

# Provolt™ Series Dual Relay Passive Infrared (PIR) Occupancy Sensors



Light Pipe



## DESCRIPTION

The Leviton Provolt™ Series Dual Relay Occupancy Sensors combine line voltage dual relay occupancy sensors and photocells into a self-contained unit. The integrated design alleviates the need for separate power pack and occupancy sensor wiring making it a low-cost, efficient energy solution for new construction and retrofits. For true daylight harvesting applications, integrated photocells provide consistent daylight design levels by actively switching the connected load(s) ON and OFF in response to available natural light to maximize energy savings. Vacancy timers continually analyze and adjust to changing conditions using the latest microprocessor-based technology to optimize performance. Auto-ON/ auto-OFF automatically turns lights ON and keeps them ON when occupancy is detected and automatically turns lights OFF when the space is vacant or unoccupied. Wire terminals allow for simple connection to a line-voltage circuit and are ideal for existing buildings with limited access to wiring and new construction.

## APPLICATIONS

- Can be used to comply with ASHRAE 90.1 and 2016 California Title 24, Part 6 occupancy/ vacancy sensing, automatic shut-off, daylight harvesting and stairwell requirements
- Auto-ON/auto-OFF
- Manual-ON/auto-OFF
- Dual relay modes include:
  - Fan control
  - Auto-ON/manual-ON
  - Stairwell control
  - Step dimming—alternating daylighting levels
  - Step dimming—load 1 primary

## FEATURES

- Uses industry-exclusive digital (4 element) PIR circuitry for fewer false triggers from unwanted sources such as HVAC systems
- A Fresnel lens establishes dozens of detection zones requiring the heat source to move from one zone to another to trigger the sensor
- Auto-temperature adjusts tech sensitivity for optimal detection/operation
- Auto-adapting: time delay and sensitivity are continually adjusted to occupancy pattern of use
- Vacancy sensing time outs:
  - Delayed OFF timer
  - Exclusive walk-through feature
- Output short circuit protection
- Industry-exclusive self-configuring local manual switch input: momentary or maintained switches are supported
- Presentation mode allows user to turn lights OFF and keep them OFF while the room is occupied
- Adjustable time delay: 30s, 5min, 10min, 20min, 30min
- Test mode for simplified commissioning
- Manual switch and emergency override are Class 1 and Class 2 circuits. Class 2 circuits provided for flexibility.
- Industry-exclusive “fail-safe” circuitry: in the event of product failure, return-to-closed feature causes the relay to default ON which eliminates life safety concerns
- Industry-exclusive H.I.S. (High Inrush Stability) technology designed to handle today’s high inrush electronic ballast loads and offer unmatched durability and service



## PRODUCT DATA

### FEATURES

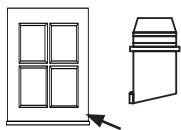
- Robust and reliable mechanically held latching relay provides dependability and robust performance for all load types and provides energy savings over electronically held relays
- Field of view: units from 450 to 1,500 square feet available
- Lenses are easily replaceable and color-coded—blue (high-density) and red (mid-range) for contractors and end-users to easily identify lenses from the ground
- Visual LED indicators for all states:
  - Red—blinks when infrared is detecting motion and during photocell manual calibration; solid during device malfunction
  - Yellow—blinks during test mode; solid with emergency/BMS input
  - Blue—blinks when knob settings are changed and during photocell override
  - Green—solid during auto calibration

### RATINGS AND TESTING

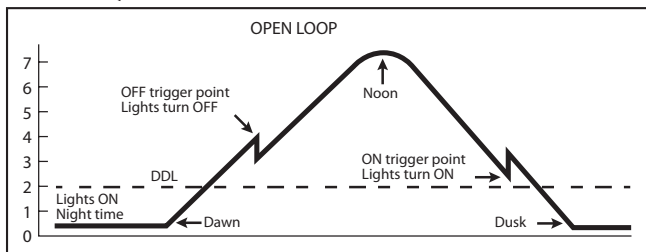
- Factory-calibrated, zero-crossing circuitry for extended life of the relay
- Tested to exceed 1 million switching cycles under standard loads
- Multiple compliance and regulatory UL testing—consult factory for details
- Passed rigorous NEMA 410 testing for electronic ballast rating
- BMS Input/Emergency Override: UL 924 listed for Emergency and Egress lighting control

### PHOTOCELL OPERATION

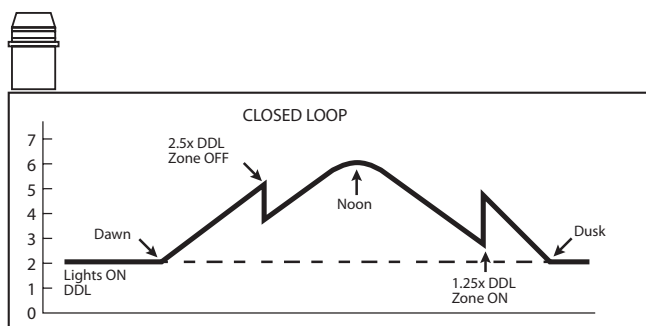
#### Open Loop - Angled Light Pipe



Note: Long side of angled light pipe must face toward natural light source (window)



#### Closed Loop - Flat Light Pipe



### Photocell Features

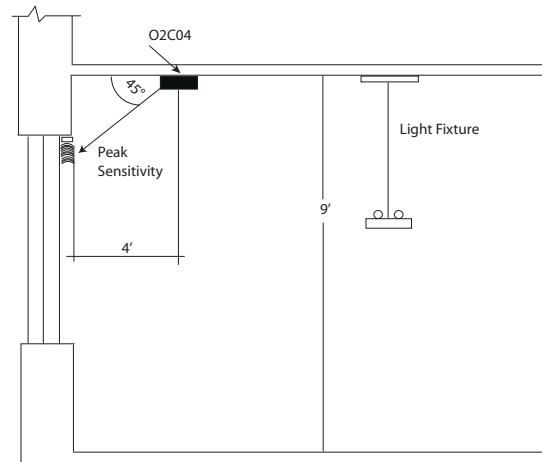
- Daylight harvesting applications:
  - Auto-calibration (automatic daylight calibration): photocell intelligently measures light levels to determine optimal daylight design levels for closed loop applications
  - Closed loop: photocell detects total measurement of both natural and artificial light in the space
  - Open loop: photocell detects measurement of natural light only (sunlight from window or skylight)
- Adjustable daylight design levels: Normal (OFF), Manual (ON/OFF) and Auto Calibration
- Integrated photocell tested to less than 1 Fc accuracy

### INSTALLATION

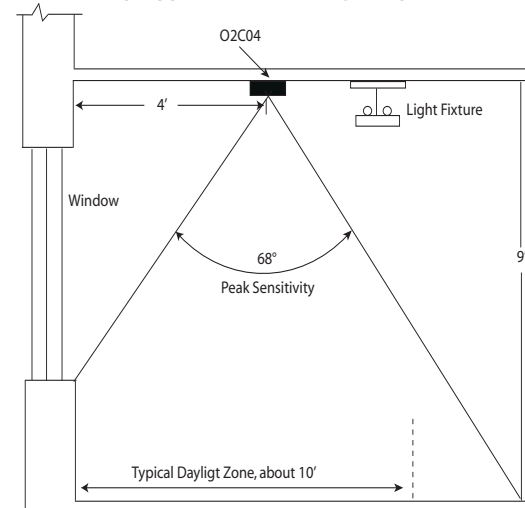
- Easy installation into junction boxes with Leviton-exclusive screw guides, coasters and terminal blocks
- Front cover snaps on and off for ease of installation

### PHOTOCELL PLACEMENT\*

#### Open Loop Application - Angled Light Pipe



#### Closed Loop Application - Flat Light Pipe

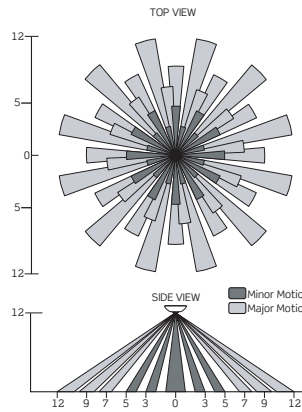


\*May require more than one occupancy sensor for total room coverage

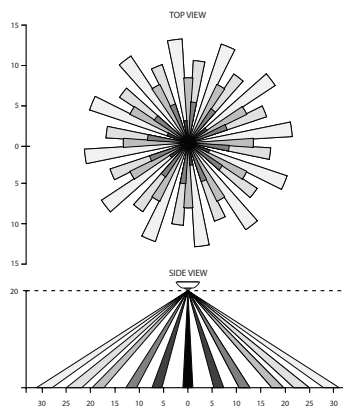
# PRODUCT DATA



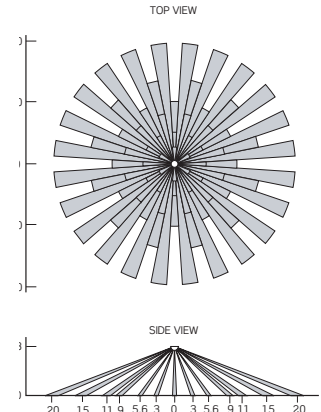
## FIELD OF VIEWS



O2C04-IDW  
(High Density Lens - Blue)

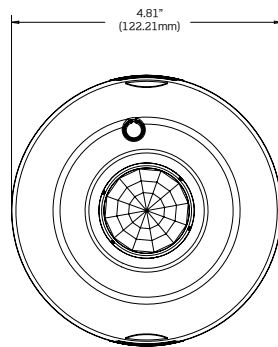
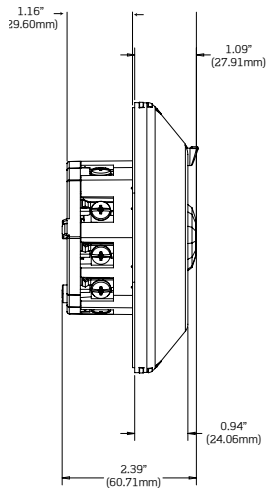


Multi-Range Lens  
(Included with PIR Model - Red)

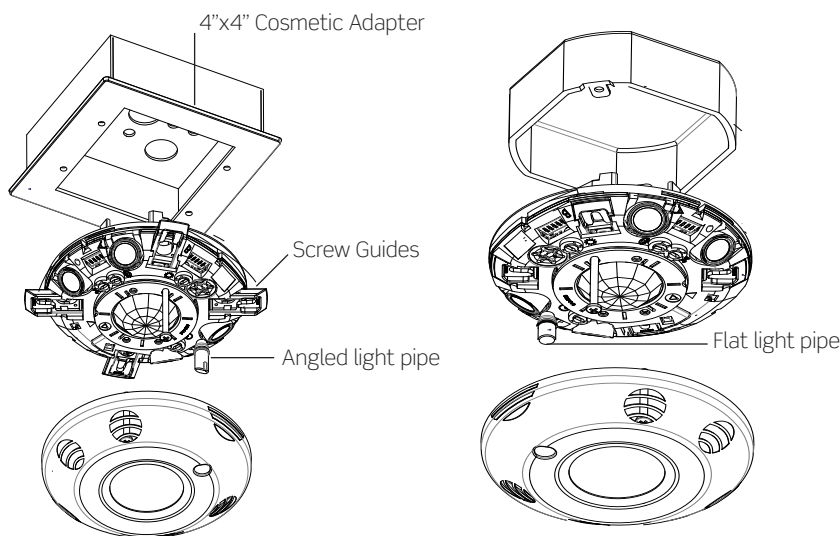


O2C15-IDW  
(Extended Range Lens - Black)

## DIMENSIONS



## INSTALLATION



Sensors conveniently mount to a standard 4" x 4" square or octagon electrical box per NEC standards.

Provolt™ Series Dual Relay Passive Infrared (PIR) Occupancy Sensors

### Leviton Manufacturing Co., Inc. Global Headquarters

201 North Service Road, Melville, NY 11747-3138 tech line 800-824-3005 fax 800-832-9538

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## PRODUCT DATA

### SPECIFICATIONS

ELECTRICAL			
<b>Input Voltage</b>	120V, 50/60Hz	230V, 50Hz	277V, 50/60Hz
<b>Load Rating</b>	8A, Electronic Ballast, 800W, Tungsten, 800VA Ballast, 1/4 HP Motor	6A/6AX, Electronic Ballast, Magnetic Ballast, Tungsten, 1/3 HP Motor	5A, Electronic Ballast, 1200VA Ballast, 1/3 HP Motor
<b>Current Consumption</b>	60-30ma		
ENVIRONMENTAL			
<b>Operating Temperature</b>	32-104° F (0-40° C)		
<b>Storage Temperature</b>	-15-160° F (-26-71° C)		
<b>Relative Humidity</b>	0-90% non-condensing		
OTHER			
<b>Listings</b>	Can be used to comply with ASHRAE 90.1 and 2016 California Title 24, Part 6 occupancy/vacancy sensing, automatic shut-off, daylight harvesting and stairwell requirements, UL 773A (Occupancy Standard), UL 924 (Emergency Equipment), cUL listed, CE compliant, NOM certified, RoHS compliant, NY LLC48 compliant		
<b>Warranty</b>	5-Year Limited Warranty		

### ORDERING INFORMATION

CAT. NO.	DESCRIPTION
<b>02C04-IDW</b>	Passive Infrared Ceiling Mount Line Voltage Dual Relay Occupancy Sensor w/Integrated Photocell, 450SF, 120-277V, high-density lens installed, mid-range included
<b>02C15-IDW</b>	Passive Infrared Ceiling Mount Line Voltage Dual Relay Occupancy Sensor w/Integrated Photocell, 1,500SF, 120-277V, extended range lens installed, mid-range included

#### Leviton Manufacturing Co., Inc. Global Headquarters

201 North Service Road, Melville, NY 11747-3138 **tel** 800-323-8920 **fax** 800-832-9538 **tech line** (8:30AM-7:00PM ET Mon-Fri) 800-824-3005

#### Leviton Manufacturing Co., Inc. Energy Management, Controls and Automation

20497 SW Teton Avenue, Tualatin, OR 97062 **tel** 800-736-6682 **fax** 503-404-5594 **tech line** (6:00AM-4:00PM PT Mon-Fri) 800-959-6004

#### Visit our Website at: [www.leviton.com/provolt](http://www.leviton.com/provolt)

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