Collision Avoidance System



KNAP AUTOMATION

Complete system solution for
Ground Support Equipment

ASO Safety Solutions

Anwendungsbeispiele
Applications









SENTIR®
bumper

Individuelle Lösungen
Customized Solutions







COLLISION AVOIDANCE SYSTEM FOR GSE

ASO's collision avoidance system has been developed to ensure a damage-free approach of the vehicle to the aircraft. The modular component system consists of a control unit, that acts as an interface of all components, as well as tactile and proximity sensors.

The proximity sensors detect the fuselage, illustrate information like distance and current system status and provide alarm if necessary, so that the operator can act accordingly.

If a collision cannot be avoided, the actively switching sensor mounted in the front area of the vehicle ensures that neither the aircraft nor the vehicle is damaged and indicates this collision via peripheral components such as lights and beepers.

ASO's collision avoidance system is particularly suitable for retrofitting to existing equipment and thus offers the possibility to efficiently increase the safety level. Interruptions in work processes caused by collisions as well as costs for repairs can be avoided or reduced immensely.

PROXIMITY SENSORS

Ultrasonic sensor

Reliable and proven technology to detect the distance between GSE and aircraft. Compatible with ASO control units.

Radar sensor

Distance detection with more precise and error-proof design in terms of noise and environmental conditions.

FEATURES

Display unit

Provides information for the operator in terms of distance to the aircraft and system status.

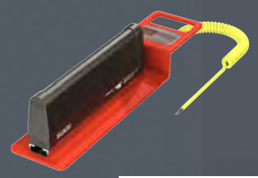
PRESSURE - SENSITIVE SENSORS

SENTIR® bumper



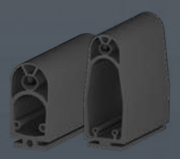
The safety contact bumper is applied at the GSE in order to detect any impact when approaching the aircraft. Immediately, a signal can be triggered. Thanks to its specific design, the bumper also absorbs the momentum of the vehicle itself and offers a crumple zone, so that the risk of damage is very low even when an aircraft is touched.

SENTIR® safety foot

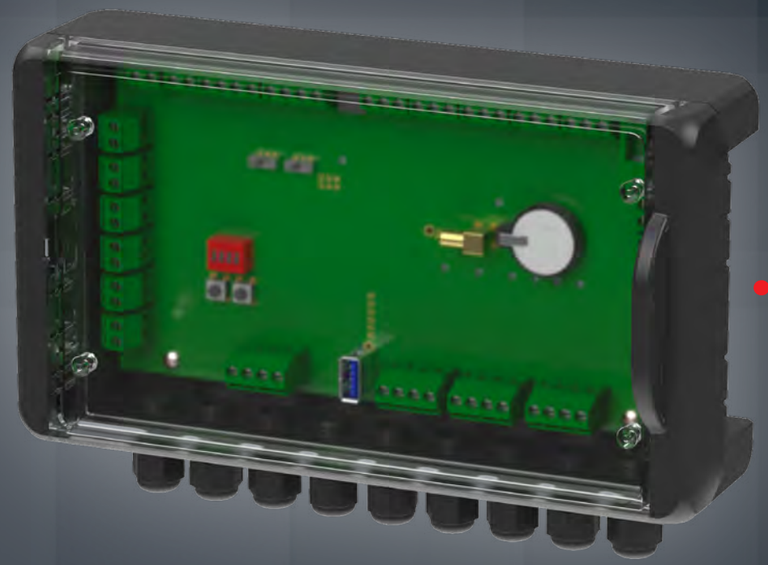


The sensor is placed below the aircraft door in order to detect and report the lowering of the aircraft during loading.

SENTIR® edge



The actively switching safety contact edge is mounted at the vehicle in order to detect any impact when approaching the aircraft, specifically at the leading edge of handrails.



ELMON® relay

GPS antenna

Exact determination of location. At an event of tactile safety input trigger, the location and time is stored.

Acoustic warning

With self-adjustable volume depending on the ambient noise level.

Signal lights

Indicates the distance and system status via light signals.

Log book entry

Event tracker of system and sensors status can be down-loaded via USB Stick in case of collision.

Reset button

In case of collision, the system can be reset by the ramp agent to ensure no collision is overlooked.

Interface function

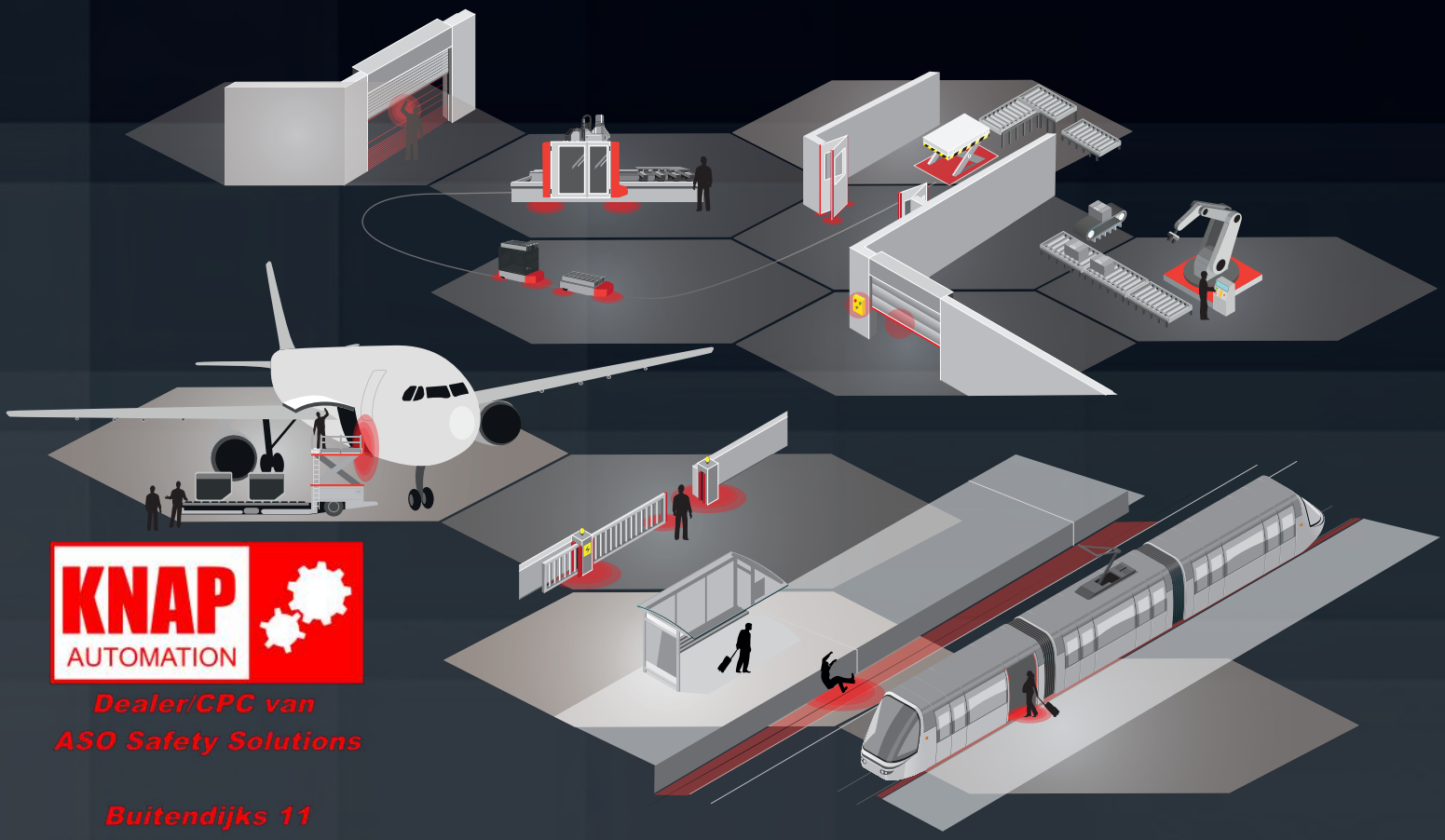
Can be connected to vehicle control unit for higher integra-tion of autonomous aircraft handling.

ASO Safety Solutions - At the Cutting Edge

ASO Safety Solutions has been established for almost 40 years and is today the world market leader for tactile sensor technology.

Regular exchanges and feedback from customers has enabled the compnay to align production and sales with real customer requirements. Investment in research and development has allowed ASO to meet growing requirements in industry and society. ASO Safety Solutions pride themselves in innovative thinking and dynamic development processes that make them an industry success.

ASO addresses the major challenges of globalisation by concentrating on core competences, by carefully adapting its operating structures and systematically expanding its international presence. Today, there are 200 employees worldwide, who manufacture safety contactors, controls and customer-specific sensor solutions. In addition to the company headquarters in Germany, the USA and China, sales offices all over Europe and a worldwide dealer network are responsible for worldwide sales.



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