Maximizing Safety!

Solid-state scanner with rugged ToF technology for perfect protection at every closing edge.

ShieldScan
Door Protection Sensor

Your automation, our passion.

PEPPERL+FUCHS

ShieldScan

The Door Sensor for a New Level of Safety

With its innovative technology concept, the new door safety sensor from Pepperl+Fuchs stands for one thing above all: uncompromising safety. Static time-of-flight technology provides impressive precision and reliability—in any environment, at all times.

Quality and Expertise that Raise the Bar

As a leader in industrial sensor technology, Pepperl+Fuchs has been developing components and solutions for over 70 years. Above all, our goal is to offer the perfect solutions for our customers' applications. Absolutely reliable sensor technology is indispensable when the safety and functionality of automatic door, gate, and barrier systems needs to be guaranteed. Decades of experience, a high level of technical expertise, and an enormous variety of products mean that Pepperl+Fuchs is a competent partner for customers worldwide.

Reliable Monitoring at All Times

When it comes to door automation, safety is the key issue. Collisions with people when the doors are opening and closing have to be prevented. The safe and reliable monitoring of the closing edges is the top priority when operating automatic doors. People in the opening area always have to be detected to prevent the accidental closing of the door and injuries.

Just a Bit of Protection—No Such Thing!

Protecting people is a top priority for Pepperl+Fuchs. That is why the company has been uncompromising in developing its new door safety sensor, the ShieldScan. Optimized beam geometry provides perfect protection for each door area. The hinge edge is monitored reliably, and pinching is prevented. Innovative technology, convenient commissioning, and puristic design—the ShieldScan door safety sensor offers safe functionality without compromise.

For more information, visit
pepperl-fuchs.com/pf-shieldscan

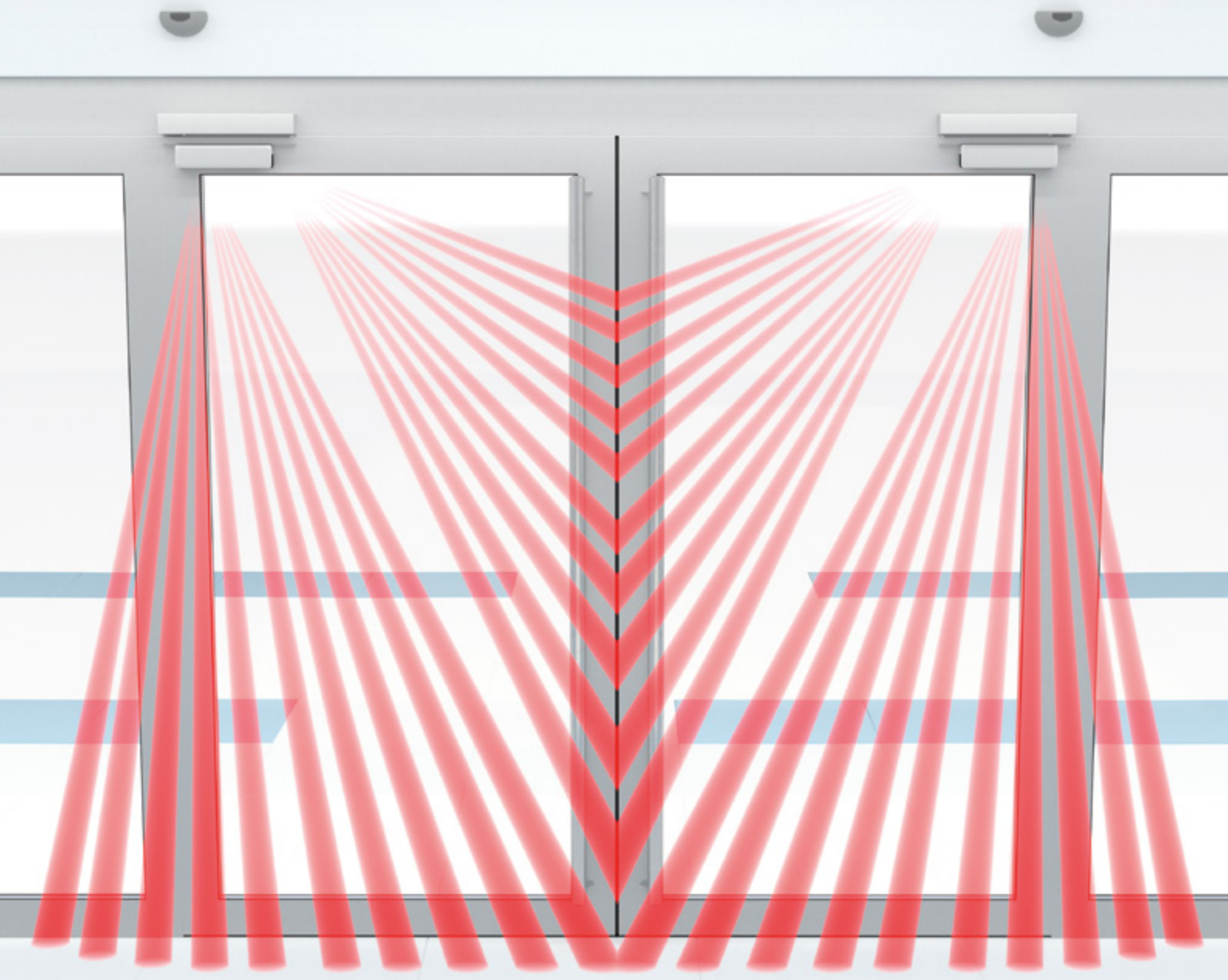
Technology

Innovative Technology, No Compromises

Single beams specifically aligned to the door leaf, the leading edge, and the hinge edges guarantee smooth operation for optimal reliability.

Perfect Customization to Any Door Area

Due to the ShieldScan's configurable beam path, the sensing range has been optimally adapted to the different door areas. This precise customization option makes the new Pepperl+Fuchs door protection sensor the perfect solution for the different requirements of automatic doors.

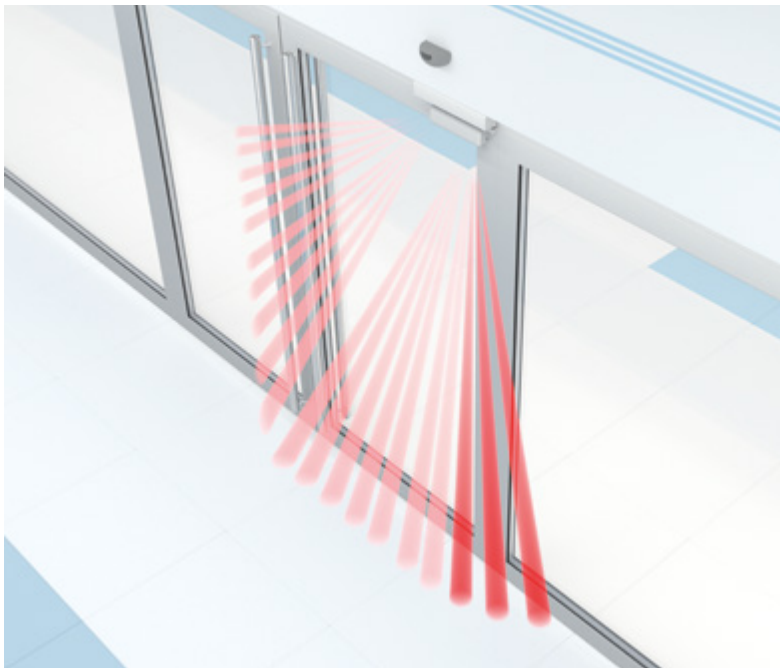


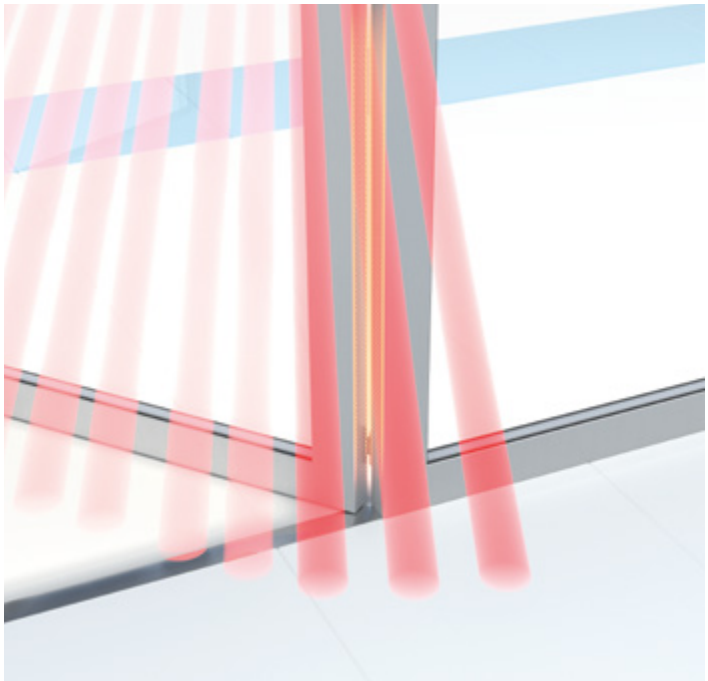
The Leading Edge Always in Sight

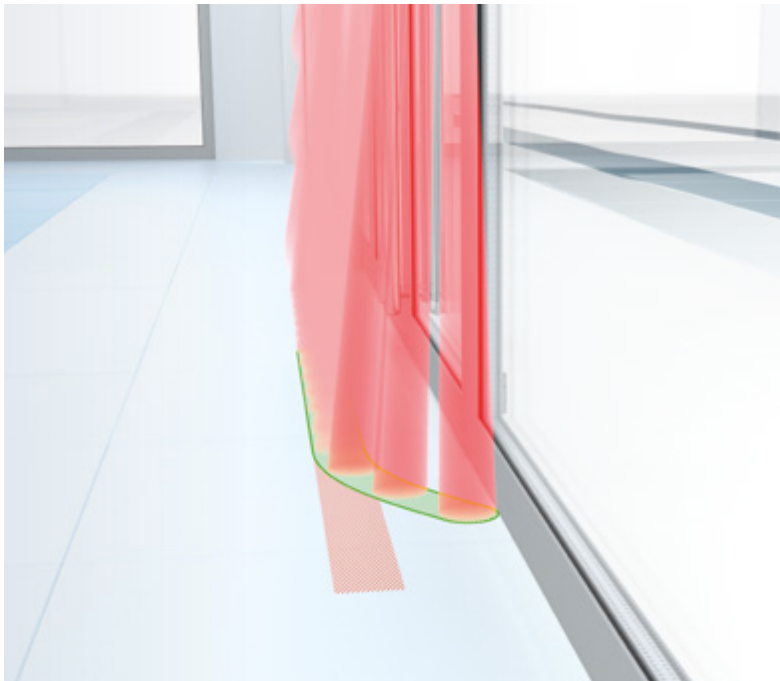
The ShieldScan always provides reliable protection using optimized beam geometry with ten individual beams at the leading edge. The exposed beam path ensures that handles do not pose a safety risk. The beams, which are swiveled forward, pass the handrail to ensure that they do not hit the door handle. Commissioning is especially quick and easy, since the handle does not need special consideration.

A Sensor That Sees around Corners

With ShieldScan, the hinge edge is protected by the curvature of the beam field around the hinge edge. A lateral grip is detected. This means that the new Pepperl+Fuchs door protection sensor offers optimal sensor-based pinch protection.







Technology

Optimal Reliability in Any Environment

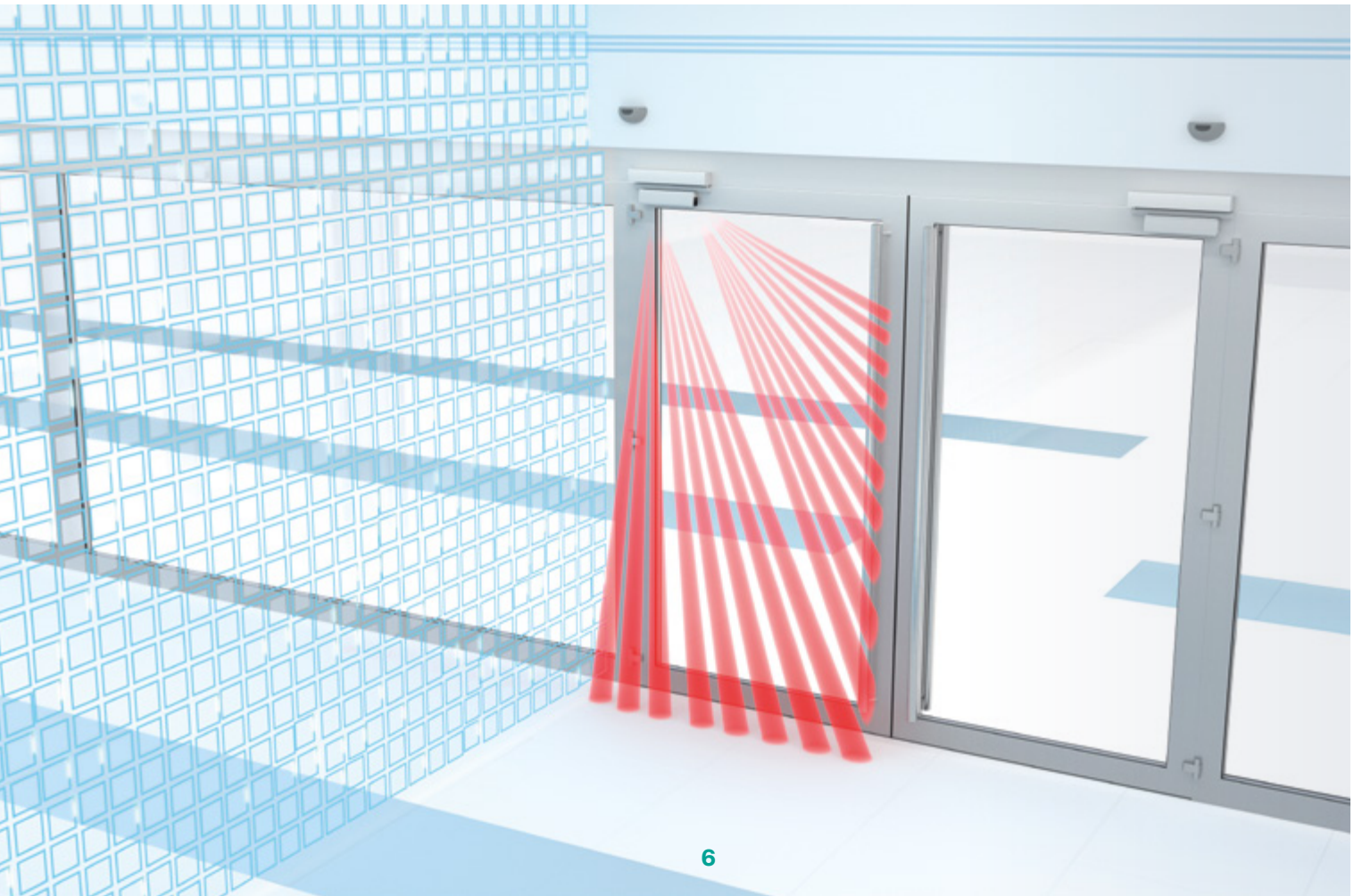
The new ShieldScan is based on the proven principle of light runtime measurement—absolutely safe and fully accurate. For convenient operation, it is possible to simply hide non-relevant areas using the virtual-wall function.

Proven Technology, Innovatively Used

Like the first door protection sensor, the ShieldScan uses static time-of-flight sensor technology (ToF). The proven principle of light runtime measurement delivers safe, accurate measurements with high repeat accuracy and short response times. The distance measurement per single beam and multiobject detection allow significantly improved detection reliability and guarantee superior precision. This enables absolutely reliable operation in any ambient conditions. Because there are no moving parts, operational noise is reduced, bearing damage is not an issue, and service life of the devices is reliably longer.

Convenient Operation using the Virtual-Wall Function

The sensor can adjust its protection field dynamically and according to the angle. This means that a wall behind the open door does not need to be explicitly taught in, which makes operation simple and very convenient. The virtual-wall function of the ShieldScan hides the individual beams of the protection field in succession when the door is opened until the total opening angle is reached. All changes behind the open door are ignored and reliable operation is ensured in all environments.

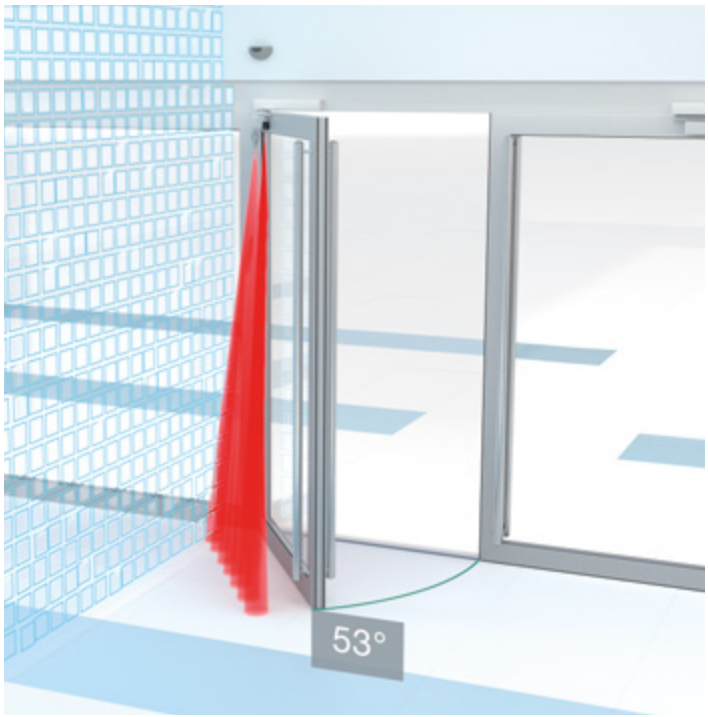


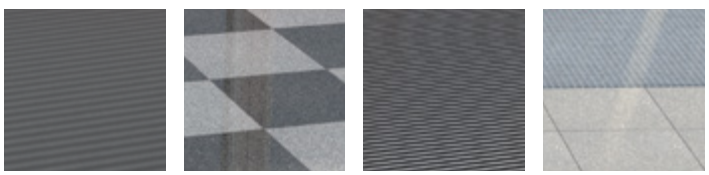
CAN Ready: Customized Interface

The ShieldScan can provide bidirectional communication between the sensor and the control panel via a CAN bus interface. This allows the user to access important value-added data, which allows automated parameterization. IoT and Smart Building applications are also possible based on the additional data and make the ShieldScan a future-proof investment. The CAN standard module is already prepared for individual customization for the user, guaranteeing optimal integration and quick plug-and-play commissioning.

Highlights

- Solid-state scanner with time-of-flight technology is rugged and silent, no matter the conditions
- High reliability: suppression of background surfaces via virtual-wall function





Top: Virtual-wall function for hiding nonrelevant areas.
Bottom: Reliable with all types of floor coverings and resistant to ambient light and reflections.

Easy Commissioning, No Compromises

The ShieldScan is mounted via plug-and-play in just a few steps. Intuitive gesture control allows for especially quick and simple commissioning—for unique convenience.

Quick and Effortless: Plug-and-Play Mounting

The exceptionally compact design of the ShieldScan is impressive. Each module consists of only the basic housing and cover. All optical elements are preinstalled in the housing and must not be aligned individually. This is called a single-component system. One sensor is mounted on the hinge edge on each door for complete coverage of the door leaf. Plug-and-play mounting of the ShieldScan requires just a few steps and a total of three screws—a simple, time-saving, and highly convenient process.

Modular Concept for Increased Flexibility

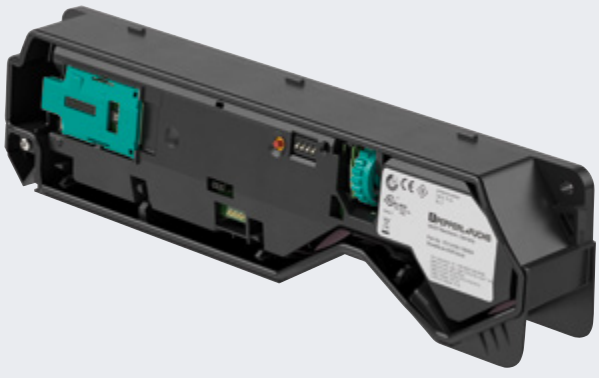
The new ShieldScan is available as a set or can be ordered separately for a modular arrangement. This means that the installer always has the right individual component for service applications and retrofit solutions. Only one sensor type is needed for all door sizes, since the ShieldScan guarantees absolute reliability for door widths of up to 1800 mm and door heights of up to 3500 mm. Even with new doors and conversions, only one sensor model is needed. A modular concept that reduces planning costs and offers a significant increase in flexibility.

Excerpt of Technical Data

Mounting height	3,500 mm
Degree of protection	IP65
Ambient temperature	–30 °C ... +60 °C
Operating voltage	24 V DC ±20 %
Signal output	SST; NPN, PNP, short-circuit proof; CAN
Safety integrity level	SIL 2
Performance level (PL) PL d	PL d
Category	Cat. 2
Conformity with standards	DIN 18650/EN 16005; EN 12978; ISO 13849-1; EN 61508 part 1–4

Highlights

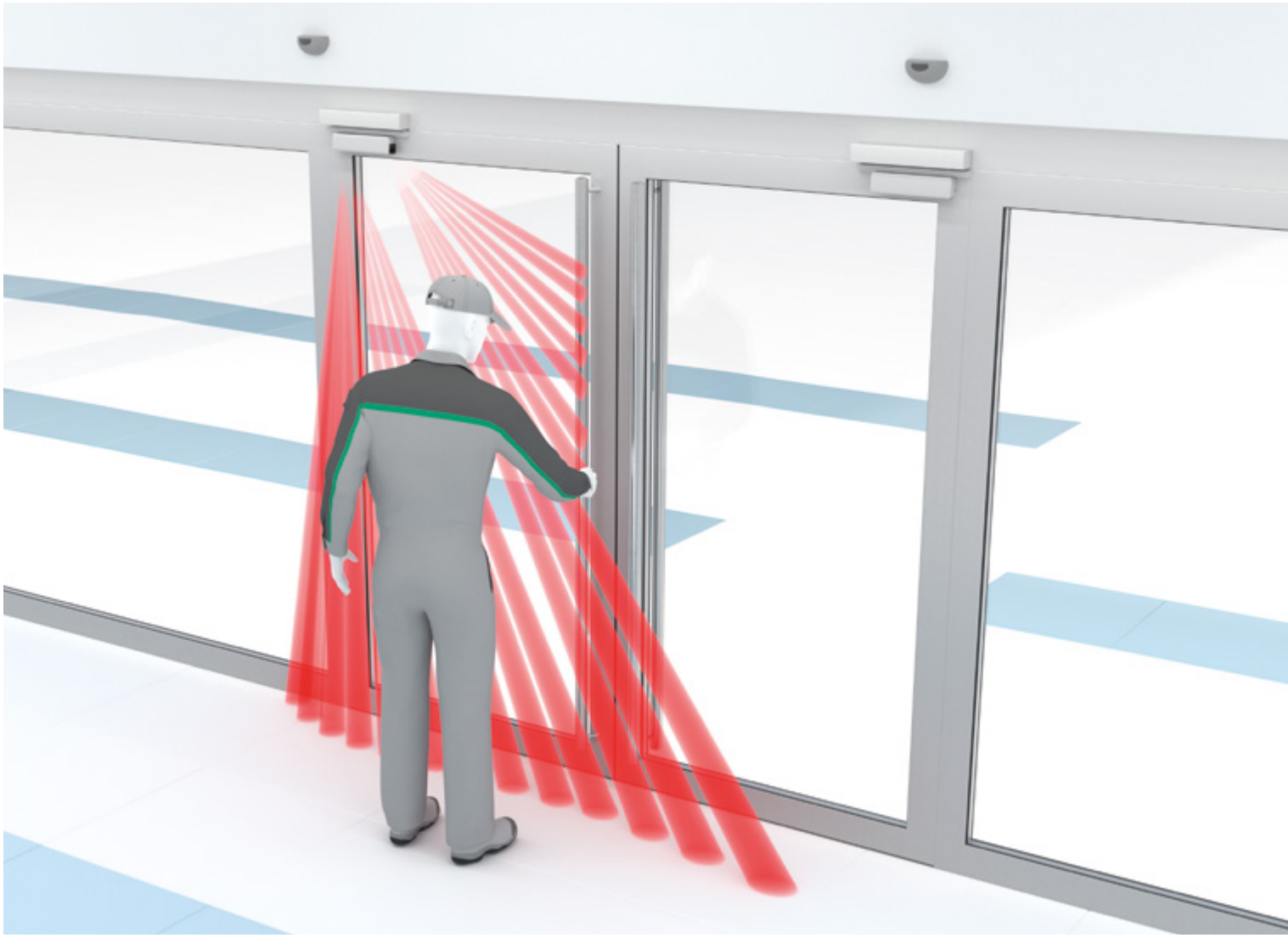
- Plug-and-play installation in just a few steps—even outdoors due to IP65 housing
- Defined inclination angles and intuitive gesture control make installation effortless
- Less planning time: one sensor for all standard swinging doors



Intuitive Gesture Control

The ShieldScan enables especially quick and simple commissioning. The sensor system first teaches in the distance to the ground. The intuitive gesture control defines the distance to the leading edge (door width) and the total opening angle for subsequent door movement.

Adjusting the inclination using the integrated knob offers users preinstalled settings that facilitate definition of the opening angle. Each door height is assigned a fixed number. Overall, the ShieldScan is incredibly simple and convenient to operate, and the commissioning process is quick and efficient.



Design

Minimalist Design, No Compromises

Compact design, simple shape, various colors: the ShieldScan from Pepperl+Fuchs has an impressive design concept that adapts perfectly to any door, in any environment.

Housing Protection IP65 for Optimal Reliability

As the first door protection sensor on the market, the ShieldScan boasts IP65 protection. The cover with integrated seal creates a waterproof connection when placed on the base body. The well-conceived design with optimized rain flow ensures water droplets can drain away easily. The combination of the high safety class and perfect design means that no additional protective measures are needed. The ShieldScan offers simple, quick commissioning, and impressive reliability during operation.

Suitable for Any Door Design

The simple, cube-shaped plastic housing of the ShieldScan enables unobtrusive mounting on every door. The compact sensor is discreetly positioned on the hinge edge of the swing door, and protects the entire door leaf. For glass doors with narrow door frames, the design ensures that the sensor does not protrude onto the glass surface. The linear shape is aligned to the rectangle of the door wings to create perfect symmetry—the ShieldScan fits seamlessly into any design concept.

Always the right color

Suitable for any door design

Always the Right Color

The door sensor is completely enclosed by the cover; the look can be easily adapted to the door by simply changing the cover color. Several standard door colors—black, white, and silver—are available. The cover can be custom-painted on request. The Pepperl+Fuchs ShieldScan is extremely flexible and adapts perfectly to any door design.

Highlights

- Low-profile corner mounting for seamless incorporation into the door frame
- Blends into any door design with a sleek, color-coordinated housing
- Slim, compact housing for perfect integration with the door

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