

Datasheet - RSS16-D-ST8H

Safety sensors / RSS16



- Thermoplastic enclosure
-
- 3 different directions of actuation
- Door stop with magnetic latching
- Connection terminal or plug connection
- Suitable for series-wiring
- 1 x connector plug M12, 8-pole
- Series-wiring
- Included in standard version Coding
- without latching

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

Ordering details

Product type description	RSS16-D-ST8H
Article number	103004370
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	$6.3 \times 10^{-11}/h$
SIL	3
Mission time	20 Years

Global Properties

Product name	RSS16
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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	max. 200 m
Mounting	2 x M5, Cylinder head screw
Active principle	RFID
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
Coding	Included in standard version
Diagnostic output (Y/N)	Yes
Reaction time	≤ 100 ms
Duration of risk	≤ 200 ms
Time to readiness	≤ 2 s
Cascadable (Y/N)	Yes
Series-wiring	
Recommended actuator	RST16-1, RST-U-2

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 S_n	15 mm
Ensured switch distance ON S_{ao}	12 mm
Ensured switch distance OFF S_{ar}	30 mm
hysteresis	max. 2 mm
Repeat accuracy R_R	< 0,5 mm
notice	see drawing: Operating principle
restistance to shock	Minimum distance between two safety sensors 250 mm
Resistance to vibration	30 g / 11 ms
Latching (Y/N)	-
Latching force	No
Tightening torque for nuts	-
	2 Nm

Ambient conditions

Ambient temperature	
- Min. environmental temperature	-25 °C
- Max. environmental temperature	+70 °C
Storage and transport temperature	
- Min. Storage and transport temperature	-25 °C
- Max. Storage and transport temperature	+85 °C
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 U_{imp}	0,8 kV
- 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 Hz
Rated insulation voltage U_i	32 VDC
Rated operating voltage U_e (stabilised PELV)	
- Min. Rated operating voltage	20.4 VDC
- Max. Rated operating voltage	26.4 VDC
Operating current I_e	2.1 A
No-load current I_0	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 U_e	24 VDC -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 piece
Voltage drop U_d	< 1 V
Max. output current at secured output	1 A
Rated operating voltage	min. ($U_e - 1$ V)
Residual current I_r	≤ 0,5 mA
Operating current I_e	max. 1 A
Minimum operating current I_m	0,5 mA
- 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

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 piece
Voltage drop U_d	< 2 V

Rated operating voltage U _e	min. (U _e – 2 V)
Operating current I _e	max. 0,05 A
Utilisation category	DC-12: 24 V / 0,05 A DC-13: 24 V / 0,05 A
Wiring capacitance for serial diagnostics	50 nF

LED switching conditions display

LED switching conditions display (Y/N)	Yes
Multi-coloured LED	green red
Number of LED's	2 piece
- green LED	Supply voltage
- red LED	Error piece
- 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 mm
- Height of sensor	30 mm
- Length of sensor	91 mm

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	with Cage clamps
SK	with Screw connection

Documents

Operating instructions and Declaration of conformity (de) 1 MB, 11.09.2014

Code: mrl_rss16_de

Operating instructions and Declaration of conformity (es) 1 MB, 25.09.2014

Code: mrl_rss16_es

Operating instructions and Declaration of conformity (pl) 1 MB, 15.10.2014

Code: mrl_rss16_pl

Operating instructions and Declaration of conformity (en) 1 MB, 11.09.2014

Code: mrl_rss16_en

Operating instructions and Declaration of conformity (fr) 1 MB, 03.12.2014

Code: mrl_rss16_fr

Operating instructions and Declaration of conformity (it) 1 MB, 08.10.2014

Code: mrl_rss16_it

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

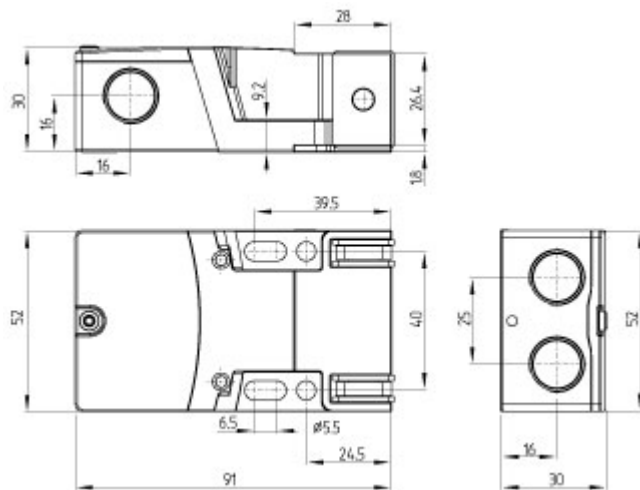
Brochure (de) 3 MB, 19.02.2015

Code: b_rss16p01_de

TÜV certification (de, en) 1 MB, 27.01.2015

Code: z_rssp03

Images



Dimensional drawing (basic component)

System components

Actuator

103004336 - RST16-1

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- 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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