



Safety shoe



EN | Product information

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Areas of application

The safety shoe is designed as collision protection for the level control of passenger, baggage, catering and maintenance platforms. Pressure on the surface activates the interior switches.

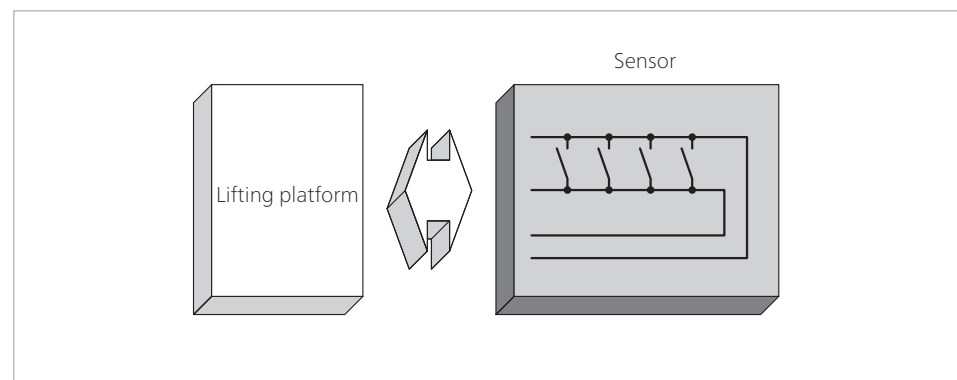
Its especially rugged installation makes it perfectly suitable for use in a rough environment and provides excellent water resistance on the surface. The function of the safety shoe is guaranteed even in wet conditions, with a water level of up to 10 mm in the position of use.

Concept

Switches are installed in the safety shoe as normally closed contact (NC) or normally open contact (NO) with forceguided contacts. The appropriate wiring achieves a single-fault-safe system according to ISO 13849-1 up to category 3 PL d.

The contacts of the NC switches are opened with actuation (pressure on the surface).

The contacts of the NO switches are closed with actuation (pressure on the surface).

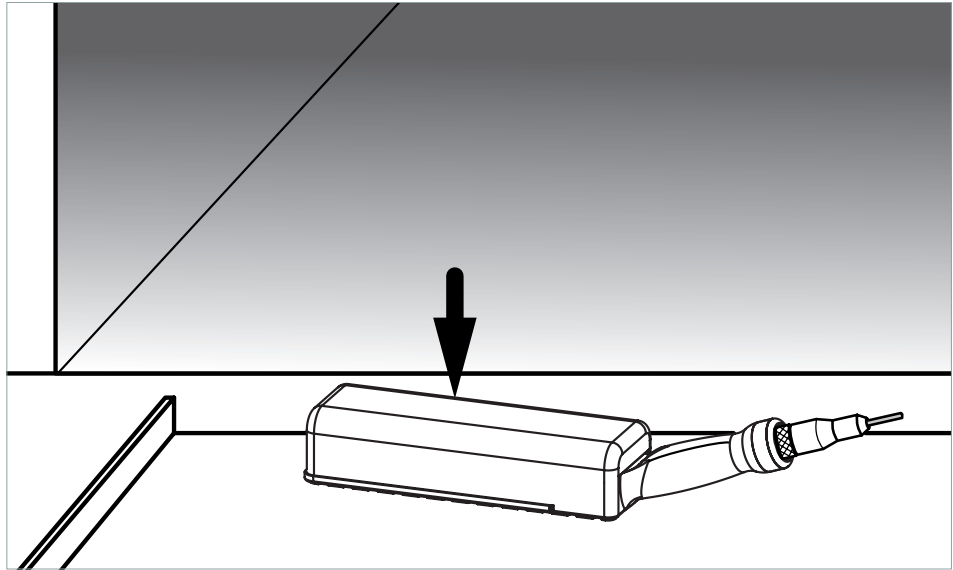


Examples

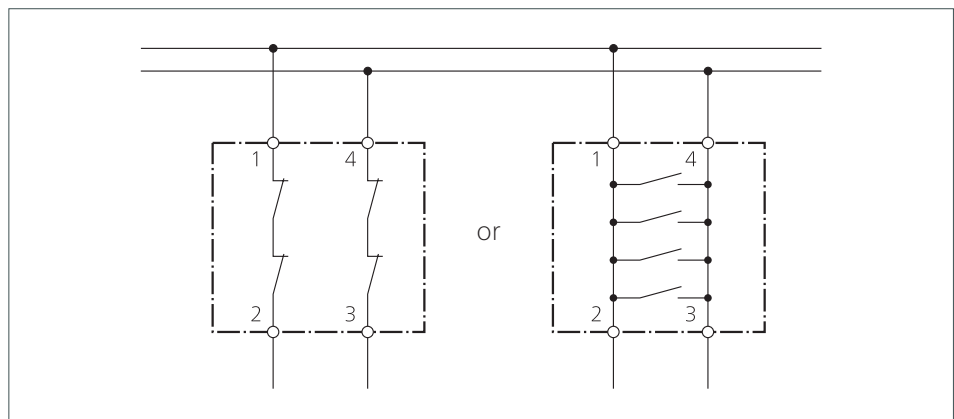
Areas of application are all areas in which mobile platforms could touch objects. An example to be named is the areas around air traffic (passenger stairs, carousel...).

Operation

The lifting platform is moved to the body of the airplane and the safety shoe is positioned between movable platform and object. The loading lowers the airplane which would make it collide with the lifting platform. The safety shoe helps detect this. Pressure is applied on the safety shoe during the pressing in. This triggers actuation and the control of the lifting platform receives the command to lower itself until the safety shoe is relieved again.



Interconnection



Other versions (also with monitoring resistor) available on request.

Maintenance and cleaning

The sensors are virtually maintenance-free.

Regular inspection

Depending on the utilisation, sensors must be inspected at regular intervals (at least monthly)

- for proper functioning,
- and damage.

Cleaning

If the sensors become dirty, they can be cleaned with a mild cleaning product.

Technical data

Safety shoe	
Testing basis	In accordance with ISO 13856-3
Switching characteristics at $v_{test} = 10 \text{ mm/s}$	
Actuation force	+23 °C
Test piece Ø 80 mm	< 300 N
Effective actuation angle	90°
Actuation distance	< 5 mm
Overtravel distance	15 mm
Safety classifications	
ISO 13856: reset function	without
ISO 13849-1:2023	up to category 3 PL d possible
MTTF _D (sensor)	381 a
B _{10D} (sensor)	2× 10 ⁶
n _{op} (acceptance)	52560 per year
Mechanical operating conditions	
Sensor size (W × H × D)	300 × 69 × 104 mm
with handle	450 × 99 × 104 mm
Weight	1.1 kg
IEC 60529: degree of protection	IP67 with screwed plug connector
Operating temperature	-20 to +45 °C
Storage temperature	-20 to +45 °C
Elektrische Betriebsbedingungen	
EN 60947-5-1: utilisation category	AC-15: 230 V / 1.5 A DC-13: 60 V / 0.5 A
Switching voltage (max.)	AC 230 V DC 60 V
Switching current (max.)	1.5 A 0.5 A
Continuous current (max)	8 A 8 A