# Multi-tasking for mobile and stationary intralogistics

The microScan3 laser scanner: the all-rounder for safety, localization and navigation

Waldkirch, February 2019 – SICK is presenting the microScan3 – a safety laser scanner that can be used for the safety, localization and navigation of driverless transport vehicles, mobile machinery and autonomous platforms – at the LogiMat trade fair in Stuttgart from 19 - 21 February (Hall 1, Stand F51). This has been made possible by fully digital safeHDDM™ scanning technology which, thanks to an angular resolution of up to 0.1°, detects the scanner’s surroundings in maximum detail. The new version of the microScan3, with its enhanced safe range of up to nine meters, also improves productivity in mobile intralogistics because the vehicle now detects persons and obstacles even earlier, and can thus be operated at higher speeds. Just one sensor can monitor an area of more than 190 m², enough to protect, for example, palletizers, lifting equipment or stretch-wrapping machines. The scanning angle of the compact safety laser scanner is 275° – including a 5° alignment reserve. Using two scanners, corner-mounted diagonally opposite one another on a vehicle or machine, enables simultaneous and gap-free safeguarding of all four sides. As a result, no additional sensors are required for 360° monitoring, correspondingly reducing installation and integration costs and effort.

The safeHDDM™ evaluation technology of the microScan3 provides highly accurate measurement data for safety monitoring, localization and navigation. The high-resolution digital process for safety-oriented time and distance measurement convinces through its safe detection of even weakly reflective dark surfaces. At the same time, it offers maximum immunity to ambient light, for example under high-frequency artificial hall illumination. Particles in the air or on the front screen do not impair safe function, so that in addition to its protective function the microScan3 safety laser scanner also ensures maximum functional availability and productivity at all times.

Intelligent safety technology with integrated added value

The microScan3 safety laser scanner offers up to eight simultaneously monitored fields, as well as up to 128 individually configurable fields and monitored cases. As a result, a large number of highly varied operational scenarios in stationary and mobile intralogistics can be covered. With Ethernet-based transmission of measurement data with a range of up to 64 meters, the safety laser scanner can exploit the data for localization and navigation. This provides additional economic efficiency and future-proofing. Vehicle producers only require one additional component – the microScan3 – for all three tasks. This saves space on the vehicle and reduces installation, integration and programming costs and effort. Experts see substantial future potential in contour-based localization, in particular, as enabled by the reliable measurement data provided by the microScan3 – because it uses existing natural contours in the surroundings. So no supplementary track guidance system on the floor is necessary. This drastically reduces integration work in both new plants or on retrofitting. The microScan3 is therefore – beyond its safety performance – also a future-proof investment when considering the autonomous control of vehicles and the implementation of smart intralogistics for Industry 4.0.

Central component of the intelligent Safe EFI-pro system

The EFI-pro version of the microScan3 is the central sensoric component of SICK’s intelligent Safe EFI-pro systems. The safety system for automated guided vehicles and collaborating robots combines safe sensor and control technology with open Ethernet network technology. This enables the implementation of application-specific safety concepts for mobile intralogistics, whilst improving their efficiency and productivity. Up to six safety laser scanners can be networked in a Safe EFI-pro system, allowing extremely sensitive monitoring of robot and vehicle movements. This decisively improves the availability and productivity of automated guided vehicles and robots.

**Certified safety**

In terms of approvals, the microScan3 complies with Type 3 acc. to IEC EN 61496-3, SIL2 acc. to IEC 61508 and SIL2CL2 acc. to EN 62061, as well as Category 3 and Performance Level d acc. to EN ISO 13849.

**Announcement of outdoorScan3 and nanoScan3**

At LogiMat 2019, SICK will also be announcing the creation of another two safety laser scanners. The outdoorScan3 for monitoring horizontal areas outdoors (available from mid-2019) not only offers maximum robustness for use in all weathers, but also uses a measurement process – outdoor safeHDDM™ – that ensures maximum detection reliability even in fog, rain, snow, sunlight and other environmental influences. The nanoScan3 (available in late 2019) is designed for indoor use. Its ultra-compact height of just 80 millimeters makes it interesting for use on compact vehicles and transport platforms, as well as on machines with restricted installation space.



*All-rounder for safety, localization and navigation: The microScan3 safety laser scanner from SICK.*

SICK is one of the world’s leading producers of sensors and sensor solutions for industrial applications. The company, founded in 1946 by Dr. Erwin Sick and based in Waldkirch-im-Breisgau near Freiburg, is a technology and market leader with a global presence – with more than 50 subsidiaries and associated companies, as well as numerous sales offices. SICK achieved Group sales of about EUR 1.5 bn. in the 2017 fiscal year with almost 9,000 employees worldwide.

Further information on SICK is available at http://www.sick.com.

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