

# DT WLS DIM

0-10 V Dimming Dual Technology Wall Switch Occupancy Sensor



The DT WLS DIM is a line voltage, Passive Infrared (PIR) and 40 kHz Ultrasonic wall switch occupancy sensor with 0-10 volt dimming capability intended to control lighting in commercial spaces. The combination of both technologies enhances occupancy detection in difficult applications. DIP switch adjustable technology options to initiate the load ON and maintain the load ON with either or both technologies. Control options via smart remote include photocell force OFF or hold OFF and partial ON or partial OFF capabilities. The convenient "Switch Link" feature enables up to four sensors to link together for peer to peer grouping achieving expanded detection zones and multi-way switching.

## Applications

The typical application is for small offices, conference rooms and break rooms. For best performance use this sensor in enclosed spaces no larger than 20' x 16'.

## Key Features:

- 0-10 volt dimming PIR & 40 kHz ultrasonic wall switch occupancy sensor
- Trigger mode settings enable what sensing technologies are used to initially turn the load ON and what technologies are used to keep the load ON
- Adjustable ultrasonic reach setting from 25% to 100%
- Line voltage lighting control (120/230/277 VAC, 50/60 Hz)
- 180° coverage pattern
- Manual ON or Automatic ON option
- Partial ON can be adjusted from 10-70% (Factory Setting 50%)
- Partial OFF can be adjusted from 10-50%
- Hold OFF or Force OFF light level feature
- Mounts to a single-gang NEMA-style, standard switch box & decorator-style wall plate by others

|                                                     |                                                                                                                                                                                       |
|-----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Project Name:                                       |                                                                                                                                                                                       |
| Location:                                           |                                                                                                                                                                                       |
|                                                     |                                                                                                                                                                                       |
| <b>DT WLS DIM Specifications</b>                    |                                                                                                                                                                                       |
| Item No.                                            | 54551 DT WLS DIM-W (white)<br>54548 DT WLS 1-LA (light almond)<br>54550 DT WLS DIM-BK (black)<br>54549 DT WLS DIM-GY (gray)                                                           |
| Voltage                                             | 120/230/277 VAC, 50/60 Hz                                                                                                                                                             |
| Mounting                                            | single-gang NEMA-style switch box (standard switch box) & decorator-style wall plate by others                                                                                        |
| Load Rating                                         | 0-800 watts @ 120/230/277 VAC, 50/60 Hz tungsten, magnetic or electronic ballast • 1/6 hp<br>0-600 watts @ 120/230/277 VAC, 50/60 Hz CFL or LED electronic ballasts C ≤ 132 µF max.   |
| Sensing Technology                                  | 40 kHz ultrasonic & passive infrared                                                                                                                                                  |
| Dimming Output                                      | 1-10 volt (purple & gray) 50mA, max 25 (1-10 electronic dimming ballasts/drivers)                                                                                                     |
| Time Setting                                        | IQ/Test, 5, 15, 30 minutes                                                                                                                                                            |
| Light Level Setting                                 | 80 - 2000 lux / 8 - 200 fc                                                                                                                                                            |
| Environment                                         | IP20 rated, 0°C to +40°C, 32°F to +104°F                                                                                                                                              |
| Ultrasonic Coverage at 1.2 m / 4 ft Mounting Height | minor motion: max. 8 x 8 m (64 sq.m.)<br>max. 18 x 12 ft (216 sq.ft.)<br>radial: max. 7 m (77 sq.m.) 24 ft (904 sq.ft.)<br>tangential: max. 7 m (77 sq.m.) 24 ft (904 sq.ft.)         |
| PIR Coverage at 1.2 m / 4 ft Mounting Height        | minor motion: max. 6.5 x 5.5 m (36 sq.m.)<br>max. 21 x 18 ft (378 sq.ft.)<br>radial: max. 7 m (77 sq.m.) 24 ft (904 sq.ft.)<br>tangential: max. 20 m (628 sq.m.) 54 ft (4,500 sq.ft.) |
| Dimensions                                          | 105 x 44.1 x 46.5 mm, 4.13 x 1.74 x 1.83 in, (LxWxD)                                                                                                                                  |
| Warranty                                            | 5 years                                                                                                                                                                               |
| Certifications                                      | C-UL-US Listed, RoHS compliant, California Compliant                                                                                                                                  |

- "Switch Link" communication allows for up to 4 sensors to be grouped together
- IQ Mode dynamically adjusts the 'ON' time delay by learning individual room occupancy
- Walk through mode option will switch the load OFF in 3 minutes if no additional detection occurs after the first 30 seconds
- Visible alert feature provides a momentary OFF/ON blink, warning that the load will shut OFF in 10 seconds unless additional motion is detected
- Service mode option deactivates the automated functions of the sensor and the load is only manually controlled using the ON/OFF button
- Optional voltage barrier included to provide separation from class 1 and class 2 circuits



Passive Infrared  
Ultrasonic



21 Ft Minor Motion  
54 Ft Tangential



8 - 200 fc



Line Voltage



0 - 10 Volt Dimming



www.steinell.net

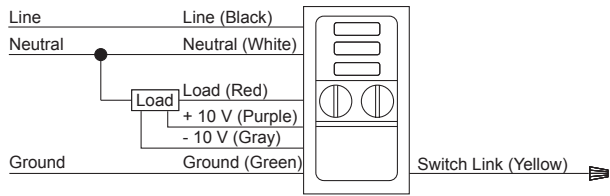
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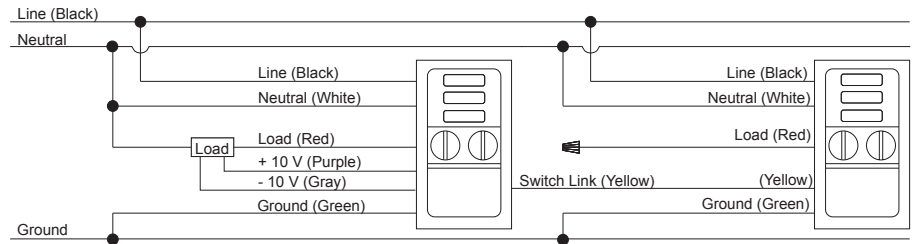


## Wiring

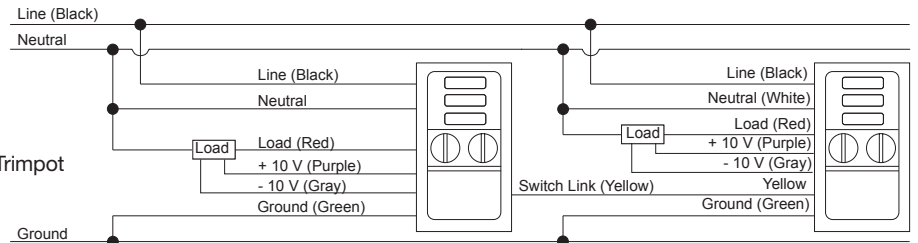
### Basic Wiring



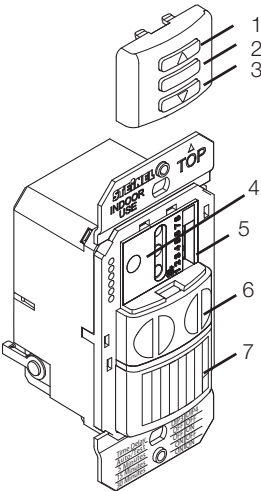
(Master / Auxiliary) Three-way Wiring - up to maximum 4 sensors can be grouped via Switch Link



(Master / Master) Three-way Wiring - up to maximum 4 sensors can be grouped via Switch Link

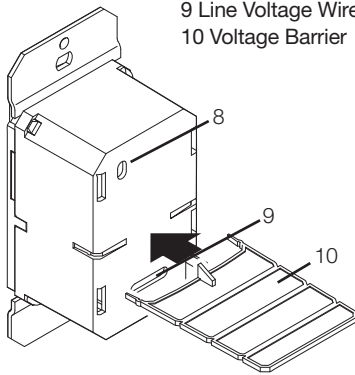


## Components

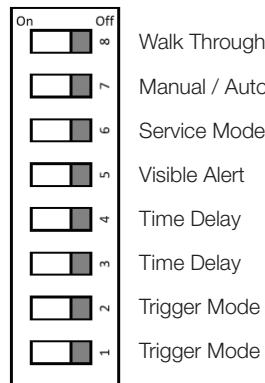


- 1 DIM Up
- 2 ON/OFF Button
- 3 DIM Down
- 4 Ultrasonic Sensitivity Adjustment Trimpot
- 5 DIP switches
  - (1-2) Trigger Mode
  - (3-4) Time Delay
  - (5) Visible Alert
  - (6) Service Mode
  - (7) Mode Auto ON / Manual ON
  - (8) Walk through Mode ON / OFF
- 6 Ultrasonic Transducers
- 7 PIR Lens

- 8 Low Voltage 0-10 Volt Dimming Wires
- 9 Line Voltage Wires
- 10 Voltage Barrier



## Settings

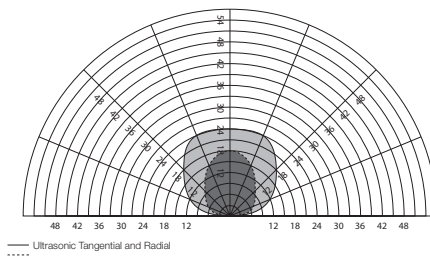
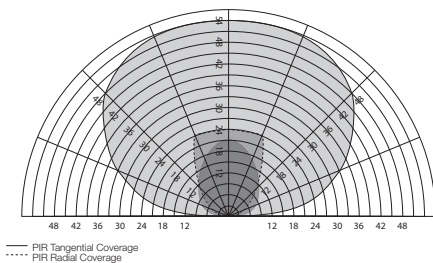


The sensors ultrasonic sensitivity and reach is adjusted with a trim potentiometer (dial). The left stop is minimum 25% (counter clockwise) the right stop is maximum 100%

| Trigger Mode    | Initial Occupancy | Maintain Occupancy | Trigger Mode | DIP 1 | DIP 2 |
|-----------------|-------------------|--------------------|--------------|-------|-------|
| Factory Setting | Both              | Either             | Either       | OFF   | OFF   |
| Option A        | PIR               | Either             | Either       | OFF   | ON    |
| Option B        | PIR               | PIR                | PIR          | ON    | OFF   |
| Option C        | Both              | Both               | Both         | ON    | ON    |

| Time Delay | DIP 3 | DIP 4 |
|------------|-------|-------|
| IQ / Test  | OFF   | OFF   |
| 5 Minutes  | OFF   | ON    |
| 15 Minutes | ON    | OFF   |
| 30 Minutes | ON    | ON    |

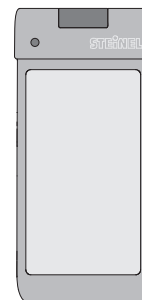
## Coverage



--- PIR Tangential Coverage  
 ..... PIR Radial Coverage

--- Ultrasonic Tangential and Radial

## Smart Remote



### Description

- Setting done by APP and universal Smart Remote
- Replaces all existing remote controls
- Connection via Bluetooth with smartphones and tablets
- iOS and Android APP
- Saving/loading of settings for easy copy & paste installation



Download APP



Pair via Bluetooth



Ready for Use