

## Datasheet - RSS16-SD-R-ST8H

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
- 1 x connector plug M12, 8-pole
- Series-wiring up to 31 components
- with latching

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

### Ordering details

Product type description	RSS16-SD-R-ST8H
Article number	103004369
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 levels according to ISO 14119	low
Coding	Universal coding
Materials	
- Material of the active surface	Plastic, glass-fibre reinforced thermoplastic
- Material of the housings	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
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	up to 31 components
Recommended actuator	RST16-1-R

## Mechanical data

Design of electrical connection	Connector M12, 8-pole
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	5
Ensured switch distance OFF	30
hysteresis	2 mm
Repeat accuracy R	< 0,5 mm
notice	For the versions with latching, the max. height misalignment (X) amounts to ± 2 mm and the axial misalignment (Y) to max. ± 2 mm. see drawing: Operating principle
	Minimum distance between two safety sensors 250 mm
restistance to shock	30 / 11
Resistance to vibration	-
Latching (Y/N)	Yes
Latching force	lateral: 60 above or bottom: 40
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, IP66, 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 / 0,25 A DC-13: 24 V / 0,25 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 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

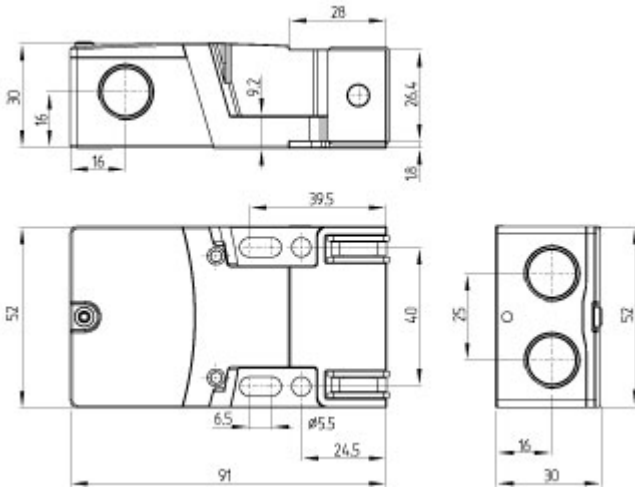
Code: z\_rssp03

**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



#### 103004337 - RST16-1-R

- Frontal actuation from assembly direction
  - Flat design
  - with latching magnet
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The data and values have been checked thoroughly. Technical modifications and errors excepted.

Generiert am 18.09.2018 - 07:41:21h Kasbase 3.3.0.F.64I