Wavetronix SmartSensor HD Radar

Wavetronix

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Wavetronix’s SmartSensor HD is a high-definition radar that serves to accurately measure and classify vehicles. It can detect traffic on up to 22 lanes simultaneously and makes it possible to define up to 8 length classes and 14 speed classes. It can also classify vehicles by direction of movement.

Description

The SmartSensor HD is installed by the side of the roadway without affecting traffic flow. It detects above obstacles and provides constant performance, regardless of traffic conditions or weather conditions (rain, freezing rain, snow, wind, dust, fog, temperature or ambient light variations).

The SmartSensor HD detects either vehicles or lanes. In vehicle detection mode, it determines the instant speed, length, class, distance, lane and passing duration. In lane detection mode, it measures—during the period set by the user—the volume of traffic (number of vehicles) by direction of movement and classification (length and speed), occupation rate, average spacing and interval between vehicles, average speed, speed by category and speed of the 85th percentile (speed below which 85% of roadway users are driving).

Vehicles are detected at all times, including during lane changes. The detection data may be recorded in real time in a file or stored in the sensor and downloaded at a later time.

The SmartSensor HD can be configured automatically or manually and is easy to reconfigure to accommodate roadway changes. All configurations can be done remotely.

The SmartSensor HD can operate in uninterrupted mode for 10 years without recalibration, battery replacement or cleaning.

Specifications

Compliance

- Weatherproofness (UL746C)
- NEMA 250 standard for:
    - Watertightness
    - Exterior icing

    - Water infiltration
    - 4X corrosion protection
    - Gasket
- Tests required under the NEMA TS 2-2003 standard:
    - Vibration
    - Impact
    - Transitional
    - Operating temperature
    - Supply voltage

Performance

- Detection range
    - Maximum: 76 m (250 ft.)
    - Minimum: 1.80 m (6 ft.)
- Vehicle speed measurement accuracy: 8 kph
- Average speed accuracy per lane and per direction of movement: 5 kph
- Occupation accuracy
    - Per direction: 10%
    - Per lane: 20%
- Classification accuracy
    - Typical: 90%
    - Minimum: 80%
- Volume measurement accuracy per direction of movement:
    - Typical: 98-99%
    - Minimum: 95%
- Volume measurement accuracy per lane:
    - Typical: 98-99%
    - Minimum: 90%
- Minimum distance between 2 vehicles: 1.67 m (5.5 ft.)
- Resolution: 0.6 m

Technical characteristics

- Operating frequency: 24-24.25 GHz
- Bandwidth: 245 MHz
- Dimensions: 33.5 x 26.9 x 8.4 cm (13.2 x 10.6 x 3.3 in.)
- Weight: 1.9 kg (4.2 lbs.)
- Lexan polycarbonate enclosure
- Power supply: 9-28 VDC
- Power consumption: 8.1 W
- Operating temperature range: -40 to +74°C (-40 to +165°F)

For more information: 1 800 363-5913

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