



# SRA2-AAR140AKZI

safeRS/safeRS3

**SAFETY RADAR SENSORS**

**SICK**  
Sensor Intelligence.



Illustration may differ



## Ordering information

Type	part no.
SRA2-AAR140AKZI	6073487

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

## Detailed technical data

### Features

<b>Manufacturer designation</b>	LBK-S01 (Model), SK (Type)
<b>Application</b>	Indoor
<b>Scope</b>	Stationary
<b>Protective field range</b>	1 m ... 4 m
<b>Warning field range</b>	1 m ... 4 m
<b>Number of protective fields</b>	1
<b>Field of view</b>	Large
	110° (horizontal plane)
	30° (vertical plane)
	Narrow
	50° (horizontal plane)
	15° (vertical plane)
<b>Response time</b>	≤ 100 ms

### Safety-related parameters

<b>Safety integrity level</b>	SIL 2 (IEC 62061)
<b>Category</b>	Category 2 (outputs category 3) (EN ISO 13849)
<b>Performance level</b>	PL d (EN ISO 13849)
<b>PFH<sub>D</sub> (mean probability of a dangerous failure per hour)</b>	4.34 x 10 <sup>-8</sup>
<b>MTTF<sub>D</sub> (mean time to dangerous failure)</b>	40 years (IEC 60050)
<b>T<sub>M</sub> (mission time)</b>	20 years (EN ISO 13849)
<b>Safe state in the event of a fault</b>	At least one safety relay is in the OFF state

### Functions

<b>Restart interlock</b>	✓
<b>Muting</b>	✓
<b>Manipulation protection</b>	✓
<b>Safe detection of a person</b>	✓

### Interfaces

<b>Connection type</b>	
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Voltage supply and signal transmission	Male connector, M12, 5-pin, A-coded
	Female connector, M12, 5-pin, A-coded

## Electronics

Supply voltage $V_s$	24 V DC (20 V DC ... 28 V DC)
Power consumption	$\leq 0.6$ A
Power consumption	$\leq 11$ W, control unit and six sensors

## Mechanics

Dimensions (W x H x D)	85 mm x 85 mm x 53 mm
Housing material	PA 66

## Ambient data

Enclosure rating	IP67 (IEC 60529)
Ambient operating temperature	-40 °C ... +60 °C
Storage temperature	-40 °C ... +80 °C

## Other information

Bandwidth	24 GHz ... 24.25 GHz
Transmissin power	$\leq 13$ dBm
Radio class	Class 2 (2014/53/EU, RED - radio equipment)
Detection method	FMCW radar for motion detection
Items supplied	safeRS sensor Safety instruction Mounting instructions Operating instructions for download safeRS3 Designer (configuration and diagnostic software) for download

## Certificates

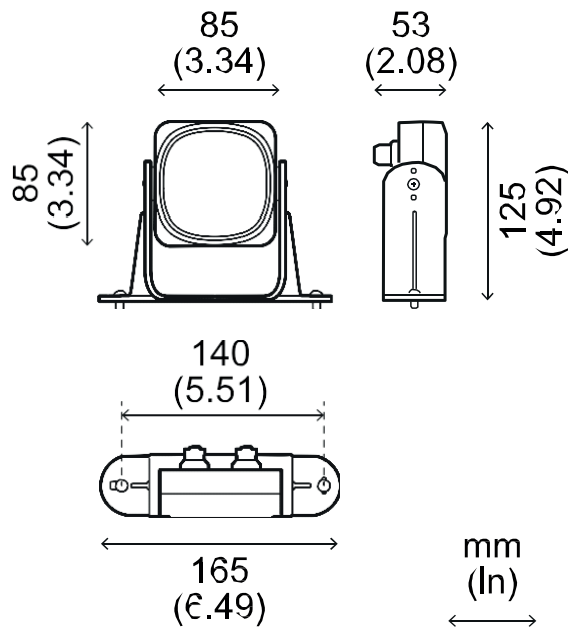
EU declaration of conformity	✓
UK declaration of conformity	✓
cULus certificate	✓
cUL approval	✓
Radio Approval certificate Australia	✓
Radio Approval certificate Brazil	✓
Radio Approval certificate EU	✓
Radio Approval certificate India	✓
Radio Approval certificate Japan	✓
Radio Approval certificate Korea	✓
Radio Approval certificate Mexico	✓
Radio Approval certificate New Zealand	✓
Radio Approval certificate Taiwan	✓
Radio Approval certificate South Africa	✓

## Classifications

ECLASS 5.0	27270890
ECLASS 5.1.4	27270890

<b>ECLASS 6.0</b>	27280800
<b>ECLASS 6.2</b>	27280800
<b>ECLASS 7.0</b>	27280890
<b>ECLASS 8.0</b>	27280890
<b>ECLASS 8.1</b>	27280890
<b>ECLASS 9.0</b>	27280890
<b>ECLASS 10.0</b>	27280890
<b>ECLASS 11.0</b>	27280890
<b>ECLASS 12.0</b>	27280890
<b>ETIM 5.0</b>	EC001825
<b>ETIM 6.0</b>	EC001825
<b>ETIM 7.0</b>	EC001825
<b>ETIM 8.0</b>	EC001825
<b>UNSPSC 16.0901</b>	39121528


Dimensional drawing safeRS sensor



Dimensions in mm (inch)

## Recommended accessories

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

	Brief description	Type	part no.
device protection and care			
	<ul style="list-style-type: none"><li>• <b>Description:</b> Protective metal housing for safeRS sensor</li><li>• <b>Material:</b> Stainless steel</li><li>• <b>Items supplied:</b> Protective metal housing incl. mounting kit</li></ul>	Protective housing	5341984

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, Micro-B, 4-pin, straight</li> <li><b>Connection type head B:</b> Male connector, USB-A, 4-pin, straight</li> <li><b>Signal type:</b> USB 2.0</li> <li><b>Cable:</b> 5 m, 4-wire, PVC</li> <li><b>Description:</b> USB 2.0, shielded</li> </ul>	YMUSA4-050VG4MUIA4	2118400
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, USB-A, straight</li> <li><b>Connection type head B:</b> Female connector, USB-A, straight</li> <li><b>Signal type:</b> USB</li> <li><b>Cable:</b> 10 m, 4-wire</li> <li><b>Description:</b> USB, unshielded</li> <li><b>Note:</b> Used to extend the USB interface by 10 m. The cable can be extended up to 20 m by plugging in another 10 m extension.</li> </ul>	USB extension cable, repeater	6069292
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, Micro-B, 4-pin, straight</li> <li><b>Connection type head B:</b> Male connector, USB-A, 4-pin, straight</li> <li><b>Signal type:</b> USB 2.0</li> <li><b>Cable:</b> 2 m, 4-wire</li> <li><b>Description:</b> USB 2.0, unshielded</li> </ul>	USB cable	6036106
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 5-pin, angled, A-coded</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 3 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-030C1B-N2A15	2112756
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 10 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-100C1BXLEAX	2112754
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 5 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-050C1BXLEAX	2112753
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Flying leads</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 15 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-150C1BXLEAX	2112755
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 5-pin, angled, A-coded</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 10 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-100C1B-N2A15	2115284
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 5-pin, angled, A-coded</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 15 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-150C1B-N2A15	2115285
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Female connector, M12, 5-pin, angled, A-coded</li> <li><b>Connection type head B:</b> Male connector, M12, 5-pin, angled, A-coded</li> <li><b>Signal type:</b> Fieldbus, CANopen, DeviceNet™</li> <li><b>Cable:</b> 5 m, 5-wire, PUR, halogen-free</li> <li><b>Description:</b> Fieldbus, shielded, CANopen, DeviceNet™</li> <li><b>Note:</b> A-coded</li> </ul>	YG2A15-050C1B-N2A15	2115283
	<ul style="list-style-type: none"> <li><b>Connection type head A:</b> Male connector, M12, 5-pin, straight, A-coded</li> <li><b>Signal type:</b> CANopen, DeviceNet™</li> <li><b>Description:</b> CANopen, DeviceNet™</li> </ul>	YM2W15-000000XXXXX	2123627

## 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)