Cut Sheet — Vacancy Sensor, Ceiling, Dual Tech-Low Voltage

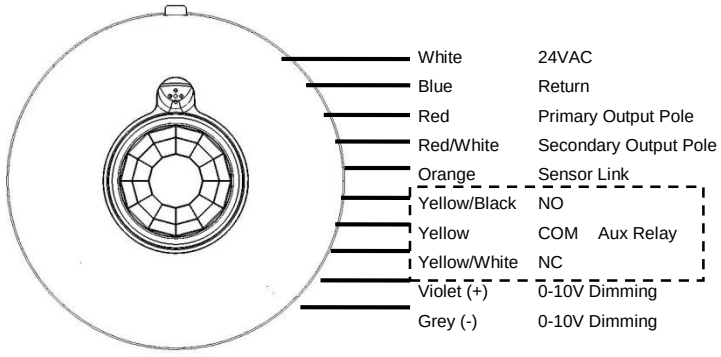
Part Number	Description
WVRSDD1-R-N	Vacancy sensor, recessed ceiling, standard range, dual technology, 24Vac, 1-pole, relay
WVRSDD2-N-N	Vacancy sensor, recessed ceiling, standard range, dual technology, 24Vac, 2-pole
WVRSDD2-R-N	Vacancy sensor, recessed ceiling, standard range, dual technology, 24Vac, 2-pole, relay
WVRXDD2-PR-N	Vacancy sensor, recessed ceiling, extended range, dual technology, 24Vac, 2-pole, photo sensor, relay
WVRSDD2-DPR-L	Vacancy sensor, recessed ceiling, standard range, dual technology, 24Vac, 2-pole, dimming, photo sensor, relay, low temp
WVRXDD2-DPR-L	Vacancy sensor, recessed ceiling, extended range, dual technology, 24Vac, 2-pole, dimming, photo sensor, relay, low temp

Features

- Vacancy only sensors meets CEC Title 24 and Local Law 48, New York requirements for Manual ON, Auto OFF operation
- Dual Technology - Passive infrared (PIR) and proprietary Accurate Detection Intelligence Voice (ADI-Voice) technology used to identify room state and control lights
- Smart Sense allows a voice response to confirm occupancy and turn lights ON immediately following an unwanted lights OFF action
- Advanced configuration done with Infrared Setting Unit (Douglas WIR-3110)
- Photo Sensor (P model) can increase energy savings though limiting ON when sufficient Natural Daylight provided
- Dimming (D models) can increase energy savings by dimming 0-10VDC ballast/LED drivers when sufficient Natural Daylight is available (LED drivers up to 25mA)

Operation

Low voltage Vacancy sensors draw power from a Douglas Lighting Controls Power Pack or 24Vac transformer. Dedicated recessed ceiling Vacancy sensors require a 24Vac wall switch to manually switch lights ON. Once ON, PIR and ADI-Voice are activated to maintain occupied condition. When occupancy is no longer detected, a diode pulse signal is sent and the lights will switch OFF. Lights can also be switched OFF manually.



Specifications

Important: Vacancy sensors require a manual ON capability. Therefore, for ceiling mounted vacancy sensors, a wall switch is needed to switch lights ON. A Douglas Lighting Controls 8600 series low voltage 24Vac 2-wire Wall Switch is required.

Inputs

- 24Vac ± 25%
- 60Hz
- Class 2 Low Voltage Source
- #18AWG

Outputs

- Diode Pulse: Each output is capable of driving up to four Diode Pulse relays.
- 0-10V Dimming: Connections are polarity sensitive. Sink current maximum 25mA per output. (D – dimming models)
- Aux Relay: SPDT Form-C contact rated for 1A at 30Vdc (R – relay models)

Power Consumption

- 9.5 mA Standard
- 14.0 mA with Auxiliary Relay

Approvals

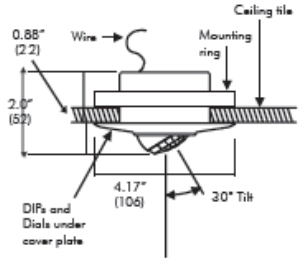
- FCC

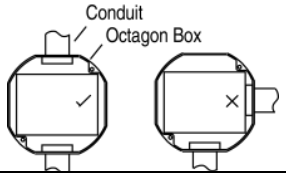
Environment

- Indoors, stationary, non-vibrating, non-corrosive atmosphere and non-condensing

Dimensions & Mounting

- Diversa recessed ceiling sensors fit into a 4” octagon box with a depth of 2-1/8” (for shallower boxes use the included mounting ring). For network wiring, connecting conduit on opposite sides of the octagon box.





Configuration Using Infrared Setting Unit WIR-3110

Diversa sensors are pre-configured at the factory for the most common applications. Dedicated Vacancy switches can only be configured with the Douglas Lighting Controls WIR-3110 Infrared Setting Unit. For more details and additional options please see the "WIR-3110 Manual".

Detection Mode – Dual Technology or Single Technology
ADI-Voice can be disabled.

Auto Time Mode
By setting the timeout to maximum, the sensor will be put into automatic mode which will adjust the time out automatically to maximize energy savings and occupant comfort.

Smart Sense
Allows voice detection to confirm occupancy and turn lights ON (over an adaptively determined period of time) in the event of an unwanted lights OFF action. Sensitivity of ADI-Voice is reduced over time until Smart Sense period ends. At that point, lights need to be switched ON manually.

Photo Sensing (P models)
When enabled (default), pressing the Manual Override Button will switch the lights ON only when the Photo Sensor detects insufficient daylight in the room.

Dimming (D models)
Automatically adjusts light level based on Natural Daylight available to reduce energy consumption

Multi-Level Switching (2-Pole w/o Photo Sensing option)
A switch on the sensor link can be used to either trigger both poles simultaneously or step through a multi-level sequence as described in the manual.

Multi-Level Photo Sensing - 2-Pole with Photo Option (P models)
Photo sensing on a 2-pole sensor can be configured to either restrict both poles or the secondary pole only; if set to "Secondary Pole Only", the primary pole will trigger based on occupancy, regardless of the photo setting.

Sensor Link
A wired (orange wire) communication network between Diversa low voltage sensors. Sensor Link allows multiple sensors to coordinate their signals and act together as a cohesive zone. This connection provides additional control functions as described below.

Diode Pulse: When a diode pulse switch is connected to sensor link, the switch can provide manual control to switch lights ON (required for Vacancy sensors). For 2-pole sensors, multi-level switching capabilities are available.

Maintained AC: If a maintained AC signal is applied to sensor link by connecting the orange to white wires, the sensors will be in an override mode. By default the sensor will turn the lights ON when disabled by this override (white and red wires). This is configurable via the IR setting unit.

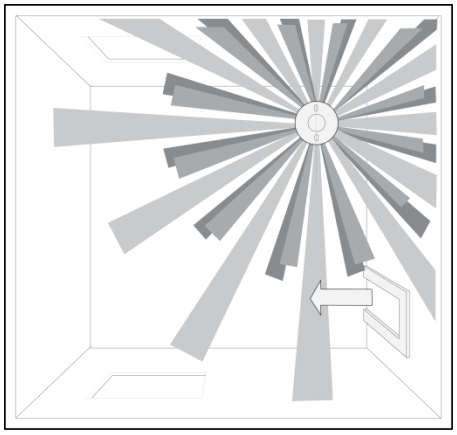
Configuration Options
Each building is unique in its lighting needs. Diversa sensors provide the user with a wide variety of configuration options to ensure each building's individual needs are met.

- Timeout 30 sec to 30 min. or self-adapting
- Adjustable PIR sensitivity
- Adjustable ADI-Voice sensitivity
- Enable/Disable ADI-Voice
- Enable/Disable LED Indicators
- 2-pole models can be set for different pole ON/OFF sequences (multi-level sequencing - see manual for details)
- Photo Sensing (P models) controls ON through daylight levels (adjustable)

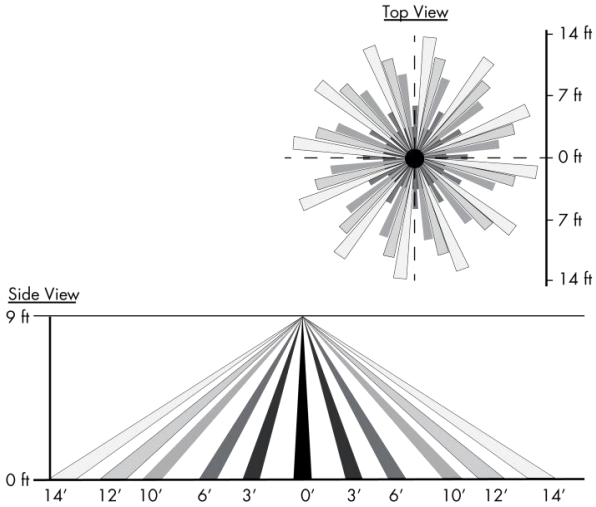
INSTALLATION

Installing Sensor in Standard Room - Standard Range Lens (S)

- Locate the sensor near the entrance door wall to prevent it from viewing out into the hallway.
- The lens can tilt, allowing the sensor to be pointed toward the area in front of the entrance door.
- Positioning the sensor in this manner ensures that an occupant moves across the longest detection beam upon entrance, utilizing the sensor's maximum PIR range.
- Optimal usage is to detect small motions such as hand movements
- Designed for a mounting height of 7-15ft
- ADI-Voice can detect around corners that PIR cannot to maintain occupancy

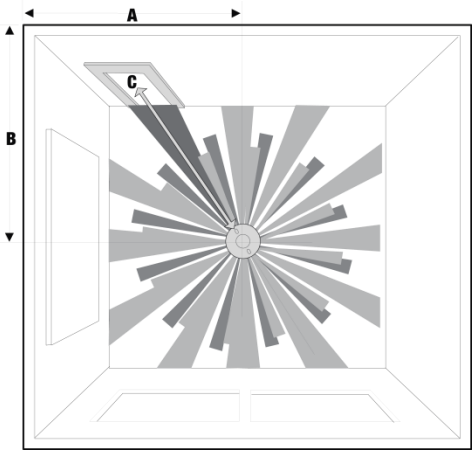


Typical Enclosed Office

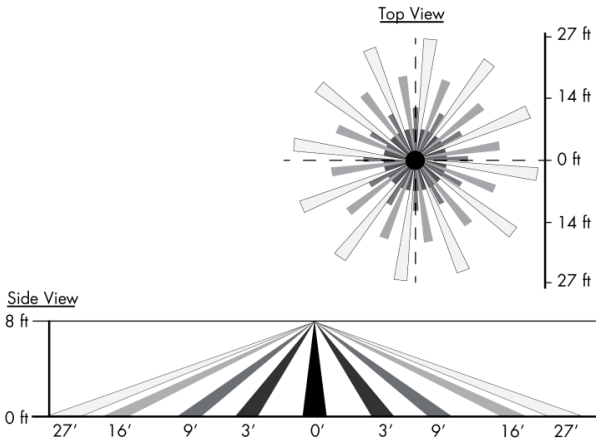


Installing Sensor in Large Room - Extended Range Lens (X)

- Place the sensor near the center of the room ceiling. Locate it so the approximate distance of 27ft in and over (A & B) or in dead center of room.
- Tilt the lens to aim the detection zone to the bottom of the door. (C)
- Positioning the sensor in this manner ensures that the beam does not reach outside the room without reducing sensitivity.
- Optimal usage is to detect large motions such as walking
- Designed for a mounting height of 7-15ft
- ADI-Voice can detect around corners that PIR cannot to maintain occupancy



Typical Classroom



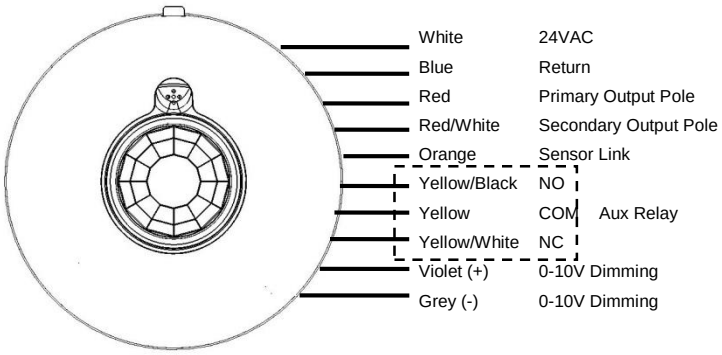
INSTALLATION & WIRING DIRECTIONS

Installation

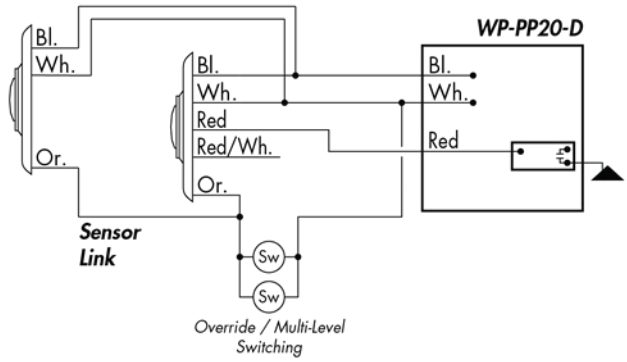
Mounting of the device requires a 2-1/8” deep or more, octagonal junction box. Install by recessing the device into the octagon box; lining up the mounting holes and securing it using the screws provided. If too shallow, use the spacer ring is provided.

Wiring

The WVR Series Low Voltage sensors are equipped with plug-in harness for easy installation. This harness has #22 AWG leads. Use appropriate sized wire-nuts to connect the wires to the incoming load terminations.



Wiring to a Power Pack



Wiring to a Relay Panel