



## RSS 36-SD-R-ST

- Universal coding with RFID technology
- 1 x connector socket M12, 8-pole
- Actuation from side
- Max. 31 sensors can be wired in series.
- serial diagnostic output
- Thermoplastic enclosure
- RFID-technology for needs-based protection against tampering
- Misaligned actuation possible
- 27 mm x 108.2 mm x 35 mm
- High repeat accuracy of the switching points
- 2 short-circuit proof PNP safety outputs
- Integral cross-short, wire-breakage and external voltage monitoring of the safety cables up to the control cabinet

## Data

### Ordering data

EAN (European Article Number)	4030661413419
eCl@ss number, Version 9.0	27-27-24-03
eCl@ss number, Version 11.0	27-27-24-03

### Approval - Standards

Certificates	TÜV
	cULus
	ECOLAB
	EAC
	FCC
	IC

## General data

Standards	IEC 60947-5-3
general information	Universal coding
Coding level according to ISO 14119	Low
Active principle	RFID
Housing construction form	Block
Installation conditions (mechanical)	not flush
Sensor topology	Sensor for series wiring
Enclosure material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Active area	Glass-fibre, reinforced thermoplastic
Gross weight	100 g
Time to readiness, maximum	2,000 ms
Reaction time, maximum	100 ms
Duration of risk, maximum	200 ms

## General data - Features

Serial diagnostics	Yes
Latching	Yes
Diagnostic output	Yes
Short circuit detection	Yes
Short-circuit recognition	Yes
Safety functions	Yes
Cascadable	Yes
Integral System Diagnostics, status	Yes
Number of LEDs	3
Number of semi-conductor outputs with signaling function	1

Number of fail-safe digital outputs	2
Number of Series-wiring of sensors	31

## Safety appraisal

Standards	EN ISO 13849-1 IEC 60947-5-3 EN 62061 IEC 61508
Performance level, up to	e
Control category to EN13849	4
PFH-value	$2.70 \times 10^{-10} /h$
Safety Integrity Level (SIL), suitable for applications in	3
Mission Time	20 Year(s)

## Mechanical data

Actuating panels	lateral
Active area	lateral
Hysteresis (Switch distance), maximum	2 mm
Repeat accuracy R R	0.5 mm
Note (Repeat accuracy $R_R$ )	Axial offset: The long side allows for a maximum height misalignment (x) of sensor and actuator of 8 mm (e.g. mounting tolerance or due to guard door sagging). The axial misalignment (y) is max. $\pm 18$ mm (see figure: Operating principle). Minimum clearance between two sensor systems 100 mm.
Latching force	18 N
Mounting	A screw length of 25 mm is sufficient for sensor mounting and for side mounting of the actuators. 30 mm long screws are recommended when the actuator is mounted upright and/or when the sealing discs are used.

## Mechanical data - Switching distances according IEC 60947-5-3

Switch distance	12 mm
Ensured switch distance "ON" S ao	10 mm
Ensured switch distance "OFF" S ar	20 mm

### Mechanical data - Connection technique

Terminal Connector	Connector M12, 8-pole
Note	The cable section of the interconnecting cable must be observed! Cable length and cable section alter the voltage drop depending on the output current

### Mechanical data - Dimensions

Length of sensor	22 mm
Width of sensor	106.3 mm
Height of sensor	25 mm

### Ambient conditions

Degree of protection	IP65 to EN 60529 IP67 to EN 60529 IP69 to EN 60529
Ambient temperature, minimum	-25 °C
Ambient temperature, maximum	+70 °C
Storage and transport temperature, minimum	-25 °C
Storage and transport temperature, maximum	+85 °C
Material temperature resistance of the cable (in motion), minimum	-10 °C
Material temperature resistance of the cable (at rest), minimum	-30 °C
Material temperature resistance (long-term), maximum	+105 °C

Resistance to vibrations to EN 60068-2-6	10 ... 55 Hz, amplitude 1 mm
Resistance to shock	30 g / 11 ms
Protection rating	III

### Ambient conditions - Insulation value

Rated insulation voltage $U_i$	32 VDC
Rated impulse withstand voltage $U_{imp}$	0.8 kV
Overvoltage category	III
Degree of pollution to VDE 0100	3

### Electrical data

Voltage type	DC (direct current)
No-load supply current $I_0$	100 mA
Rated operating voltage	24 VDC $-15\%$ / $+10\%$
Rated operating voltage, minimum	20.4 VDC
Rated operating voltage, maximum	26.4 VDC
Operating current	600 mA
Required rated short-circuit current to EN 60947-5-1	100 A
Switching frequency, approx.	1 Hz

### Electrical data - Fail-safe digital outputs

Rated operating current (safety outputs)	250 mA
Output current, (fail-safe output), maximum	0.25 A
Versions	p-type

Voltage drop $U_d$ , maximum	1 V
Current leakage $I_r$	0.5 mA
Voltage, Utilisation category DC12	24 VDC
Current, Utilisation category DC12	0.25 A
Voltage, Utilisation category DC13	24 VDC
Current, Utilisation category DC13	0.25 A

### Electrical data - Diagnostic output

Operating current	150 mA
Versions	p-type
Voltage drop $U_d$ , maximum	2 V

### Electrical data - Electromagnetic compatibility (EMC)

Interfering radiation	IEC 61000-6-4
EMC rating	IEC 60947-3

### Status indication

Note (LED switching conditions display)	LED yellow: Operating condition LED green: Supply voltage LED red: Fault
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### Pin assignment

PIN 1	A1 Ue Brown
PIN 2	X1 Safety input 1 White
PIN 3	A2 GND Blue
PIN 4	Y1 Safety output 1 Black

PIN 5	serial diagnostic output OUT Grey
PIN 6	X2 Safety input 2 violet
PIN 7	Y2 Safety output 2 red
PIN 8	IN serial diagnostic input Pink

## Scope of delivery

Included in delivery	Actuators must be ordered separately.
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## Accessory

Recommendation (actuator)	RST 36-1 RST 36-1-R
Recommended safety switchgear	PROTECT PSC1 SRB-E-301ST SRB-E-201LC

## Notes

Note (General)	Evaluation requirements: dual-channel safety input, suitable for p-type sensors with NO function. The safety-monitoring module must tolerate internal functional tests of the sensors with cyclic switch-off of the sensor outputs for max. 2 ms. Short-circuit recognition by the evaluation is not necessary.
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The details and data referred to have been carefully checked. Images may diverge from original. Further technical data can be found in the manual. Technical amendments and errors possible.

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