



### Application range

- Detection and gathering of traffic data in accordance with TLS BAST<sup>1</sup>

### Features

- overhead mounting
- data supplied by RD 2002/94:
  - vehicle class car/lorry
  - vehicle speed
  - vehicle direction
  - vehicle length
  - distance between two vehicles
- automatic adjustment to environment
- exact detection of speed by a DSP (Digital Signal Processor) and a FFT (Fast Fourier Transformation)

### Description

The RD2002/94 is a compact radar detector for the detection of traffic data in flowing traffic. The detection range of a detector is limited to one lane. It is designed for an over-head mounting on bridges, cantilevers or similar relatively vibration-free installations. For object detection, the detector receives and sends microwaves with a frequency of 24.125 GHz. An object (vehicle), moving in the transmission/reception range of the detector causes a frequency shift (Doppler effect) of the emitted signal, which is measured and analysed. Due to this procedure only moving vehicles can be detected and the allocation and classification of the vehicles can only be achieved by determination of the object length. The vehicles are classified as cars or lorries.

The unit is to be used in combination with an IOC<sup>2</sup>, since parameterising of the RDs is done by the IOC. The IOC administers all parameters for the RD and hands these over according to TLS agreements. Upon request the vehicle data is handed over to the IOC as so-called individual vehicle-data records. According to the options the IOC arranges the data to interval data and prepares them for delivery to the CM<sup>3</sup>.

<sup>1</sup> TLS: Technical Terms of delivery of road stations, (German) federal office for road constitution

<sup>2</sup> IOC: Input/Output Concentrator

<sup>3</sup> CM: Control Module

### □ Technical data

<b>Power supply:</b>	22 V DC to 30 V DC
<b>Ripple:</b>	$\leq 40 \text{ mV}_{\text{ss}}$
<b>Power consumption:</b>	approx. 260 mA with 24 V
<b>Operation temperature:</b>	in accordance with DIN VDE 0832
<b>Storage temperature:</b>	-40°C to +80°C
<b>Transmission frequency:</b>	24.125 GHz
<b>Transmission power:</b>	5 mW
<b>Detection angle:</b>	approx. 10° to 20°, automatic adjustment
<b>Mounting height:</b>	5 m – 10 m
<b>Mounting angle:</b>	45° $\pm$ 2° compared to road
<b>Mounting angle:</b>	downward incline up to 15 %, upward incline up to 25 %
<b>Speed range:</b>	(3 – 254) km/h, detection of direction
<b>Vehicle distance:</b>	min. 7 m (depending on mounting height)
<b>Classification:</b>	car/lorry
<b>Output:</b>	RS485 with 9600 baud, even parity
<b>Connection:</b>	Amphenol-Tuchel connector, 7-pin
<b>Safety:</b>	IP65
<b>Dimensions:</b>	approx. 125 mm x 135 mm x 395 mm (H x W x L) (incl. rain roof)
<b>Weight:</b>	approx. 3.5 kg

### □ Technical specifications/ conformity

<b>Safety, Health:</b>	guideline 73/23/EWG, R&TTE, Art. 3 (1)
<b>EMV:</b>	guideline 89/336/EWG, R&TTE, Art. 3 (1)
<b>Radio:</b>	R&TTE, Art. 3 (2)
<b>Equipment:</b>	mounting arm

## Dimensions

