

## Datasheet - RSS16-D-SK

Safety sensors / RSS16



- Thermoplastic enclosure
- RFID-technology for needs-based protection against tampering
- 3 different directions of actuation
- Door stop with magnetic latching
- Connection terminal or plug connection
- Suitable for series-wiring
- Universal coding with RFID technology
- Screw connection
- Series-wiring unlimited
- without latching

(Minor differences between the printed image and the original product may exist!)

### Ordering details

|                          |             |
|--------------------------|-------------|
| Product type description | RSS16-D-SK  |
| Article number           | 103004343   |
| EAN Code                 |             |
| eCl@ss                   | 27-27-24-01 |

### Approval


Approval



### Classification

|                  |  |
|------------------|--|
| Standards        | EN ISO 13849-1, IEC 61508, IEC 60947-5-3, EN 62061 |
| PL               | bis e  |
| Control category | bis 4  |
| PFH              | 6.3 x 10 <sup>-11</sup> /h                         |
| SIL              | 3  |
| Mission time     | 20 Years   |

### Global Properties

|  |   |
|--|---|
| Permanent light  | RSS16   |
| Standards  | IEC 60947-5-3   |
| Compliance with the Directives (Y/N)  | Yes   |
| Suitable for safety functions (Y/N)  | Yes   |
| Function   | Sensor for series wiring  |
| Length of the sensor chain   | 200   |
| Mounting   | 2 x M5, Cylinder head screw                                       |
| Active principle   | RFID  |
| Coding   | Universal coding  |
| Coding levels according to ISO 14119   | low   |
| Materials  |   |
| - Material of the housings   | Plastic, glass-fibre reinforced thermoplastic, self-extinguishing |
| - Material of the active surface   | Plastic, glass-fibre reinforced thermoplastic                     |
| Housing construction form  | Block   |
| Weight   |   |
| Input for enabling pushbutton, suitable for automatic start (Y/N)  | No  |
| Input for reset pushbutton, with edge monitoring (Y/N)   | No  |
| Diagnostic output (Y/N)  | Yes   |
| Reaction time  | ≤ 100   |
| Duration of risk   | ≤ 200   |
| Time to readiness  | ≤ 2   |
| Cascadable (Y/N)   | Yes   |
| Series-wiring  | unlimited   |
| Recommended actuator   | RST16-1, RST-U-2  |

## Mechanical data

|                                    |  |
|------------------------------------|--|
| Design of electrical connection    | Screw connection   |
| mechanical installation conditions | not flush  |
| Actuating planes                   | front side, rear, Actuation from top   |
| Active area                        | lateral, front side, cover-side  |
| Switch distance                    | 15   |
| Ensured switch distance ON         | 12   |
| Ensured switch distance OFF        | 30   |
| hysteresis                         | 2 mm   |
| Repeat accuracy R                  | < 0,5 mm   |
| notice                             | The actuator mounting centric to the active sensor surface enables a max. height misalignment (X) of ± 27 mm in the vicinity. The axial misalignment (Y) amounts to max. ± 9 mm.<br>see drawing: Operating principle |
| restistance to shock               | 30 / 11  |
| Resistance to vibration            | -  |
| Latching (Y/N)                     | No   |
| Latching force                     | -  |
| Tightening torque for nuts         | 2  |

## Ambient conditions

|                                   |     |
|-----------------------------------|-----|
| Ambient temperature               |     |
| - Min. environmental temperature  | -25 |
| - Max. environmental temperature  | +70 |
| Storage and transport temperature |     |

|   |                            |
|---|----------------------------|
| - Min. Storage and transport temperature                | -25                        |
| - Max. Storage and transport temperature                | +85                        |
| Protection class  | IP65, IP67 to IEC/EN 60529 |
| Protection rating                                       | -                          |
| Air clearances and creepage distances To IEC/EN 60664-1 |                            |
| - Rated impulse withstand voltage                       | 0,8                        |
| - Overvoltage category                                  | III                        |
| - Degree of pollution                                   | 3                          |

### Electromagnetic compatibility (EMC)

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

### Electrical data

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|  |   |
|--|---|
| Cross circuit/short circuit recognition possible (Y/N) | Yes   |
| Voltage type   | DC  |
| Switch frequency                                       | 1   |
| Rated insulation voltage                               | 32 VDC  |
| Rated operating voltage (stabilised PELV)              |   |
| - Min. Rated operating voltage                         | 20.4 VDC  |
| - Max. Rated operating voltage                         | 26.4 VDC  |
| Operating current                                      | 2.1 A   |
| No-load current  | 0,1 A   |
| Required rated short-circuit current                   | 100 A   |
| notice   | The cable section of the interconnecting cable must be observed for both wiring variants! Cable length and cable section alter the voltage drop depending on the output current |

### Electrical data - Safety inputs

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|                         |              |
|-------------------------|--------------|
| Safety inputs           | X1 and X2    |
| Rated operating voltage | 24 -15 / +10 |

### Electrical data - Safety outputs

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|   |  |
|---|--|
| Safety outputs                          | Y1 and Y2                              |
| Fuse rating                             | short-circuit proof                    |
| Design of control output                | p-type                                 |
| Number of secure semi-conductor outputs | 2                                      |
| Max. output current at secured output   | 1 A                                    |
| Rated operating voltage                 | ( - 1)                                 |
| Residual current                        | ≤ 0,5                                  |
| Operating current                       | 1 A                                    |
| Minimum operating current               | 0,5                                    |
| - Ambient temperature -25°C ... +70°C   | ≤ 0,25 A                               |
| - Ambient temperature -25°C ... +65°C   | ≤ 0,5 A                                |
| - Ambient temperature -25°C ... +55°C   | ≤ 1 A                                  |
| Utilisation category                    | DC-12: 24 V / 1 A<br>DC-13: 24 V / 1 A |
| Voltage drop                            | < 1                                    |

### Electrical data - Diagnostic output

|  |  |
|--|--|
| Serial diagnostics (Y/N)                                 | Yes  |
| Fuse rating  | short-circuit proof                          |
| Design of control output                                 | p-type                                       |
| Number of semi-conductor outputs with signaling function | 1  |
| Rated operating voltage                                  | ( - 2)                                       |
| Operating current  | 0,05 A                                       |
| Voltage drop   | < 2  |
| Utilisation category                                     | DC-12: 24 V / 0,05 A<br>DC-13: 24 V / 0,05 A |
| Wiring capacitance for serial diagnostics                | 50   |

### LED switching conditions display

|  |                     |
|--|---------------------|
| LED switching conditions display (Y/N) | Yes                 |
| Multi-coloured LED                     | green red           |
| Number of LED's                        | 2                   |
| - green LED                            | Supply voltage      |
| - red LED                              | Error               |
| - yellow LED                           | switching condition |

### ATEX

|   |      |
|---|------|
| Explosion protection categories for gases | None |
| Explosion protected category for dusts    | None |

### Dimensions

|                          |    |
|--------------------------|----|
| Dimensions of the sensor |    |
| - Width of sensor        | 52 |
| - Height of sensor       | 30 |
| - Length of sensor       | 91 |

### Included in delivery

Actuators must be ordered separately.

### Ordering code

RSS16 (1)-(2)-(3)-(4)

|                |  |
|----------------|--|
| (1)            |  |
| <i>without</i> | Included in standard version Coding          |
| I1             | Individual coding                            |
| I2             | Individual coding, for multiple applications |
| (2)            |  |
| D              | with Diagnostic output                       |
| SD             | with serial diagnostic function              |
| (3)            |  |
| <i>without</i> | without latching                             |
| R              | with latching, Latching force 40 ... 60 N    |
| (4)            |  |
| ST8H           | with connector plug M12, centered            |

CC  
SK

with Cage clamps  
with Screw connection

## Documents

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**Operating instructions and Declaration of conformity (de)** 1 MB, 28.05.2018

Code: mrl\_rss16\_de

**Operating instructions and Declaration of conformity (es)** 1 MB, 06.06.2018

Code: mrl\_rss16\_es

**Operating instructions and Declaration of conformity (pl)** 1 MB, 24.06.2016

Code: mrl\_rss16\_pl

**Operating instructions and Declaration of conformity (en)** 1 MB, 28.05.2018

Code: mrl\_rss16\_en

**Operating instructions and Declaration of conformity (fr)** 1 MB, 13.07.2018

Code: mrl\_rss16\_fr

**Operating instructions and Declaration of conformity (jp)** 1 MB, 15.03.2017

Code: mrl\_rss16\_jp

**Operating instructions and Declaration of conformity (it)** 1 MB, 19.04.2016

Code: mrl\_rss16\_it

**Brochure (de)** 6 MB, 15.02.2018

Code: b\_css\_brosch09\_de

**Brochure (en)** 6 MB, 15.02.2018

Code: b\_css\_brosch09\_en

**Brochure (en)** 3 MB, 19.02.2015

Code: b\_rss16p01\_en

**Brochure (fr)** 3 MB, 19.02.2015

Code: b\_rss16p01\_fr

**Brochure (nl)** 336 kB, 19.02.2015

Code: b\_rss16p01\_nl

**Brochure (it)** 3 MB, 19.02.2015

Code: b\_rss16p01\_it

**Brochure (cs)** 353 kB, 13.03.2015

Code: b\_rss16p01\_cs

**Brochure (es)** 3 MB, 15.12.2014

Code: b\_rss16p01\_es

**Brochure (pt)** 3 MB, 19.02.2015

Code: b\_rss16p01\_pt

**Brochure (de)** 3 MB, 19.02.2015

Code: b\_rss16p01\_de

**TÜV certification** (de, en) 657 kB, 03.07.2018

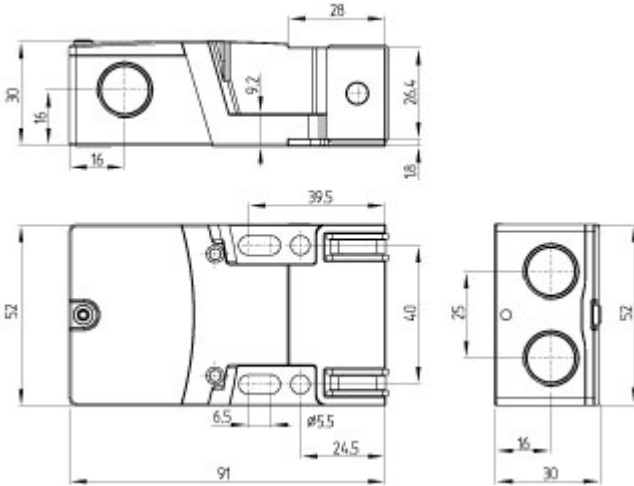
Code: z\_rssp03

**EAC certification** (ru) 747 kB, 05.10.2015

Code: q\_6396p17\_ru

## Images

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Dimensional drawing (basic component)

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## System components

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### Actuator



#### 103004336 - RST16-1

- Frontal actuation from assembly direction
  - Flat design
  - Mounting 2 x M5
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The data and values have been checked thoroughly. Technical modifications and errors excepted.

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