

## RSS 36-I2-SD-R-ST



- Actuation from side
- Thermoplastic enclosure
- 27 mm x 108.2 mm x 35 mm
- serial diagnostic output
- Misaligned actuation possible
- 1 x connector socket M12, 8-pole
- Max. 31 sensors can be wired in series.
- 2 short-circuit proof PNP safety outputs
- Coding level "High" according to ISO 14119
- High repeat accuracy of the switching points
- Repeated individual coding with RFID technology
- RFID-technology for needs-based protection against tampering
- Integral cross-short, wire-breakage and external voltage monitoring of the safety cables up to the control cabinet

## Data

### Ordering data

RSS 36-I2-SD-R-ST

101218832

EAN (European Article Number)

4030661416342

eCl@ss number, Version 9.0 27-27-24-03

### Approval - Standards

TÜV  
cULus  
ECOLAB  
EAC  
FCC  
IC

## General data

|                                      |                                                                   |
|--------------------------------------|-------------------------------------------------------------------|
|                                      | RSS 36                                                            |
|                                      | IEC 60947-5-3                                                     |
| general information                  | Individual coding, multiple teaching                              |
| Coding level according to ISO 14119  | High                                                              |
|                                      | 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                         | 13 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                                          | Yes |
| 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

|                          |               |
|--------------------------|---------------|
|                          | ISO 13849-1   |
|                          | IEC 60947-5-3 |
|                          | EN 62061      |
|                          | IEC 61508     |
| Performance level, up to | e             |

|                                              |                                   |
|----------------------------------------------|-----------------------------------|
| Control category to EN13849                  | 4                                 |
| PFH-value                                    | $2.70 \times 10^{-10} / \text{h}$ |
| Safety Integrity Level (SIL), applicable for | 3                                 |
| Mission Time                                 | 20 Year(s)                        |

#### Mechanical data

|                                        |                                                                                                                                                                                                                                                                                                        |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Actuating panels                       | lateral                                                                                                                                                                                                                                                                                                |
| Active area                            | lateral                                                                                                                                                                                                                                                                                                |
| 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.                                                                                       |
| Switch distance                        | 12 mm                                                                                                                                                                                                                                                                                                  |
| Ensured switch distance "ON" $S_{ao}$  | 10 mm                                                                                                                                                                                                                                                                                                  |
| Ensured switch distance "OFF" $S_{ar}$ | 20 mm                                                                                                                                                                                                                                                                                                  |
| Hysteresis (Switch distance), maximum  | 2 mm                                                                                                                                                                                                                                                                                                   |
| Repeat accuracy R 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. $\pm 18$ mm (see figure: Operating principle). Minimum clearance between two sensor systems 100 mm. |
| Latching force                         | 18 N                                                                                                                                                                                                                                                                                                   |

#### 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

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

#### Ambient conditions

|                              |                                                                         |
|------------------------------|-------------------------------------------------------------------------|
| Protection class             | IP 65 to IEC/EN 60529<br>IP 67 to IEC/EN 60529<br>IP 69 to IEC/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 |
|                                                                   | 30 g / 11 ms                 |
|                                                                   | III                          |

#### Ambient conditions - Insulation value

|                                 |        |
|---------------------------------|--------|
| Rated impulse withstand voltage | 0.8 kV |
|                                 | III    |
|                                 | 3      |

#### Electrical data

|                                                      |                      |
|------------------------------------------------------|----------------------|
| Voltage type                                         | DC (direct current)  |
| No-load current                                      | 100 mA               |
|                                                      | 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 | 0.3 A  |
| Versions                                    | p-type |
| Voltage drop $U_d$ , maximum                | 1 V    |
| Current leakage                             | 0.5 mA |

|                                    |        |
|------------------------------------|--------|
| Voltage, Utilisation category DC12 | 24 VDC |
| Current, Utilisation category DC12 | 0.3 A  |
| Voltage, Utilisation category DC13 | 24 VDC |
| Current, Utilisation category DC13 | 0.3 A  |

#### Electrical data - Diagnostic output

|                                       |        |
|---------------------------------------|--------|
| Operating current (diagnostic output) | 150 mA |
| Versions                              | p-type |
| Voltage drop $U_d$ , maximum          | 2 V    |

#### Electrical data - Electromagnetic compatibility (EMC)

IEC 61000-6-4  
IEC 60947-3

#### Status indication

|                                         |                                                                                |
|-----------------------------------------|--------------------------------------------------------------------------------|
| Note (LED switching conditions display) | LED yellow: Operating condition<br>LED green: Supply voltage<br>LED red: Fault |
|-----------------------------------------|--------------------------------------------------------------------------------|

#### 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. |
|----------------------|---------------------------------------|

#### Accessory

RST 36-1  
RST 36-1-R  
PROTECT PSC1  
SRB-E-301ST  
SRB-E-201LC

## Notes

Note (General) Teaching of the individual coding of a RST actuator through a simple routine during start-up (as -I1). A protected coding process enables teaching a new actuator in case of maintenance.

## Ordering code

Product type description:

RSS 36 (1)-(2)-(3)-ST

(1)

**without** Standard coding

**I1** Individual coding

**I2** Individual coding, for multiple applications

(2)

**D** With diagnostic output

**SD** With serial diagnostic function

(3)

**without** without latching

**R** with latching, latching force approx. 18 N

## Pictures

### Photo/Product/Catalogue



ID: krss3f11

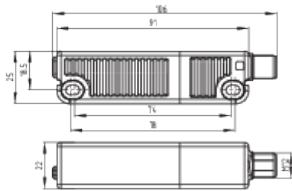
| 501,7 kB | .jpg | 196.144 x 572.911 mm - 556 x 1624

Pixel - 72 dpi

| 106,3 kB | .png | 74.083 x 216.253 mm - 210 x 613

Pixel - 72 dpi

### Dimension/Product/Basic



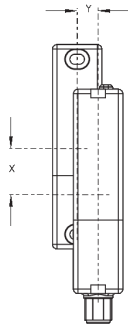
ID: 1rss3g03

| 8,8 kB | .png | 74.083 x 51.506 mm - 210 x 146 Pixel  
- 72 dpi

| 124,2 kB | .jpg | 352.778 x 245.181 mm - 1000 x 695  
Pixel - 72 dpi

| 55,0 kB | .cdr |

### Illustration/Product/Function

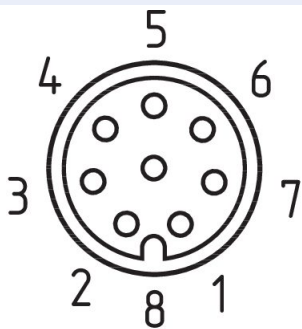


ID: krss3a01

| 182,6 kB | .jpg | 352.778 x 920.75 mm - 1000 x 2610  
Pixel - 72 dpi

| 4,2 kB | .png | 74.083 x 193.322 mm - 210 x 548  
Pixel - 72 dpi

### Graphic/Product/PIN



ID: km23-k8a

| 18,0 kB | .cdr |

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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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