



## SL EZ SENSOR

The EZ sensor is a robust, PU-based, reinforced fiber-optic traffic sensor for effective and precise vehicle and cyclist detection.

### Product Description

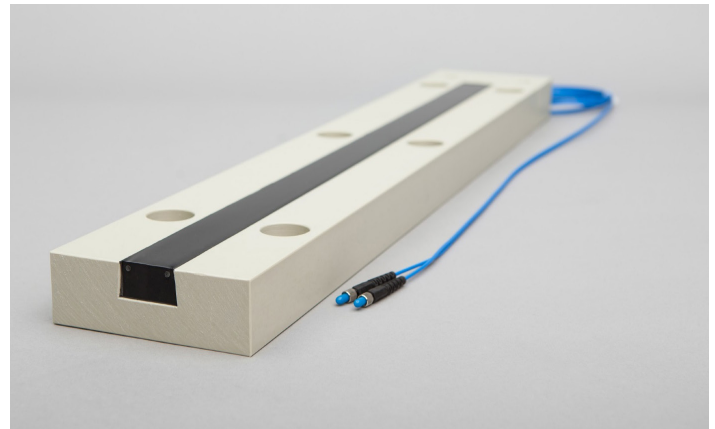
The SL EZ sensor detects vehicles in road traffic for applications like axle counting, speed measurement, headway measurement, vehicle classification and cyclist counting. The SL EZ sensor is designed for permanent installation in concrete or asphalt roads. It is a polyurethane-based reinforced fiber optic traffic sensor which is preinstalled in a frame of high density polymer and for a fast and easy replacement of the sensor stripes. The pressure of a wheel deforms the SL EZ sensor. This deformation decreases the optical transmittance inside the sensor. This transmittance change is detected by our opto-electronic interfaces like the dynamic or static optical transmittance analyzer and is transformed into signals for traffic data processing.

### Advantages

- 100% vehicle detection rate
- Visibility independent
- EMV Immune
- Noise free signal
- Highly reliable and maintenance free

### References

- New York Thruway
- Istanbul Bosphorus bridge
- Brussels bicycle counters
- Bangkok toll station organisation
- Bogota traffic control



SL EZ sensor and frame



SL EZ sensor installation for axle-based classification

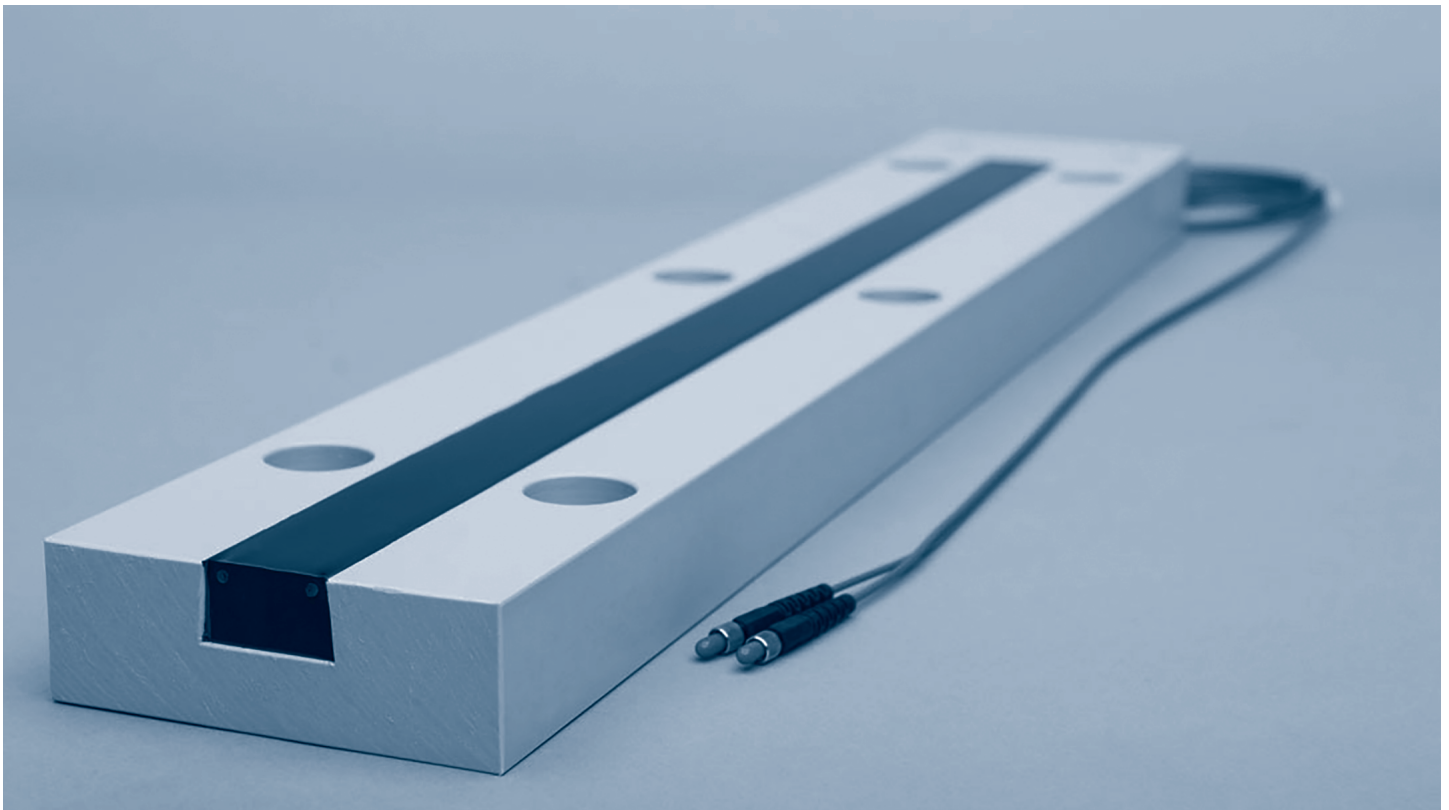
## SL EZ sensor: Easy install fiber-optic sensor for road traffic

### Characteristics

- From one up to four SL fiber optic sensors are preinstalled in a frame of high-density polymer.
- The sensor does not include any metal parts.
- It is immune against electromagnetic disturbances, corrosion and lightning.
- A ready to install SL EZ sensor consists of a frame, the sensor element itself and a fiber-optic feeder cable with a variable length.
- The SL EZ sensor is connected to a SL opto-electronic analyser with fiber optic plugs.
- SL EZ sensor detects vehicles such as cars and trucks.
- Typical applications are axle counting, dual tire and direction detection, speed measuring and vehicle classification.

### Benefits

- Easy and fast installation at lowest risk
- 100% detection rate - all vehicles are detected independent of poor visibility like smoke, rain, fog or snow
- Fiber-optic cable is EMV immune—no impact by electric vehicles, any other magnetic fields or lightning
- Fiber optic cable is noise free—clear analog or digital trigger output
- Installs flush with asphalt or concrete surfaces
- No maintenance or calibration needed at or after installation
- Customized sensor length possible - up to 4.5 m (14.8 ft) and cable length up to 250 m (820 ft)
- Reinforcement against lateral strain for a longer lifetime
- Unique strip lifetime ensures low maintenance costs
- Easy and quick replacement if needed



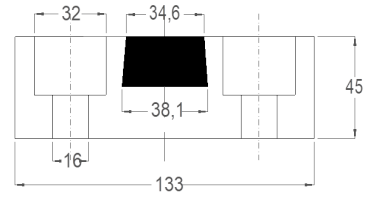
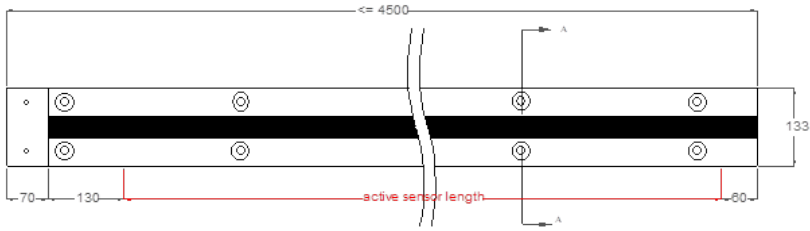
## SL EZ sensor: Easy install fiber-optic sensor for road traffic

### Specifications

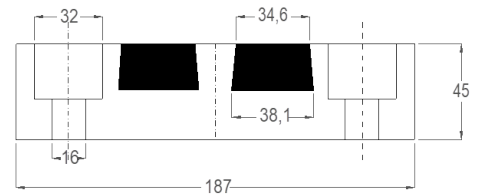
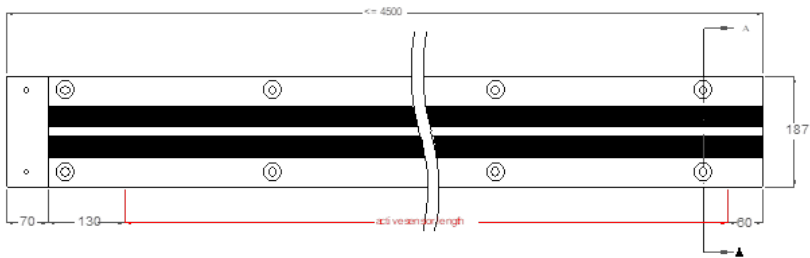
<b>Sensor Element</b>	Length	up to 4.5 m (14.8 ft)	
	Width / Weight	1 Slot Frame	133 mm / 6 kg/m (5.23 in / 12.10 lb/yd)
		2 Slot Frame	187 mm / 8.2 kg/m (7.36 in / 16.53 lb/yd)
		3 Slot Frame	240 mm / 9.5 kg/m (9.45 in / 19.15 lb/yd)
		4 Slot Frame	295 mm / 12.5 kg/m (11.61 in / 25.20 lb/yd)
	Sensor distance	Centre-to-centre	54 mm (2.13 in)
	Standard slot gap		19 mm (0.75 in)
	Insensitive zones		tip 60 mm (2.36 in) / feeder joint 200 mm (7.87 in)
Height		45 mm (1.77 in)	
Shore hardness		86	
<b>Fiber-optic feeder cable</b>	Outer dimension	2.5 x 5 mm (0.1 in x 0.2 in)	
	Length	up to 250 m (820 ft)	
	Weight	12 g/m (0.39 oz/yd)	
	Maximum short term pull tension	20 N	
	Minimum bending radius	25 mm (0.98 in)	
<b>Optional: PE enforced feeder cable</b>	Outer dimension	4 x 6.6 mm (0.16 in x 0.26 in)	
	Length	up to 250 m (820 ft)	
	Weight	12 g/m (0.39 oz/yd)	
	Maximum short term pull tension	60 N	
	Minimum bending radius	25 mm (0.98 in)	
<b>Fiber Connectors (plastic / metal)</b>	Length	34 mm (1.34 in)	
	Max. diameter	8.5 mm (0.33 in)	
<b>Performance</b>	Maximum speed	up to 250 km/h (155 mph)	
	Operating / storage temperature	-30°C to 85°C (-22°F to 185°F)	
	Humidity	No limitation	
	Warranty	2 years	
<b>Accompanying Products</b>	SL MA-X10 - Electronic Interface with 1-3 channels		
	SL MD-220 - Electronic Interface		
	SL BOLT SET - Mounting material		

# SL EZ sensor: Easy install fiber-optic sensor for road traffic

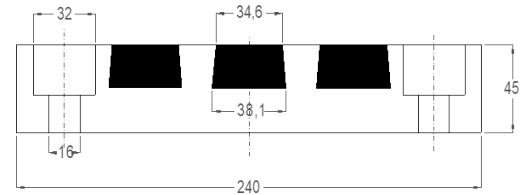
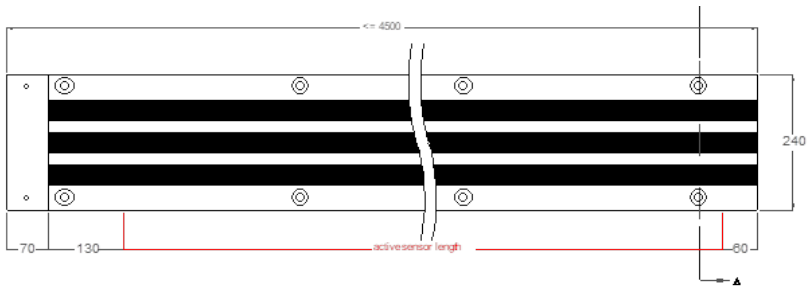
## SL 1EZ: One-Strip Sensor



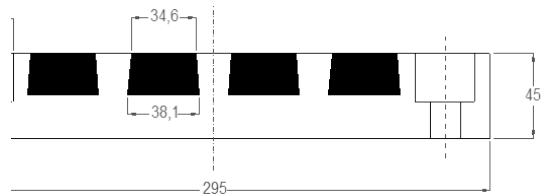
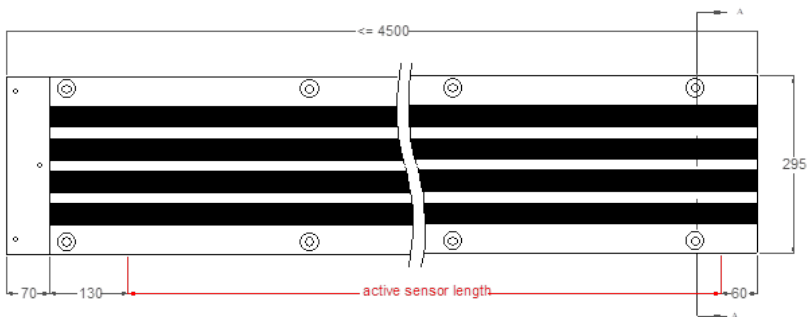
## SL 2EZ: One-Strip Sensor



## SL 3EZ: One-Strip Sensor

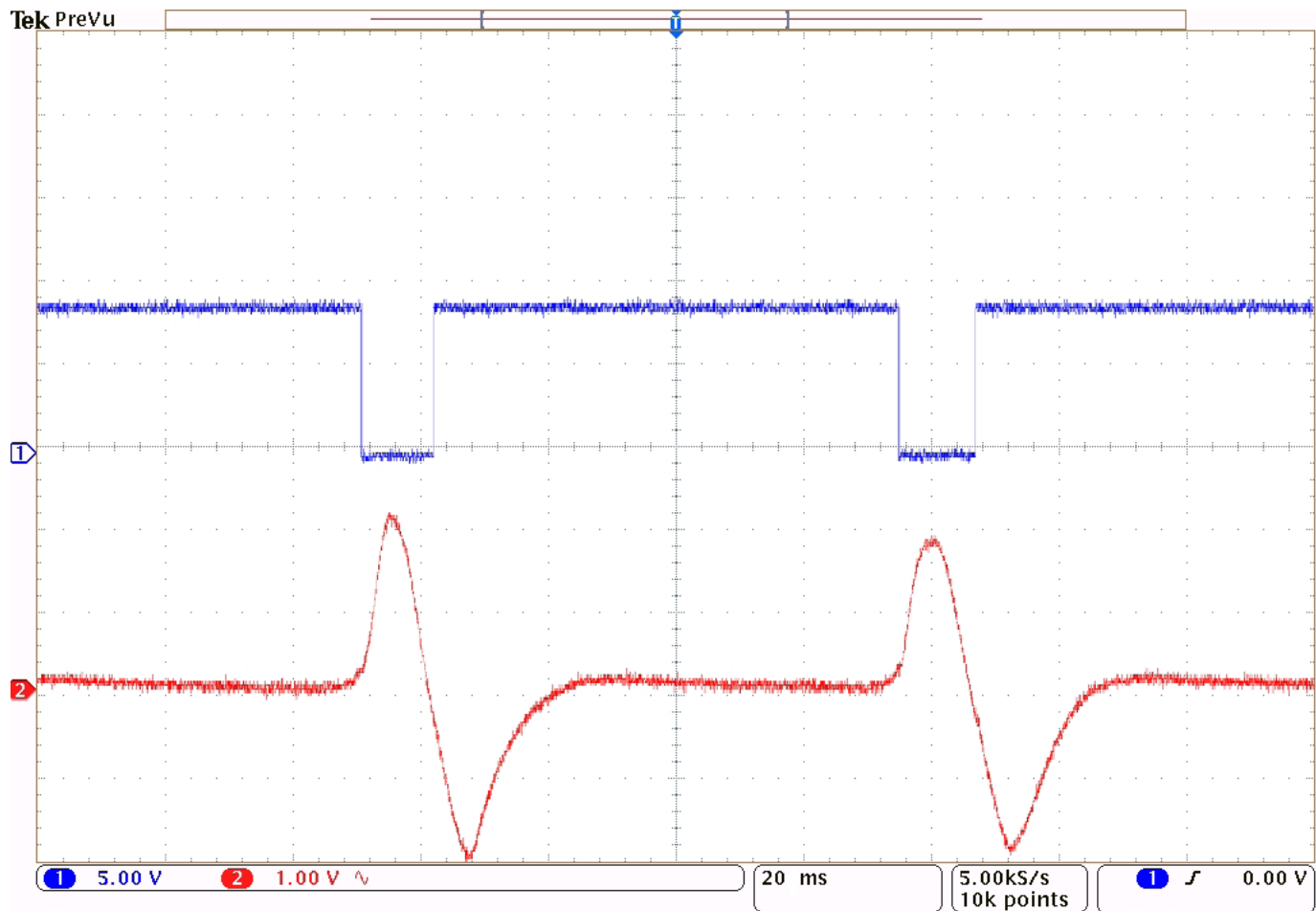


## SL 4EZ: One-Strip Sensor



# SL EZ sensor: Easy install fiber-optic sensor for road traffic

## Typical Signal Output

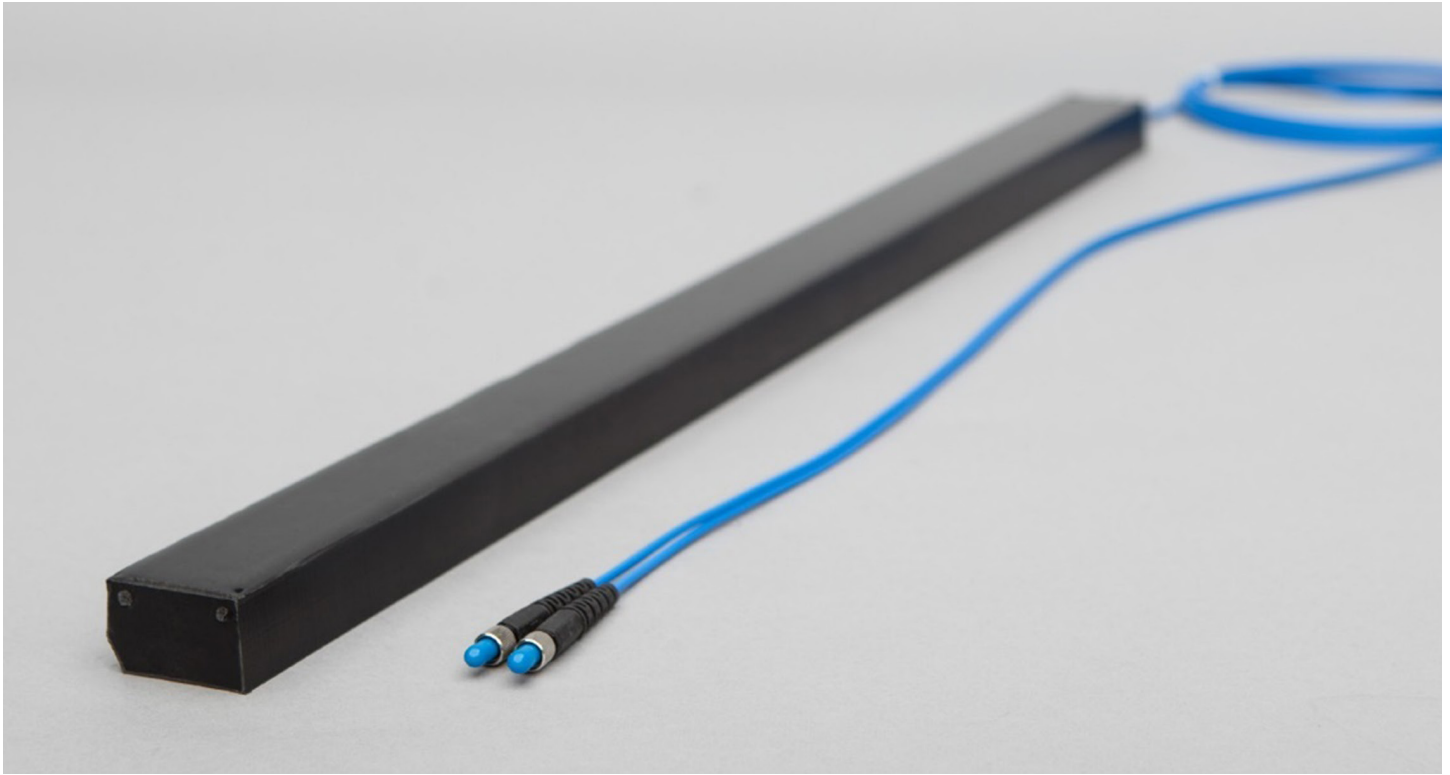


SL EZ Sensor operated by analyser SL MA-110

Trigger signal output (blue, 5V/div.) and analog voltage output (red, 1V/div.).

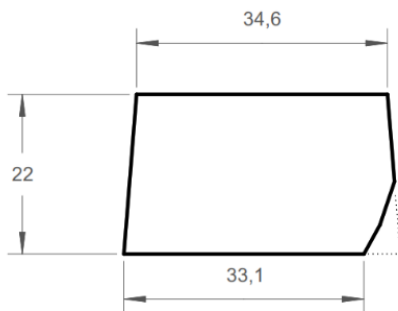
## SL EZR Strip

Easy replace fiber-optic strip for SL EZ frame



### Product Description

The SL EZR Strip is a polyurethane-based reinforced fiber optic traffic sensor replacement strip designed for permanent installation in SL EZ frames. Its special chamfered shape ensures a fast and simple replacement into an existing frame. The SL EZR Strip has a double-sided adhesive tape on the underside to guarantee a tight fit even in diagonal configurations for dual tire detection and heavy traffic.



Cross section SL EZR

