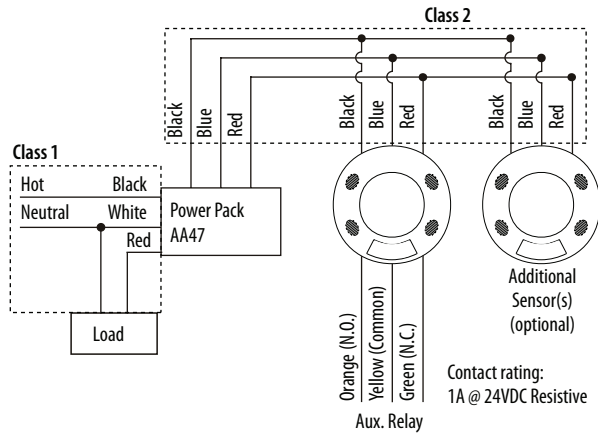
MSCU	4.6" (117 mm) diameter, 1.4" (35.1 mm) high
MSCD/MSCP	4.6" (117 mm) diameter, 1.8" (45.7 mm) high

For local line switching control, power must be provided by AA47 Power Pack or an approved equivalent.

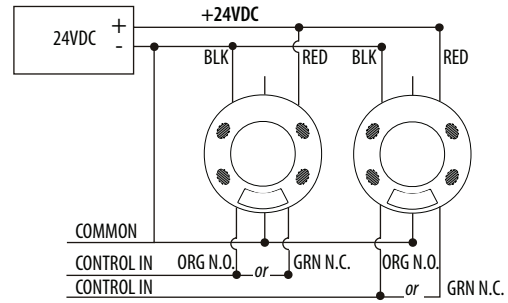
*Leadership in Energy and Environmental Design (LEED) is a registered mark of the US Green Building Council

APPLICATION/WIRING DIAGRAMS

Local Line-Power Control MSC



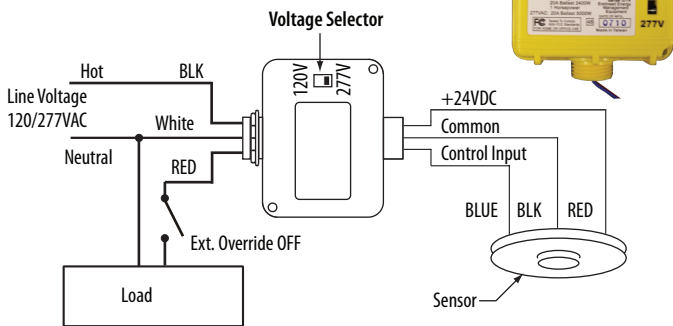
Building Control Panel



The AA47 Line-Switching Power Pack provides local switching capability to control loads at a signal from MSC Series occupancy sensors, independent of any connection to building control systems. The AA47 routes 120/277VAC, 60 Hz line power directly to a Form A relay contact (SPST) to control a load and generates full-wave, 24VDC to power up to four MSC sensors (dependent on model). The AA47 can be mounted either inside or outside an electrical box, and sensor power can be routed via plenum-rated cable to the sensor(s).

System Diagram Using AA47

AA47 Line-Switching Power Pack
For local line switching

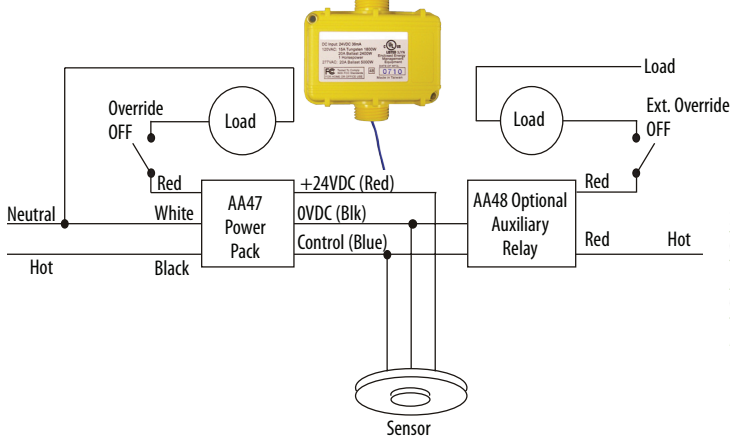


SPECIFICATIONS - AA47

Storage Temperature	-29° to 65°C (-20° to 150°F)
Operating Temperature	0° to 40°C (32° to 104°F)
Maximum Humidity	90% RH noncondensing
AC Power Input	120/277VAC ± 10%, 60 Hz
Output Voltage	24VDC
Output Current	100mA max.
<i>Relay Contacts:</i>	
Horsepower Rating	1HP@120V
Switching Capacity	120VAC, 60 Hz; 15A tungsten 1800W 277VAC, 60 Hz; 20A Ballast
Dimensions	3.2" (81.3 mm) x 3" (76.2 mm) x 1.75" (44.5 mm)

System Diagram Using AA48

AA48 Auxiliary Relay (Optional)



The AA48 Auxiliary Relay is a low-voltage relay device for expanding the switching capacity of an AA47. It can be used to control loads connected to additional circuits in response to a signal from a connected sensor. It is essentially a relay with a SPST output controlled directly by the occupancy sensor. The auxiliary relay can be mounted inside or outside of an electrical junction box.

SPECIFICATIONS - AA48

Storage Temperature	-29° to 65°C (-20° to 150°F)
Operating Temperature	0° to 40°C (32° to 104°F)
Maximum Humidity	90% RH noncondensing
Control Input	24VDC, 36mA nominal
<i>Relay Contacts:</i>	
Horsepower Rating	1HP@120V
Switching Capacity	120VAC, 60 Hz; 15A tungsten 1800W 120/277VAC, 60 Hz; 20A ballast
Dimensions	3.2" (81.3 mm) x 3" (76.2 mm) x 1.75" (44.5 mm)

ORDERING INFORMATION



Sensing Technology

- MSC
- U** = Ultrasonic
 - D** = PIR + Ultrasonic
 - P** = Passive Infrared (PIR)

Coverage

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- 1000** = 1000 Sq. Ft. (Passive Infrared only)
 - 2000** = 2000 Sq. Ft. (Ultrasonic or Dual technology only)

Example:

