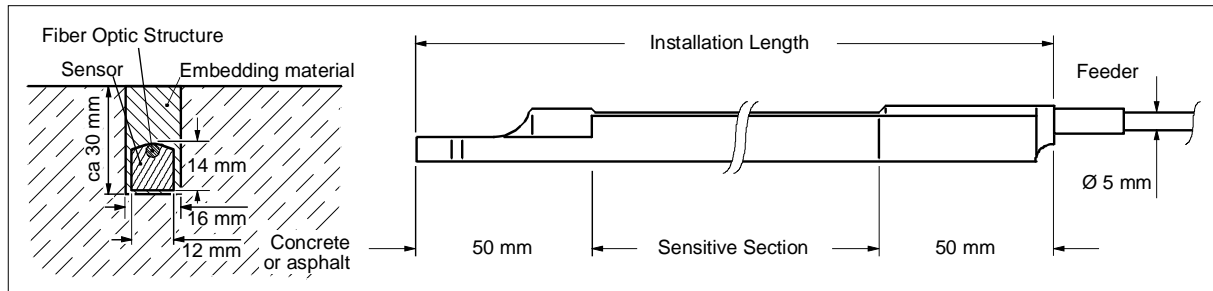


SPT Short Feeder Spliceless Fiber Optic Traffic Sensor

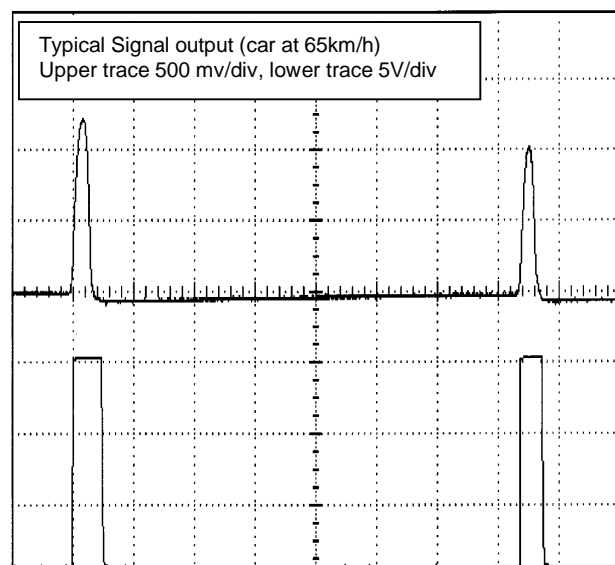
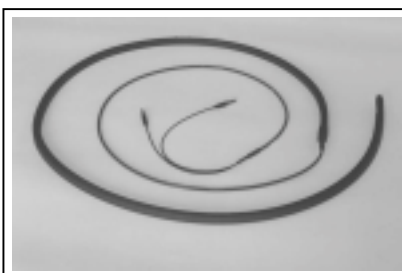
Product Description



The SENSOR LINE SPT traffic sensor is a fiber optic load sensor designed for permanent road installation. It yields a decrease of optical transmittance when exposed to the load of a vehicle passing over it. These changes are detected by an opto-electronic interface and transformed into electrical signals for traffic data processing.

Characteristics

- The fiber optic structure is fitted into a special conduit which makes the SPT sensor sensitive to vertical pressure only.
- As the sensor does not include any metal parts it is immune against electro-magnetic disturbances, corrosion, and lightning.
- A ready to install SPT traffic sensor comprises the sensor element itself, and a fiber optic feeder cable terminated with fiber optic connectors using a single optical fiber without any splice.
- The sensor installation is done flush and even to the road surface in small saw cut slots using SENSOR LINE SL-Cast embedding material and wedge kit.
- Inductive loops can be installed in the same slot
- To operate the SPT sensor it is connected to an opto-electronic interface, e.g. SENSOR LINE SL MA-100/110 for axle counting, speed measuring, and vehicle classification or the SL MD-200 especially suited for toll collection applications.



SPT Short Feeder Spliceless Fiber Optic Traffic Sensor

Technical Data

Dimensions			
Sensor Element (including insensitive end zones)			
Maximum Length	3		m
Standard Lengths #	1 / 2 / 3		m
Insensitive End Zones	50		mm
Width	12		mm
Height	14		mm
Weight	180		g/m
Fiber Optic Feeder Cable			
Outer Diameter	5		mm
Maximum Length	3		m
Standard Lengths #	1 / 2 / 3		m
Maximum Short Term Pull Tension	129 (29)		N (lbs.)
Optional Fiber Connectors			
Type	Crimp and Cleave	SMA 905	
Length		39	mm
Max. Diameter		8	mm

Optical Data			
Sensor Waveguide			
Core Diameter	200		µm
Cladding Diameter	230		µm
Buffer Diameter	500		µm
Numerical Aperture	0.3		
Sensor Attenuation	typ. 3.5+1.5/m		dB
Feeder Waveguide			
Core Diameter	200		µm
Cladding Diameter	230		µm
Buffer Diameter	500		µm
Numerical Aperture	0.3		
Feeder Attenuation @ 850 nm	<1		dB

Performance			
Storage Temperature Range	-40...+85		°C
Operating Temperature Range	-30...+70		°C
Maximum Stretching	3		%
Minimum Bend Radius of Sensor Element	100		mm
Minimum Bend Radius of Feeder Cable	15		mm
Estimated MTBF	10		years
Number of Load Cycles	unlimited		
Sensitivity	Typical light change caused by a midsize passenger car 10%		
# other lengths available on request			