### Technical Data

**Wall Switch Occupancy Sensor**

**Line Voltage with Neutral**

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<table>
<thead>
<tr>
<th>PART No.</th>
<th>FEATURES</th>
<th>SPECIFICATIONS</th>
</tr>
</thead>
<tbody>
<tr>
<td>WOSSDU1-P-TW</td>
<td>• Occupancy Sensor, Switch Station, Standard Lens, Dual Technology, 120/277VAC, 1-pole, Photo Sensor, Neutral Wire, Vandal Lens, White</td>
<td><strong>Power</strong>&lt;br&gt;• 120/277VAC&lt;br&gt;• 60 Hz</td>
</tr>
<tr>
<td>WOSSDU2-P-TW</td>
<td>• Occupancy Sensor, Switch Station, Standard Lens, Dual Technology, 120/277VAC, 2-pole, Photo Sensor, Neutral Wire, Vandal Lens, White</td>
<td><strong>Contact Ratings</strong>&lt;br&gt;• 120VAC - 800W&lt;br&gt;• 277VAC - 1200W</td>
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</tbody>
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**Features**

- 180° coverage pattern to maximize the sensor area.
- Dual Technology sensors utilizes PIR & ADI-Voice (microphonic) technology. ADI-Voice uses advanced digital signal processing to accurately detect of human speech to minimize false actions.
- Smart Sensing mode allows for an immediate return to occupied mode in the event of a false off being triggered.
- Programmed with on-board DIP switches and dials or using an Infrared Setting hand-held device for convenience.

**Operation**

Line voltage sensors draw control power directly from the lighting circuit they are intended to control. When in operation the sensor will detect initial motion using PIR; once motion is detected, the internal contact will close. ADI-Voice is then activated to work alongside PIR to maintain the occupied condition as long as people are within the sensing range.

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**DPI Settings**

- Photo Setpoint Dial
  - Used to determine light level for Photo Functions
- Override Button
  - On-board button for override and testing

**Vacancy Time Dial**

- Ranges form 30s to 30 min.
- Full turn for Auto Time.

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**Environment**

- Indoors, stationary, non-vibrating, non-corrosive atmosphere and non-condensing humidity
- Ambient Operation Temperature:
  - 32°F to 104°F (0°C to 40°C)
- Storage Temperature:
  - -14°F to 140°F (-25°C to 60°C)
- Low temperature and high humidity option products: PCB conformal coated for resistance to condensing moisture and operation to -40°C/F

**Approvals**

- Certified to:
  - UL 508, UL244A, CSA C22.2 #14

**Power Consumption**

- 400 micro amps

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**Contact Information**

Ph. 877-873-2797  
www.DouglasLightingControls.com

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**Dimensions & Mounting**

- Mounts in a standard gang box
- Only SQUARE CORNER mud-rings fit these devices.

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*Ph. 877-873-2797 www.DouglasLightingControls.com*
Wiring Instructions

The WOS Series Line Voltage sensors are equipped with #14 AWG leads. Use appropriate sized wire-nuts to connect the wires to the incoming load terminations.

Electrical Connections

Sensor Settings

Programming - IR / Manual Setting
Programming can be done either with the DIP switches and dials on-board the device or with the WIR-3110 setting unit. For more details and additional options, please see the “WIR-3110 Manual”.

Detection (Dual or PIR Only)
When in operation, the sensor will detect initial motion using Passive Infrared; once motion is detected the ADI-Voice is then activated to work alongside the PIR to maintain occupancy. The ADI-Voice can be disabled on any dual tech sensors.

Automatic Timeout
By setting the timeout dial 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 Sensing
When vacancy occurs, sensitivity of the ADI-Voice technology transitions from maximum to zero over an adaptively determined time period, based on occupancy tendencies. During this period, ADI-Voice can turn the lights back on immediately, even with no line-of-sight to the sensor, assuring the best combination of user convenience and energy savings.

Energy consumption due to false triggers is minimized by the automatic walk-through mode. This feature turns the lights off after 3 minutes if no occupancy detection occurs after the first 30 seconds after initial turn on.

Photo Sensing (-P)
When enabled, occupancy alone will not trigger the output state to on. If occupancy is detected AND there is a deficiency of natural light, the output is triggered on. An increase in natural light will not force the lights off but as the ambient light level drops the lights will turn on automatically.

Multi-Level Photo Sensing (2-Pole w/ Photo Option)
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.
INSTALLATION

- Mount the WOS Series sensor on the wall about 4’ above floor level near the midline of the room so its PIR detection zones cover the room area and any obstructions are within range of the ADI-Voice detector.
- There should be no obstructions between the sensor and the room entrance. This ensures that the sensor’s PIR lens will be activated when a person enters the room, which will subsequently trigger the ADI-Voice.

Installing in Offices

- Sensor effective in obstructed spaces.
- Voice sound re-activation prevents lights out condition.

Installing in Washrooms

- Sensor effective in partitioned spaces.
- Voice sound re-activation prevents lights out condition.

Standard Lens

- Optimal usage is to detect small motions such as hand movements
- Designed for a mounting height of up to 4 ft.
- ADI-Voice can detect voices around corners to maintain occupancy.

Typical Office

Typical Washroom
Installation & Wiring Instructions

Installation
Mounting of the device requires a standard gang box. Only SQUARE CORNER mud-rings fit these devices.

Wiring

The WOS Series Line Voltage sensors are equipped with #14 AWG stranded leads. Use appropriate sized wire-nuts to connect the wires to the incoming load terminations; for installation with field-installed conductors of 60ºC minimum rating.

DIP Switches
A bank of eight DIP switches and two rotating controls can be used to manually setup and configure the sensor.

<table>
<thead>
<tr>
<th>DIP #</th>
<th>Function</th>
<th>WOSSDU1-P-TW</th>
<th>WOSSDU2-P-TW</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Voice Detection</td>
<td>Disabled</td>
<td>Enabled</td>
</tr>
<tr>
<td>2</td>
<td>Motion Detection Sensitivity</td>
<td>High</td>
<td>Normal</td>
</tr>
<tr>
<td>3</td>
<td>Detection LED</td>
<td>Disabled</td>
<td>Enabled</td>
</tr>
<tr>
<td>4</td>
<td>Auto or Manual ON</td>
<td>Occupancy (Auto-On)</td>
<td>Vacancy (Manual On)</td>
</tr>
<tr>
<td>5</td>
<td>Photocell Inhibit</td>
<td>Disabled</td>
<td>Enabled</td>
</tr>
<tr>
<td>6*</td>
<td>Photocell Control</td>
<td>Inhibit Primary Pole Only</td>
<td>Inhibit Both Poles</td>
</tr>
<tr>
<td>7</td>
<td>Manual Override Button</td>
<td>Disabled</td>
<td>Enabled</td>
</tr>
<tr>
<td>8</td>
<td>Settings Input</td>
<td>IR Handheld (WR-3110)</td>
<td>DIPS &amp; Dials</td>
</tr>
</tbody>
</table>

*2-Pole models only

CAUTION
TURN POWER OFF AT THE CIRCUIT BREAKER BEFORE WORKING WITH OR NEAR HIGH VOLTAGE