

# DUAL TECHNOLOGY 0-10 VOLT DIMMING WALL SWITCH OCCUPANCY SENSOR

DW-311

Defaults to Manual-ON operation for maximum energy savings

High sensitivity and dense coverage for exceptional performance

Color-matched lens and low profile for appealing design



Supports Partial-ON operation for energy code compliance or incentives

120/230/240/277VAC and 347VAC models

Allows fully functional multi-way control from up to four switch locations

## DESCRIPTION

The DW-311 dual technology dimming wall switch sensor can turn lights OFF and ON based on occupancy and allow the user to increase or decrease the lighting level. It combines the benefits of passive infrared (PIR) and ultrasonic occupancy detection technologies and works with 0-10 VDC dimming drivers and ballasts to control lighting loads including LEDs.

## OPERATION

The DW-311 installs in a single gang junction box. Factory default operation is for Manual-ON, so that users turn lights on only when needed. Once the space is vacated and the time delay elapses, lights automatically turn OFF. DIP switch settings enable a variety of control options such as Auto-ON operation, high and low trim, ramp up and fade down times, power loss mode, smart light level, walk-through and test modes. Additional DIP switch settings allow the user to choose which sensing technologies turn ON, hold ON or retrigger the lighting.

On loss of normal power to the DW-311, the 0-10V dimming control will open. Any light fed with a separate circuit but controlled by the unit's 0-10V signal will go to 100%. When combined with a

Wattstopper ELCU-200, this ensures lights fed with a separate Emergency Power Circuit but dimmed with the DW-311's 0-10V signal circuit will go to 100% when normal power fails.

## PARTIAL-ON OPTION

When set for Automatic-ON operation, the DW-311 typically comes ON to the last non-zero light level for occupant comfort and convenience. However, this default setting may be changed to a fixed light level value of 50%, 75% or 100%. The dimmed level options (Preset On Level) support new state and federal energy code requirements.

## APPLICATIONS

This dual technology sensor has the flexibility to work in a variety of applications including spaces that benefit from enhanced small motion detection. Common applications include small and executive offices, small and medium conference rooms and lunch/break rooms. Multiple DW-311 sensors may be used to control a lighting load in spaces with up to four switch locations; each device provides fully functional dimming control. When additional sensors are used for multi-way control, each connected sensor expands the coverage area.

## FEATURES

- Vandal resistant lens combines precise coverage with durability
- Presentation mode may be deactivated to allow Auto-ON operation after 15 second time delay for spaces with transient occupancy
- Optional smart light level adapts ambient light hold off threshold to meet user needs
- Selectable walk-through mode turns lights off three minutes after the room is initially occupied if no motion is detected after the first 30 seconds
- Test mode allows quick and easy verification of coverage

- Selectable audible and/or visual alerts for impending shutoff
- LED indicates occupancy detection
- Service mode allows sensor to operate as a service switch in the unlikely event of a failure
- Zero-crossing for long relay life
- No derating required for multi-gang applications
- Sensor coverage tested to NEMA Guide Publication WD 7-2000
- Compatible with decorator wall plates
- This product meets the material restrictions of RoHS

PROJECT	LOCATION/ TYPE
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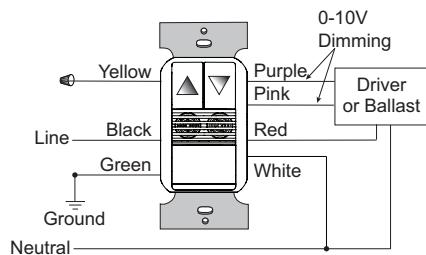
## SPECIFICATIONS

- DW-311: 120/230/240/277VAC; 50/60Hz
- DW-311-347: 347VAC; 50/60Hz
- 8" flying leads for line, load, ground, and multi-way connections
- Dimming control signal: 0-10VDC, sinks up to 50mA for control of compatible ballasts (25 if each sources 2mA); Class 1 wiring
- Time delays: 3, 5, 15 or 30 minutes, walk-through, test-mode
- Power up after power loss: On, Off or last state

- Coverage: Major motion, PIR 35' x 30' Ultrasonic 20' x 20'  
Minor motion, PIR 20' x 15', Ultrasonic 15' x 15'
- Sensitivity adjustment: PIR (high/low), Ultrasonic (fully variable)
- Dimensions (L x W x D): 2.73" x 1.75" x 1.81" (69mm x 44mm x 46mm)
- UL and cUL listed (E101196). Complementary Listed to "Emergency Lighting Equipment", (UL924)
- Five year warranty

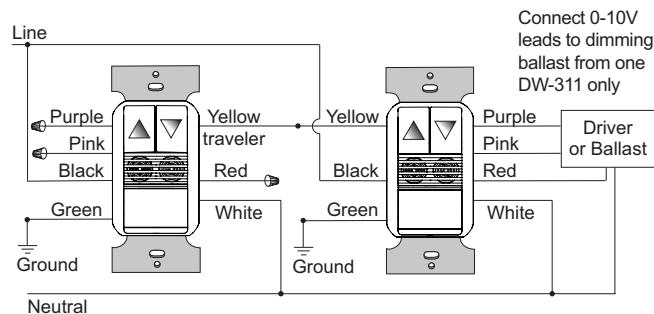
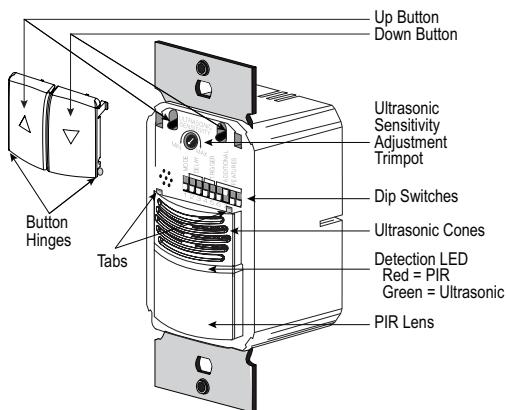
## WIRING AND CONTROLS

### Wiring Diagrams



**Note:** Requires Class 1 wiring for 0-10V dimming.

### Product Controls

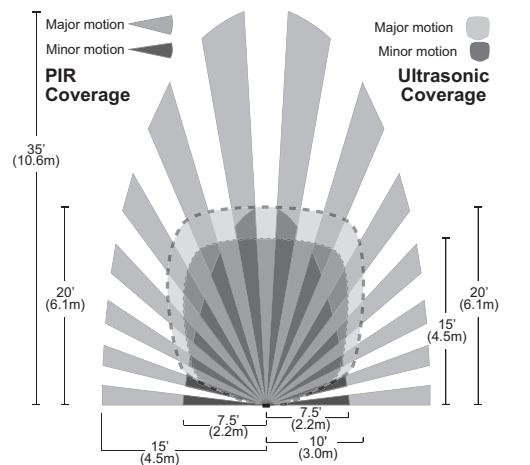


### Multi-way wiring

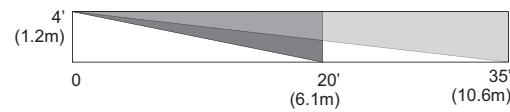
**Note:** All units should be on the same phase.

**NOTE:** Per UL, the 0-10V negative dimming wire color has been changed from gray to pink.

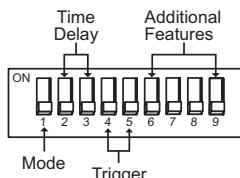
## COVERAGE PATTERNS



For best performance, Legrand recommends using this sensor in spaces no larger than 18' x 15'.



## DIP SWITCH SETTINGS



Mode	1
Manual - On	↑
Auto - On	↓

Time Delay	2	3
Test/3 min	↓	↓
5 minutes	↓	↑
<b>15 minutes</b>	↑	↓
30 minutes	↑	↑

↑=ON ↓=OFF

Trigger Mode	Initial Occupancy	Maintain Occupancy	Re-trigger	4	5
Standard	Both	Either	Either	↓	↓
Option A	PIR	Either	Either	↓	↑
Option B	PIR	PIR	PIR	↑	↓
Option C	Both	Both	Both	↑	↑

Default Values Shown in **Bold**

Additional Features	6	7	8	9	Green LED # of Blinks
Exit Programming Mode	↓	↓	↓	↓	
Visual Alert	↓	↓	↓	↑	1=OFF, 2=ON
Audio Alert	↓	↓	↑	↓	1=ON, 2=OFF
Walk-Thru	↓	↓	↑	↑	1=OFF, 2=ON
PIR Sensitivity	↓	↑	↓	↓	1=100%, 2=50%
High Trim	↓	↑	↓	↑	1=10V, 2=Manual Adjustment
Low Trim	↓	↑	↑	↓	1=0V, 2=Manual Adjustment
Ramp Up Time	↓	↑	↑	↑	1=1, 2=2.5, 3=5, 4=10s
Fade Down Time	↑	↓	↓	↓	1=2.5, 2=5, 3=15, 4=30s
Light Level Adjust	↑	↓	↓	↑	1=Disable, 2=Enable, 3=Smart Light Level
Power Loss Mode	↑	↓	↑	↓	1=Keep Last State, 2=Default On, 3=Default Off
Presentation Mode	↑	↓	↑	↑	1=ON, 2=OFF
Service Mode	↑	↑	↓	↓	1=OFF, 2=ON
Preset On Level	↑	↑	↓	↑	1=Last Non-Zero Value, 2=50%, 3=75%, 4=100%
Non-Dim Mode	↑	↑	↑	↓	1=OFF, 2=ON
Reset To Default	↑	↑	↑	↑	Press and Hold UP or DOWN for 5 seconds

## ORDERING INFORMATION

Catalog #	Color	Voltage	Load Rating
DW-311-W	White		
DW-311-W-U	White		
DW-311-LA	Light Almond		
DW-311-I	Ivory		
DW-311-I-U	Ivory		
DW-311-G	Gray		
DW-311-B	Black		
DW-311-R	Red		
DW-311-R-U	Red		
DW-311-347-W	White	347VAC; 50/60Hz	0-1500W ballast, LED; 1/4hp motor
		120VAC; 50/60Hz	@ 120VAC: 0-1000W ballast, E-ballast, LED, tungsten; 1/4hp motor
		or	or
		230/240/277VAC; 50/60Hz	@ 230/240/277VAC: 0-1200W ballast, E-ballast, LED; 1/4hp motor

-U = BAA/TAA compliant. Product is compliant with Buy American Act and Trade Agreement Act

Order wall plate separately.

26611r7 Rev 05/24

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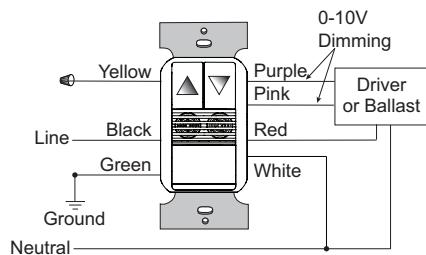
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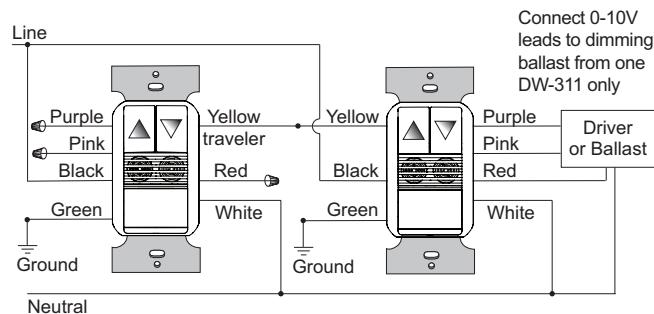
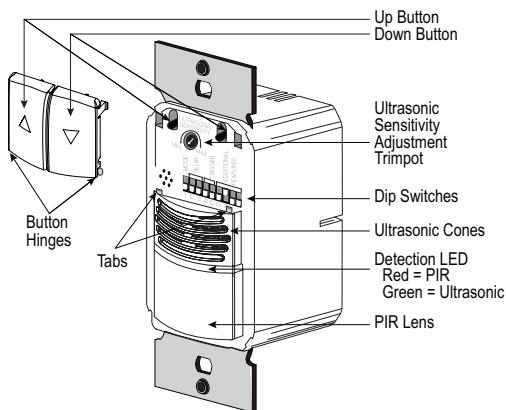
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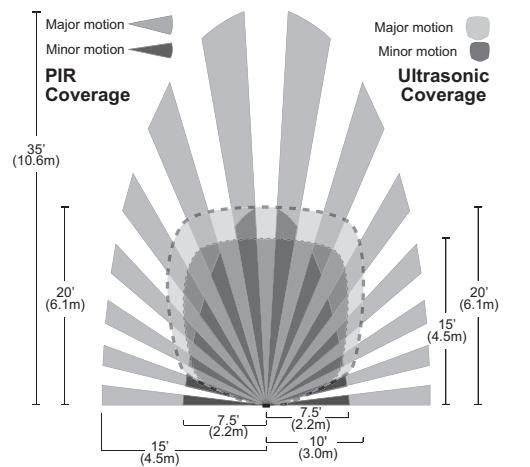


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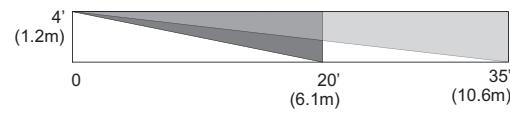
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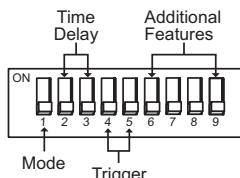
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DW-311-LA	Light Almond		
DW-311-I	Ivory		
DW-311-I-U	Ivory		
DW-311-G	Gray		
DW-311-B	Black		
DW-311-R	Red		
DW-311-R-U	Red		
DW-311-347-W	White	347VAC; 50/60Hz	0-1500W ballast, LED; 1/4hp motor
		120VAC; 50/60Hz	@ 120VAC: 0-1000W ballast, E-ballast, LED, tungsten; 1/4hp motor
		or	or
		230/240/277VAC; 50/60Hz	@ 230/240/277VAC: 0-1200W ballast, E-ballast, LED; 1/4hp motor

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