



SRA3-AAR150BKZI

safeRS/safeRS3

SAFETY RADAR SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
SRA3-AAR150BKZI	6080599

Other models and accessories → www.sick.com/safeRS_safeRS3

Detailed technical data

Features

Manufacturer designation	S201A (Model), WSK (Type)
Application	Indoor / Outdoor
Scope	Stationary, mobile
Protective field range	0.2 m ... 5 m
Number of protective fields	4
Field of view	10° ... 100°, adjustable in 10° intervals (horizontal plane) 20° (vertical plane)
Response time	≤ 100 ms
Vehicle speed	≤ 2 m/s

Safety-related parameters

Safety integrity level	SIL 2 (IEC 62061)
Category	Category 3 (EN ISO 13849)
Performance level	PL d (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	
Access protection	1.66 x 10 ^{-8 1)}
MTTF_D (mean time to dangerous failure)	38 years (IEC 60050)
T_M (mission time)	20 years (EN ISO 13849)
Safe state in the event of a fault	At least one OSSD pair is in the OFF state.

¹⁾ For details see operating instructions.

Functions

Restart interlock	✓
Muting	✓
Manipulation protection	✓
Safe detection of a person	✓

Interfaces

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

Electronics

Supply voltage V_s	12 V DC, $\pm 20\%$ ¹⁾
Power consumption	≤ 1 A
Power consumption	≤ 4.7 W

¹⁾ Via control unit.

Mechanics

Dimensions (W x H x D)	85 mm x 85 mm x 71 mm
Housing material	
Sensor	PA 66
Rear view	Aluminum
Bracket	PA 66, Glass fiber

Ambient data

Enclosure rating	IP67 (IEC 60529)
Ambient operating temperature	-30 °C ... +60 °C
Storage temperature	-40 °C ... +80 °C

Other information

Bandwidth	60.6 GHz ... 62.8 GHz
Transmissin power	≤ 16 dBm
Radio class	Class 2 (2014/53/EU, RED - radio equipment)
Detection method	FMCW radar for motion detection
Items supplied	safeRS3 sensor Two-axis/three-axis bracket Safety instruction Mounting instructions Operating instructions for download safeRS3 Designer (configuration and diagnostic software) for download

Certificates

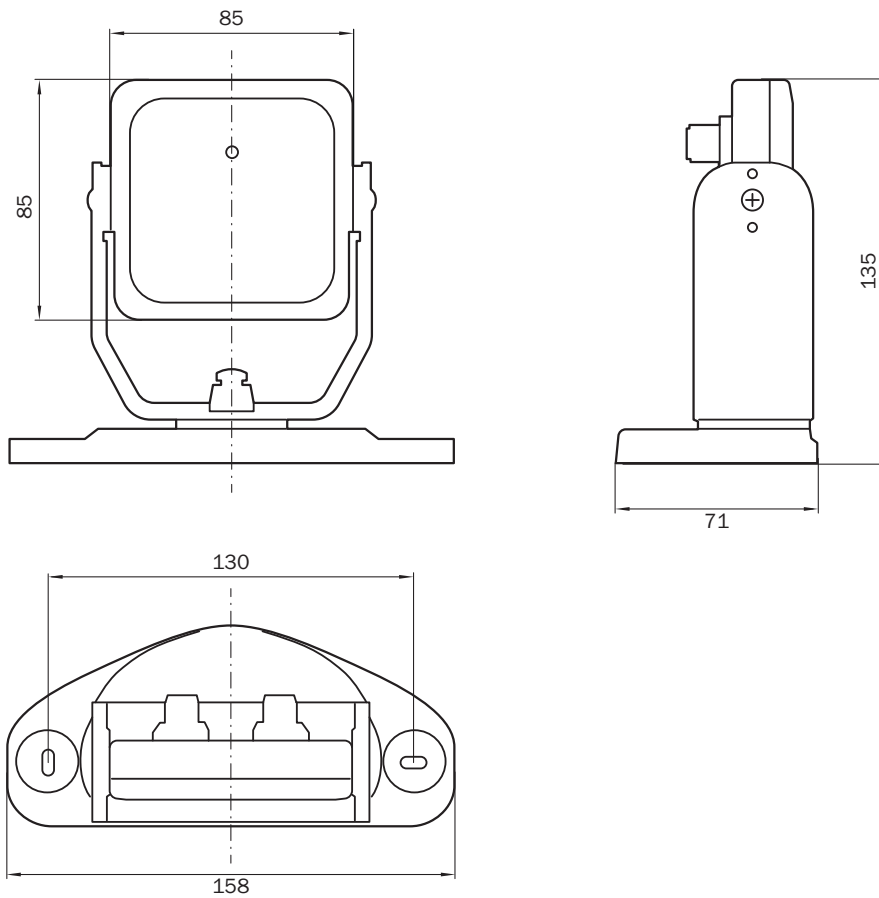
EU declaration of conformity	✓
China-RoHS	✓
cUL approval	✓
EC-Type-Examination approval	✓

Classifications

ECLASS 5.0	27270890
ECLASS 5.1.4	27270890
ECLASS 6.0	27280800
ECLASS 6.2	27280800
ECLASS 7.0	27280890

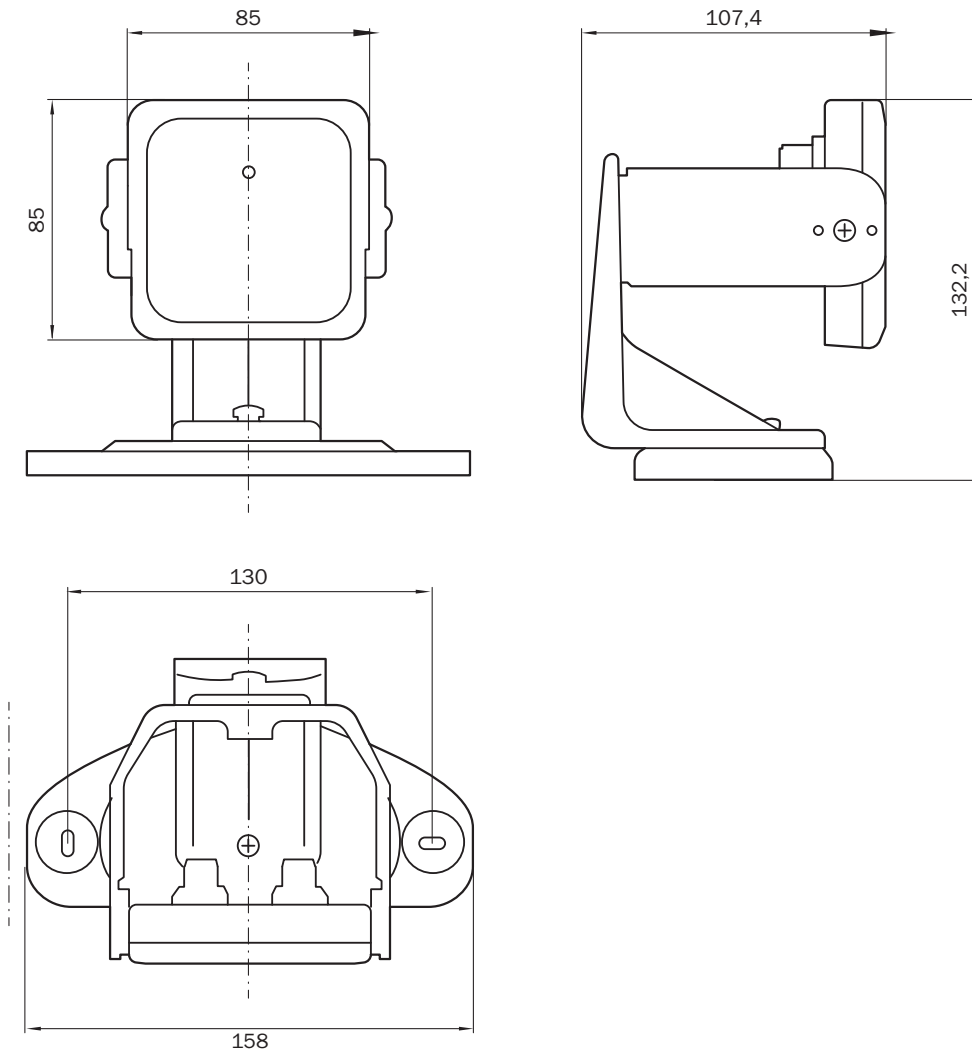
ECLASS 8.0	27280890
ECLASS 8.1	27280890
ECLASS 9.0	27280890
ECLASS 10.0	27280890
ECLASS 11.0	27280890
ECLASS 12.0	27280890
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825
UNSPSC 16.0901	39121528

Dimensional drawing safeRS3 sensor on two-axis bracket



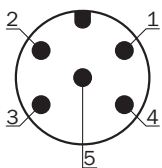
Dimensions in mm (inch)

Dimensional drawing safeRS3 sensor on three-axis bracket



Dimensions in mm (inch)

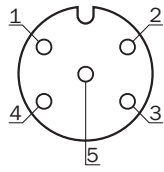
Pinouts Male connector



Pin	Description
1	Shield, for connecting to the ground connection of the control unit
2	+ 12 V DC
3	GND
4	CAN H
5	CAN L

For details see operating instructions

Pinouts Female connector



Pin	Description
1	Shield, for connecting to the ground connection of the control unit
2	+ 12 V DC
3	GND
4	CAN H
5	CAN L

For details see operating instructions

Recommended accessories

Other models and accessories → www.sick.com/safeRS_safeRS3

	Brief description	Type	part no.
connectors and cables			
	<ul style="list-style-type: none"> Connection type head A: Male connector, Micro-B, 4-pin, straight Connection type head B: Male connector, USB-A, 4-pin, straight Signal type: USB 2.0 Cable: 5 m, 4-wire, PVC Description: USB 2.0, shielded 	YMUSA4-050VG4MUIA4	2118400
	<ul style="list-style-type: none"> Connection type head A: Male connector, USB-A, straight Connection type head B: Female connector, USB-A, straight Signal type: USB Cable: 10 m, 4-wire Description: USB, unshielded Note: 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. 	USB extension cable, repeater	6069292
	<ul style="list-style-type: none"> Connection type head A: Male connector, Micro-B, 4-pin, straight Connection type head B: Male connector, USB-A, 4-pin, straight Signal type: USB 2.0 Cable: 2 m, 4-wire Description: USB 2.0, unshielded 	USB cable	6036106
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Male connector, M12, 5-pin, angled, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 3 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-030C1B-N2A15	2112756
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 10 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-100C1BXLAX	2112754
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 5 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-050C1BXLAX	2112753
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Flying leads Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 15 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-150C1BXLAX	2112755
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Male connector, M12, 5-pin, angled, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 10 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-100C1B-N2A15	2115284
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Male connector, M12, 5-pin, angled, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 15 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-150C1B-N2A15	2115285
	<ul style="list-style-type: none"> Connection type head A: Female connector, M12, 5-pin, angled, A-coded Connection type head B: Male connector, M12, 5-pin, angled, A-coded Signal type: Fieldbus, CANopen, DeviceNet™ Cable: 5 m, 5-wire, PUR, halogen-free Description: Fieldbus, shieldedCANopenDeviceNet™ Note: A-coded 	YG2A15-050C1B-N2A15	2115283
	<ul style="list-style-type: none"> Connection type head A: Male connector, M12, 5-pin, straight, A-coded Signal type: CANopen, DeviceNet™ Description: CANopenDeviceNet™ 	YM2W15-000000XXXX	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