

SENSOR LINE SL SMS

The SL SMS sensor is a flat fiber-optic traffic sensor for temporary installations. It offers easy installation, superior traffic data processing, and a flawless vehicle detection rate.

Product Description

The surface mounted SL SMS sensor is a flat fiber optic traffic axle detection sensor designed for temporary installations in a road pocket tape (e.g. self-adhesive reinforced mastic membrane pocket tape) which is sticking on the pavement. This type of sensor allows an easy and fast installation on the road.

The pressure of a wheel deforms the SL SMS sensor. This deformation decreases the optical transmittance inside the sensor. This transmittance change is detected by our opto-electronic interfaces like our dynamic or static optical transmittance analyzer and is transformed into signals for traffic data processing. Sensitive and insensitive zones of the sensor can be defined on customer request.



SL SMS sensor

Advantages

- 99,99+% vehicle detection rate
- Visibility independent
- Noise free signal
- EMV immune

References

- Netherland Westerschelde tunnel
- New Zealand bicycle detection
- USA temporary traffic control
- Iceland Skaftafel countryside

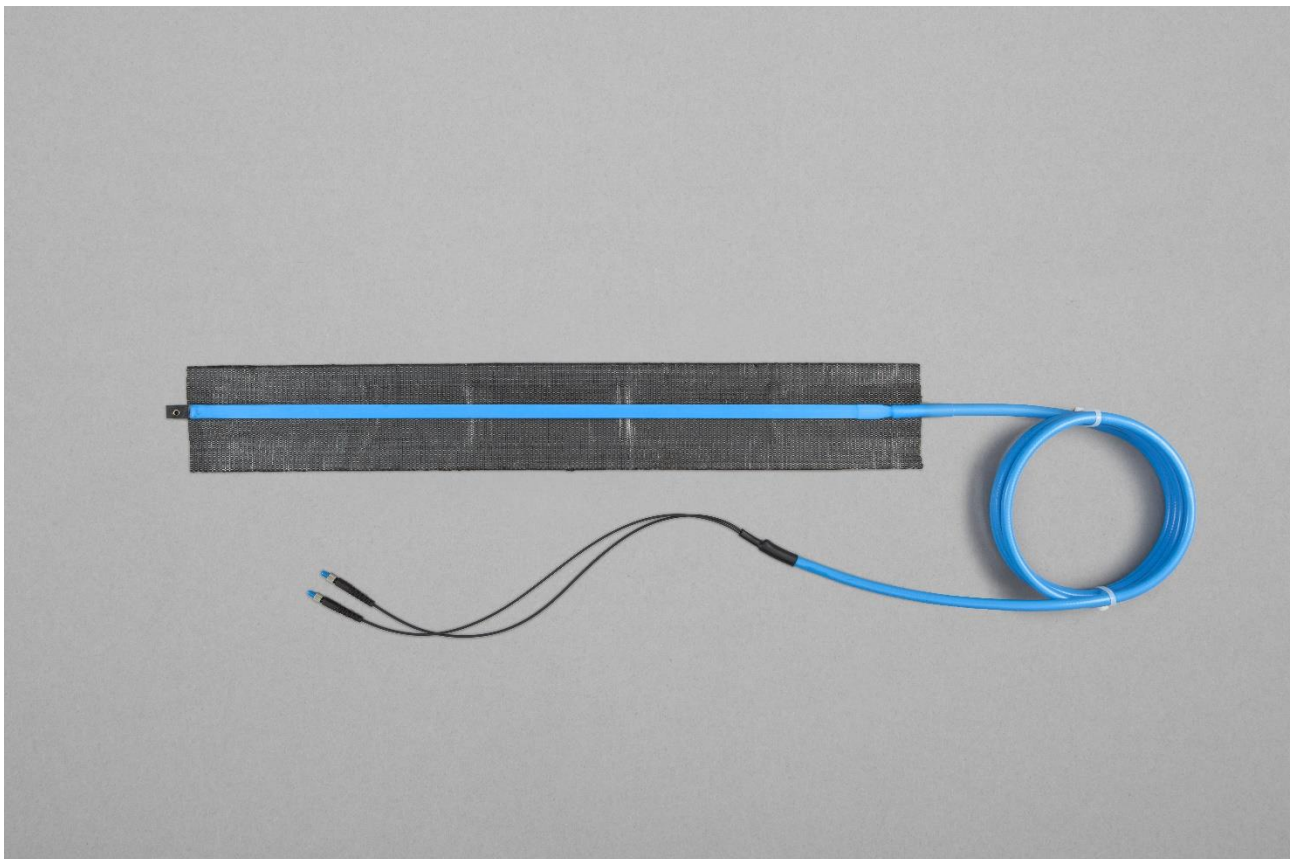
SL SMS sensor: fiber-optic sensor for temporary installations

Characteristics

- SL SMS sensor detects vehicles such as cars, trucks, buses and motorbikes by pressure on the sensor
- SL SMS sensor is used for temporary installations e.g. construction sites or temporary vehicle counting stations
- A ready to install SL SMS sensor comprises the sensor element itself, a fiber optic feeder cable terminated with fiber optic connectors and a self-adhesive pocket tape
- The sensor installation is done in a pocket tape on the road surface
- To operate the SL SMS sensor, it is connected to a Sensor Line opto-electronic interface

Benefits

- Accurate Detection of Vehicles - all vehicles are detected independent of poor visibility caused by smoke, rain, fog or snow
- Adapts smoothly to asphalt or concrete path surface
- Easy and fast installation and complete removal
- No maintenance or calibration needed during or after installation
- Customized sensor length possible - up to 4 m (13 ft) and cable length up to 15 m (50 ft)



SL SMS sensor: Technical Data

Dimensions

Sensor element	Length	up to 4 m (13 ft)
	Insensitive zones	tip 50 mm (2 in) feeder joint 100 mm (4 in)
	Width	14 mm (0.55 in)
	Height	3.7 mm (0.15 in)
	Weight (without feeder cable)	25 g/m (0.81 oz/yd)

Fiber optic feeder cable	Outer dimension	2.5 x 5 mm (0.10 in x 0.20 in)
	Length	up to 15 m (50 ft)
	Weight	12 g/m (0.39 oz/yd)
	Maximum short term pull tension	20 N
	Minimum bending radius	25 mm (0.98 in)

Fiber connectors (plastic / metal)	Length	34 mm (1.34 in)
	Max. diameter	8.5 mm (0.33 in)

Performance

	Maximum speed	up to 100 km/h (62 mph)
	Operating / storage temperature	-30 °C to 85 °C (-22 °F to 185 °F)
	Humidity	No limitation
	Warranty	no

Accompanying Products

- SL Pocket Tape: Self-adhesive reinforced mastic pocket tape
- SL MA-110: Analog Electronic Interface with 1 channel
- SL MA-210: Analog Electronic Interface with 2 channels
- SL MA-310: Analog Electronic Interface with 3 channels
- SL MD-220: Digital Electronic Interface with 2 channels

Ordering Information

SL SMS XXX-1-ZZ	XXX: Sensor Length (cm) ZZ: Cable Length (m)
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SL SMS sensor: Drawings

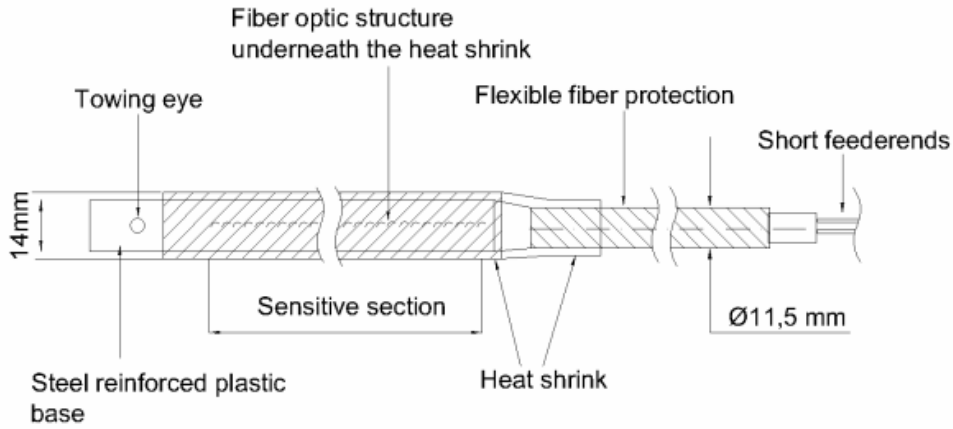


Figure 1: Top view

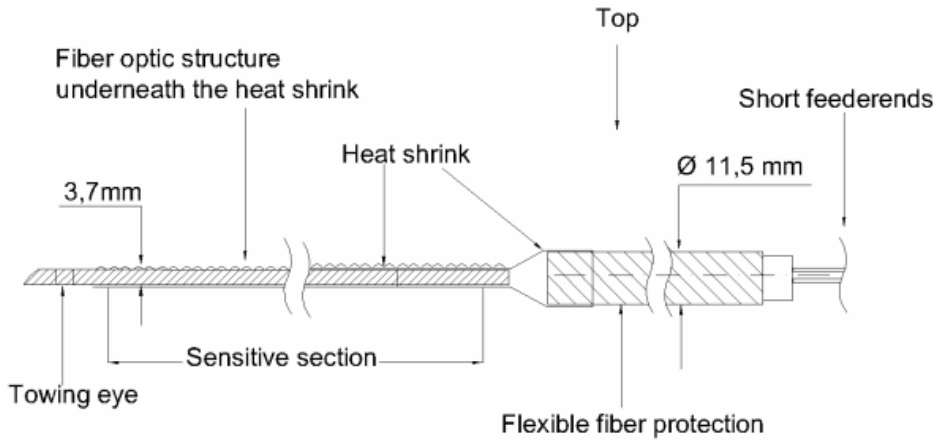
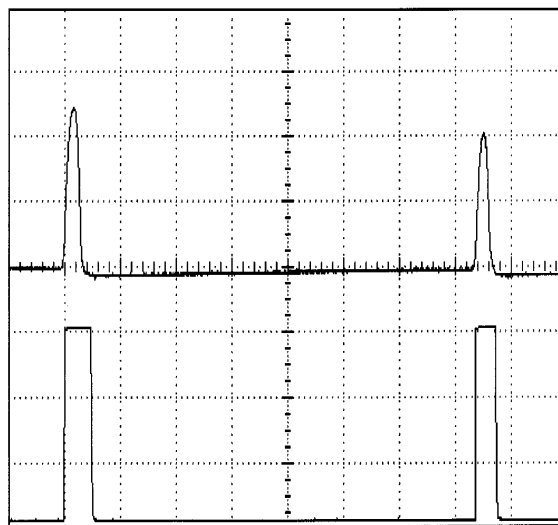


Figure 2: Lateral view



Typical signal output of SL MA/MD interfaces and SL sensors.
Upper trace: analog output 500mV/div, lower trace: digital output 5V/div