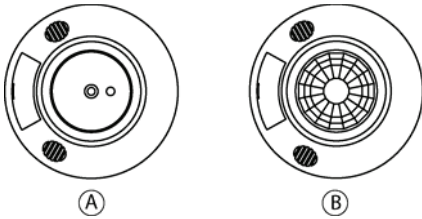


## 180 Degree Ceiling Mounted Occupancy Sensors SLSCDS800 and SLSCUS800

### INTRODUCTION



The 180 Degree Ceiling Mount Occupancy Sensors are ideal for use in business and office settings to accurately detect occupancy and automatically control lighting. The ceiling-mount design of these low-profile sensors allows the greatest possible motion sensitivity. An adjustment panel is conveniently located on the front of the sensor, providing ready access to setting controls after the sensor is installed.

There are two models of 180 degree ceiling-mounted sensors (See figure on left):

- A. 180 Degree Ultrasonic (US) sensor (SLSCUS800)
- B. 180 Degree Dual Technology Sensor - Passive Infrared (PIR) and Ultrasonic combined (SLSCDS800)

### Contents of the Box

Item	Quantity
Sensor	1
Mounting adapter plate	1
Threaded mounting post	1
Washer	1
Lock nut	1
Mounting screws	2
Masking strips, sheet*	1

\* = Supplied with Dual sensors only.

### FEATURES

Description	Ultrasonic	Dual
Coverage area	1000 sq. ft.	1000 sq. ft.
Field of view	180°	
Ambient light level sensing	0.5-250 foot candles	
Adjustable time delay	15 sec.-30 min.	
Adjustable sensitivity	600-1000 sq. ft. (10-100% of max. coverage)	
Isolated relay	Form C contacts for Class 2 signalling	
LED motion indicators	1 (red)	2 (red/green)

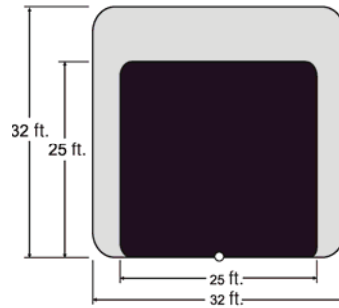
**COVERAGE PATTERNS FOR 9 FT. CEILING HEIGHT**

**Ultrasonic**

**SLSCUS800**

COVERAGE PATTERNS FOR 9 FT. CEILING HEIGHT

Top View



Area of Detection

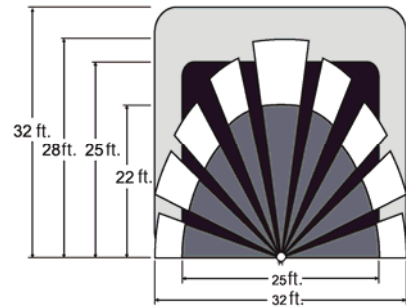
- : Ultrasonic Major Motion
- : Ultrasonic Minor Motion

**Dual Technology**

**SLSCDS800**

COVERAGE PATTERNS FOR 9 FT. CEILING HEIGHT

Top View



Area of Detection

- : Ultrasonic Major Motion
- : Ultrasonic Minor Motion
- : PIR Major Motion
- : PIR Minor Motion

**STANDARDS AND SPECIFICATIONS**

Standards	Ultrasonic	Dual
	UL and cUL Listed FCC Part 15, Home and Office Use (Class B) California Title 24 Certified	
Specifications	Ultrasonic	Dual
Current Consumption @ 24VDC*	Active: 30mA	Active: 33mA
Isolated relay	Contact rating: 1A @24Vdc Resistive	
Operating Temperature	32 to 122°F (0 to 50°C)	
Humidity	0 to 90% RH non-condensing	

\*Control power must be provided by the Power Pack SLSP1277 or an approved equivalent.

## CLASS B FCC STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

Changes or modifications to this device that are not expressly approved by Schneider Electric could void the user's authority to operate this equipment.

## SAFETY PRECAUTIONS

This section contains important safety precautions that must be followed before attempting to install or maintain electrical equipment. Carefully read and follow the safety precautions below.

### DANGER

#### HAZARD OF ELECTRIC SHOCK, EXPLOSION, OR ARC FLASH

- Apply appropriate personal protective equipment (PPE) and follow safe electrical work practices. See NFPA 70E.
- This equipment must be installed and serviced by qualified electrical personnel.
- Turn off all electrical power supplying this equipment before working on or inside the equipment.
- Always use a properly rated voltage sensing device to confirm that power is off.
- Replace all devices, doors, and covers before turning on power to this equipment.

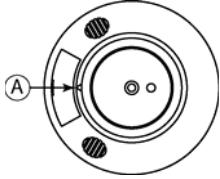
**Failure to follow these instructions will result in death or serious injury.**

## INSTALLATION

Installation and configuration is simple. The sensor mounts directly to ceilings or ceiling junction boxes. The sensor can be mounted to a variety of ceiling surfaces, such as acoustical tile, drywall, plywood, etc. Three possible mounting methods are described in the following paragraphs.

*NOTE: Install the sensor at least five feet away from sources of air flow, such as HVAC vents, ceiling fans, etc.*

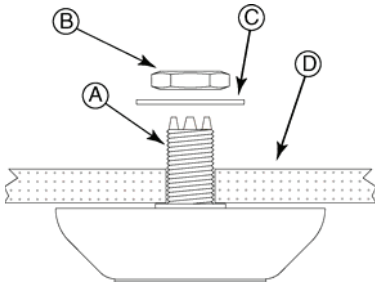
The sensor has a small directional arrow to indicate the coverage direction. Determine the direction to mount the sensor and point the arrow in desired coverage direction.



KEY:

A. Directional Arrow

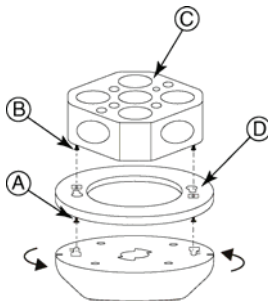
### Mounting with Supplied Mounting Post



A. Mounting post  
 B. Lock nut  
 C. Washer  
 D. Ceiling tile

1. Turn off all electrical power supplying this equipment before working on or inside the equipment. Always use a properly rated voltage sensing device to confirm that power is off.
2. Drill a 7/8-in. dia. hole at the mounting location.  
*NOTE: For acoustical tile, you can use the threaded mounting post to drill a mounting hole. Press the cutter end of the mounting post firmly against the tile, and twist the post back and forth.*
3. Feed sensor wiring through the mounting post, then twist and lock the mounting post to the back of the sensor.
4. Insert the mounting post into the hole drilled in step 2. Secure the sensor assembly from the top of the ceiling tile using the supplied washer and lock nut.
5. Wire the sensor according to the wiring diagram; follow all applicable national and local electrical codes.

### Mounting to a Junction Box

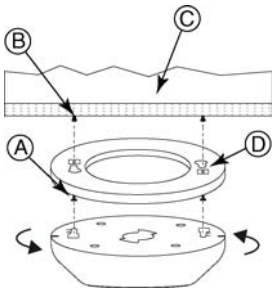


Note: Rotate Clockwise

A. Keyhole pin  
 B. #8 x 32 screw  
 C. Junction box  
 D. Mounting adapter plate

1. Turn off all electrical power supplying this equipment before working on or inside the equipment. Always use a properly rated voltage sensing device to confirm that power is off.
2. Attach the adapter plate to a standard 4-in. ceiling junction box using the two #8 x 32 screws supplied.
3. Wire the sensor according to the wiring diagram; follow all applicable national and local electrical codes.
4. Attach the sensor to the adapter plate by inserting the pins on the adapter plate into the keyholes on the back of the sensor. Rotate the sensor clockwise until it locks in place.

### Flush Mounting

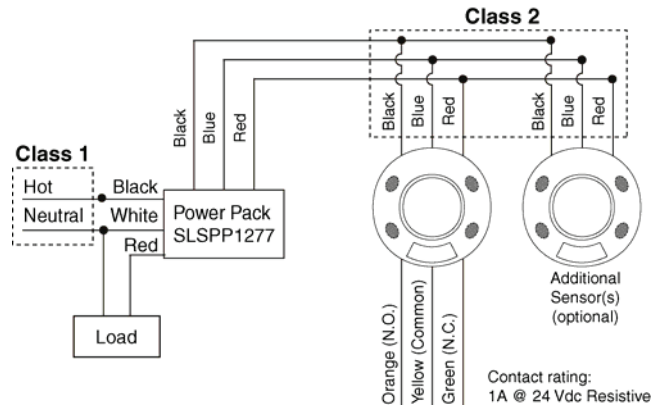


Note: Rotate clockwise.

- A. Keyhole pin
- B. Mounting screw
- C. Ceiling
- D. Mounting adapter plate

1. Turn off all electrical power supplying this equipment before working on or inside the equipment. Always use a properly rated voltage sensing device to confirm that power is off.
2. Drill a hole large enough to accommodate wiring at the mounting location.
3. Attach the adapter plate to the ceiling using a secure method, such as with screws and wall anchors (not provided).
4. Wire the sensor according to the wiring diagram; follow all applicable national and local electrical codes.
5. Attach the sensor to the adapter plate by inserting the pins on the adapter plate into the keyholes on the back of the sensor. Rotate the sensor clockwise until it locks in place.

### WIRING DIAGRAM

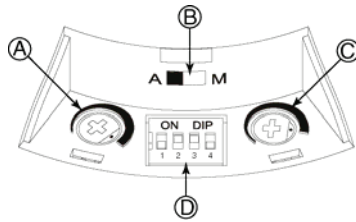


### OPERATION

1. Turn on the circuit breaker and any wall switches that may be supplying power to the sensor's power pack.
  2. Whenever motion is detected, the LED(s) on the sensor housing will flash on for approximately 0.5 seconds, and the lights will turn or remain on.
- NOTE: When first installed, the sensor may have to warm up for a few minutes before it is fully operational.*
3. Set the Time Delay to the Test setting of 15 seconds. (See Steps 1 and 5 in the Sensor Adjustment section.)
  4. Vacate the room until the lights turn off.
  5. Re-enter the room. Lights should turn on immediately. If lights do not turn on immediately, verify correct sensor wiring.
  6. Once the sensor is operational, adjust the settings.

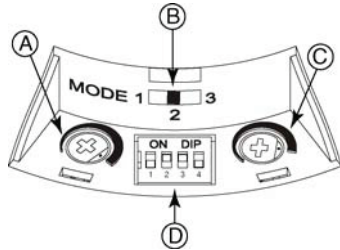
## SENSOR ADJUSTMENT

### Ultrasonic



- A. Sensitivity dial
- B. Mode switch
- C. Photocell dial
- D. DIP switches

### Dual Technology



1. The adjustment panel is located on the front of the sensor housing. To access the adjustment controls shown at left, gently pry off the cover with a small, flathead screwdriver.
2. Mode: Determines when lights are turned on or will remain on.

Sensor	Mode	Description
Ultrasonic	A	Automatic mode. Normal, default setting. Lights will turn on or remain on only when the sensor detects motion.
	M	Manual override ON mode. Lights are always on.
Dual Technology	1	Instant ON setting. Either PIR or ultrasonic detection will turn the lights on or cause the lights to remain on.
	2	Normal, default setting. Only PIR detection will turn the lights on. Either PIR or ultrasonic detection will cause the lights to remain on.
	3	Override ON setting. Lights are always on.

3. Sensitivity: Determines the amount of movement required to trigger the sensor and the distance from which movement can be detected. The sensitivity can be adjusted between 10%-100% of max.. The default sensitivity setting is approximately 50%.

*NOTE: Consider the characteristics of the room when adjusting the sensitivity of the Ultrasonic and Dual Technology sensors. Hard surfaces (concrete, tile, glass) are reflective and will create a higher sensitivity for ultrasonic detection.*

*Soft surfaces (carpet, drapes, acoustical tile) will absorb some of the ultra-sonic energy and reduce the unit's sensitivity. Building additions, such as cubicles and walls, may also require a higher sensitivity setting.*

4. Photocell: Sets the level above which ambient light will not trigger the sensor. The ambient light level can be set from 0.5–250 footcandles. Turn the dial to the desired setting: from 0.5 footcandles (fully counterclockwise) to 250 footcandles (fully clockwise). The default setting is 250 footcandles. This setting also disables the photocell, i.e., ambient light will not inhibit sensor operation.
5. Time Delay: A set of four DIP switches determines how long lights will stay on after motion is no longer detected. Settings range from 15 seconds to 30 minutes. The default setting is 18 minutes. The possible settings are shown in the "Time Delay Settings" table.
6. Replace the adjustment access cover by gently snapping it in place.

*NOTE: The sensor employs our patented self adjustment technology which senses occupancy patterns and continually adjusts the time delay to an optimal setting.*

Time Delay Settings

DIP Switch Number	1	2	3	4
<b>Time Delay:</b>				
15 seconds (Test setting)	•	•	•	•
2 minutes	•	•	•	-
4 minutes	•	•	-	•
6 minutes	•	•	-	-
8 minutes	•	-	•	•
10 minutes	•	-	•	-
12 minutes	•	-	-	•
14 minutes	•	-	-	-
16 minutes	-	•	•	•
18 minutes (Factory setting)	-	•	•	-
20 minutes	-	•	-	•
22 minutes	-	•	-	-
24 minutes	-	-	•	•
26 minutes	-	-	•	-
28 minutes	-	-	-	•
30 minutes	-	-	-	-

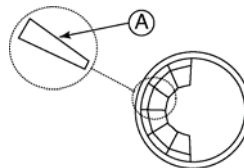
• = On - = Off

Sensor Masking

The sensor comes with a coverage area of 180°. A sheet of masking strips is also provided for additional masking.

Sensor Masking Example

Sensor with Masking



A. Masking Strip

Field of View from the Top



**180 Degree Ceiling Mounted Occupancy Sensors  
Instruction Bulletin**

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