SRA2-AAR140AKZI

safeRS/safeRS3

SAFETY RADAR SENSORS

SICK
Sensor Intelligence.

SRA2-AAR140AKZI | safeRS/safeRS3

SAFETY RADAR SENSORS

Ordering information

Illustration may differ

Type	part no.
SRA2-AAR140AKZI	6073487

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

Detailed technical data

Features

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

Safety-related parameters

Safety integrity level	SIL 2 (IEC 62061)
Category	Category 2 (outputs category 3) (EN ISO 13849)
Performance level	PL d (EN ISO 13849)
PFH_D (mean probability of a dangerous failure per hour)	4.34×10^{-8}
$MTTF_D$ (mean time to dangerous failure)	40 years (IEC 60050)
T_M (mission time)	20 years (EN ISO 13849)
Safe state in the event of a fault	At least one safety relay is in the OFF state

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	24 V DC (20 V DC … 28 V DC)
Power consumption	≤ 0.6 A
Power consumption	≤ 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

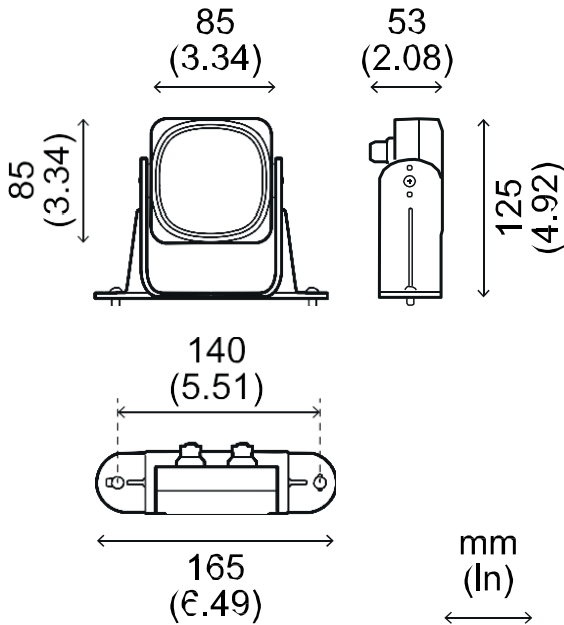|	
Bandwidth	24 GHz … 24.25 GHz
Transmissin power	≤ 13 dBm
Radio class	Class 2 (2014/53/EU, RED - radio equipment)
Detection method	FMCW radar for motion detection
Items supplied	safeRS sensor Safety instruction Mounting instructions Operating instructions for download safeRS3 Designer (configuration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

Certificates

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

Dimensions in mm (inch)

Recommended accessories

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

Brief description		Type	part no.
device protection and care			
	• **Description:** Protective metal housing for safeRS sensor • **Material:** Stainless steel • **Items supplied:** Protective metal housing incl. mounting kit	Protective housing	5341984

Brief description	Type	part no.
connectors and cables		
• **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
• **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
• **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
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-030C1B-N2A15	2112756
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-100C1BXLEAX	2112754
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-050C1BXLEAX	2112753
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-150C1BXLEAX	2112755
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-100C1B-N2A15	2115284
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-150C1B-N2A15	2115285
• **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, shielded, CANopen, DeviceNet™ • **Note:** A-coded	YG2A15-050C1B-N2A15	2115283
• **Connection type head A:** Male connector, M12, 5-pin, straight, A-coded • **Signal type:** CANopen, DeviceNet™ • **Description:** CANopen, DeviceNet™	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."

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