

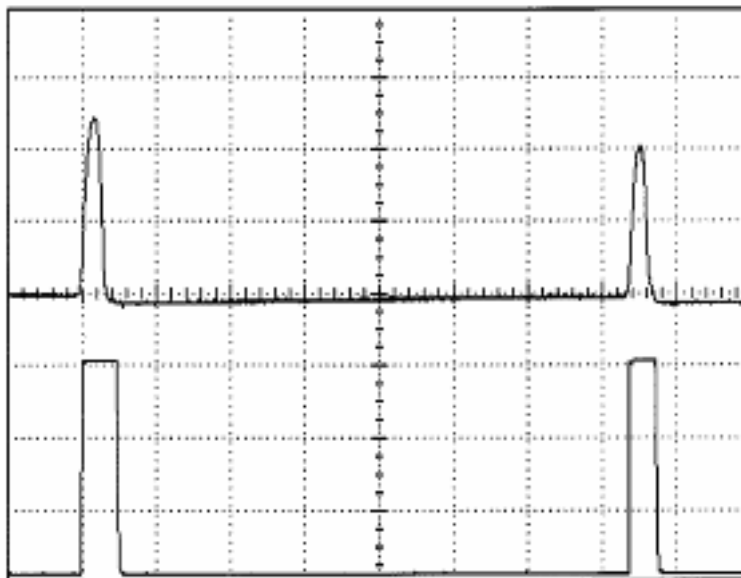
SMS - Fiber Optic Traffic Sensor

SENSOR LINE Surface Mounted Sensor (SMS) is a flat fiber optic load sensor designed for temporary installations in a road pocket (e.g. Bituthane Pocket Tape) which is sticking on the pavement. This type of sensor allows an easy and fast installation on the road. Axle crossing causes a certain amount of light change inside of the sensor. This light change will be detected by an opto-electronic interface which provides analog and digital signals for further data processing. This kind of surface mounted sensor is also available as two channel version to monitor two lanes. Sensitive and insensitive zones of the sensor can be defined on customer request. The special sensor design avoids any crossover talking between both channels.

Characteristics

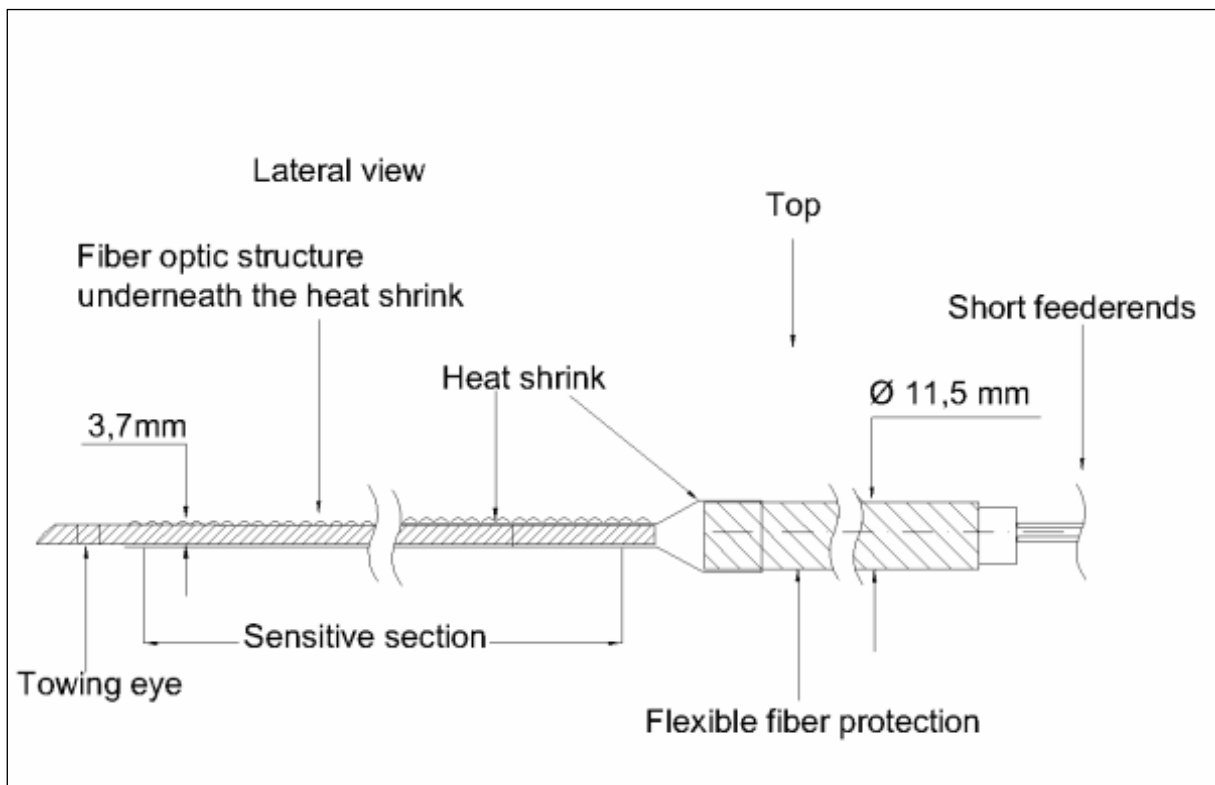
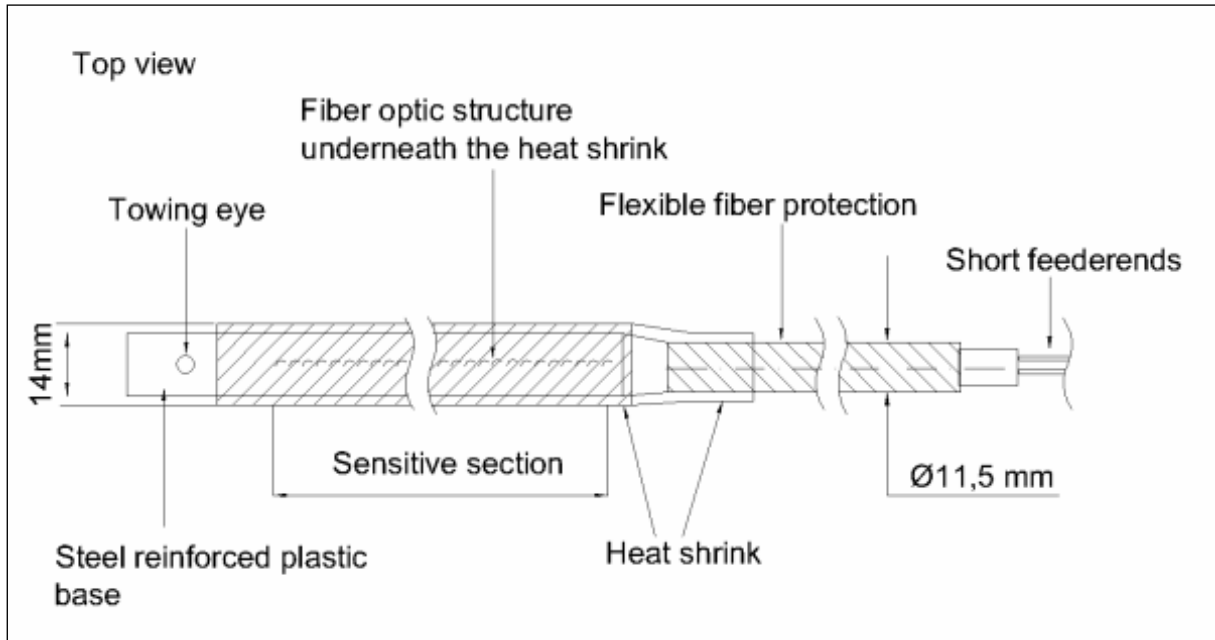
- Available as single channel and two channel version
- Fast Installation and multiple use of the SMS sensor
- Immune against electro-magnetic disturbances, corrosion and lightning
- Common applications are axle counting, speed measuring and vehicle classification

Typical Signal output (car at 65km/h)
Upper trace 500 mv/div. lower trace 5V/div



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Schematic drawings



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Technical Data

Dimensions		
Sensor Element (including fiber protection)		
Length of the sensor up to	600	cm
Length of the fiber protection up to	20	m
Width of the sensor	14	mm
Height of the sensor	3.7	mm
Weight of the sensor	25	g/m
Diameter of the fiber protection	11.5	mm

Sensor Attenuation	typ. 1/m	dB
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Fiber Connectors FSMA-905			
Standard Type	Crimp & Cleave	SL 4430-C	
Dimension		34	mm
Max. Diameter		8.5	mm
Optional:			
Type:	Multiuse	SL-RP2.5-C	
Dimension		41	mm
Max. Diameter		8.5	mm

Performance		
Storage Temperature Range	-40...+85	°C
Operating Temperature Range	-30...+85	°C
Recommended minimum Bend Radius Sensor Element (with its lower side inwards only)	~100	mm
Minimum Bend Radius fiber protection	25	mm
Maximum tensile load	2(449.61)	kN(lbs)
Sensitivity	Typical light change caused by a midsize passenger car 10 %	
Expected Sensor Durability	100 000 to 2 million axle crossings	

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Additional Information

IMPORTANT:

When rolling the sensor for transportation, never point its upper side inwards to avoid damage of the waveguide due to bulging.

The Bituthane Pocket Tape is available at:

Mar Mac Construction Products, Inc

PO Box 447

McBee, SC 29101

Tel: toll free 877.962.7622

Tel: 843.335.5814

Fax: 843 335 5909

Tel: toll free 877.962.7622

e.g. Tape ST0005604 (4" wide with a 2" pocket)

Notice:

For easy installation: the longer the sensor is the bigger the pocket has to be.

Installation:

e.g. Installation in Bituthane Pocket Tape

