

RFID Safety sensor RSS 16

The next generation of safety technology



SCHMERSAL
Safe solutions for your industry



Innovative technology in a proven construction

The new RFID safety sensor RSS 16 is based on the design of the AZ 16: A Schmersal classic, that is rightly regarded today as a symbol for a safe and economical solution in the field of personal protection on equipment.

This versatile construction is now available as a non-contact system with wear-free RFID technology for the most demanding requirements of safety level and protection against manipulation.


The advantages at a glance:

- Encoding level "high" according to ISO 14119 with an individual RFID code
- Three encoding options for demand-protection against manipulation
- 3 actuating directions
- Door stop with magnetic latching function
- Connection terminal or plug connection
- Suitable for applications
 - up to PL e / category 4 to EN ISO 13849-1
 - and SIL 3 to IEC 61508

From the model AZ 16, the universal three-sided actuation was adopted, which allows the the RSS 16 to be quite versatile and can be mounted in different situations. The non-contact operating principle allows a high tolerance for misaligned doors and in addition to the purely mechanical solution enables an actuation direction to the side of the sensor surface.

The robust construction of the RSS 16, in the version with the magnetic latching that has an integrated damping element allows it to be used as a door stop with latching forces up to 60 N.

Installation benefits also offer the connectivity options built-in plug or terminal connection area with four connection openings, combined here for the first time with the Schmersal RFID technology. This allows the cable routing to be accurately assembled in a series circuit and adapted to the individual machine geometry.

Technical data	
Standards	IEC 60947-5-3; IEC 61508; IEC 62061, ISO 13849-1
Switching distance	15 mm
Housing material	thermoplastic
Magnetic latching	60 N frontal / lateral 40 N latching force, anchor plate and pole plates made of stainless steel 1.4016
Serial diagnostic	Yes, for max. 31 components
Number of inputs	2
Number of outputs	2 x OSSD, 1 x Diagnostic
Electrical characteristics	
Operating voltage	24 VDC (PELV)
Power consumption	max. 2.1 A
Max. switching capacity U/I	24 VDC / 1 A
Mechanical data	
Connection	Connector plug M12, cage clamps, screw terminals
Ambient conditions	
Ambient temperature	-25 °C ... +70 °C
Protection class	IP65 / IP67
Dimensions H x W x D	91 x 52 x 30 mm
Safety classification	
Performance level	PL e
SIL	3
Approvals	TUV 

Ordering code

RSS16^{①-②-③-④}

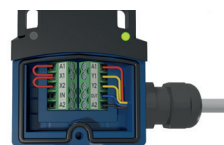
No.	Option	Description
①	I1	Standard coding
	I2	Individual coding
	I2	Individual coding, re-teaching enabled
②	D	With diagnostic output
	SD	With serial diagnostic function
③		Without latching
	R	With latching, latching force 40 ... 60 N
④	ST8H	With connector plug M12 in the middle
	CC	With cage clamps
	SK	With screw terminals

Actuator

RST16-1	Without latching
RST16-1-R	With latching, latching force 40 ... 60 N

Wiring possibilities

Single connection



Series-wiring



RSS16 with typical installation situations



Front actuation

Plexiglas door: no interfering contour due to flat actuator



Ground actuation

With dampened door stop and 40 N magnetic latching



Actuation from side

Sliding door: Approach possible from all sides



The Schmersal Group

For many years the privately owned Schmersal Group has been developing and manufacturing products to enhance occupational safety. What started out with the development and manufacture of a very wide variety of mechanical and non-contact switchgear has now become the world's largest range of safety systems and solutions for the protection of man and machine. Over 1,600 employees in more than 50 countries around the world are developing safety technology solutions in close cooperation with our customers, thus contributing to a safer world.

Motivated by the vision of a safe working environment, the Schmersal Group's engineers are constantly working on the development of new devices and systems for every imaginable application and requirement of the different industries. New safety concepts require new solutions and it is necessary to integrate new detection principles and to discover new paths for the transmission and evaluation of the information provided by these principles. Furthermore, the set of ever more complex standards, regulations and directives relating to machinery safety also requires a change in thinking from the manufacturers and users of machines.

These are the challenges which the Schmersal Group, in partnership with machinery manufacturers, is tackling and will continue to tackle in the future.

Product ranges



Safe switching and monitoring

- Guard door monitoring safety switches
- Command devices with safety function
- Tactile safety devices
- Optoelectronic safety devices

Safe signal processing

- Safety monitoring modules
- Safety controllers
- Safety bus systems

Automation

- Position detection
- Command and signalling devices

Industries



- Elevators and escalators
- Packaging
- Food
- Machine tools
- Heavy industry

Services



- Application advice
- CE conformity assessment
- Risk assessment in accordance with the Machinery Directive
- Stop time measurements
- Training courses

Competences



- Machine safety
- Automation
- Explosion protection
- Hygienic design

Precautions have been taken to assure accuracy of the information in this catalogue. Typographic or pictorial errors that are brought to our attention will be corrected in subsequent issues.

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