

Sentry™ Visibility Sensor For Tunnel Applications

Now with 24 month
factory warranty!



- - - Key Features - - -

- Optimal tunnel measurement range
- Proven 42-degree forward scatter angle
- Compact, lightweight package
- Road & rail tunnel applications
- Preferred “look down” geometry
- Simple installation & maintenance


SVS1-T Sentry™ Visibility Sensor

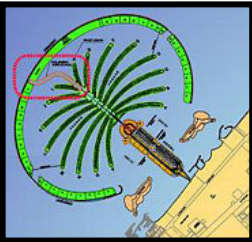
Measures atmospheric visibility (meteorological optical range) by determining the amount of light scattered by particles (smoke, dust, haze, exhaust fumes) in the air that pass through the optical sample volume. A 42-degree forward scatter angle is used to ensure performance over a wide range of particle sizes. MOR is calculated by converting the received signal strength (extinction coefficient, σ) using Koschmeider's formula, MOR (Km) = $3/\sigma$.

Integrated single-pedestal sensor design that keeps all sensor cabling internal to the sensor for complete protection against dust and water intrusion. The sensor is made from anodized aluminum and rugged, UV-resistant fiberglass enclosures rated to IP66. Based on the proven field experience, the sensor uses a "look down" geometry to reduce window contamination. The optical windows have continuous duty anti-dew heaters. All power and signal lines to the Sentry™ are protected with surge and EMI filtering to help guarantee uninterrupted service for the life of the sensor.

Installation and maintenance are simple with the Sentry™. A mounting flange located on the bottom of the Main Enclosure Box mates with a user supplied 1-1/2 inch IPS mounting pipe. Power and signal cables are installed through weatherproof cable glands on the bottom of the Main Enclosure Box to terminal boards for simple but reliable connections.

Calibration of the Sentry™ in the field is as simple as attaching a factory supplied calibration fixture and following a procedure that takes less than 30 minutes. Semiannual calibration is recommended.

Specifications		
Performance	Power	Environmental
Range: 15 - 0.03 km ⁻¹ Extinction (EXCO) 200m - 100 km Visibility Accuracy: +/- 10% RMSE Time Constant: 60 sec Scatter Angle: 42 deg nominal Source: 880 nm LED	AC Version: 100-240 VAC, 24 VA Nominal DC Version: 10-36 VDC, 6 VA Nominal	Operating Temperature: -40 to 60 C Operating Humidity: 0-100% Protection: IP66 (NEMA-4X)
Outputs: 4-20 ma single ended output standard Output Options: ▶ 4-20 ma isolated output ▶ Relays - Control (up to 2) ▶ Relays - Diagnostic	Physical Weight: 8 kg (18 lb) Dimensions: 889 mm W x 292 mm H x 305 mm D (35 in x 11.5 in x 12 in) Mounting: Nominal 40 mm ISO pipe, 48 mm OD max (1-1/2" IPS pipe, 1.9 inch OD max)	 This equipment is in compliance with the essential requirements and other provisions of Low Voltage Directives 73/23/EEC and 89/336/EEC as amended by Directive 93/68/EEC.



Palm Jumeirah Tunnel, Dubai UAE

← Typical Tunnel Installations for the Sentry™ Visibility Sensor →



4 Torres Tunnel, Madrid Spain

Ordering Information

Sentry™ Visibility Sensor Model SVS1-T-xx-y

Where "T" is for the tunnel optimized Sentry with 15/km EXCO range
 "xx" = mains voltage (AC = 100-240 VAC, DC = 10-36 VDC)
 "y" = output option (A = Single Ended 4-20 ma, B = Isolated 4-20 ma,
 C = Control Relay #1, D = Diagnostic Relay, E = Control Relay #2)

- See Option & Accessory Brochure and Price List for more information -