# DATASHEET

## RSS260-I2-D-F1-Q-LSTM8-8-0,1M

- Thermoplastic enclosure
- Simple mounting without additional angle
- RFID-technology for needs-based protection against tampering

## Data

### Ordering data

| | |
|---|---|
| Product type description | RSS260-I2-D-F1-Q-LSTM8-8-0,1M |
| Article number (order number) | 103040369 |
| EAN (European Article Number) | 4030661553740 |
| 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<br>cULus<br>FCC<br>IC<br>UKCA<br>ANATEL |

## General data

| | |
|---|---|
| Standards | EN ISO 13849-1<br>EN IEC 60947-5-3<br>EN IEC 61508 |
| Coding | Individual coding, multiple teaching |
| Coding level according to EN ISO 14119 | High |
| 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 | Plastic, thermoplastic, self-extinguishing |
| Active area | Glass-fibre, thermoplastic |
| Reaction time, maximum | 100 ms |
| Duration of risk, maximum | 200 ms |
| Reaction time, switching off safety outputs via actuator, maximum | 100 ms |
| Gross weight | 68 g |

## General data - Features

| | |
|---|---|
| Diagnostic output | 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 poles | 8 |
| Number of fail-safe digital outputs | 2 |

### Safety classification

| | |
|---|---|
| Standards | EN ISO 13849-1<br>EN IEC 61508 |
| Performance Level, up to | e |
| Category | 4 |
| PFH value | 6.80 x $10^{-10}$ /h |
| PFD value | 1.20 x $10^{-4}$ |
| Safety Integrity Level (SIL), suitable for applications in | 3 |
| Mission time | 20 Year(s) |

## Mechanical data

| | |
|---|---|
| Actuating panels | lateral<br>front side |
| Active area | lateral<br>front |
| Mounting | A 20 mm screw length usually suffices to mount the sensor. When the mounting plates are used, we recommend 25 mm long screws. |
| Type of the fixing screws | 2x M4 |
| Tightening torque of the fixing screws, maximum | 0.8 Nm |

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

| | |
|---|---|
| Typical switching distance, frontal | 12 mm |
| Typical switching distance, lateral | 9 mm |

| | |
|---|---|
| Assured switching distance "ON", frontal | 10 mm |
| Assured switching distance "OFF", frontal | 18 mm |
| Assured switching distance "ON", lateral | 6 mm |
| Assured switching distance "OFF", lateral | 15 mm |
| Note ($S_{ao}$) | The specifications of the safety switching distance $S_{ao}$ refer to a temperature range of<br>-10 °C ... +60 °C. For a temperature range of -28 °C ... +65 °C, $S_{ao}$ is reduced by 2 mm. |
| Note (switching distance) | Axial misalignment, a horizontal and vertical misalignment of the safety sensor and the actuator are tolerated. The possible misalignment depends on the distance of the active surfaces of the sensor and the actuator. The sensor remains active within the tolerance range. |
| 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 dependiing on the output current |
| Note (series-wiring) | Unlimited number of devices, oberserve external line fusing, max. 31 devices in case of serial diagnostic SD |
| Termination | Connector M8, 8-pole |

## Mechanical data - Dimensions

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|---|---|
| Length of sensor | 29.5 mm |
| Width of sensor | 39.2 mm |
| Height of sensor | 18 mm |

## Ambient conditions

| | |
|---|---|
| Degree of protection | IP65<br>IP67 |
| Ambient temperature | -28 ... +65 °C |
| Storage and transport temperature | -28 ... +85 °C |
| Relative humidity, maximum | 93 % |
| Note (Relative humidity) | non-condensing<br>non-icing |
| Resistance to vibrations | 10 ... 55 Hz, amplitude 1 mm |
| Restistance to shock | 30 g / 11 ms |
| 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 |
| Overvoltage 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 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<br>C2<br>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 | 1 ms |
| Classification ZVEI CB24I, Source | C2 |
| Classification ZVEI CB24I, Sink | C1<br>C2 |

## Electrical data - Diagnostic outputs

| | |
|---|---|
| Designation, Diagnostic outputs | OUT |
| Operating current | 50 mA |
| 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) | (1) LED green: Supply voltage<br>LED yellow: Operating condition<br>LED red: Fault |

## Pin assignment

| | |
|---|---|
| PIN 1 | A1 Supply voltage UB |
| PIN 2 | X1 Safety input 1 |
| PIN 3 | A2 GND |

| | |
|---|---|
| PIN 4 | Y1 Safety output 1 |
| PIN 5 | OUT Diagnostic output |
| PIN 6 | X2 Safety input 2 |
| PIN 7 | Y2 Safety output 2 |
| PIN 8 | without function |

## Scope of delivery

| | |
|---|---|
| Scope of delivery | Actuator must be ordered separately. |

## Accessory

| | |
|---|---|
| Recommendation (actuator) | RST16-1<br>RST-U-2<br>RST260-1 |

## Ordering code

Product type description:
RSS260-(1)-(2)-(3)-(4)-(5)

(1)

| | |
|---|---|
| **without** | Standard coding |
| **I1** | Individual coding |
| **I2** | Individual coding, multiple teaching |

(2)

| | |
|---|---|
| **D** | With diagnostic output |
| **SD** | With serial diagnostic function |

(3)

| | |
|---|---|
| **without** | Standard version without feedback circuit monitoring EDM (External Device Monitoring) |
| **F0** | EDM with automatic reset |
| **F1** | EDM with manual reset |

(4)

| | |
|---|---|
| **without** | without emergency-stop |
| **Q** | Acknowledge input error with EMERGENCY STOP |

(5)

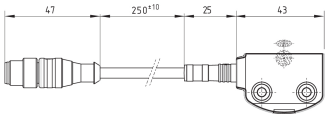
| | |
|---|---|
| **without** | Connecting cable (lenght in m) |
| **ST** | Connector plug M8, 8-pole |
| **LSTM12-8-0,25M** | Cable 0.25 m long with connector M12, 8-pole |
| **LSTM8-8-0,1M** | Cable 0.1 m long with connector M8, 8-pole |
| **LSTM12-5-0.25M** | Cable 0.25 m long with connector M12, 5-pole |

## Pictures

### Product picture (catalogue individual photo)

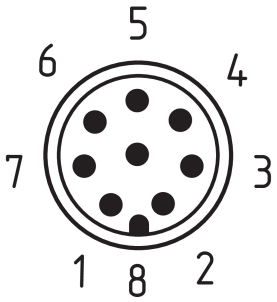
ID: krss2f13
| 42.7 kB | .png | 74.083 x 141.817 mm - 210 x 402 px - 72 dpi
| 638.8 kB | .jpg | 352.778 x 676.275 mm - 1000 x 1917 px - 72 dpi
| 22.4 kB | .jpg | 64.558 x 123.472 mm - 183 x 350 px - 72 dpi

### Dimensional drawing basic component




ID: krss2g03
| 1.3 MB | .ai | 297 x 210.002 mm - 841 x 595 px - 72 dpi
| 5.1 kB | .png | 74.083 x 26.811 mm - 210 x 76 px - 72 dpi
| 64.0 kB | .jpg | 352.778 x 127 mm - 1000 x 360 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

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