USER'S GUIDE

INTERSECTOR™ SDLC

MICROWAVE VEHICLE MOTION SENSOR

FOR USE WITH THE MS SEDCO INTERSECTOR HUB

IDENTIFICATION:

- Part Number: TC-0A-SDLC
- Product Name: INTERSECTOR™ SDLC
- Software Compatibility:
    - V3.2E: Intended for the INTERESECTOR SDLC or any Intersector that is being updated from V2.0F
    - V3.1E: Intended for Intersectors being upgraded from V1.9U

DESCRIPTION

The INTERSECTOR SDLC is a microwave motion and presence tracking sensor designed for vehicle detection at intersections. The sensor offers several advantages over inductive loop detectors and camera-based systems:

- Detection is not affected by weather conditions
- Immune to sunrise / sunset or post-rain glare
- Not susceptible to in-road breakage
- Multiple lanes can be covered by a single unit
- Lane by lane detection configuration ability
- Easily installs on corner signal poles and signal mast arms
- No privacy concerns
- Reduces construction cost

Through the INTERSECTOR HUB portal, the INTERSECTOR SDLC allows users to visually track vehicles as they approach the intersection and allows easy setup of detection zones to provide programmable inputs to a traffic control cabinet. The portal also provides the ability to verify system functionality.

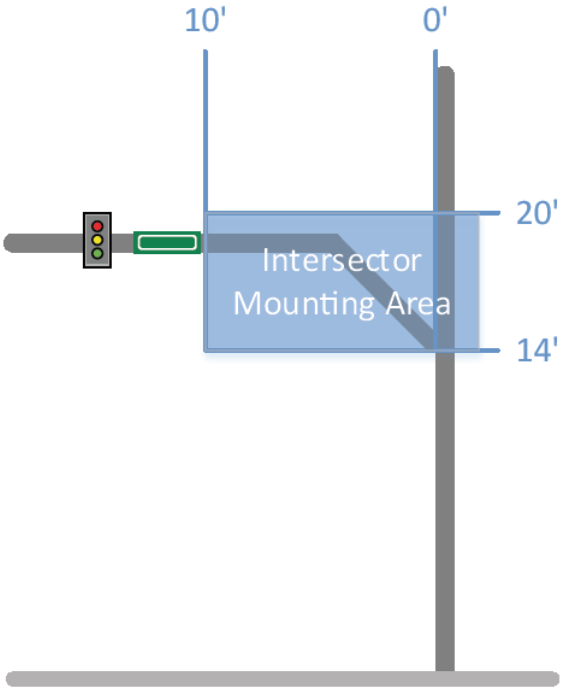
SPECIFICATIONS

DESCRIPTION	VALUE
Dimensions	10.5" x 8.5" x 7"
Weight	5 lbs
Materials	Front & Back Cover: UV Protected Polycarbonate
Ambient Temperature Rating	-40 to +85C
IP Rating	IP 54
Ethernet Connection	IP 67
Technology	Microwave: 24.000 to 24.250 GHz
Max. Transmitted Power	20 dBm
Startup Time	60 Seconds
Input Voltage	12 to 24 VDC, POE
Max. Power	8.8 Watts
Weep Hole	1/8" Dia.
Compliances	NEMA TS2 2003 FCC Part 15.245 Canadian Std: RSS-210

MOUNTING LOCATION – GUIDELINES

IMPORTANT NOTE:
MS Sedco recommends a "Pre-Analysis" be performed for the intersection where the INTERSECTOR SDLC is to be installed. The Pre-Analysis provides key information that can be helpful with the initial setup of the sensor relative to mounting height, distance from detection zone, number of lanes, etc. The information below helps to outline the basic requirements to assist in the proper location and setup of the sensor.

1. Fundamental guidelines for installation:
   - Mounting height should be between 14 ft. and 20 ft. on a corner signal pole or on a mast arm no further than 10 feet from the signal pole
   - The maximum offset angle (azimuth) to the direction of traffic should be no more than +/- 15°
   - The sensor must be mounted level
   - Distance from the sensor to the Stop Bar should not exceed 160 ft.
   - Distance from the sensor to the closest detection zone should be at least 60 ft.
   - Typical detection range of the INTERSECTOR SDLC is 600 ft.
   - The INTERSECTOR SDLC has a detection width angle of 30 degrees. For best results the sensor should be mounted at a tilt angle between horizontal and 6 degrees downward plus or minus the slope of the road.



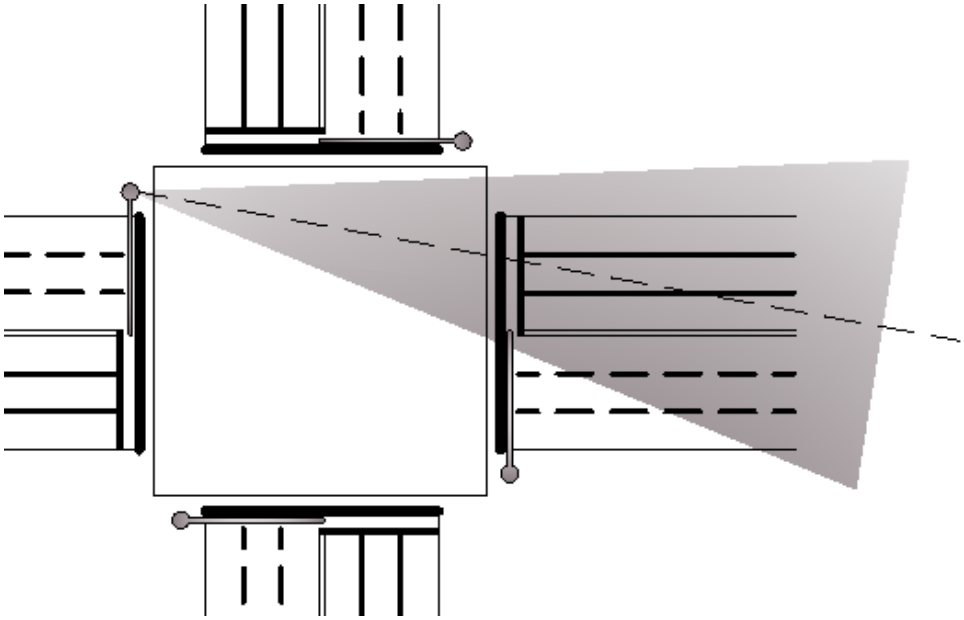
2. Tilt angle (elevation) in degrees based upon mounting height vs. distance to front of the detection.
   - Keep in mind that the angle is relative to the slope/grade of the roadway.
   - MS Sedco recommends the use of an angle indicator for this procedure.

Tilt Angle (Deg.)		*Distance to Front of Zones (ft)*								
		60	***70***	***80***	***90***	***100***	***110***	***120***	***130***	***140+***
Mounting Height (ft)	***14***	-8	-6	-3	-2	-1	0	0	0	0
	15	-9	-7	-4	-3	-1	0	0	0	0
	16		-8	-5	-3	-2	-1	0	0	0
	17		-9	-6	-4	-3	-1	0	0	0
	18			-7	-5	-4	-2	-1	0	0
	19			-8	-6	-5	-3	-2	0	0
	20			-8	-7	-6	-3	-3	-1	0

3. Approximations for quick reference:

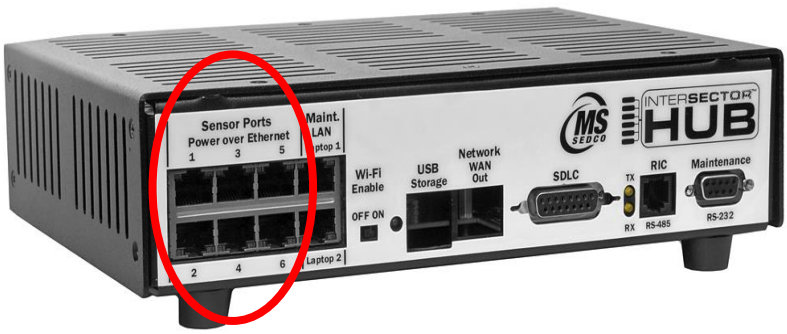
Distance To Stop Bar	Max. # Lanes	Angle Mounting	Mounting Height
60 – 80 Feet	2	-6	16 Feet
80 – 100 feet	3	-6	17 Feet
100 – 120 Feet	4	-4	18 Feet
120 – 160 Feet	4	-2	19 Feet

- Use the gun-sights molded into the front and rear sensor covers of the INTERSECTOR SDLC to help point the sensor at the center of the detection zone as shown below.



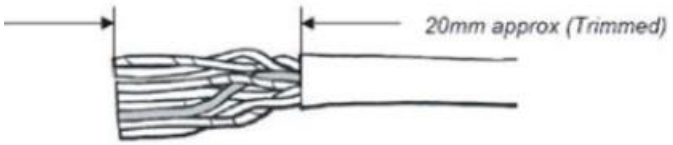
ELECTRICAL INSTALLATION

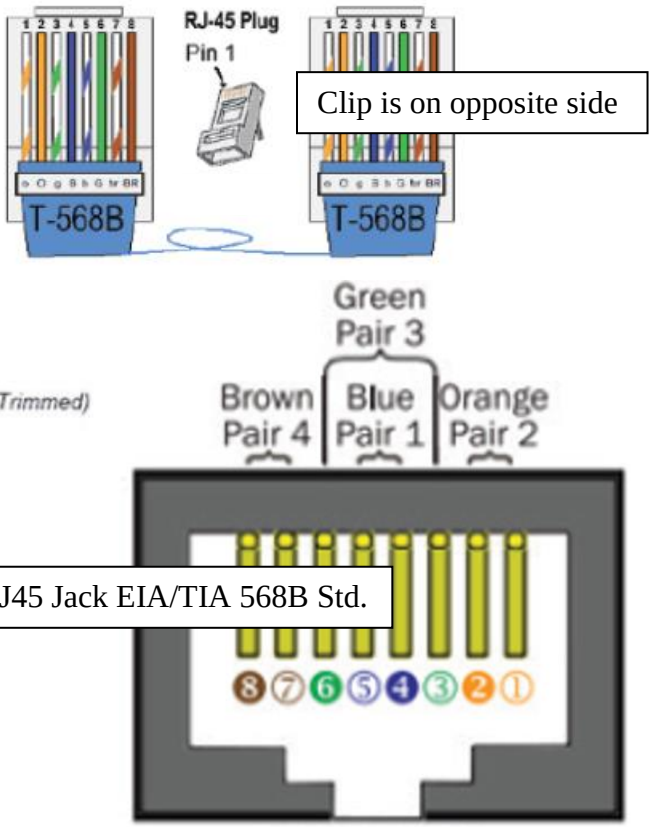
1. All power and data for the INTERSECTOR SDLC is accomplished through any of the 6 sensor ports provided at the INTERSECTOR HUB. An ethernet cable with RJ45 connections must be plugged in at the back of the INTERSECTOR SDLC and at one of 6 sensor ports. Power Over Ethernet (POE) is provided through the port.



2. If making the ethernet cable specific to the installation, adhere to the following cable configuration:

PIN	WIRE COLOR
1	White w/orange stripe
2	Orange
3	White w/ green stripe
4	Blue
5	White w/ blue stripe
6	Green
7	White w/ brown stripe
8	Brown





CONFIGURATION AND PROGRAMMING

Upon successful mechanical installation of the INTERSECTOR SDLC and cabling to the HUB, refer to the INTERSECTOR HUB User's Guide for complete programming and setup instructions.

TESTING & VALIDATION

Upon completion of all Intersector and HUB installation and setup procedures, all functions shall be tested to ensure safe and reliable performance. As a minimum…

- Verify all devices have been properly secured
- Verify all wire connections and plug-ins are properly secured
- Ensure all defined settings and zones have been saved at the HUB
- Verify that each zone operates as expected per the configuration that has been defined
- Verify that the proper SDLC output shows up on the controller as vehicles go into each zone
- Ensure the Fail-Safe time (in seconds) is appropriate for the application
- Observe real-time traffic flow and ensure sensor and HUB performance is performing correctly

COMPATIBLE PRODUCTS

MS Sedco INTERSECTOR HUB
Part Number: TC-HUB

RMA PROCEDURE

Upon confirmation of a failed product, an RMA form must be filled out online prior to returning the product to MS Sedco.

Go To: https://mssedco.com/return-repair-policy-form/

Or scan the QR code with your smartphone to go directly to the online form.

TERMS OF WARRANTY

MS SEDCO, Inc. guarantees this product to be free from manufacturing defects for five years from the date of original invoice. If, during this period, the product fails to operate and has not been tampered with or abused, the unit can be returned prepaid to the factory and be repaired free of charge or replaced, as determined by MS Sedco. After five years, the unit may be repaired for a nominal service charge. No repairs will be made if the product is older than 8 years from date of original invoice. The terms of warranty apply to the original buyer of the product and are not transferrable. Limited warranty is in lieu of all other warranties, expressed or implied, including any implied warrantability of merchantability. No representative or person is authorized to assume for MS SEDCO any other liability in connection with the sale of our products. All warranties are limited to the duration of this written limited warranty. In no event shall MS SEDCO be liable for any special, incidental, consequential or other damage arising from any unclaimed breach of warranty as to its products or services. Terms of warranty are subject to change without notice.

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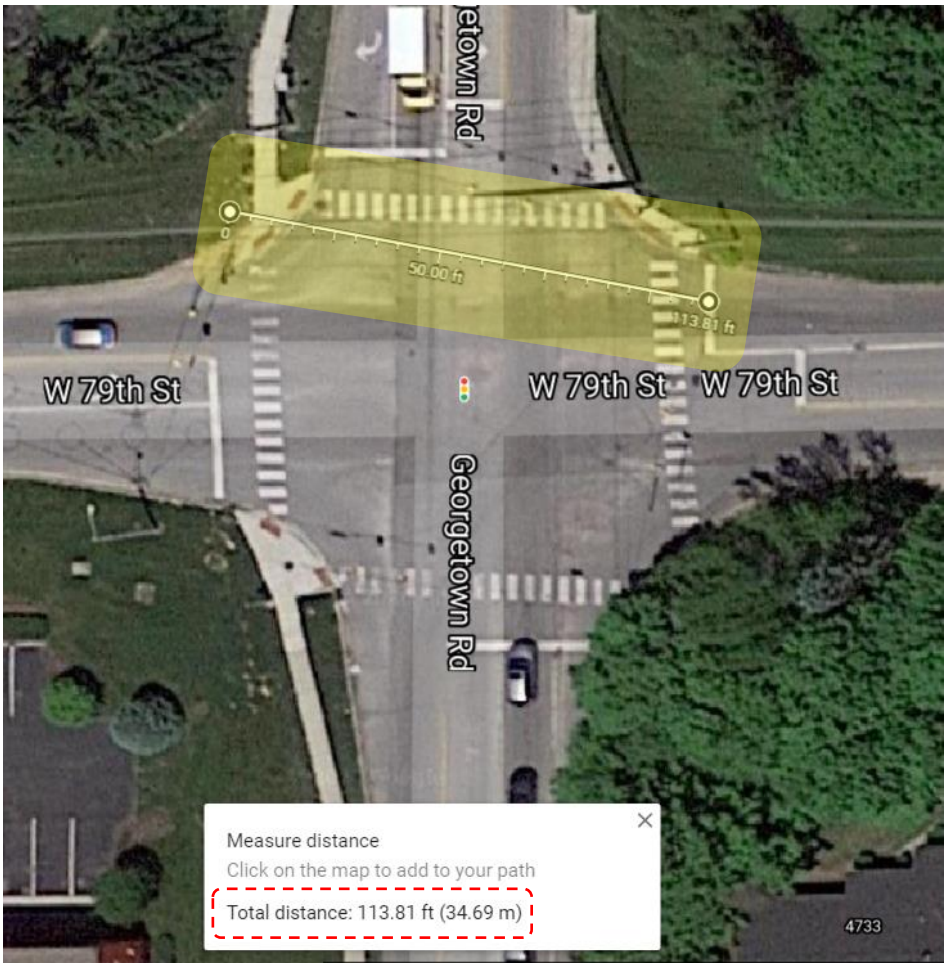
APPENDIX – GOOGLE MAPS

Google maps is a tool that can be used to help determine distances between key points such as the distance between the Stop Bar and the INTERSECTOR SDLC mounting location. Open Google Maps and enter the location desired.

Once the location is selected, right-click and select “Measure distance”.



Follow instructions on Google Maps to select measurement points. The result will be displayed on the measurement line and also in a dialogue box at the bottom of the map.