

# LS-CM Series

Ceiling mount occupancy sensors



## Overview

The CM Series of ceiling mount occupancy sensors provide a range sensor solutions for applications with finished ceilings (e.g., ceiling tiles, sheetrock, plaster). CM Series sensors utilize 100% digital Passive Infrared (PIR) detection and are available with several lens options, providing flexibility for multiple mounting height and coverage pattern requirements. Dual technology occupancy detection can also be added as an option for applications where occupants are stationary for long periods of time.

## Applications

- Finished ceilings (e.g., ceiling tiles, sheetrock, plaster)

## Features & Benefits

- 360° coverage pattern
- Push-button programmable, adjustable time delays, and multiple operating modes
- 100 hr lamp burn-in timer
- No field calibration or sensitivity adjustments required
- Convenient test mode
- Green LED indicator

# Product Specifications

Size	4.55" diameter and 1.55" deep
Weight	6 oz
Mounting	3.5" octagon box, ceiling tile surface, single gang box
Color	White
Operating Voltage	12-24 VAC/VDC
Current Draw	4mA Standard; 16mA w/R option 16mA
Dimming Load	Sinks <20 mA; ~40 Ballasts @ .5 mA each
Power Pack>Relay Rating	1A @ 24VAC/VDC
Rcmd. Power Pack	LS-PP20
Approvals	RoHS compliant

## Model Selection

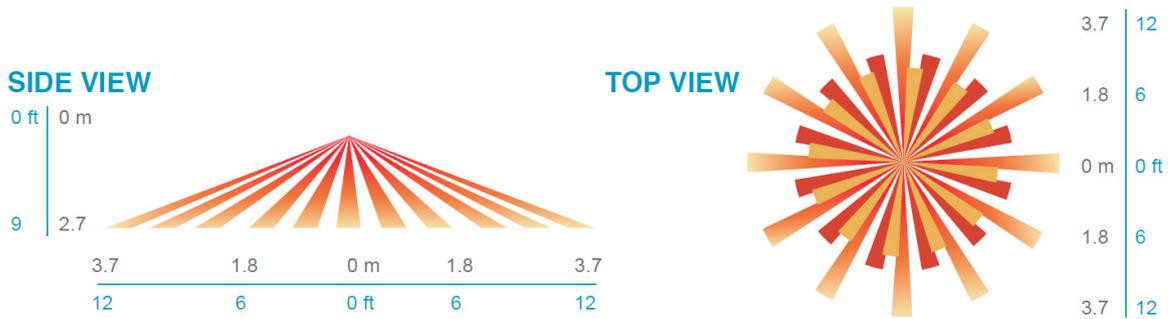
	LS-	CM	X	XX	X	X	X	X
Occupancy Sensors								
Ceiling Mount								
Detection Technology	X = PIR D = Dual Technology <sup>1</sup> (PIR/Microphonics™)							
Coverage Type	X6 = High Bay 360° X9 = Small Motion 360° 10 = Large Motion 360° 11 = Hallway							
Relay	X = None R = Low Voltage Relay							
Dimming	X = None D = Occupancy Controlled Dimming P = Photocell A = ADC <sup>2</sup> (Photocell w/ Dimming)							
Visible Light Programming	X= None V = VLP <sup>3</sup> (Visible Light Programming)							
Temp/Humidity	X = Standard L = Low Temp/High Humidity							

1. Dual Technology not available on High Bay models
2. ADC option not available on High Bay models
3. Must specify P or ADC if VLP is ordered, and be within 5ft of sensor to program

# Coverage Patterns

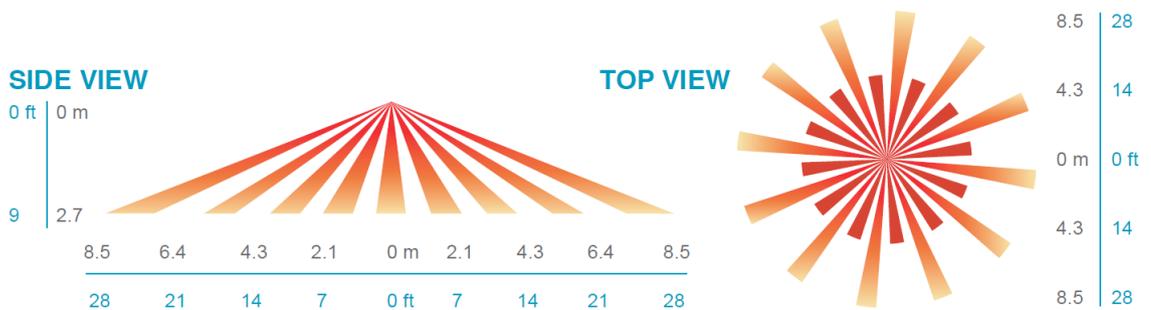
## Small Motion 360<sup>o1</sup>

- Best choice for small motion (e.g. hand movements) detection
- 360° conical shaped pattern
- Provides 12 ft (3.66 m) radial coverage (~500 ft<sup>2</sup>) when mounted to standard 9 ft (2.74 m) ceiling
- 8 to 15 ft (2.44 to 4.57 m) mounting heights provide 10 to 20 ft (3.05 to 6.10 m) radial coverage
- Lens assembly is marked with a gray ring around lens to differentiate versus the large motion lens
- Tested on NEMA-WD 7-2011



## Large Motion 360<sup>o1</sup>

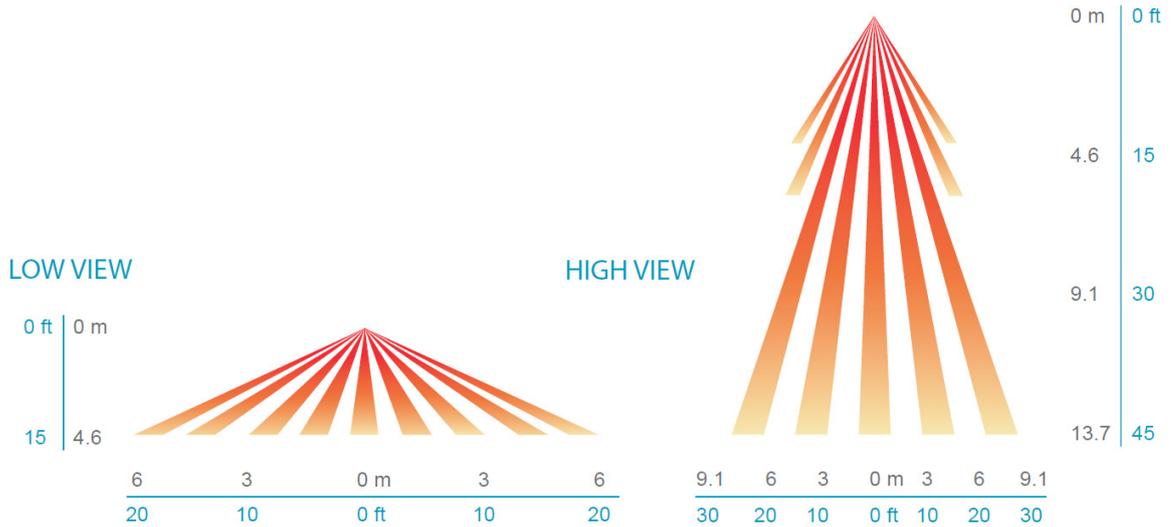
- Best choice for large motion detection (e.g. walking)
- 360° conical shaped pattern
- Provides ~24 ft (7.32 m) radial coverage (~2000 ft<sup>2</sup>) when mounted at 9 ft (2.74 m)
- 7 to 15 ft (2.13 to 4.57 m) mounting heights provide 16 to 36 ft (4.88 to 10.97 m) radial coverage
- Detection range improves when walking across beams compared to into beams
- Tested to NEMA WD 7-201



1. Sensors with Microphonics™ provides overlapping detection of human activity over the complete PIR coverage area. Advanced filtering is also utilized to prevent nonoccupant noises from keeping the lights on.

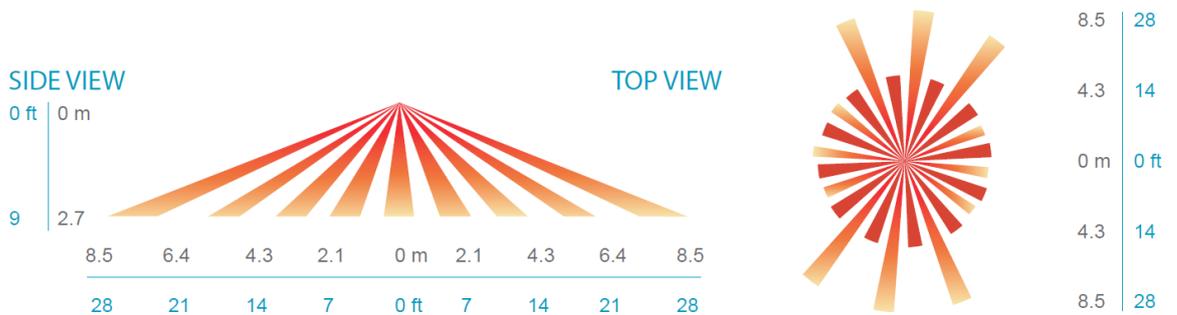
## High Mount 360°

- Best choice for 15 to 45 ft (4.57 to 13.72 m) mounting heights
- 15 to 20 ft (4.57 to 6.10 m) radial coverage overlaps area lit by a typical high bay fixture
- Excellent detection of large motion (e.g. walking) up to 35 ft (10.76 m)
- Excellent detection of extra large motion (e.g. forklifts) up to a 45 ft (13.72 m)
- Tested to NEMA WD 7-2011



## High Mount Hallway

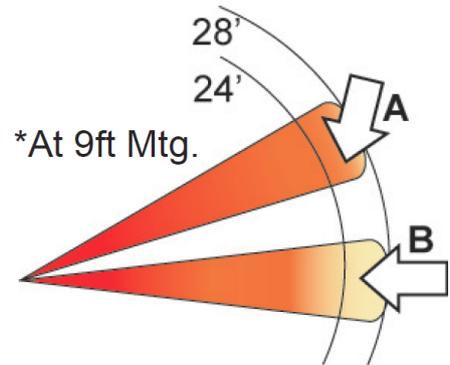
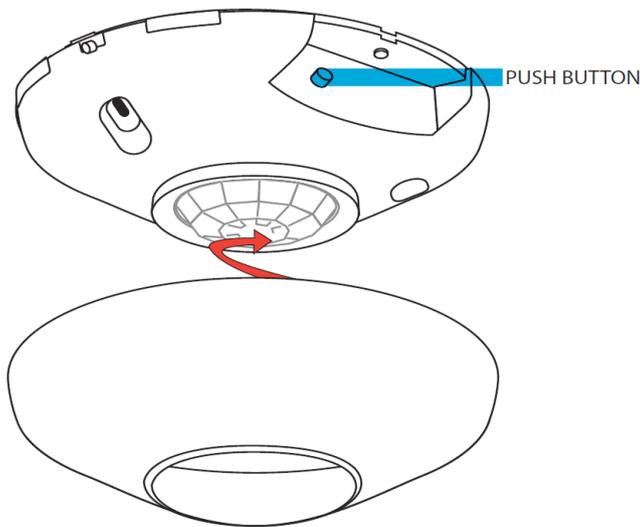
- Best choice for large motion detection
- Provides 28 ft (8.53 m) of coverage when mounted to standard 9 ft (2.74 m) ceiling
- 7 to 15 ft (2.13 to 4.57m) mounting heights provide 16 to 36 ft (4.88 to 10.97m) hallway coverage
- Tested to NEMA WD 7-2011





## Installation

- Mount sensor directly to a ceiling tile or a metallic grid (two self-tapping screws provided).
- Sensor's mounting holes also align with 3.5" octagon or single gang handy box (screws not provided).
- Sensor will detect motions crossing segments more effectively than motions parallel to beams.
- For optimal detection, position sensor such that segments are crossed upon entrance and unable to view outside the space.
- Dual-technology models: For maximum Microphonics sensitivity avoid locating sensor near HVAC air diffusers



**A:** When walking across beam, detection will occur at approximately 28 feet. (8.53 m)

**B:** When walking into beam, detection will occur at approximately 24 feet. (7.32 m)