

"Open Sesame!"

## radar sensors / optical sensors



our sensors ensure your success



# focusing on doors and gates

automatic monitoring of doors and gates

Nowadays, systems for automatic presence and movement monitoring are essential in many branches of industry. The many potential application areas of such systems require an equally large number of different solutions. The spectrum ranges from optical scanners, multifunction light barriers and radar motion sensors to combined systems that can both open doors and also detect objects within the area surrounding a door.



optical sensors  
for presence detection



fully automatic light barrier  
for presence detection



radar sensors  
for movement detection  
(flush-mounted or surface-mounted)



radar sensors  
for movement and  
presence detection

## advantages and highlights

- reliable movement and presence detection
- diverse fields of application (e.g. industry, gastronomy, retail food trade, etc.)
- high level of insensitivity to soiling, especially in hostile production environments
- reliable elimination of interference caused by moving objects in the detection range (e.g. branches)
- reliable object detection independent from structure and color
- insensitive to environmental influences (e.g. rain or snow)
- simple suppression of pedestrians and parallel traffic
- great flexibility with regard to operating ranges and inclination angles
- robust and water-proof plastic housings
- simple mounting

*combined solution  
for indoor industrial applications ▶*



*robust radar sensors  
◀ for outdoor industrial applications*



*optical sensors  
for food industry ▶*



*radar motion sensors  
◀ for hygienic door opening  
in hospitals*



# more safety for doors and gates

our sensors ensure your success



Diverse solutions for almost every problem: The motion sensors for industrial doors have proven effective in harsh everyday production environments. They are extremely insensitive to soiling and can detect objects based on their direction of movement in order to optimize the opening cycles of the doors. Persons can be suppressed so that a door only reacts to vehicles.

Furthermore, it is possible to eliminate interference caused by moving objects within the detection range of the sensor. Systems for presence detection monitor the area in front of a door in order to prevent the door panel from coming into contact with vehicles or objects.

Doors in the food, pharmaceutical or chemical industry, in hospitals or in gastronomy can be opened using contactless systems which are a real and, above all, hygienic alternative to conventional manual solutions such as push buttons or pull switches.

The systems, which can be flush-mounted or surface-mounted, react to all deliberate and approaching movement.

Optical systems which have background suppression and operating ranges that can be precisely configured, are suitable for movement detection at doors with normal passage height, e.g. store entrances or revolving doors. Extremely flat and fully automatic light barriers available with different operating ranges and in different lengths have minimum space requirements and are recommended for installation at the sides of doors and gates for presence and movement detection.

And these are just a few of the possible applications for our comprehensive range of products ...

# combination units

movement and presence detection for outdoor applications



## advantages and highlights

- for doors up to 6m high
- suppression of pedestrians and parallel traffic
- immunity against door vibrations and interference in the surrounding area
- robust housing for industrial environments
- energy savings by reducing the opening time of the door
- great flexibility thanks to remote control and spotfinder
- simple "plug and play" installation



accessories

### infrared spotfinder

aid for positioning the IR field



accessories

### remote control

universal remote control for adjusting radar and combination scanners

## two in one: opening and detection

The RO71 and RO57 radar sensors combine two functions in just one unit. The described radar technology enables dependable movement monitoring, and the integration of active infrared technology ensures reliable presence monitoring of objects.

Here is an example:

If stationary objects or vehicles are located directly underneath a door or in its immediate vicinity, the door remains open for as long as the object or vehicle is in the detection range of the infrared sensor.

The RO71 combination units with protection class IP65 are designed for a maximum operating range of 6m and the RO57 units for interior doors up to a height of 4m.



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## operating principle



The detection field can be adjusted according to the environmental conditions.



Movement detection causes the door to be opened.



Presence detection causes the door to remain open for as long as an object is in the detection range.

# combination units

movement and presence detection for indoor applications



## advantages and highlights

- reliable detection in industrial environments
- direction sensing reduces the opening cycles
- reliable object detection
- simple mounting
- interior doors up to 4m high
- easy configuration by means of push buttons



### accessories

#### infrared spotfinder

aid for positioning the IR field



### accessories

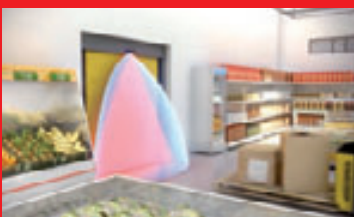
#### remote control

universal remote control for adjusting radar and combination scanners

The combination of radar and active infrared technology in a single product provides the advantages of a direction-sensing and, therefore, energy and cost-saving door opener together with the advantages of presence detection for approach area monitoring.

A combination sensor allows convenient opening for smaller doors and at the same time ensures that the door does not close until the detection range is free again.

## operating principle



Here, the extremely narrow and permanently active detection field for movement prevents erroneous operations.



When an object approaches frontally, the door opens as soon as the detection field is reached.



Forgotten or deliberately positioned objects are also detected reliably – the door remains open.



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# radar sensors

movement detection for outdoor applications



## advantages and highlights

- distinction between vehicles and persons
- adjustable detection range
- suppression of parallel traffic
- sensitivity adjustment using buttons or optional remote control
- large operating range
- potential-free relay output with change-over contact
- relay drop-out time can be set from 0.5 to 9s
- robust and water-proof plastic housing
- bracket made of anodized aluminum



### accessories

#### remote control

universal remote control for adjusting radar and combination scanners

### extremely insensitive to dirt

The RT71 and RT55 radar sensors are ideal for movement monitoring and therefore for automatic actuation of industrial doors. A special feature for industrial applications is the extremely high insensitivity of radar sensors to soiling, making these solutions ideal for use in hostile production environments. Furthermore, the setting options of the radar sensors make it possible to reliably eliminate interference caused by moving objects (e.g. branches) in the detection range of the sensors.

The RT71 sensors with their large operating range of up to 7m and a tilt angle range from 0° to 180° can detect

extremely small movements (5cm/s); they are, however, less sensitive to rain and snow than previously available systems. Owing to their robust and water-proof plastic housing with degree of protection IP65, these radar sensors are predestined for outdoor use.

The RT55 motion sensors have an operating range of max. 6m and permit inclination angles of 0° to 90° (vertical) and -120° to +120° (lateral).

With housings with degree of protection IP64, these sensors, which can also detect extremely small movements, are recommended for indoor use in industrial environments.



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## operating principle



With movement direction sensing activated, the door only opens when the forklift truck approaches.



Parallel traffic is suppressed here in order to prevent unnecessary opening.



Pedestrians can be suppressed. This increases safety and reduces energy consumption in the case of heated factory buildings.



# radar sensors

movement detection for indoor applications

## advantages and highlights

- reliable detection in industrial environments
- detection of persons and vehicles
- direction sensing reduces the opening cycles
- simple mounting
- doors up to 6m high
- easy configuration by means of push buttons
- great flexibility due to a rotation angle of +/- 120°



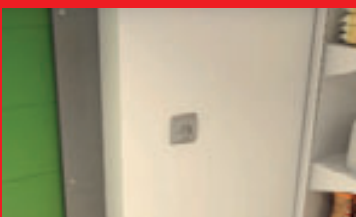
contactless opening of doors and gates

## advantages and highlights

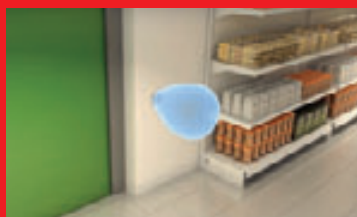
- easy installation, also behind nonmetallic materials
- flush mounting or surface mounting
- alternative to push buttons
- adjustable detection range
- terminal connection



## operating principle



Simple mounting in existing flush-mounted sockets makes installation easier.



The detection field can be set from 10 to 50cm and can therefore be adapted to any environment.



The RT45 allows opening without the switch having to be touched. Ideal for hygienic applications.



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**ipf**  
electronic

# optical scanners

presence detection for doors and gates



## accessories

### remote control

universal remote control for adjusting radar and combination scanners

## advantages and highlights

- optional time-setting with pickup or dropout delay of 0.1 to 5 seconds
- LED indicator for signal and functional reserve
- indicator for scanning range adjustment
- universal voltage units with relay output
- DC voltage units with pnp and npn output
- presence detection by means of two infrared curtains each with 24 light spots
- for industrial doors up to max. 4m high
- intuitive setting by means of graphical LCD screen

The optical OT59 sensors from ipf electronic are especially suitable for installation at doors with normal passage height. Since the operating range of these sensors depends on the reflection properties of the object surface (color, structure), it can be set extremely precisely up to a scanning range of 2500mm. The sensors with IP67 are available with a wear-free, electronic transistor output or alternatively with a relay output to, for example, allow the sensor to be integrated in a door control system.

The OT570900 and OT710900 units are active infrared sensors for presence monitoring. The operating principle is based on the permanent analysis of background reflection. The adaptable detection fields allow precise areas to be defined which, when violated, cause the door to be opened. On industrial doors up to 4m high with the OT570900 and up to 6m with the OT710900, they monitor the area in front of the door in order to prevent the door panel from coming into contact with objects and vehicles. The graphical LCD screen with language selection as well as the 4 visible red spots on the floor allow simple configuration of the OT570900.

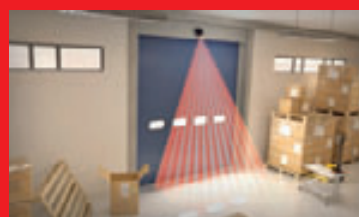


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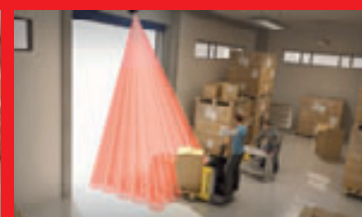
## operating principle



OT59 units are used, for example, for detecting the presence of persons in revolving doors.



The operating principle is based on the permanent analysis of reflection from the building floor.



The door remains open until the detection field of the presence sensors is free again.

# fully automatic light barriers

presence detection for doors and gates

## advantages and highlights

- flat design 9mm
- operating range 5m (optional: 10m)
- fully automatic, fast sensitivity control with fuzzy logic
- degree of protection IP54 (optional: IP65)
- integrated heater (optional)
- bracket or bolt mounting
- electronic relay output, wear-free and potential-free, no/nc configurable
- switch-on or switch-off delay configurable
- cross or parallel beam configurable
- field heights starting with 60mm



The OYL2 fully automatic light barriers round off the comprehensive range of solutions for presence and movement monitoring. With their integrated electronics, a flat design of just 9mm, operating ranges of 5m (optional: 10m) and lengths of 240mm to 3030mm, these light barriers are ideal

for space-saving installation at the side of doors and gates. In addition to their extremely low dependency on extraneous light and their short reaction times, the OYL2 light barriers also provide fast and fully automatic sensitivity control using fuzzy logic.

## operating principle



The cross-beam configuration increases the resolution of the detection field.



Bracket mounting allows simple attachment, e.g. to walls or machine parts.



Bolt mounting allows the unit to be attached from behind.

# efficient advice on all matters

personal service and problem-solving on site



CONTACT

Every call is important! When you contact our technical hotline, you speak to experienced employees who will answer your questions competently and conscientiously. Our goal is to provide you with comprehensive and individual advice around the clock. Our expert team of in-house trained personnel are here to support you.

You can also contact your personal applications consultant in our sales department. At ipf electronic, we work together very closely so that we are able to react quickly, competently and reliably to your specific query.

In almost all industrial applications, problems are becoming ever more complex and varied. Solutions to these problems often require external expertise. You will find this expertise together with a high level of specialist and problem-solving competence at ipf electronic. We are happy to discuss tasks which may seem small with you. For us, this is a matter of course!

ipf electronic is a renowned supplier of industrial sensor technology and a reliable partner. No customer query is ignored and no on-site customer appointment is missed. Our extremely broad range of products will convince you. Diversity, expertise, consultation and flexibility:

**This is ipf electronic's recipe for success.**

## ipf electronic gmbh

Kalver Straße 25 - 27  
58515 Lüdenscheid  
Germany

Fon +49 2351 9365-0  
Fax +49 2351 9365-19

info@ipf-electronic.com  
www.ipf-electronic.com