



## APPLICATION

### Interlock system with RFID coding protects multiple access points on enclosed conveyor

Enclosed conveyors are an efficient way of preventing contamination in hygienic production systems. Doors onto the conveyor are provided wherever the operator needs access for set-up, maintenance or troubleshooting. To protect the operator and preserve process hygiene, RFID-coded safety sensors are fitted to each door. These cascadable devices with IP6K9K protection and Ecolab approval, are ideal for hygienic conveyor systems, where they reliably inhibit operation as soon as any door is opened.

## INDUSTRIES

Automotive production and supply, machine tool, packaging, logistics, materials handling, assembly, automation, robotics



*Robotics*



*Machine tools*



*Automotive industry*



*Logistics systems*

# SAFETY SENSORS

## MAGNETIC AND RFID

### NON-CONTACT MONITORING OF DOORS

**Magnetic** and **RFID** safety sensors are ideal for monitoring guard doors, hoods or covers. Their compact housings with standard fixing are particularly suitable for washdown applications in the food industry. RFID types are also ideal for multi-sensor applications, such as long assembly lines. Thanks to non-contact operation and coded communication, service life is very long.

#### KEY ADVANTAGES

- ✓ Up to category 4, PL e according to EN/ISO 13849-1
- ✓ Operating distance up to 18 mm
- ✓ PVC cable or M12 pigtail connection
- ✓ Certified TÜV, CE and UL
- ✓ IP6K9K, Ecolab

#### MAGNETIC

- ✓ Safety sensor with frontal or 90° actuation
- ✓ Magnetically coded, ISO 14119 type 4
- ✓ Detection through metal plate possible
- ✓ Sizes 36 × 26 × 13 mm and 88 × 25 × 13 mm

#### RFID

- ✓ Safety sensor with RFID coding (random or teachable) ISO 14119 type 4
- ✓ Compact size 36 × 26 × 13 mm
- ✓ Cascadable up to 30 units
- ✓ EDM and diagnostic function



#### PRODUCT OVERVIEW

|                 | SERIES<br>Housing size mm | CUBIC<br>36 × 26 × 13 | RECTANGULAR<br>88 × 25 × 13 |
|-----------------|---------------------------|-----------------------|-----------------------------|
| OPERATING RANGE | Magnetic                  | 4... 18               | 8... 18                     |
|                 | RFID                      | 8... 18               | —                           |

#### ACCESSORIES

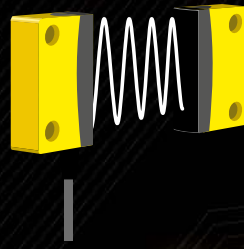
Go to pages 256 and 298 to see all the accessories



# SAFETY SENSORS MAGNETIC

## COMMON FEATURES

|                          |                     |
|--------------------------|---------------------|
| <b>Safety Level</b>      | Cat. 4, PL e, SIL 3 |
| <b>Supply Voltage</b>    | 24 VDC              |
| <b>Temperature Range</b> | -25 ... +80°C       |
| <b>Enclosure Rating</b>  | IP6K9K              |



# SAFETY SENSORS MAGNETIC

## OUTPUT

Hole spacing  
[22] 22 mm [78] 78 mm

see p. 258











YSM-[xx][x]4-[xxxx]-[xxxx]

Module  
[K] Kit (sender + receiver)

Connection type  
[C050] Cable, 5 m, PVC  
[P012] M12 pigtail,  
0.3 m, 4 pins

Reference key on page 258

## ACCESSORIES

-  **Relay**  
See page 256
-  **Top/bottom mounting bracket**  
For YBB & YCA  
See page 256
-  **Sliding T-nuts for side mounting**  
See page 256
-  **Mounting bracket No. 5**  
For YBBS & YBES  
See page 256
-  **Mounting bracket No. 6**  
For YBBS & YBES  
See page 256
-  **Mounting bracket No. 7**  
For YBBS & YBES  
See page 256
-  **Safety filter**  
See page 257
-  **Laser alignment tool**  
See page 257
-  **Device columns**  
See page 254
-  **Mirror columns**  
See page 254

Go to page 298 for details

| FAMILY                  | SAFE SWITCH<br>ON DISTANCE SAO (mm) | SAFE SWITCH<br>OFF DISTANCE SAR (mm) |  |
|-------------------------|-------------------------------------|--------------------------------------|--|
| CUBIC<br>STANDARD       | 4                                   | 10                                   |  |
|                         | 4                                   | 10                                   |  |
|                         | 4                                   | 10                                   |  |
|                         | 4                                   | 10                                   |  |
| CUBIC EXTENDED          | 8                                   | 17                                   |  |
|                         | 8                                   | 17                                   |  |
|                         | 8                                   | 17                                   |  |
|                         | 8                                   | 17                                   |  |
|                         | 8                                   | 17                                   |  |
| RECTANGULAR<br>EXTENDED | 8                                   | 18                                   |  |
|                         | 8                                   | 18                                   |  |
|                         | 8                                   | 18                                   |  |
|                         | 8                                   | 18                                   |  |
|                         | 8                                   | 18                                   |  |





**KEY ADVANTAGES**

- ✓ Safety sensor with frontal or 90° actuation
- ✓ Magnetically coded, ISO 14119 type 4
- ✓ Up to category 4, PL e according to EN/ISO 13849-1
- ✓ Operating distance up to 18 mm
- ✓ PVC cable or M12 pigtail connection
- ✓ Sizes 36 × 26 × 13 mm and 88 × 25 × 13 mm
- ✓ Certified TÜV, CE and UL
- ✓ IP6K9K, Ecolab



|  | HOUSING SIZE (mm) | ACTUATION   | NUMBER OF OUTPUTS | CABLE      | CONNECTOR | PART REFERENCE     |
|--|-------------------|-------------|-------------------|------------|-----------|--------------------|
|  | 36 × 26 × 13      | Frontal     | 2 × NO            | 5 m PVC    |           | YSM-22K4-MSFN-C050 |
|  | 36 × 26 × 13      | Frontal 90° | 2 × NO            | 5 m PVC    |           | YSM-22K4-MSAN-C050 |
|  | 36 × 26 × 13      | Frontal     | 2 × NO            | 0.15 m PVC | M12       | YSM-22K4-MSFN-P012 |
|  | 36 × 26 × 13      | Frontal 90° | 2 × NO            | 0.15 m PVC | M12       | YSM-22K4-MSAN-P012 |
|  | 36 × 26 × 13      | Frontal     | 2 × NO            | 5 m PVC    |           | YSM-22K4-MEFN-C050 |
|  | 36 × 26 × 13      | Frontal 90° | 2 × NO            | 5 m PVC    |           | YSM-22K4-MEAN-C050 |
|  | 36 × 26 × 13      | Frontal     | 2 × NO            | 0.15 m PVC | M12       | YSM-22K4-MEFN-P012 |
|  | 36 × 26 × 13      | Frontal 90° | 2 × NO            | 0.15 m PVC | M12       | YSM-22K4-MEAN-P012 |
|  | 36 × 26 × 13      | Frontal     | NO, NC            | 5 m PVC    |           | YSM-22K4-MEFL-C050 |
|  | 88 × 25 × 13      | Frontal     | 2 × NO            | 5 m PVC    |           | YSM-78K4-MEFN-C050 |
|  | 88 × 25 × 13      | Frontal 90° | 2 × NO            | 5 m PVC    |           | YSM-78K4-MEAN-C050 |
|  | 88 × 25 × 13      | Frontal     | 2 × NO            | 0.15 m PVC | M12       | YSM-78K4-MEFN-P012 |
|  | 88 × 25 × 13      | Frontal 90° | 2 × NO            | 0.15 m PVC | M12       | YSM-78K4-MEAN-P012 |
|  | 88 × 25 × 13      | Frontal     | NO, NC            | 5 m PVC    |           | YSM-78K4-MEFL-C050 |

# SAFETY SENSORS RFID

## COMMON FEATURES

|                          |                     |
|--------------------------|---------------------|
| <b>Safety Level</b>      | Cat. 4, PL e, SIL 3 |
| <b>Supply Voltage</b>    | 24 VDC              |
| <b>Temperature Range</b> | -25 ... +70°C       |
| <b>Enclosure Rating</b>  | IP6K9K              |



## OUTPUT

Hole spacing [22] 22 mm

see p. 258











YSR-[xx][x]4-[xxxx]-[xxxx]

Module [K] Kit (sender + receiver)

Connection type [C050] Cable, 5 m, PVC [P012] M12 pigtail, 0.3 m, 8 pins

Reference key on page 258

## ACCESSORIES

-  **Relay**  
See page 256
  -  **Top/bottom mounting bracket**  
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See page 254
  -  **Mirror columns**  
See page 254
- Go to page 298 for details


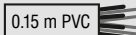

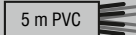
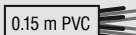

| FAMILY       | SAFE SWITCH ON DISTANCE SAO (mm) | SAFE SWITCH OFF DISTANCE SAR (mm) |  |
|--------------|----------------------------------|-----------------------------------|--|
| CUBIC RANDOM | 8 mm                             | 18 mm                             |  |
|              | 8 mm                             | 18 mm                             |  |
| CUBIC TEACH  | 8 mm                             | 18 mm                             |  |
|              | 8 mm                             | 18 mm                             |  |



**KEY ADVANTAGES**

- ✓ Safety sensor with RFID coding (random or teachable) ISO 14119 type 4
- ✓ Category 4, PL e according to EN/ISO 13849-1
- ✓ Operating distance up to 18 mm
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- ✓ Compact size 36 × 26 × 13 mm
- ✓ Cascadable up to 30 units
- ✓ EDM and diagnostic function
- ✓ Certified TÜV, CE and UL
- ✓ IP6K9K, Ecolab



|  | HOUSING SIZE (mm) | ACTUATION      | NUMBER OF OUTPUTS | CABLE  | CONNECTOR   | PART REFERENCE     |
|--|-------------------|----------------|-------------------|--|---|--------------------|
|  | 36 × 26 × 13      | RFID random    | 2 × OSSD          | 5 m PVC       |   | YSR-22K4-RESE-C050 |
|  | 36 × 26 × 13      | RFID random    | 2 × OSSD          | 0.15 m PVC    |  M12   | YSR-22K4-RESE-P012 |
|  | 36 × 26 × 13      | RFID teachable | 2 × OSSD          | 5 m PVC      |   | YSR-22K4-TESE-C050 |
|  | 36 × 26 × 13      | RFID teachable | 2 × OSSD          | 0.15 m PVC  |  M12 | YSR-22K4-TESE-P012 |

