

# Entrance Automation overview

CEDES develops intelligent and safe sensor solutions. With our pioneering spirit and Swiss quality we strengthen the innovative power of our customers around the globe.



### **UNDERSTANDING**

We understand our customers, their situations and their markets. Our extensive expertise and passion for technology enable us to develop leading-edge solutions for the future.

### **PIONEERING**

We are driven to constantly seek new possibilities. Using visionary and unconventional ideas, we captivate and inspire our customers, continually extending our leadership role in global sensor solutions.

### **TRUSTWORTHY**

We know what we are doing. Our name stands for consistent Swiss quality - this allows our customers around the globe to place their wholehearted trust in us.

## ENTRANCE AUTOMATION

### INDUSTRIAL DOORS



### PEDESTRIAN DOORS



### APPLICATION-SPECIFIC SOLUTIONS



# INDUSTRIAL DOORS

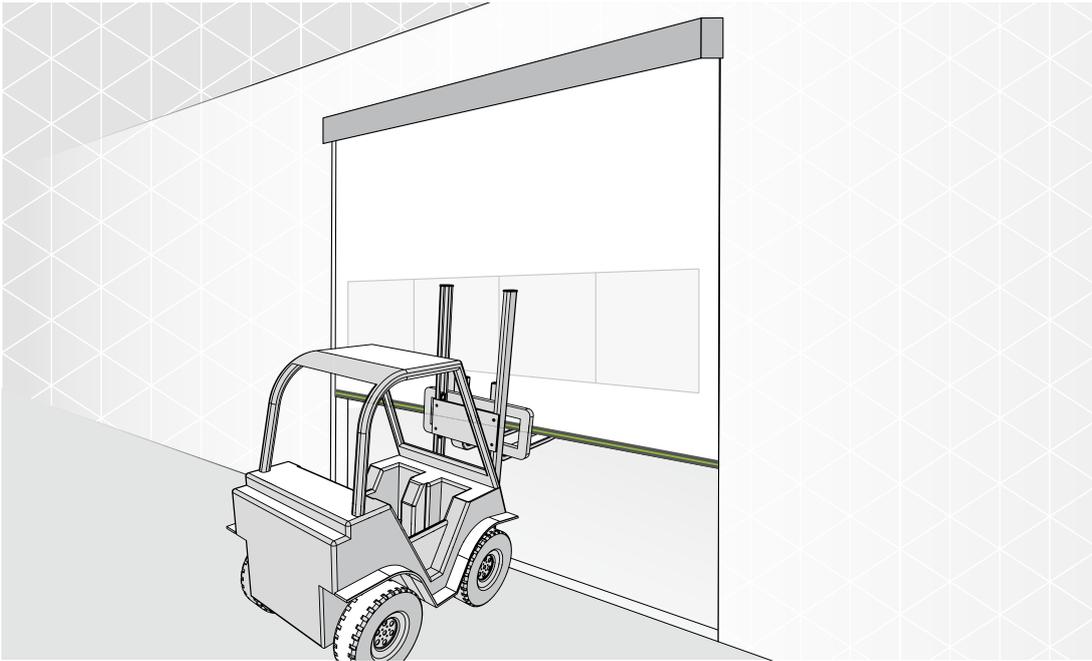


## INDUSTRIAL DOORS

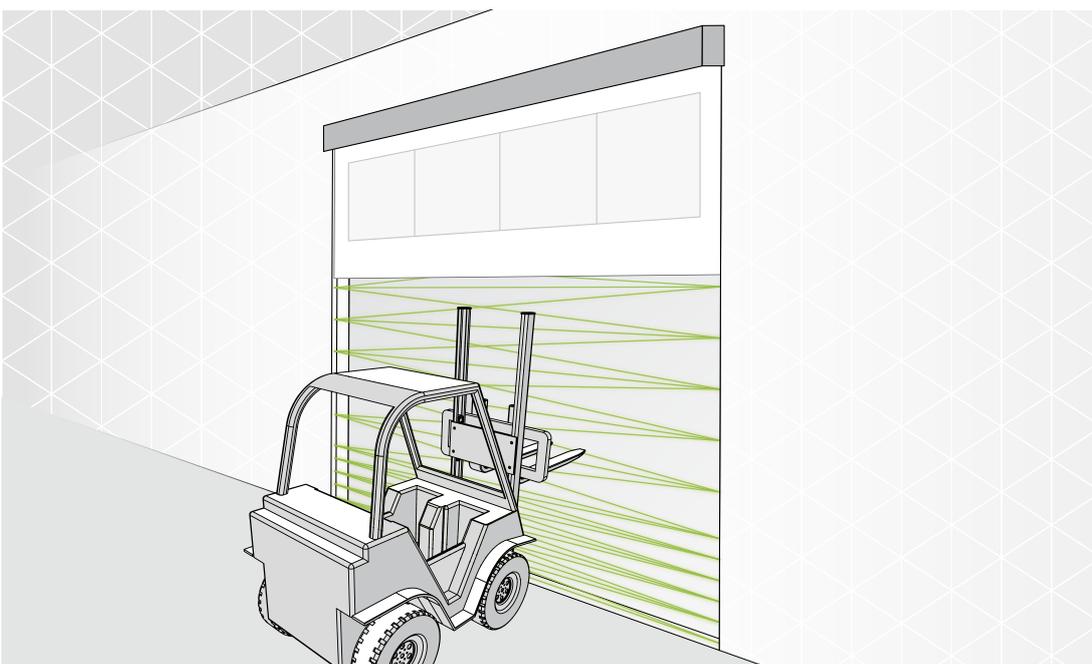
CEDES offers an extensive portfolio of safety and comfort sensors for industrial doors. The safety sensors range from light barriers to advanced light curtain solutions featuring integrated door blanking.

Conventional pressure sensors have to 'hit' a passing person or object to stop the automatic door from continuing to close. This can result in damage or injury.

CEDES sensor solutions ensure users pass through the automatic doors in complete safety, without coming in contact with them: this prevents both injury and damage. A wide range of industrial door activation sensors rounds out our portfolio.



A pressure sensor in the lower door edge has to strike a person or object to prevent door closure



A light curtain with door blanking function offers contactless safeguarding

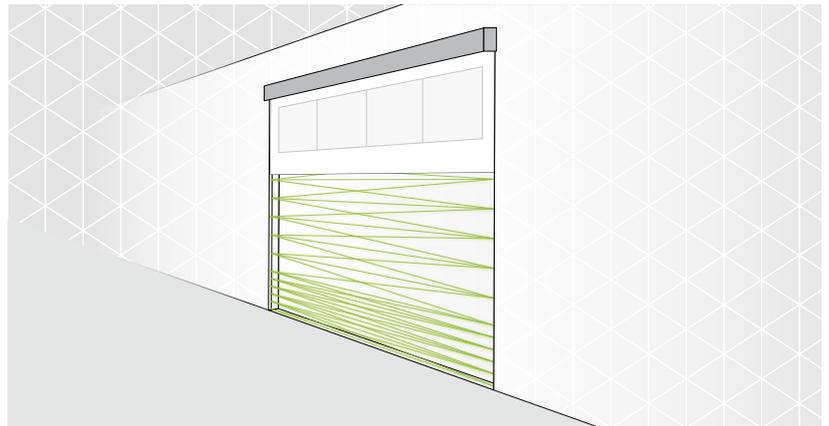
### SECTIONAL AND HIGHSPEED DOOR SAFEGUARDING

## GridScan/Mini



The GridScan/Mini is an extremely compact SIL 2-certified safety light curtain. Its door blanking function allows it to be integrated into the door design. The system with an FSS output fulfils EN 13849-1 Cat. 2 without testing.

- ▶ Door speeds up to 1.6 m/s
- ▶ Criss-cross beams
- ▶ Cross section only 12 mm × 16 mm
- ▶ Second output for additional information (customized versions)



### SECTIONAL AND HIGHSPEED DOOR SAFEGUARDING

## GridScan/Pro



The GridScan/Pro is an extremely reliable SIL 2-certified safety light curtain for industrial doors. EC type-certification allows it to be used for any door. Thanks to its multi-output design, it can be integrated into all types of door controllers.

- ▶ Combined outputs with FSS and Push-Pull
- ▶ System tolerances allow for easiest installation
- ▶ Version with communication interface available
- ▶ Ideal for modernization projects thanks to FSS safety relay



## INDUSTRIAL DOOR ACTIVATION

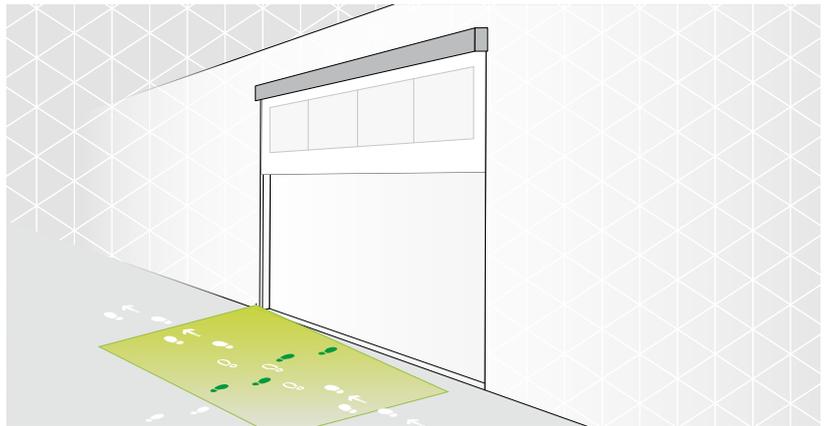
### ENTRANCE AREA MONITORING

#### TOF/Start



The TOF/Start detects people or objects approaching industrial doors. Using its direction-recognition capability, it can give an activation command if the person is heading for the door and ignore them if they are passing by. This increases energy efficiency.

- ▶ Individual setting of the detection area
- ▶ Detection area operates with all types of background
- ▶ Fade out of cross-traffic



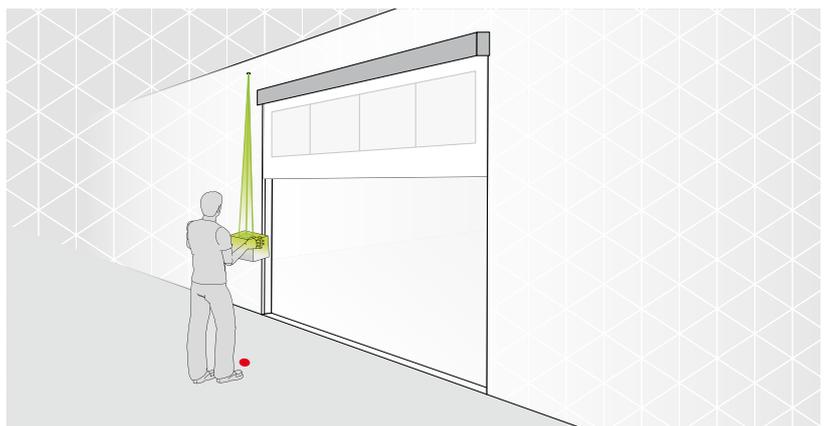
### PULL STRING ALTERNATIVE

#### TOF/Spot



The TOF/Spot is ideally suited as a contactless door opener replacement for a pull-string on industrial doors. Its very small detection area prevents false openings and greatly improves energy efficiency.

- ▶ No 'free' hand required
- ▶ Solid-state relay and analog output
- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m



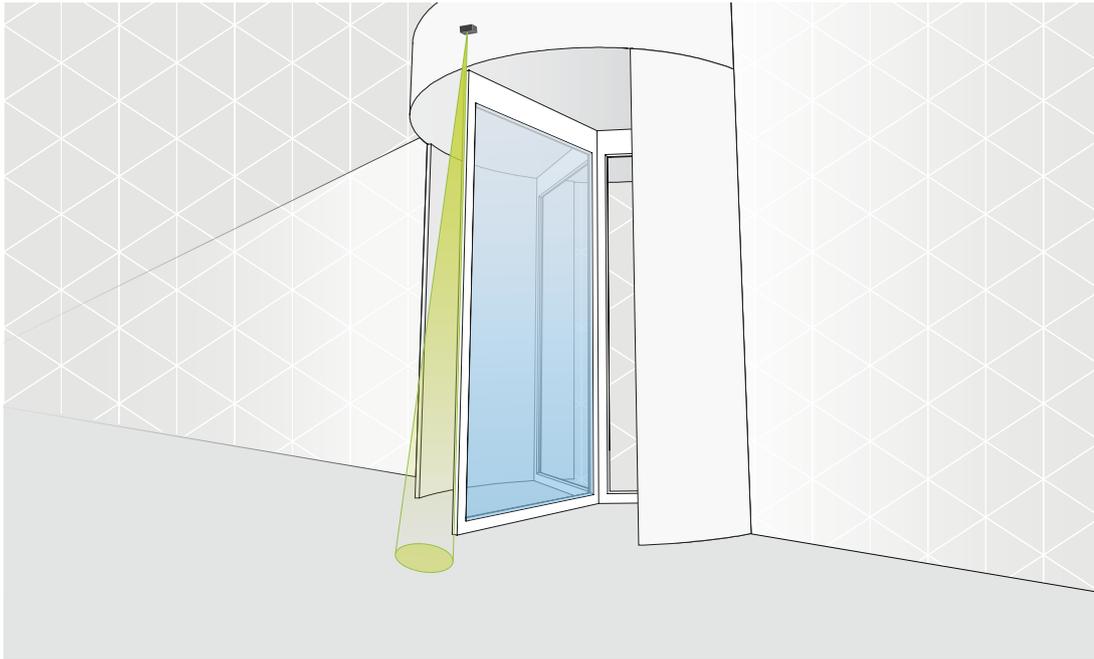
## PEDESTRIAN DOORS



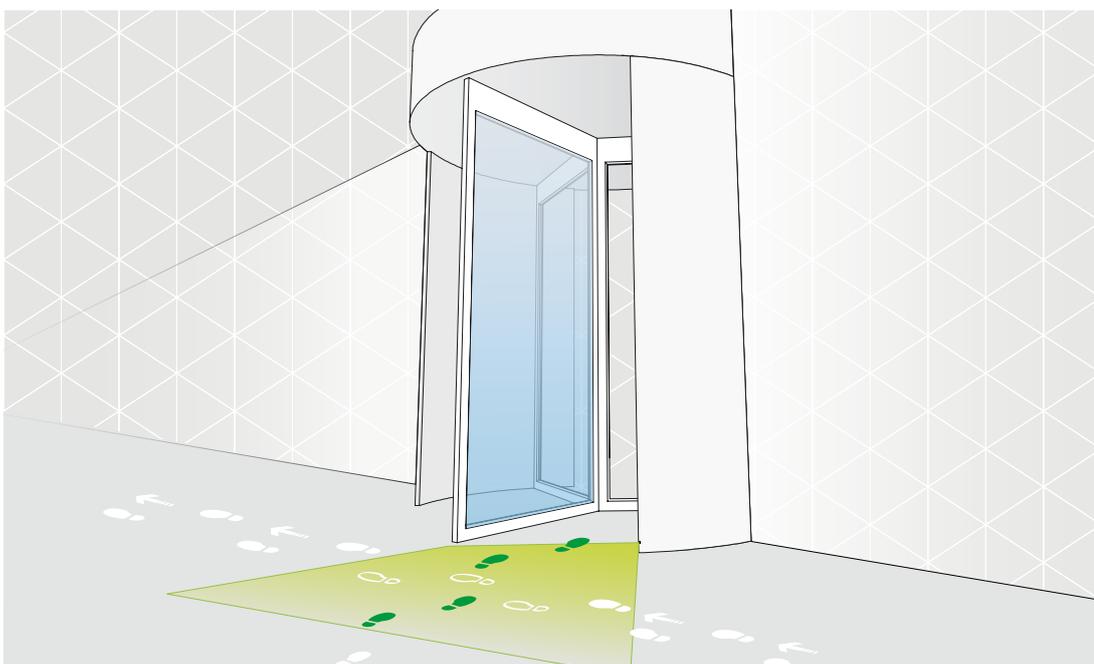
## PEDESTRIAN DOORS

CEDES' TOF (Time of Flight) technology means our sensors offer not only door activation – they can also provide much greater functionality. This new generation of products can decide if the person or object within the detection area intends to pass through the door or is

simply walking past. CEDES' sensor solutions are robust and reliable, thanks to years of experience developing and producing devices for automatic doors.



Conventional door activation sensors ensure reliable detection of approaching people



Smart TOF sensors ignore cross-traffic to increase energy efficiency

## PEDESTRIAN DOOR SAFEGUARDING

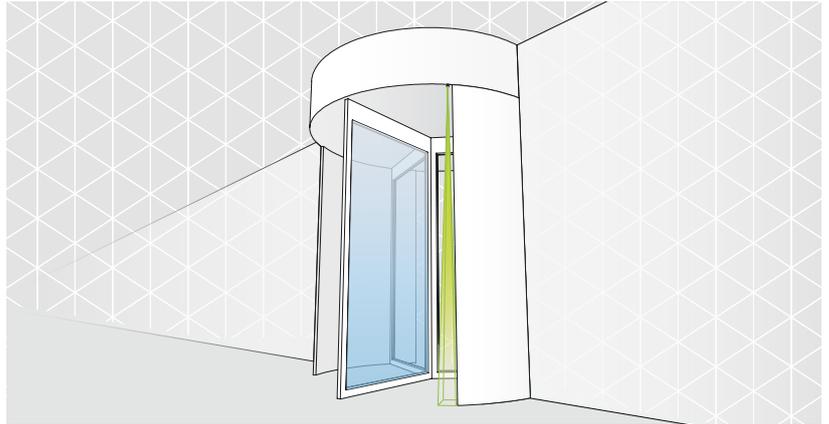
### REVOLVING DOOR CLOSING EDGE SAFEGUARDING

## TOF/Spot-S



The TOF/Spot-S is a compact yet powerful measuring system. This safety version of the TOF/Spot is ideal for safeguarding the closing edge of revolving doors, thanks to its exact detection range setting and very small detection area.

- ▶ Solid-state relay and analog output
- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m



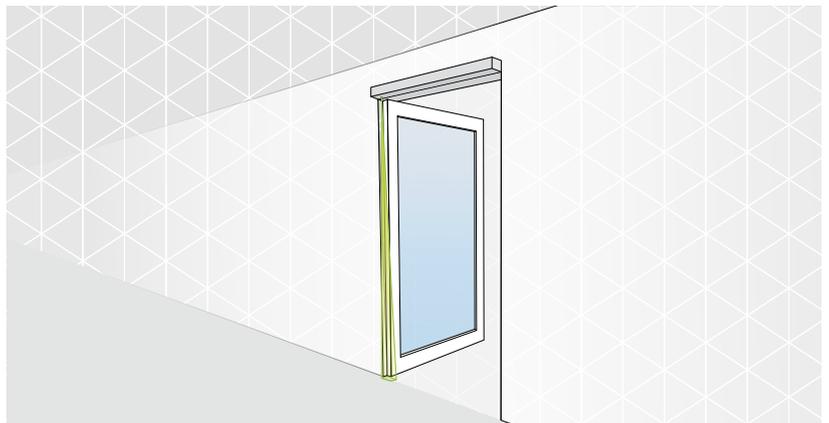
### SWING DOOR HINGE EDGE SAFEGUARDING

## TOF/Spot-S



The TOF/Spot-S is a compact yet powerful measuring system. It offers reliable detection and exact detection range setting. The TOF/Spot-S is a safety version of the TOF/Spot. Its extremely small detection area is perfectly suited to safeguarding the hinge edge of swing doors.

- ▶ Solid-state relay and analog output
- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m



## PEDESTRIAN DOOR SAFEGUARDING

### SLIDING DOORS

## ELS 263



The ELS 263 light barrier has a very compact design and is easily built into door frames or indeed anywhere where space is limited. Fully potted, it is also ideal for outdoor safeguarding applications.

- ▶ Simplest assembly (snap-in)
- ▶ Multiple ELS 263 units connectable in a network with Y-switch



### SLIDING DOORS

## ELS 300



The ELS 300 light barrier is certified under EN-13849, Category 2, Performance Level C. Its compact design allows it to be easily integrated into the safeguarding application.

- ▶ Excellent detection capability even in harsh environmental conditions
- ▶ Various operating ranges available
- ▶ Multiple ELS 300 units connectable in a network with Y-switch



## PEDESTRIAN DOOR ACTIVATION

### REVOLVING DOOR ENTRANCE MONITORING

#### TOF/Start



The TOF/Start is ideal for detecting people or objects approaching revolving doors. Using its direction-recognition capability, it can give an activation command if the person is heading for the door and ignore them if they are passing by. This increases energy efficiency.

- ▶ Individual setting of the detection area
- ▶ Detection area operates with all types of background
- ▶ Fade out of cross-traffic



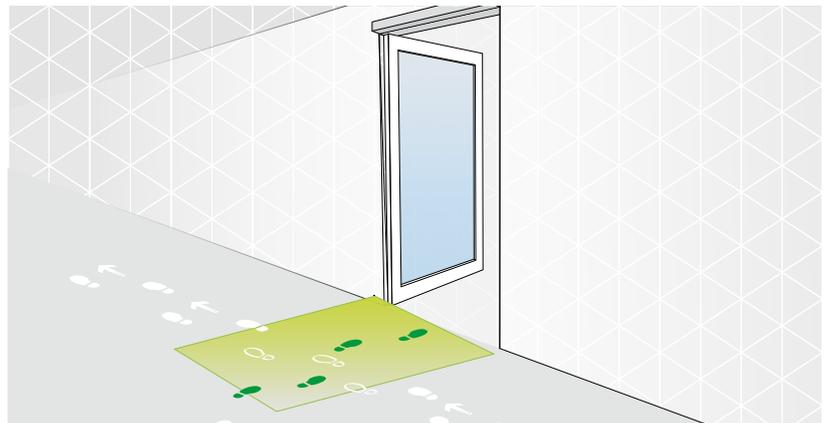
### SWING DOOR ENTRANCE MONITORING

#### TOF/Start



The TOF/Start detects people or objects approaching swing doors. Using its direction-recognition capability, it can give an activation command if the person is heading for the door and ignore them if they are passing by. This increases energy efficiency.

- ▶ Individual setting of the detection area
- ▶ Detection area operates with all types of background
- ▶ Fade out of cross-traffic



## PEDESTRIAN DOOR ACTIVATION

### ACTIVATION SENSORS

#### RDS 100/200



The RDS range of radar sensors provides very reliable door activation. They can be used for all automatic doors, thanks to their large detection area of 4 x 2 m at a mounting height of 2.2 m.

- ▶ Adjustable detection angle
- ▶ Easy mounting and connection to the door control unit
- ▶ Audio function and acrylic plate available

#### TLS 500



The TLS 500 is a versatile diffuse-reflective sensor suitable for any application where spot monitoring is needed. Its compact and elegant design allows it to be easily and discreetly integrated into any application.

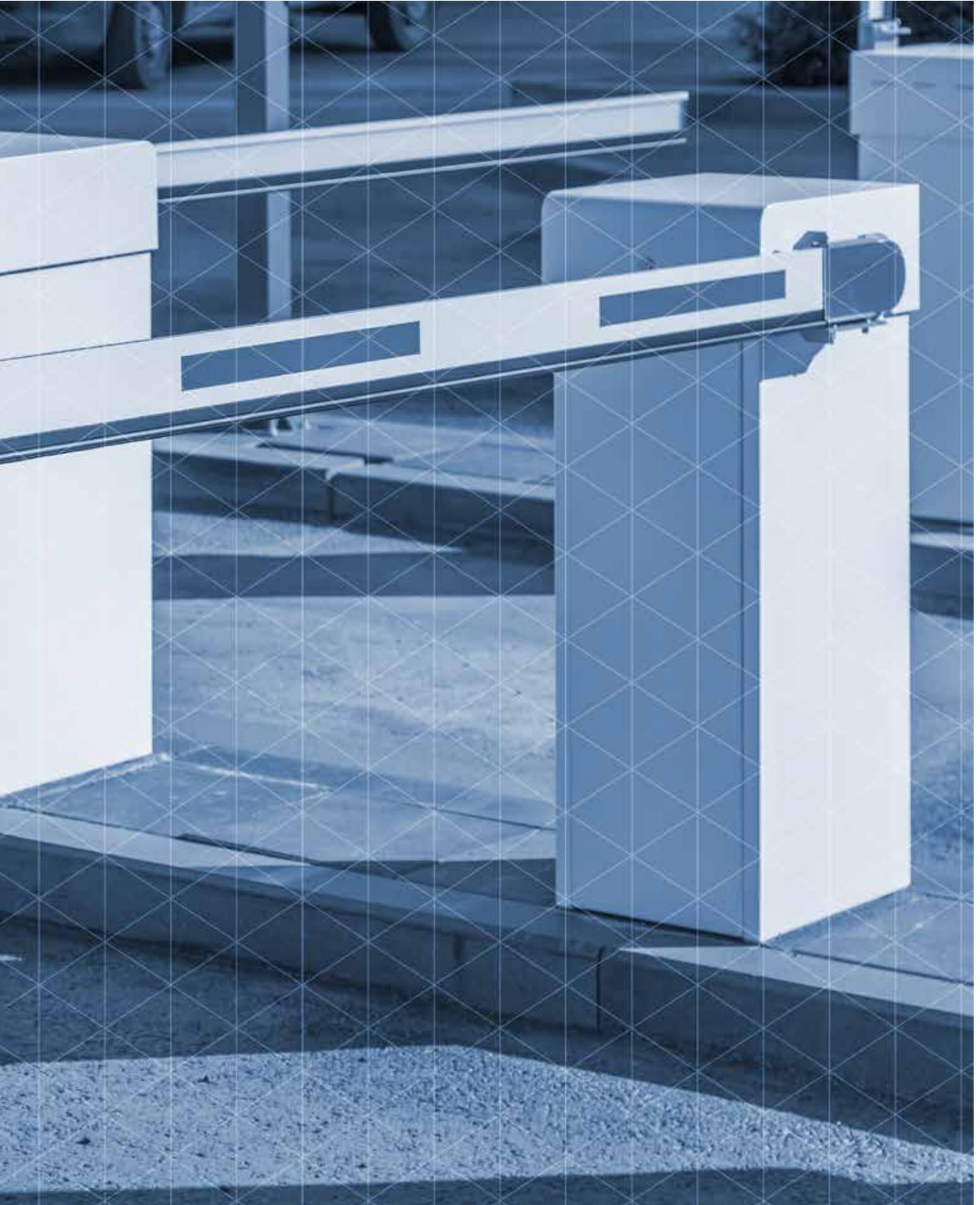
- ▶ Excellent detection capability
- ▶ Very compact detection area
- ▶ PNP or NPN output, light on or dark on available
- ▶ Operating range up to 6 m
- ▶ Insensitive to direct sunlight up to 100,000 Lux
- ▶ Detection area at 2 m is a circle of  $\varnothing$  240 mm

#### TLS 600



The TLS 600, with its wide detection area, is a reliable door-opening sensor for automatic doors.

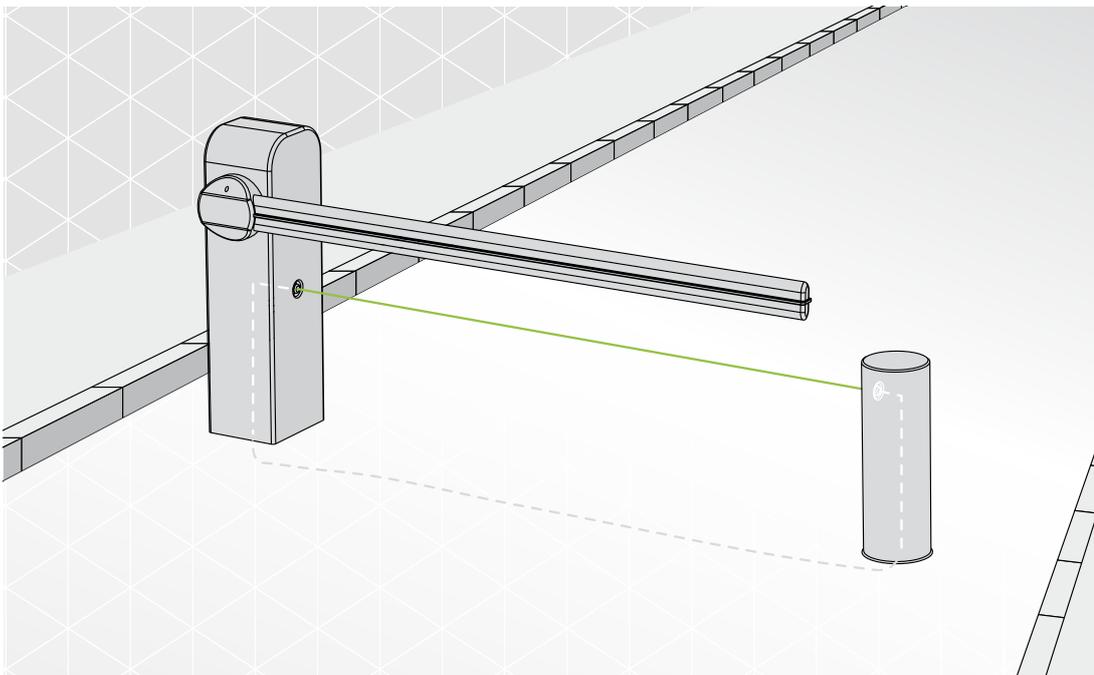
- ▶ Excellent detection capability
- ▶ Very compact detection area
- ▶ PNP or NPN output, light on or dark on available
- ▶ Operating range up to 4 m
- ▶ Insensitive to direct sunlight up to 100,000 Lux
- ▶ Detection area at 2 m is an oval of 860 mm length and 280 mm width



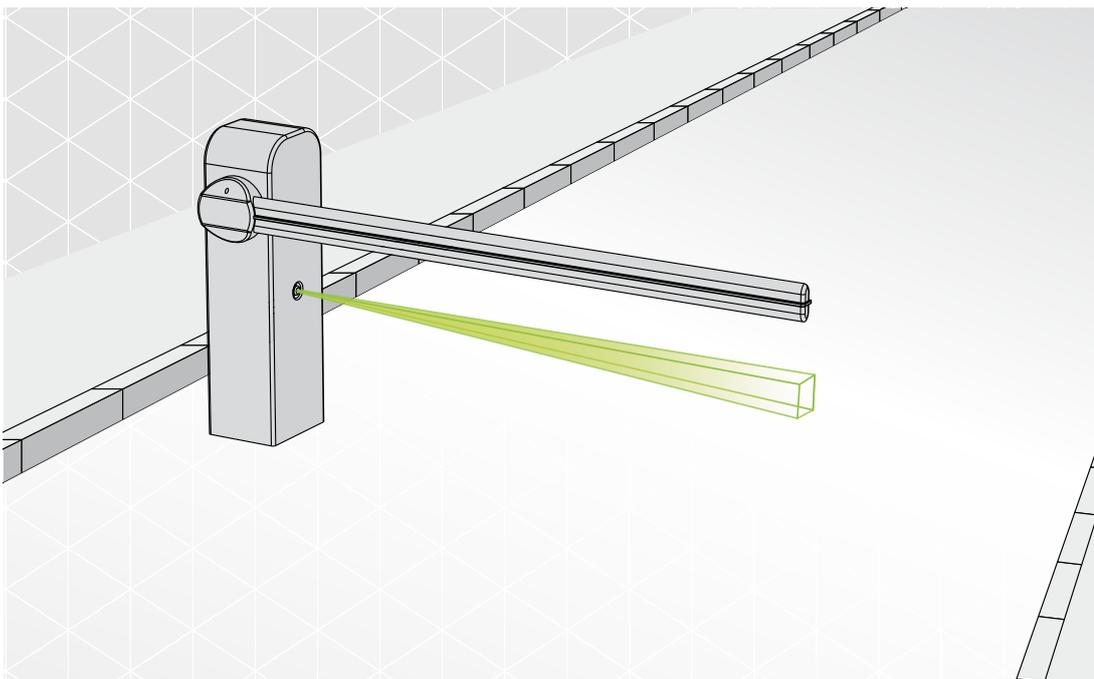
## APPLICATION-SPECIFIC SOLUTIONS

CEDES' latest technology provides an increasing range of solutions for specific application requirements e.g. car park barriers. Conventional single beam sensors require a second housing for the receiver element directly across from the emitter. The installation also requires cabling to run underground from one to the other.

The camera sensor means no separate receiver, no second housing and no extra cabling are required. This greatly reduces the time and effort required to install it. Its specialized software deals with environmental influences, such as sunlight and its effect on a car's metallic coating. CEDES is specialized in solving complex applications.



Car park barrier with a single-beam sensor requires a receiver, additional housing and cabling



Car park barrier featuring the TOF/Spot - a very reliable solution that is very easy to install

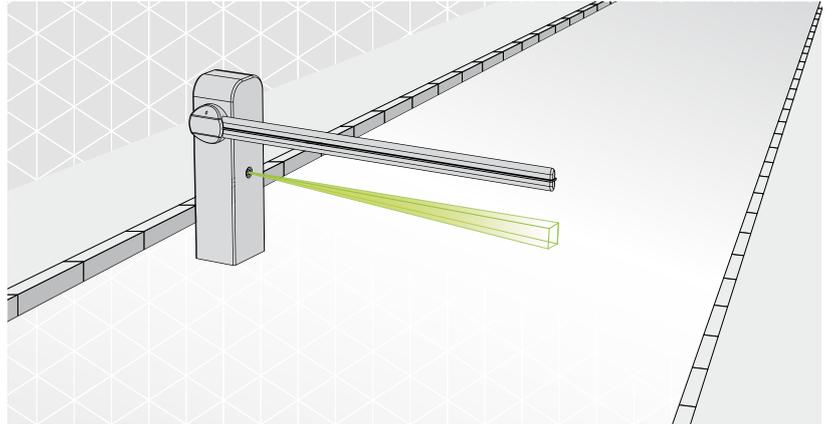
### CAR PARK BARRIER

#### TOF/Spot



The TOF/Spot's very compact design means easier and more efficient installation in car park barrier applications. It prevents the barrier lowering if a car is still underneath. Its TOF camera can set a precise detection distance, eliminating the need for a receiver, extra housing, additional cabling etc..

- ▶ Prevents accidental damage to waiting car
- ▶ Very reliable detection, independent from background



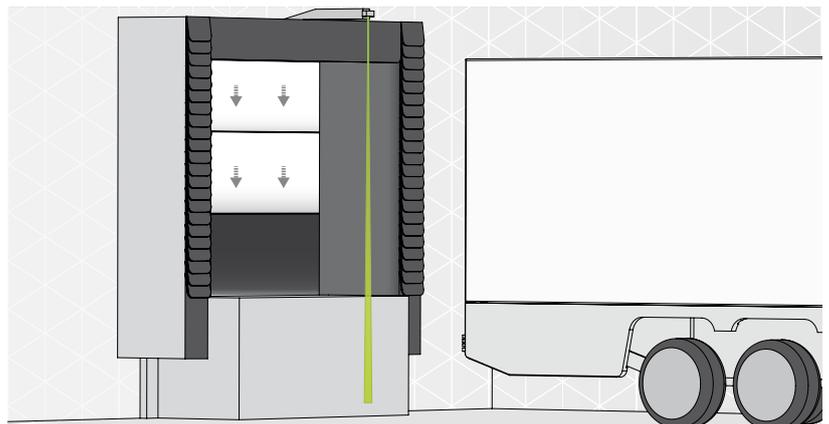
### TRUCK DETECTION

#### TOF/Spot



The TOF/Spot can be used to detect if a truck is present in a loading bay. In doing so, it ensures the automatic door does not open unnecessarily, greatly increasing energy efficiency.

- ▶ Prevents doors opening if a truck is not present
- ▶ Exact distance setting, independent from background
- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m



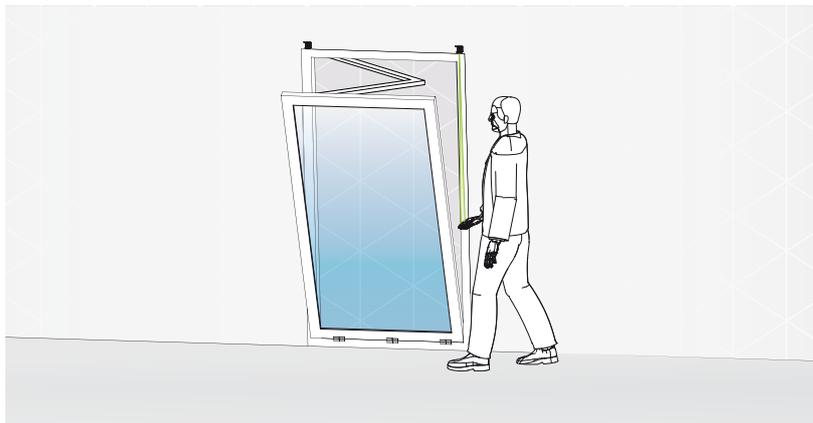
### WINDOW SAFEGUARDING

## TOF/Spot-S



With increasing building automation, the TOF/Spot-S can be used to prevent an automatic window from closing if a person's limb or object is in danger of being trapped. Its compact design allows it to be discreetly installed above the window frame and its exact distance setting ensures ultra-reliable detection, independent of background.

- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m



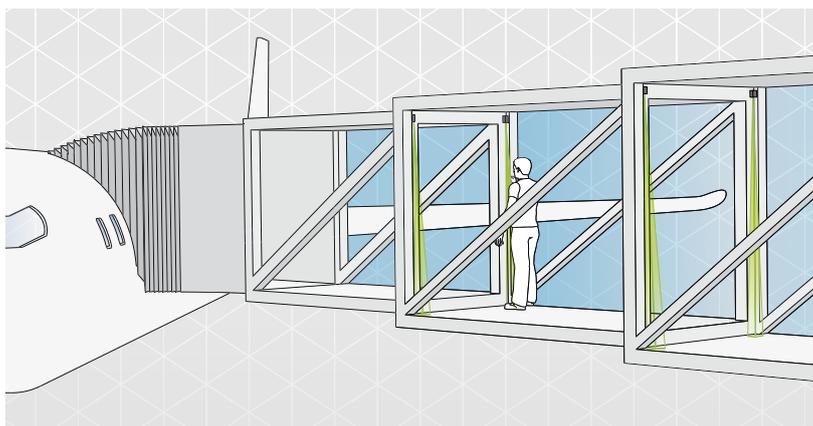
### AIRPORT FINGER SAFEGUARDING

## TOF/Spot-S



The TOF/Spot-S reliable detection and exact detection range setting make it an excellent sensor for safeguarding the telescope edge of airport docking fingers. Its detection range can be precisely configured to safeguard the small but potentially hazardous zones to the side featuring moving mechanical parts.

- ▶ Exact distance setting, independent from background
- ▶ Small and sleek design
- ▶ Operating range from 0.2 m up to 6 m



### RAIL-PLATFORM SAFEGUARDING

## GridScan/LR



The GridScan/LR is a light curtain with an operating range of up to 80 m (260 ft.). This makes it ideal for safeguarding rail platforms, both underground and overground. Its multi-scan feature ensures reliable operation in harsh weather.

- ▶ Up to 2.6 m in protection height
- ▶ Elements run entire length of edge



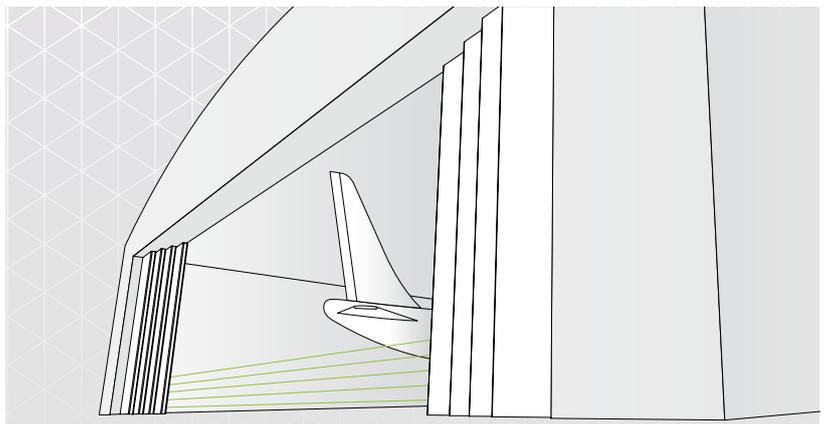
### HANGAR SAFEGUARDING

## GridScan/LR



The GridScan/LR's 80 m (260 ft.) maximum range also makes it very suited to safeguarding aircraft hangars. Each GridScan/LR features 2.6 m in protection height and the multi-scan feature ensure reliable operation in harsh weather.

- ▶ Up to 2.6 m in protection height
- ▶ Elements run entire length of edge



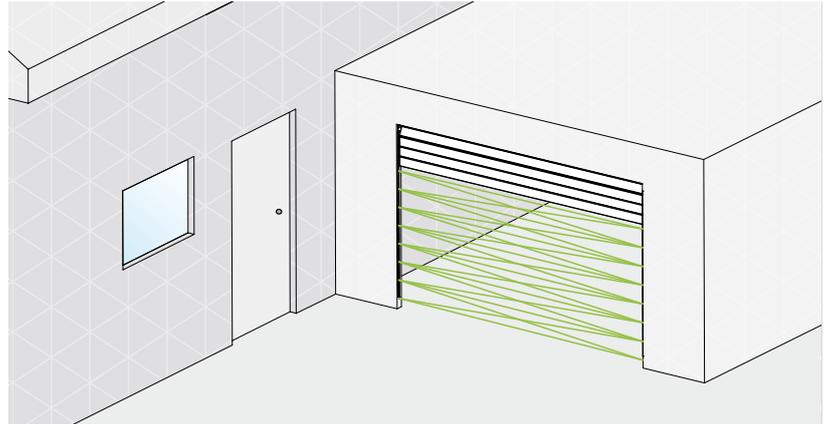
### RESIDENTIAL DOOR SAFEGUARDING

## Micro MF



The Micro MF is a universal light curtain for safeguarding automatic doors. Its robustness and flexible optical element arrangement allows it to be adapted to customer-specific applications, such as garage door safeguarding.

- ▶ Telemonitoring status output (TMS)
- ▶ Test input for increased safety
- ▶ IP65 (standard) and IP67 (waterproof) versions available



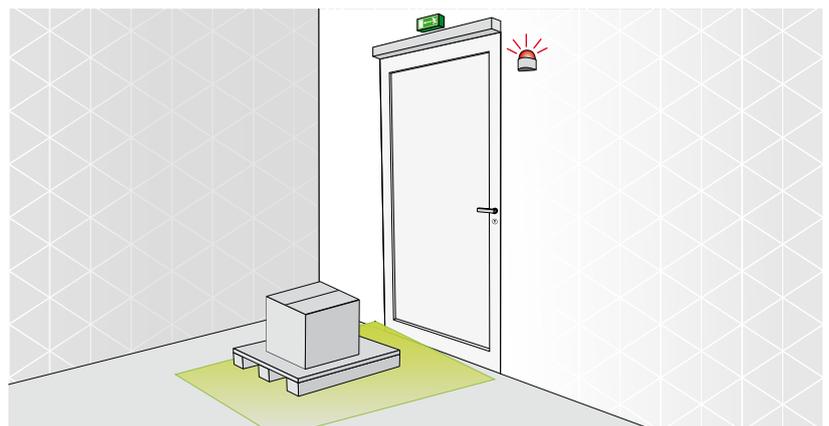
### EMERGENCY EXIT MONITORING

## TOFniva



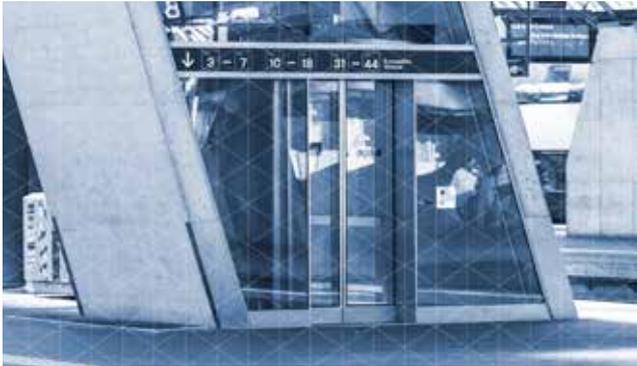
The TOFniva is a multi-purpose area sensor. The detection area can be set to match the application requirements. This makes it ideal for ensuring emergency exits remain clear of objects, switching an output and triggering an alarm if anything is placed in the way.

- ▶ Adjustable detection area
- ▶ Independent of background
- ▶ Insensitive to ambient light



# CEDES APPLICATION MARKETS

## ELEVATORS



## ESCALATORS



## INDUSTRIAL DOORS



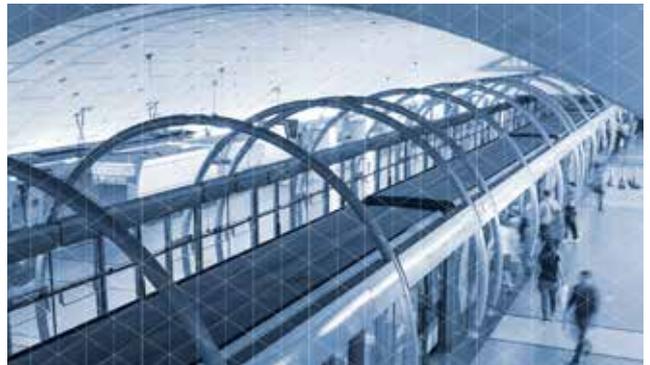
## PEDESTRIAN DOORS



## RESIDENTIAL DOORS



## TRANSPORTATION & PEOPLE-FLOW



## AUTOMATIC WINDOWS



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