

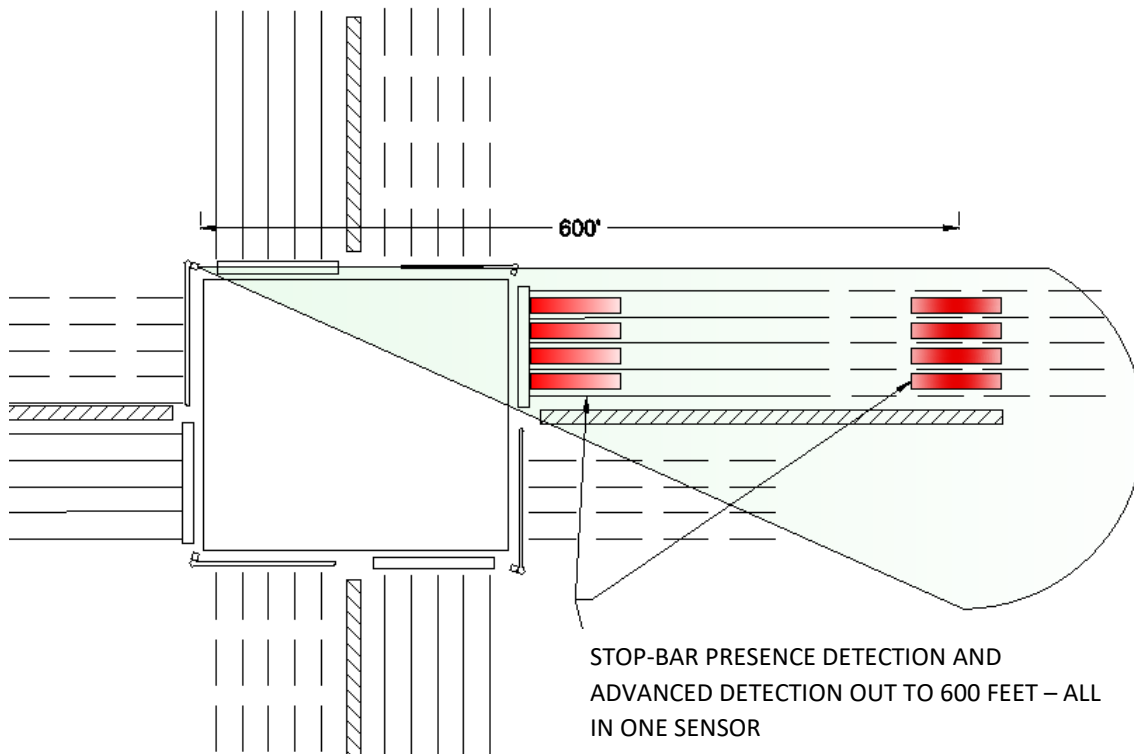
## DATA SHEET / SPECIFICATION INTERSECTOR™ SDLC

### PRODUCT

Intersector™ SDLC / PN: TC-0A-SDLC

### PRODUCT DESCRIPTION

The Intersector SDLC is a microwave-based radar motion and presence sensor used for intersection control. The unit interfaces with the MS Sedco Intersector HUB that ultimately interfaces with the traffic controller. The Intersector SDLC provides output signals when vehicles are present in the user-defined zones. Zones are created using an X-Y coordinate system, and operation is verified and optimized using a laptop with a web browser (Google Chrome, FireFox, Microsoft Internet Explorer and Edge) to access the Intersector portal as part of the installation process.



## **BENEFITS**

The Intersector SDLC brings the advantages of microwave radar detection together with presence-tracking capabilities in an easy-to-understand visual image. The TC-0A-SDLC offers these advantages when compared to cameras or loops:

- Setup using a user-friendly drag-and-drop user interface
- Detection not affected by weather
- Immune to sunrise/sunset or post-rain glare
- Not susceptible to in-road breakage
- Multiple lanes covered by a single unit
- Lane by lane detection configuration ability
- Advanced and stop bar detection in a single unit
- Easily installs to corner pole or mast arm
- Surge protection provided in detector
- Successfully detects bicycles/motorcycles
- Significant cost savings when compared to camera mounting requirements or multiple loops
- No privacy concerns
- Classifies bicycles as they approach a red light, allowing users to establish bicycle-only detection zones.
- Graphically track vehicles as they approach the intersection
- Easily set up detection zones to provide programmable inputs to a control cabinet

## **SPECIFICATIONS**

Parameter	Value	Unit
<b>General</b>		
Included In Product Box	INTERSECTOR SDLC Sensor	Product
Included In Product Box	Instruction Manual	Product
IP Address	Yes	Automatic
MAC Address	Yes	Set at factory
Input voltage	12-24	Volts DC – Power Over Ethernet provided by HUB
Input Power	5	Watts
Frequency	24.125 GHz	Microwave
Regulatory	FCC & IC	FCC Part 15.245 Canadian Std: RSS-210
<b>Environmental</b>		
Tested under NEMA TS2 2003	Compliant	Applicable sections
Ambient operating temp	-40° to +85°	Degrees Celsius
Shock	10	G's
Vibration	+/- 0.5	G's
PCB protection	Yes	Conformal coated PCB
IP Rating	IP 54	
Ethernet Connector	IP 67	
<b>Mechanical</b>		
Weight	5	Pounds
Outline	10.5 x 8.5 x 7	L x W x H Inches
Product finish	Blue body with gray end-caps	Finish
Material	Powder coated aluminum	
Weep hole	1/8	Inch

Mounting	Shelf	Mounting
Interface with network	Via INTERSECTOR HUB	Communication
Sensor connection time	30	Seconds typical
Fail-safe	60-960 seconds, 120 seconds default	Time before operational
Service port	Diagnostics, change IP address	RS232
<b>Software (via the INTERSECTOR HUB)</b>		
Login page	Yes	Login
Portal Page (HUB setup)	Yes	Status and diagnostics
Grid Page (sensor setup)	Yes	Vehicle tracking and zone setup
IP Configuration	Yes	Network configuration
Interface	Web page	Network configuration
Browsers supported	Chrome, Edge, Firefox	Web interface
Download	Yes	Web interface
WIFI/Ethernet	Yes	
Fail-safe	Yes	Seconds
Simultaneous Displayed Objects	Up to 32	Objects
Counts	Loop from 0 to 65,535	By Zone
Adjustable Speed Bins	Adjustable 0 to 150	MPH
Direction of Detection	Approach & depart	Movement relative to sensor
Stationary Vehicle Hold Time	Adjustable 0 to 960	Seconds
Occlusion Zone Protection	Adjustable 0 to 960	Seconds
Rain Threshold	Yes	From mist to heavy rain
Vehicle Classification	Yes	Bike, car, truck
Software Upgradable	Yes	Bootloader
Max. Range For Pedestrian	160	Feet
Max. Range For Passenger Car	600	Feet
Min. Range	50	Feet
Number of Detection Lanes >100 Feet	4	Lanes
Number of Detection Lanes 80 to 100 feet	3	Lanes
Number of Detection Lanes 60 to 80 feet	2	Lanes
Radar Field of View - Azimuth	+/- 15	Degrees
Max. Offset Angle	+/- 15	Degrees
Max. Field of View: Elevation	12	Degrees
Range Accuracy	Typical < +/- 2.5% or < +/- 2 feet	Greater of
Radar Channels	7	Unique Channels
Presence Detection Range	60 to 160	Feet
Motion Detection Range	60 to 600	Feet
Typical Mounting Height	14 to 20	Feet
Mounting Location	Rigid pole or mast arm	
Radar Speed Range	.2 to 150	MPH
Radar Speed Accuracy	Typical < +/- 2 MPH or +/- 2%	Greater of
Radar Update Rate	<50	Milli-seconds
Tracking Verification Time	< 0.5	Seconds
New Object Validation Distance	60	Feet - minimum

Fail-safe conditions	Failsafe timer, startup, sensor error, lost connection, application programming,	Seconds until all faults cleared
Troubleshooting	Via the INTERSECTOR HUB - Sensor connection, voltage, current, Ethernet SQL, rain, Intersector status.	Pass/fail or numeric

## VEHICLE TABLE - EXAMPLE

Vehicle Table ▲

ID	Vehicle Number	X Position (feet)	Y Position (feet)	Speed(mph)	Classification
0	8	49.9	235.9	31.8	4.4
1	9	52.5	307.1	31.8	4.4
2	10	69.2	387.8	31.8	4.4
3	11	82.7	468.5	31.8	4.4
4	12	96.1	549.2	31.8	4.4
5	13	30.8	229.7	31.8	4.4

- Classification as shown in last column of Vehicle Table:

1.0m= Pre-track - Unused in this software version

1.2m = Pedestrian

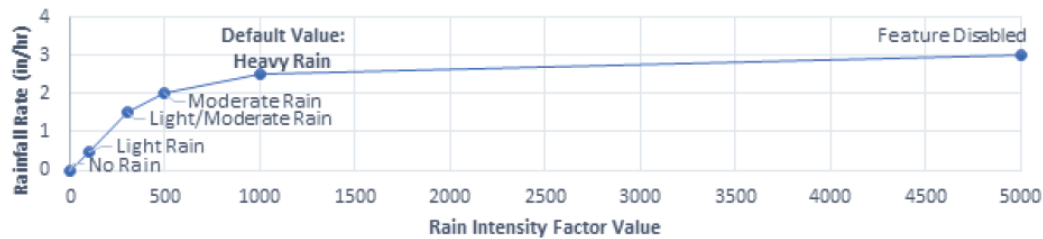
2.0m = Bicycle / Motorcycle

3.2m = Unused in this software version

4.4m ... 8.4m = Passenger Car

> 8.4m = Truck

## RAIN INTENSITY FACTOR

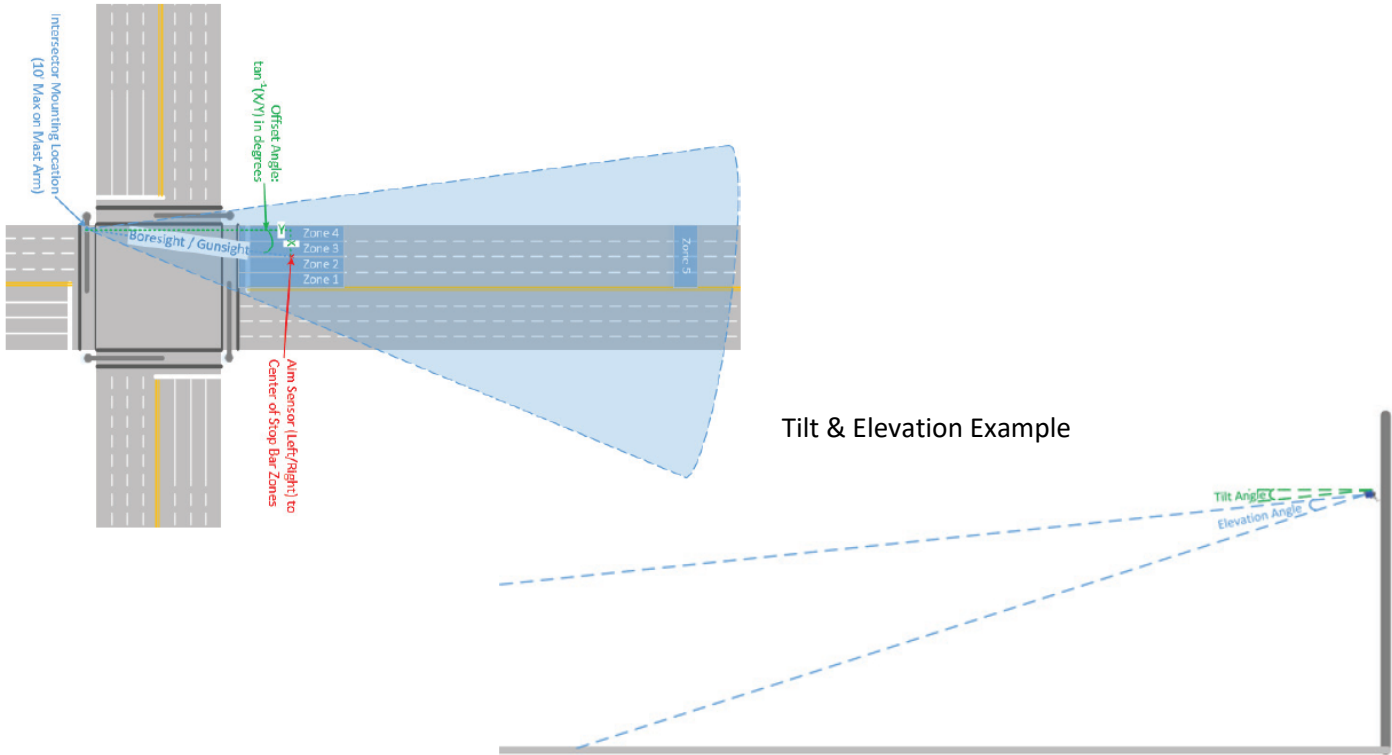


## DISTANCE TO STOP BAR VARIABLES

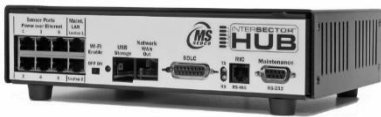
Distance to Stop Bar	Max.# Lanes	Mounting Height	Angle <sup>1</sup> (°)
60'-80'	2	16'	-6°
80'-100'	3	17'	-6°
100'-120'	4	18'	-4°
120'-160'	4	19'	-2°

**INSTALLATION EXAMPLE**

TC-0A-SDLC Installation Example  
FIGURE 1: TC-CK1-SBE-2.0 Installation Example



**COMPATIBLE PRODUCTS**



MS Sedco Intersector HUB  
Part Number: TC-HUB



MS Sedco ECX Cable Extender  
Part Number: ECX



The ECX allows cable runs for the INTERSECTOR of up to 600 feet, doubling the allowable distance. It's rugged and streamlined enclosure features IP66-rated connector covers that assemble easily around conventionally terminated Cat 5e and Cat 6 cables.

**WARRANTY**

MS Sedco traffic products are warrantied pursuant to current terms and conditions against faulty workmanship and defect in materials for 5 years from the invoice date.

**COMPANY CONTACT**

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