The OPS9243 is a complete traffic monitor for detection of pedestrians, bicycles, or vehicles. The sensor provides motion detection and traffic flow statistics without the invasion of privacy. A simple configuration sets the sensor for pedestrians, bicycles, or vehicles. Follow the below simple step-by-step mounting instructions to provide the optimum detection and reporting of traffic. For a more detailed explanation, see **AN-019 Traffic Monitor Mounting Guideline** application note.

Step 1. Determine Mounting Location

Determine the best location for mounting that gives a solid field of view of the pedestrian, bicycle, or vehicle traffic. Ideally the sensor will be mounted ~3-23 ft. (1-7m) from the flow of traffic. The OPS9243 has a cone shaped field of view that should be targeted at the center of the flow of traffic.
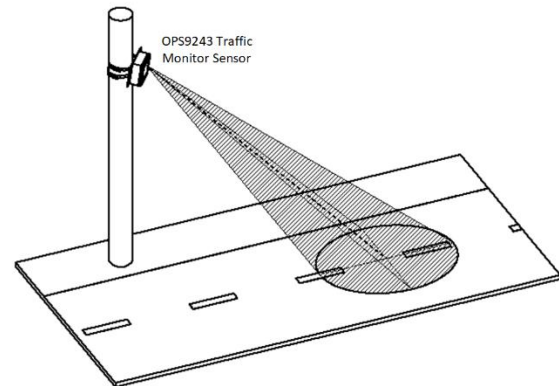

Figure 1. Traffic Monitor Field of View

Step 2. Determine Center Point of Field of View

Once the location and mounting structure are set, determine the center point of the field of view desired. If one lane of a road or pathway is desired, pick a point in the center of the lane upstream from the mount location. If two lanes are desired, pick a point upstream and between the lanes.

If detecting pedestrians or bicycles, you'll want to target distances a bit closer to the sensor. Pedestrian and bicycle detection should be targeted no more than 50 ft. (15 m) from the sensor.
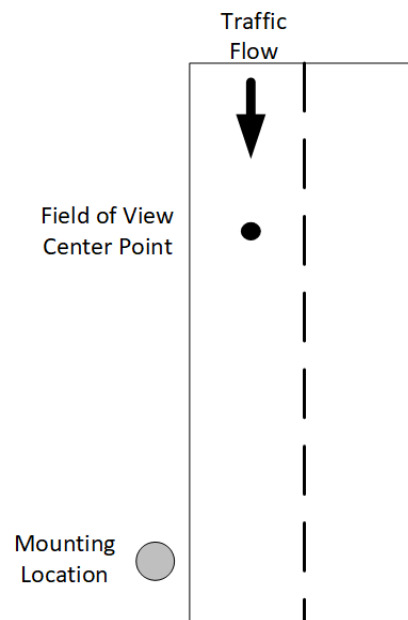

Figure 2. Field of View Center Point Determination (single lane)

Step 3. Measure the X and Y Distance to Center Point

With the center point determined, measure the distance from the mount location directly into the street or pathway equal to the point of the center point (perpendicular to road, pathway). This would be either the center of the lane or between two lanes. This is the X distance.

Next measure the distance parallel to the road from the mount location to the point equivalent to the center point. This is the Y distance.
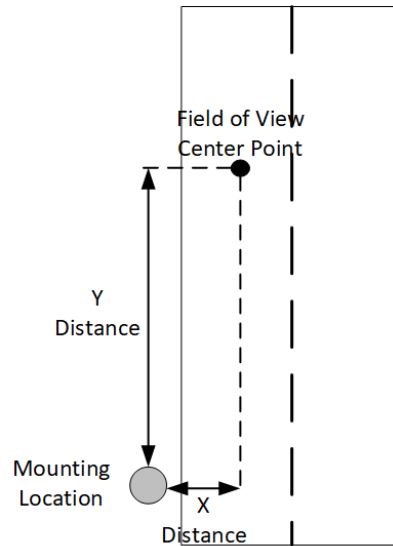

Figure 3. Center Point X, Y Measurement

Step 4. Determine Mount Height and Angle

Use the Lookup Table below to find the set of X and Y distances that closest matches the measured values. Note the matching mount height (H) and angle (A) from the table. Alternatively, use the **Field of View calculator** found on the OmniPreSense website.

| X (ft.)	X (m)	Y (ft.)	X (m)	Height (H)	Angle (A)
10	3.0	38	11.6	7 ft./2.1m	15˚
20	6.1	34	10.4	7 ft./2.1m	30˚
12	3.7	44	13.4	8 ft./2.4m	15˚
23	7.0	40	12.2	8 ft./2.4m	30˚
13	4.0	49	14.9	9 ft./2.7m	15˚
26	7.9	44	13.4	9 ft./2.7m	30˚
15	4.6	55	16.8	10 ft./3.0m	15˚
28	8.5	49	14.9	10 ft./3.0m	30˚

Step 5. Mount Sensor

5a. Prepare the sensor for mounting. Slide the metal bands in the metal plate as shown.

5b. Mount the bracket to the back of the sensor. The bottom of the sensor is with the connector on the underside.
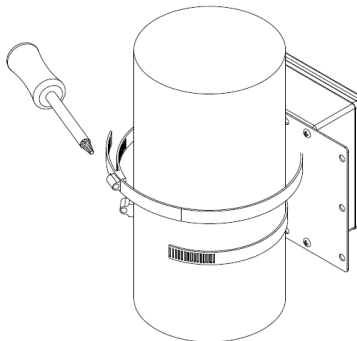
5c. Attach the sensor and mounting plate to the desired pole.
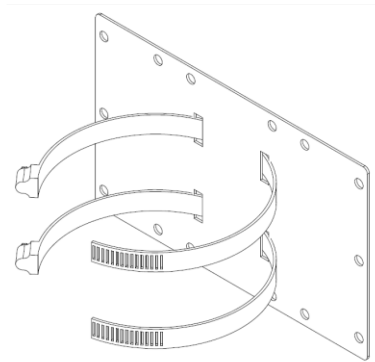

5a. Attach Wire Bands to Mounting Plate
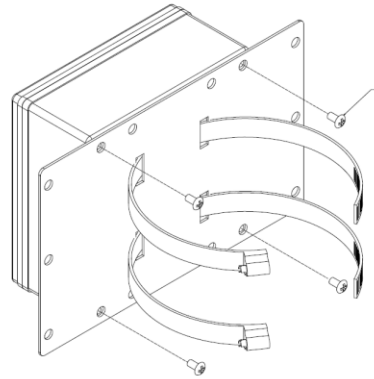
**5b. Attach Mounting Plate to Sensor**

5c. Attach Sensor to Mounting Pole

5d. Mount the sensor at the mounting location at the height H determined in Step 4. Initially mount the sensor facing parallel to the road or pathway in the direction of the center point.

5e. Next, rotate the sensor either 15˚ or 30˚ towards the roadway based on the angle (A) from the Lookup Table. Make final adjustments to lock the sensor in place.
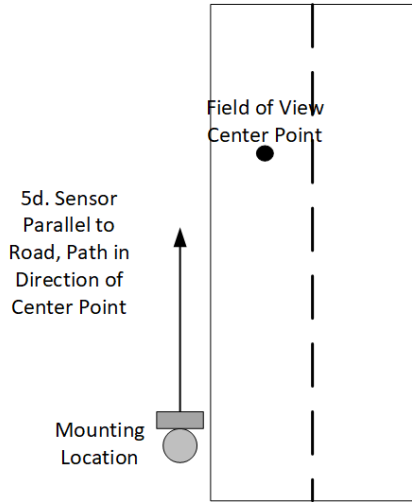
5d. Initial Mounting Angle
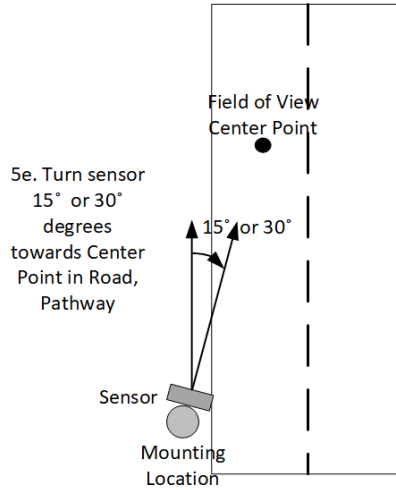
5e. Final Mounting Angle

Step 6. Mount Sensor

6a. Connect network cable to sensor. Note the M12 connector is keyed for proper alignment.

6b. Upon power applied by the network, the LED light to the right of the network connector may light up. Details of the LED lighting sequence is to be provided.

6c. The OPS9243 sensor automatically starts detecting and counting foot traffic. It should be configured over the network for the proper object detection (pedestrian, bicycle, vehicle, etc.). Check the network to confirm connectivity and to see traffic statistics.
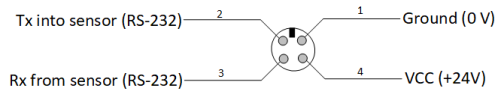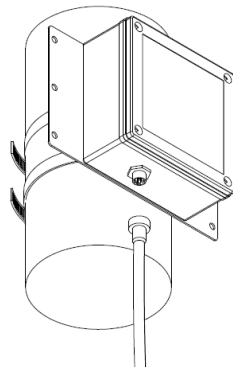
6a. Connect Network Cable and Keyed Connector Pins