Datasheet - RSS16-D-SK

Safety sensors / RSS16

SCHMERSAL

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

- 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

Ordering details

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

Approval

Approval	TÜV cULus EAC

Classification

Standards	EN ISO 13849-1, IEC 61508, IEC 60947-5-3, EN 62061
PL	bis e
Control category	bis 4
PFH	6.3×10^{-11}/h
SIL	3
Mission time	20 Years

Global Properties

Permanent light	RSS16
Standards	IEC 60947-5-3
Compliance with the Directives (Y/N) CE	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. see drawing: Operating principle Minimum distance between two safety sensors 250 mm
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)

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

Electrical data

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

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

Electrical data - Safety outputs

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 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
	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)
without	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)
without	without latching
R	with latching, Latching force 40 … 60 N

(4)
ST8H	with connector plug M12, centered

| **CC** | with Cage clamps |
| **SK** | with Screw connection |

Documents

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, 21.11.2018
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 (cn) 1 MB, 23.11.2018
Code: mrl_rss16_cn

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

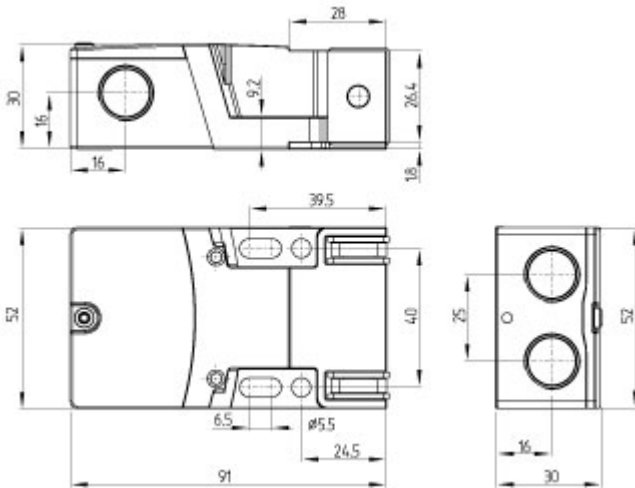**Brochure** (de) 3 MB, 19.02.2015
Code: b_rss16p01_de

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

Dimensional drawing (basic component)

System components

Actuator

103004336 - RST16-1

• Frontal actuation from assembly direction
• Flat design
• Mounting 2 x M5