



SRA3-AAC100ZANI

safeRS/safeRS3

SAFETY RADAR SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Variant	Integration in the control system	OSSD pairs	Universal inputs	Type	Part no.
safeRS3	Local inputs and outputs (I/O)	≤ 2	2 dual-channel	SRA3-AAC100ZANI	6080600

The system consists of a control unit and up to 6 sensors.

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



Detailed technical data

Features

Number of monitoring cases	≤ 4
Response time	≤ 100 ms

Safety-related parameters

Safety integrity level	SIL2 (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

Outputs	
OSSD pairs	≤ 2
Universal outputs	≤ 4 ¹⁾

¹⁾ Freely configurable.

²⁾ Prescribed as soon as at least one digital input is used.

Inputs	Universal inputs	2 dual-channel ¹⁾
	Test input	1 ²⁾
Configuration method	PC with safeRS3 Designer (Configuration and Diagnostic software)	
Configuration and diagnostics interface	Micro USB	
Display elements	LEDs	

¹⁾ Freely configurable.

²⁾ Prescribed as soon as at least one digital input is used.

Electrical data

Supply voltage V_s	24 V DC (20 V DC ... 28 V DC)
Power consumption	≤ 1 A
Power consumption	≤ 33 W, control unit and six sensors

Mechanical data

Dimensions (W x H x D)	105 mm x 103 mm x 58 mm
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Ambient data

Enclosure rating	IP20 (IEC 60529)
Ambient operating temperature	-30 °C ... +60 °C
Storage temperature	-40 °C ... +80 °C

Other information

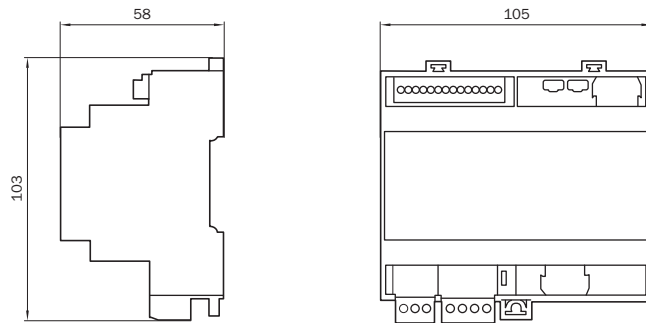
Bandwidth	60.6 GHz ... 62.8 GHz
Transmissin power	≤ 16 dBm
Radio class	Class 2 (2014/53/EU, RED - radio equipment)
Detection method	FMCW radar for motion detection
Items supplied	safeRS3 control unit Safety instruction Mounting instructions Operating instructions for download safeRS3 Designer (configuration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

Classifications

eCl@ss 5.0	27270890
eCl@ss 5.1.4	27270890
eCl@ss 6.0	27280800
eCl@ss 6.2	27280800
eCl@ss 7.0	27280890
eCl@ss 8.0	27280890
eCl@ss 8.1	27280890
eCl@ss 9.0	27280890
eCl@ss 10.0	27280890
eCl@ss 11.0	27280890
eCl@ss 12.0	27280890
ETIM 5.0	EC001825
ETIM 6.0	EC001825

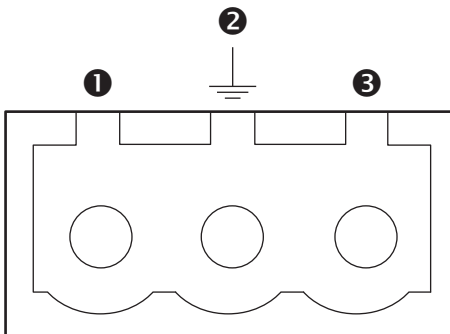
ETIM 7.0	EC001825
ETIM 8.0	EC001825
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))



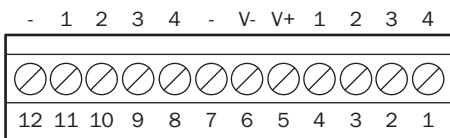
Pin assignment

Voltage supply



- ① GND
- ② Ground
- ③ +24 V DC

Digital inputs and outputs

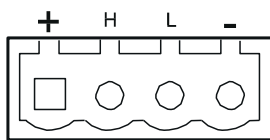


Pin	Description
1	Input 2, channel 2
2	Input 2, channel 1
3	Input 1, channel 2
4	Input 1, channel 1
5	V+ (SNS) for digital input diagnostics (obligatory when at least one input is used)

Pin	Description
6	V- (SNS), mutual reference potential (obligatory when at least one input is used)
7	GND, mutual reference potential for all digital outputs
8	Output 4 (OSSD 4)
9	Output 3 (OSSD 3)
10	Output 2 (OSSD 2)
11	Output 1 (OSSD 1)
12	GND, mutual reference potential for all digital outputs

For details see operating instructions

Sensor connection









Terminal	Description
+	+12 V DC
H	CAN H
L	CAN L
-	GND

For details see operating instructions

Recommended accessories

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

	Brief description	Type	Part no.
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, angled Head B: Flying leads Cable: Fieldbus, DeviceNet™, PUR, halogen-free, shielded, 5 m A-coded	YG2A15-050C1BXLEAX	2112753
	Head A: female connector, M12, 5-pin, angled Head B: Flying leads Cable: Fieldbus, DeviceNet™, PUR, halogen-free, shielded, 10 m A-coded	YG2A15-100C1BXLEAX	2112754
	Head A: female connector, M12, 5-pin, angled Head B: Flying leads Cable: Fieldbus, DeviceNet™, PUR, halogen-free, shielded, 15 m A-coded	YG2A15-150C1BXLEAX	2112755
	Head A: male connector, USB-A Head B: male connector, Micro-B Cable: USB 2.0, unshielded, 2 m	USB cable	6036106

	Brief description	Type	Part no.
	Head A: male connector, USB-A, straight Head B: female connector, USB-A, straight Cable: USB, unshielded, 10 m 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
	Head A: female connector, M12, 5-pin, angled Head B: male connector, M12, 5-pin, angled Cable: Fieldbus, DeviceNet™, shielded, 3 m A-coded	YG2A15-030C1BN2A15	2112756
	Head A: female connector, M12, 5-pin, angled Head B: male connector, M12, 5-pin, angled Cable: Fieldbus, shielded, 5 m A-coded	YG2A15-050C1BN2A15	2115283
	Head A: female connector, M12, 5-pin, angled Head B: male connector, M12, 5-pin, angled Cable: CANopen, DeviceNet™, shielded, 10 m A-coded	YG2A15-100C1BN2A15	2115284
	Head A: female connector, M12, 5-pin, angled Head B: male connector, M12, 5-pin, angled Cable: CANopen, DeviceNet™, shielded, 15 m A-coded	YG2A15-150C1BN2A15	2115285
	Head A: male connector, Micro-B, 4-pin, straight Head B: male connector, USB-A, 4-pin, straight Cable: USB 2.0, PVC, shielded, 5 m	YMUSA4-050VG4MUIA4	2118400
	Head A: male connector, M12, 5-pin, straight, A-coded Cable: 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.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com