

Safety. Detection. Control.



Magnus RFID

Your choice for securing moving guards

PL e, SIL 3 RFID Safety Sensors



Magnus RFID: next generation sensors for machine safety

The best in cost-effectiveness

Wear-free technology allows for longer product life time.

Status LED and diagnostic output.

Smallest design of RFID safety sensors.

Full mechanical compatibility with Magnus MG S and MG B.

Can be used as stand-alone.

The best in safety

Tampering protection in accordance with DIN EN 14119, the highest in its class.

Screw covers prevent easy removal.

Series connection up to PL e/SIL 3.

IP67 and IP6K9K protection grade for use in harsh environments.

Complies with the strict hygiene and cleaning requirements of the food and packaging industry.

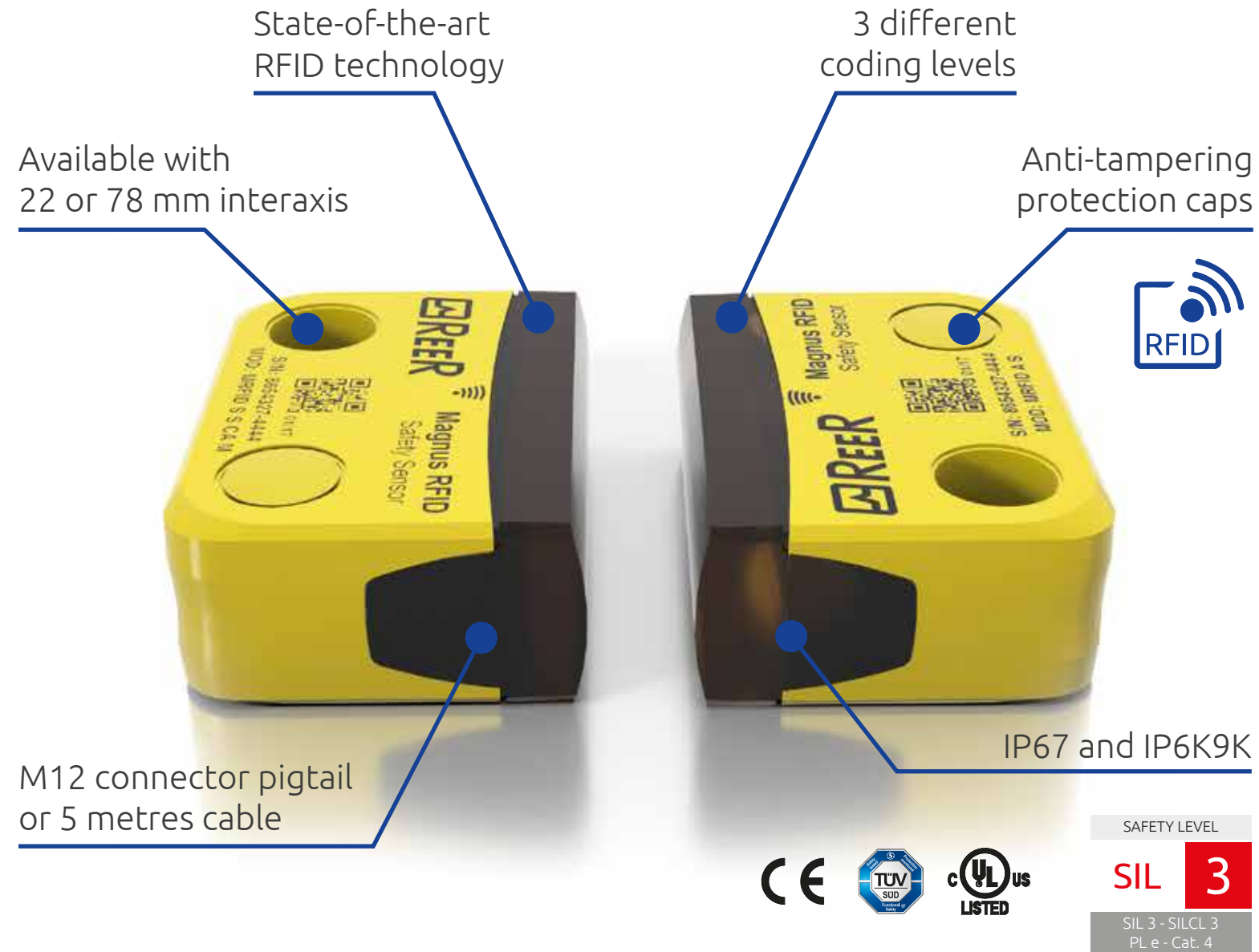
The best in versatility

Dual mounting options.

M12 connector or cable.

3 different coding levels.

Extension cables for series connection.



Magnus RFID – next generation

The application of Magnus RFID sensors can be extremely wide thanks to the compact and versatile design.

The different design and technology options as well as the complete mechanical compatibility with the Magnus MG magnetic sensors series, make this product extremely valuable for users.

The RFID technology enables Magnus RFID sensors to be individually coded in three different ways to allow the appropriate tampering protection in all applications. The highest configurations allow each sensor to be paired with one only assigned actuator.

The RFID technology used allows to reach safety levels up to PL e/SIL 3 also when connecting the sensors in series.

As a result, Magnus RFID sensors can be simply integrated in existing safety scenarios, offering a cost-effective solution for modifying and upgrading machines.

Typical applications

Magnus RFID is the ideal choice for many industrial applications, including ...

... food & beverage, packaging, pharmaceuticals, printing, paper, logistics, renewable energies, chemicals, injection moulding and many more ...

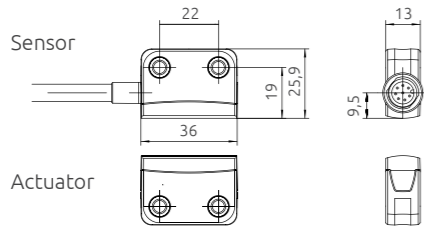


Outstanding technical specifications

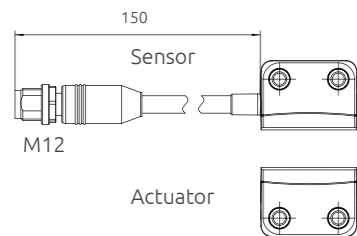
Technical drawings

S series

Cable



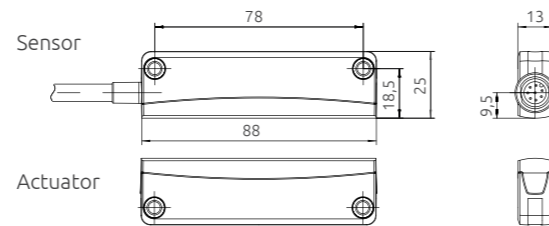
M12 connector



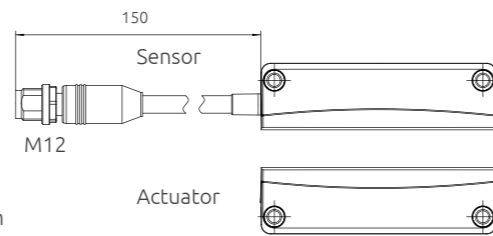
All measures in mm

B series

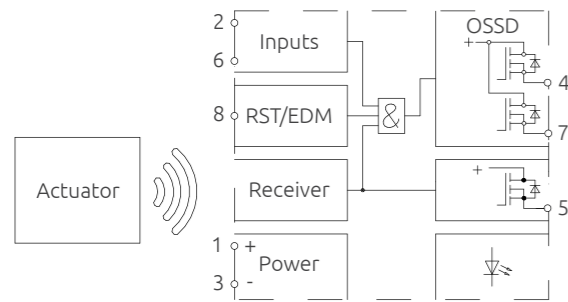
Cable



M12 connector

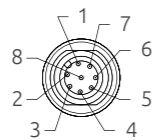


Circuit diagram



Pin-out

| Pin | Function |
|-----|-------------------|
| 1 | VDC |
| 2 | Safety input 1 |
| 3 | GND |
| 4 | Safety output 1 |
| 5 | Diagnostic output |
| 6 | Safety input 2 |
| 7 | Safety output 2 |
| 8 | RST/EDM input |

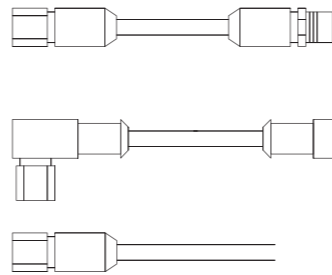


Accessories

Extension cables

Type

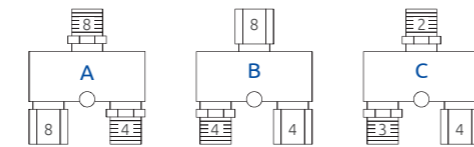
- S** Male - Female M12 connector (straight)
Length: 1, 3, 5, 10 m
Poles: 4 or 8
- L** Male - Female M12 connector (90°)
Length: 1, 3, 5, 10 m
Poles: 4
- C** Female M12 connector
Length: 1, 3, 5, 10 m
Poles/wires: 4 or 8



Connectors

Type

- Type A** To gain status output from the connected sensor
- Type B** For series connections of 2 or more sensors
- Type C** To introduce additional power supplies in long series



Ordering information

Sensor + Actuator Combo¹

- M RFID C** **S I A 5**
- S** 22 mm interaxis
 - B** 78 mm interaxis
 - M** M12 Connector
 - 5** 5 m cable
 - A** Automatic EDM input
 - I** Individual coding
 - U** Unique coding
 - C** Actuator coded

Extension cables (for series connection)

- M RFID EC** **S 4 3**
- S** Male - Female M12 connector (straight)
 - L** Male - Female M12 connector (90°)²
 - C** Female M12 connector cable
 - 1** 1 m cable
 - 3** 3 m cable
 - 5** 5 m cable
 - 10** 10 m cable
 - 4** 4 poles connector / 4 wires cable
 - 8** 8 poles connector / 8 wires cable

T Connectors (for series connection)

- M RFID TC** **A**
- A** M12 Type A
 - B** M12 Type B
 - C** M12 Type C

Accessories

- M RFID SP** Spacers available for S or B series (recommended for mounting on metal surfaces)
- M RFID TP** Termination plug (to close the last Type B connector in series connections of 2 or more sensors)

Notes

- Each Combo set is provided with a Sensor and the corresponding Actuator. Sensors and Actuators can be also ordered separately, please enquire within
- 2 4-pole version available only

Technical data

| Electrical specifications | S series | B series |
|--------------------------------------|---|------------|
| Supply voltage | 24 VDC ± 10% | |
| Max. switching voltage | Supply voltage ± 0,2 V | |
| Switching current safety output | Max. 400 mA | |
| Switching current control output | Max. 50 mA | |
| Contact form | OSSD | |
| Switching frequency | 3 Hz | |
| Transition time | Input-Output: 3 ms / Sensor-Actuator: 75 ms | |
| No. of safety outputs electronic | 2 | |
| No. of diagnostic outputs electronic | 1 | |
| Number of safety inputs | 2 | |
| EDM input | Yes | |
| Start button | Yes | |
| Functional category | DC-12 / DC-13 | |
| Assured switching distance | 8 mm | |
| Safe distance for switching off | 18 mm | |
| Minimum air-gap | 0,5 mm | |
| Misalignment actuator | Max. 8 mm | |
| Reverse polarity protection | Yes | |
| Short-circuit proof outputs | Yes | |
| Current consumption per input | 2,75 mA | |
| Indication LED | Three-colour | |
| Operating direction | Any direction | |
| Switching principle | Electronic | |
| Repeating accuracy (R) | < 0,5 mm | |
| Hysteresis | 2 mm | |
| Series connection | Max. 30 sensors | |
| Technology | RFID | |
| Possible actuators | M RFID A S | M RFID A B |

Environmental features

| | | |
|-----------------------|---|--|
| Protection class | IP67 (all models) / IP6K9K (only models with cable) | |
| Operating temperature | - 25 ... 70° C | |
| Shock resistance | 30 g / 11 ms | |
| Vibration resistance | 10 ... 55 Hz, amplitude 1 mm | |

Mechanical data

| | | |
|-------------------------------------|-------------------------------|-----------------|
| Housing material | PBT / PC | |
| Housing | Rectangular | |
| Connector type | Pigtail M12 / 8-pole / 150 mm | |
| Cable | 5 m PVC / 8 wires | |
| Cross-section of wire | 0,25 mm ² | |
| Temp. range cable | - 25 ... 80° C | |
| Dimensions (height x width x depth) | 26 x 36 x 13 mm | 26 x 88 x 13 mm |
| Mounting type | M4 screws (countersunk) | |

Approvals

| | |
|--------------|-----|
| CE | Yes |
| UL | Yes |
| SGL (Ecolab) | Yes |
| PL | e |
| SIL | 3 |
| SIL CL | 3 |
| Category | 4 |

next generation RFID safety sensor

www.reersafety.com

Quality, reliability and an extensive range to fit all applications

Cost-effective and reliable solutions

Multiple options of actuation technology



Individual coding

The actuator is programmed via teach-in and permanently assigned to the sensor during set-up (the process can be repeated if necessary).

Unique coding

The actuator is permanently assigned to the sensor during manufacturing (it cannot be replaced with another actuator).

Actuator coded

The actuator is free and not specifically assigned to the sensor (one actuator can work with multiple sensors).

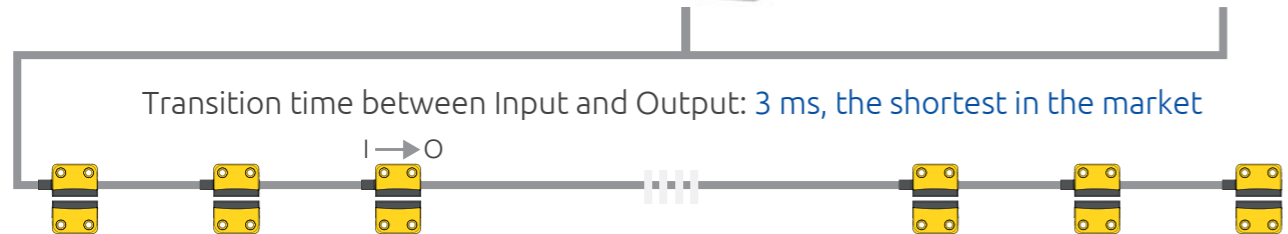
Series connection with maximum safety

Up to **PL e**
Performance Level
according to
EN ISO 13849-1

Reliable evaluation,
e.g. with the modular
safety controller Mosaic ...



... or with the AD SR1
configurable
safety control unit



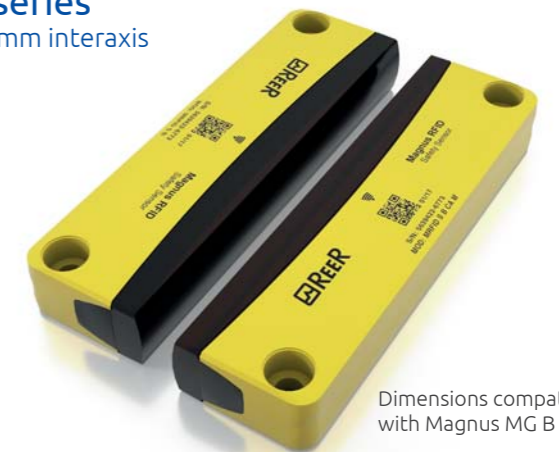
2 series ideal for all applications

S series
22 mm interaxis



Dimensions compatible
with Magnus MG S series

B series
78 mm interaxis



Dimensions compatible
with Magnus MG B series

Ideal also in the most demanding applications

Unique mechanical characteristics allow protection against cleaning agents and washdown processes, a typical requirement of the food industry.



Resistant to aggressive
elements, e.g. cleaning agents
used in the food industry.



Waterproof housing
compliant with **IP67**
and **IP6K9K** requirements
(SGL according to Ecolab
standards).

Connectivity

Cable or M12 Connector

Magnus RFID satisfies all requirements with regards to connectivity. Cables and connectors approved for the food industry complete the range of sensors.



Magnus RFID

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More than 50 years of quality and innovation

Founded in Turin, Italy in 1959, ReeR distinguished itself for its strong commitment to innovation and technology.

A steady growth throughout the years allowed ReeR to become a point of reference in the safety automation industry at a worldwide level.

The Safety Division is in fact today a world leader in the development and manufacturing of safety optoelectronic sensors and controllers.

ReeR is ISO 9001, ISO 14001 and BS OHSAS 18001 certified.



Rev. 1.2
January 2017
8946242
Printed in Italy

Brochure Magnus RFID English

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