



RSS 36-D-R-ST5

- 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-D-R-ST5
Article number (order number)	103025099
EAN (European Article Number)	4030661512228
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	Individual sensor or end sensor in a series
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	100 g

General data - Features

Diagnostic output	Yes
Short circuit detection	Yes
Cross-circuit detection	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

Safety classification

Standards	EN ISO 13849-1 EN IEC 61508
Performance Level, up to	e
Category	4
PFH value	2.70×10^{-10} /h
PDF 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
Latching force, approx.	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.
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
Termination	Connector M12, 5-pole, A-coded

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
Utilisation category DC-12	24 VDC / 0.05 A
Electrical fuse rating, maximum	2 A

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, Source	C2
Classification ZVEI CB24I, Sink	C1 C2

Electrical data - Diagnostic outputs

Designation, Diagnostic outputs	OUT
Design of control elements	short-circuit proof, p-type
Voltage drop U_d , maximum	2 V
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	0.05 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	0.05 A

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	Y2 safety output 2: White
PIN 3	A2 GND Blue
PIN 4	Y1 Safety output 1 Black
PIN 5	OUT Diagnostic output OUT Grey

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)



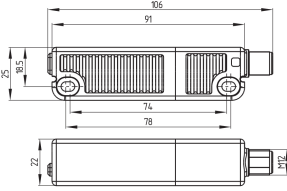
ID: krss3f11

| 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



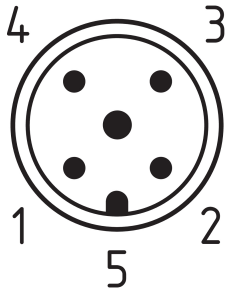
ID: 1rss3g03

| 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

Contact arrangement



ID: km12-k5g

| 5.8 kB | .png | 73.731 x 106.892 mm - 209 x 303 px - 72 dpi

| 158.2 kB | .jpg | 352.425 x 510.117 mm - 999 x 1446 px - 72 dpi

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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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