

# SCHMERSAL Tech Briefs: RSS16 RFID Electronic Safety Sensor



## Overview

The RSS16 incorporates the RFID based safety sensor in a body type which matches our popular AZ16 electro-mechanical keyed interlock switch and BNS16 coded magnet sensor.

The RSS16 uses radio frequency identification (RFID) to detect the actuator and indicate a closed guard. This non-contact operating principle limits wear on components and tolerates misalignments.

Optional individual coding makes it difficult to bypass the RSS16: The basic version of the sensor responds to any RSS16 target actuator; The "I1" version only accepts the coded ID number of the specific target actuator which is taught in during the first start-up; The "I2" version allows the teach-in process to be repeated, allowing replacement of a lost or damaged actuator.

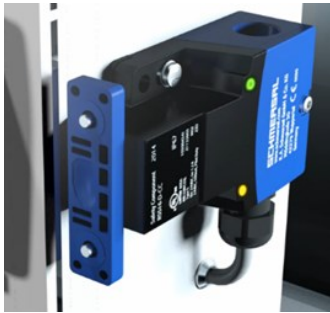
The RSS16 also features all of the diagnostic advantages of our electronic safety sensors. With continuous internal function tests and monitoring of the safety outputs, RSS16 sensors can be wired in series without detriment to the safety level. The RSS16 comes standard with diagnostic LED's on the front of the sensor housing to indicate various errors, such as mis-alignment, and door open/closed signaling. For more advanced diagnostic indication the RSS 16-SD (serial diagnostic) version is available.

There are several wiring options for the RSS16. It is available with a prewired M12 quick connector from the bottom. The screw terminal or cage clamp versions have 4 conduit openings, to allow for mounting flexibility.

The RSS16 sensors meet stringent North American and European Standards, are cULus and CE approved, and can be used in the highest level of machine safety circuits, PLe to ISO13849-1 and SIL 3 to IEC61508.

## Features

### Mounting options



Mounting actuator to Plexiglas door



Sliding guard, approach from side



Magnetic latching option

## Magnetic latching version

The RSS16 is available in a magnetic latching version with special actuator. The sensor has two magnets integrated into the sensor head.

The special actuator (RST-1-R) is an assembly of a mounting plate and stainless steel anchor plates with integrated elastomer damping elements. This allows the magnetic latching version of the RSS16 to be used as a door stop for small to medium sized guard doors.

When actuated from front (label side) or back the latching force is approx. 9 lbs (40 N). Latching force for the top side is approx. 13 lbs (60 N).

Requires "R" versions of both switch and actuator.



## Applications

- Material handling systems
- Packaging machinery
- Chemical processing equipment
- Robot cells
- Folding or brake presses
- Filter presses
- Punching machines
- Printing machines
- Injection molding
- Palletizers
- Packaging equipment

## Available Literature



RSS16 Brochure  
4 pages

## Ordering Details

### RSS16①-②-③-④

- ① Actuator Coding
  - blank Standard version
  - I1 Individual coding (single)
  - I2 Individual coding (multiple)
- ② Outputs
  - D Diagnostic output
  - SD Serial Diagnostic
- ③ Magnetic Latching
  - blank no latching
  - R with magnetic latching
- ④ Wiring connections
  - ST8H M12 connector, bottom
  - CC Cage Clamp terminals
  - SK Screw terminals

Regularly stocked:

<b>RSS16-D-ST8H</b>	<b>RSS16-D-R-ST8H</b>
<b>RSS16-D-SK</b>	<b>RSS16-D-R-SK</b>
<b>RSS16-I2-D-ST8H</b>	<b>RSS16-I2-D-R-ST8H</b>
<b>RSS16-SD-ST8H</b>	<b>RSS16-SD-R-ST8H</b>

## Accessories

### Actuator

<b>RST16-1</b>	Standard Actuator
<b>RST16-1-R</b>	Actuator with latching

### Connector cables

<b>A-K8P-M12-S-G-2.5M-BK-1-X-A-2</b>	IP67 cable, 2.5 meter length
<b>A-K8P-M12-S-G-5M-BK-1-X-A-2</b>	IP67 cable, 5 meter length
<b>A-K8P-M12-S-G-10M-BK-1-X-A-2</b>	IP67 cable, 10 meter length

### Compatible Safety Controllers

<b>SRB-301MA</b>	<b>SRB-301MC</b>
<b>SRB-301ST-24</b>	<b>SRB-301LCB</b>
<b>SRB-504ST</b>	<b>SRB-211ST</b>
<b>SRB-324ST</b>	<b>SRB-031MC</b>

### SD Interface Gateways

<b>SD-I-DP-V0-2</b>	PROFIBUS Gateway
<b>SD-I-U</b>	Universal gateway
<b>CSS-Y-8P</b>	Series wiring Y adapter
<b>CSS-Y-A-8P</b>	Series ender

*Bold part numbers are regularly stocked*

## Contact

### Schmersal USA

660 White Plains Road  
Suite 160  
Tarrytown, NY 10591  
Tel: 914-347-4775  
Fax: 914-347-1567  
E-mail: salesusa@schmersal.com

### Schmersal Canada

15 Regan Road  
Unit #3  
Brampton, ON L7A 1E3  
Tel: 950-495-7540  
Fax: 905-495-7543  
E-Mail: salescanada@schmersal.com