

ENGLISH

**OS10D7 0-10VDC Occupancy Sensor/dimmer
VS10D7 0-10VDC Vacancy Sensor/dimmer
Single Pole and 3-Way 0-10VDC Sensor Dimmer 120V/AC-60Hz 1200Watts / 277V/AC-60Hz 2200Watts For use with controllable fluorescent ballasts or LED drivers utilizing 0-10VDC control**

SPECIFICATIONS

- Single Pole and 3-Way
- 10A, 120V/AC 60 Hz
- 8A, 277V/AC, 60 Hz
- Neutral is required

DESCRIPTION

- The OS10D7 or VS10D7 can control 0-10V LED or fluorescent ballasts
- The OS10D7 or VS10D7 can interface with an external control switch pack
- The OS10D7 turns on automatically when a person enters the room to 50% or lower
- The VS10D7 requires manual activation to turn ON the lights
- The OS10D7 and VS10D7 will automatically turn OFF lights after a selectable time delay
- The selectable time delays are 15 seconds (Test Mode; changes to be 2 minutes after 2 minutes of powering up), 5 minutes (factory default), 15 minutes and 20 minutes
- Includes a light level adjustment for daylight to prevent motion from turning ON the lights when there is sufficient daylight available (OS10D7 Only)
- A green LED provides a momentary flash to indicate motion
- The OS10D7 or VS10D7 relay connections are isolated. They may be wired to a load that is powered by a power source separate from the one for sensor power

OPERATION INSTRUCTIONS

Auto ON Sensor Dimmer— OS10D7

- OS10D7 will turn ON lights automatically to 50% or lower when a person enters the room
- The light level may be changed by pressing the dimming bar – left side to lower and right side to raise
- Lights will turn OFF automatically when no motion is detected after the selected time delay

Manual ON Sensor Dimmer – VS10D7

- The VS10D7 must be turned ON manually with the ON/OFF button
- Lights will turn OFF automatically when no motion is detected after the selected time delay
- The light level may be changed by pressing the dimmer bar – left side to lower and right side to rise
- When the lights have turned OFF due to a lack of motion, the lights will turn ON automatically if motion is detected within 20 seconds of turning OFF

WARNINGS AND CAUTIONS:

- Must be installed and used in accordance with all national and local electrical codes
- To reduce the risk of overheating and possible damage to other equipment, do not install to control a receptacle or motor-operated appliance
- Use only with permanently installed 120V AC or 277 V AC, 0-10VDC controllable fluorescent ballasts or LED drivers.
- Only one sensor can be used in a 3-way circuit with a switch. The switch will turn on/off the load only at the brightness level selected at the dimmer
- Do not exceed maximum rating of sensor as indicated on the strap
- Use only #14 or #12 copper wire with this device for the line and load connections. **DO NOT USE WITH ALUMINUM WIRE**
- Ganging/Multi-Device Application: When ganging multiple devices in one wallbox, no de-rating is required
- Turn OFF circuit breaker or remove fuse(s) and verify that power is OFF before wiring
- Never wire any electrical device with power turned ON. Wiring the device with the power on is unsafe and may cause permanent damage to the device and void the warranty
- If you are unsure about any part of these instructions, or if the wiring does not match the descriptions given, you should call a qualified electrician

INSTALLING 0-10V DIMMER FOR SINGLE POLE APPLICATION

- Refer to wiring figure 1, and install the dimmer properly by following the described wire connections. Once all wires are connected, using the provided wire nuts go to **COMPLETING THE INSTALLATION**

INSTALLING 0-10V DIMMER FOR 3 WAY APPLICATION

- Refer to wiring figure 2 to complete the installation and install the device properly by following the described wire connections, using the provided wire nuts, and go to **COMPLETING THE INSTALLATION**

COMPLETING THE INSTALLATION:

1. Secure dimmer in the wall box using the two mounting screws provided. Turn the circuit breaker ON.
2. Allow the sensor to stabilize for 30 seconds. The sensor is now ready to detect motion.
3. Verify that Power is ON by pushing the ON/OFF button. Lights and LED should turn ON.
4. NOTE - The sensor time delay is factory preset (OS10D7 = 5 minutes, VS10D7 = 5 minutes)

TEST MODE

After completing sensor installation, you can test the sensor as per the following steps

1. Remove the ON/OFF button from the sensor by pressing in the hooks on the button, and then lift up on the button as shown in Fig. 3.
2. Set the time delay using the dial on the right side by using a small Phillips screwdriver. Align the arrow on the dial to the "TEST" time delay. Refer to Fig. 3.
 - This will set the time delay to be 15 seconds
 - This will allow a quick feedback if the sensor is working properly
- After 2 minutes, the time delay will automatically change to be 2 minutes if the installer doesn't change the dial to be a different value
3. Replace push button by sliding it upward into the slots in the front housing and push down until the button hook snaps into place.
4. Push the ON/OFF button to verify that the lights turn ON/OFF, and that the button operates freely.

ADJUSTING TIME DELAY

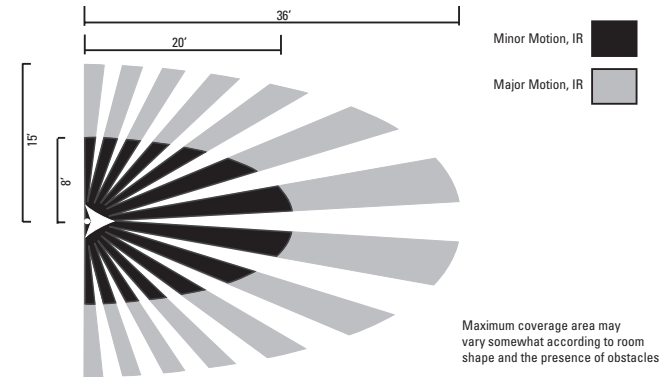
Time delay is the time interval, since sensing the last motion in the occupied space, after which the sensor will turn OFF the light.

1. To change the time delay setting
1. Remove the ON/OFF button from the sensor by pressing in the hooks on the button, and then lift up on the button as shown in Fig. 3.

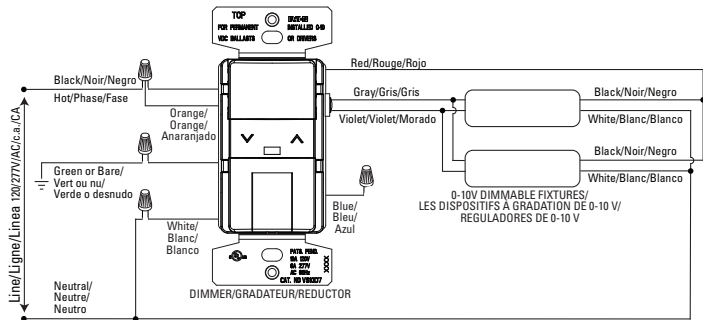
2. Set the time delay using the dial on the right side by using a small Phillips screwdriver. Align the arrow on the dial to the desired time delay. Refer to Fig. 3.

NOTE: To set a time delay of 2 minutes, align the arrow with "TEST". Refer to "Test Mode" above for details.

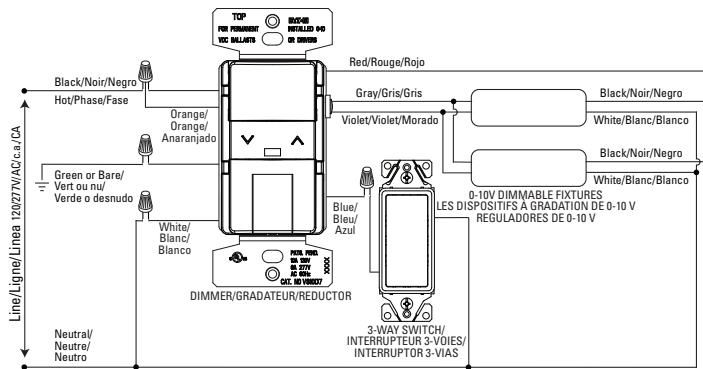
3. Replace push button by sliding it upward into the slots in the front housing and push down until the button hook snaps into place.
4. Push the ON/OFF button to verify that the lights turn ON/OFF, and that the button operates freely.



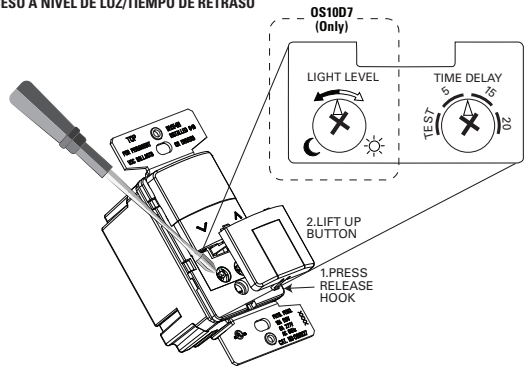
**FIGURE 1: SINGLE POLE WIRING DIAGRAM
FIGURE 1: SCHEMA DE CÂBLAGE DE UNIPOLAIRE
FIGURA 1: DIAGRAMA DE CABLEADO UNIPOLAR**



**FIGURE 2: 3-WAY WIRING DIAGRAM
FIGURE 2: SCHEMA DE CÂBLAGE DE 3-VOIES
FIGURA 2: DIAGRAMA DE CABLEADO DE 3-VIAS**



**FIGURE 3: TIME DELAY/LIGHT LEVEL ACCESS
FIGURE 3: ACCÈS AUX RÉGLAGES DU DÉLAI/DE L'INTENSITÉ LUMINEUSE
FIGURA 3: ACCESO A NIVEL DE LUZ/TIEMPO DE RETRASO**



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DAYLIGHT SENSING ADJUSTMENT (OS10D7 ONLY):

- The Daylight sensing feature prevents lights from turning ON when the room is adequately illuminated by natural light
 - NOTE - The factory setting for this adjustment is fully clockwise and permits motion detection to turn ON the lights regardless of the ambient light level in the room
 - This adjustment must be made when the light level in the room is at the desired level for the lights to turn ON
1. Remove the ON/OFF pushbutton to access the light level adjustment. Refer to Fig. 3
 2. From the clockwise position, turn the dial on the left counterclockwise using a small Phillips screwdriver until the green LEDs blink (see Fig. 3)
 3. Step away from the sensor to allow the device to calibrate to the normal light level in the room. Do not obstruct the natural light
 4. The calibration process starts when the light turns OFF, and will take approximately 5 seconds. At the end of the calibration process the sensor will turn the lights back ON
 5. Replace the ON/OFF pushbutton

CONFIGURATION MODE

Other feature settings can be changed easily by means of the ON/OFF push button by entering Configuration Mode as outlined below.

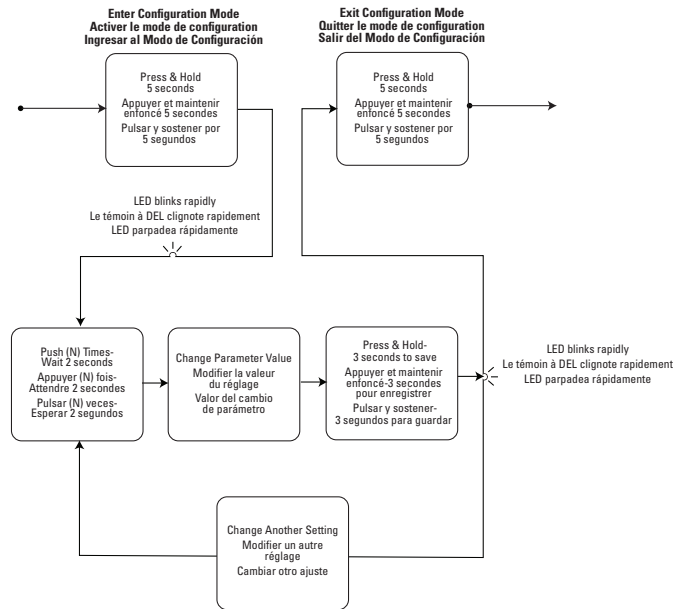
Feature Setting Changes - Sequence of Operations (Refer to Fig. 4—Settings change procedure):

1. Enter Configuration Mode
 - a) Turn ON the light
 - b) Press and hold the ON/OFF button for 5 seconds
 - c) LED indicator begins to blink
 - d) Release the ON/OFF button as soon as the LED starts to blink
 - e) The LED continues to blink and Configuration Mode is active
- NOTE: If ON/OFF button continues to be pushed till until LED stops blinking, the device will exit Configuration Mode and resume normal operation.
2. Select feature to change
 - a) Press ON/OFF button for number of times corresponding to the feature you want to change (Refer to table below for details)
 - b) LED indicator will blink for each press
 - c) After pressing the ON/OFF button the required number of times to enter a specific feature, and wait for 2 seconds; the LED indicator will blink for number of times matching button pushes
3. Change value for selected feature
 - a) Refer to table 1 below for details
4. Save and Exit back to Configuration Mode
 - a) Press and hold 3 seconds to save new value for selected feature
 - b) LED indicator blinks for same number of times as in step 2 above, indicating successful saving of feature setting; the unit will go back into the configuration mode and the LED starts to blink rapidly
 - c) If LED blinks rapidly immediately after press and hold above, that indicates invalid feature setting entry, which cannot be saved, and the unit goes back into Configuration Mode
5. Repeat steps 2 through 4 above for one or more other features
6. Exit Configuration Mode through one of the following ways
 - a) Press and hold the ON/OFF button for 5 seconds; the LED stops blinking and the unit exits Configuration Mode
 - b) Do nothing (although the LED continues to blink) and the configuration mode will time out after 30 seconds, and the LED stops blinking

TABLE 1: FEATURE SETTINGS

Feature	Default	Button Pushes (N)	Next Steps
On Mode (OS10D7 only)	Occ.	2	LED indicator will turn OFF for 1 second LED indicator ON indicates Occupancy mode LED indicator OFF indicates Vacancy mode Push ON/OFF button to toggle mode
High-end Trim	75%	3	Use dimming bar to adjust to highest desired brightness
Low-end Trim	25%	4	Use dimming bar to adjust to lowest desired brightness
Preset	50%	5	Push ON/OFF button 1 time = 25% 2 times = 50% 3 times = 75% 4 times = 100% 5 times = Last Level
*Note: Preset > 50% is saved only in vacancy mode			
Dim to OFF Time Delay	0 mins	6	Push ON/OFF button 1 time = 0 minutes 2 times = 5 minutes 3 times = Match Time Delay (set on trim pot) 4 times = Never OFF
LED Indicator Operation	Enabled	7	LED indicator will turn OFF for 1 second LED indicator ON indicates LED Enabled LED indicator OFF indicates LED Disabled Push ON/OFF button to toggle mode
Restore Defaults	—	8	Factory default settings will be restored and saved immediately LED indicator will turn off for 1 second Unit will go back into Configuration Mode

**FIGURE 4: SETTINGS CHANGE PROCEDURE
FIGURE 4: PROCÉDURE DE MODIFICATION DES RÉGLAGES
FIGURA 4: PROCEDIMIENTO DE CAMBIO DE AJUSTES**



TROUBLESHOOTING:

If you have a problem with your Motion Sensor, first follow this guide. If the problem persists, call the customer service hotline at 1-866-853-4293 between 8:00 A.M. and 6:00 P.M. EST weekdays.

TABLE 2: TROUBLESHOOTING

Symptoms	Possible Cause	Solution
Light does not automatically turn ON	1. Circuit breaker or fuse is turned OFF 2. Light fixture is defective 3. Poor connection 4. Sensor set to manual ON mode 5. Control may be wired incorrectly 6. Daylight sensing prevents lights ON	1. Turn circuit breaker ON 2. Replace light fixture 3. Verify all wiring connections 4. Press the ON/OFF button 5. Check wiring 6. Re-adjust daylight sensing level
Light does not automatically turn OFF	1. Motion is still present 2. TIME DELAY has not expired 3. Control may be wired incorrectly 4. Switch is being triggered by air vent or other heat source	1. Make sure there is no motion during the time delay period 2. No action needed or shorten TIME DELAY 3. Check wiring 4. Determine the source triggering the switch, and alter the air flow
Light does not stay ON	1. Motion is not detected 2. TIME control is set for too short a delay	1. Create movement in front of the sensor for 5 seconds 2. Set switch TIME delay longer time period
Remote switch does not work	1. Control may be wired incorrectly	1. Check wiring
Raise/Lower button doesn't work	1. Purple and gray wires may be crossed	1. Check wiring

EATON WIRING DEVICES LIMITED 5 YEAR WARRANTY

Eaton Wiring Devices (Eaton) warrants its Smart Dimmer System to be free of defects in materials and workmanship in normal use and service for a period of five years from date of original purchase. THIS FIVE (5) YEAR LIMITED WARRANTY IS IN LIEU OF ALL OTHER WARRANTIES, OBLIGATIONS, OR LIABILITIES, EXPRESSED OR IMPLIED (INCLUDING ANY IMPLIED WARRANTY OF MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE THAT IS IN DURATION IN EXCESS OF FIVE YEARS FROM THE DATE OF ORIGINAL CONSUMER PURCHASE). NO AGENT, REPRESENTATIVE, OR EMPLOYEE OF Eaton HAS AUTHORITY TO INCREASE OR ALTER THE OBLIGATIONS OF Eaton UNDER THIS WARRANTY. To obtain warranty service for any properly installed Smart Dimmer System that proves defective in normal use send the defective Smart Dimmer System prepaid and insured to Quality Control Dept., Eaton, 203 Cooper Circle, Peachtree City, GA 30269; in Canada: Eaton, 5925 McLaughlin Road, Mississauga, Ontario L5R 1B8. Eaton will repair or replace the defective unit, at its option. Eaton will not be responsible under this warranty if examination shows that the defective condition of the unit was caused by misuse, abuse, improper installation, alteration, improper maintenance or repair of damage in shipment to Eaton. Eaton SHALL HAVE NO RESPONSIBILITY FOR INSTALLATION OF THE SMART DIMMER SYSTEM, OR FOR ANY PERSONAL INJURY, PROPERTY DAMAGE, OR ANY SPECIAL, INCIDENTAL, CONTINGENT, OR CONSEQUENTIAL DAMAGES OF ANY KIND, RESULTING FROM DEFECTS IN THE SMART DIMMER SYSTEM OR FOR BREACH OF ANY EXPRESS OR IMPLIED WARRANTY ON THIS PRODUCT. THE EXCLUSIVE REMEDY FOR BREACH OF THE LIMITED WARRANTY CONTAINED HEREIN IS THE REPAIR OR REPLACEMENT OF THE DEFECTIVE PRODUCT AT EATON'S OPTION. IMPLIED WARRANTIES (IF ANY) INCLUDING, BUT NOT LIMITED TO IMPLIED WARRANTIES OF FITNESS FOR A PARTICULAR PURPOSE AND MERCHANTABILITY, ARE LIMITED IN DURATION TO A PERIOD ENDING TWO YEARS FROM THE DATE OF ORIGINAL CONSUMER PURCHASE. IN NO CASE SHALL EATON'S LIABILITY UNDER ANY OTHER REMEDY PRESCRIBED BY LAW EXCEED THE PURCHASE PRICE. Some states do not allow the exclusion or limitation of incidental or consequential damages or allow disclaimers or modifications or limitations on how long an implied warranty lasts, so the above limitations may not apply to you. Some Canadian provinces do not allow exclusion or variance of implied warranties so that some or all of the above limitations may not apply to you. This warranty gives you specific legal rights and you may also have other rights which vary from state to state and province to province. Read enclosed instructions carefully. If you have any questions concerning use or care of this product, please write: Consumer Service Division, Eaton, 203 Cooper Circle, Peachtree City, GA 30269.

Wiring Diagrams

External Switchpack Wiring Diagram

