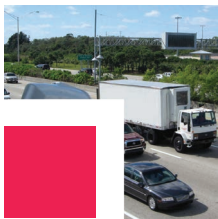# RTMS®
Sx-300

The non-intrusive, radar-based RTMS Sx-300 is an advanced sensor for the detection and measurement of traffic on roadways. It is all-weather accurate and virtually maintenance-free. Best of all, Sx-300 is renowned for long-term worry-free reliability.

The RTMS Sx-300 is a small roadside pole-mounted radar, operating in the microwave band. Simultaneously, the sensor provides per-lane presence as well as volume, occupancy, speed and classification information in up to 12 user-defined detection zones. Output information is provided to existing controllers via contact closure and to other computing systems by serial or TCP/IP communication port. A single radar can replace multiple inductive loop detectors.

The Sx-300's all-in-one concept combines a high resolution radar and a variety of communications options all in a single enclosure. This sleek cabinet free detection station is simple to integrate into any system whether urban signal control or highway traffic management.

RTMS

BENEFITS

- Fast, safe installation, on existing road-side poles, with no traffic disruptions
- Compatible with all RTMS integrated solutions including detection station, counting, urban traffic control, event reporting, data collection
- Highly flexible: suitable for any road and pole type, with various built-in communication options, including contact pairs and TCP/IP
- Zero Setback™ feature means any pole is suitable
- Low power requirement allows low cost solar power operation

FEATURES

- Provides presence indication and accurate measurements of volume, occupancy, speed and classification in up to 12 separate zones (lanes) up to 76 meters (250 feet) away
- Fully programmable to support multiple applications using simple intuitive software on a Notebook PC
- True-presence: detects stationary and fast moving vehicles; single or dual loop emulation
- Reliable all-weather performance
- Low life-cycle cost with no routine maintenance procedures and high reliability. Typical MTBF – 10 years or 90,000 hours
- Easy to calibrate by fast, automatic set-up wizard

APPLICATIONS

- Mid-block detection for intersections (advance detection)
- Freeway traffic management and incident detection
- Traveler information and journey time prediction
- Ramp metering
- Queue detection
- Work zone safety systems
- Permanent and mobile traffic counting stations
- Loop replacement (single or dual loop emulation)

RTMS®
Sx-300

SPECIFICATION

Average Coverage (Radar)

The Sx-300 detection field of view covers the area defined by:

- Elevation angle
  50 degrees
- Azimuth
  12 degrees
- Range
  0 to 76 m (0 to 250 ft)

Measurement Resolution

- Detection zones
  up to 12 zones
- Detection range (increment)
  0.4 m (1.3 ft)
- Zone width
  2 to 7 m (7 - 20 ft)
- Time events
  1.3 msec

Frequency Bands

- K band, model Sx-300 operates at high resolution in the 24 GHz band

Regulatory

- FCC
- CE EN 60215, EN 301 489-1, EN 301 489-3, EN 300 440-1, EN 300 440-2, EN61000-4-4
- Canadian CSA C108.8 - M1983

Interface

- Single MS type connector provides communications and output signals
- Data: volume, occupancy, speed, gap or headway, six vehicle classes, 85th percentile
- 8MB built-in memory for data storage
- Isolated configurable RS232/RS-485 port provides vehicle presence, per vehicle and statistical data
- Bluetooth communication for setup, calibration and data access

Configuration Options

- Base unit (as configured above)
- Option 1: Base unit plus second serial port (RS-232/422)
- Option 2: Base unit plus TCP/IP

*Note: Option 1 includes 8 optically isolated output pairs rated for 100mA and 24VDC for presence indication and dual-loop speed

Mechanical

- Unit is encased in a rugged, water-tight NEMA 4X & IP-67 polycarbonate enclosure
- Universal mounting bracket mountable on any structure. Tilts on three axes and is lockable.
- Size
  23 x 18 x 17 cm (9 x 7.25 x 6.75 in)
- Weight
  1.02 kg (2.24 lbs) without mount

Power

- Operates on 12 - 24 VAC or VDC
  3.6W max standard
  12W max with IP camera option
- EN 61000-4-5

Maintainability

- Ultra reliable: MTBF (mean time between failures) designed for 90,000 hours (10 years)
- Self-test diagnostic software
- Quick replacement
- Firmware field upgradable

Environmental Conditions

- Temperature range
  -40° to +74°C (-40° to 165°F)
- NEMA TS2: 2003
- Wind
  Up to 190 km/hr (120 mph)
- IP 67 compliant

Warranty

- Five year warranty

ImageSensing systems

Precision decisions.

Due to ISS' continuous efforts to develop the products that are most responsive to our customers needs, the above specifications are subject to change. To verify the current information, please visit the Image Sensing Systems website.

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