INDUSTRIAL AUTOMATION SOLUTIONS

PEDESTRIAN SENSING SOLUTIONS

INDUSTRIAL AUTOMATION SOLUTIONS

PUBLIC TRANSPORTATION SOLUTIONS

VEHICLE SENSING SOLUTIONS

PEOPLE COUNTING SOLUTIONS

A HALMA COMPANY

Opening sensors for industrial doors

BEA sensors use technology like microwave, magnetic induction to detect people and vehicles in critical industrial environments.

Sensor series

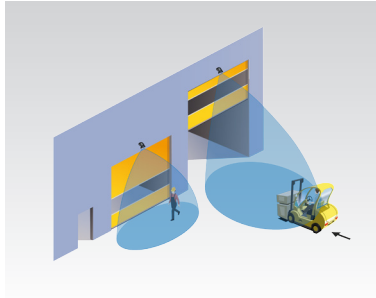
FALCON

Energy saving

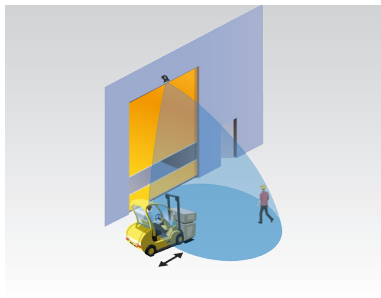
FALCON is a high-performance motion detector using microwave technology. It allows a precise opening detection with the capability to filter pedestrians and parallel cross traffic.

Features

- Unidirectional motion detection for an optimum door closing cycle generating energy savings.
- Possibility of filtering people and detecting vehicles only.
- Possibility of filtering cross-traffic to eliminate unwanted detection.
- Immunity and stability thanks to the BEA planar antenna and the digital treatment of the signal.
- IP65 housing to protect the sensor in harsh environmental situation.



Industrial doors



Cross-traffic filtering

Installation

- Simple Installation (plug and play).
- Additional parameters can be adjusted by remote control.

Application

- Big doors (till 7 m): FALCON.
- Small doors (till 3.5 m): FALCON XL.
- Industrial doors: Cold storage doors, high speed doors.
- Explosion proof: FALCON EX
- Explosion intrusion proof: PHOENIX EX

Technical specifications

Technology	Microwave, 24.150 GHz
Detection mode	Motion
Tilt angles	0° to 180° in elevation
Detection area	4 m (W) x 2 m (D) (FALCON XL)@2.5 m 4 m (W) x 5 m (D) (FALCON)@5 m
Supply voltage	12 V to 24 V AC ±10% 12 V to 24 V DC -10%/+30%
Power consumption	< 2 W
Dimensions	127 mm (W) x 102 mm (H) x 96 mm (D)
Temperature range	-30°C to +60°C
Degree of protection	IP65
Mounting height	3.5 m to 7 m(FALCON) 2 m to 3.5 m(FALCON XL)

Accessories

Remote control

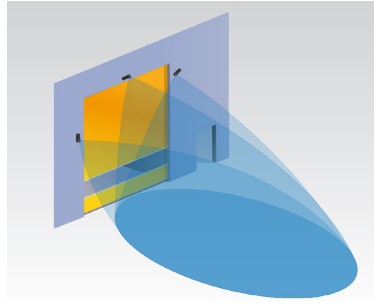
SPARROW

Energy saving

SPARROW is based on microwave technology aimed to detect people and vehicles approaching the door indistinctly. Its unidirectional detection mode allows the sensor to optimize the door operation.

Features

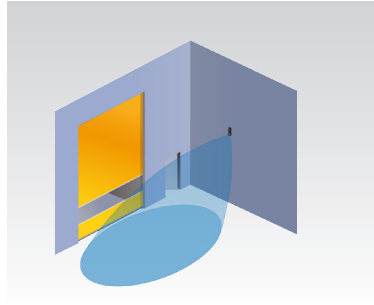
- Detection of people and vehicles.
- Great product flexibility thanks to a rotating angle from -120° to +120 °.
- Unidirectional motion detection for an optimum door closing cycle generating energy savings.
- 10 detection areas available offering an area from 1 m (D) x 2 m (L) to 6m (D) x 10 m (L).



Flexible mounting positions

Installation

- Mounting height up to 6 m.
- Simple Installation (plug and play).
- Parameter adjustment with remote control or push-buttons.



Wall mounting positions

Application

- Motion sensor for industrial doors of any type.

Technical specifications

Technology	Microwave, 24.150 GHz
Detection mode	Motion
Tilt angles	0° to 90° vertical; -120° to +120° lateral
Detection area	Max. 6 m × 10 m
Supply voltage	12 V to 24 V AC ±10% 12 V to 24 V DC -10%/+30%
Power consumption	< 2 W
Dimensions	140 mm (W) x 55 mm (H) x 57mm (D)
Temperature range	-30°C to +60°C
Degree of protection	IP64
Mounting height	2 m to 6 m

Accessories

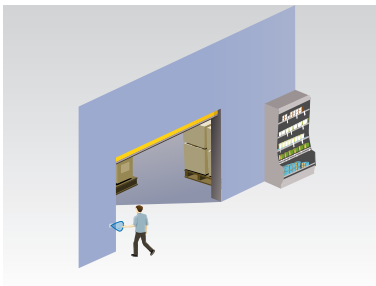
Remote control

MAGIC SWITCH

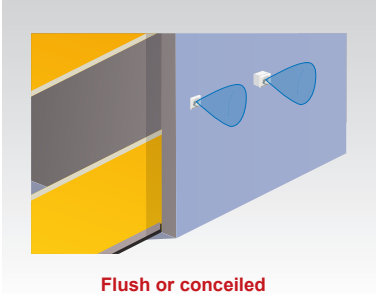
MAGIC SWITCH is an alternative contactless solution to push-buttons, pull-cords and other manual activators based on microwave technology.

Features

- Ideal hygienic solution for the retail, pharmaceutical, chemical and healthcare sectors.
- Efficient alternative to push-buttons and other manual solutions.
- Immunity and stability thanks to the BEA planar antenna and the digital treatment of the signal.
- The microwave technology allows to install the sensor behind every type of non-metallic material for aesthetics and protection against detergent products.
- Microwave module with an adjustable detection area from 10 to 50 cm.
- Pulse mode/ Toggle mode.



Reliable opening in industrial environment



Flush or conceiled mounting installations

Installation

- Flush or concealed mounting.
- Mounting behind non-metallic surface possible.

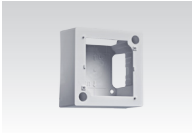
Application

- Retail, pharmaceutical, chemical and healthcare sectors (operating theatres).

Technical specifications

Technology	Microwave, 24.150 GHz
Detection mode	Motion
Detection area	±10 to 50 cm if movement towards sensor at 90° (adjustable)
Supply voltage	12 V to 24 V AC ±10% 12 V to 24 V DC -10%/+30%
Power consumption	< 1.2 W
Dimensions	85 mm (L) × 85 mm (H) × 45 mm (W)
Temperature range	-20°C to +55°C
Degree of protection	IP52

Accessories



Visible box

MAGIC SWITCH IP65

MATRIX

MATRIX is an induction loop controller detecting the presence of vehicles and metallic objects.

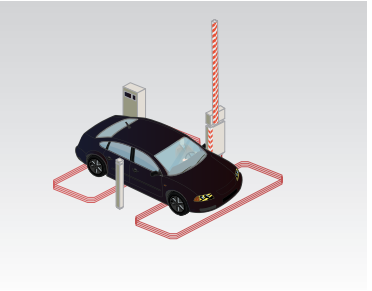
Features

- 4 frequency adjustments to avoid all interferences.
- Possibility to define the motion direction on 2- channel loop controllers.
- ASB function used to make the loop sensitive to raised floor vehicles, trail tillers or fork-lifts.
- Accurate detection parameter adjustment with a guarantee of stability in the long term.

Vehicle detection

Installation

- One or two-channel versions supplied with 12-24, 220 Volts.
- Thanks to standard connectors, the MATRIX can be embedded into most control boxes.



Parking applications

Application

- Industrial doors, parking barriers, and sliding gates.
- 12-24V AC/DC & 220-240V AC/DC with sigle and dual channel version available as per application.

Technical specifications

Technology	Inductive loop
Detection mode	Presence
Presence time	1 minute to infinity
Supply voltage	MATRIX S&D 12-24: 12-24 V AC/DC ±10% MATRIX S&D 220: 220-240 V AC ±10%
Power consumption	< 2.5 W
Dimensions	77 mm (W) x 40 mm (H) x 75 mm (D)
Operating temperature	-30°C to +40°C
Degree of protection	IP40

Accessories

Matrix Socket

Remote control

Remote control is a handy and practical solution to open doors, garage doors, gates, barriers, etc.

Features

- Robust, industrial environment suitable design.
- Control distance is up to 100 m in open space.
- Operates with a unique rolling code each time the switch is activated.
- Multiple applications (i.e. Vestibule) with delay or no delay programming.
- 100 transmitters can be programmed into a single receiver, A transmitter code can be removed.
- 4 relays can be programmed flexibly.
- 4 transmitter-versions available (1, 2, 3 or 4 buttons).
- Red LED indicator on transmitter confirms transmission and battery life.
- Extended antenna available.

Installation

- The BEA 433MHz receiver can be easily installed in the door /gate operator.

Application

- Ideal solution for industrial doors, garage doors, gates,barriers, etc.

IDRC 433 K1

IDRC 433 K2

IDRC 433 K3

IDRC 433 K4

IDRC 433

IDC 433+

IDATN

Technical specifications

Frequency	433 MHz
Emitted Radio Power	≤ 7 dBm (Transmitter)
Current Consumption	32 mA (Transmitter), 40 mA (Receiver)
Contact range	1.0 A @ 30 V DC
Power supply	3 V DC(CR 2032 3V battery*2) 50,000cycles (Transmitter) 9 V to 30 V DC/AC (Receiver)
Max No. of programmed units per receiver	100 Transmitters
Operating temperature	-30°C to 70°C
Modulation	GFSK

Safety sensors for industrial doors

BEA sensors use active infrared technology which ensure a reliable presence detection in front of the door while we recommend using the Laser technology to guarantee a high precision safety for the users. Presence and safety sensors are used to maintain the door open as long as someone is standing in the threshold of the door or in its proximity.

Sensor series

LZR®-I100/110

LZR®- I100/110 works according to the principle of time of flight. A dynamic orientation of the Laser beams on 4 planes offers more safety in the door threshold and its proximity.

Features

- High level of safety with a complete three-dimensional detection in front of the door.
- Detection of small objects.
- Variable depth of plane (1 m max.) according to the installation height.
- Easy installation and opportunity for the retrofit.
- Replaces the current solutions such as contact edges, light beams and light grids.
- We have 2 different versions:
  LZR®-I100 = Max. 10 m x 10 m;
  LZR®-I110 = Max. 5 m x 5 m

On rolling doors

Virtual push button

Installation

- 10 m cable provided.
- Automatic door dimensions teach-in.
- Set up with the universal remote control.
- Easy to set up the detection zone with 3 visible LASER beams.

Application

- Possibility to create 2 virtual push buttons to open the door.
- Safety during the opening and the closing of the door thanks to 2 separate detection areas.

Technical specifications

Technology	Time-of-flight
Detection mode	Montion & Presence
Rotation angles on bracket	-5° to +5° (lockable)
Detection area	9.9 m × 9.9 m (Max.)
Supply voltage	10 V to 35 V DC @ sensor side
Power consumption	< 5 W
Dimensions	125 mm (L) × 93 mm (D) × 70 mm (H)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65
Vibrations	< 2 G

Accessories

Remote control

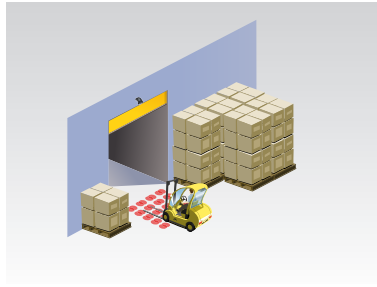
LBA

MILAN

MILAN is an active infrared sensor working on the principle of the background analysis to prevent contact of vehicle with the doors.

Features

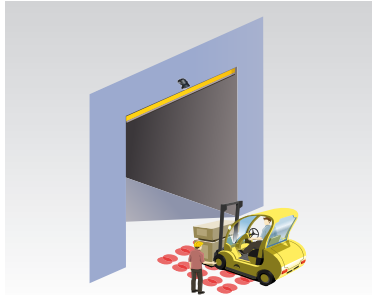
- Increased protection of vehicles and pedestrians.
- Two outputs available to run presence and motion separately.
- Improvement of the door protection and reduction of collision risks.
- 40 active infrared spotlights covering 3 m × 3 m in front of the door at 5 m mounting height.
- Possibility to adjust the detection area and the minimal size of the target.



Possibility to adjust the size of the infrared field

Installation

- Easy Installation (plug and play).
- Immunity against door vibrations and interferences.
- User-friendly adjustment with remote control and spot finder.



Area monitoring

Application

- Accurate opening in confined rooms.
- Presence detection in front of the door to increase its protection.

* We don't recommend using infrared sensors in cool rooms and freezer rooms.

Technical specifications

Technology	Infrared
Detection mode	Motion & presence
Tilt angles	15° to 45°
Detection area	3 m × 3 m (5 lines × 8 spots) *
Supply voltage	12 V to 24 V AC ±10% 12 V to 24 V DC -10%/+30%
Power consumption	< 2 W
Dimensions	127 mm (P) × 102 mm (L) × 96 mm (H)
Temperature range	-30°C to +60°C
Degree of protection	IP65
Mounting height	2.5 m to 6 m **

* at a mounting height of 5 m

** depending on size and nature of the target

Accessories

Remote control

Spotfinder

IXIO-S INDUS

IXIO-S INDUS is an active infrared presence sensor. It functions on the basis of background analysis.

Features

- Presence detection via 2 infrared curtains (3D safety), each consisting of 24 light spots.
- Higher convenience and safety for pedestrians and vehicles near the door.
- Reliable protection thanks to the double presence curtain.
- Ideal solution for industrial doors up to 4 m high.

Area detection infrared
3 m × 0.6 m @ 3 m

Installation

- Intuitive setup with the aid of the LCD screen and/or BEA remote control.
- Graphic LCD screen with language selection.
- 4 visible red spots on the ground for simplified positioning of the safety curtain.
- Easy installation.
- Comes with a 10 m cable.

LCD screen

Application

- Presence detection for industrial doors.

Technical specifications

Technology	Infrared
Detection mode	Presence
Tilt angles	From -7 ° to +4 ° (adjustable)
Detection area	3.5 m × 0.6 m (Width × depth)*
Supply voltage	12 V - 24 V AC ±10 % 12 V - 30 V DC - 5%/+10%
LED signals	Red
Dimensions	262 mm (L) × 55 mm (H) × 44 mm (W)
Temperature range	- 25°C to +55°C
Degree of protection	IP54
Mounting height	2 m to 4 m

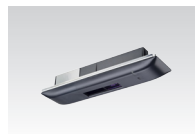
* at a mounting height of 3.5 m

Accessories

Bracket accessory

Spotfinder

Rain accessory



Ceiling accessory

Remote control

Combined sensors for industrial doors

Combined sensor brings activation and safety in the same housing. This is by far the best and the safest option for industrial automatic doors. This solution offers a reliable and stable opening detection field combined with a 3D presence curtain ensuring better safety for all users.

Sensor series

	LZR®-WIDESCAN	Opening sensor, area surveilance and safety for industrial doors.	12
	CONDOR	Combined sensor for automatic industrial doors up to 6 m.	13
	IXIO D01	Combined sensor for automatic industrial doors up to 4 m.	14

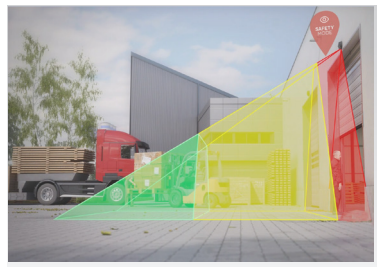
LZR®-WIDESCAN

Energy saving

LZR®- WIDESCAN is a laser scanner based on analysis of time of flight technology. One device provides 3 functions: opening the door, area surveillance and safety.

Features

- 7 laser curtains in front of the door makes it possible to measure distance accurately and offers advantages, such as calculation of the size and trajectory of an object.
- Rejects parallel traffic and filters out pedestrians according to your application.
- Independent of weather conditions, such as rain, snow, fog, reflecting surfaces, etc.
- Detection fields can be configured in three dimensions.



Door protection application

Door protection application

Installation

- Two visible spots on the floor align the first curtain with the center of the door.
- Intuitive configuration provided by the LCD screen and/or the BEA remote control.
- Can be positioned centrally or laterally depending on the design of the door.
- Teach-in of various detection zones (opening, presence, safety) via the remote control.
- Plug & play.

Application

- Opening the door, areas surveillance and safety for industrial doors.

Technical specifications

Technology	Time-of-flight (7 laser curtains)
Detection mode	Motion and presence
Supply voltage	10 V to 35 V DC @ sensor terminal
Tilt angles on bracket	10° to 5°
Rotation angles on bracket	-45° to + 45°(lockable)
Power consumption	<5 W
Dimensions	200 mm (H) × 150 mm (W) × 100 mm (D) (approx.)
Temperature range	-30°C to +60°C if powered
Degree of protection	IP65
Typ. Mounting height	2 m to 6 m

Accessories

Remote control

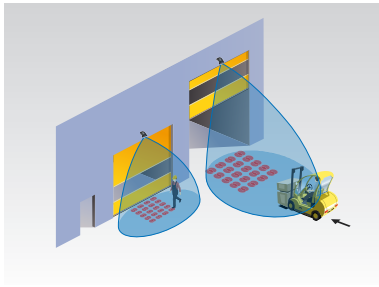
CONDOR

Energy saving

CONDOR has a microwave motion detector and an active infrared presence sensor built in the same housing. It allows a precise opening with the capability to filter pedestrians and parallel cross traffic.

Features

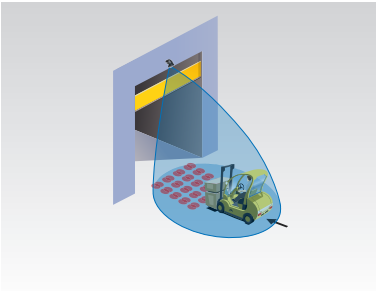
- The presence area is defined to detect every vehicle in front of the door.
- The CONDOR highly reduces the risk of collision with the door and increases the lifetime of the door.
- The planar antenna features an accurate pedestrian/vehicle filtering and a reliable cross-traffic rejection.
- This detection area allows to decrease the door timer: it offers energy savings proportional to the number of door closing cycles.



For all industrial doors

Installation

- Easy installation (plug and play).
- Flexible operation thanks to the remote control and the spot finder.



Capability to filter pedestrian and cross traffic

Application

- High doors (till 6 m): CONDOR.
- Small doors (till 3.5 m): CONDOR XL.

Technical specifications

Technology	Microwave and infrared
Detection mode	Motion and presence
Tilt angles	-8° to 22° (radar) ; 15° to 45° (infrared)
Detection area	3.5 m × 0.5 m
CONDOR	4 m × 5 m (radar) 4 m × 4 m (infrared)
CONDOR XL	4 m × 2 m (radar) 4 m × 4 m (infrared)
Supply voltage	12 V to 24 V AC ±10 % 12 V to 24 V DC -3%/+10%
Power consumption	< 3.5 W
Dimensions	127 mm (L) × 102 mm (H) × 96 mm (W)
Temperature range	-30°C to +60°C
Degree of protection	IP65

Accessories

Remote control

Spotfinder

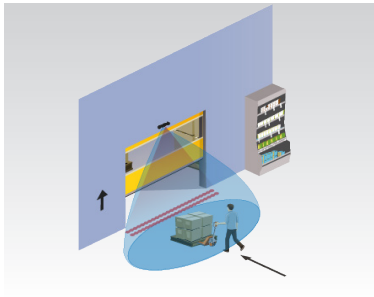
IXIO DO1

Energy saving

IXIO DO1 is a sensor which combines two technologies: the radar detects the approach of people and vehicles, while the active infrared technology guarantees pure presence detection.

Features

- Unidirectional sensor which enables the door to close sooner improving energy/ thermal efficiency and ideal for airlock application.
- 4 visible spots appear on the ground during setup. This makes it easy to establish the optimal angle for the first safety curtain.
- 48 infrared spots, divided over 2 curtains, detect the presence of people and objects in the immediate vicinity of the door closing area, preventing the door from coming in contact with any person or object.
- A 32-bit microprocessor optimizes the processing of information from the surrounding area, providing sustainable performance and stability regardless of background changes.
- Intuitive setup via the LCD screen with text and symbol display (LCD graphics).



High-speed doors

Industrial doors

Installation

- Intuitive setup with the aid of the LCD screen and/or BEA remote control.
- Graphic LCD screen with language selection.
- Lateral orientation of the radar antenna with a range of -15° to +15°.
- 4 visible red spots on the ground for simplified setup of the safety curtain.
- Plug & play.

Application

- Motion and presence detection for industrial doors.

Technical specifications

Technology	Microwave and active infrared
Detection mode	Motion and presence
Tilt angle	15 °to 45 °(radar); -7 ° to +4 ° (infrared) (adjustable)
Detection area	4.5 m × 2.5 m (radar), 3.5 m × 0.5 m (infrared)
Supply voltage	12 V - 24 V AC ±10 % 12 V - 30 V DC - 5%/+10%
Power consumption	< 2 W
Dimensions	269.3 mm (L) × 57.3 mm (H) × 57.9 mm (W)
Temperature range	-25°C to +55°C
Degree of protection	IP54
Mounting height	2 m to 4 m

Accessories

Bracket accessory

Rain accessory

Spotfinder

Remote control

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