

Vehicle Detection System

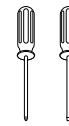
Wiring Diagram

Voltage

Operates within an input range of 100VAC to 240VAC.

What You Need:

Phillips Head Screw Driver
3mm/1/8" Flat-head Screw Driver
Sign (*ordered separately*)



Always turn off the power prior to installation.



Be sure any metal debris cleared out of the cabinet.

Typical Wiring Wiring will involve three separate areas: Wiring to the Sensor; Wiring to the LED Sign and Wiring to the Control Module

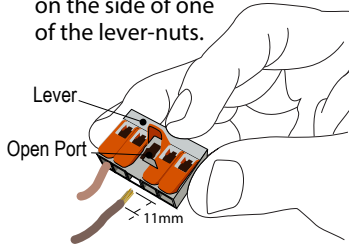
IMPORTANT NOTE: All conduit entry points must be on the bottom of the Control Module's enclosure. *Failure to do so will result in water damage not covered under warranty*

A Wiring the Sensor:

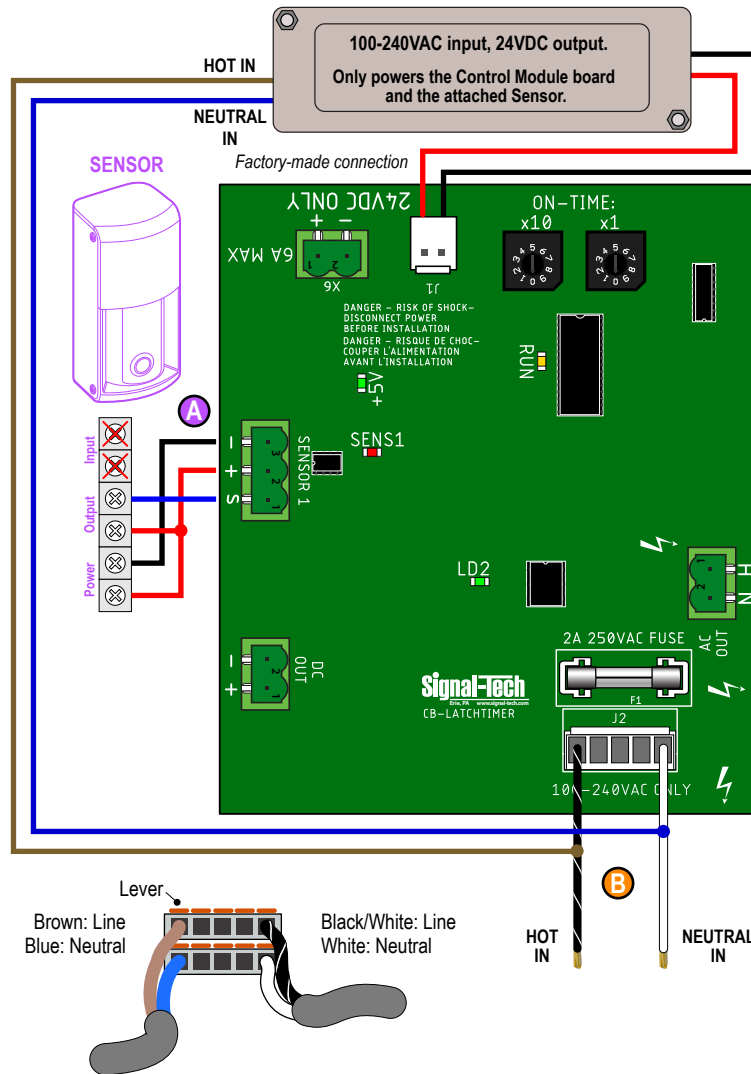
1. Referencing the Optex OVS-01GT instructions, open the Sensor and locate the screw terminals labeled POWER (+/-) and OUTPUT
2. On the Control Module board, locate the green screw terminal block labeled SENSOR 1
3. Following the wiring diagram below, make the appropriate connections using 18 gauge, 4-conductor wire up to 350'

B Wiring the Control Module:

1. Locate the Lever-nut connectors. Connector with the Brown and Black/White wires is HOT/LINE IN. The connector with the Blue and White wires is NEUTRAL IN.
2. Strip the ends of your input wires to 11mm using the guide on the side of one of the lever-nuts.

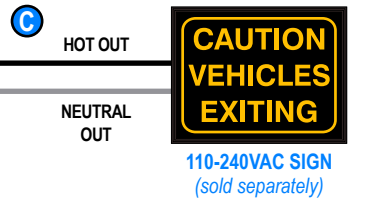


3. To make a connection pull up on the lever of an open port insert wire conductor and push lever back down to lock wire in place.

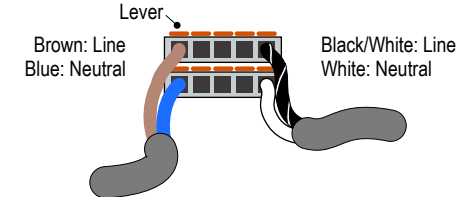


C Wiring the LED Sign:

1. Refer to the sign's included wiring diagram and note the color code for its HOT and NEUTRAL input leads (typically Black/White and White, respectively).
2. On the Control Module board, locate the green screw terminal block labeled with "H" and "N".
3. Using the screw terminals, make the appropriate wiring connections between the control module and the sign.



- Note:** Neutral-IN and Neutral-OUT are connected on PCB.
- Note:** Make appropriate wiring connections per local code.



Sensor Information and Installation

This guide is specific to the Optex OVS-01GT sensor

The Optex OVS-01GT sensor uses a combination of microwave and ultrasonic sensors to detect vehicle presence. It offers on-board adjustments for sensitivity, human cancellation, and detection range. For full details on the OVS-01GT sensor—including specific installation guidelines and settings—please refer to Optex's documentation included with your sensor:

Quick Start Guide: <https://optex-america.sfo2.digitaloceanspaces.com/sensor-downloads/Optex-Viik-OVS-01GT-Quick-Reference-Guide-En.pdf>

Full User Manual: https://optex-america.sfo2.digitaloceanspaces.com/sensor-downloads/Optex-Viik-OVS-01GT-Installation-Manual-En_190410_084617.pdf

Recommended Installation (Physical)

Measurement	Value	Failure Mode
Position, relative to lane	Adjacent to lane (<i>see recommended positioning in Figure 1</i>)	1) Vehicle may not hit detection field (<i>if sensor is too close to parallel with lane</i>) 2) Vehicle may be detected too late, or missed completely (<i>if sensor is too close to perpendicular with lane</i>)
Height from ground	>20"	The ground below may interfere with the sensor field
Relay Output Types	Parallel with ground; adjust to slope of ramp (<i>see Figure 2 below</i>)	1) The ground below may interfere with the sensor field (<i>if angled too low</i>) 2) Vehicle may be detected too late or missed completely (<i>if angled too high</i>)

Installing the Sensor

Install the sensor facing the oncoming path of vehicles at a 45° angle at a height of 20 inches from the ground.

Adjust so that the detection area is parallel to the road surface. Some vertical adjustment may be required if the road surface rises or falls away from the sensors mounting height.

Figure 1.

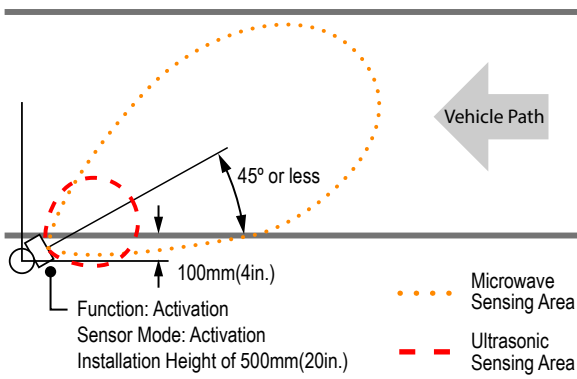
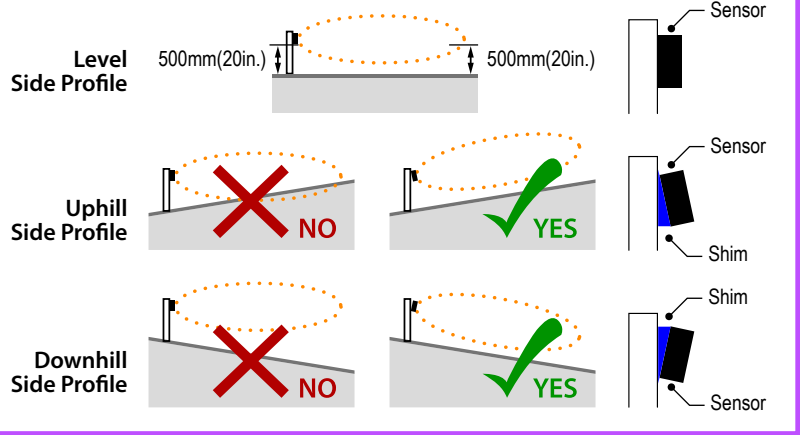


Figure 2.



Refer to the included Optex installation instructions for more information about sensor setup, testing, and troubleshooting.

Recommended Installation (Sensor Settings)

Setting	Value	Notes
Microwave Range	Set per application	Depends on several easy to configure variables
Output	Normally Open (NO)	
Sensor Mode	Activation	Closes relay contacts when a vehicle enters detection area
Sensitivity	4	Upon initial setup and testing, sensitivity and human cancel adjust may need to be changed; see <i>Optex documentation for more details</i>
Human Cancel Adjust	4	Upon initial setup and testing, sensitivity and human cancel adjust may need to be changed; see <i>Optex documentation for more details</i>
Presence Detection Timer	5 Minutes	Sensor's built-in automatic reset threshold
Sensitivity Boost Timer	OFF	
Ultrasonic Range	1.5m/6ft	
Input	Wake L	

Control Module Information and Installation

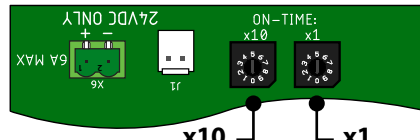
Signal-Tech's adjustable Control Module uses an input signal from the sensor to activate a set of relays, turning on the pedestrian signage for an adjustable amount of time (see "Typical Wiring Diagram" for board layout and wiring).

The device comes in a NEMA 4X rated, lockable enclosure. It includes the Control Module board with 100-240VAC input/output.

Installation notes: The enclosure should be mounted between the sensor and the LED sign to minimize the distance of any low-voltage wiring

Adjusting the Sign On-Time

Use the two switches to adjust the amount of time the sign stays illuminated.



To Adjust:

Turn the x10 to select 0 to 90 seconds in 10 second increments.

Turn the x1 to select 0 to 9 seconds in 1 second increments

0 - 90 seconds in 10 second increments

0 - 9 seconds in 1 second increments

Vehicle Detection/Pedestrian Warning System

· ALWAYS bring in conduit through the bottom of the enclosure to prevent water intrusion into the enclosure

Specification	Value	Notes
Input Voltage	100-240VAC	Power supply step down from 100 - 240VAC to 24VDC included
Adjustable Timer Range	1-99 seconds	<ul style="list-style-type: none"> If rotary switches are set to 0, 0 time will default to 1 second Timer begins when input signal returns to its open state (NO) Timer is retriggered by additional activations on the sensor input
Relay Output Types	Mechanical; 100-240VAC (labeled N/H)	
Relay Output Rating	AC Output: 1A	