SRA3-AAC100ZPUI

safeRS/safeRS3

SAFETY RADAR SENSORS

SICK
Sensor Intelligence.

SRA3-AAC100ZPUI | safeRS/safeRS3

SAFETY RADAR SENSORS

Ordering information

Variant	Integration in the control system	OSSD pairs	Safety outputs via network	Universal inputs	Type	Part no.
safeRS3	Local inputs and outputs (I/O), PROFINET PROFIsafe	≤ 2	4	2 dual-channel	SRA3-AAC100ZPUI	6080601

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	≤ 32
Response time	≤ 100 ms

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	1.66×10^{-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

[1] Freely configurable.
[2] Prescribed as soon as at least one digital input is used.

Safety outputs via network	4
Universal outputs	≤ 4 [1]
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	Ethernet, micro USB
Fieldbus, industrial network	PROFINET
Protocol	PROFIsafe
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

Ambient data

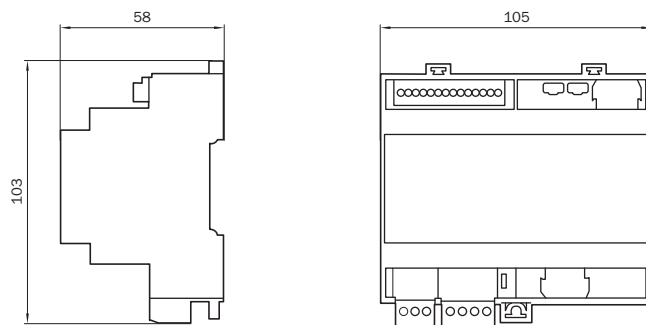|	
Enclosure rating	IP20 (IEC 60529)
Ambient operating temperature	−30 °C … +60 °C
Storage temperature	−40 °C … +80 °C

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

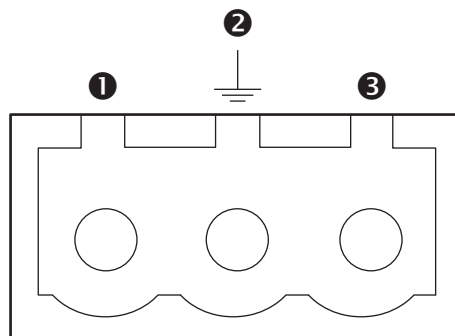|	
ECLASS 5.0	27270890
ECLASS 5.1.4	27270890
ECLASS 6.0	27280800
ECLASS 6.2	27280800
ECLASS 7.0	27280890
ECLASS 8.0	27280890
ECLASS 8.1	27280890
ECLASS 9.0	27280890
ECLASS 10.0	27280890

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

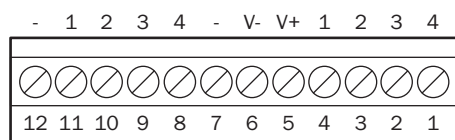## Dimensional drawing (Dimensions in mm (inch))

Pin assignment

Voltage supply

① GND
② Ground
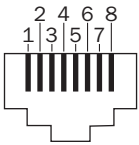③ +24 V DC

Digital inputs and outputs

Pin	Description
1	Input 2, channel 2
2	Input 2, channel 1

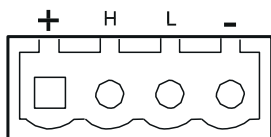| Pin	Description
3	Input 1, channel 2
4	Input 1, channel 1
5	V+ (SNS) for digital input diagnostics (obligatory when at least one input is used)
6	V- (SNS), mutual reference potential (obligatory when at least one input is used)
7	GND, mutual reference potential for all digital outputs
8	Output 4 (OSSD 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	

Ethernet

Pin	Designation	Description
1	TX+	Send data +
2	TX-	Send data -
3	RX+	Receive data +
4	-	Reserved
5	-	Reserved
6	RX-	Receive data -
7	-	Reserved
8	-	Reserved
Housing	SH	Shielding
For details see operating instructions		

Sensor connection

CAN BUS

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		
• **Connection type head A:** Female connector, M12, 5-pin, angled • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, DeviceNet™ • **Cable:** 5 m, 5-wire, PUR, halogen-free • **Description:** Fieldbus, DeviceNet™, shielded • **Note:** A-coded	YG2A15-050C1BXLEAX	2112753
• **Connection type head A:** Female connector, M12, 5-pin, angled • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, DeviceNet™ • **Cable:** 10 m, 5-wire, PUR, halogen-free • **Description:** Fieldbus, DeviceNet™, shielded • **Note:** A-coded	YG2A15-100C1BXLEAX	2112754
• **Connection type head A:** Female connector, M12, 5-pin, angled • **Connection type head B:** Flying leads • **Signal type:** Fieldbus, DeviceNet™ • **Cable:** 15 m, 5-wire, PUR, halogen-free • **Description:** Fieldbus, DeviceNet™, shielded • **Note:** A-coded	YG2A15-150C1BXLEAX	2112755
• **Connection type head A:** Male connector, USB-A • **Connection type head B:** Male connector, Micro-B • **Signal type:** USB 2.0 • **Cable:** 2 m • **Description:** USB 2.0, unshielded	USB cable	6036106
• **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:** Female connector, M12, 5-pin, angled • **Connection type head B:** Male connector, M12, 5-pin, angled • **Signal type:** Fieldbus, DeviceNet™ • **Cable:** 3 m, 5-wire • **Description:** Fieldbus, DeviceNet™, shielded • **Note:** A-coded	YG2A15-030C1BN2A15	2112756
• **Connection type head A:** Female connector, M12, 5-pin, angled • **Connection type head B:** Male connector, M12, 5-pin, angled • **Signal type:** Fieldbus • **Cable:** 5 m, 5-wire • **Description:** Fieldbus, shielded • **Note:** A-coded	YG2A15-050C1BN2A15	2115283
• **Connection type head A:** Female connector, M12, 5-pin, angled • **Connection type head B:** Male connector, M12, 5-pin, angled • **Signal type:** CANopen, DeviceNet™ • **Cable:** 10 m, 5-wire • **Description:** CANopen, DeviceNet™, shielded • **Note:** A-coded	YG2A15-100C1BN2A15	2115284
• **Connection type head A:** Female connector, M12, 5-pin, angled • **Connection type head B:** Male connector, M12, 5-pin, angled • **Signal type:** CANopen, DeviceNet™ • **Cable:** 15 m, 5-wire • **Description:** CANopen, DeviceNet™, shielded • **Note:** A-coded	YG2A15-150C1BN2A15	2115285

	Brief description	Type	Part no.
	• **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, M12, 5-pin, straight, A-coded • **Signal type:** CANopen, DeviceNet™ • **Description:** CANopen, DeviceNet™, Terminating plug with a 120 Ω resistor for the last sensor in the system	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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