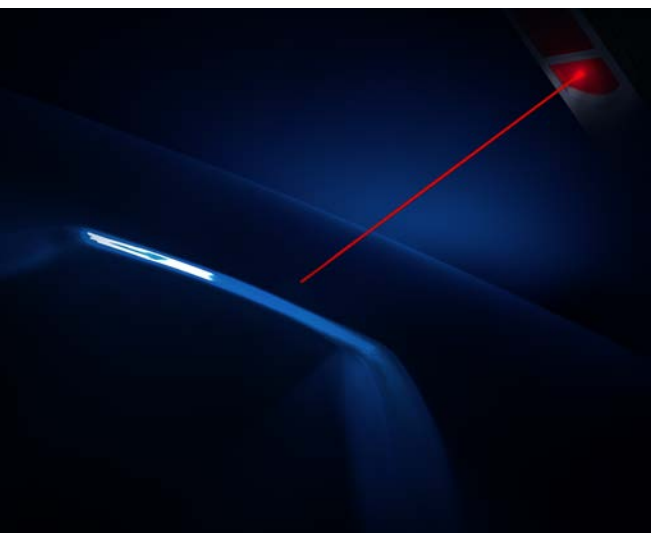


SICK.COM



THE INNOVATIONS MAGAZINE

SICK INNOVATIONS

Issue April 2026

SICK

Sensor Intelligence

EDITORIAL

Innovation is not a buzzword for us. It is our motivation to see and shape the world of tomorrow today. It takes the courage to rethink things and the will to actively shape developments. This is exactly where our aspiration as a technology company begins: not only to be a supplier, but to be a source of inspiration. The SICKinnovations magazine not only highlights new technologies and trends but is also a telescope for what becomes possible when we dare to try new things together with our customers and partners – ideas become solutions, concepts become real products, challenges become progress.

In this issue, we would like to show you how innovations not only increase efficiency but also provide real answers to pressing questions whether in automation, digitalization or sustainable production. Our industry is under pressure, but it is precisely in such moments that the best solutions often emerge – when we are willing to change our perspective.

Our customers are not customers for us they are co-creators. That's why we don't see innovation as a finished product, but as a joint process. Your requirements, your challenges, your goals – they drive us.

We invite you to discover in this magazine how we can break new ground together. With sensor intelligence, with creativity and with the firm belief that progress is best achieved through dialogue.

Yours

Dr. Niels Syassen

Member of the Executive Board Technology & Solutions SICK AG



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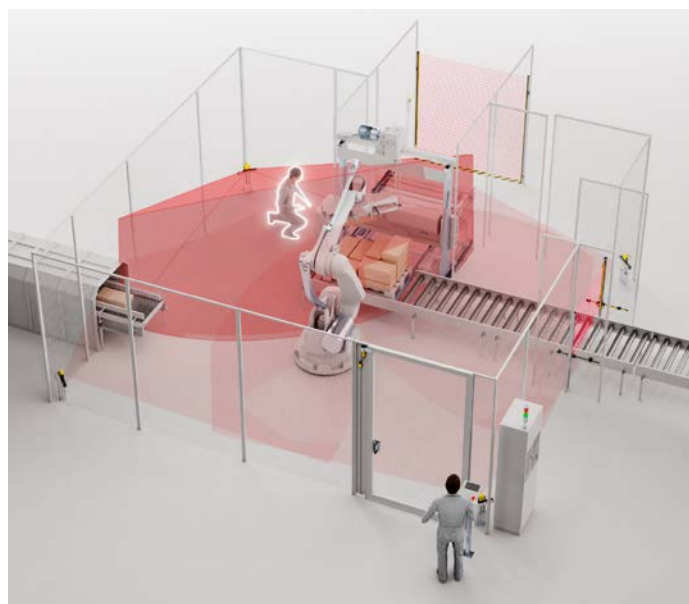


SAFETY RADAR SENSORS

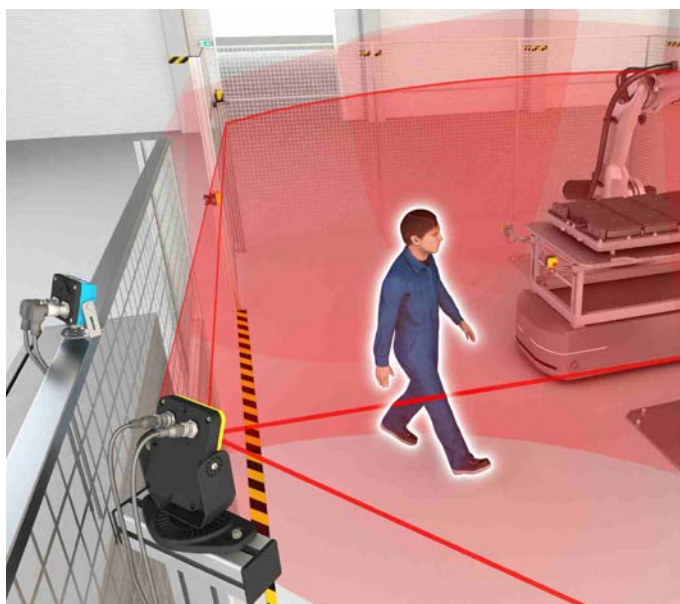
safeRS3 Portfolio Extension

Safety radar sensors enable new safety solutions

Next generation safety radar sensors, powerful evaluation units, and intuitively operated software open up new possibilities for safety applications. The safety radar sensors of the safeRS3 family are designed for both stationary and mobile hazardous area protection and provide precise and reliable protection of people. Whether in wood and metal processing or in steel, paper, and plastics production, safeRS3 ensures dependable protection even in areas with limited visibility, preventing unexpected machine restarts and enhancing overall operational safety.



Safe automatic restart of robot cells



Safeguarding a robot cell and recording safety-critical events with sensingCam SEC 110

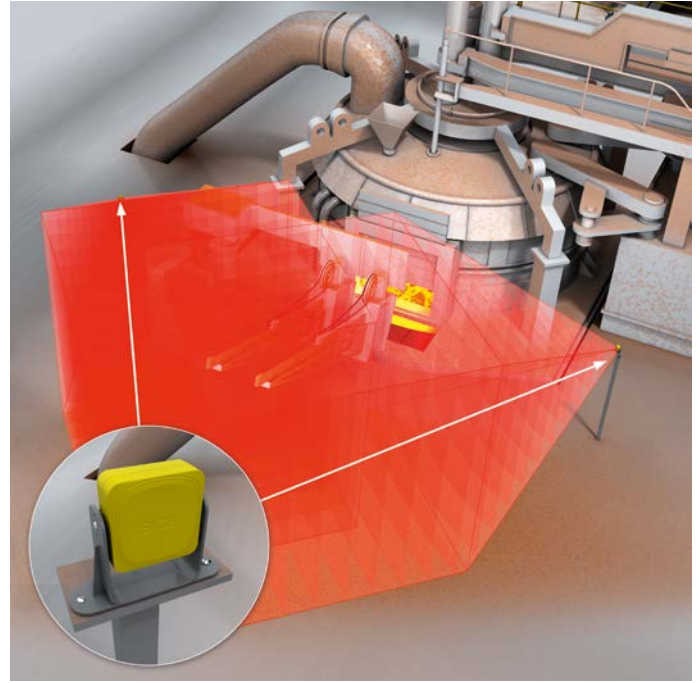
PRODUCT DESCRIPTION

The safeRS3 radar system with PL d and SIL 2 in accordance with ISO 13849-1 and IEC 62061 reliably protects stationary and mobile machines in demanding industrial environments. With configurable 3D protective fields and high resistance to dust, dirt, flying sparks and ambient light, it offers a safe alternative to opto-electronic sensors. With an evaluation unit and up to six sensors, the safeRS3 can distinguish static from dynamic objects. The system secures hazardous areas and access means, precisely detects people and material and prevents unintentional restart. In addition, the intuitive software configuration, simple integration with standardized industrial protocols and the available accessories facilitate commissioning on site.

APPLICATION EXAMPLES



Collision avoidance for mobile machines



Protection of converter furnace platforms

BENEFITS

- Certified safety solution with PL d and SIL2 – even in difficult ambient conditions such as dust, dirt, flying sparks and ambient light
- High machine availability indoors and outdoors – even with severe temperature fluctuations
- 3D protective field in which even small movements are detected – for seamless safety
- Radar system can be flexibly adapted to applications and processes
- Fast project planning and commissioning thanks to intuitive software
- Simple integration into automation systems

FEATURES

- Certified in accordance with ISO 13849-1 and IEC 62061
- Operation at -30 to +60 °C and durable housing with IP67
- Freely configurable protective field and dynamic monitoring cases
- 3D protective field with a scanning range of up to 9 m
- Modular system
- 2D and 3D configuration software
- Interfaces: I/O, PROFIsafe, Safety over EtherCAT®, CIP Safety™

Visit www.sick.com/safeRS3 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.





SAFETY CONTROLLERS

Flexi Net

High-performance safety controller for stationary and mobile applications

The powerful, scalable Flexi Net safety controller enables the creation of safe machine networks along the production line. With 512 TÜV-certified function blocks, Flexi Net reduces engineering effort whilst maintaining a cycle time of 4 ms and offers safety up to performance level e. EFI-pro and Flexi loop enable flexible sensor integration.



Safety from the individual stationary machine to modular machine concepts



Safe motion monitoring on machines and mobile robots via HTL interface and CAN-Listen

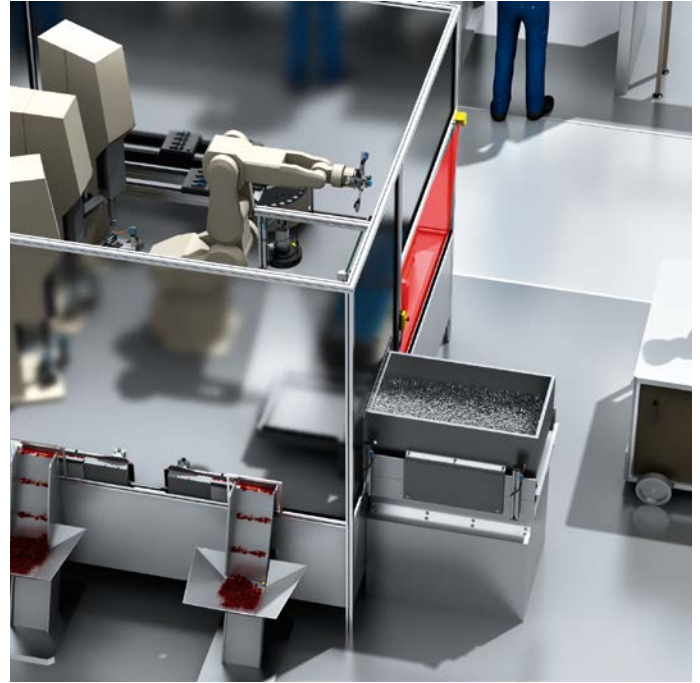
PRODUCT DESCRIPTION

Flexi Net is the high-performance safety controller up to PL e for modern machines and networked systems. The scalable control architecture enables CPU extension by up to twelve modules, such as Flexi-IOs and gateways, as well as the networking of several machines in a production line. Flexi Net offers a configuration of up to 512 function blocks in the logic, especially for complex applications. TÜV-certified function blocks make engineering much easier. Cycle times of only 4 ms underline the performance of the Flexi Net. Sensors can be flexibly integrated into the safety controller – also via EFI-pro and Flexi Loop. Safe Motion via integrated HTL inputs and application-specific function blocks also meets the requirements of mobile robots.

APPLICATION EXAMPLES



Cost-effective protection for assembly cells in modular systems with only one Flexi Net safety controller and Flexi Loop



Protection of mobile robots or moving machine parts with the new Safe Motion concept

BENEFITS

- Scalable and future-proof for stationary and mobile requirements
- Individual safety solutions thanks to versatile configuration options in the Safety Designer
- Easy sensor integration and control networking thanks to safe communication along the production line
- Cost-effective, Safe Motion Monitoring
- Reduced safety distances thanks to short response times
- Seamless integration into standard machine control systems for comprehensive diagnostics
- Fast configuration transfer and commissioning
- Reduced wiring and number of inputs due to safe series connection

FEATURES

- Main module expandable with twelve Flexi IO modules
- Powerful logic with up to 512 function blocks
- Safe communication via EFI-pro
- Safe Motion via HTL interface and CAN-Listen
- Response Time (Fast Shut-Off): 4.5 ms
- Supports common fieldbuses
- Compatible with Safety Configuration Deployment and Flexi Loop

Visit www.sick.com/Flexi_Net for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.





SYSTEM PLUGS AND EXTENSION MODULES

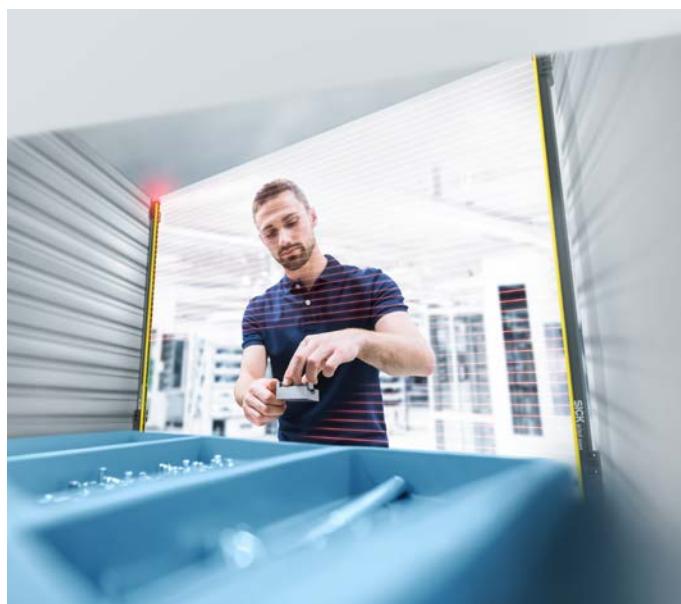
DCM4

Smart safety functions for deTec4 safety light curtains

The DCM4 expansion module makes deTec4 safety light curtains smarter for hazard zone and access protection. With blanking, reduced resolution, object pattern detection and intelligent restart inhibition, the DCM4 boosts productivity: through reliable finger and hand detection as well as safe material flow.



DCM4 makes the deTec4 safety light curtains even more intelligent for hazardous point and access protection

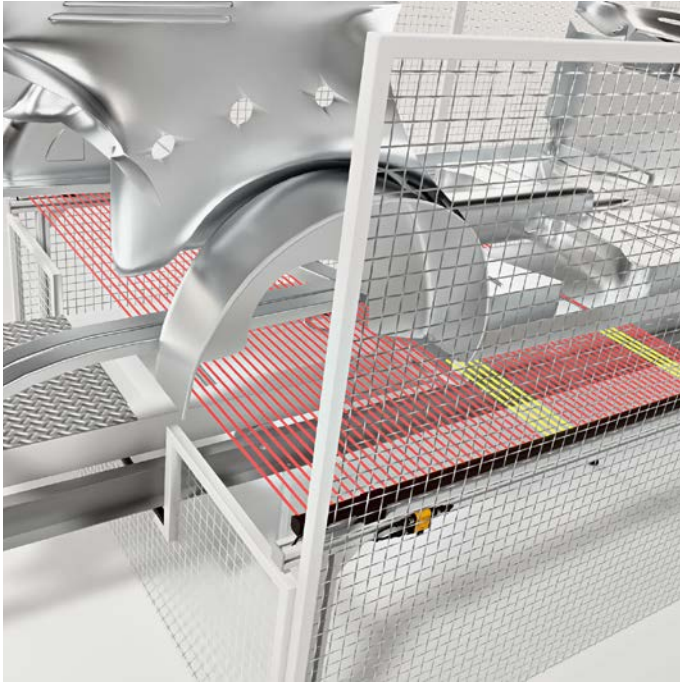


Smart functions such as blanking, reduced resolution (advanced) and smart restart interlock increase plant availability

PRODUCT DESCRIPTION

The DCM4 extension module adds intelligent safety functions to deTec4 safety light curtains for reliable hazardous area and access safeguarding. Features such as blanking, reduced resolution (Advanced), object pattern detection, and an intelligent restart interlock enable safe material flow with active protective fields – without the need for additional muting sensors. This increases system availability, reduces downtime, and allows flexible adaptation to changing process requirements while maintaining reliable finger and hand detection.

APPLICATION EXAMPLES



Safe material flow with object pattern recognition



Finger- and hand protection with blanking

BENEFITS

- Higher system availability through reduced downtime
- Safe material flow processes with the protective field active; no additional muting sensors required
- High process efficiency thanks to an intelligent restart lock that adapts to object size
- Customizable to meet changing process requirements
- Easy configuration and quick diagnostics for all DCM4 functions

FEATURES

- Many options for masking objects in the protective field
- Reduced resolution (Advanced) for ignoring objects that are temporarily within the protective field
- Object pattern detection
- Intelligent restart interlock
- Dynamic mode switching
- Safety Designer for easy configuration and diagnostics

Visit www.sick.com/DCM4 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



LUMINESCENCE SENSORS

LUTS/LUTX

Luminescence sensors with intensity display and intuitive operation

The LUTS/LUTX luminescence sensors use powerful UV technology and high quality optics to reliably detect invisible luminescence marks. With three sensing ranges and light spot geometries, LUTS/LUTX offer a suitable variant for every application and provide direct process feedback via the integrated display.



Detection of luminescence, independent of the material or surface texture



Display with luminescence intensity values for a quick process overview

PRODUCT DESCRIPTION

LUTS/LUTX luminescence sensors from SICK reliably detect visible and invisible luminescent marks. Variants with UV or blue emitted light are available, in three sensing ranges and light spot geometries. LUTS is ideal for tight installation spaces, while the larger LUTX offers greater mounting flexibility. The integrated display shows intensity values, making sensor setup and process monitoring easier. With a switching frequency of up to 16 kHz and a scalable luminescence value output, the sensors are well suited for high speed applications or weakly luminescent marks. Additional diagnostic functions can be configured via IO Link. LUTS/LUTX are used, among others, in the packaging industry, the pharmaceutical industry, and wood processing.

APPLICATION EXAMPLES



Luminescence sensors reliably detect invisible fluorescent markings even at high process speeds



The luminescence sensors with blue LED are used in particular for detecting knots in wood

BENEFITS

- Provides a quick process overview and precise sensor adjustment
- Variants tailored to installation conditions and marking geometries simplify installation
- Reliable detection of luminescence markings
- Suitable LED for every application: the blue LED for exciting red luminophores, and the UV LED for blue, green, and yellow markings
- High process reliability, even with low luminescence intensity
- Additional diagnostic and visualization options, as well as simple and fast format changes thanks to IO Link functionality

FEATURES

- Display showing luminescence intensity values from 0 to 999
- Choice of three light spot geometries and sensing ranges; large working distances
- High signal stability
- Variants with UV LED (375 nm) or blue LED (470 nm)
- Two different housing sizes
- Scalable digital output with a factor of 0.5 to 4
- IO Link functionality
- Scalable luminescence value output with a factor of 0.5 to 4

Visit www.sick.com/LUTS_LUTX for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.

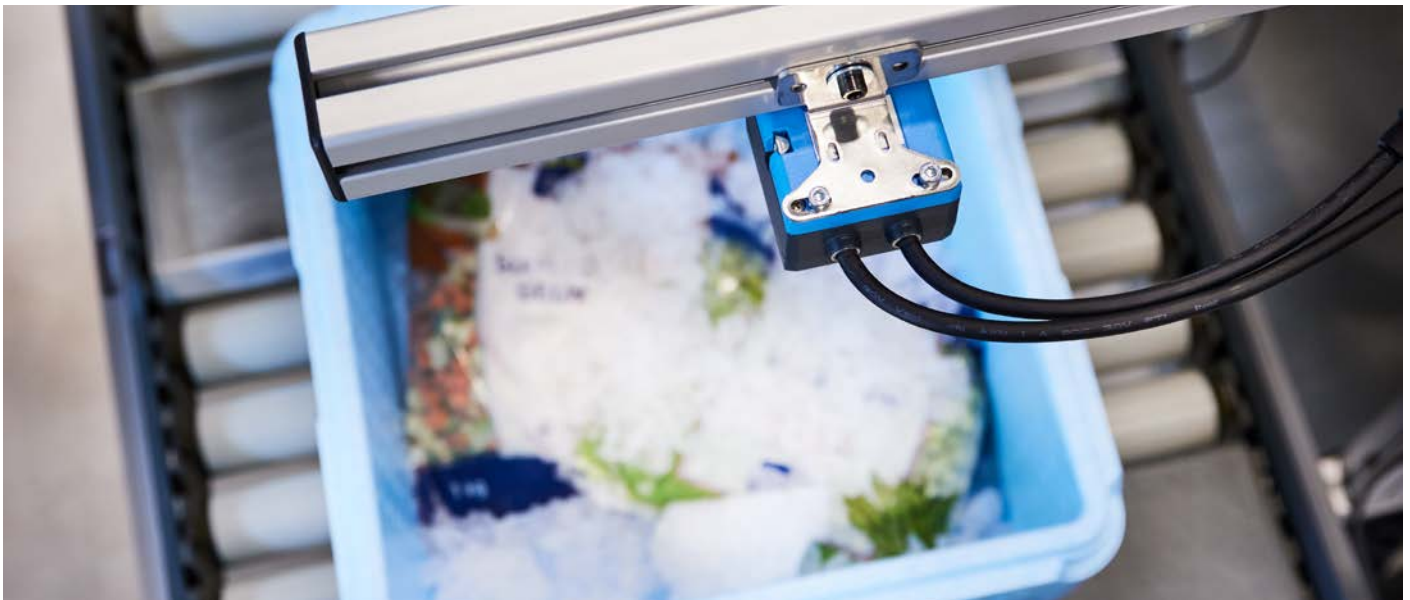


MACHINE VISION

sensingCam SEC310

Industrial streaming camera for process monitoring, documentation, and error analysis

The rugged sensingCam SEC310 camera with IP65 housing and protected optics is designed for use in industrial environments – especially in the deep-freeze sector.

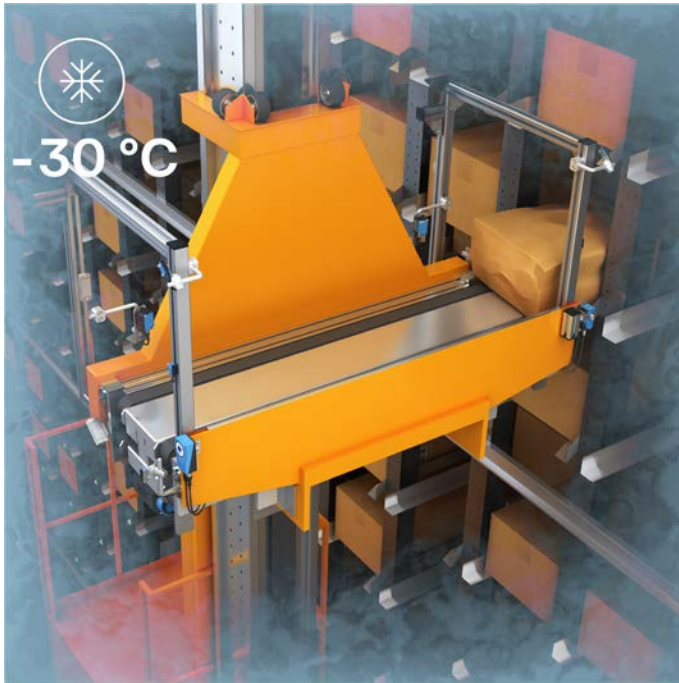


The integrated image recording function is particularly useful for documenting the quality of fast processes

PRODUCT DESCRIPTION

The sensingCam SEC310 industrial camera has been specially developed for use in cold storage areas and is particularly suitable for fast processes. The live stream allows critical processes and blind spots to be reliably monitored. Using the integrated image recording function, the device can create images, e.g. for quality documentation. In the event of unplanned machine stops and sporadic errors, the event recording function supports rapid root cause analysis by recording event videos before and after a trigger signal.

APPLICATION EXAMPLES



Streaming and event recording in cold storage warehouses



Quality documentation in cold storage applications

BENEFITS

- Fast analysis of sporadically occurring machine errors thanks to event recording function
- Real-time monitoring of blind spots
- Capturing of images to document product quality
- Quick and easy commissioning without additional software
- For use in cold storage areas as well as in harsh industrial environments
- Wide range of mounting options

FEATURES

- Recording of event videos up to 1200 s
- Storage of image captures directly on the device or transfer via FTP to a server
- Integrated web server
- Rugged housing (IP65 enclosure rating), protected optics and M12 connections
- 2.1 megapixel camera with global shutter and 60 fps

Visit www.sick.com/sensingCam_SEC310 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



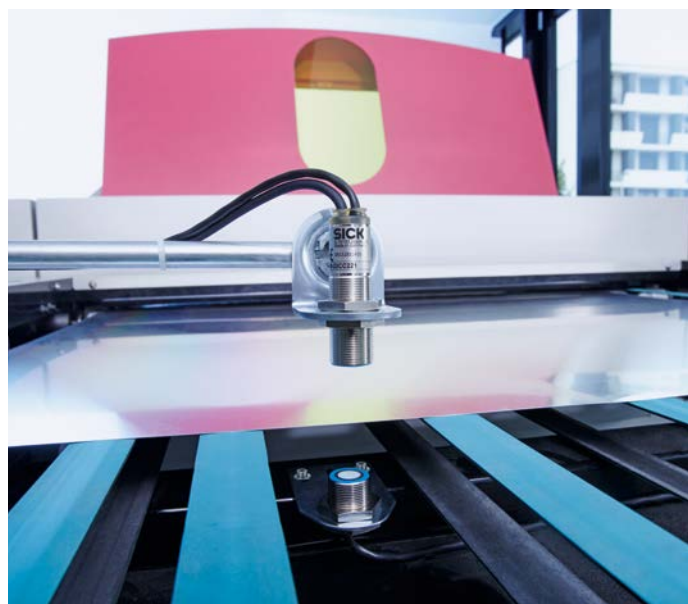


FORK SENSORS

UD18 IO-Link

Double layer and splice detection for paper, cardboard, metal, and plastic

The UD18 ultrasonic sensor reliably detects double layers and adhesive joints – even with challenging materials such as paper, cardboard, shiny metal or transparent plastic. Plug-and-play commissioning and simple parameterisation via the IO-Link interface, which provides additional diagnostic data, enable the targeted analysis and optimisation of production processes.



Robust ultrasonic technology for a reliable detection in dirty, dusty, and humid conditions



Variable mounting distance and optional M12 5-pin connector enable flexible installation

PRODUCT DESCRIPTION

Using ultrasonic technology, the UD18 checks for double layers and adhesive areas. The sensor precisely detects whether one or two material layers are present—or missing—between its sender and receiver. The UD18 is particularly well suited for detecting double layers made of paper, cardboard, glossy metal, or transparent plastic. Up to four sensitivity levels can be taught into the device and adjusted during operation. Via the IO Link interface, the device can transmit process data as well as additional diagnostic information to analyze and optimize machine performance. This enables the sensor to reliably solve even demanding applications while ensuring long-term system availability and consistently high production quality.

APPLICATION EXAMPLES



Reliable double layer detection of paper, cardboard, transparent, battery and metal foils



Accurate double layer detection when splicing film

BENEFITS

- High productivity and quality thanks to reliable material feed monitoring and fast transmission of diagnostic data
- Rapid commissioning thanks to plug-and-play and predefined sensitivity levels
- Material changeover without system downtime thanks to simple modification of sensitivity levels
- Individual teach-in of various materials, for solving demanding applications
- Variable mounting distance for high flexibility
- Easy monitoring of operating status with all-round visible LEDs
- Robust ultrasonic technology for reliable detection, even in dirty, dusty, and humid conditions

FEATURES

- Detection of missing, single and multiple layers of material
- Easy parameterization and diagnostics with IO-Link
- Sensitivity levels can be changed during operation
- Up to four sensitivity levels can be taught in
- Variable mounting distance
- LEDs visible from any direction
- Plug-and-play default settings
- Immune to dirt, dust, and humidity

Visit www.sick.com/UD18 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



FIXED MOUNT BARCODE SCANNERS

CLV60x

The latest generation of the CLV60x with supply voltages (5 V and 12-24 V DC) and new MCU which improved decoding performance

The CLV60x Gen2 delivers impressively improved reading performance whilst the additional variants with 12-24 Volts supply voltage is now more versatile to support new applications in the Electronics industry and other more applications. Additionally, the open-end cable variants comprehend flexibility to the customers in installation options.



Comprehensive solutions on the wafer load port unit

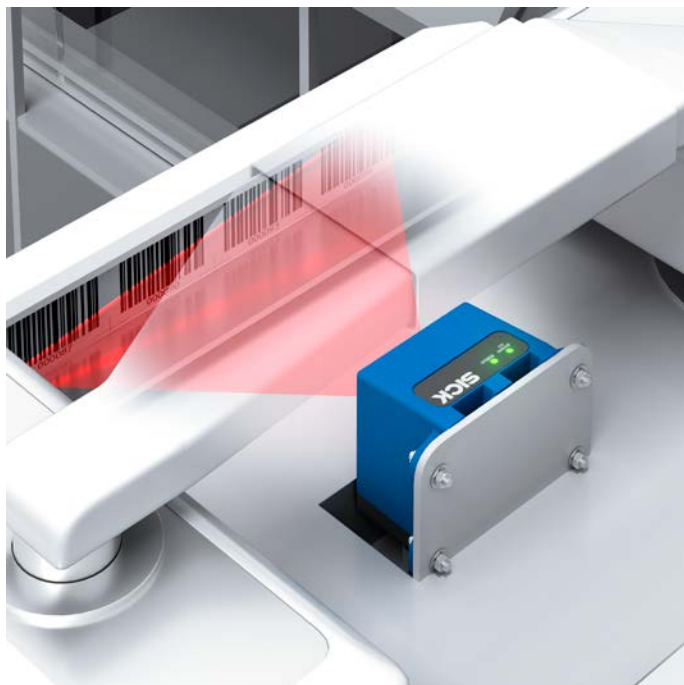


Identification and sorting of test tubes

PRODUCT DESCRIPTION

The CLV60x fixed mount barcode scanner is ideal for identifying 1D codes at short reading distances. With a compact design and 2K pixel CMOS sensor, the CLV60x offers reliable barcode reading at a good price-performance ratio. Its reading features are especially noteworthy, even at short reading distances. Thanks to its high 750 Hz scanning frequency, CLV60x is suited to fast applications. Configuration is easy with the SOPAS ET user interface. CLV60x is set apart by its small space requirements and can be integrated in small machines. The product comes in in two versions: 5 V and 12-24 V DC, both with optional ESD protection.

APPLICATION EXAMPLES



Cost-effective solution for positioning FOUF transport systems



Sample identification in laboratory Automation

BENEFITS

- Minimal space requirements for integration in even the smallest machines
- High performance at a cost-efficient price
- It's a sound investment thanks to the long-term availability of CMOS technology and proven SICK quality
- Easy operation and installation with the SOPAS ET user interface and the ingeniously positioned LED status indicator
- RS-232 or USB communication interface to control the industrial devices

FEATURES

- High reading field height even at 30 mm distance
- 2K pixel CMOS technology
- LED status indicator detected from nearly any direction
- Optional customer remodels
- 750 Hz scanning frequency
- Front/Side reading
- Supply voltage 5 V/12–24 V DC
- Optional ESD bracket protection

Visit www.sick.com/CLV60x for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



MEASURING WHEEL ENCODERS

MWS250

Robust measuring wheel encoder for speed and position measurement on conveyor belts

For precise speed and position measurement on conveyor belts – for example in logistics applications – the robust MWS250 is the right choice. Even on uneven or slack conveyor belts, the measuring wheel encoder reliably delivers accurate measurement data.



The vulcanized measuring wheel enables precise and durable measurement on various materials



Quick and easy mounting even in confined spaces

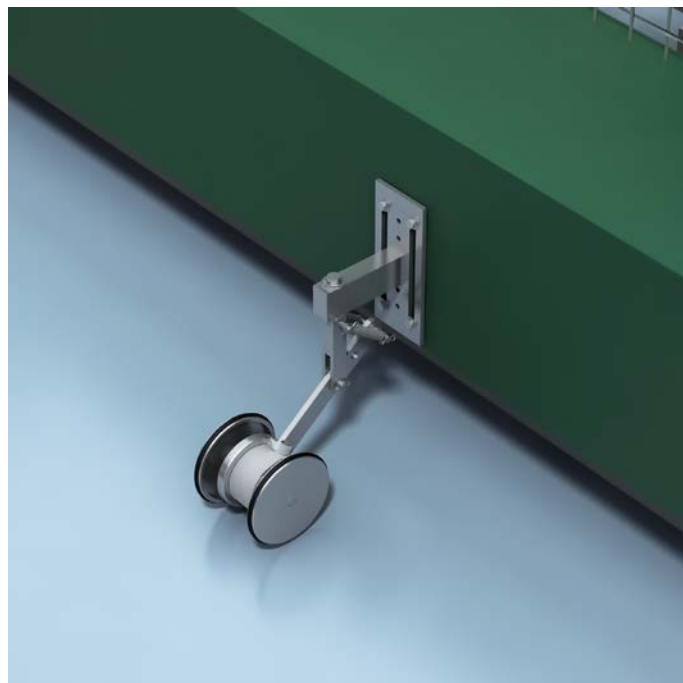
PRODUCT DESCRIPTION

The MWS250 from SICK is an incremental measuring wheel encoder with two measuring wheels and a spring travel of ± 10 mm. The sensor reliably measures the position and speed of moving materials – even on uneven, dusty or unpressurized conveyor belts. The robust mechanism with constant contact pressure ensures almost slip-free detection. The measuring wheel system can be flexibly mounted above or below the belt, offers all the standard incremental interfaces and is freely programmable in terms of resolution. Interchangeable measuring wheels and optional accessories facilitate integration into conveyor belts, track and trace and logistics applications.

APPLICATION EXAMPLES



Speed measurement on conveyor belts



Length measurement in textile production

BENEFITS

- Precise speed and length measurement - even on uneven surfaces
- Quick and easy mounting even in confined spaces
- Flexible integration thanks to common interfaces and connection type
- Suitable for individual requirements and easy integration into different application environments
- High operational safety under demanding conditions
- Simplified spare parts management and reduced warehousing and downtimes
- Reliable measurement on different material surfaces

FEATURES

- Two measuring wheels for stable contact and slip-free measurement
- Rotatable spring arm and accessories available
- TTL, HTL, RS-422 and M12 male connector
- Configuration of interface, pulse count, voltage, zero pulse
- Robust mechanism with proven springs
- Configuration of the device for use with multiple applications
- Vulcanized measuring wheel for different surfaces

Visit www.sick.com/MWS250 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



MOBILE HANDHELD SCANNERS

Zx36 XR

Extra range for greater productivity and reliable code reading

A mobile handheld scanner for nearly every distance: from 5 cm to 32 m. Fewer interruptions, reduced maintenance, and improved readability – even directly from the forklift cab.



Even after multiple drops from manned forklift trucks, the scanners continue to function flawlessly



Zx36 scanners are resistant to extreme heat, cold, and humidity

PRODUCT DESCRIPTION

The Zx36 mobile handheld scanners capture numerous codes – whether 1D, 2D, DPM or Digimarc codes. The rugged housing with an enclosure rating of IP65 or IP68 enables the mobile handheld scanners to withstand adverse ambient conditions. Thanks to the three-fold read confirmation via LED, beeper and vibration, the devices can be quickly and intuitively configured and operated. Cable-bound and cable-free variants ensure the Zx36 can be flexibly adapted to countless applications. SICK offers suitable connection modules for integration into industrial fieldbuses such as PROFIBUS, PROFINET and Ethernet TCP/IP. Thanks to the combination of reliable code reading, rugged design, and easy fieldbus configuration, the Zx36 is also suitable for very demanding industrial applications.

APPLICATION EXAMPLES



Barcode goods identification in varying load carriers



Effortless barcode capture from a distance

BENEFITS

- Scanning technology optimized specifically for industrial applications with significant scanning requirements and reading distances of up to 32 m
- Fast and reliable identification even with low-contrast or highly reflective codes
- Long operating times with up to 80,000 scans per battery charge
- Fast, reliable detection without interrupting the workflow, even in cold stores with temperatures down to -30 °C
- Reliable operation in dust, wet conditions and outdoors thanks to IP65 / IP68
- Simple integration into industrial fieldbus networks using SICK connection technology
- Practical accessories and simple configuration for flexible handling

FEATURES

- Reliable 1D / 2D, DPM and Digimarc code reading with a high scanning range of up to 32 m
- Ultra rugged design with IP65 / IP68 rating and 3 m drop resistance
- Long battery life of up to 23 hours of uptime
- Industrial grade: Available with an enclosure rating of IP65 / IP68, suitable for use down to -30 °C

Visit www.sick.com/Zx36 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



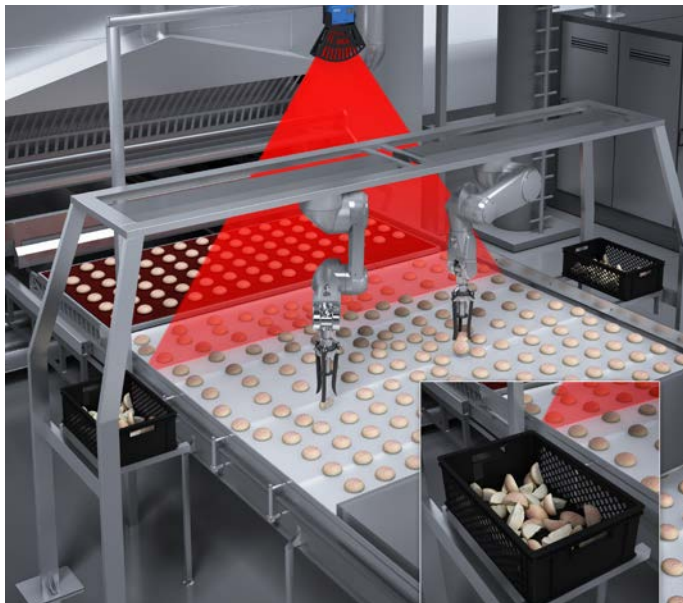


APPLICATION SOFTWARE

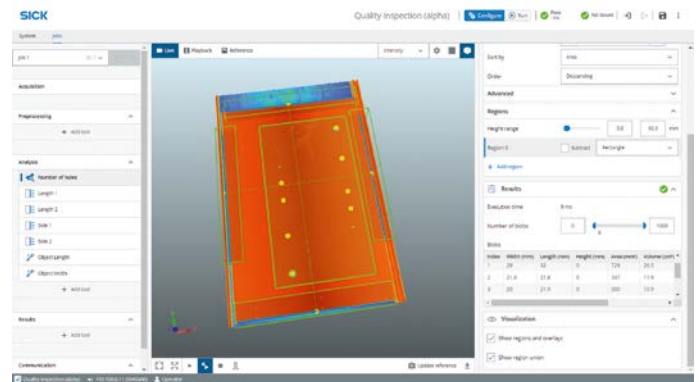
Nova LMS4000

Precise LiDAR data and powerful image processing

The LMS4000 2D LiDAR sensor is combined with the SIM2x00 Sensor Integration Machine and SICK Nova. The result is a rugged, high-performance machine vision system for precise quality control – even under demanding ambient conditions – featuring a comprehensive toolset including AI deep learning algorithms.



Optical solution for easy position detection

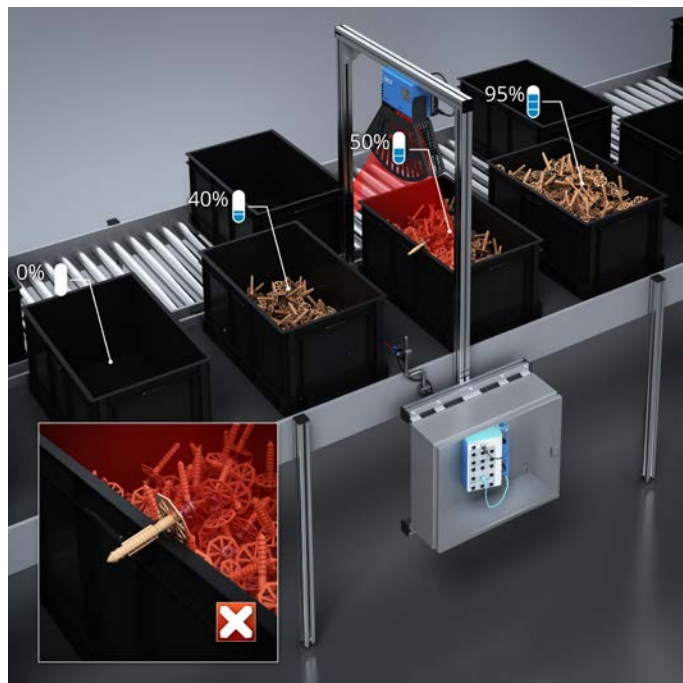


Plug and Play: einfache Installation ohne Inbetriebnahme

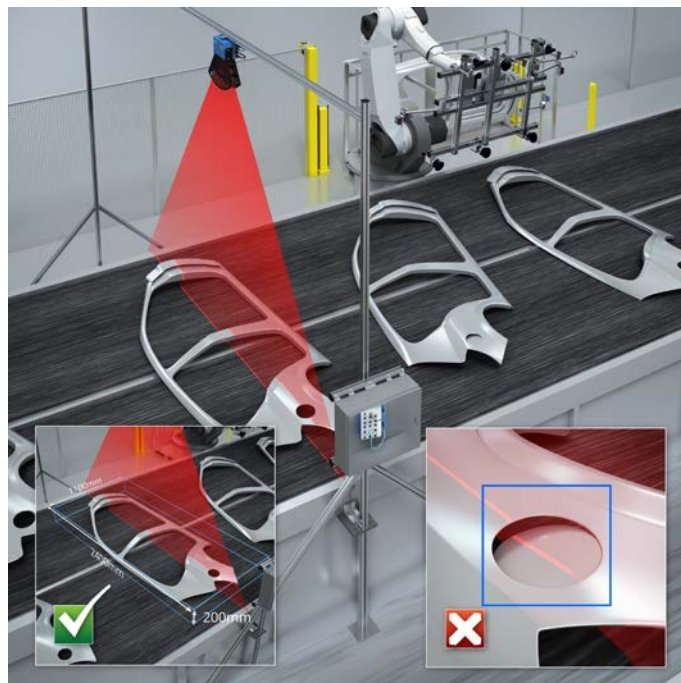
PRODUCT DESCRIPTION

Nova LMS4000 makes it possible to perform quality controls in a wide range of applications, e.g., to verify the correct characteristics, processing or assembly of components. Cracks or other damage are detected accurately, the fill level or completeness is determined, and the volume flow is also calculated. Larger objects and distances of several meters are unproblematic. In addition to tools for position detection and length, angle or height measurements, the ever-expanding Nova Toolset also includes powerful AI tools for tasks such as anomaly detection and object classification.

APPLICATION EXAMPLES



Empty Box check and fill level measurement including protrusion or anomaly detection



Classification of various components and inspection of processing and assembly

BENEFITS

- Turnkey solution for high-performance Machine Vision tasks
- Automated quality analysis and verification of details to improve production yield and speed
- Reliable detection even of unknown deviations, defects or anomalies
- Reduce waste and avoid production downtime
- Ability to create and add custom tools in case a function is missing to solve a special task

FEATURES

- Precise and fast LMS4000 data evaluated on SIM2x00 with Machine Vision algorithms
- Presence Inspection, Quality Inspection and Intelligent inspection toolset for location, inspection, measurement and deep learning evaluation
- Quick customization with SICK Nova plug-in tools
- Wide portfolio offering across multiple sensor technologies
- Easy configuration in web interface with unified UI across all supported product families

Visit www.sick.com/p/p682900 for direct access to more information and to select the appropriate product variant. There, you will also find suitable accessories, CAD models, operating instructions, software, application examples, and much more.



SICK AT A GLANCE

SICK is a globally leading company in intelligent sensors and sensor solutions. With over 10,000 employees, more than 60 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers.

With a unique range of products and services for factory and logistics automation, SICK creates added value along the entire value chain of its customers. In addition, SICK brings extensive industry and application experience as well as a deep understanding of its customers' processes and requirements.

Partnering for the better, optimizing productivity, elevating quality, and protecting health and safety – this is what SICK stands for.

THAT IS “SENSOR INTELLIGENCE”.