

## Coded magnetic sensors SR series



# Coded magnetic sensors, SR series

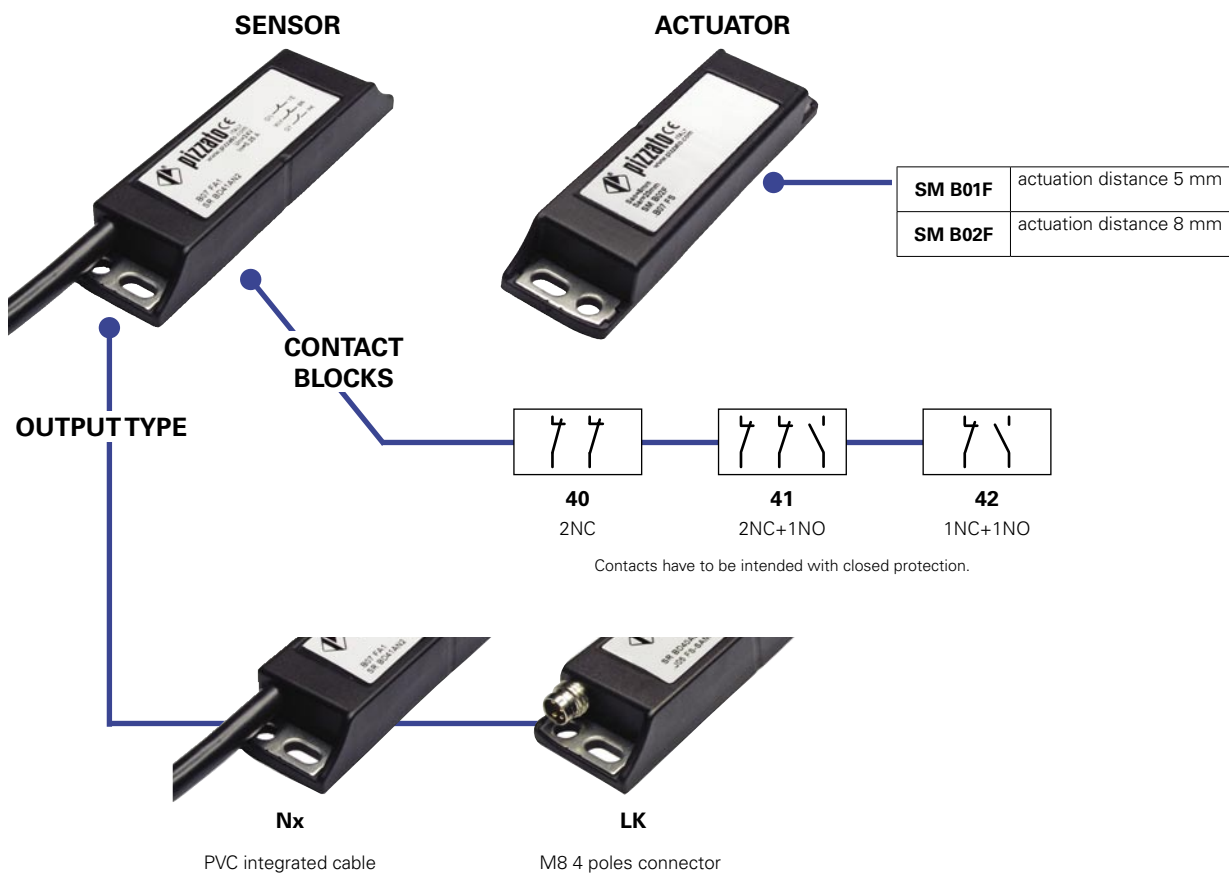
## Introduction

Coded magnetic sensors are devices studied to monitor protections and guards that, when linked to a safety module, can create a system up to safety category 4, according to EN 954-1. These products are composed by a magnetic field monitoring sensor, which is connected to the machine structure; and by a coded magnetic actuator, which has to be connected to the mobile guards. When sensor and actuator are neared (closed guard), the sensor recognizes the actuator and provides to actuate electric contacts. The sensor is manufactured in a way so to activate itself only in presence of the correct coded actuator and not through a common magnet.

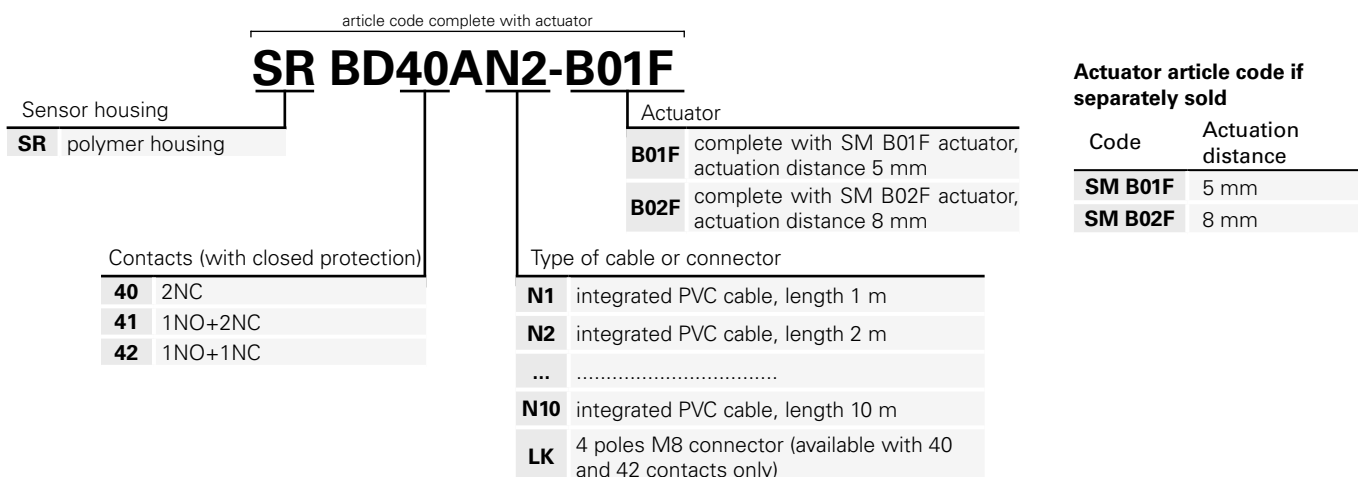
## Main data

- Polymer housing
- Long life, no mechanical wear
- Versions with M8 integrated connector
- Stainless steel fixing plates
- Output contacts: 2NC, 1NO+2NC or 1NO+1NC
- Insensitive to dirt
- Protection degree IP67
- Coded actuator

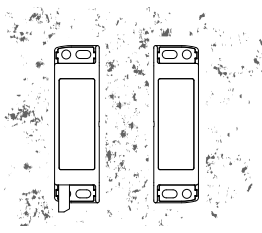
## Selection diagram



## Code structure



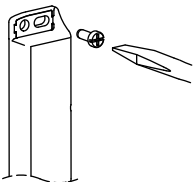
### Inensitivity to dirt



Magnetic sensors are totally sealed and maintain unchanged their safety characteristics also where dirt and dust are present (not ferromagnetic material).

This characteristic, joined with the shape without recesses, make them especially proper to the use in the agro-industrial sector.

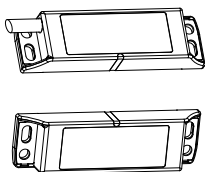
### Stainless steel fixing plates



In order to avoid that the fixing on no perfectly plane surfaces could damage the fixing slots, Pizzato Elettrica magnetic sensors are provided with stainless steel fixing plates.

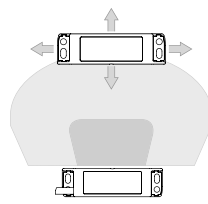
Also in presence of right fixing surfaces, this solution makes the sensor stronger to mechanical stresses and so the whole system becomes safer and more reliable.

### Alignment marks



Sensors and magnets are provided with marks on the housing, as reference for operating distances. For a correct working, you have to install sensor with facing marks (see figure).

### Wide actuation zone

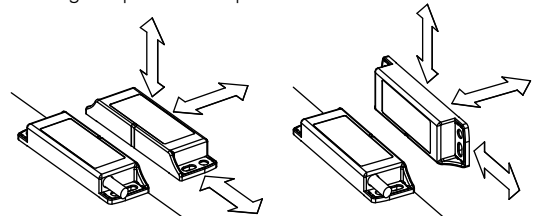


Because of their intrinsic characteristics, magnetic sensors have a wide actuation zone, which make them appreciated in the use of inaccurate protections or for protection that can change their mechanic characteristics through the time.

In this type of sensors actuation distances may change according to the actuator displacement direction from the sensor.

### Actuation from many directions

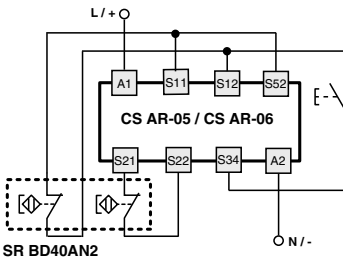
Pizzato Elettrica magnetic sensors have been designed in order to be activated by the related actuator from many directions. In this way, the customer has the max flexibility about the placing of the devices along the protections perimeters.



### Coded magnetic sensors used for safety applications

A coded magnetic sensor alone can not be used for safety functions because its working modalities are not considered safe by the standards (as are, for example, the positive opening on mechanical switches). For this reason a coded magnetic sensor, in order to be used in safety applications, has to be compulsory connected to a proper safety module which monitors its right working.

### Complete safety system

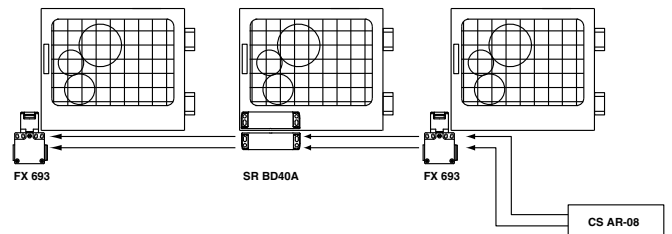


These magnetic sensors have been checked and tested for the working with proper Pizzato Elettrica safety modules. Using completed and tested solutions, the customer has the certainty to have no electric incompatibility between sensor and safety module, and has a higher reliability guarantee.

Sensors	Compatible safety modules	Safety module output contacts
SR BD40A••	CS AR-05•••••	3NO+1NC
	CS AR-06•••••	3NO+1NC
	CS AR-08•••••	2NO
SR BD41A••	CS AR-05•••••	3NO+1NC
	CS AR-06•••••	3NO+1NC
	CS AR-08•••••	2NO

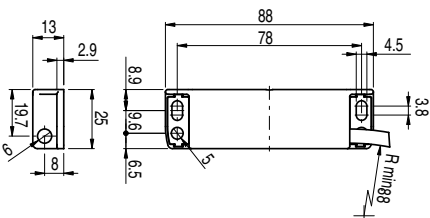
### Connection of sensors and switches in series

Pizzato Elettrica magnetic sensors could be connected in series with the only limitation that the overall resistance, gave by sensors and the related wiring, has to be not higher than the admitted max value of the module, which typically 50 ohm (see module features). It is a very high value that, with normal wiring, it allows the use of dozens of sensors without problems. It is also possible to realize mixed circuit solutions connecting in series magnetic sensor to safety switches, with the only limitation of the above mentioned max electric resistance. We remind you that the connection in series of two or more safety sensor, makes the sensors-module system of category 3, according to EN 954-1.

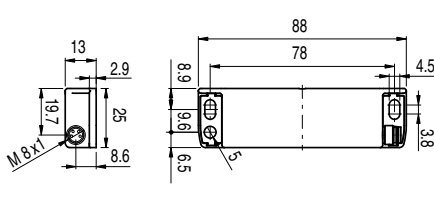


### Dimensional drawings

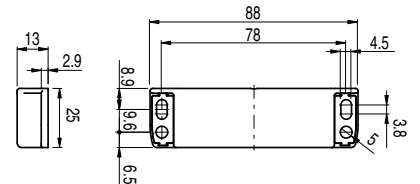
Magnetic sensor SR BD••AN• with integrated cable

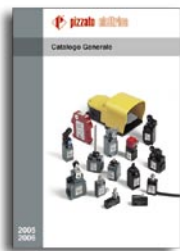


Magnetic sensor SR BD••ALK with M8 connector



Coded actuator SM B0•F





General catalog



Production program



ATEX brochure



Lift devices  
brochure



Cd-rom



Web site  
[www.pizzato.com](http://www.pizzato.com)



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**Pizzato Elettrica s.r.l.** Via Torino, 1 - 36063 Marostica (VI) Italy  
Phone +39.0424.470.930 - Fax +39.0424.470.955  
E-mail: [info@pizzato.com](mailto:info@pizzato.com) - Web site: [www.pizzato.com](http://www.pizzato.com)

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