Occupancy and Vacancy Sensors
Diversa® PIR Sensors

PIR sensors are the right choice for spaces with a high level of occupant movement and a clean line of sight to the sensor.

Features
- Perfect for applications calling for PIR only sensors
- Pre-configured at factory for “wire and it works” installation
- Onboard switches and dials for easy configuration changes
- Tilting lens on WOR series for directing sensors to, or away from, particular areas
- Vandal resistant lens on WOS series
- Sensor link to network up to 8 sensors for master/slave control in one area

Options include:
- Photo sensor for natural daylight harvesting
- 0-10v dimming for closed loop control
- Auxiliary relay for controlling devices such as HVAC or security systems
- Can be ordered in white, ivory, grey, black

WOR Series

WOS Series

faceplate sold separately

ASHRAE 90.1-2010

California Compliant
Diversa® Dual Technology Sensors

Diversa Dual Technology sensors are easy to install and use while still being highly configurable for specific requirements and locations. Combining proprietary ADI-Voice technology with industry standard PIR sensing minimizes energy consumption and provides very accurate occupancy detection when compared to ultrasonic/PIR sensors.

Features:
- Dual technology sensors for accurate occupancy detection
- Highly configurable for site specific requirements
- Configured with on-board switches and dials or with our handheld Infrared Setting Unit for ease and reduction of ladder time
- Tilting lens on WOR series and a ball/socket on WOW series provide adjustments for directing sensors to, or away from, particular areas
- Vandal resistant lens on WOS series
- Sensor link to network up to 8 sensors for master/slave control in one area

Options include:
- Photo sensor for natural daylight harvesting
- 0-10v dimming for closed loop control
- Auxiliary relay for controlling devices such as HVAC or security systems

ASHRAE 90.1-2010
### Specifications

#### WOW SERIES  
**Recessed Ceiling Sensors**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>Occupancy</th>
<th>Vacancy</th>
<th>Lens</th>
<th>Single Tech PIR</th>
<th>Dual Tech (PIR &amp; ADI-Voice)</th>
<th>24Vac (low voltage)</th>
<th>120/277Vac</th>
<th>347Vac</th>
<th>1-pole</th>
<th>2-pole</th>
<th>Dimming</th>
<th>Photo Sensor</th>
<th>Auxiliary Relay</th>
<th>Additional Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>WORSID1-N</td>
<td>X</td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td>X</td>
<td>X</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORSID1-DPB-L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORSDD1-R-N</td>
<td></td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORSDD1-DPB-L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW VOLTAGE</td>
<td></td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORSDD1-R-N</td>
<td></td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORSDD1-DPB-L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>PART NUMBER</td>
<td>Occupancy</td>
<td>Vacancy</td>
<td>Lens</td>
<td>Single Tech PIR</td>
<td>Dual Tech (PIR &amp; ADI-Voice)</td>
<td>24Vac (low voltage)</td>
<td>120/277Vac</td>
<td>347Vac</td>
<td>1-pole</td>
<td>2-pole</td>
<td>Dimming</td>
<td>Photo Sensor</td>
<td>Auxiliary Relay</td>
<td>Additional Feature</td>
</tr>
<tr>
<td>-------------</td>
<td>-----------</td>
<td>--------</td>
<td>------</td>
<td>-------------------</td>
<td>-----------------------------</td>
<td>----------------------</td>
<td>--------------</td>
<td>--------</td>
<td>--------</td>
<td>--------</td>
<td>---------</td>
<td>--------------</td>
<td>-------------------</td>
<td>------------------</td>
</tr>
<tr>
<td>WORSDD1-R-N</td>
<td></td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WORSDD1-DPB-L</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### WOW SERIES  
**Corner Mount Sensors**

<table>
<thead>
<tr>
<th>PART NUMBER</th>
<th>Occupancy</th>
<th>Vacancy</th>
<th>Lens</th>
<th>Single Tech PIR</th>
<th>Dual Tech (PIR &amp; ADI-Voice)</th>
<th>24Vac (low voltage)</th>
<th>120/277Vac</th>
<th>347Vac</th>
<th>1-pole</th>
<th>2-pole</th>
<th>Dimming</th>
<th>Photo Sensor</th>
<th>Auxiliary Relay</th>
<th>Additional Feature</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOWCDD2-DPB-R-N</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>WOWCDD2-R-N</td>
<td></td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>LOW VOLTAGE</td>
<td></td>
<td></td>
<td>S</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### WOW SERIES  
**Corner & Large Area Lens**

- **Top View**
- **Side View**

#### LENS OPTIONS
- S = Standard
- X = Extended range
- C = Corner
- L = Large Area
- B = High Bay

---

**LOW VOLTAGE**
- **Inputs**: 24Vac, Class 2 Low Voltage Source, 60Hz
- **Outputs**: Diode Pulse, 0-10V Dimming, Auxiliary Relay
- **Current Draw**: 9.5 mA Standard, 14.0 mA with Auxiliary Relay

**LINE VOLTAGE**
- **Power**: 120/277Vac or 347Vac, 60Hz
- **Contact Rating**: 120Vac, 800W; 277Vac, 1200W; 347Vac, 1500W
- **Power Consumption**: 5.7 mA
- **Certification**: Certified to applicable UL & CSA standards
Specifications

WOS SERIES  Wall Switch Sensors

Inputs:  24Vac, Class 2 Low Voltage Source, 60Hz
Power Consumption: 9.5mA Standard, 14.0mA with Auxiliary Relay

Outputs:  Diode Pulse, 0-10V Dimming, Auxiliary Relay

LOW VOLTAGE

- Power: 120/277Vac or 347Vac, 60Hz
- Contact Rating: 120Vac, 800W; 277Vac, 1200W; 347Vac, 1500W
- Power Consumption: 0.4 mA
- Certification: Certified to applicable UL & CSA standards

LINE VOLTAGE

- Power: 120/277Vac or 347Vac, 60Hz
- Contact Rating: 120Vac, 800W; 277Vac, 1200W; 347Vac, 1500W
- Power Consumption: 0.4 mA
- Certification: Certified to applicable UL & CSA standards

WOR SERIES  Lens Range and Coverage patterns

Standard Range Lens

Extended Range Lens

High Bay Lens

WOS SERIES  Lens Range and Coverage patterns

ASHRAE 90.1-2010
Diversa Occupancy & Vacancy Sensors

When interior spaces require sensor control for lights and loads, look no further that Diversa commercial grade occupancy and vacancy sensors. Diversa sensors can be used in a variety of locations to meet projects specifications while enabling your site to meet California Title 24, NYLL48 and AHSRAE compliance.

**Diversa Dual Technology** sensor are available in recessed ceiling, wall switch and corner mount designs and all use PIR and our ADI-Voice to maximize sensing effectiveness while minimizing false triggers from common interference items such as HVAC systems, music, vibrations, knocking and traffic. These sensors meet the needs in high spec projects by providing a wide variety of configuration features and options. Configurations can be done with on-board switches and dials or through the convenience of our handheld Infrared Setting Unit.

**Diversa PIR** sensors are available in recessed ceiling and wall switch formats and are competitive with other PIR sensors in the market, but offer quick, easy installation and are factory configured for the most common uses. Our PIR sensors also offer features and configurations that can be set with on-board switches and dials.

---

**Features:**
- Low voltage (24Vac), 120/277Vac, and 347Vac for recessed ceiling and wall switch sensors
- Low voltage (24Vac) for corner mount sensors
- All sensors can be configured as Vacancy sensors (Manual ON, Auto OFF)
- Dedicated Vacancy sensors are available to meet California Title 24, ASHRAE 90.1 and New York Local Law 48 requirements for reducing building lighting energy consumption

**Advantages:**
- Single and proprietary dual sensing technology for exceptional coverage
- Tilt and Swivel lens option available for optimization of detection capability
- IR Setting Unit for deck level configuration of dual technology sensors
- Diode Pulse output on Low Voltage Sensors for direct drive of Douglas relays
- Wall Switches (WOS series) can be ordered in White, Ivory, Grey, Black

**Accessories:**
- Infrared Setting Unit (WIR-3110)
- Diode Pulse Power Packs:
  - 120/277Vac 20A 1-pole (WP-PP20-D)
  - 120/277Vac 20A 2-pole (WP-PP20-2P-D)
  - 347Vac 20A 1-pole (WP-PP20-347-D)

---

### Power Packs & Infrared Setting Unit

**Power Pack**

Diversa Power Packs provide 24Vac power to Diversa low voltage sensors and control loads based on the sensor’s commands.

**Specifications**

| Load Voltage: | 120/277Vac or 347Vac, Class 1 Source, 60Hz |
| Switching Load: | 120/277Vac or 347Vac |
| Inputs: | Diode Pulse |
| Output Power Source: | 24Vac, 140 mA, Class 2 |
| Certification: | Certified to applicable UL & CSA Standards |
| | Plenum rated UL2043 |

**Infrared Setting Unit**

The Infrared Setting Unit is a handheld remote configuration tool for Diversa Dual Technology sensors. Read, configure, and address sensors through an LCD display and simple dial interface. Ladder time is avoided by programming sensors from the floor.

**Part Numbers:**

| Part Numbers: | |
| WP-PP20-D (120/277Vac, 1-pole) | WP-PP20-2P-D (120/277Vac, 2-pole) |
| WP-PP347-D (347Vac, 1-pole) |
Functionality

Smart Sense
When occupancy is no longer detected and lights time out, PIR and ADI-Voice detection stay active for 30 seconds to immediately reactivate the lights through motion or voice. Once Smart Sense has expired, sensors would operate as configured (vacancy switches would require a manual light switch for switching lights ON; dual technology sensors would require motion to be detected by PIR to switch lights on and activate ADI-Voice).

Self-Adapting Technology
Diversa sensors have an Auto Mode which learns vacancy tendencies rather than manually setting the vacancy timer for a predetermined period of time. This technology can save energy by understanding how long a time delay is needed.

Walk Through Mode
Lights are switched OFF after 3 minutes if occupancy not detected after 30 seconds of initial detection (lights ON) saving energy by shortening the OFF delay when a quick entrance and exit occurs.

Sensor Link
Sensor Link communication network for Diversa low voltage (24Vac) sensors. Sensor Link allows up to 8 sensors to communicate and coordinate their actions to act as a one cohesive zone. Sensor Link also provides additional control functions:

- By using a low voltage diode pulse light switch connected to the Sensor Link network, manual control over the lights can be achieved. Multi-level sequencing can be achieved by using 2-pole sensors.
- Maintained AC: Sensor control is disabled while AC is provided to the Sensor Link network (e.g. reception area remains lit during business hours, but after hours lights will only switch on when motion is detected - AC into Sensor Link network is managed through a time-of-day controller).

Restroom Mode (PIR 2-pole only)
Allows pole delay timer to be synchronized for both pole or Offset (pole 2 OFF delay is extended 50% longer than pole 1 as set on time delay dial) e.g. - a room fan connected to pole 2 would stay on for 15 minutes if time delay for light (pole 1) set at 10 minutes.

Natural Daylight Mode (models with photo sensor)
Natural light is used in a room until light level drops below Light Level dial set point. Lights are then activated to provide additional illumination.

Light Level Mode (models with photo sensor and dimming)
Closed Loop Control of the light level. Lights come on and self-adjust to the light level set point when there is insufficient natural daylight.

Relay Control
Diversa low voltage sensors can control up to 4 relays through a diode pulse signal.
toll free: 877-873-2797
direct: 604-873-2797
lighting@douglaslightingcontrols.com
www.douglaslightingcontrols.com

Your Douglas Lighting Controls representative: