### Single Pole and 3-Way Wide View Motion Activated Light Control & Dimmer

Cat. No. IPSD6. IPVD6 - INDOOR USE ONLY

Ratings: 120VAC, 60Hz 600W Incandescent & 150W Dimmable LED & CFL

#### INSTALLATION INSTRUCTIONS

#### **WARNINGS AND CAUTIONS:**

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- TO AVOID FIRE, SHOCK, OR DEATH; TURN OFF POWER AT CIRCUIT BREAKER OR FUSE AND TEST THAT THE POWER IS OFF BEFORE WIRING!
- To be installed and/or used in accordance with electrical codes and regulations.
- To avoid overheating and possible damage to this device and other equipment, **DO NOT** install to control a receptacle, a motor, or a transformer-operated appliance other than applicable specified lighting load: Incandescent, LED or CFL.
- When using in a 3-way application use one sensor and one standard 3-way switch. Cannot be used with another sensor, or in a 4-way application.

#### **WARNINGS AND CAUTIONS:**

- If you are not sure about any part of these instructions, consult an electrician.
- Clean outer surface gently with damp cloth only. DO NOT use soaps or cleaning liquids.
- No user serviceable components. DO NOT attempt to service or repair.
- Use this device WITH COPPER OR COPPER CLAD WIRE ONLY.

PK-93918-10-00-2B

#### Tools needed to install your Device

Slotted/Phillips Screwdriver

**Electrical Tape** 

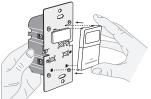
Pliers Ruler

#### Changing the color of your device:

Your device may include color options. To change color of the face proceed as follows:



Push down tabs per diagram, one at a time and rotate forward to release



Attach new face by inserting bottom hinge tabs, then pivot and snap the color kit to attach

#### **FEATURES**

- Cat. No. IPSD6 and IPVD6 have a sensing area of coverage of 30 ft. x 30 ft., and a sensing angle of 180° (see Sensing Area Coverage figure on page 2).
- Adjustable light, time-delay and minimum level controls are located on the front of the device (See Adjustment Setting section on page 2 for details).
- Occupancy sensor can be converted to a vacancy sensor (See adjustment settings on page 2).
- LED indicator is used to alert the user of the status of the device.
- Adjustable Time Delay setting for 30 seconds, 5 min, 15 min & 30 min.
- Adjustable setting for minimum light level.

#### LOCATION / MOUNTING

The device responds to temperature changes and care should be taken when mounting the device. DO NOT mount directly above a heat source, in a location where hot or cold drafts will blow directly on the sensor, or where unintended motion (e.g., hallway traffic) will be within sensor's field-of-view.

#### **INSTALLING YOUR DEVICE**

**NOTE:** Use check boxes  $\sqrt{\phantom{a}}$  when Steps are completed.



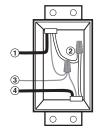
WARNING: TO AVOID FIRE, SHOCK, OR **DEATH: TURN OFF POWER** at circuit breaker or fuse and test that power is off before wiring!





#### Identifying your wiring application (most common):

NOTE: If the wiring in the wall box does not resemble any of these configurations, consult an electrician.



Single-Pole

- 1. Line (Hot)
- Ground 4. Load
- 2. Neutral
- 1. Line or Load (See important instruction below)
- 2. Neutral
- 3. Ground

3-Way

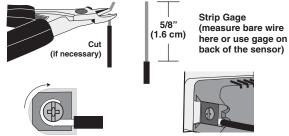
- 4. First Traveler note color
- 5. Second Traveler note color

**IMPORTANT:** For 3-way applications, note that one of the screw terminals from the old switch being removed will usually be a different color (Black) or labeled Common. Tag that wire with electrical tape and identify as the common (Line or Load) in both the sensor wall box and remote wall box.

# Step 3

#### Preparing and connecting wires:

This device can be wired using side wire terminal screws. Choose appropriate wire stripping specifications accordingly.

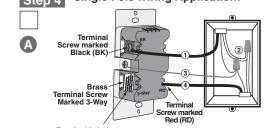


**Side Wire Connection** Side wire terminals accept #14-12 Back wire openings use #14-12 AWG solid copper wire only.

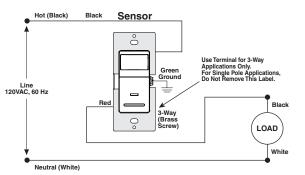
#### **Back Wire** AWG solid copper wire only.

- . Make sure that the ends of the wires from the wall box are straight (cut if necessary).
- Remove insulation from each wire in the wall box as shown.
- For Single Pole Application, go to Step 4A.
- · For 3-Way Application with the sensor on the Load side, go to Step 4B.
- For 3-Way Application with the sensor on the Line side, go to Step 4C.

## **Single Pole Wiring Application:**



Use Terminal for 3-Way Applications Only. For Single Pole Applications, Do Not Remove This Label



#### **WIRING SENSOR:**

#### Connect wires per WIRING DIAGRAM as follows:

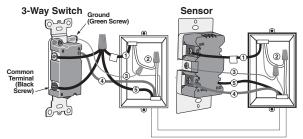
- · Green or bare copper wire in wall box to Green terminal screw.
- · Line Hot wall box wire to terminal screw marked "BK".
- · Load wall box wire to terminal screw marked "RD".
- Terminal screw marked "3-way" should have Red insulation label
- NOTE: If insulating label is not affixed to terminal screw marked "3-way", use electrical tape to cover.
- Proceed to Step 5.

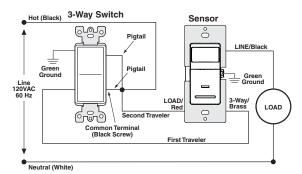
#### 3-Way Wiring with Single Pole Switch Application:

When connecting the sensor for 3-way control, first choose which wall switch location the sensor will be installed in. Next. identify which electrical box has the line connection. If the line connection is in the box where the standard 3-way switch is located, use wiring diagram 4B. If the line connection is in the box where the sensor is located, use wiring diagram 4C.

NOTE: A pair of short pigtail wires will be needed for connection to the 3-way switch.

#### Sensor is located in electrical box with LOAD connection:





#### **WIRING SWITCH:**

#### Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wire in wall box to Green terminal screw.
- One pigtail wire to the Black screw terminal marked "COM" and one pigtail wire to the Brass terminal (same side of switch).
- Connect the following 4 wires using an appropriately sized wire nut:
- 1. Common/Line wire (identified in step 2).
- 2. Second Traveler wire (note color from step 2).
- 3. Two pigtail wires from the 3-way switch.
- First Traveler wall box wire (note color from step 2) to Brass screw terminal on the switch (opposite side from the Black screw).

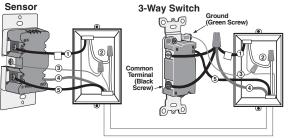
#### WIRING SENSOR:

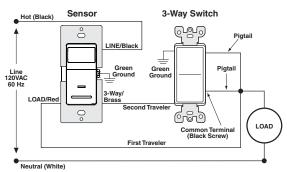
screw marked "3-wav".

#### Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wire in wall box to Green terminal screw. Common/Load wall box wire identified when removing old
- switch (step 2) to terminal screw marked "BK". • First Traveler wall box wire (note color from step 2) to terminal
- Second Traveler wall box wire (note color from step 2) to terminal screw marked "RD". This Traveler from the switch must go to the terminal screw on the sensor marked "RD".

#### Sensor is located in electrical box with LINE connection:





#### WIRING SENSOR:

#### Connect wires per WIRING DIAGRAM as follows:

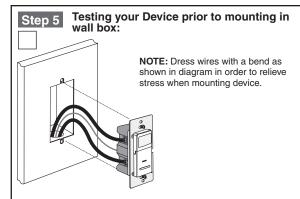
- Green or bare copper wire in wall box to Green terminal screw.
- Common/Line wall box wire identified when removing old switch (step 2) to terminal screw marked "BK".
- First Traveler wall box wire (note color from step 2) to terminal screw marked "RD".
- Second Traveler wall box wire (note color from step 2) to terminal screw marked "3-way"

#### WIRING SWITCH:

#### Connect wires per WIRING DIAGRAM as follows:

- Green or bare copper wire in wall box to Green terminal screw. One pigtail wire to the Black screw terminal marked "COM" and
- a one pigtail wire to the brass terminal (same side of switch) Connect the following 4 wires using an appropriately sized
- wire nut: 1. Common/Load wire (identified in step 2).
- 2. First Traveler wire (note color from step 2).
- 3. Two pigtail wires from the 3-Way switch.
- Second Traveler wall box wire (note color from step 2) to Brass screw terminal on the switch (opposite side from the Black screw).





- Position all wires to provide room in outlet wall box for device.
- Ensure that the word "TOP" is facing up on device strap.
- Partially screw in mounting screws in wall box mounting holes.
- Restore power at circuit breaker or fuse.
- For IPSD6 lights will automatically turn ON after power is applied.
- For IPVD6, press and release pushpad to turn the lights ON.

See Locator Light Status chart to confirm the operational state of the

If lights still do not turn ON, refer to the TROUBLESHOOTING section.



## Step 6

#### Device Mounting: TURN OFF POWER AT CIRCUIT BREAKER OR FUSE.



Installation may now be completed by tightening mounting screws into wall box. Attach wallplate.



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**Restore Power:** Restore power at circuit breaker or fuse.

Installation is complete.

#### **OPERATION**

#### IPSD6: Auto On

Lights will automatically turn on when room is occupied or motion is detected. The IPSD6 will switch lights off when no motion is detected in un-occupied room after a set period of time.

Time delay adjustment: refer to section on Adjustment settings. The ON/OFF/DIM push pad can be used to manually turn the lighting load ON and OFF or to dim it UP and DOWN.

**Dimming:** Once the load has been turned ON, push and hold the ON/OFF/DIM button to dim the lights UP or DOWN. To reverse the dimming direction momentarily release the ON/OFF/DIM button, then push and hold it again. Once you achieve the desired light level the dimmer will re-call the pre-set dimming level when turning on the load.

Light level adjustment: Refer to section on adjustment settings.

#### IPVD6: Manual On

Operation requires the user to manually turn the lights ON by depressing the ON/OFF/DIM pad. Lights will automatically turn OFF when the room is left un-occupied for a set period of time.

Time Delay Adjustment: Refer to section on Adjustment settings. Dimming: Once the load has been turned ON, push and hold the ON/OFF/DIM button to dim the lights UP or DOWN. To reverse the dimming direction momentarily release the ON/OFF/DIM button, then push and hold it again. Once you achieve the desired light level the dimmer will re-call the pre-set dimming level when turning on the load.

NOTE: In a 3-way application, the 3-way switch provides the ability to manually switch the load ON from a second location. The sensor will time out and switch the load OFF once motion is no longer detected and the time delay expires.

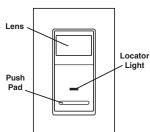
#### Locator Light LED:

IPSD6: LED blinks when motion is detected.

IPVD6: LED blinks when motion is detected and load is ON. LED will remain illuminated when load is OFF.

#### **Enabling Kick Start**

- 1. Pull the push pad out from the bottom (to activate the air gap switch).
- Push the push pad gently back into place until the button is pushed too.
- 3. Keep the button pushed for ten seconds.
- 4. Device will blink the locator led to indicate successful programming.
  - a. CFL mode (kick start): 2 blinkb. LED/Incandescent mode: 1 blink



LOCATOR LIGHT STATUS		
LOAD	IPSD6	IPVD6
OFF	Blinking	Lit
ON	Blinking	Blinking

#### ADJUSTMENT SETTINGS

1. With power restored and wallplate removed, remove face of device to expose setting controls, see color change instructions in page 1. Use your finger or a small screwdriver to adjust the light sensitivity and time settings on the device as follows:

#### **Light Level Adjustment:**

- Turn the control clockwise. Lights will turn ON in lighter conditions.
- Turn the control counter-clockwise. Lights will turn ON in less lighting conditions.
- Adjusting light level fully counter clockwise will require manual operation of the sensor.

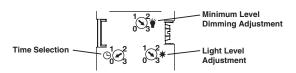
#### Time Selection:

- Adjust the time selector to the desired length of time the lights are to remain ON. Lights will remain ON from 30 seconds to 30 minutes after the room is vacated.
- Turn the control clockwise. Lights will remain ON up to 30 minutes (see table below).
- Turn the control counter-clockwise. Lights will remain ON up to 30 seconds (see table below).

**CFL & LED dimming:** The dimmer features a user adjustable dial for setting the minimum light level. This feature can be used with certain lighting loads to reduce any flicker at low light levels.

#### Minimum Dim Level Adjustment:

- Turn the control clockwise. Lights will dim to higher light level.
- Turn the control counter clockwise. Lights will dim to lower light level.
- 2. Test that the light level, time selection and minimum dimming level are set as desired. If not, repeat adjustments until satisfied.
- 3. Mount wallplate. INSTALLATION IS COMPLETE.

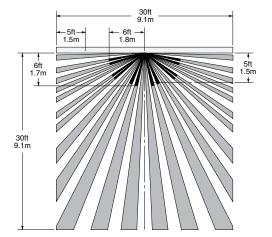


Time Settings	Time
0	30 Sec
1	5 Min
2	15 Min
3	30Min

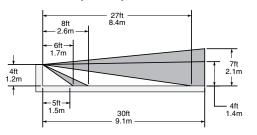
**NOTE:** To operate the IPSD6 as a vacancy sensor (manual ON/Auto OFF) - rotate the light level adjustment fully counter clockwise.

#### SENSING AREA COVERAGE

#### Field-of-View (Horizontal)



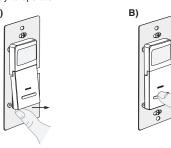
#### Side (Vertical) Field-of-View



#### REPLACING LAMPS

The IPSD6 and the IPVD6 utilizes an Air Gap Isolation feature when replacing a lamp(s) connected to the IPSD6 or the IPVD6, for safety.

- Pull the bottom of the push pad out as shown in the Figure A
  until it locks into place. This engages the Air Gap, which stops
  electricity from flowing to the connected load.
- After replacing the lamp(s), press the Air Gap Switch (push pad) so that it returns to the original position ensuring it is flush with the surface of the Sensor/Dimmer (Figure B).
- 3. The Sensor/Dimmer will return to its pre-set condition and is ready to operate.



Engage Air Gap

Reset Sensor/Dimmer

#### TROUBLESHOOTING

#### Lights do not switch ON - IPSD6:

Motion is beyond sensing range, move closer to switch.
Adjust the light level adjustment toward lighter or darker, depending on room conditions.

#### Lights always stay ON:

- Check time delay settings and compare to how long the lights stay ON.
- Be sure that no motion occurs in coverage area for time selected.
- Check that switch is not installed near a heat source (e.g., stove, lights, heat vents) or detecting motion from an adjacent area (e.g., hallway traffic). If so, switch may have to be relocated.

#### Lights do not turn ON - IPVD6:

- Check that switch is installed correctly.
- · Check that power is ON.
- · Check that light bulb is functioning.

#### The LED or CFL bulb flickers or flashes during start up:

 Verify the bulb is marked "dimmable" This device is intended to operate only dimmable LED and CFL bulbs.

#### Flickering is observed at low dim level:

 Some LED and CFL bulbs do not achieve the same minimum light level of incandescent. Refer to section on adjusting the minimum brightness setting for LED and CFL bulbs.

#### CFL bulb appears to flicker:

 CFL bulbs may require several minutes of warm up to stabilize the light.

#### LED or CFL bulbs do not turn on:

Refer to section on enabling kick start feature for CFL and LED lamps.

NOTE: If problems continue, consult an electrician

For additional information, contact Leviton's Techline at 1-800-824-3005 or visit Leviton's website at www.leviton.com

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#### FCC COMPLIANCE STATEMENT

This device complies with Part 15 of the FCC Rules. Operation is subject to following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation of the device.

This equipment has been tested and found to comply with the limits for a Class B Digital Device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment OFF and ON, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving Antenna.
- Increase the separation between the equipment and the receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/tv technician for help.

#### FCC CAUTION

Any changes or modifications not expressly approved by Leviton Manufacturing Co., Inc., could void the user's authority to operate the equipment.

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LIMITED 5 YEAR WARRANTY AND EXCLUSIONS

Leviton warrants to the original consumer purchaser and not for the benefit of anyone else that this product at the time of its sale by Leviton is free of defects by repair or replacement, at its option, if within such five year period the product at the time of its sale by Leviton is required prepaid, with proof of purchase date, and a description of the problem to Leviton Manufacturing Co., Inc., Att: Quality Assurance Department, 201 North Service Road, Melville, New York 11747. This warranty is void this product is installed improperly or in an improper environment, overloaded, misused, opened, a particular purpose, is limited to five years from the purchase date. Leviton is required by the applicable time in a coordance with any labels or instructions. There are no other or incidental, including merchantability and fitness for a particular purpose, is limited to five years from the purchase date. Leviton is not liable for incidental, including without limitation, damage to, or loss of use of, any equipment, lost sales or profits or otherwise.