

INTELLIGENT SOLUTION FOR INDUSTRIAL DOOR

ROBUST RADAR SENSORS DETECT MOTION AND PRESENCE

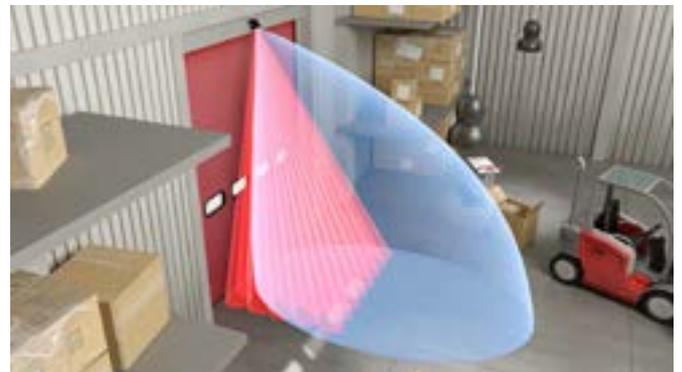
If hall doors have to be operated frequently for logistical reasons, an automatic opening system is recommended. But not every solution meets the requirements or handles the problems that arise in practice. To automatically open and close a hall door, a company uses a system with an induction loop laid 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)



The sensors from ipf electronic enable reliable motion control and, due to the active infrared technology, presence control of objects at the same time. The coverage area of the IR field can also be adjusted individually via a remote control at a later date. All images ipf electronic.

EASY INSTALLATION WITH IMPRESSIVE RESULT

The installation of the **RO710900** with a detection field of 4m x 5m (at a mounting height of 5 meters) was very easy, among other things due to the infrared spot finder (accessory) for individual positioning of the IR field both outside and inside the hall. In addition, the sensors can be conveniently configured even after installation using a remote control, which is also available as an accessory, e.g. the response sensitivity, the uni- or bidirectional detection of objects, and the size of the IR detection field. The advantages of the combination device now used to control the door are obvious thanks to the solution's versatile features. When a vehicle approaches the hall door, the sensor's motion detection gives the impulse to open the door. However, if a vehicle has to stop in the gate area for a variety of reasons, the gate remains open due to the presence control until the vehicle leaves the detection range of the **RO710900**.

Vehicles that merely drive past the door or people moving within the detection range of the radar sensor are reliably blanked out- the door remains closed. Since the new system only opens the door when it is really necessary, the company has also been able to achieve energy savings in heating the hall, especially in the cold seasons.



If a vehicle stops in the door area, the presence check of the sensor ensures that the door remains open until the vehicle leaves the detection range of the **RO710900**. Vehicles that merely drive past the gate or persons moving within the detection range of the radar sensor are reliably blanked out.