DATASHEET

SCHMERSAL
THE DNA OF SAFETY

RSS16-D-R-SK

- Universal coding with RFID technology
- Screw connection
- Series-wiring unlimited
- with latching
- 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
- Repeated individual coding with RFID technology

Data

Approvals - Standards

Certificates	cULus
	TÜV
	IC
	FCC
	ANATEL

General data

Standards	EN IEC 60947-5-3
Coding	Universal coding
Coding level according to EN ISO 14119	Low
Working principle	RFID
Housing construction form	Block
Installation conditions (mechanical)	not flush
Sensor topology	Sensor for series wiring
Housing material	Plastic, glass-fibre reinforced thermoplastic, self-extinguishing
Active area	Glass-fibre, reinforced thermoplastic
Reaction time, maximum	100 ms

General data

Duration of risk, maximum	200 ms
Gross weight	200 g

General data - Features

Latching magnet	Yes
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	2
Number of semi-conductor outputs with signaling function	1
Number of fail-safe digital outputs	2

Safety classification

Standards	EN IEC 61508
	EN ISO 13849-1
Performance Level, up to	e
Category	4
PFH value	6.30×10^{-11} /h
PFD value	1.50×10^{-5}
Safety Integrity Level (SIL), suitable for applications in	3
Mission time	20 Year(s)

Mechanical data

Actuating panels	from head
	front side
	rear
Active area	front side
	cover-side
	lateral

Mechanical data

Mounting	2 x M5, Cylinder head screw
Tightening torque of the fixing screws	2 Nm

Mechanical data - Switching distances

Switch distance, typical	15 mm
Assured switching distance "ON" Sao	5 mm
Assured switching distance "OFF" Sar	30 mm
Note (switching distance)	All switching distances in accordance EN IEC 60947-5-3
Hysteresis (Switching distance), maximum	2 mm
Repeat accuracy R	0.5 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
Cable entry	4 x M16 x 1,5
Termination	Screw terminals
Cable section, minimum	0.14 mm^2
Cable section, maximum	1.5 mm^2

Mechanical data - Dimensions

Length of sensor	91 mm
Width of sensor	52 mm
Height of sensor	30 mm

Ambient conditions

IP Degree of protection	IP67
	IP65
Ambient temperature	-28 ... +70 °C
Storage and transport temperature	-28 ... +85 °C
Relative humidity, maximum	93 %
Note (Relative humidity)	non-condensing
	non-icing
Restistance to shock	30 g / 11 ms

Ambient conditions

Permissible installation altitude above sea level, maximum	2,000 m

Ambient conditions - Insulation values

Rated insulation voltage Ui	32 VDC
Rated impulse withstand voltage Uimp	0.8 kV
Overvoltage category	III
Degree of pollution	3

Electrical data

Operating voltage	24 VDC -15 % / +10 %
Operating current, minimum	0.5 mA
No-load supply current I0, typical	100 mA
Rated operating voltage	24 VDC
Operating current	2,100 mA
Required rated short-circuit current	100 A
Time to readiness, maximum	2,000 ms
Switching frequency, maximum	1 Hz

Electrical data - Safety digital inputs

Current consumption of the safety inputs	5 mA

Electrical data - Safety digital outputs

Rated operating current (safety outputs)	1,000 mA
Output current, (fail-safe output), maximum	1 A
Design of control elements	p-type
Voltage drop Ud, maximum	1 V
Leakage current Ir, maximum	0.5 mA
Voltage, Utilisation category DC-12	24 VDC
Current, Utilisation category DC-12	1 A
Voltage, Utilisation category DC-13	24 VDC
Current, Utilisation category DC-13	1 A

Electrical data - Diagnostic outputs

Operating current	50 mA

Electrical data - Diagnostic outputs

Design of control elements	p-type
Voltage drop Ud, 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

Status indication

Note (LED switching conditions display)	LED green: Supply voltage
	Multi-coloured LED: Green, Red
	LED red: Fault
	LED yellow: Operating condition

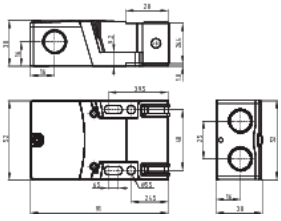
Pictures

Product picture (catalogue individual photo)

ID: krss1f01

| 1.01 MB | .jpg | 1000 x 2040 Pixel
| 39.31 KB | .jpg | 171 x 350 Pixel
| 138.8 KB | .png | 210 x 428 Pixel

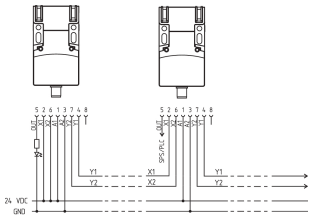
Dimensional drawing basic component



ID: krss1g01

| 141.14 KB | .jpg | 1000 x 762 Pixel
| 4.73 KB | .png | 210 x 160 Pixel

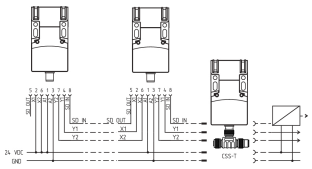
Wiring example



ID: krss1l02

| 101.19 KB | .jpg | 1000 x 701 Pixel

Wiring example



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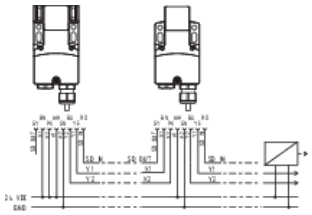
| 112.09 KB | .jpg | 1000 x 520 Pixel

Wiring example

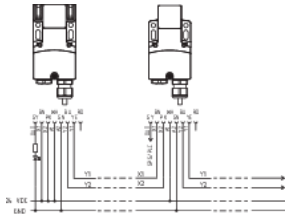


ID: krss1l05

| 120.86 KB | .jpg | 1000 x 687 Pixel

| 3.92 KB | .png | 210 x 144 Pixel

Wiring example



ID: krss1lx2

| 117.71 KB | .jpg | 1000 x 757 Pixel

| 3.85 KB | .png | 210 x 159 Pixel