

## Connecting an Occupancy Sensor to a TekMonitor

TEKVOX offers occupancy sensors with advanced multi-technology to enhance the operation of a TekMonitor. These sensors use both infrared and ultrasonic technology to provide the best monitoring without typical false triggers created by other sensors detecting people walking by the door. Using an advanced microprocessor, these sensors automatically adapt to the room's usage allowing for an easy and quick install. Once the sensor is installed, there is no need to make any new adjustments.

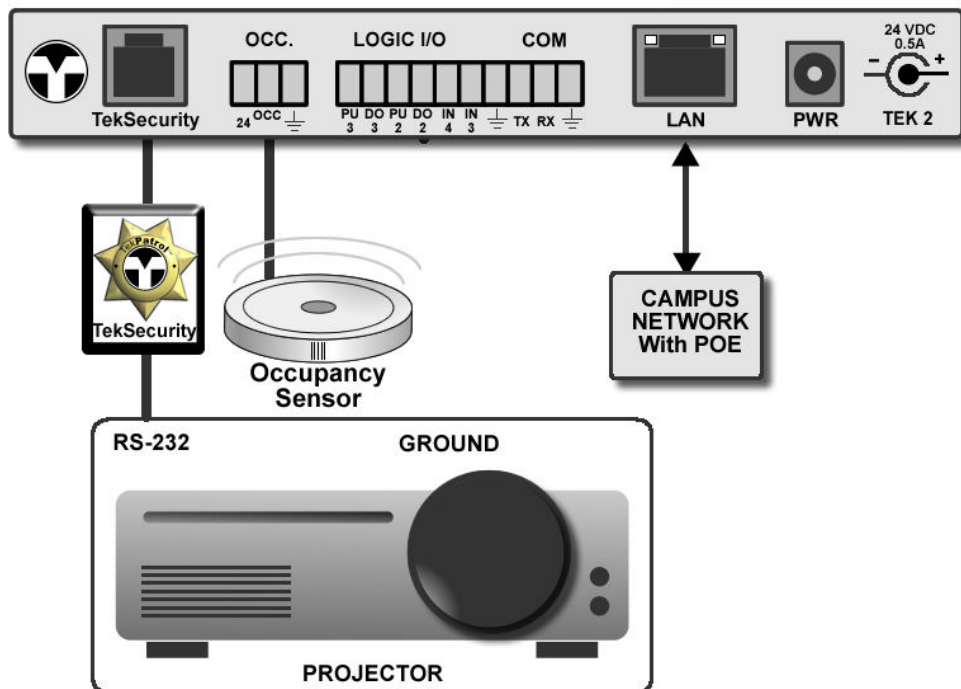
By incorporating an occupancy sensor, a TekMonitor is able to manage the lamp life of a video projector with extreme efficiency. This is accomplished by automatically shutting down the video projector when someone leaves the device running and then exits the room. It is not uncommon for a video projector to remain turned on overnight or during the weekend. A TekMonitor partnered with an occupancy sensor will increase a projector's lamp life and provide substantial energy-savings as well. Other benefits include control of a room's lights, interface with the HVAC system, and monitoring the occupancy of a room for crisis management.

### Benefits

- Improves security
- Increases lamp life
- Lowers energy cost
- Automatic lighting control
- Automatic HVAC control

### Features

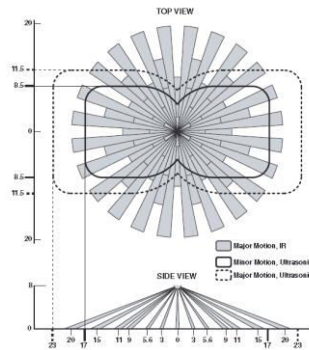
- Easy configuration with TekManager/TekWizard
- Room occupancy monitoring
- Automatic lighting control
- Automatic equipment shut down



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## Large Room Occupancy Sensor

This sensor provides a bidirectional pattern to cover a larger area. This sensor can cover 1000 sq. ft. and should be mounted near the center of the room. This sensor however, should not be pointed towards the door. Even when the door is closed, an occupancy sensor is able to detect movement through glass. See warnings and cautions.



### Specifications:

Model.....	78003
Leviton Part Number .....	OSC10-M0W
Multi-Technology .....	Uses both IR and Ultrasonic sensors
Coverage.....	360° 1000 Sq. Ft.
Transducer Pairs .....	2
Frequency .....	40 kHz
Housing .....	Rugged, high-impact, injection molded plastic.
Size & Weight: .....	4.5" dia., 1.5" height; 5 oz. (114 mm dia., 38 mm height; 142 g).
Color.....	White
Power Requirements.....	24 VDC, 40 mA
Output.....	24 VDC Active High
Operating Environment .....	32°F to 104°F (0°C to 40°C); 0% to 95% relative humidity, non-condensing.

## **WARNING AND CAUTIONS:**

For indoor use only

- To be installed and/or used in accordance with appropriate electrical codes and regulations.
- If you are unsure about any part of these instructions, consult a qualified electrician.
- Sensors must be mounted on a vibration free surface.
- All sensors must be mounted at least 6 feet away from air vents.
- Do not mount sensors closer than 10 feet from each other.
- Do not touch the surface of the lens. Clean outer surface with a damp cloth only.

## **General Operations**

Occupancy sensors have two tasks: keeping the video projector on while the room is occupied, and conversely turning the video projector off when unoccupied. Ultrasonic (Doppler shift) motion detection gives maximum sensitivity but can be vulnerable to false triggering from air conditioning currents, corridor activity, and movement of inanimate objects. Infrared motion sensing gives immunity to false triggering, but lacks sensitivity at greater distances. Multi-technology sensors combine the benefits of both infrared and ultrasonic technologies for unrivaled performance and reliability.

Upon entry into a room, the infrared will detect motion and enable the occupancy sensor. If lights are controlled, the TekMonitor will turn them on. Once the occupancy sensor is enabled by infrared motion, both the ultrasonic and infrared sensors will keep the occupancy sensor timer and TekMonitor's system off-timer active. When the occupancy sensor no longer detects motion, the lights will turn off and the TekMonitor will start its system-off countdown timer. If this timer reaches zero, the video projector will turn off.

*A dedicated internal microprocessor continually analyzes the room's environment and adjusts itself automatically. The internal timer and ultrasonic sensitivity are automatically adjusted. Once installed, the occupancy sensor does not require additional manual adjustment or calibration.*

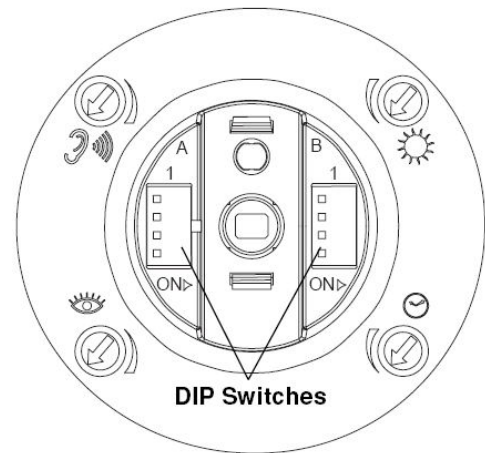
## **How the Occupancy Sensor Automatically Adapts:**

<b>Condition</b>	<b>Example</b>	<b>Adaptive Reaction</b>
Timer Left In Test Mode – The sensor remains in a 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, the current delayed off-time setting will be increased

# Controls

## DIP switch settings

Switch	Bank A	Switch Functions	Switch Settings
		OFF	ON
A1	Single/Multi-Tech Mode	Multi-Tech	Single Tech
A2	PIR/Ultrasonic Mode	PIR	Ultrasonic
A3	Manual Mode	Auto Adapting Enabled	Auto Adapting Disabled
A4	Walk-Thru Disable	Walk-Thru Enabled	Walk-Thru Disabled
	<b>Bank B</b>	<b>OFF</b>	<b>ON</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



## LEDs

Green – Ultrasonic detection

Red – Infrared detection

## Adjustments

Knob Color: Control	Function	Automatic Operation	Conditions Analyzed in Automatic Operation	Knob Setting Under Manual Operation**	Recommended Manual Setting
Green: Ultrasonic Sensitivity	Sets the ultrasonic range	Sensor analyzes room and sets sensitivity to optimal setting	Air currents False-on occurrences False-off "	Linear range setting Full CCW = min (off) Full CW = max range	50%
Red: Infrared Sensitivity	Sets the infrared range	Same as above	Room (surface) temp Lens dirt Signal to noise ratio	Same as above	75%
Black: Timer	Sets the length of time lights will remain on after last motion is sensed	Timer setting generally increased during learning period, then decreases to minimize "on" time	False-off occurrences Error free operation decreases the timer setting	Linear range setting Full CCW = min Full CW = max (30 min.)	33% 10 min.
Blue: Photocell	Sets level of daylight needed to prevent the lights from turning on	No automatic operation	N/A	Linear range setting Full CCW = min daylight Full CW = max (off)	Off unless used