

Occupancy Sensor Ultrasonic Ceiling Sensor

OSC20-U
OSC10-U
OSC05-U

Microprocessor based, the OSCxx-U has a self adapting feature that compensates for air flow, giving it excellent immunity to air currents and other interference.

THE OSCxx-U OCCUPANCY SENSOR

- ULTRASONIC SENSING TECHNOLOGY (US)
- EXCELLENT RANGE AND SENSITIVITY
- SIMPLE, FAST INSTALLATION
- SELF-ADJUSTING
- DIGITAL TECHNOLOGY, COMPLETE RELIABILITY
- PHOTOCELL CONTROL



GENERAL OPERATION

The OSCxx-U is a low voltage occupancy sensor that controls indoor lighting. The sensor fills the room with continuous high frequency (ultrasonic) sound waves. Any movement within the sensor's range causes a shift in the original emitted frequency. The sensor's receiver identifies any change in frequency as motion and either turns the lights on or maintains lights on.

AUTOMATICALLY ADAPTS

Interference	Symptoms	OSCxx-U Action
Air Flow	Lights on frequently	Auto adjust US threshold Low pass filter
Timer Left In Test Mode	Lights cycle on/off	Auto sets timer to operating mode
US Sensitivity	False-ons	Auto adjust time-out
	False-offs	Auto adjust time-out
Time-out Too Long	Lights on too long	Auto adjust Time Delay

Designed for "install and forget" use, the OSCxx-U automatically analyzes room conditions and adapts to errors or changing environment.

FEATURES

- Small Size:** Installed sensor appears almost invisible.
- Fast, Simple Installation:** Easy ceiling mount, three wire connection (low voltage) and twist-lock sensor attachment.
- Maximum Reliability, Low Cost:** All digital circuitry uses a minimum of components.
- Small Motion Sensitivity:** The ultrasonic technology provides excellent small motion sensitivity.
- Timer Setting:** Automatic - and Manual 30 sec. to 30 min. Test mode - 6 sec.
- Non-Volatile Memory:** Learned and adjusted settings saved in protected memory are not lost during power outages.
- Wide Coverage:** Units from 500 to 2000 sq. ft. available.
- Ambient Light Recognition:** The photocell prevents lights from turning on when the room is adequately lit by natural light.

HOW THE OSCXX-U AUTOMATICALLY ADAPTS

Condition	Example	Adaptive Reaction
Timer Left In Test Mode - The sensor remains in an 6 sec. test mode.	An installer accidentally leaves the sensor in the 6 sec. timer test mode and the lights may go off or on every 6 sec.	The sensor automatically resets the timer to 10 min after 15 min of test mode.
False-On -The sensor incorrectly turns the lights on.	The sensor detects movement in the corridor or hallway and the room lights turn on.	After an initial movement is sensed, if another movement is not sensed within the timer setting then the delayed off time setting is automatically reduced.
False-Off -The sensor incorrectly turns the lights off.	The sensor does not detect movement because an occupant sits virtually motionless at a desk and the lights turn off.	If motion is sensed within a short period after the lights go off, then the current delayed off-time setting is increased.

A dedicated internal microprocessor continually analyzes the room environment and adjusts itself automatically. The internal timer and ultrasonic sensitivity are automatically adjusted. Once installed, the OSCxx-U does not require manual adjustment or calibration.

OSCxx-U

LEVITON SPECIFICATION SUBMITTAL

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Product Specifications

OSCxx-U

PRODUCT SPECIFICATIONS

Models				
Part Number	Transducer Pairs	Coverage	Operating Frequency	Additional Features
OSC05-U	One	500 sq. ft.	40kHz	Photocell
OSC10-U	Two	1000 sq. ft.	40kHz	Photocell
OSC20-U	Two	2000 sq. ft.	32kHz	Photocell

CONTROLS

US (Ultrasonic Sensitivity): High to low range.
Self Adjusting Timer: Timer is factory set at 10 minutes. User can easily select 30s, 30 minutes using internal controls. Sensor may increase timer automatically through self-adapting features to meet room or occupancy patterns.

PC (Photocell Adjustment): 20 to 3,000 Lux

INDICATOR

Green LED Lamp: Ultrasonic motion.

DIP switch settings

Switch	Switch Functions		Switch Settings
	Bank A	OFF	ON
A1	N/A	—	—
A2	N/A	—	—
A3	Manual Mode	Auto Adapting Enabled	Auto Adapting Disabled
A4	Walk-Thru Disable	Walk-Thru Enabled	Walk-Thru Disabled
Bank B			
B1	Override to On	Auto Mode	Lights forced On
B2	Override to Off	Auto Mode	Lights forced Off
B3	Test Mode	OFF→ON→OFF	Enter/Exit Test Mode
B4	LED Disable	LEDS Enabled	LEDS Disabled

SPECIFICATIONS

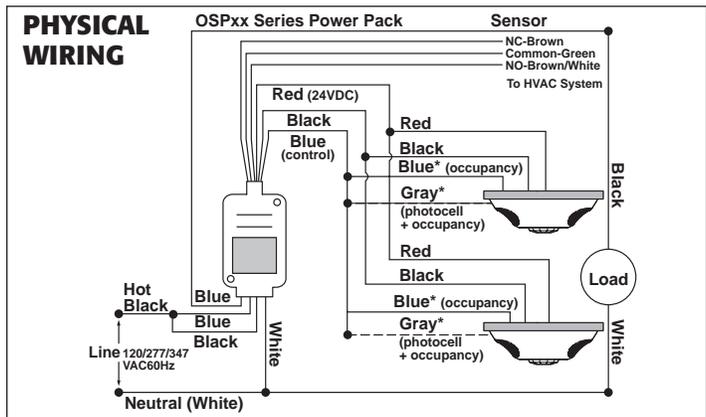
Construction: One or two ultrasonic transmitters and one or two narrow bandwidth receivers each 16mm in diameter. Frequency – Crystal controlled to ±.005%. Transducers – Oriented north and south. Housing – Rugged, high-impact, injection molded plastic. Color coded leads 6" (16.24 cm).

Size & Weight: 4.5" dia., 1.5" height; 5 oz. (114 mm dia., 38 mm height; 142 g).

Color: White.

Power Requirements: 24 VDC, from OSPxx power pack.

Model	Power Requirement
OSC05	30MA
OSC10	40MA
OSC20	32MA



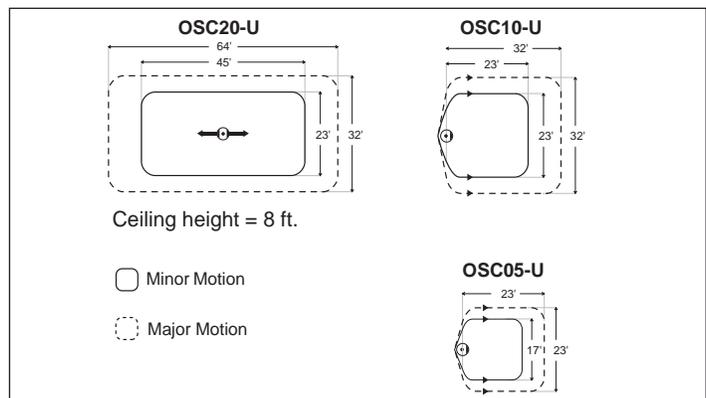
*When the photocell function is not being used, connect the Blue Occupancy Sensor lead to the Blue Power Pack lead. When using the Photocell function, connect the Gray Occupancy Sensor lead to the Blue Power pack lead—Do not use the Blue Occupancy Sensor lead for the photocell function.

Output: 24 VDC active high logic control signal with short circuit protection.

Operating Environment: 32°F to 104°F (0°C to 40°C); 0% to 95% relative humidity, non-condensing. For indoor use only.

Warranty: 5 years.

RANGES (APPROXIMATE)



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