



Over Height Vehicle Detection



RAM20

RAM20 has been developed to detect moving objects passing over the allowed height. RAM20 is also able to measure the distance of the object from the sensor and therefore to give information about the lane in which the object passed (even in roadside installation). This system is generally installed on roads close to a bridge, tunnel or other structure to safeguard.

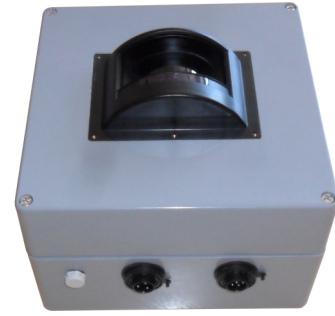


RAM20 is based on a laser scanner with 4 planes of detection (which helps for a precise detection of small objects and to avoid false alarms) with a beam width of 96 degrees. The emitted light (in the range of the infrared light, not visible) is modulated to be captured on the receiver filtering the ambient light noises.



RAM20-T

The laser scanner has an internal heating system to avoid the moisture condensation on the optical lens.



In addition to detecting the maximum height, the system is also able to inform on which lane the vehicle has passed.

Compared to the standard systems based on photocells with transmitter and receiver it has the advantage of easy installation because the laser and the control unit are placed on the same pole. Moreover, it is not necessary to collimate the transmitter and receiver but only to properly install the detector on the horizontal or vertical plane.

The control unit is composed by an outdoor cabinet which includes a power supply, a CPU and a communication unit.

ALARM

RAM20 provides alarms in different ways when an over height vehicle is detected: relay contact; digital output; software event (protocol).

Technology	Laser scanner
Class	Class 1
Opening angle	96°
Detection range	20 m.
Minimum width of object	50 mm.
Maximum speed of vehicle	150 km/h.
Data line	Ethernet
Alarm	Relay, D/O, software
Power supply	12 or 24 Vdc
Protection	IP65
Operating temperature	RAM20 :-20°C : +50°C RAM20-T: -40°C : +60°C



The control unit is based on an ARM9 microprocessor (with software and hardware watchdog) with the following features:

- Diagnostics of the laser scanner detector
- Computation of the size of the detected object
- Computation of the distance of the object from the sensor to determine the lane of transit
- Filtering of noises such rain, snow, birds, etc.
- Generation of alarms in case of detection of an overheight object with activation of a digital output, software alarm or relay.

RAM200

RAM200 is based on two laser scanners: one horizontal with 4 planes of detection (which helps for a precise detection of small objects and to avoid false alarms) and one vertical with 1 plane of detection. Both lasers have a beam width of 96 degrees. The advantage of using two laser scanner are the following:

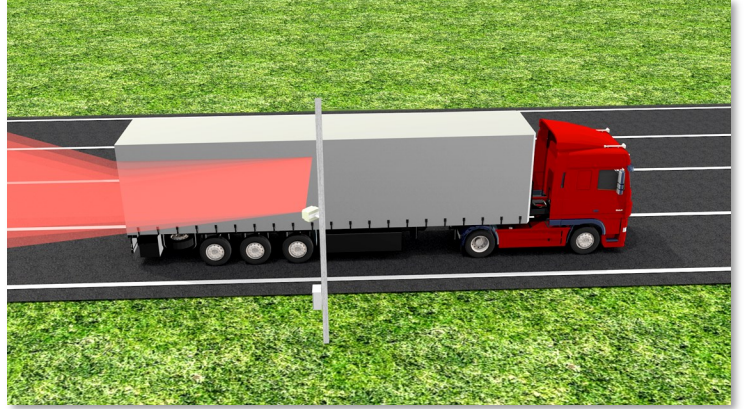
- Redundancy: both detectors can measure the height and work independently from the other
- Traffic information: the vertical laser is able to provide counting and classification of the vehicles

VARIABLE MESSAGE SIGN

It is also possible to combine the laser detection with a variable message sign (VMS) to inform the driver that he has to stop his vehicle or exit.



RAM20 & RAM20-T



RAM200

