

# Multi-Technology Ceiling Mount True White Occupancy Sensor



## Description

Occupancy sensors have two tasks: 1) Keeping the lights ON while the room is occupied, and 2) Saving energy by keeping the lights OFF while the room is unoccupied. Passive Infrared (PIR) is an excellent and precise technology for initially turning the lights ON, but lacks sensitivity for minor motion at distances. Ultrasonic (U/S) technology provides maximum sensitivity with continuous reflective high frequency waves. This is optimal for keeping the lights ON. Multi-technology sensors combine the benefits of both PIR and U/S technologies for unrivaled performance and reliability.

## Applications

- Cafeterias
- Classrooms
- Computer rooms
- Conference rooms
- Day care centers
- Filing rooms
- Work spaces
- Open warehouses
- Offices with cubicles
- Open areas
- Restrooms
- Stairwells
- Storage rooms
- Executive, open and private offices

## Features

- Self-adjusting: internal microprocessor continually analyzes, evaluates and adjusts the sensitivity and time delay. Performance is kept at a maximum and user complaints are eliminated.
- Fast, simple installation: easy ceiling mount, three wire connection (low voltage) and twist-lock sensor attachment for 360° rotation and flexibility
- Maximum reliability, low cost: digital circuitry uses a minimum of components
- Small motion sensitivity: the ultrasonic technology provides excellent small motion sensitivity
- Power Packs can be used to provide additional power for connecting multiple sensors to a single input
- Timer setting feature: automatic—30sec-30min.
- Test mode—6sec with auto exit programming.
- Non-volatile memory: learned and adjusted settings saved in protected memory are not lost during power outages
- Walk-through: provides increased energy savings by decreasing the time delay to 2.5min when someone momentarily walks through the monitored space
- Wide coverage: units from 500 to 2,000 sq. ft. available
- Ambient light recognition: a light sensor prevents lights from turning on when the room is adequately lit by natural light
- Ultrasonic (U/S) components: one or two U/S transducers and one or two narrow bandwidth receivers each 16mm in diameter. Frequency—Crystal controlled to ±.005%.
- Device: rugged, high-impact, injection molded plastic, true-white. Color-coded leads 6" (16.24cm)

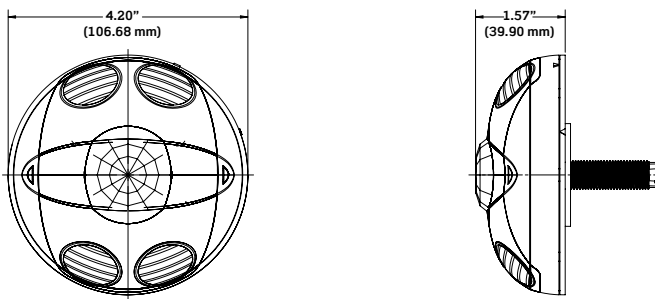
## How the Sensors Adapts

Condition	Example	Self-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 hall way 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

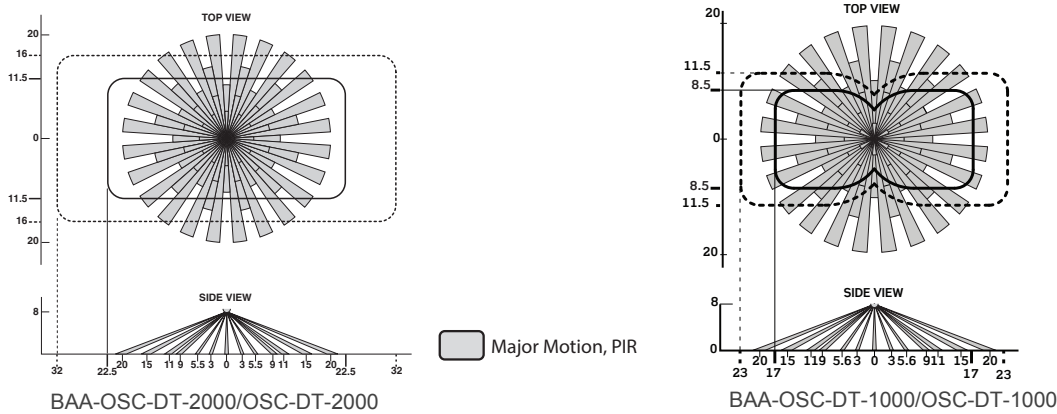
DIP Switch Settings

SWITCH		SWITCH FUNCTIONS	SWITCH SETTINGS
BANK A		OFF	ON
A1	N/A	Multi-Tech	Single Tech
A2	N/A	PIR	Ultrasonic
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

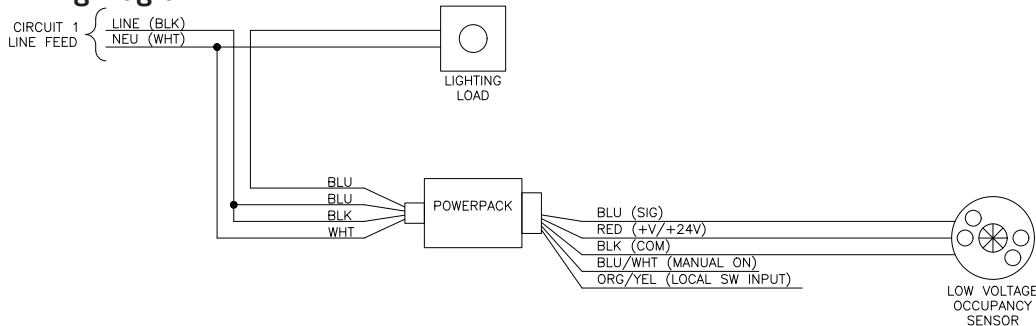
Dimensions



Field of View



Wiring Diagram



**Specifications**

Electrical	
Frequency	BAA-OSC-DT-1000/OSC-DT-1000: 40kHz BAA-OSC-DT-2000/OSC-DT-2000: 32Khz
Power Requirements	24VDC (12-30VDC) from Power Pack
Power Consumption	OSC-DT-1000: 35mA, OSC-DT-2000: 30mA
Output	24 VDC active high logic control signal with short circuit protection
Controls	
Ultrasonic Sensitivity	0-100%; green knob (factory setting: 50%)
Infrared Sensitivity	0-100%; red knob; (factory setting: 75%)
Light Sensor*	20 to 3,000 Lux; blue knob; factory set at 100% (*grey wire required)
Time Delay	30sec-30min; black knob (factory setting: 10min)
Indicators	
Green LED	U/S motion technology
Red LED	Infrared motion technology
Environmental	
Operating Temperature Range	32 to 104°F (0 to 40°C)
Relative Humidity	0-95% non-condensing, for indoor use only
Other	
Mounting Height	8-12 feet
Color	True White
Listings	CUL/US Certified
Energy Codes	Can be used to comply with IECC, ASHRAE 90.1, and 2022 Title 24, Part 6 occupancy sensing requirements
Warranty	Limited Five-Year Warranty

**Ordering Information**  
BAA Options Available\*

Cat. No.	Description
OSC-DT-1000	Multi-Technology Ceiling Sensor, 1,000 sq.feet of coverage
OSC-DT-2000	Multi-Technology Ceiling Sensor, 2,000 sq. feet of coverage
BAA-OSC-DT-1000	BAA Compliant Multi-Technology Ceiling Sensor, 1,000 sq.feet
BAA-OSC-DT-2000	BAA Compliant Multi-Technology Ceiling Sensor, 1,000 sq.feet

\*Options to meet Buy American and other domestic preference requirements.

Product is manufactured in one of our U.S. factories and is a commercially available off-the-shelf (COTS) item that complies with the requirements of the Buy American Act of 1933 (BAA).

Please select OSC-DT-\* that aligns with your required domestic preference. Failure to do so will result in receiving a non-compliant product, with no option for an RMA or refund. Note that the BAA designations mentioned here do not cover [(i) the applicability of the Trade Agreements Act of 1979,] [(ii)] the applicability of the Build America, Buy America Act (BABA)], [or] [(iii)] the “Buy America” domestic content requirements imposed on states, localities, and other non-federal entities as a condition of receiving funds administered by the Department of Transportation or other federal agencies.