

# Vehicle Detection Solution

For gate and barrier automation



## OVS-02GT

**Microwave Virtual Loop**  
Up to 8 m with 95-degree  
detection angle

- Reliable, weather resistant vehicle sensor for above ground installation with easy set up via App.
- Detects all type of vehicles up to 35 kmh / 22 mph and filters out pedestrian traffic.



# Advantages of OVS-02GT vehicle sensor

## Reliable and flexible vehicle detection

The vehicle detection sensor for automatic gates and barriers offers excellent short and long-range detection up to 8 meters and a wide-angle adjustment of 90° to 95°.

## Easy above-ground installation

The above-ground installation on a barrier housing, wall or pole makes it a less invasive solution for many locations where a ground loop is not possible or even allowed.

## Excellent performance

The OVS-02GT is not affected by ground movement and is able to filter out pedestrian traffic to avoid unnecessary activations. It detects all type of vehicles of any colours and materials; stationary vehicles and moving vehicles up to 35km/h will be detected.

## Do more with one sensor

The presence detection prevents damage to the vehicle from early closing barriers. The sensor can also be used for activating third party devices like signalling lights and ticketing machines.



## Stable all weather detection

The microwave technology ensures exceptional performance in challenging weather conditions and warmer climates.

With a built in heater and IP66 rating OVS-02GT ensures a reliable detection in cold, wet or humid weather conditions.



## Setup via smartphone App

Installation made easier and quicker with setup via App.

To download: Search for "Virtual Loop"



Stone pavement

## Applications

- Parking barriers
- Perimeter barriers
- Parking warning system
- Residential gates
- Industrial gates
- Loading docks / Truck occupancy



Parking facility

### Where digging is not possible

Resin bound driveways, stone/brick pavements

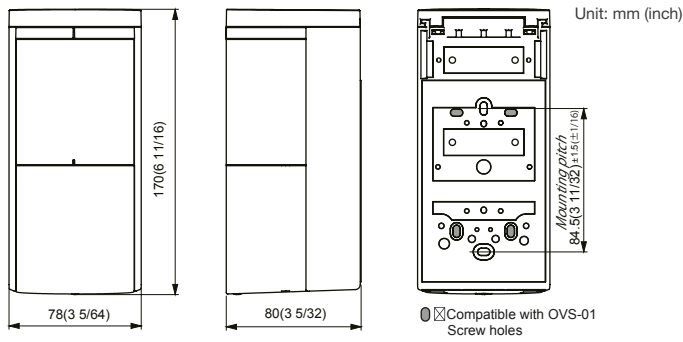
### Where civil engineering is not possible

Public areas, post tensioned concrete, steel grating, cover drains

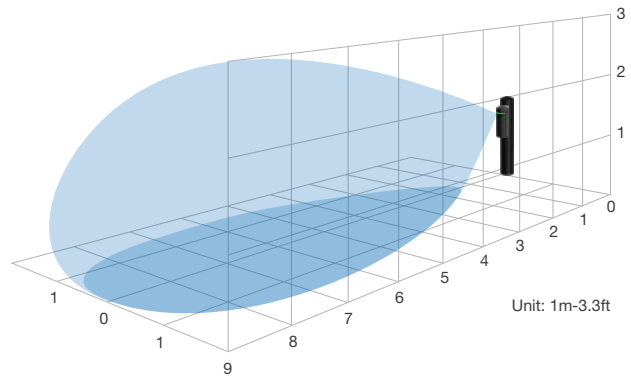
### Where loop malfunctions are caused

Damaged surfaces, surfaces prone to flood, malfunctions by ice or snow

## Dimensions



## Detection Area Diagram



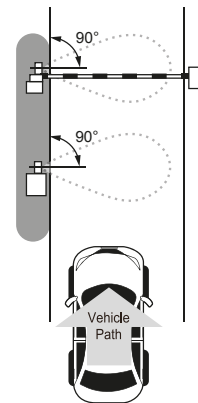
## Specifications

Name		Vehicle Detection Sensor (Surface mount)		
Model		OVS-026T		
Detection method		Microwave (FMCW)		
Frequency		Microwave : 24GHz, BLE communication : 2.4GHz		
Response		MIN 500ms		
Supply voltage		12 to 24V AC/DC		
Power consumption		Heater enabled : Up to 300mA / Heater disabled: Up to 90mA (at 24V)		
Output	Spec	1	Non-voltage solid state relay output 30VDC 0.3A or less (resistance load) (N.O. / N.C.)	
		2	Non-voltage mechanical relay output 30VDC 1A or less (resistance load) (N.O. / N.C.)	
	Delay [s]	OFF / 0.5 / 1 / 2 / 3 / 4		
	Hold timer [s]	OFF / 0.5 / 1 / 2 / 3 / 10 / 30 / 60		
	Mode	Detection / Pre-detection / Mask		
	Type	Holding / Pulse IN / Pulse OUT		
Input	Pulse time duration			
	150ms / 250ms / 500ms / 1s			
Spec	N.O. contact Non-voltage relay Input ON resistance 100Ω or less, Off resistance 200kΩ or more, Internal pull-up voltage: approx. 3.3V			
	Mode			
Link(OR gate) / Link (AND gate) / Inhibit / Wake				
Application		Barrier-Activation, Protection / Slide gater-Activation, Protection / Swing gater-Activation, Protection, Shadow		
Detectable vehicle speed		2 to 35km/h (1.2 to 22 mi/h)		
Device setting	Detection range		1.5m (7ft.) to 8.0m (26ft.) *0.5m(20in.) pitch	
	Main sensitivity		Level 1 to 7	
	Fine tuning presence		Level 1 to 7	
	Close range sensitivity		Level 1 to 7	
	Side approach detection		Off / On(2.5s)	
	Vibration sensitivity		Off / Low / Middle / High	
	Sensitivity boost		Off / Low / Middle / High	
	Sensitivity boost timer [s]		Off / 0.5 / 1 / 2 / 3 / 4 / 5 / 10 / 20 / 40	
	Relay Response time		Level 1 to 4	
	Presence detection timer [min]		5 / 15 / 60 / 180 / Infinity	
	Slide gate cancellation		Off / On	
	On / Off		Switchable (with the smartphone App or by holding a magnet close to the unit)	
Indicator	Standard operation mode	Detection operation		
		Standby : Solid green, Detected : Solid red, Bad environment : Solid purple, Calibration uncompleted : Solid blue		
		Wake up		
	Wake up : Solid blue for 3 seconds			
	Sensor reset		Completed reset : Blinking blue (Fast) for 2 seconds	
	Smartphone app connection mode	Setting Detecton operation		Stanby : Blinking green(slow), Detected : Blinking yellow(slow), Bad environment : Blinking purple(slow), Calibration uncompleted : Blinking blue(slow)
Area check		Stanby : Blinking green(slow), Pre-detected : Blinking yellow(slow), Detected : Blinking red(slow)		
Calibration		In process : Blinking Blue & Green, Error Unstable : Blinking Red & Yellow(Fast), Error High reflection : Blinking Red & Blue(Fast), High reflection : Blinking Purple(for 10s)		
Ambient Temperature		-30 to 50 (-22 to 122 F)		
Operating Ambient Humidity		95% max. (no condensation)		
Degree of Protection		IP66 / NEMA4		
Installation Location		Indoor / Outdoor		
Installation Height		500mm(20in.) (from the ground to the bottom of the unit)		
Sensor Angle Adjustment		Left and right : ±96 (3 pitch)		
Weight		600g (21oz) (including accessories)		
Accessories		Retaining screw (Metric coarse thread M4x12 : 2pcs, Tapping Screws 4x20 : 2pcs), Quick manual		

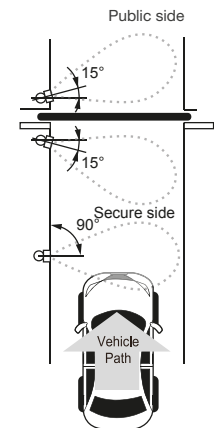
Specifications are subject to change without notice for improvement.

## Sensor Installation Conditions

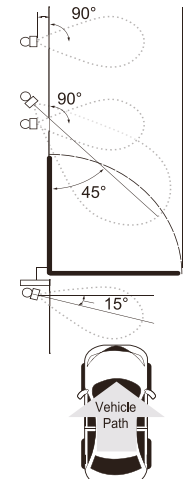
### Barrier Gate



### Sliding Gate



### Swing Gate



Manufacturer  
OPTEX CO. LTD (Japan)

For EMEA Entrance applications  
info@optex.eu

For EMEA Security applications  
marketing@optex-europe.com

www.optex-europe.com



Scan for more  
information

Copyright (C) 2023 OPTEX CO., LTD