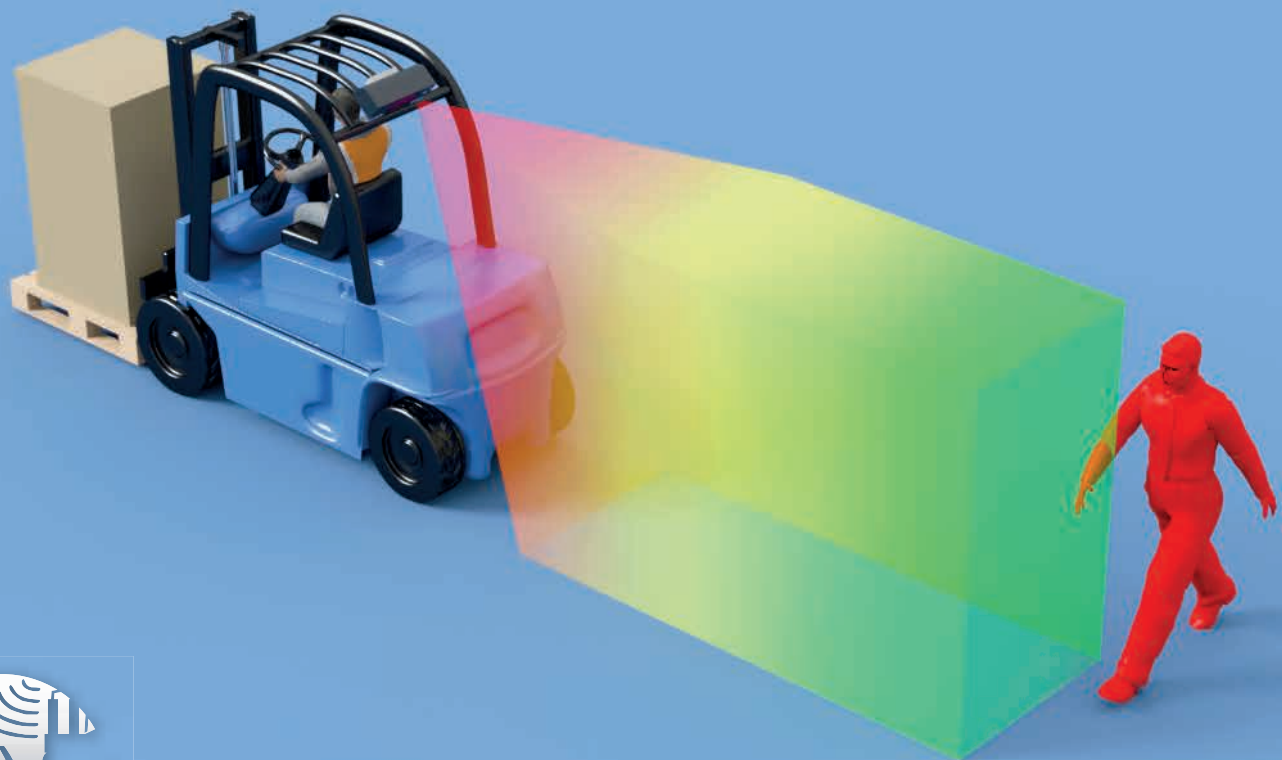


Rear Area Monitoring

RAM-107

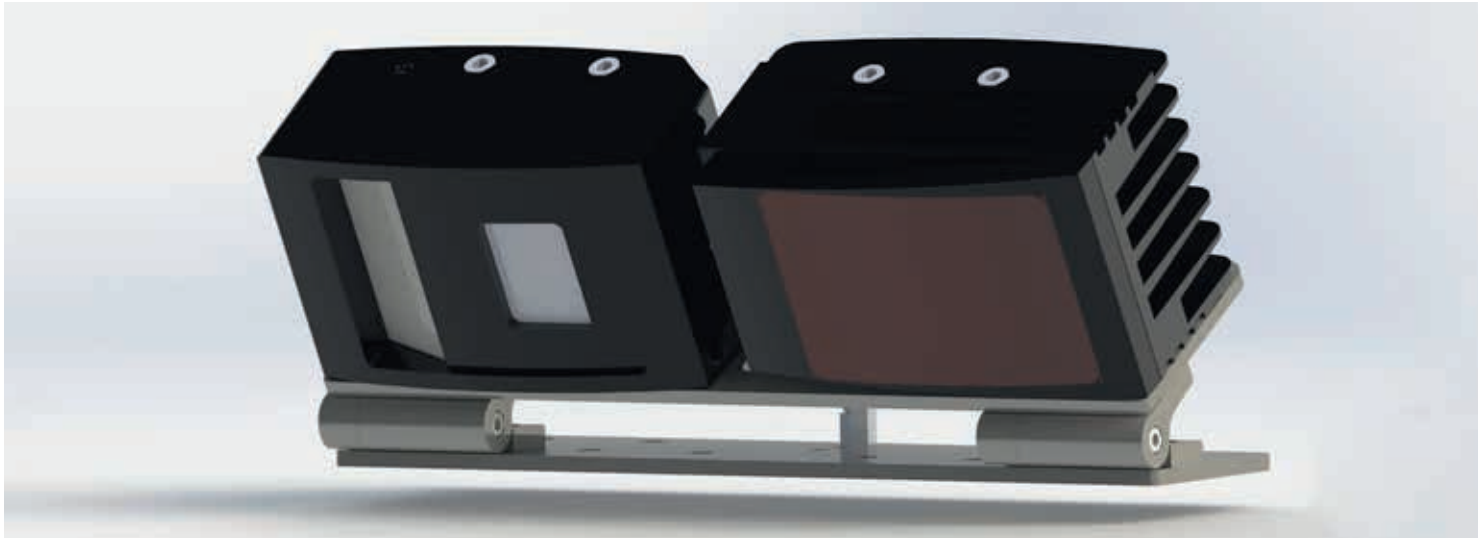
Dynamic Protection Zones



Occupational
Safety

Rear Area Monitoring RAM-107

The safe way to reverse.



Unobstructed view, reliable and accurate detection of objects and timely deceleration in the event of danger: these are the functions provided by the Rear Area Monitoring RAM-107 to prevent accidents and collisions.

If optimally installed on the driver's overhead guard, the RAM-107 will monitor the rear area virtually without any blind angle.

A Driver Assistance System that is a cut above the rest.

The driver can view 3 adjustable monitoring zones on a 5-inch multi-function colour display. The distance to the detected object is indicated both visually (green/yellow/red colour change) and acoustically (increasingly faster sound signals). The Rear Area Monitoring thus fulfils the accident prevention requirements for forklift trucks as stipulated in the applicable regulations (VBG D27 § 12, MaschRL and BetrSichG).



Dynamic monitoring zones for increased comfort and safety

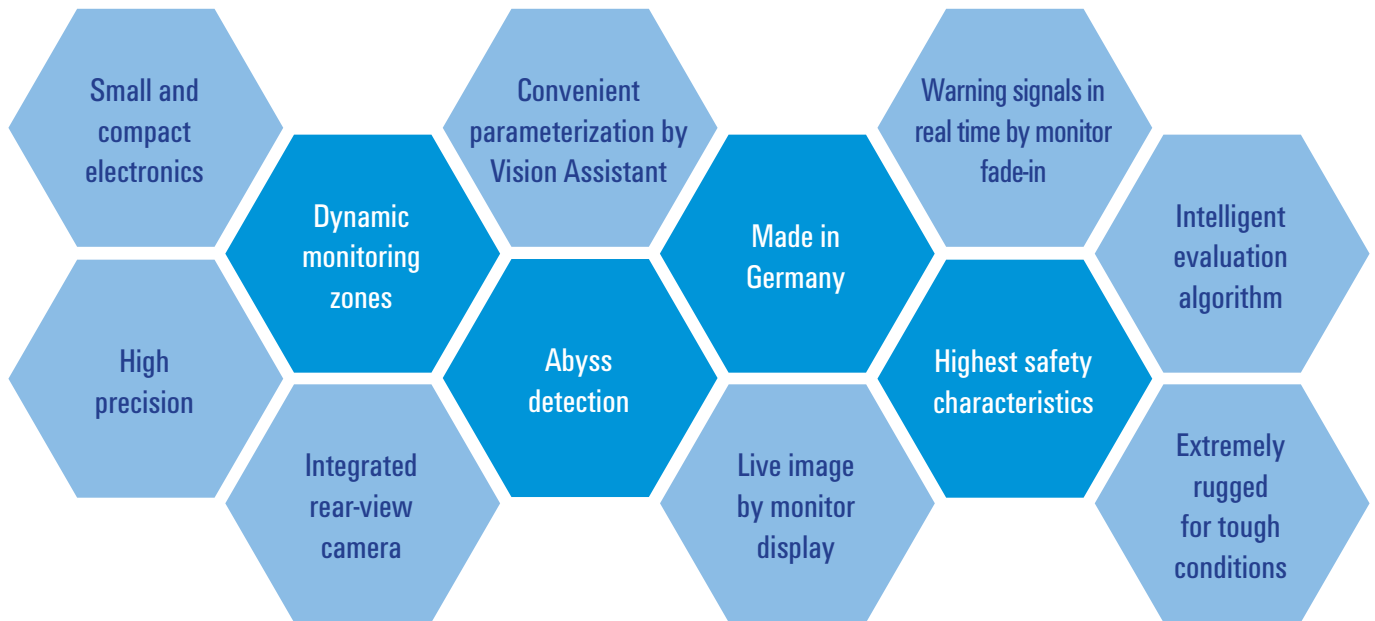
On suitable vehicles, the length of the monitoring zones is adjusted automatically to the driving speed. This ensures interruption-free travelling in confined spaces and during manoeuvring at slow speeds. An alarm will only be triggered when an alarm is actually required. This guarantees a high acceptance from the drivers.



Smart 3D sensor technology

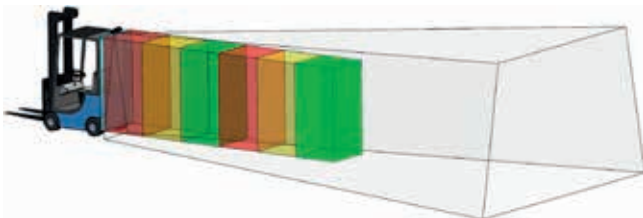
The Rear Area Monitoring RAM-107 with integrated rear view camera works based on the time-of-flight process using a patented PMD technology. The area to be monitored is illuminated by a modulated invisible infrared light and the reflected light falls on the PMD sensor. Each pixel of the PMD chip will thus determine the distances to the object based on the phase shift between the transmitted and the received signal.

Excellent characteristics



View of the 3D sensor

- Far reaching, highly accurate and extremely fast
- Image data are evaluated 50x per second
- Three dimensional recording and evaluating in light speed
- Prevents collisions



View of the driver

The view of the hazard area provides the driver with additional safety and control. The monitor set simultaneously functions as control panel for manoeuvring in the event of an alarm stop.

On the 5 inch display, the driver can...

- view the reverse travel area
- see the visual and acoustic distance indication

... even in the dark.



Rear-end collision protection for tow trucks and tugging trains (Application)



The precision and accuracy of the 3D sensor technology detects trailers of tow trucks and reliably prevents rear-end collisions.

Benefits at a glance

- Integrated rear view camera
- Safe person and object detection
- Automatic vehicle deceleration in the event of danger
- Continuous monitoring all the way to the rear of the vehicle

Technical specifications

RAM-107 sensor unit	
Operating voltage:	24 VDC \pm 10%
Power consumption:	max. 75 W
Operating temperature:	-30°C .. +65°C
Measuring principle:	Infrared camera
Range:	0 - 35 m
Enclosure:	IP 65
MTTFd:	15 years (calculation based on SN29500 part 1- 15. Calculation acc. to ISO 13849, Annex D.)
Dimensions (L x W x H):	298 x [132-144] x [128-171] depending on type of assembly
Type of assembly:	Screw assembly
Weight:	3,5 kg

RAM-107 controller box		CCD-100 monitor	
Operating voltage:	24 VDC \pm 10%	Display:	5"-LCD (4:3)
Operating current:	max. 75 W	Brightness:	200 cd/m ²
Operating temperature:	-30°C .. +65°C	Contrast ratio:	500:1
Relay switch outputs:	24 VDC / max. 1 A (open circuit fail safe design)	Response time:	15 ms (at 25°C)
Enclosure:	IP 54	Operating voltage:	12/24 VDC
Housing material:	GD-AI Si 12 (DIN 1725)	Power consumption:	< 5 W
Faceplates:	2x polyoxymethylene (POM)	Operating temperature:	-20°C .. +70°C
Coating:	Powder coating RAL 9011 (black)	Dimensions (W X H X D):	147 x 110 x max. 60 mm
Dimensions (L x W x H):	200 x 170 x 60 mm	Weight:	400 g
Type of assembly:	Screw assembly		
Weight:	1,6 kg		

tbm awards



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