



## safeRS/safeRS3

Safe radar systems for hazardous area protection in harsh environments

**SICK**  
Sensor Intelligence.



## Technical data overview

<b>Protective field range</b>	0.2 m ... 9 m (depending on type)
<b>Field of view</b>	110° (horizontal plane), 30° (vertical plane), configurable 10° ... 100°, adjustable in 10° intervals (horizontal plane), 20° (vertical plane) 10° ... 100° (0.2 m ... 5 m) or 10° ... 40° (5 m ... 9 m), can be adjusted in 10° intervals (horizontal plane), 20° (vertical plane) (depending on type)
<b>Application</b>	Indoor Outdoor (depending on type)
<b>Number of monitoring cases</b>	4 / 32 (depending on type)
<b>Detection method</b>	FMCW radar for motion detection
<b>Response time</b>	≤ 100 ms
<b>Integration in the control system</b>	Local inputs and outputs (I/O) PROFINET PROFIsafe (depending on type)
<b>Safety level</b>	PL d, SIL 2

## Product description

The safeRS and safeRS3 safe radar systems are electro-sensitive 3D protective devices for safe personal detection with very high machine productivity. They protect applications in accordance with PL d or SIL 2 in line with ISO 13849-1 and IEC 62061. A radar system consists of an evaluation unit and up to 6 sensors which enable switchover to a protected mode as soon as a person enters the protected area. The high resistance to dirt, dust clouds, wood chips, plastic particles and sparks as well as the insensitivity to ambient light such as solar radiation or infrared waves enables reliable operation, even under the toughest ambient conditions. The radar systems stand out due to their rugged sensor housing and quick and easy commissioning.

## At a glance

- Evaluation unit and up to 6 sensors
- Protective field: Scanning range up to 9 m, flexible adjustment of aperture angle
- High resilience to dust clouds, wood chips, sparks and plastic particles
- Protection class IP67; operation at -40 °C to +60 °C
- High tolerance against contamination
- Simple configuration via software

## Your benefits

- Modular system for adjusting to your protection tasks up to performance level d/SIL 2, in accordance with ISO 13849-1 and IEC 62061
- Extended hazardous area protection thanks to three-dimensional protective field
- Very high machine and plant productivity, even under harsh ambient conditions
- Reliable use even at extreme temperatures
- Radar sensors with long cleaning intervals
- Quick and easy commissioning

## Fields of application

- Safe hazardous area protection at machines and vehicles both in- and outdoors
- Safe automatic restart in complex applications such as robot cells thanks to 3D monitored area
- Applications in harsh environments, e.g. wood processing, steel production, paper and plastic production

## Ordering information

Other models and accessories → [www.sick.com/safeRS\\_safeRS3](http://www.sick.com/safeRS_safeRS3)

- **System part:** sensor

Variant	Protective field range	Field of view	Type	Part no.
safeRS	1 m ... 4 m	110° (horizontal plane), 30° (vertical plane), configurable	SRA2-AAR140AKZI	6073487
safeRS3	0.2 m ... 5 m	10° ... 100°, adjustable in 10° intervals (horizontal plane), 20° (vertical plane)	SRA3-AAR150BKZI	6080599
	0.2 m ... 9 m	10° ... 100° (0.2 m ... 5 m) or 10° ... 40° (5 m ... 9 m), can be adjusted in 10° intervals (horizontal plane), 20° (vertical plane)	SRA3-AAR190BKZI	6082806

- **System part:** control
- **Variant:** safeRS3

Integration in the control system	OSSD pairs	Safety outputs via network	Universal inputs	Type	Part no.
Local inputs and outputs (I/O)	≤ 2	–	2 dual-channel	SRA3-AAC100ZANI	6080600
Local inputs and outputs (I/O), PROFINET PROFI-safe	≤ 2	4	2 dual-channel	SRA3-AAC100ZPUI	6080601

## SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. 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.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

## WORLDWIDE PRESENCE:

Contacts and other locations –[www.sick.com](http://www.sick.com)