



RSS 36-SD-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

Product type description	RSS 36-SD-ST
Article number (order number)	101214772
EAN (European Article Number)	4030661413402
eCl@ss number, version 12.0	27-27-46-01
eCl@ss number, version 11.0	27-27-24-03
eCl@ss number, version 9.0	27-27-24-03
ETIM number, version 7.0	EC001829
ETIM number, version 6.0	EC001829

Approvals - Standards

Certificates	TÜV cULus ECOLAB FCC IC UKCA ANATEL
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General data

Standards	EN ISO 13849-1 EN IEC 60947-5-3 EN IEC 61508
Coding	Universal coding
Coding level according to EN ISO 14119	Low
Working principle	RFID
Frequency band RFID	125 kHz
Transmitter output RFID, maximum	-6 dB/m
Housing construction form	Block
Installation conditions (mechanical)	not flush
Sensor topology	Sensor for series wiring
Housing material	Glass-fibre, reinforced thermoplastic
Reaction time, maximum	100 ms
Duration of risk, maximum	200 ms
Reaction time, switching off safety outputs via actuator, maximum	100 ms
Reaction time, switching off safety outputs via safety inputs, maximum	0.5 ms
Gross weight	85 g

General data - Features

Serial diagnostics	Yes
Short circuit detection	Yes

Cross-circuit detection	Yes
Series-wiring	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 classification

Standards	EN ISO 13849-1 EN IEC 61508
Performance Level, up to	e
Category	4
PFH value	2.70×10^{-10} /h
PFD value	2.10×10^{-5}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Mechanical data

Actuating panels	lateral
Active area	lateral
Mechanical life, minimum	1,000,000 Operations
Note (Mechanical life)	Actuating speed 0.25 m/s Operations for door weights ≤ 5 kg
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.

Type of the fixing screws	2x M4 (cylinder head screws with washers DIN 125A / form A)
Tightening torque of the fixing screws, minimum	2.2 Nm
Tightening torque of the fixing screws, maximum	2.5 Nm

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

Switch distance, typical	12 mm
Assured switching distance "ON" S_{ao}	10 mm
Assured switching distance "OFF" S_{ar}	20 mm
Hysteresis (Switching distance), maximum	2 mm
Repeat accuracy R	0.5 mm
Note (Repeat accuracy 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. ± 18 mm (see figure: Operating principle). Minimum clearance between two sensor systems 100 mm.

Mechanical data - Connection technique

Note (length of the sensor chain)	Cable length and cross-section change the voltage drop depending on the output current
Note (series-wiring)	Unlimited number of devices, observe external line fusing, max. 31 devices in case of serial diagnostic SD
Termination	Connector M12, 8-pole

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 IP67 IP69
Ambient temperature	-28 ... +70 °C
Storage and transport temperature	-28 ... +85 °C
Relative humidity, maximum	93 %
Note (Relative humidity)	non-condensing non-icing
Resistance to vibrations	10 ... 55 Hz, amplitude 1 mm
Resistance to shock	30 g / 11 ms
Protection class	III
Permissible installation altitude above sea level, maximum	2,000 m

Ambient conditions - Insulation values

Rated insulation voltage U_i	32 VDC
Rated impulse withstand voltage U_{imp}	0.8 kV
Oversvoltage category	III
Degree of pollution	3

Electrical data

Operating voltage	24 VDC -15 % / +10 % (stabilised PELV power supply)
Operating current, minimum	0.5 mA
No-load supply current I_0 , typical	35 mA
Rated operating voltage	24 VDC
Operating current	600 mA
Required rated short-circuit current	100 A
Time to readiness, maximum	2,000 ms
Switching frequency, maximum	1 Hz

Electrical fuse rating,
maximum 2 A

Electrical data - Safety digital inputs

Designation, Safety inputs X1 and X2

Current consumption of the
safety inputs 5 mA

Test pulse duration,
maximum 1 ms

Test pulse interval, minimum 100 ms

Classification ZVEI CB24I,
Sink C1

Classification ZVEI CB24I,
Source C1
C2
C3

Electrical data - Safety digital outputs

Designation, Safety outputs Y1 and Y2

Rated operating current
(safety outputs) 250 mA

Output current, (fail-safe
output), maximum 0.25 A

Design of control elements short-circuit proof, p-type

Voltage drop U_d , maximum 1 V

Leakage current I_r , maximum 0.5 mA

Voltage, Utilisation category
DC-12 24 VDC

Current, Utilisation category
DC-12 0.25 A

Voltage, Utilisation category
DC-13 24 VDC

Current, Utilisation category
DC-13 0.25 A

Test pulse interval, typical 1000 ms

Test pulse duration,
maximum 0.3 ms

Classification ZVEI CB24I, C2
Source

Classification ZVEI CB24I, C1
Sink C2

Electrical data - Serial diagnostic SD

Designation, Serial diagnostic SD OUT
Operation current 150 mA
Design of control elements short-circuit proof, p-type
Wiring capacitance 50 nF

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

Pin assignment

PIN 1 1A1 Ue: (1)
PIN 2 X1 Safety input 1
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

Scope of delivery Actuator must be ordered separately.

Accessory

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

Note

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. 0.5 ms. Short-circuit recognition by the evaluation is not necessary.

Ordering code

Product type description:
RSS 36 (1)-(2)-(3)-(4)

(1)

without	Standard coding
I1	Individual coding
I2	Individual coding, re-teaching enabled

(2)

without	without diagnostic function (only on request for ST5)
D	With diagnostic output
SD	with serial diagnostics (only for ST)

(3)

without	without latching
R	with latching, latching force approx. 18 N

(4)

ST Connector plug M12, 8-pole

ST5 Connector plug M12, 5-pole

Pictures

Product picture (catalogue individual photo)



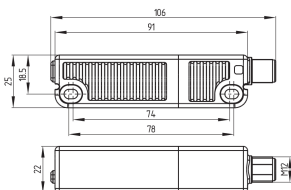
ID: krss3f11

| 501.7 kB | .jpg | 196.144 x 572.911 mm - 556 x 1624 px - 72 dpi

| 106.3 kB | .png | 74.083 x 216.253 mm - 210 x 613 px - 72 dpi

| 24.3 kB | .jpg | 42.333 x 123.472 mm - 120 x 350 px - 72 dpi

Dimensional drawing basic component



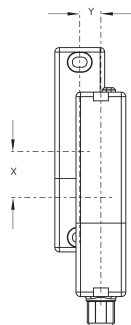
ID: 1rss3g03

| 55.0 kB | .cdr |

| 8.8 kB | .png | 74.083 x 51.506 mm - 210 x 146 px - 72 dpi

| 124.2 kB | .jpg | 352.778 x 245.181 mm - 1000 x 695 px - 72 dpi

Operating principle

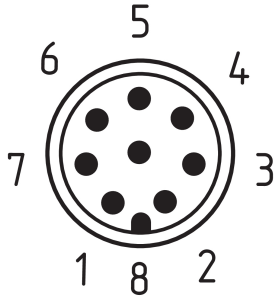


ID: krss3a01

| 182.6 kB | .jpg | 352.778 x 920.75 mm - 1000 x 2610 px - 72 dpi

| 4.2 kB | .png | 74.083 x 193.322 mm - 210 x 548 px - 72 dpi

Contact arrangement



ID: km12-k8b

| 5.3 kB | .png | 73.731 x 87.489 mm - 209 x 248 px - 72 dpi

| 138.6 kB | .jpg | 352.425 x 417.689 mm - 999 x 1184 px - 72 dpi

Schmersal India Pvt. Ltd., Plot No - G-7/1, Ranjangaon MIDC, Tal. - Shirur, Dist.- Pune 412 220

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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