

OSR300S

120/277VAC

Dual Relay PIR Wall Switch



Installation Instructions

Specifications

Voltages	120/277VAC, 50/60Hz
Load Limits for each relay:	
@120 VAC	0-800W ballast
@277 VAC	0-1200W ballast
Load Type Compatibility:	
Incandescent, fluorescent, magnetic or electronic ballast	
Horsepower Rating (each relay)	1/6 HP
Time Delay Adjustment	.5 to 30 minutes
Walk-Through Mode	.3 minutes if no activity after 30 sec.
Test Mode	.15 sec. upon initial power up or DIP switch reset
PIR Sensitivity Adjustment	Low or High/Automatic
Light Level Adjustment	.8fc to 180+fc
Alerts	Selectable Audible

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US Patents: 4,787,722
4,874,962 • 5,124,566
Des 343,386

Syracuse, NY 13221
800.223.4185

UNIT DESCRIPTION AND OPERATION

The OSR300S is a passive infrared wall switch that turns lighting on and off based on occupancy and ambient light levels. SmartSet™ technology allows the sensor to be installed without any adjustments and automatically adjusts it to the usage patterns in the space. Alternate operating modes, selected by DIP switch settings, can be combined to create the ideal custom control.

The OSR300S contains two relays. Dual buttons on the front of the OSR300S allow the user to control one or two loads independently. Pressing an ON/OFF button toggles the state of the corresponding relay, turning the load on if it is currently off, or off if it is currently on. If no motion is detected during the time delay that is in effect, the load will turn off.

The OSR300S also contains a light level sensor that, when enabled, operates on the secondary relay. If adequate daylight is present, the sensor holds the secondary load off until light levels drop, even when the controlled area is occupied. Users can override this function by blocking the light coming into the sensor by placing their hand over the sensor lens until the load comes on. The load will then remain on until the space is unoccupied.

Turning The Load On

The relays are programmed independently for either Auto On or Manual On. In either mode, the load can be turned on or off using the ON/OFF button.

Auto On	Load turns on and off automatically based on occupancy. If the load is turned off manually, automatic-on is reenabled when no motion is detected for five minutes. This prevents the load from being turned on after it was deliberately turned off.
Manual On	Occupants must turn on the load by pressing the ON/OFF button. The sensor keeps the load on until no motion is detected for the selected time delay. There is a 30 second reset delay. If motion is detected during this time, the sensor turns the load back on automatically. After the reset delay time has elapsed, the ON/OFF button must be pressed to turn on the load.

Time Delays

The OSR300S holds the load on until no motion is detected for the selected time delay. You select either SmartSet or a Fixed time delay using DIP switch settings. The sensor automatically sets the time delay when SmartSet is enabled; with the fixed time delay settings you select a time delay between 5 to 30 minutes, and whether the Walk-Through mode is included.

Both relays use the same delay, unless a delayed disconnect is enabled for relay 2 using the Delay Relay 2 Disconnect feature. This delayed disconnect feature is useful in applications where you want both loads to turn off automatically, but want relay 2 to stay on longer, such as when running an exhaust fan after the lights have shut off.

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SmartSet™ Time Delays	Records typical occupancy patterns. Using this history (which is constantly updated), it chooses an optimal time delay from two minutes (if the space is usually vacant) up to 30 minutes (if the space gets heavy usage). SmartSet behavior starts immediately, and is refined continually as history is collected.
Fixed Time Delay	DIP switch selections provide fixed time delays of 5, 10, 15, 20 or 30 minutes.
Walk-Through Mode	Use for rooms that have frequent walk-through traffic (i.e., room that accepts mail deliveries). The OSR300S turns the load off three minutes after the area is initially occupied, if no motion is detected after the first 30 seconds. If motion continues beyond the first 30 seconds, the SmartSet or Fixed time delay applies.
Test Mode Time Delay	To confirm proper operation of the sensor, a short initial time delay of 15 seconds is set as the default (SmartSet/Test) mode. This Test Mode cancels automatically after five minutes, or if a fixed time delay is selected. To reenable the Test Mode for an additional five minutes, change the time delay from any fixed amount to the SmartSet/Test setting.
Delay Relay 2 Disconnect	Both relays use the same Time Delay, unless DIP switch #4 is turned on, enabling a delayed disconnect for relay 2. When the delayed disconnect is enabled, relay 2 turns off 10 minutes after relay 1 and during Test Mode, relay 2 turns off 10 seconds after relay 1.

Sensitivity Adjustment

High/SmartSet™	The OSR300S monitors the controlled environment and automatically selects the maximum sensitivity setting that will provide reliable operation without false detection. This setting is constantly updated.
Low	Fixed sensitivity mode, reduces detection range.

Alerts

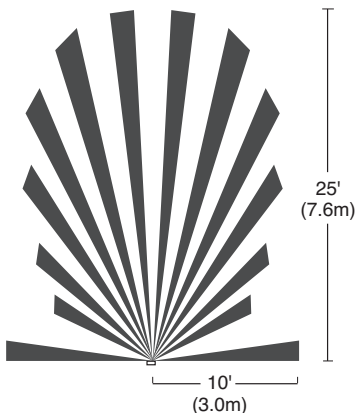
To warn an occupant that the load is about to be turned off, the OSR300S provides audible alerts.

Audible Alerts	Sensor "chirps" twice – at one minute and at 30 seconds before turn-off. A distinct alert sounds 10 seconds before the lights go off.
No Alerts	No warning is provided.

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COVERAGE PATTERNS

The OSR300S will cover up to 300 sq. ft. (28m²). The typical recommended coverage for desktop activity is 150 sq. ft. (14m²). The sensor has a two-tiered, multi-cell viewing Fresnel lens with 180 degree field of view.



Masking the lens

Opaque adhesive tape is supplied so that sections of the sensor's view can be masked. This allows you to eliminate coverage in unwanted areas. Since masking removes bands of coverage, remember to take this into account when troubleshooting coverage problems.

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INSTALLATION



CAUTION



TURN THE POWER OFF AT THE CIRCUIT BREAKER BEFORE INSTALLING THE SENSOR OR WORKING ON THE LOAD.



WARNING

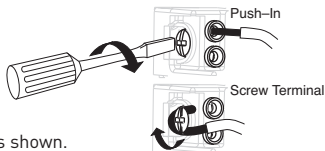


THE GROUND MUST BE TIGHTLY SECURED OR THE SENSOR WILL NOT WORK.

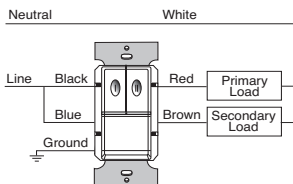
1. Make sure that the power has been turned off at the circuit breaker.
2. Connect wires to the OSR300S wire leads as shown in the wiring diagrams. The ground wires must be **tightly fastened** or the unit will not operate properly. If the metal junction box is grounded, it can be a suitable ground. Attach a ground wire to the green terminal as shown.

Strip Gauge 

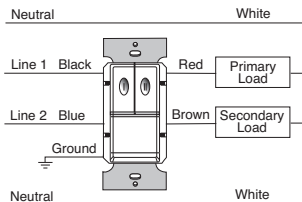
#12 - #14 AWG
Cu Wire Only



Insert or wrap ground wire as shown.
Tighten screw in the clockwise direction.



Bi-Level Wiring



Dual Circuit Wiring

3. Attach the sensor to the wall box by inserting screws into the two wide holes on the top and bottom of the attached metal bracket. Match them up with the holes in the wall box and tighten.
4. Turn the circuit breaker on. Wait one minute, then push the Auto ON/OFF switch for each load and the lights will turn on. There is a delay due to initial power-up of the sensor that only occurs during installation.

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DIP SWITCH SETTINGS

DIP Switch #s: 1 2 3	
Time Delay	
SmartSet/Test	↓ ↓ ↓
5 minutes	↓ ↓ ↑
10 minutes	↓ ↑ ↓
10 minutes	↓ ↑ ↑
15 minutes	↑ ↓ ↓
15 minutes	↑ ↓ ↑
20 minutes	↑ ↑ ↑
30 minutes	↑ ↑ ↓

DIP Switch # 5
Relay 1 ON Mode
Auto On ↓
Manual On ↑

DIP Switch # 7
Audible Alerts
Disabled ↓
Enabled ↑

DIP Switch # 6
Relay 2 ON Mode
Auto On ↓
Manual On ↑

DIP Switch # 8
Sensitivity
High/SmartSet ↓
Low ↑

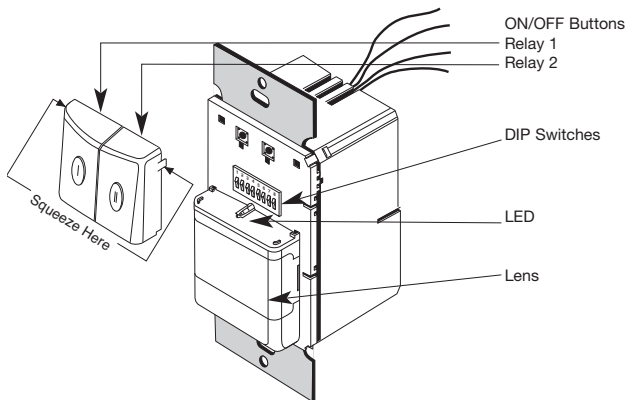
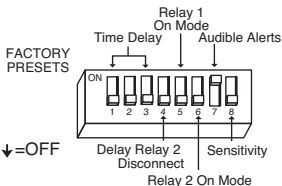
DIP Switch # 4
Delay Relay 2 Disconnect
Use Relay 1 Delay ↓
Add 10 minutes* ↑

*10 seconds in Test mode

◀ Factory Settings

🚶 Walk-Through Mode enabled

↑=ON ↓=OFF



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ADJUSTMENTS

Sensor Adjustment

The OSR300S is preset to SmartSet mode. It is designed for "Install and Forget" functionality. If you need to change the settings, follow the directions below.

All major adjustments to the OSR300S must be made with the wall plate removed. To access the DIP switches, remove the button cap by squeezing the top sides of the button assembly and pull it gently away from the unit.

When the adjustments are completed, replace the button cap by inserting its hinges into the LED light bar and then squeeze the top of the button while pressing it into the unit. Reinstall the cover plate.

Light Level Adjustment

The light level setting only affects the secondary relay. The light level can be set with the overhead lights on or off. To enable light level control and set the threshold to match the current ambient light level, press and hold the Relay 2 button for 3 seconds, until you hear a beep. Step away from the sensor. After 25 seconds another short beep sounds, indicating that the threshold level is set. This threshold is retained, even if power is lost, until it is disabled then re-programmed in this manner. To disable light level control, press and hold the Relay 2 button for ten seconds, until a beep tone sounds.

Reset to Default

Press and hold the Relay 1 button for ten seconds to reset the OSR300S to factory settings. This resets the sensor occupancy history and disables light level control (the brightest ambient light will not hold the light off).

TROUBLESHOOTING

Lights do not turn on with motion (LED does flash):

1. Press and release each button to make sure that the correct lights come on for each relay. If the lights turn on with the button press, verify that the correct On Mode is selected in DIP switches 5 and 6.
2. Check to see if light level control is enabled: cover the sensor lens with your hand. If the lights come on, adjust the light level setting.
3. Check all wire connections, in particular, the Load connection.
4. If lights still do not turn on, call 800.223.4185 for technical support.

Lights do not turn on with motion (LED does not flash)

1. Press and release each button to make sure that the correct lights come on for each relay. If the lights turn on, verify that the Sensitivity is set to High/SmartSet.
2. Check the wire connections, in particular, the Ground and Line connections. Verify that connections are tightly secured.
3. If lights still do not turn on, call 800.223.4185 for technical support.

Lights do not turn off

1. There can be up to a 30 minute time delay after the last motion is detected. To verify proper operation, set DIP switch 1 to ON, then reset switches 1, 2, and 3 to OFF to start Test Mode. Move out of view of the sensor. The lights should turn off in approximately 15 seconds. Relay 2 lights turn off 10 seconds after Relay 1 lights, if DIP switch 4 is ON.
2. Verify that the sensor is mounted at least six feet (2 meters) away from any heating/ventilating/air conditioning device that may cause false detection. Verify that there is no significant heat source (e.g., high wattage light bulb) mounted near the sensor.
3. If the lights still do not turn off, call 800.223.4185 for technical support.

Sensing motion outside desired areas

1. Select Sensitivity – Low (DIP switch 8 = ON) if necessary.
2. Mask the sensor's lens, using the opaque tape supplied.

No response to repeated button presses

Rapid pressing of the Auto-ON/OFF button causes a delay in proper functioning of the sensor. If the sensor does not respond to pressing the ON/OFF button, wait 10-15 seconds, then press the button **once** again.

ORDERING INFORMATION

Catalog #	Description
OSR300S	Universal PIR Wall Switch; 120/277VAC, 50/60Hz

Units come in White (-W), Ivory (-I), Gray (-GRY) and Light Almond (-LA).
Add color designator to catalog number when ordering.

Limited FIVE YEAR Warranty

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