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PRODUCT OVERVIEW

multiScan100-S

Safety laser scanners

SICK Sensor Intelligence

SAFETY LASER SCANNERS

multiScan100-S

3D safety laser scanner for safeguarding mobile outdoor applications

multiScan100-S is a 3D LIDAR sensor specifically developed for outdoor use, featuring PL b and Performance Class C. TÜV-certified Safety Application Notes are available for integration into applications with higher safety requirements up to PL d. With a scanning angle of 360° × 42°, 16 scan layers, and protective field ranges of up to 20 m, the multiScan100-S enables safe collision avoidance and environmental perception for mobile industrial, agricultural, and transport machinery. Thanks to integrated 3D protective field evaluation and precise measurement data, even complex detection tasks can be solved. The rugged housing, intelligent filtering algorithms, and safe multi-echo technology ensure high reliability – even in demanding environments.

multiScan100-S AT A GLANCE

- **Certified safety solution for outdoor applications**
  multiScan100-S with PL b is specifically designed for outdoor use. TÜV-certified Safety Application Notes support compliance with safety requirements up to PL d.
- **Reliable performance, even in harsh environments**
  Robust multi-echo technology and intelligent filter algorithms ensure reliable detection and high availability, even under harsh ambient conditions.
- **Precise technology and large detection ranges**
  The combination of a 360° × 42° scanning angle, 16 scan layers, protective field ranges of up to 20 m, and high measurement accuracy enables precise object detection and environmental perception.
- **Intelligent functions, easy to integrate**
  The 3D protective field evaluation can be easily integrated into safety controllers via digital outputs. For more complex tasks, safe measurement data is available via Ethernet.

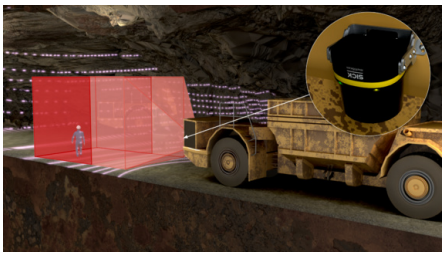
TECHNICAL DATA OVERVIEW

Safety level	PL b
Protective field range	20 m
Integration in the control system	Local inputs and outputs (I/O) Ethernet UDP
Number of fields	48
Number of monitoring cases	48
Scanning angle	Horizontal: 360°, vertical: 42°
Connection type	M12
Measured data output	Via Ethernet
Application	Indoor Outdoor
Integrated application	Safe measurement data output with PL b Safe 3D object detection with PL b
Enclosure rating	IP65 IP67 IP69 IPX9K

ADVANTAGES

As versatile as the outdoor conditions

The multiScan100-S allows new approaches for safely automating your mobile outdoor applications. The 3D LiDAR sensor is certified for outdoor use in accordance with the ISO 13849-1 standard and the IEC/TS 62998-1 standard. It generates safety-related ambient data, which creates the basis for various integration options.



Safe collision avoidance
Even in environments with poor lighting conditions and high levels of contamination and dust, such as underground, the multiScan100-S avoids collisions to protect personnel and capital goods – with PL b safety certification.
Find out more about the application

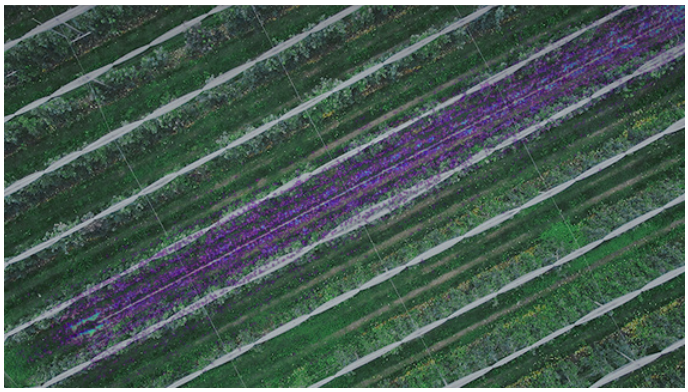
Safety-related environmental perception
The measurement data from the 3D LiDAR sensor can also be used for simultaneous localization and mapping (SLAM). Thanks to its ability to detect a variety of surfaces, such as the test obstacle in accordance with the agricultural standard ISO 18497, the sensor ensures the safety of people.
Find out more about the application

Safety-related sensor systems (SRSS)
The multiScan100-S can be used as a component in an SRSS, as described in IEC/TR 62998-2 for container handling equipment. Additional diagnostic measures and redundant system architectures enable stringent safety requirements to be met thanks to performance class C (IEC-TS 62998-1).
Find out more about the application

→ Automate your outdoor applications with the multiScan100-S

Safe environmental perception in three dimensions

Thanks to its large field of view and 16 scan layers with a high measurement accuracy, the multiScan100-S ensures precise three-dimensional environmental perception and is therefore versatile in use. The generated 3D point cloud creates the prerequisite for use in complex safety functions. The precise data can also be used for automation tasks such as the creation of 3D maps.



Safety-related measurement data
The PL b (ISO 13849-1) and performance class C (IEC/TS 62998-1) certifications enable the flexible and customized use of the generated measurement data. The measurement data serves as the basis for numerous safety functions – even complex safety functions can be implemented with the help of external data processing.

Flexible application possibilities
The large field of view of the multiScan100-S enables seamless integration into your machine and application designs. Thanks to the aperture angle of 360 x 42 degrees, the sensor can be mounted variably compared to 2D sensors and ensures that obstacles are reliably detected.

→ Flexible and safe: precise technology for your challenges in dynamic terrains

Rugged and reliable in challenging ambient conditions

The combination of hardware and software performance makes the multiScan100-S a true all-rounder. The robust measurement technology and rugged housing with IP69K enclosure rating ensure high availability in harsh outdoor environments. With smart outdoor filters such as particle and fog filters as well as safe multi-echo technology, the sensor works precisely and efficiently even in changing weather conditions outdoors.

Rugged hardware
Thanks to its ruggedness, the multiScan100-S can withstand strong shocks and vibrations. With leak tightness up to enclosure rating IP69K, the sensor is protected against dust and high-pressure water. This ensures a long service life and reliable performance even under harsh conditions. Suitable accessories for outdoor environments further enhance the usability of the sensor.

Intelligent software
Safe multi-echo technology and smart filter algorithms ensure that the sensor can be used in challenging ambient conditions such as fog, dust, rain or snow. The sensor also works in ambient light and on uneven surfaces. Let your outdoor application benefit from the reliable software performance.

→ Reliable performance thanks to a targeted combination of hardware and software

Select the right product variant and accessories directly online. There you will also find example applications as well as downloads such as CAD dimensional models, operating instructions and software.
www.sick.com/multiScan100-S

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SICK AT A GLANCE

SICK is a leading global technology company for intelligent sensors and integrated solutions in industrial automation. Our technologies set benchmarks, making your industrial processes more efficient, safer and more sustainable – both in logistics and manufacturing operations.

SICK combines sensor intelligence with industry expertise and certified consulting services. We provide the ideal foundation for scalable as well as tailor-made automation solutions and create added value along the entire value chain. Our close partnership with our customers is more than just a promise: Together, we optimize productivity, elevate quality, protect health and safety, and sustain the future. All with empathy and trust.

Since 1946, we have been developing innovative technologies with passion and a pioneering spirit. With a global network in around 40 countries, SICK has a global presence and is always close by. The company's headquarters are located in Waldkirch near Freiburg, Germany. Our customers benefit from our understanding of both local and global requirements, which enables us to deliver tailor-made solutions.

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