



RADAR / OPTICAL SENSORS

„Open Sesame!“



IPF ELECTRONIC

High-End in High-Tech.



*SCAN QR CODE AND READ
FLYERS IN DIGITAL FORM*

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.

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 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.



OPTICAL SENSORS

for presence detection



FULLY AUTOMATIC LIGHT BARRIER

for presence detection



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

COMBINATION UNITS MOVEMENT AND PRESENCE DETECTION

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



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.

COMBINATION UNITS

MOVEMENT AND PRESENCE DETECTION

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



The combination of radar and active infrared technology in a single product provides the advantages of a directionsensing 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.

ACCESSORIES



infrared spotfinder

aid for positioning the IR field



remote control

universal remote control for adjusting radar and combination scanners

RADAR SENSORS

MOVEMENT DETECTION

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



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 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.

OPTICAL SCANNERS

PRESENCE DETECTION FOR DOORS AND GATES

ADVANTAGES AND HIGHLIGHTS

- / optional time-setting with pickup or dropout delay of 0.1 to 5 seconds
- / LED indicator for signal and functional reserve
- / presence detection by means of two infrared curtains each with 24 light spots
- / indicator for scanning range adjustment
- / universal voltage units with relay output
- / DC voltage units with pnp and npn output
- / 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 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**.



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 logik
- / 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.

APPLIKATION EXAMPLE

INTELLIGENT SOLUTION FOR INDUSTRIAL DOOR

ROBUST RADAR SENSORS DETECT MOTION AND PRESENCE

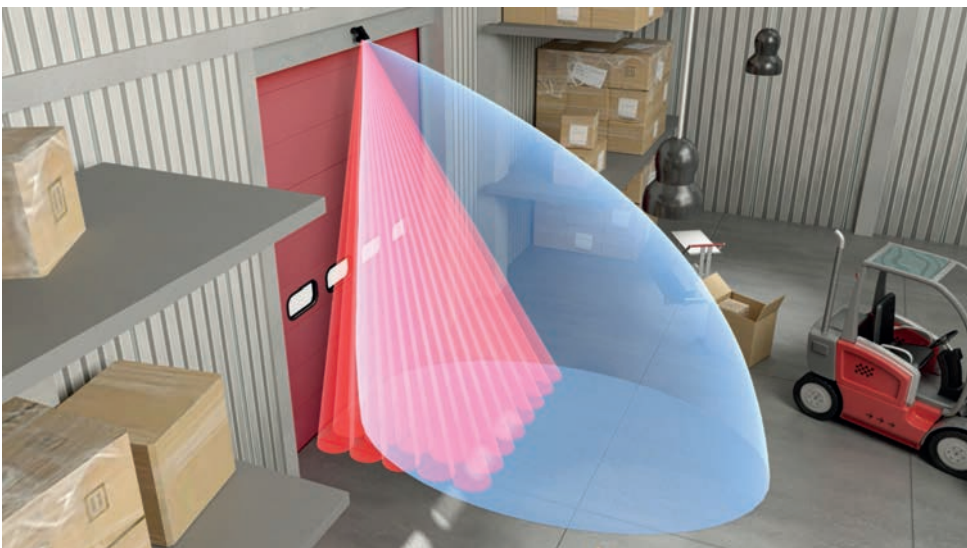
If hall doors have to be operated frequently for logistical reasons, an automatic opening system is recommended. But not every solution meets the requirements or handles the problems that arise in practice. To automatically open and close a hall door, a company uses a system with an induction loop laid in the floor covering of the hall and in the asphalt in front of the door. As soon as a vehicle, e.g. a forklift truck, is on the induction loop, the door to the hall opens. Once the vehicle has passed the loop, the gate closes with a certain time delay. Similarly, the system works via the induction loop embedded in the concrete floor of the hall, so that the door also opens and closes automatically when a vehicle leaves the hall.

REACTIONS EVEN IF THEY ARE UNDESIRE

However, after a certain time, the disadvantages of the system used become visible in practice. Thus, the induction loops both in front of and in the hall also respond when vehicles in cross and shunting traffic pass the gate. It therefore opens even if, for example, a forklift truck merely drives past the door and does not want to enter or leave the hall. For this reason, a conventional optical motion detector that detects the presence of every object in the door area is also out of the question as a possible alternative to the previous system, especially since company employees also regularly approach the door when they use an adjacent door as an entrance and exit to the hall. In addition, optical motion detectors are sensitive to dirt, so their range is reduced over time in environments with high levels of dust and dirt.

COMBINATION DEVICE BLANKS OUT PARALLEL TRAFFIC AND PEDESTRIANS

In search of a solution that would very reliably provide both motion and presence control, the company finally came across the **RO71** series radar sensor from ipf electronic. These robust and dirt-resistant devices with IP65 protection for outdoor use are primarily used as signal transmitters for controlling automatic doors and gates up to a height of six meters. With their radar technology, the sensors enable reliable motion control and, at the same time, provide reliable presence control of objects through the integration of active infrared technology. Since the sensors are able to detect objects in relation to the direction of movement, the opening cycles of gates can be optimized. Furthermore, the devices not only block out pedestrians with high precision, but also cross traffic from vehicles at the gate. In addition, the combination devices are insensitive to dirt, gate vibrations, and disturbances in the environment (e.g., the movement of branches in adjacent trees).





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