

AOS Radar

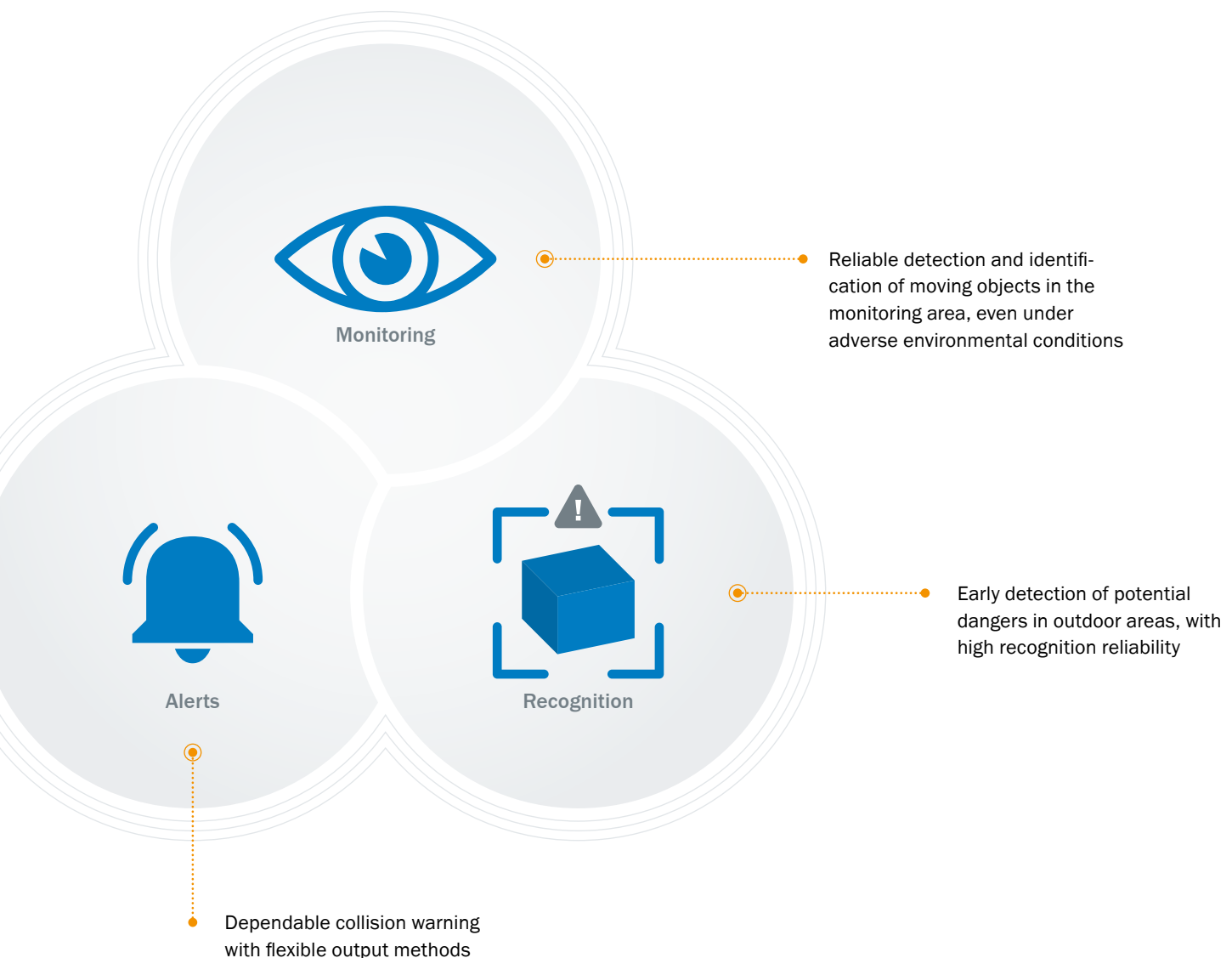
HIGH DETECTION RELIABILITY FOR HAZARDOUS SITUATIONS
IN OUTDOOR AREAS

Object detection systems

SICK
Sensor Intelligence.

LESS RISK, MORE PRODUCTIVITY

Megatrends such as globalization, urbanization and mobility are contributing to a steady increase in the transportation of passengers and goods. The mining industry, ports, logistics and construction companies all work under permanent time pressure in order to deal with continuously increasing throughput rates. Therefore, it is important to minimize the risks of collision, so that costly downtimes and damages to vehicles, property or even physical injury can be prevented. In this context, the reliable and precise SICK Object detection systems make a crucial contribution.



Possible fields of application

Traffic

- Directions of movement in road traffic
- Roadworks and barriers



Port processes

- In docks
- In container storage areas
- On container terminals
- In intermodal facilities



Cranes

- In ports, terminals and power plants
- In the steel and chemical industry
- In production processes for assembly operations



Mining

- Danger and safety zones



Mobile automation

- Agricultural and forest machinery
- Construction and mining machinery
- Special-purpose and municipal vehicles

RELIABLE DETECTION WITH HIGH FLEXIBILITY

The versatile SICK Object detection systems provide robust components, high performance technology and are easy to use. The AOS Radar consists of one or optionally two SICK RMS2000 radar sensors. The Telematic Data Collector System Controller includes the necessary analysis software for evaluating the environmental data recorded by the radar sensors. This means that the system evaluates data independently and directly initiates an alert in dangerous situations.



+ High recognition reliability

- Reduction of wrong detection due to multiple evaluation of captured data through pre-installed analysis software in the system controller

+ Fast reaction to dangerous situations

- Real-time alerts due to precise and reliable data analysis
- All necessary interfaces for alerts are provided – wired or cellular communication options

+ Maximum locational flexibility

- Robust radar technology for high performance in all weather conditions
- Flexible mounting - including laterally or overhead - thanks to non-contact measuring process
- Mobile radio interface for wireless data transfer

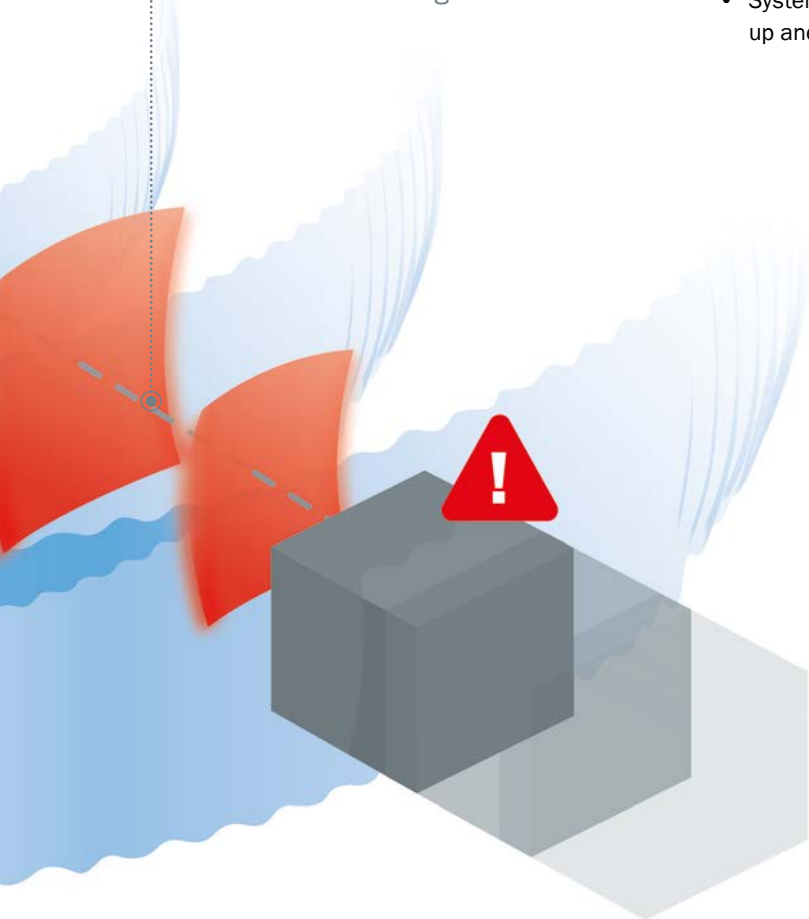
+ Fast commissioning

- To ensure user-friendly operation, the configuration parameters of the respective applications are reduced to a minimum
- System starts tracking objects immediately after start up and provides output data and alerts

+ Individual definition of potential dangerous objects

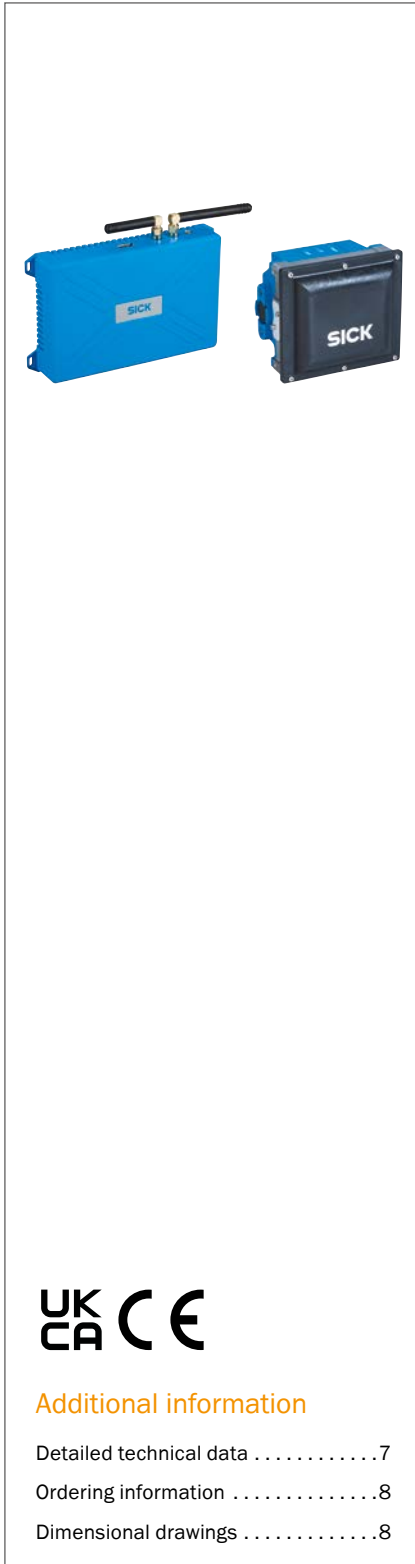
- Application-specific data analyses can be easily and individually created via the system parameters. Therefore, objects that cause dangerous situations can be precisely defined

• Trajectory determination by means of all object positions within the monitoring area



Object

HIGH DETECTION RELIABILITY FOR HAZARDOUS SITUATIONS IN OUTDOOR AREAS



Product description

The AOS Radar (Advanced Object Detection System) object detection system enables early detection of dangerous situations with a high potential for collision. The data recorded by the radar sensor is then evaluated multiple times to rule out incorrect detection and clearly verify objects. Even in difficult weather condi-

tions, it offers high detection reliability. The system solution thus helps increase safety and prevent accidents. The unit responsible for evaluation and alarming is the integrated Telematic Data Collector gateway system, which has a wireless communications interface in addition to industrial interfaces.

At a glance

- Non-contact measurement process with radar technology
- Can be expanded to max. two radar sensors
- Evaluation and alarming using the Telematic Data Collector gateway system
- Application-specific parameterization
- Web-based user interface

Your benefits

- High detection reliability and performance in any weather conditions
- Individual determination of objects with high potential for collision
- Flexible installation location
- Simple system expansion
- All common interfaces for connection to the customer system
- Standalone operation and quick alarming without cable connection to the customer system
- Access via web browser



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→ www.sick.com/AOS_Radar

For more information, simply enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples, and much more.



Detailed technical data

The exact device specifications and performance data of the product may deviate from the information provided here, and depend on the application in which the product is being used and the relevant customer specifications.

AOS Radar Wrong Way Detection

General notes

Items supplied	Radar sensor RMS2000 Telematic Data Collector TEMS-based "Wrong Way Driver" software on Telematic Data Collector Mounting bracket Connecting cables Mounting rail bracket System documentation and interface description Quick Start guide including download link for the operating instructions
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Features

Industries	Traffic
Sensor	RMS2000
Aperture angle	± 4°, vertical ± 60°
Scanning range	5 m ... 150 m
Version	Europe, Middle East, Africa, APAC excluding Japan North and Latin America Japan

Performance

Driving speed	10 km/h ... 200 km/h
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Interfaces

Inputs/outputs I/O	6 analog inputs (configurable, current and voltage), 6 digital inputs/outputs (configurable), 2 additional digital inputs, 2 additional digital outputs ¹⁾
Ethernet Data transmission rate Electrical connection	✓ (2) 10 Mbit/s ... 1,000 Mbit/s RJ45
Modem Data transmission rate	✓ , 4G ≤ 150 Mbit/s, Full 4G performance cannot be guaranteed on operating temperature over 60°C.
WLAN Data transmission rate Protocol	✓ ≤ 65 Mbit/s, single band 2.4 GHz IEEE 802.11 b/g/n
Output data	Time Lane assignment Trajectory Driving direction Speed Validity status Wrong-way driver alarm via I/Os, TCP/IP, mobile communications or MQTT

¹⁾ Analog measurement of voltage (0 – 36 V) with accuracy of ± (0.2%+30 mV), current (0 – 32 mA), with accuracy of ± (1%+0.1mA), input resistance 27.5 kΩ typical for voltage mode, 100 Ω typical for current mode.

Mechanics/electronics

Housing dimensions (W x D x H)	34 mm x 97 mm x 96 mm (RMS2000) 162 mm x 32 mm x 101 mm (TDC-E)
Supply voltage	24 V (9 V ... 32 V)
Installation position	Above or next to the lane (0.4 m ... 5 m)
Machine operating voltage	9 V ... 32 V, 24 V
Enclosure rating	IP67 ¹⁾ IP20 (according to DIN EN 60529) ²⁾

¹⁾ RMS2000.

²⁾ TDC-E.

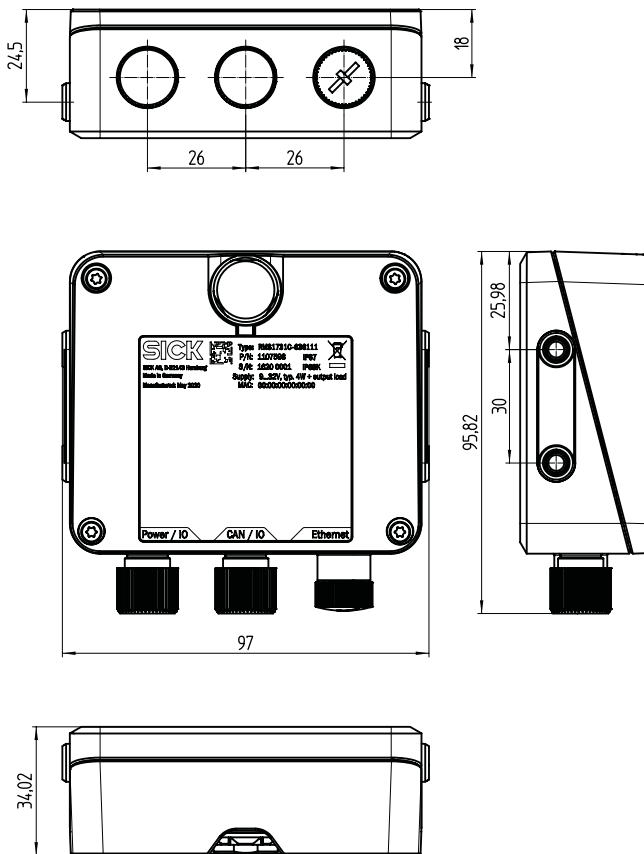
Ordering information

- **Items supplied:** Radar sensor RMS2000, Telematic Data Collector, TEMS-based “Wrong Way Driver” software on Telematic Data Collector, Mounting systems, Connecting cables, Mounting rail bracket, System documentation and interface description, Quick Start guide including download link for the operating instructions

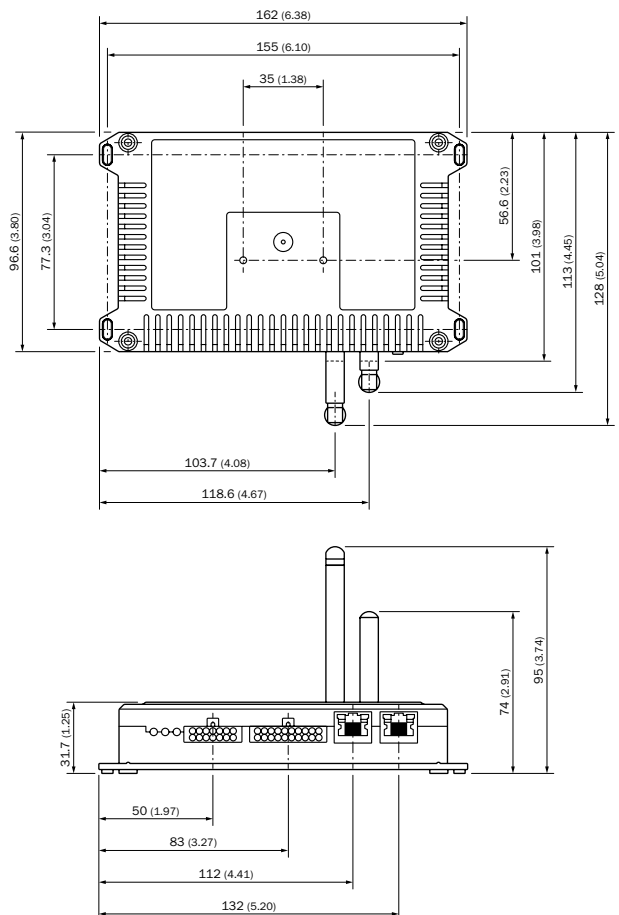
Version/Application	Type	Part no.
Europe, Middle East, Africa, APAC excluding Japan	AOS2001-GC WWD	1133090
North and Latin America	AOS2001-AC WWD	1133091
Japan	AOS2001-JC WWD	On request

Dimensional drawings (Dimensions in mm (inch))

RMS2000



Telematic Data Collector



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SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 11,900 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents, and preventing damage to the environment.

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Detailed addresses and further locations → www.sick.com