



Your future's safe!



R.SAFE

RFID safety switches

Short form

R-Safe RFID Next generation



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

The best in cost-effectiveness

Contactless, wear-free RFID technology enables a longer life cycle of the product.

Status LEDs and diagnostic output allow the status of the sensors to be checked in real time.

R-Safe sensors can be used as stand-alone or in serial connection.

The best for series connections

The RFID technology used enables PL e/SIL 3 security level to be achieved even when sensors are connected in series.

Depending on the model, R-Safe RFID allows:

- the reading of the individual status of each sensor in the series (Pro model).
- the reading of the status of each sensor in series without having to individually wire the status output of each individual sensor (Plus model).

The best in safety

The RFID technology enables R-Safe RFID sensors to be coded in three different ways to allow the appropriate tampering protection in all applications.

The highest level of coding allow the sensors to be paired only with the assigned actuators.

Screw covers prevent tampering and eliminate the possibility of dirt deposits.

IP67 and IP69K protection grade (cable models only) for use in harsh environments.

The best in versatility

Three models: Basic, Pro and Plus with different operating modes according to needs.

Triple mounting options.

M12 connector, Pigtail with M12 connector or Cable.

Three different coding levels.

Extension cables for series connection.

R-Safe sensors can be easily integrated in existing safety scenarios, offering a cost effective solution for modifying and upgrading machines.

- 1 Highly visible status LED
- 2 RFID technology
- 3 Anti-tampering protection caps
- 4 3 different coding levels
- 5 IP67 and IP69K (models with cable)
- 6 Series connection with status information
- 7 M12 connector, Pigtail with M12 connector, 1, 3, 5 or 10 metres cable
- 8 22 mm interaxis



SAFETY LEVEL

SIL 3

SIL 3 - SILCL 3
PL e - Cat. 4



R-Safe RFID is the ideal choice for many industrial applications



Outstanding technical specifications

Three different coding levels

Generic coding

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

Teach-in coding (Plus model only)

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)



Three models for all application needs

Basic models (5-pole)

- Automatic restart

Pro models (8-pole)

- Automatic restart with or without EDM
- Digital inputs for series connection, through OSSD outputs
- Individual status signal for each sensor (not serialisable)

Plus models (8-pole)

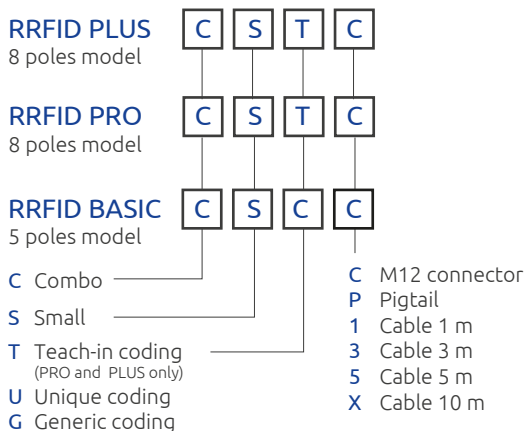
- Selectable Automatic/Manual restart with or without EDM
- Digital inputs for series connection, through OSSD outputs
- Serialisable status signal with individual status indication of each sensor



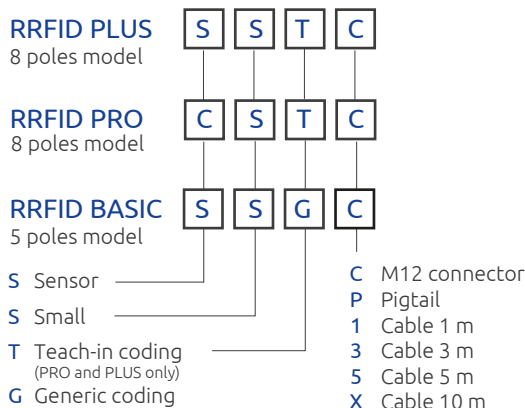
Technical characteristics

Ordering information

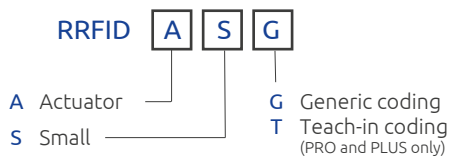
Combo¹ (Sensor + Actuator)



Sensor



Actuator



Cables

(For models with C and P connector)



Note 1

Each Combo set is provided with a Sensor and the corresponding Actuator. Sensors and Actuators can be also ordered separately.

Technical data

Electrical specifications

Supply voltage	24 VDC ± 20%
Power consumption	0,5 W
Switching current safety output	Max. 300 mA
Switching current status output	Max. 50 mA
Safety outputs	2 OSSD active high
Safety inputs	2 inputs active high
Status output	1 output active high
Restart	Monitored normally open Restart input in series with EDM

Operating characteristics

Assured release distance (Sar)	25 mm
Operating temperature	- 25 ... + 70 °C
Storage temperature	- 25 ... + 70 °C
Humidity	50% @ 70 °C ... 90% @ 20 °C
Protection class	IP65/IP67 (IP69K)
Shock resistance	30 g / 11 ms IEC 60068
Vibration resistance	10 ... 55 Hz, amplitude 1 mm
Switch-on delay	10s typical, 15s max.
Standalone Risk time Δ Rt	≤ 55 ms
Operating direction	Any direction
Switching principle	Electronic
Series connection	Max. 16 sensors
Technology	RFID

Mechanical data

Material	Polyketone (POK)
Housing	Rectangular
Connector type	M12 8 or 5 poles
Cable	PVC 8 or 5 wires
Cross-section of wire	0,25 mm ²
Temp. range cable	- 25 ... 80 °C
Dimensions (height x width x depth)	28,5 x 57 x 18 mm
Mounting type	M4 screws (countersunk)

Approvals and safety characteristics

PL	PL e	ISO 13849-1
Category	4	ISO 13849-1
PFHd	3,58E ⁻⁹	IEC 61508-1
SFF	90% ... 99%	IEC 61508-1
SIL	3	IEC 61508-1
SIL max.	3	EN 62061
Hardware fault tolerance	1	EN ISO 13849-1 / EN 62061
Duration (Mission time)	20 years	ISO 13849-1 / EN 62061
Low level coding	Yes - Generic	ISO 14119-1
High level coding	Yes - Teachin/Unique	ISO 14119-1



Mechanical adapter interaxis 22 / 78

(for installation of sensors with 22 mm spacing on supports that have 78 mm spacing holes).

22T078

Mechanical adapter 22/78

Quality, reliability and an extensive range

Series connection with maximum safety



- Up to 16 R-Safe sensors can be connected in series
- Splitter connectors to simplify and speed-up wiring
- Up to Performance level PL e
- Connection to Mosaic* or any PLC or safety interface

*M1S and M1S COM only

In Plus models, it is possible to serialise the status signal of each sensor.

The series status signal contains the individual status of each sensor of the series.

In Pro models it is possible to read the status signal of each sensor.

To use the status signal of a sensor connected in series, the CRY12 - A splitter is necessary.

Series connection accessories

Extension cables

(for series connection)

	CFM	5P	3	
5P	5-pole			2
8P	8-pole			3
				5
				10
				20

2 Cable 2 m
3 Cable 3 m
5 Cable 5 m
10 Cable 10 m
20 Cable 20 m

Splitter connectors

(for series connection of Plus models)

CRY12 - S1

For the connection of the last sensor of the series



CRY12 - S2

For the connection of the other sensors of the series



Termination connector

(for series connection Pro models)

CRY12 - TP

Termination plug

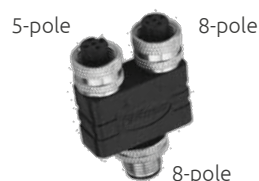


Splitter connectors

(for series connection of Pro models)

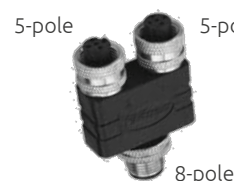
CRY12 - A

For the connection of the status signal of the sensor



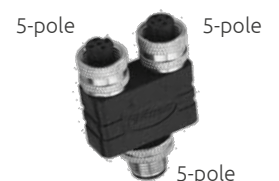
CRY12 - B

For the connection in series of the sensors

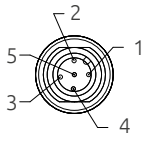


CRY12 - C

For the connection of additional power supply

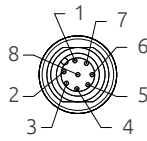


Pin-out



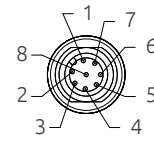
Basic models

Pin	Function
1	24 VDC
2	Safety output 1
3	0 VDC
4	Safety output 2
5	Status



Pro models

Pin	Function
1	24 VDC
2	OSSD input 1 for series connection
3	0 VDC
4	Safety output OSSD 1
5	Status
6	Input s OSSD 2 for series connection
7	Safety output OSSD 2
8	EDM Input



Plus models

Pin	Function
1	24 VDC
2	OSSD input 1 for series connection
3	0 VDC
4	Safety output OSSD 1
5	Status
6	Input s OSSD 2 for series connection
7	Safety output OSSD 2
8	EDM Input, Restart, Serial

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 **IP69K** requirements

Connectivity

M12 connector



Cable (1, 3, 5 or 10 mt)

Pigtail
(15 cm with M12 connector)

M12 connector, Pigtail with M12 connector, Cable

R-SAFE RFID satisfies all connection requirements. Cables and connectors approved for the food industry complete the range of sensors



Your future's safe!

More than 60 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 ISO 45001 certified.



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