



## Laser scanner

LSR2001 is a sensor for vehicle detection based on the laser scanner technology. Compared to other technologies, this sensor is able to detect vehicles with high precision and resolution. LSR2001 is able to accurately measure vehicle profiles and is therefore the ideal tool for applications where precise vehicle classification is required. It is able to distinguish more than 20 classes of vehicles including:

- Motorcycles
- Cars
- Vans
- Trucks
- Articulated lorries
- Buses

The sensor has been designed, in both the mechanical and firmware side, to operate outdoor, even in adverse weather conditions. The firmware has in fact filters for rain and snow.

The scanner optics is different from other products on the market because it consists of two physically distinct areas for laser transmission and reception, making it particularly immune to the opacity produced by dust, water and pollution.

The sensor is equipped with a CPU that processes the signals received from the scanner to obtain all the data related to the transited vehicle. The communication with the sensor takes place via Ethernet line and it can be configured through simple and intuitive web pages.

### VERSIONS

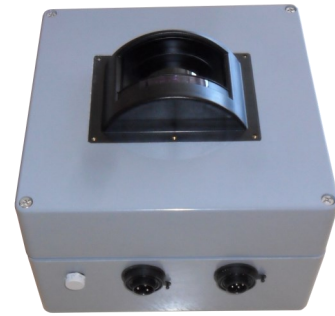
In addition to the LSR2001 basic version, the LSR2001-T version is also available and is more suitable for installations in extended temperature range.



## LSR2001



## LSR2001-T



Technology	Laser scanner
Emitted light	905 nm – not visible
Laser class	Class 1
Scan angle	96°
Scan period	16 ms
Transmission power	16 dB
Communication line	Ethernet
Power consumption	< 5W
Power supply	12 or 24 Vdc
Protection	IP65
Temperature range	LSR2001: -20°C : +50°C LSR2001T: -40°C : +60°C



## Laser Scanner



### LSR2001 - LSR2001T

#### TRANSVERSAL INSTALLATION

With transversal installation we mean when the laser detection plane is perpendicular to the lanes. This type of installation, which allows the positioning of the sensor on the side of the road, is suitable when more than one lane must be monitored and when the length and speed data are not needed. The data provided are:

- Counting
- Classification
- Height
- Traffic status

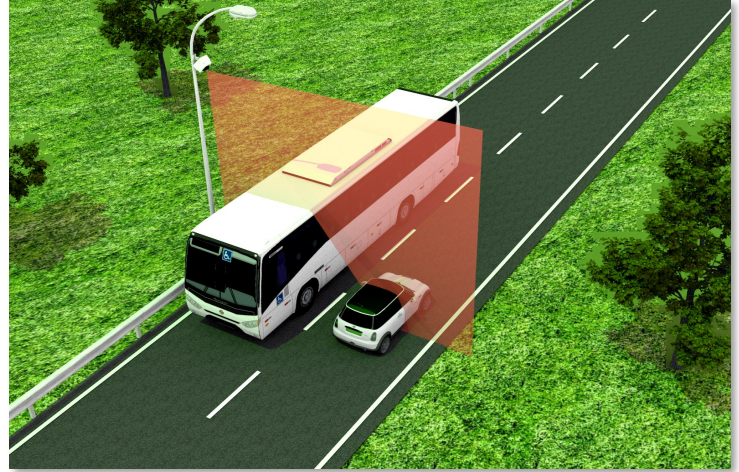


Figure 1: transversal lateral installation

#### OBLIQUE INSTALLATION

With oblique installation the sensor is able to monitor only one lane, but it can also provide information on speed and length of the vehicle. The data provided in this case are:

- Counting
- Classification
- Height
- Length
- Speed
- Traffic status

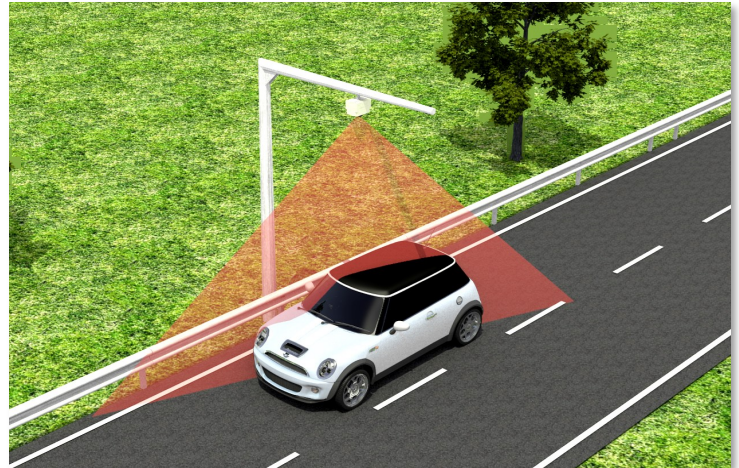


Figure 2: oblique installation above lane

#### APPLICATIONS

- Toll
- Traffic monitoring (ITS)
- Vehicle profiling
- Maximum height relief
- Vehicle classification
- Trigger for cameras

