Product family overview

Safe Brake Assist

Safe collision avoidance for mobile machines in outdoor applications

SICK
Sensor Intelligence.

Advantages

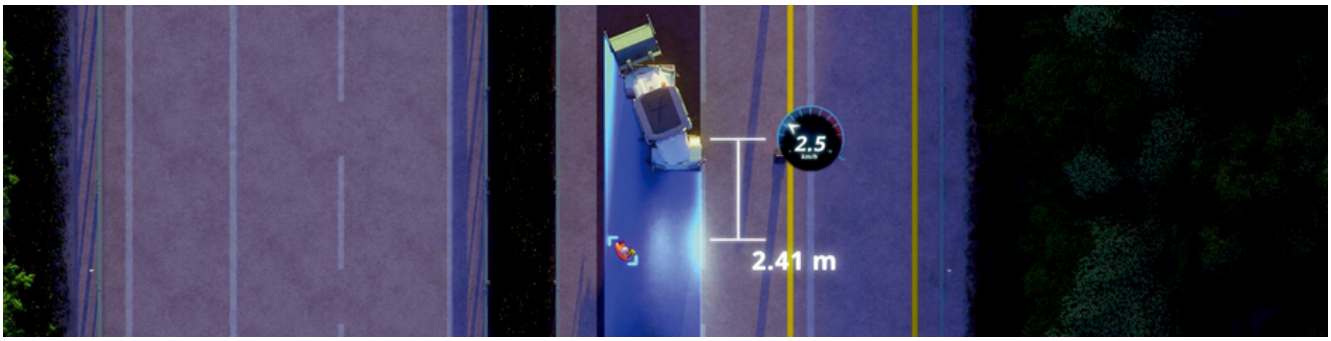
High availability and safety up to PL b – even in difficult driving scenarios

Integration
SICK offers certified safety components for collision avoidance of mobile machines and supports machine manufacturers in simplifying the work required to certify their specific machines.

Functionality
Safe Brake Assist continuously monitors the distance of the vehicle from persons and objects in the driving path and continuously transmits these distance values to the machine controller. If a collision is imminent, the controller reliably slows down the vehicle.

System components
The EN 18349-certified safety system comprises two rugged 3D LiDAR sensors for environment perception and a processing unit that links measurement and vehicle data based on intelligent algorithms. This enables Safe Brake Assist to respond to obstacles in the driving path in a situation-specific manner.

Safe environment perception thanks to 3D LiDAR sensors



Adaptive braking support
The intelligent braking control allows situation-adapted braking of mobile machines, thereby avoiding damage to the asphalt surface.The system adaptively controls the braking process, thereby relieving for the driver.

Safely drive past objects
To enable vehicles to drive past persons and objects safely and without unnecessary braking, the system precisely calculates the distance to these. This increases the productivity of your machines without having to compromise on safety.

Reliable detection capabilities
Intelligent filters allow smooth operation even under adverse ambient conditions and weather influences such as vapour, fog and bright ambient light. The result is a high machine availability, and thus a high reliability in your day-to-day work.

Flexible and certified solution for construction and agricultural machinery

Safe Brake Assist

Technical data overview

Supply voltage	(8 V DC ... 17 V DC)
Ambient operating temperature	–30 °C ... +50 °C, Accessories are required for operation during maximum solar heating
Ambient light immunity	100,000 lx
Vehicles	Construction machinery, Agricultural machinery
Monitored area	Rear of vehicle, front of vehicle with dynamically calculated travel path of the machine
Functions	Output of safe distance signal via CAN bus Object position in the Cartesian coordinate system
Working range	0.5 m ... 60 m
Scanning frequency	20 Hz
Angular resolution	Horizontal: 0.125° (NAV plane) & 1° vertical: 2.5° (between a NAV plane and another plane) & 5°

Product description

The ISO 13849-certified Safe Brake Assist safety system prevents collisions with people and infrastructure in outdoor areas. It does so using 3D LiDAR sensors that continuously measure the distance between the vehicle and potential obstacles along the vehicle's path based on vehicle movement data. This ensures a safe and smooth operation even under demanding ambient conditions such as vapour, heat or rain. Thanks to the adaptive braking control feature, the system only applies the brakes in case of an imminent collision with people or the road infrastructure, e.g. guardrails. The result: Safe Brake Assist increases the availability of construction and agricultural machinery, saves costs, and relieves the driver. SICK experts assist with integrating the system into your vehicle.

At a glance

- Vehicle-independent brake assist system for outdoor applications
- TÜV-certified system
- Active braking assistance with no distracting signals in the cockpit
- Dynamic calculation of the travel path using the tried-and-proven LiDAR technology
- Reliable detection even under harsh ambient conditions such as vapour and rain

Your benefits

- Protect people and other objects in the path of the machine
- Save time and money when integrating the system through the assistance of SICK experts
- Relieves drivers so they can focus on their work, in particular in challenging ambient conditions
- The calculation of the travel path reduces false triggerings and makes it possible to precisely navigate through narrow spaces.
- Avoid unnecessary and abrupt braking for fewer downtimes
- Thanks to SICK's expertise, you receive system certifications that give you a competitive edge in future tenders.
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Fields of application

- Safe collision avoidance for mobile machines

Ordering information

Other models and accessories ➜ www.sick.com/Safe_Brake_Assist

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

WORLDWIDE PRESENCE:

Contacts and other locations –www.sick.com