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## OVERHEIGHT DETECTION

Avoid collisions and dangerous situations

- Overheight detection system based on two light beams (infrared light pulses)
- Can be combined with VMS, traffic lights, Toronto etc. for visually alerting drivers
- Detection of up to 4 road lanes
- Can be expanded with laser scanner for additional vehicle measurements (*see page 2*)

### Accurate overheight vehicle detection

Our overheight system has been developed to prevent strikes and collisions against road infrastructures such as bridges, tunnels, underpasses etc. Infrastructure strikes are costly to both highway and road network operators, creating hours of delay and disruption. Therefore, it is mandatory to have an accurate system that warns drivers in advance if their vehicles exceed the maximum height when approaching an overhead structure.

The system is based on two single beam lasers, with a high detection frequency (up to 1KHz) and a narrow angle to detect small objects. The light emitted (infrared light pulses) is reflected in order to be recognized by the receiver filtering the environmental light noise. The lasers are positioned horizontally in order to detect the vehicle's travel direction.

The solution is installed at the road side and can detect overheight vehicle on 3-4 lanes.

Compared to systems based on photocells with transmitter and receiver, our system has the advantage of easy installation as it is placed at the side of the road and does not need to collimate transmitter and receiver.

It is also able to provide the lane in which the overheight vehicle has travelled and operates under both day and night conditions.

Finally, it can provide alarms in various ways when an overheight vehicle is detected: relay contact; digital output.

**SEE BACK FOR  
TECHNICAL DATA**



## TECHNICAL DETAILS

Technology	Laser
Laser class	Class 1
Opening angle	0,5°
Detection range	20 mt (10 cm object) 40 mt (15 cm object)
Minimum width of object	10 cm
Maximum vehicle speed	150 km/t
Data line	Ethernet
Alarm	Relay, D/O
Power supply	12 ÷ 28 Vdc
Protection I	IP65
Temperature range	-25°C ÷ +60°C

## ACCURATE

twin single-beam laser for over height vehicle detection



## One mounting bracket for easy installation



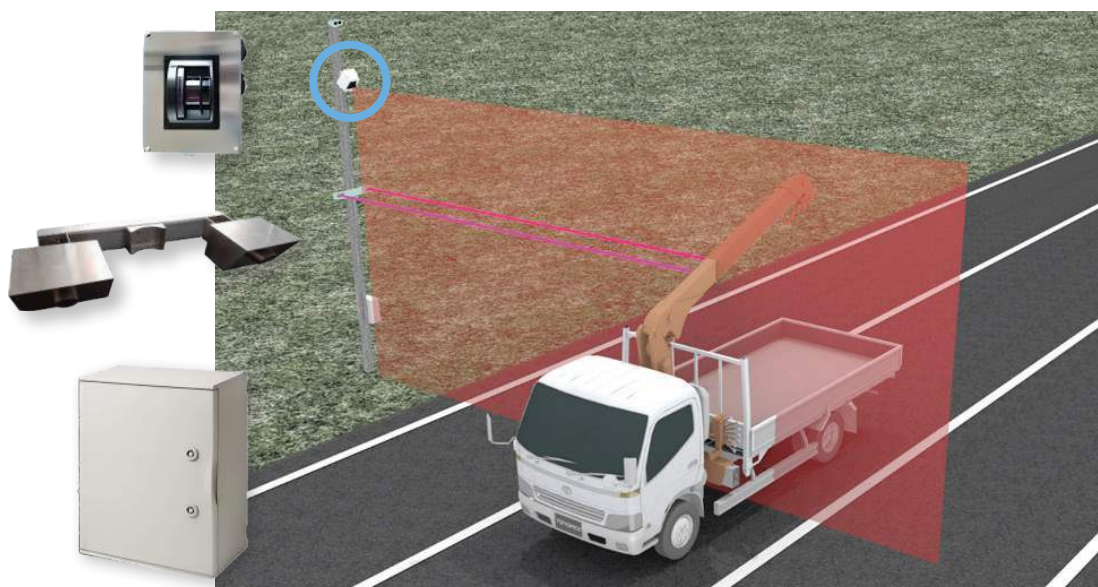
## Expand with laser scanner for more detailed measurements (*optional*)

The system can be expanded with a laser scanner which allows for not only overheight detection and alerts but also measurement of vehicle height, width and length in addition to vehicle counting with classification.

The laser scanner is very accurate in measuring the height and detecting the presence of a vehicle, while the double beam laser has a very high frequency and a narrow angle, allowing the detection of objects of small dimensions even at a distance of 20 m.

An internal CPU works in real time combining the data of both lasers and thus providing very accurate data. The algorithms are designed to detect small objects over the allowed height but to trigger the alarm only when the presence of a vehicle is detected, reducing the false alarm rate.

It is also possible to combine the laser detection with a variable message sign (VMS) to alert the driver about the potential danger. When an overheight vehicle is detected, the system provides alarms in different ways: relay contact, digital output and software event (protocol).



*The laser scanner and the double-beam laser are installed at the road side along with a control unit.*