



SRA3-AAR190BKZI

safeRS3

SAFETY RADAR SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	part no.
SRA3-AAR190BKZI	6082806

Other models and accessories → www.sick.com/safeRS3

Detailed technical data

Features

System part	sensor	
Variant	safeRS3 9 m	
Manufacturer designation	S201A (Model), WLSK (Type)	
Application	Indoor / Outdoor	
Scope	Stationary, mobile	
Protective field range	0.2 m ... 9 m	
Number of simultaneously monitored fields	4	
Number of fields	128	
Field of view	0.2 m ... 5 m	10° ... 100°, adjustable in 10° intervals (horizontal plane)
		20° (vertical plane)
	5 m ... 9 m	10° ... 40°, adjustable in 10° intervals (horizontal plane)
		20° (vertical plane)
Response time	≤ 100 ms	
Detection speed (access detection)	Stationary applications	1.6 m/s
	Mobile applications	≤ 4 m/s
Items supplied	safeRS3 sensor Two-axis/three-axis bracket Safety instruction Operating instructions for download safeRS3 Designer (configuration and diagnostic software) for download safeRS3 Designer 3D (configuration and diagnostic software) for download The evaluation unit must be ordered separately.	

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)	For details, see operating instructions, "Safety-related parameters" section
MTTF_D (mean time to dangerous failure)	42 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.

Functions

Restart interlock	✓ ¹⁾
Muting	✓
Manipulation protection	✓
Safe detection of a person	✓

¹⁾ Only available at a protective field range of 0.2 m ... 5 m.

Interfaces

Connection type	
Voltage supply and signal transmission	Male connector, M12, 5-pin, A-coded
	Female connector, M12, 5-pin, A-coded
	For connection to a safeRS3 evaluation unit

Electronics

Supply voltage V_s	12 V DC, ± 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 1 (2014/53 / EU, + Delegated Regulation 2022/30)
Detection method	FMCW radar for motion detection

Certificates

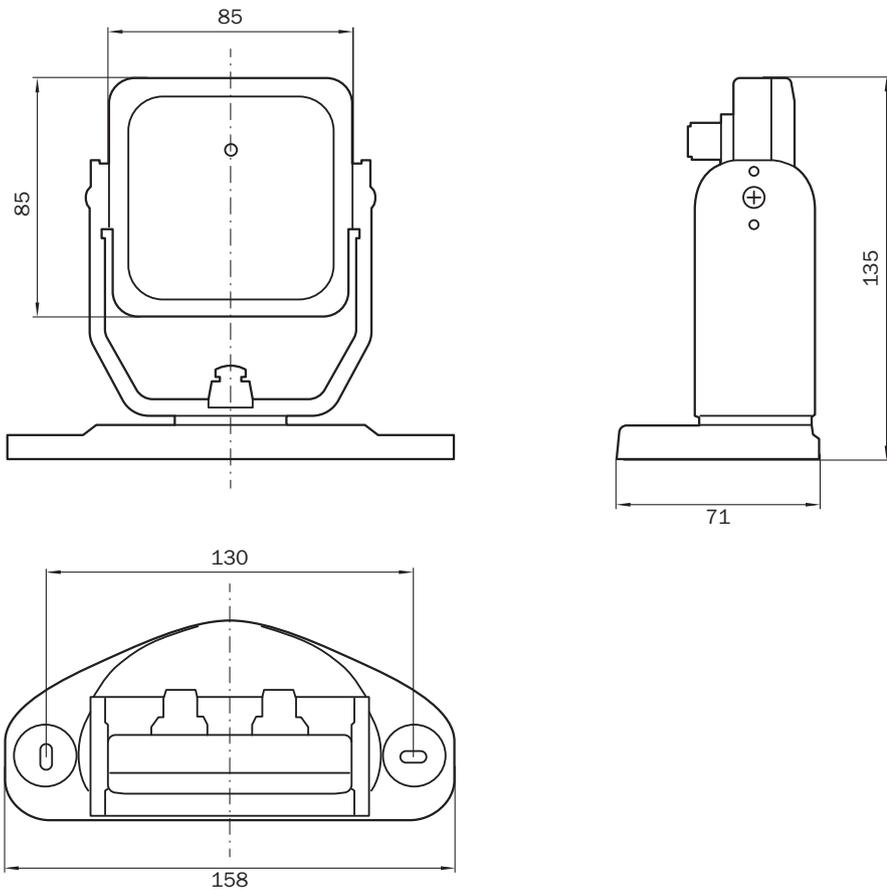
EU declaration of conformity	✓
UK declaration of conformity	✓
China RoHS	✓

UK-Type-Examination approval	✓
cUL approval	✓
EC-Type-Examination approval	✓
Radio Approval certificate United Arab Emirates	✓
Radio Approval certificate Argentina	✓
Radio Approval certificate Australia	✓
Radio Approval certificate Brazil	✓
Radio Approval certificate Canada	✓
Radio Approval certificate EU	✓
Radio Approval certificate Ghana	✓
Radio Approval certificate Hong Kong	✓
Radio Approval certificate India	✓
Radio Approval certificate Israel	✓
Radio Approval certificate Japan	✓
Radio Approval certificate Korea	✓
Radio Approval certificate New Zealand	✓
Radio Approval certificate USA	✓
Radio Approval certificate South Africa	✓
RoHS manufacturer declaration	✓

Classifications

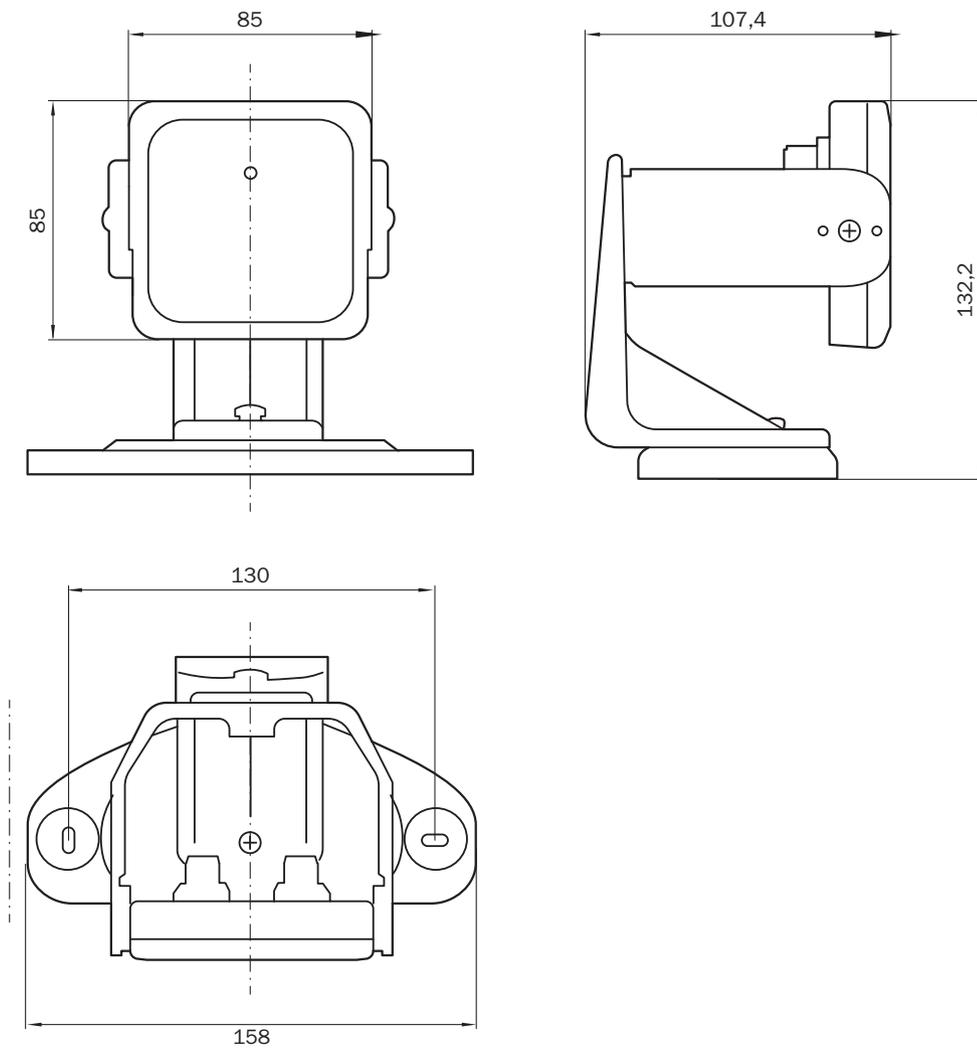
ECLASS 5.0	27270890
ECLASS 5.1.4	27270890
ECLASS 6.0	27280800
ECLASS 6.2	27280800
ECLASS 7.0	27280890
ECLASS 8.0	27280890
ECLASS 8.1	27280890
ECLASS 9.0	27280890
ECLASS 10.0	27280890
ECLASS 11.0	27280890
ECLASS 12.0	27280890
ETIM 5.0	EC001825
ETIM 6.0	EC001825
ETIM 7.0	EC001825
ETIM 8.0	EC001825
UNSPSC 16.0901	39121528

Dimensional drawing safeRS3 sensor on two-axis bracket



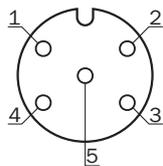
Dimensions in mm (inch)

Dimensional drawing safeRS3 sensor on three-axis bracket



Dimensions in mm (inch)

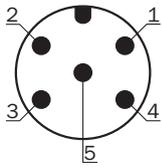
Pinouts Female connector



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

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

Recommended accessories

Other models and accessories → www.sick.com/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, 4-pin, straight • Connection type head B: Female connector, USB-A, 4-pin, straight • Signal type: USB • Cable: 10 m, 4-wire, PVC • Description: USB, shielded • 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. 	YMUSD4-100VG6FUSE4	6069292
	<ul style="list-style-type: none"> • Description: USB 2.0, unshielded • 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 	YMUSA4-020VG4MUIA4	6036106
	<ul style="list-style-type: none"> • Connection type head A: Male connector, M12, 5-pin, straight, A-coded • Signal type: CANopen, DeviceNet™ • Description: CANopen, DeviceNet™ 	YM2W15-000000XXXXX	2123627
	Strich		On request
Mounting systems			
	Strich		On request
	Strich		On request

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