



Efficient Automation for Food and Beverage Production

Intelligent Sensor Solutions improve your processes

SICK
Sensor Intelligence.

Sensor technology and applications in focus. SICK solutions for all areas of food and beverage production.

We know what our customers want

As one of the leading providers of innovative, practical sensor solutions, we are continually setting standards when it comes to successfully improving the manufacturing quality and output of your production. SICK sensor solutions contribute to constant increases in efficiency in all areas of food and beverage manufacture. Product innovations are always developed with the economic and ergonomic requirements of our customers in mind.

The SICK delivery program covers all areas of sensor technology, e.g., photoelectric sensors, inductive magnetic sensors and encoders in many special designs, safety sensors, identification and camera solutions and even level measurement. Based on the applications expertise we have gained over many years, we supply our customers not only with top quality technology, but also with the know-how required to help them achieve maximum productivity and economic efficiency.

Global presence

Sensor solution provider

Innovation leader

International
service solutions

E-business –
Partner Portal

SICK
Sensor Intelligence.





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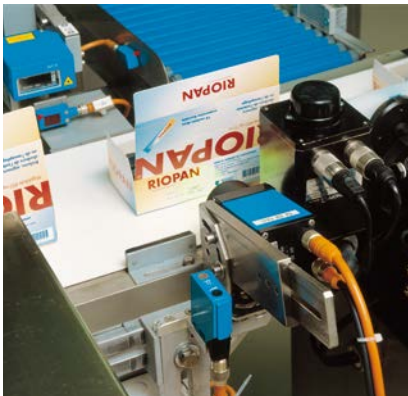
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Innovation SICK: new packaging automation.

Global competition necessitates the use of every resource. Machines must become even more flexible and user-friendly, service activities must be available worldwide. Solutions from SICK open up the potential for new applications, such as brand protection. SICK has the widest product offering of IP 69K-rated products, ideal for food and beverage applications. From communication at the fieldbus level to automatic format changes, our leading-edge technology and high level of expertise helps you create operational efficiencies and reduce costs in all stages of food and beverage production.



PRODUCT/ BRAND PIRACY

The latest SICK technology for quality assurance constructs a multi-layered protective wall against the attacks from brand pirates. How do you want to protect your brand? Using luminophores, codes or holograms? Contact us – we have exactly the right solution for your problem.



FLEXIBLE PRODUCTION THROUGH FORMAT ADJUSTMENT

A new machine is installed, a production line is adapted for new packaging formats. You minimize your customers' effort with intelligent sensor and control systems from SICK. The advantages:

- high machine flexibility
- easily handled changes
- short machine downtimes



PRODUCT TRACING

The ability to trace products is a vital component of today's food and beverage production. With technology from SICK, you can ensure your customers' traceability and their documentation of products and processes. Regardless of the method that you select – whether it's bar code, Data Matrix, data code, etc., you can count on SICK for a reliable solution.



WASH DOWN ENVIRONMENTS

Sensors in food and beverage plants are exposed to particularly high levels of stress due to the cleaning processes used there:

- special resistant materials
- high resistance to liquid penetration
- resistance against all common detergents



FLEXIBLE COMMUNICATION

IO-Link is the open interface between the control and fieldbus levels. It opens up new possibilities for your machine or factory management system concept:

- communication between machine controller and sensors
- processing of digital and analog signals
- reverse compatibility, integration in existing production lines
- reduced cabling effort
- remote diagnostic potential



SAFETY AND AVAILABILITY

Machine operator safety, operational efficiency and high production throughput are not contradictory. Talk to our safety experts about your safety plan.

Global presence.

Automation knows no borders.

A global perspective is what counts in factory and logistics automation. That's why SICK is present worldwide. As an independent partner, we are always at your side and readily available. Regardless of where you are in the world. SICK is close by – with nearly 50 national and international subsidiaries, as well as numerous sales offices and associated companies.

In addition to sales and services, our production and development is located internationally. SICK has a strategic and customer-oriented distribution of these departments in Germany, Italy, Sweden, Japan and the USA. As a result, we are even closer to changing market conditions and industry developments.

As an innovative, all-around sensor supplier with advanced expertise and the will to be a worldwide leader, SICK is committed to its customers. This philosophy is also included in our corporate statement – always stay one step ahead in creating state-of-the-art developments, worldwide.

**Benefit from SICK's worldwide presence.
Everywhere, at all times.**



All over the world

Europe

- Austria
- Belgium
- Czech Republic
- Denmark
- Finland
- France
- Germany
- Great Britain
- Italy
- Luxembourg
- Netherlands
- Norway
- Poland
- Romania
- Russia
- Slovenia
- Spain
- Sweden
- Switzerland
- Turkey

N. & S. America

- Brazil
- Chile
- Canada
- USA
- Mexico

Africa

- South Africa

Asia

- China
- India
- Indonesia
- Israel
- Japan
- Korea
- Singapore
- Taiwan
- United Arab Emirates

Australia

- Australia
- New Zealand

WORLD CLASS LOGISTICS AND SERVICE

The international SICK Logistics Center reduces delivery times and cuts servicing and stock-keeping costs. We deliver components and spare parts to the right place at the right time – You'll see the benefit of our state-of-the-art Logistics Center.

A worldwide presence is vital for services. With subsidiaries and sales offices all over the world, we maintain a local presence, wherever you need us.

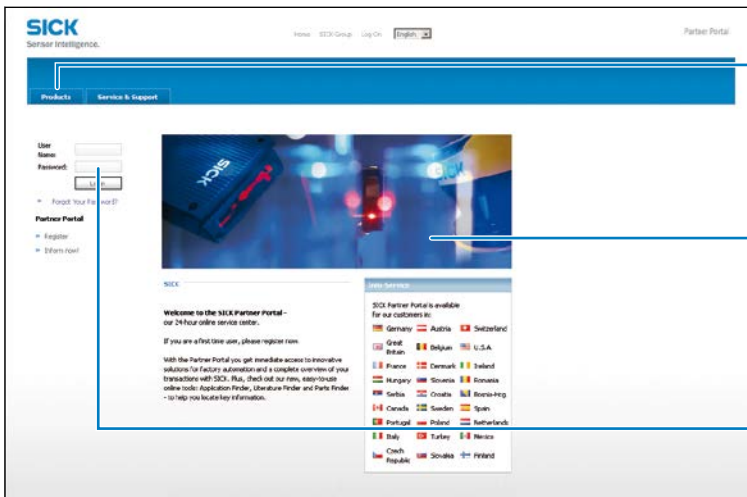
Work more efficiently online.

www.mysick.com – your sensor e-business Partner Portal.

An online portal is essential when efficient and fast processing of every detail is required!

You will find comprehensive e-commerce tools and information for your automation solution planning at www.mysick.com: complete order administration – from a product availability check, through offers and order conditions, to order placement and status. The SICK Partner Portal supports your workflow with the individual provision of user rights. Moreover, simple online access to application examples and technical data, drawings and graphics will effectively accelerate your product selection.

Plan your product solution online – at SICK's Partner Portal.



User-friendly: you will find everything you need for solution planning under the menu items Products, Information and My Processes.

24-hour availability: regardless of where you are in the world or when you want to know something, everything is available within a click at www.mysick.com.

Secure: your data is password-protected and only visible to you. With individual user administration you define who may access what data and carry out which actions!

Product Finder

www.mysick.com/Products

The Product Finder lets you search for the suitable device for your application using your specification – from a large number of products in all areas of factory and logistics automation.

Applikations Finder

www.mysick.com/Applications

You can select an application description for your particular task, market or product group with the Applications Finder.

Literature Finder

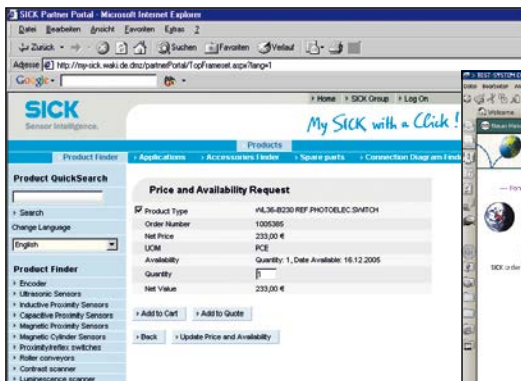
www.mysick.com/Literature

You can access all publications in the Literature Finder, e.g. Operating Instructions, technical information, customer magazines and other literature about SICK products.

THE ADVANTAGES OF USING SICK'S PARTNER PORTAL

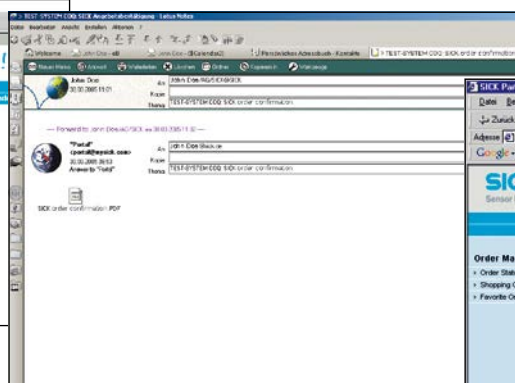
- Work more efficiently online
- User administration supports your workflow
- Product availability is immediately displayed
- All processes are sped up, saving you time. For example, price inquiries, quotes, orders
- Find products, applications, circuits and accessories even quicker
- Products and additional information are linked, ensuring comprehensive search results
- All processes available at a glance: product searches, quotes, order status, etc.
- Exclusive downloadable content: technical data, drawings, graphics, etc.

Order online now!



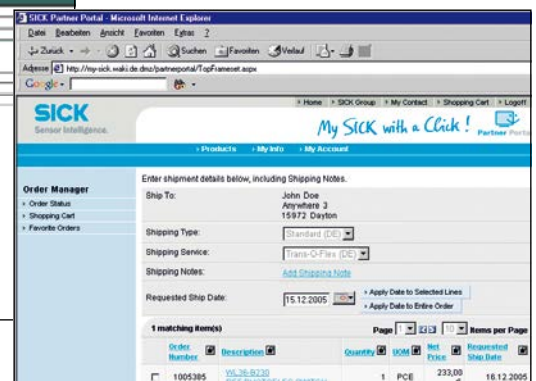
Request price and availability:

Find the price and delivery date of the desired products easily and quickly.



Request for a quote:

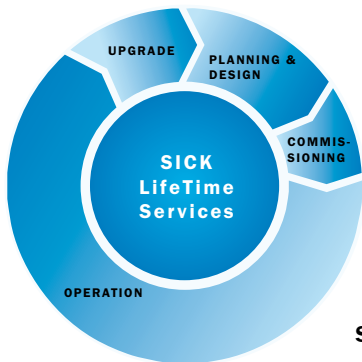
You can enter a reference number for a quote. The quote is available online. Each quote is confirmed via e-mail.



Online orders:

You can carry out the order process in just a few steps.

SICK LifeTime Services – a good decision for every phase of a machine's life



Protective devices, identification systems and measuring systems report information relevant to the system control and protect the operator and machine. When optimally integrated and maintained, these components and systems offer great potential for safe processes, consistent product quality and protecting people and the environment.



The complete concept from SICK

From the first meeting and for many years to come, SICK LifeTime Services offer the right level of service to meet customers' needs. Place your trust in SICK from the beginning. Our practical experience and extensive knowledge of the industry make us highly-qualified partners. SICK service contracts are designed to be convenient. They include guaranteed hotline availability for quick help in solving the problem yourself as well as guaranteed reaction times for on-site call-outs – for all types of production, anywhere in the world.

Machine and system services ¹⁾

Service contracts for SICK LifeTime Services:

- Inspection contracts for assessing the current system status with recommendations for optimization
- Maintenance contracts for carrying out preventative measures and optimizations
- Service contracts as tailor-made service packages, from reaction time agreements to support availability

¹⁾ Not all services are available in all countries. Check with your SICK Sales Representative for the services in your area.





Consulting & Design

For the ideal fusion of product, application and industry expertise to form the perfect solution.



Upgrade & Retrofits

For integration of powerful and innovative SICK systems and sensors into existing systems to maintain or increase efficiency.



Product & System Support

For rapid reaction and reliable support for inquiries about integration and the function of SICK systems and sensors. Experienced specialists deal with your problems professionally and provide practical solutions.



Training & Education

For well-trained staff and optimum use of SICK systems and sensors. SICK seminars and user training courses increase the confidence of design engineers and supervisors.



Verification & Optimization

For optimum use and smooth operation of SICK systems and sensors. Use SICK's experience for optimum system efficiency.



Standards and certificates

SICK sensors fulfil the most important standards – worldwide

As one of the leading providers of industrial sensor technology, we focus strongly on the requirements of the food and beverages industries. Our product range provides solutions – even for the most demanding applications.

With SICK you place your trust in a partner who has learned through experience about the extreme hygienic demands frequently made on sensor solutions. Whether dealing with damp, high process and cleaning temperatures, aggressive media or cleaning pressures of up to 100 bar – SICK sensor technology functions trouble-free for many years.

SICK also fulfils automation standards, thus meeting the requirements of future machine generations.

SICK solutions mean satisfying automation and process requirements in equal measure.



Standards and approvals



CE

The CE marking documents that the units sold by the manufacturer comply with the European directives for specified electrical equipment.



UL/CSA oder cULus

Units with this marking meet the requirements of UL (Underwriters Laboratories Inc.) and CSA (Canadian Standards Association). In many cases this approval is a prerequisite for access to the North American market. cULus is a combined approval and corresponds to the two individual approvals CSA and UL.



CCC

CCC (China Compulsory Certification) is a mandatory Chinese certificate for certain products used in China. The products concerned are listed in a catalogue as defined by the Chinese authorities. Proximity sensors with a voltage range higher than 36 V are subject to certification.



Food Certificates



HACCP

Provides third party endorsed food safe certification which confirms that stringent food safety standards are achieved.



FDA

FDA (Food and Drug Administration) is a US-American supervisory authority for food and drugs. This authority grants approvals for products and materials used in the food and pharmaceutical industries.



EHEDG

The EHEDG (European Hygienic Equipment Design Group) prepares guidelines for Europe concerning the requirements for measuring systems in machines of the food and pharmaceutical industry. Units with the EHEDG marking have been tested and approved for the food and pharmaceutical industry in accordance with these guidelines.



GMP

GMP (Good Manufacturing Practice) comprises guidelines for the quality assurance of production processes and the environment in the food and pharmaceutical sectors. A GMP-compliant quality management system serves to ensure product quality and the fulfilment of health authority requirements binding for placing goods on the market.



3A

Units with this marking comply with the hygienic standards applicable in the USA. They are approved for use in hygienic applications in the dairy industry.



JohnsonDiversey

Products showing this label are consistent versus industrial cleanser and disinfectants according to JohnsonDiversey.

Prepared for the extreme cases: IP 69K and ECOLAB

The food and beverage industry demands extreme water-tightness and material resistance of systems and components. Solutions from SICK are engineered to last. SICK offers a wide range of products that are rated IP 69K and are ECOLAB certified to be resistant to cleaning agents.

SAFE OPERATION – UNAFFECTED BY STEAM JETS

Pressure washers – using hot steam or cold water jets – are standard in industries where clean surfaces are important. SICK sensors remain water-tight and operational, even in exposed locations – temperature variations and high steam temperatures do not affect their function.



RESISTANT – UNAFFECTED BY CLEANING AGENTS AND DISINFECTANTS

Aggressive cleaning agents and disinfectants – such as alkaline products and products containing chlorine – place particular demands on sensors.

Resistance of materials to the effects of such aggressive chemicals is a minimum requirement for SICK sensors, which have been developed and manufactured according to strict quality standards. Aggressive cleaning agents and disinfectants do not affect their function, not even long-term.





IP 69K ACCORDING TO DIN 400 50



Resistance of the sensors and accessories during cleaning processes:

- 100 bar high-pressure jet cleaning
- 16 liters per minute
- 80 °C water temperature
- 100 mm distance from the sample
- Testing at 0, 30, 60, 90° spraying angle, with the product rotating (5 rotations/min)

ECOLAB



Testing the resistance of materials to aggressive cleaning agents and disinfectants:

- 28 days reaction time
- 20 °C temperature
- no swelling
- no embrittlement



Supporting your hygienic design requirements.

HACCP “Hazard Analysis and Critical Control Points“

HACCP is a prevention concept, used to highlight the risks in the manufacture, processing and sales of food items. The aim of an HACCP is to create a method of recognizing, documenting, eliminating and tracking of health risks.

Each machine builder or manufacturer must create his own HACCP. Many industry-specific guidelines and methods of best practice have been established over the years.

Authorities or customers may impose their own hygienic standards. Some of them can be adhered to on a voluntary basis.

Some specific standards, such as hygienic design standards as established by EHEDG (European Hygiene Equipment Design Group) are useful. The people who create them strive for safer, easier to clean and maintain equipment. Through these standards, the equipment is manufactured at a higher hygienic level and manufacturers that maintain these standards are helping to prevent future problems.

SICK strives to meet these requirements. The guidelines are maintained where possible.

THE SEVEN STEPS TO HACCP

1. Conduct a hazard analysis
2. Identify critical control points
3. Establish critical limits
4. Establish monitoring procedures
5. Establish corrective actions
6. Establish verification procedures
7. Record keeping procedures

1. CONDUCT A HAZARD ANALYSIS

You must determine the food safety hazards and then identify the preventive measures the plant can then apply to control these hazards. Potential hazards associated with a food could be biological, such as microbe, or chemical, or they could be physical.

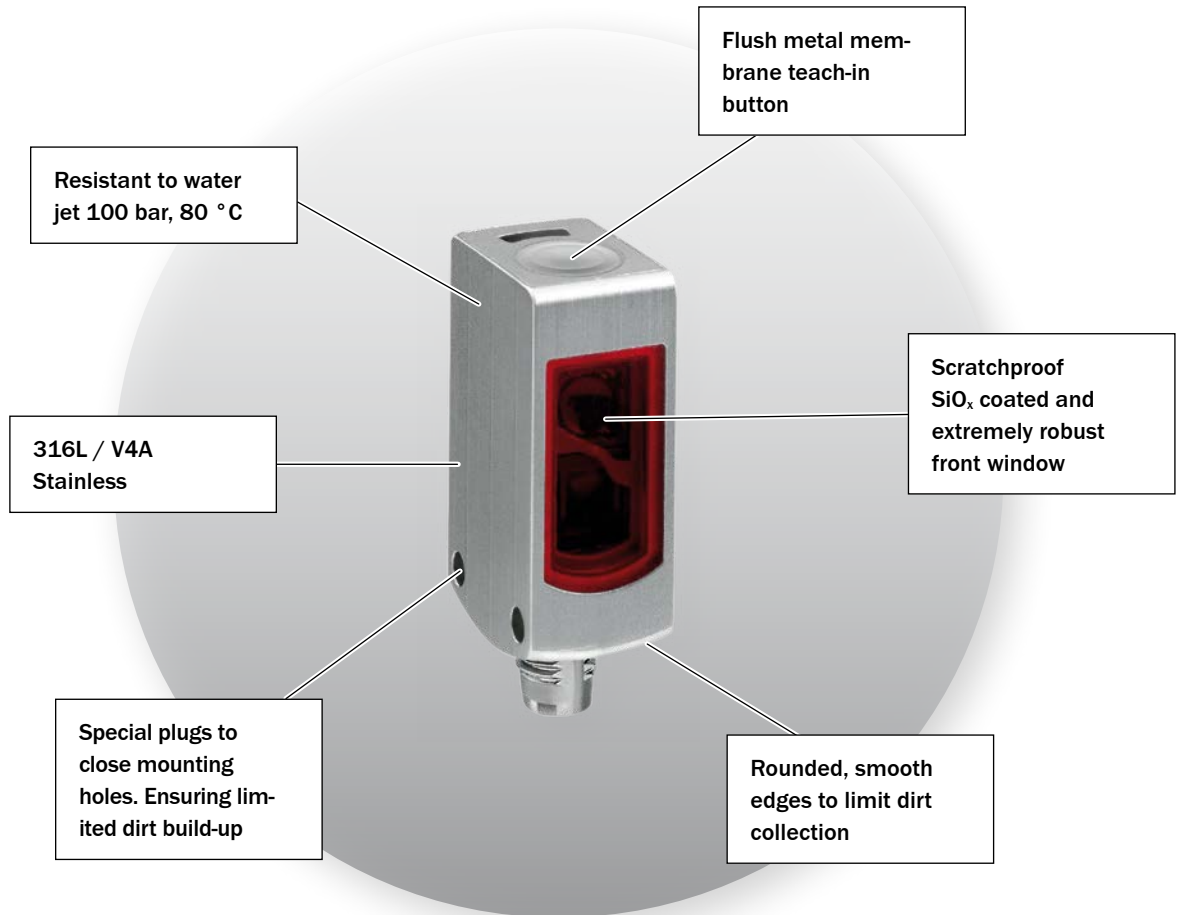
Create a strategy in step 2 – 7 to address the identified risks.



SICK supports your needs

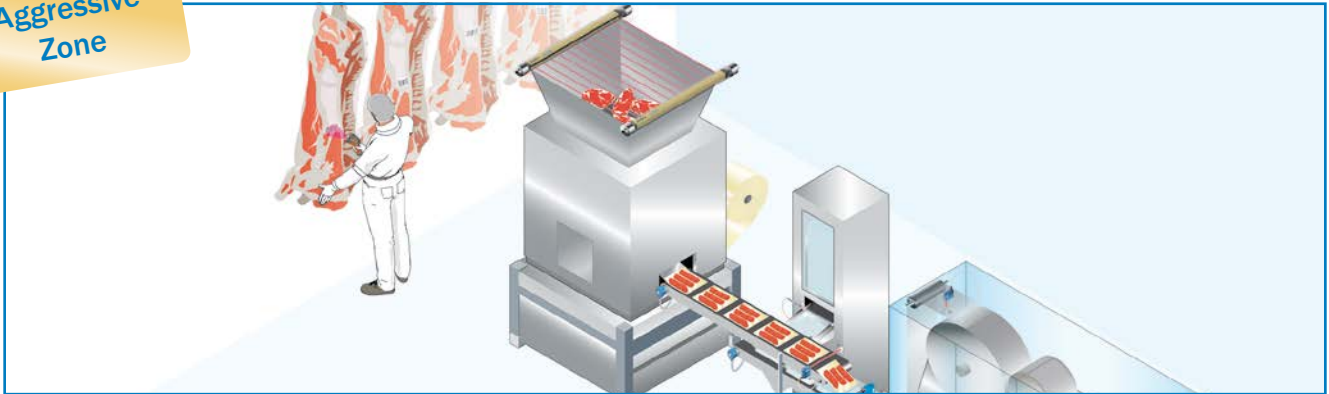
Reducing the risks in step 1, reduce the costs of preventative actions in steps 2 – 7.

Using the GMP and EHEDG guidelines to ensure the correct materials are used, Smooth surfaces ensure that no dirt can collect. SICK helps reduce your costs and efforts in steps 2 – 7.





Aggressive Zone



AGGRESSIVE ZONE

Food zone. Continual contact with food.

CLEANING. HACCP RISK

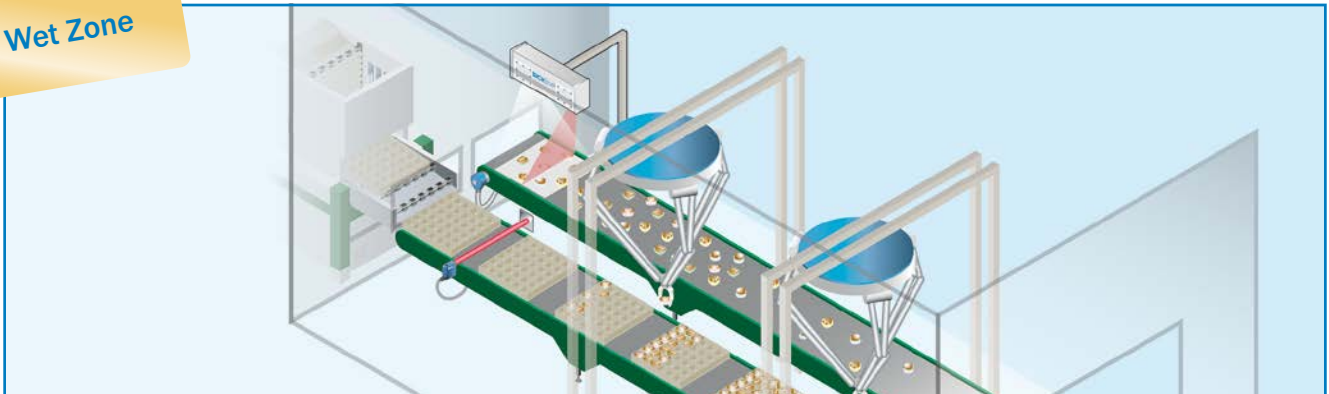
Aggressive cleaning with high pressurised water, chemicals and heat. Bacterial risk is high in these areas.

HOW CAN SICK SUPPORT YOU

With specially designed stainless steel and food grade plastics, our sensors can help to reduce the risk.

Robust housings ensure the water tightness and the resistance of our products. **IP 69K**

Wet Zone



WET ZONE

Food zone. Continual contact with food.

CLEANING. HACCP RISK

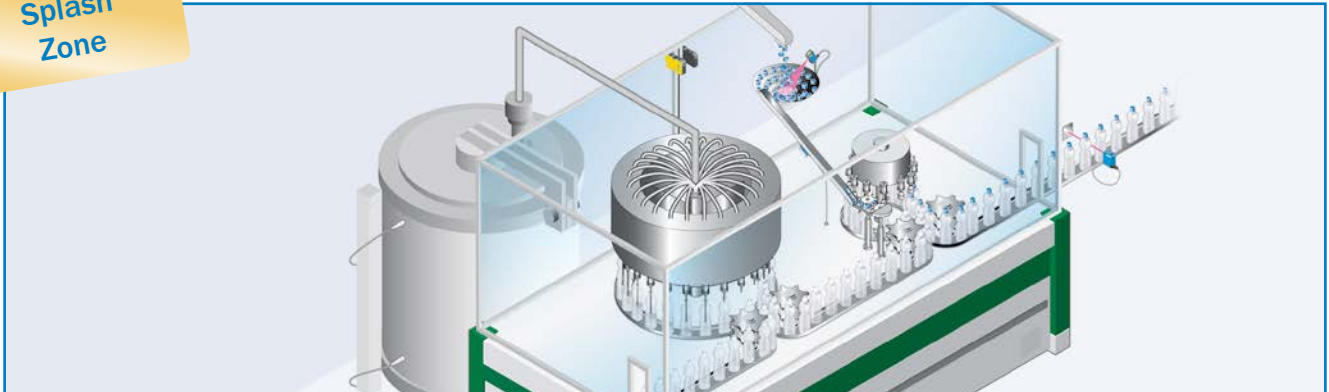
Cleaning with low pressurized water, chemicals and heat. Bacterial risk is high in these areas.

HOW CAN SICK SUPPORT YOU

With specially designed food grade plastics, our sensors can help to reduce the risk.

Robust housings ensure the water tightness and the resistance of our products. **IP 69K**

Splash Zone



SPLASH ZONE

Splash zone. Personnel can touch the surfaces of the plant and then the food. Or food could splash onto this area.

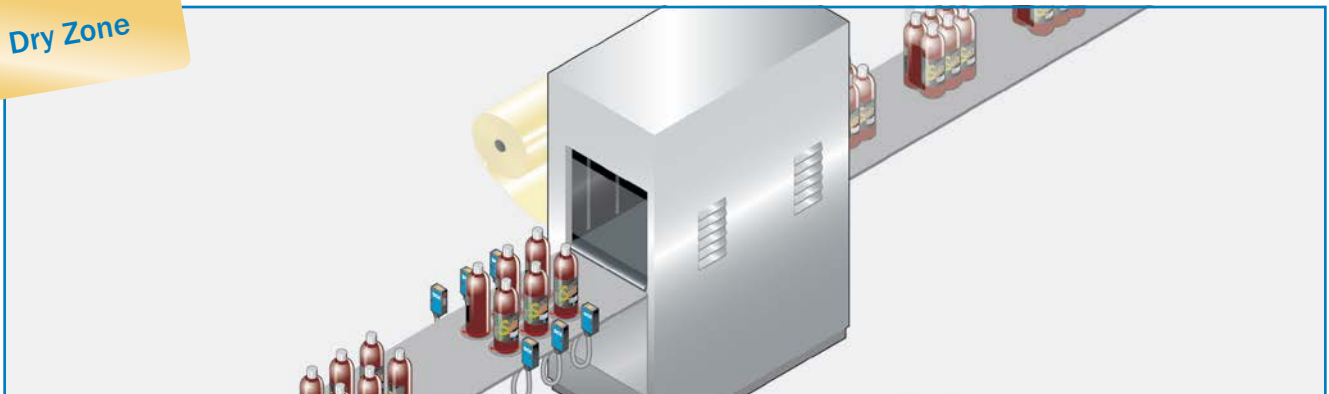
CLEANING. HACCP RISK

Cleaning is not aggressive. Bacteria and cross contamination are the risks in this area.

HOW CAN SICK SUPPORT YOU

With housings designed for wet areas and with GMP we can help reduce the risk. SICK also offers non-toxic plastics and splash-proof housings. IP 67->IP 69K

Dry Zone



DRY ZONE

Non-contact zone. Internal part of machines.

CLEANING. HACCP RISK

Not cleaned. Hazards include glass falling in food.

HOW CAN SICK SUPPORT YOU

Special plastic front covers ensure that no glass can enter the product.

Level and pressure sensing Universal use through intelligent technologies

For more products see
www.mysick.com



Level measurement of liquid food



LFB200 is a universal sensor for the food and beverage industries that is used to monitor levels in storage and buffer tanks. It is also used for dry running pump protection. A compact design, high enclosure rate, CIP/SIP capability characterize LFB200 for hygienic applications.

Product information → page 68

Level measurement of raw material



Level measurement and monitoring in raw material silos, such as overflow protection during filling or as a reliable minimum switch for emptying the silo. Robust and universal measuring technology for almost every raw material.

Product information → page 70

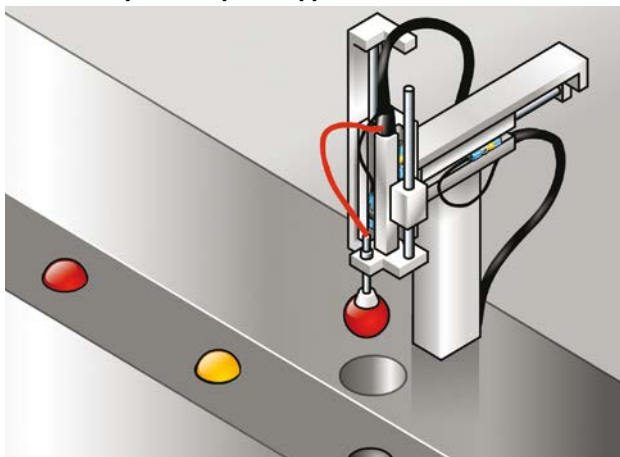
Hygienic pressure sensors PHT



Food and beverage production requires pressure sensors as an integral part of food processing and for level measurement. Hygienic process connectors, CIP/SIP capability, robust and precise sensor technology distinguish the food and beverage-rated PHT pressure sensors.

Product information → page 72

MZT8 in a pick and place application



MZT8 detects the end position of the piston in a pneumatic cylinder/gripper, which serves as a pick and place application.

Product information → page 36

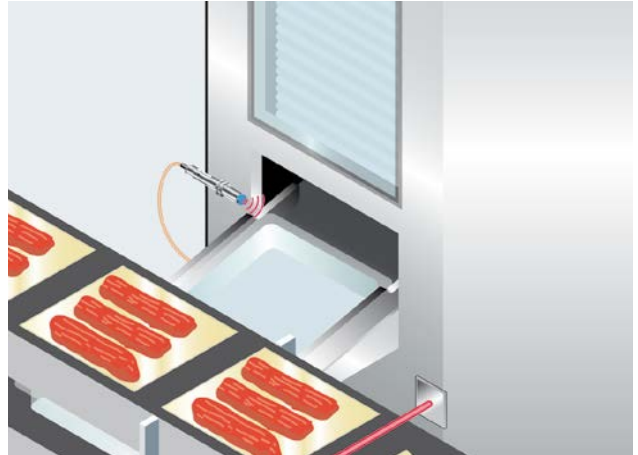
IMF12 in a rotation filling machine



The IMF12 inductive sensor detects several positions of the transport wheel before the sealing process and is cleaning resistant due to its construction/design.

Product information → page 32

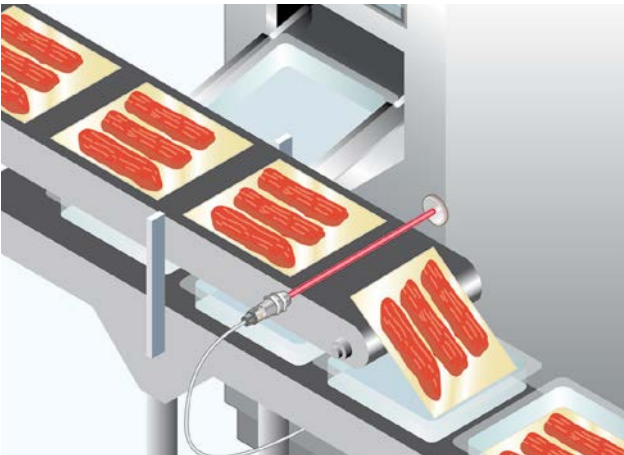
IMF18 in a conveyor system



The IMF18 inductive sensor detects the presence of a tray at the tray magazine.

Product information → page 32

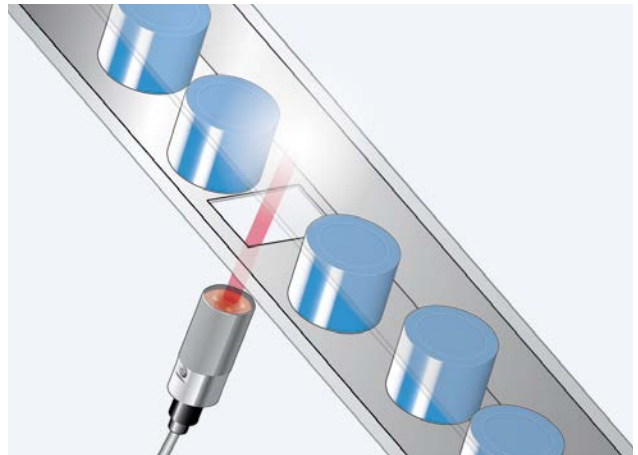
V18V on a conveyor belt



The VL18V photoelectric reflex sensor for transparent objects triggers the portioning belt for synchronizing the feed belt (packaging/transparent belts).

Product information → page 30

MH15V – Shortest full-metal housing in stainless steel



The MHTB15V monitors the delivery of closing caps and at the same time it controls the holdup of the caps.

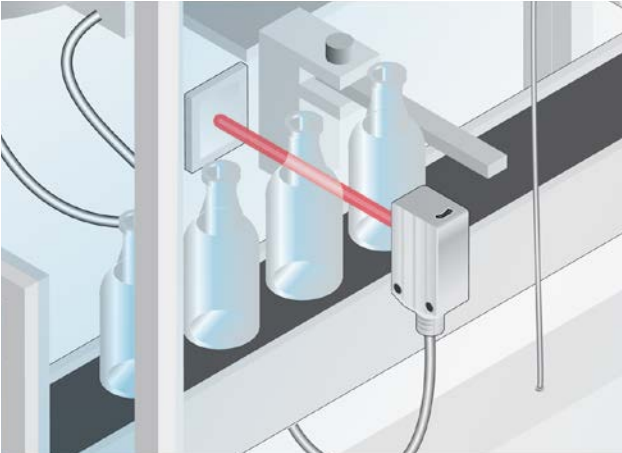
Product information → page 28

Photoelectric sensors for use under very harsh conditions
IP 69K with top optical functionality

For more products see www.mysick.com



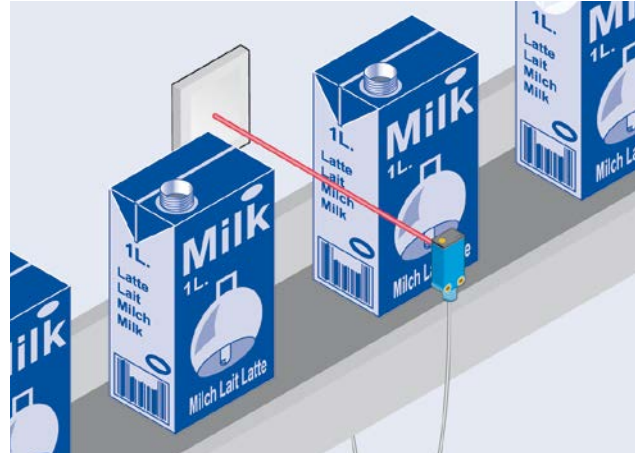
WLG4S-3 INOX in a bottling plant



Recognition of PET and glass bottles under very harsh ambient conditions. The all around solution – reliable recognition of all packaging in the food and beverages market. Simple setting via Metal Membrane Teach. High reliability due to automatically tracking switching threshold.

Product information → [page 26](#)

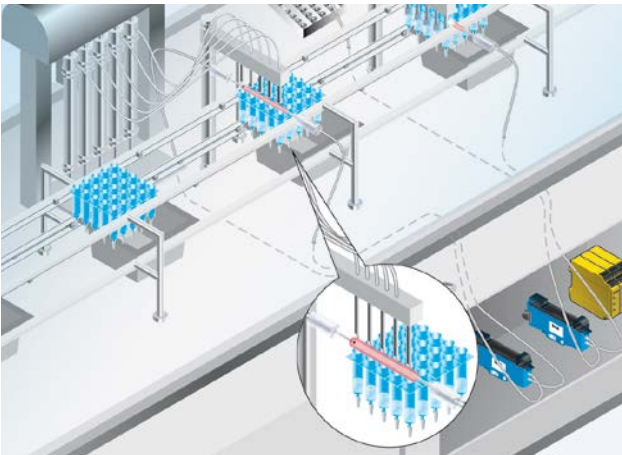
Counting and recognition of all types of packaging



WL4-3: simple and quick alignment during commissioning. Reliable operation when contaminated due to high reserve factors. Also detects packaging with reflective surfaces.

Product information → www.mysick.com

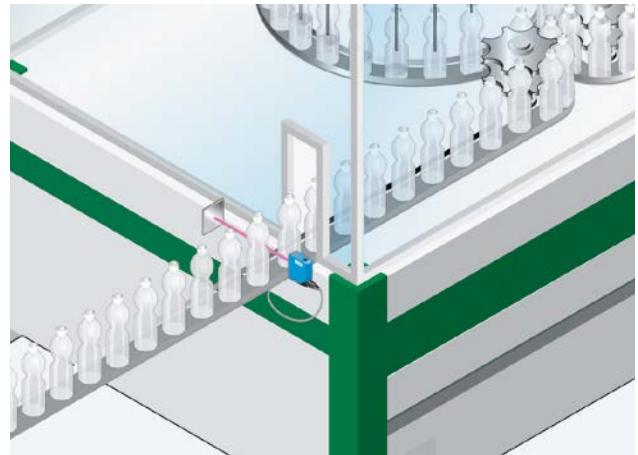
Wine bottling plant: WLL190 determines the filling level



The filling tube, which is fitted with a filling level fiber-optic cable, is inserted down into the bottle neck, and filling begins. Once the desired level has been reached, the WLL190T-2 switches and the filling process stops immediately.

Product information → www.mysick.com

WL12 G recognizes PET bottles



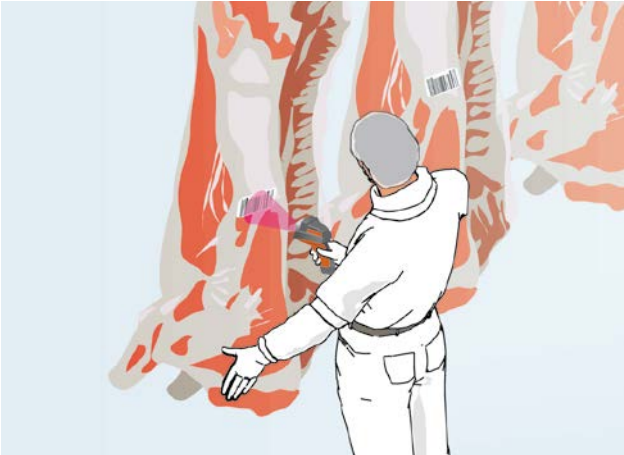
WL12G detects thin-walled, transparent bottles. It also recognises bottles which are lying down, i.e., are incorrectly positioned, and activates a pusher. This ensures that only bottles which are positioned correctly are fed into the bottler.

Product information → www.mysick.com

Identification solutions for food and beverage production

From scanner to 3D camera system

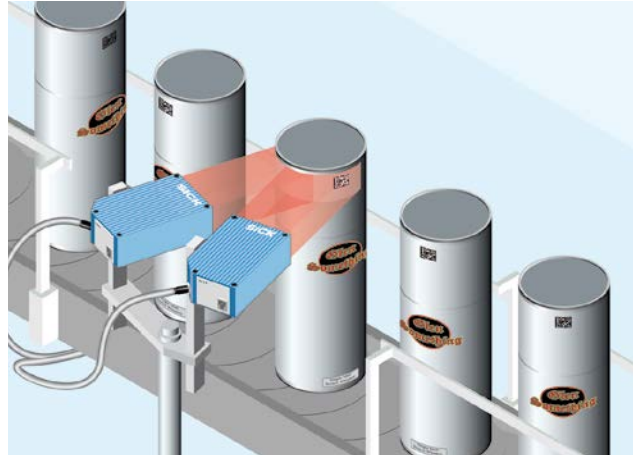
Detection of the PDF417 code



The IT4800i mobile hand-held scanner (as cable or radio variant) detects the PDF417 codes of unprocessed goods.

Product information → page 56

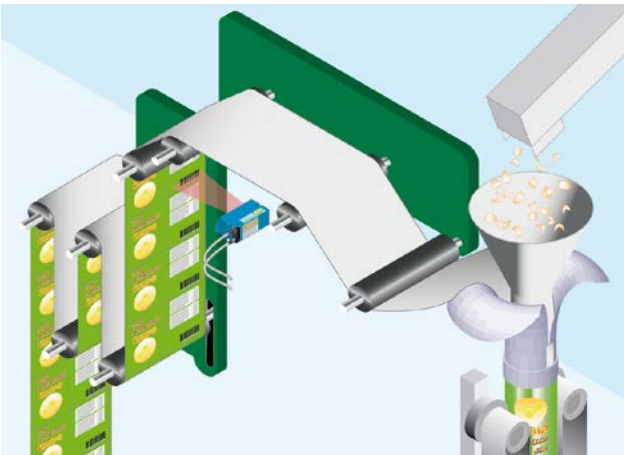
ICR845-2 camera-based code reader ensures quality



Data Matrix codes on the packages ensure goods are correctly sorted and guarantees high quality in the packaging process. The ICR845-2 code reader identifies all codes on the fly at a speed of up to 3 m/s and does not negatively affect the machine throughput.

Product information → page 52

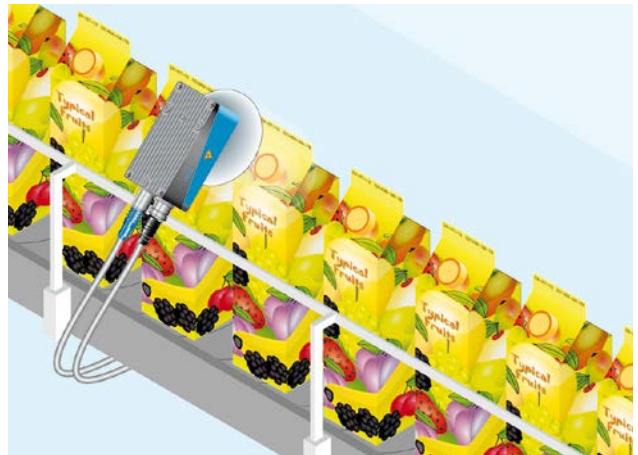
Product validation with 1D bar code scanner



Before the start of production the bar code on the package is taught into the bar code scanner. During production the bar code on the package is read and compared to the taught-in bar code. If they match, the correct packaging/label is used within this production batch.

Product information → page 54

Fast cap and date code inspection with I20 Dome



With the sophisticated Inspector part inspection tool set, verifying the presence of package details moving on a conveyor belt is as easy. Edge pixel counter inspection is used to check that the packaging has a code, while contour inspection is used to check that it has a cap.

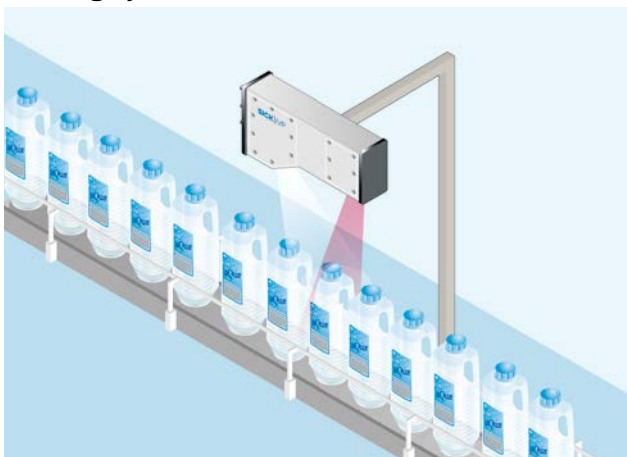
Product information → page 64

Guaranteed quality and safety
One stop shopping

For more products see
www.mysick.com



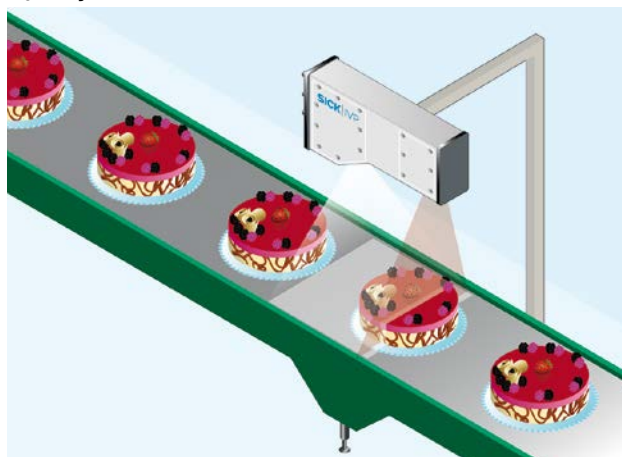
Lid integrity verification with IVC-3D



The IVC-3D smart camera locates the lid and verifies that it is correctly assembled. For many package types, the 3D measurements can be made relative to the rest of the package. This gives a correct result even if the container itself is slightly tilted on the conveyor.

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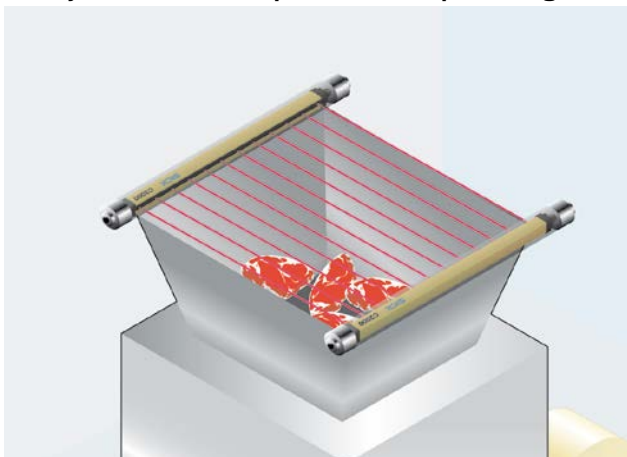
Quality verification of cakes with IVC-3D



The IVC-3D smart camera records the 3D shape at high speed as the baked cakes pass by on the conveyor belt. The camera checks that the cakes have no dents or missing chunks, and that they have the correct height, volume, roundness and diameter. The version with a stainless steel housing makes it ideal for food and beverage applications.

Product information → page 62

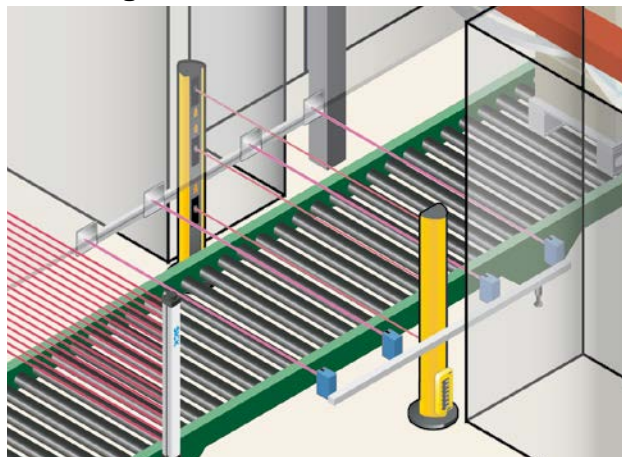
Safety for machines and plants for meat processing



C2000 safety light curtain in IP67 Housing for point-of-operation guarding at a funnel of a meat mincer machine.

Product information → page 42

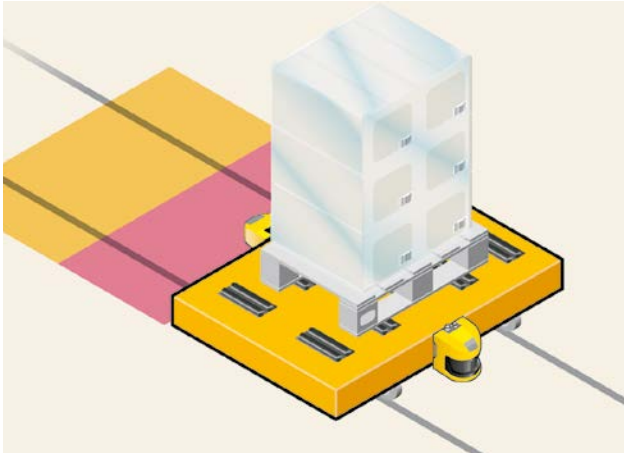
Cold storage down to $-10\text{ }^{\circ}\text{C}$... $-40\text{ }^{\circ}\text{C}$



Point-of-operation guarding or access protection in industries that require cold storage, such as food and beverage and logistics, with temperatures down to $-10\text{ }^{\circ}\text{C}$... $-40\text{ }^{\circ}\text{C}$.

Product information → page 42

Safety for transport systems in cold store logistics



Safety laser scanners safeguard danger zones on driverless transport systems. The S3000 and S300 can be used in temperatures down to 10° C. The S3000 Cold Store is used to secure autonomous vehicles in the extreme conditions of cold areas with temperatures down to -30 °C.

Product information → [page 46](#)

IME inductive sensors with maximum precision



IME12 sensors have two unique characteristics: stainless steel housing for harsh ambient conditions and an imprinted "S" or "O" on the sensor casing to easily identify the output function of the sensor.

Product information → www.mysick.com

WLL190T-2 for level monitoring



The task: to ensure that the bottle is not overfilled after completion of the filling process. The solution: a cleanable and chemically resistant fiber-optic head.

Product information → www.mysick.com

WTB4-3 for securing apertures



Task: to ensure that the aperture is sealed by the boxes. Solution: WTB4-3 sensor with self monitoring function. If the aperture is not sealed or if there is a sensor error, a message is sent to the control system.

Product information → www.mysick.com

For more products see
www.mysick.com

W4S-3 INOX Photoelectric Sensors

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

Robust and powerful



ECOLAB[®]



IO-Link



PinPoint
by **SICK**

Stainless Steel



Product Description

The W4S-3 INOX photoelectric sensor combines a robust housing with optical “best in class” features. Adjustment via

100% welded and tight Metal Membrane Teach, IO-Link, and teach-in via cable.

Product Features

- Beyond IP 69K
- Stainless steel (316L/1.4404)
- Water jet resistant up to 80 °C
- Resistant against all known cleaning liquids
- Detects every transparent object and fulfils hygienic demands applicable in the food industry
- All versions with PinPoint Technology
- Easy and fast adjustments with Metal Membrane Teach
- Superior background suppression

Customer Benefits

- Highest availability due to robust sensor resisting rough environmental conditions
- No restrictions in terms of cleaning procedures
- Reliable detection of all objects known in the food and beverage industry
- Easy and fast adjustments with Metal Membrane Teach button or teach via wire
- Fast and reliable alignment due to highly visible light spot generated by PinPoint Technology
- Remote monitoring via IO-Link

W4S-3 INOX Photoelectric Sensors

Technical data and order information

- Red light PinPoint technology
- Adjustment via Metal Membrane Teach
- Electrical connection: 10 ... 30 V DC
- Gold-plated pins
- Output: PNP, IO-Link, NPN, Alarm
- Input: external teach via wire, IO-Link, test input (WSE only)

Series	Characteristics	Sensing range	Switching outputs	Switching mode	Additional option	Connection type	Type	Order no.		
Proximity	BGS	4 ... 500 mm	PNP	Complementary	–	M8, 4-pin	WTB4S-3P2262V	1046383		
				Light-switching	IO-Link, teach	M8, 4-pin	WTB4SC-3P2262V	1045092		
		70 ... 120 mm	NPN	Complementary	–	Cable 2 m, 4-adrig	WTB4S-3N1162V	1046391		
				Light-switching	Teach-in via wire	Cable plug, M12, 4-pin	WTB4S-3P3464V	1048015		
	PNP		Complementary	–	M8, 4-pin	WTB4S-3P2232V	1046396			
			Light-switching	IO-Link, teach	Cable plug, M12, 4-pin	WTB4SC-3P3432V	1046408			
	FGS	200 mm	NPN	Complementary	–	Cable 2 m, 4-adrig	WTB4S-3N1132V	1046403		
			PNP	Light-switching	–	M8, 4-pin	WTF4S-3P2265V	1045094		
Reflex	Autocol- limination	0 ... 4 m	PNP	Complementary	–	M8, 4-pin	WL4S-3P2230V	1045095		
				NPN	Dark-switching	–	Cable 2 m, 3-adrig	WL4S-3E1330V	1046420	
		0 ... 5 m	PNP	Complementary	–	M8, 4-pin	WL4S-3P2232V	1046421		
				Dark-switching	¹⁾ , Pre-failure signalling output	VMA, M8, 4-pin	WLG4S-3V2232V	1046447		
			NPN	Complementary	–	Cable 2 m, 4-adrig	WL4S-3N1132V	1046431		
				Dark-switching	¹⁾ , Teach-in via wire	Cable 2 m, 4-adrig	WLG4S-3E1135V	1046438		
		Through beam	–	0 ... 5 m	PNP	Dark-switching	–	M8, 3-pin	WSE4S-3F2130V	1045099
					NPN	Dark-switching	–	Cable 2 m, 3-adrig	WSE4S-3E1330V	1046445

¹⁾ Transparent objects

Accessories for W4S-3 INOX

Description	Material	Enclosure rating	Dimensions	Type	Order no.
Universal bar clamp system (UBS)	Stainless Steel (1.4408)	–	–	BEF-KHS-N02N	2051618
Mounting bracket, wall mounting	Stainless Steel (1.4404)	–	–	BEF-W4-A	2051628
Mounting bracket, floor mounting	Stainless Steel (1.4404)	–	–	BEF-W4-B	2051630
Protection bracket, floor mounting	Stainless Steel (1.4404)	–	–	BEF-SW-W4	2051497
Chemically resistant reflector	Chemically resistant	IP 69K	20 x 32 mm	PL10FCHEM	5321636
			18 x 60 mm	PL20CHEM	5321089
			51 x 61 mm	P250CHEM	5321097
Connecting cable, female connector, straight	PVC, orange	IP 69K	2 m, M8, 4 pin	DOL-0804-G02MN	6033670

MH15V Photoelectric Sensors

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

The shortest full-metal housing in stainless steel



Product Description

The shortest M18 housings on the market, robust materials, and unique accessories for flush mounting – the MH15V series solves all standard tasks in the food & beverage area. Their full-metal housing in stainless steel and wash-down design combines tightness

with optimum industrial suitability, and resist high air humidities and chemical cleaning processes using high water pressures. Certificates from ECOLAB and Johnson Diversey confirm the suitability of the product series.

Product Features

- Most complete sensor family M18 stainless steel for food & beverage
- Photoelectric proximity sensor, sensing range max. 300 m, with background suppression BGS, sensing range adjustable
- Extremely watertight (IP 69K)
- Stainless steel housing (316L / 1.4404)
- Resistant against industrial detergents acc. to ECOLAB and Johnson Diversey
- FDA-certified plastic

Customer Benefits

- Greater machine availability thanks to reliable sensors
- Sensor design and housing material makes them ideal for hygienic processes
- Resistant against all common detergents; certified by independent institutes

Technical data and order information

- Connection type: M12 connector, 4-pin, gold-plated pins
- Electrical configuration: 10 ... 30 V DC; 3-wire; Light-On or Dark-On switching
- Switching output: PNP (NPN versions: see www.sick.com)
- Housing M18 stainless steel, full-metal
- Housing material: stainless steel (316L, 1.4404)
- Optic axis: axial

MH15V – the shortest full-metal housing in stainless steel on the market

Sensor type	Function type optics	Sensing distance Sn	Switching mode	Adjustment Potentiometer	Type	Order no.
Photoelectric proximity sensor with background suppression BGS	Standard	3 ... 300 mm ¹⁾	L.ON ²⁾	Sensing distance	MHTB15-P3367V	1046537
Photoelectric proximity sensor	Energetic	10 ... 350 mm ¹⁾	L.ON ²⁾	Sensitivity	MHT15-P3347V	1043811
		10 ... 100 mm ¹⁾	L.ON ²⁾	Sensitivity	MHT15-P3317V	1043806
Photoelectric reflex sensor	Standard	0,04 ... 1,1m (P250CHEM)	D.ON ²⁾	–	MHL15-P3236V	1043814
Photoelectric through-beam sensor	Standard	0 ... 5 m	D.ON ²⁾	–	MHSE15-P3236V	1043818

¹⁾ Object to be detected with 90% remission (relating to standard white in acc. with DIN 5033); 100 x 100 mm

²⁾ 3-wire; light-on (L.ON) or dark-on (D.ON) switching

Accessories for MH15V

Description	Dimensions	Specification	Type	Order no.
Reflector	47 x 47 mm	ECOLAB-certified; increased chemical durability; temperature range –20 °C ... +80 °C	P250CHEM	5321097
Connecting cables	2 m	M12 4-pin; female connector, straight; IP 69K	DOL-1204-G02MN	6028128
		M12 4-pin; female connector, 90° angle; IP 69K	DOL-1204-W02MN	6028129
Mounting ring	M18	Flush mounting, stainless steel 316L (1.4404) for M18 housing	BEF-WN-MH15-2V	4053358
Mounting bracket	M18	Bracket axial, stainless steel	BEF-WG-M18N	5320948
		Bracket 90°; stainless steel	BEF-WN-M18N	5320947

Additional accessories → page 38 and 40

V18V Photoelectric Sensors

For more products see
www.mysick.com

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

The best in its class –
tough and powerful



Product Description

Patented technology, optimized material. The V18V series offers long ranges and resists conditions caused by chemical cleaning processes, high ambient temperatures, air humidity and high water pressures. Highlight: patented sensitivity

adjustment via touch-teach. The V18V offers sensitivity adjustment directly on the sensor but without mechanical operating elements, such as rotating or press buttons.

Product Features

- Most extensive M18 stainless steel sensor family for the food and beverage industry on the market
- Extremely watertight (IP 68/IP 69K)
- Stainless steel housing (316L / 1.4404)
- Patented Touch-Teach-in: sensitivity adjustment on sensor, but without mechanical operating elements
- Extended temperature range of -40 °C ... $+80\text{ °C}$; short-term resistant (15 min) up to $+100\text{ °C}$
- Resistant against industrial detergents acc. to ECOLAB and Johnson Diversey
- FDA-certified plastic

Customer Benefits

- Greater machine availability thanks to reliable sensors
- Hygienic processes due to appropriate sensor design and housing material
- Resistant against all common detergents; certified by independent institutes
- Adapted sensor solution due to sensor options embedded in homogeneous family performance features



ECOLAB[®]

IP
69k

JohnsonDiversey
Clean is just the beginning

Stainless Steel

Touch-Teach-in



Technical data and order information

- Patented sensitivity/sensing range adjustment: without mechanical operating elements
- Connection type: M12 connector, 4-pin, gold-plated pins
- Electrical connection: 10 ... 30 V DC; 4-wire; light-/dark-switching
- Switching output: PNP (NPN versions: see www.sick.com)
- Housing M18 stainless steel
- Housing material: stainless steel (316L, 1.4404)
- Optic axis: axial
- Switching mode: Light-On/Dark-On switching selectable, L.ON/D.ON controll wire

V18V – The best in its class – tough and powerful

Sensor type	Function type Optics	Sensing distance Sn	Adjustment Touch-Teach-in	Type	Order no.
Photoelectric proximity sensor with background suppression BGS	Standard	0 ... 140 mm ¹⁾	Sensing distance	VTB18-4P1240V	6035493
	Focused	0 ... 100 mm ¹⁾	Sensing distance	VTB18-4P1240VS01	6037754
Photoelectric proximity sensor	Energetic	5 ... 800 mm ¹⁾	Sensitivity	VTE18-4P8240V	6035491
		5 ... 400 mm ¹⁾	Sensitivity	VTE18-4P4240V	6035489
		5 ... 100 mm ¹⁾	Sensitivity	VTF18-4P1240V	6035487
Photoelectric reflex sensor	Standard	0,04 ... 2,3 m (P25OCHEM)	–	VL18-4P3140V	6035495
	Transparent objects	0,04 ... 1,5 m (P25OCHEM)	Sensitivity	VL18-4P2240V	6035497
Photoelectric through-beam sensor	Standard	0 ... 18 m	–	VS/VE18-4P3140V	6035499

¹⁾ Object to be detected with 90% remission (relating to standard white in acc. with DIN 5033); 100 x 100 mm

Accessories for V18V

Description	Dimensions	Specification	Type	Order no.
Reflector	47 x 47mm	ECOLAB-certified; increased chemical durability; temperature range -20 °C ... +80 °C	P25OCHEM	5321097
Connecting cables	2 m	M12 4-pin; female connector, straight; IP 69K	DOL-1204-G02MN	6028128
		M12 4-pin; female connector, 90° angle; IP 69K	DOL-1204-W02MN	6028129
Mounting ring	M18	Flush mounting, stainless steel 316L (1.4404) for M18 housing	BEF-WN-MH15-2V	4053358
Mounting bracket	M18	Bracket axial, stainless steel	BEF-WG-M18N	5320948
		Bracket 90°; stainless steel	BEF-WN-M18N	5320947

Additional accessories → page 38 and 40

IMF Inductive Sensors

For more products see
www.mysick.com

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

Robust and powerful



Product Description

IMF inductive sensors perform tasks in almost all areas of food production. Whether it's in breweries, dairies or in the production of frozen food, they operate with highest precision and greatest

reliability. Their housings are made of an extremely robust mix of stainless steel and FDA-certified plastics and withstand even the harshest conditions in everyday operation.

Product Features

- Extremely watertight (IP 69K)
- Stainless steel housing (316L / 1.4404)
- Extended temperature range of -40 °C ... +80 °C
- Short-term resistant up to +100 °C
- Resistant against industrial detergents acc. to ECOLAB and Johnson Diversey
- FDA-certified plastic

Customer Benefits

- Greater machine availability thanks to more reliable operation
- Sensor design and housing material makes them ideal for hygienic processes
- No sensor breakdown due to aggressive cleaning processes
- No restrictions for detergents and cleaning processes



Technical data and order information

- Electrical configuration: DC 3/4 wire, 10 ... 30 V
- Connection type: M12 connector, 4-pin, gold-plated pins
- Switching output: PNP (NPN versions on www.sick.com)

M12 housing

Installation	Output function	Sensing range Sn [mm]	Type	Order no.
Flush	Normally closed	2	IMF12-02BPOVCOS	6035454
		4	IMF12-04BPOVCOS	6035462
	Normally open	2	IMF12-02BPSVCOS	6035452
		4	IMF12-04BPSVCOS	6035460
	Complementary	2	IMF12-02BPPVCOS	6035215
		4	IMF12-04BPPVCOS	6035219
Non flush	Normally closed	4	IMF12-04NPOVCOS	6035458
		8	IMF12-08NPOVCOS	6035466
	Normally open	4	IMF12-04NPSVCOS	6035456
		8	IMF12-08NPSVCOS	6035464
	Complementary	4	IMF12-04NPPVCOS	6035217
		8	IMF12-08NPPVCOS	6035221

M18 housing

Installation	Output function	Sensing range Sn [mm]	Type	Order no.
Flush	Normally closed	5	IMF18-05BPOVCOS	6035470
		8	IMF18-08BPOVCOS	6035478
	Normally open	5	IMF18-05BPSVCOS	6035468
		8	IMF18-08BPSVCOS	6035476
	Complementary	5	IMF18-05BPPVCOS	6035223
		8	IMF18-08BPPVCOS	6035227
Non flush	Normally closed	8	IMF18-08NPOVCOS	6035474
		12	IMF18-12NPOVCOS	6035482
	Normally open	8	IMF18-08NPSVCOS	6035472
		12	IMF18-12NPSVCOS	6035480
	Complementary	8	IMF18-08NPPVCOS	6035225
		12	IMF18-12NPPVCOS	6035229

Accessories

Description	Dimensions	Specification	Type	Order no.
Connecting cables	2 m	M12 female connector straight, 4 pins	DOL-1204-G02MN	6028128
		M12 female connector angled, 4 pins	DOL-1204-W02MN	6028129
Mounting bracket	M12	90° angle, stainless steel	BEF-WN-M12N	5320949
	M18	90° angle, stainless steel	BEF-WN-M18N	5320947

Additional accessories → page 38 and 40

INOX Inductive Sensors

For more products see
www.mysick.com



- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

High-end for maximum requirements



Product Description

High-pressure cleaning with aggressive detergents, acids and alkalis challenge sensors. The solution: INOX inductive sensors with full-metal housing in

stainless steel (316L/1.4404). They withstand extreme conditions, offer a triple sensing range and a very high reduction factor.

Product Features

- Extremely watertight (IP 68/IP 69K)
- Fully enclosed in stainless steel (316L /1.4404)
- Longest sensing range in an IP 69K enclosure, up to 40 mm
- Very high reduction factor to 0.9
- Resistant against industrial detergents
- Optical adjustment aid

Customer Benefits

- Greater machine availability due to less mechanical stress
- Reduced downtime in harsh applications
- Fast and easy mounting



Stainless Steel



Technical data and order information

- Electrical configuration: DC 3 wire, 10 ... 30 V
- Connection type: M12 connector, 4-pin, gold-plated pins
- Switching output: PNP (NPN version on www.sick.com)

M12 housing

Installation	Output function	Sensing range Sn [mm]	Type	Order no.
Flush	Normally closed	6	IM12-06BPO-NC1	6027574
	Normally open	6	IM12-06BPS-NC1	6027572
Non flush	Normally open	10	IM12-10NPS-NC1	6027575

M18 housing

Installation	Output function	Sensing range Sn [mm]	Type	Order no.
Flush	Normally closed	10	IM12-06BPO-NC1	6027574
	Normally open	10	IM12-06BPS-NC1	6027572
Non flush	Normally open	20	IM18-20NPS-NC1	6027580

M30 housing

Installation	Output function	Sensing range Sn [mm]	Type	Order no.
Flush	Normally open	20	IM30-20BPS-NC1	6027582
Non flush	Normally open	40	IM30-40NPS-NC1	6027584

Accessories

Description	Dimensions	Specification	Type	Order no.
Connecting cables	2 m	M12 female connector straight, 4 pins	DOL-1204-G02MN	6028128
		M12 female connector angled, 4 pins	DOL-1204-W02MN	6028129
Mounting bracket	M12	90° angle, stainless steel	BEF-WN-M12N	5320949
	M18	90° angle, stainless steel	BEF-WN-M18N	5320947

Additional accessories → page 38 and 40

MZT8 Magnetic Cylinder Sensors

- ✓ Wet
- ✓ Splash
- ✓ Dry

The most flexible and compact pneumatic cylinder sensor



Product Description

The MZT8 magnetic cylinder sensor is used to detect the position of the piston on pneumatic cylinders. The MZT8 can be mounted into a T-slot from the top.

Due to the sensor's high level of immunity to shock and vibration, it is ideal for applications in the food and beverage industry.

Product Features

- Magnetic cylinder sensor for pneumatic & hydraulic cylinders with T-slot
- Length 24 mm
- Sensor element at tip of housing
- GMR technology from SICK
- IP 69K
- Captive mounting screw

Customer Benefits

- Shortest sensor on the market – performs short stroke applications
- Active sensor tip provides more precise piston detection at the end of stroke as it reduces travel loss
- Captive mounting screw – secure and optimized mounting possible
- Easy handling – “one hand mounting” with Allen key possible, fixing with only ¼ of a turn



Technical data and order information

- Ambient temperature: T_a -30 °C ... +80 °C
- Shock/vibration resistance: 30 g, 11 ms/10 ... 55 Hz, 1 mm
- Wire-break protection (pulsed)
- Short-circuit protection
- Reverse polarity protection
- Power-up pulse suppression

Cylinder type	Output function	Switching output	Connection type	Type	Order no.
T-slot	NO	PNP	Pigtail M8	MZT8-03VPS-KP0	1044458
			Pigtail M8, knurled screw	MZT8-03VPS-KR0	1044459
			2 m PUR cable	MZT8-03VPS-KU0	1044469
			Pigtail M12	MZT8-03VPS-KQ0	1044460
	NC	NPN	Pigtail M8	MZT8-03VNS-KP0	1044932
			Pigtail M8, knurled screw	MZT8-03VNS-KR0	1044935
			2 m PUR cable	MZT8-03VNS-KU0	1044931

Brackets for pneumatic cylinders

Cylinder type	Type	Order no.
Dovetail slot	BEF-KHZ-ST1	2022703
Round body diameter piston to 25 mm	BEF-KHZ-RT1-25	5311171
Round body diameter piston to 63 mm	BEF-KHZ-RT1-63	5311172
Round body diameter piston to 130 mm	BEF-KHZ-RT1-130	5311506
Tie rod-/integrated profile	BEF-KHZ-PT1	2022702
SMC rail cylinder type SMC ECDQ 2	BEF-KHZ-TT1	2046439
SMC rail cylinder type SMC CDQ 2	BEF-KHZ-TT2	2046440

For more products see
www.mysick.com

Mounting systems and reflectors

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

Optimum in shape and functionality



Product Description

The SICK portfolio offers a large variety of mounting solutions for sensors, including mounting systems for wet or hygienic applications. SICK is also able to provide customer-specific sensor mounting solu-

tions. In addition to, SICK offers highly robust reflectors to be used in the food & beverage industry. Customized reflectors are possible as well. Just send us your request!

Product Features

- Use of food & beverage or humidity-proof stainless steel and plastics
- Simple sensor mounting with SICK standard mounting brackets
- Highly flexible sensor alignment with the SICK universal bar clamp system
- Chemical-resistant reflectors stand up to all aggressive detergents
- Reflectors with special anti-fog coating give vapors no chance to condense
- Customer-specific solutions for reflectors and mounting brackets

Customer Benefits

- Quick installation and maintenance of plants and machines thanks to easy-to-use SICK brackets and reflectors
- Optimal sensor alignment for best application performance by using the SICK universal bar clamp system
- No constraints in the use of detergents or cleaning procedures
- No reduction of sensor performance due to vapor condensing on the reflector surface

Technical data and order information

Mounting brackets for industrial sensors

Product description	Material	For sensor families ...	Type	Order no.
Universal bar clamp system (UBS)	Stainless steel (1.4408)	W4S-3 INOX	BEF-KHS-N02N	2051618
		IM12 INOX	BEF-KHS-N05N	2051621
		V18V, MH15V, IM18 INOX	BEF-KHS-N06N	2051622
Mounting rod for UBS, straight	Stainless steel (1.4408)	Universal bar clamp system	BEF-MS12G-NA	4058914
Mounting rod for UBS, L-shape	Stainless steel (1.4408)	Universal bar clamp system	BEF-MS12L-NA	4058912
Mounting bracket, wall mounting	Stainless steel (1.4404)	W4-3, W4S-3, W4S-3 INOX	BEF-W4-A	2051628
Mounting bracket, floor mounting	Stainless steel (1.4404)	W4-3, W4S-3, W4S-3 INOX	BEF-W4-B	2051630
Protection bracket, floor mounting	Stainless steel (1.4404)	W4S-3, W4S-3 INOX	BEF-SW-W4S	2051497
Mounting bracket for cylindrical sensors M12	Stainless steel (1.4404)	IM12 INOX	BEF-WN-M12N	5320949
Mounting plate for cylindrical sensors M12	Stainless steel (1.4404)	IM12 INOX	BEF-WG-M12N	5320950
Mounting bracket for cylindrical sensors M18	Stainless steel (1.4404)	V18V, MH15V, IM18 INOX	BEF-WN-M18N	5320947
Mounting plate for cylindrical sensors M18	Stainless steel (1.4404)	V18V, MH15V, IM18 INOX	BEF-WG-M18N	5320948
Mounting ring M18, flush mounting	Stainless steel (1.4404)	V18V, MH15V, IM18 INOX	BEF-WN-MH15-2V	4053358

Reflectors

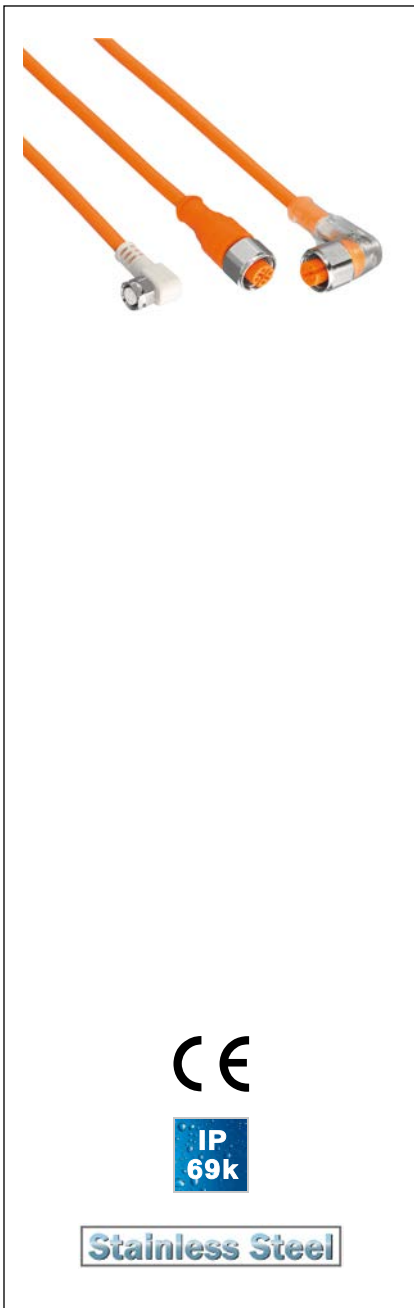
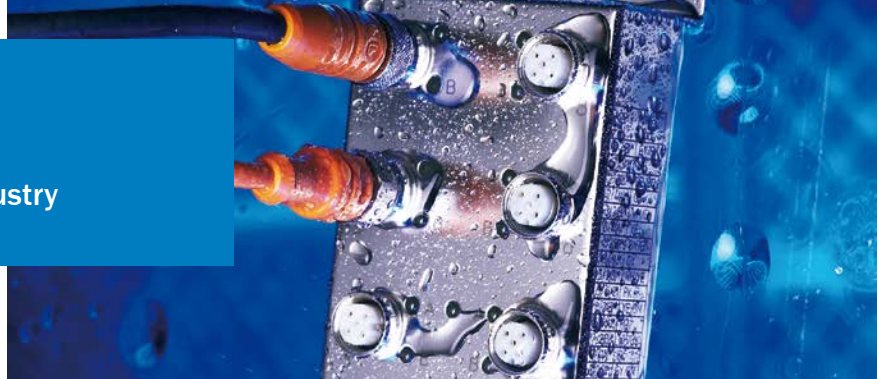
Product description	Dimensions	Enclosure rating	Certificate	Type	Order no.
Chemical resistant reflector	20 x 32 mm	IP 69K	ECOLAB, TÜV Rheinland	PL10FCHEM	5321636
	18 x 60 mm	IP 69K	ECOLAB, TÜV Rheinland	PL20CHEM	5321089
	51 x 61 mm	IP 69K	ECOLAB, TÜV Rheinland	P250CHEM	5321097
Anti-fog reflector ¹⁾	40 x 60 mm	-	-	PL40A Antifog	5322011

¹⁾ Only for Wet Zone and Dry Zone

Cables, connectors and splitter boxes

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

Connectivity solutions
for the food and beverage industry



Stainless Steel

Product Description

For an integrated solution from sensor to control, it is essential to use optimized connectivity products – especially in an environment with highest demands like the food and beverage industry.

The SICK connectivity solutions in M8 and M12 are extremely watertight (IP 69K) and assure the highest resistance against aggressive chemicals, detergents, bases and acids.

Product Features

- Connecting and extension cables extremely watertight (IP 69K)
- Highly resistant against chemicals, acids and detergents
- Gold-plated pins
- Connectors with stainless steel locking nut (316L/1.4404)
- Splitter boxes with stainless steel housing (316L/1.4404)

Customer Benefits

- Long life time of components saves costs
- No intrusion of humidity during cleaning – higher machine reliability
- Smooth surface of splitter boxes for easy cleaning
- Hygienic design avoids dirt build-up
- Reliable signal transmission

Technical data and order information

- M12 field attachable connectors (4-pin)
- M8 connecting cables (3-pin/4-pin)
- M12 connecting and extension cables optional with LED (4-pin/5-pin)
- Stainless steel sensor/actuator boxes with M12 ports

Field attachable connectors M12

Connection	Contacts	Description	Cable diameter [mm]	Mode of connection	Type	Order no.
M12	4	Female connector, straight	3 ... 6.5	Screw terminals	DOS-1204-GN	6028357
		Female connector, angled	3 ... 6.6	Screw terminals	DOS-1204-WN	6028358
		Male connector, straight	3 ... 6.7	Screw terminals	STE-1204-GN	6028359

Connecting cables, M8/M12, IP 69K

Connection	Contacts	Description	Cable	Length [m]	Type	Order no.
M8	3	Female connector, straight	PVC, orange	2	DOL-0803-G02MN	6033664
				5	DOL-0803-G05MN	6033665
		Female connector, angled	PVC, orange	2	DOL-0803-W02MN	6033667
	4	Female connector, straight	PVC, orange	2	DOL-0804-G02MN	6033670
				5	DOL-0804-G05MN	6033671
		Female connector, angled	PVC, orange	2	DOL-0804-W02MN	6033673
M12	4	Female connector, straight	PVC, orange	2	DOL-1204-G02MN	6028128
				5	DOL-1204-G05MN	6028130
		Female connector, angled	PVC, orange	2	DOL-1204-W02MN	6028129
				5	DOL-1204-W05MN	6028131
		Female connector, angled, 3xLED	PVC, orange	2	DOL-1205-L02MN	6028136
				5	DOL-1205-L05MN	6028137
	5	Female connector, straight	PVC, orange	2	DOL-1205-G02MN	6028140
				5	DOL-1205-G05MN	6028141

Extension cables, M12, IP 69K

Connection	Contacts	Description	Cable	Length [m]	Type	Order no.
M12	4	Female connector, straight/male connector, straight	PVC, orange	0.6	DSL-1204-G0M6N	6028194
				2	DSL-1204-G02MN	6028195
		Female connector, angled/male connector, straight	PVC, orange	0.6	DSL-1204-B0M6N	6028197
				2	DSL-1204-B02MN	6028198

Sensor actuator box with LED, IP 69K

Connection	Contacts	Ports	Master cable	Length [m]	Type	Order no.
M12	5	8	PVC, black	5	SNL-08D12-KA05	6027586
				10	SNL-08D12-KA10	6027587
				15	SNL-08D12-KA15	6027588

Multiple Light Beam Safety Devices and Safety Light Curtains

For more products see www.mysick.com



- ✓ Splash
- ✓ Dry

IP 67 for splash zones



Product Description

C4000 Micro and C2000 safety light curtains in addition to M2000 multiple light beam safety device have an IP 67 enclosure rating. A high level of resistance to cleaning agents is achieved by using suitable materials (V4A, PMMA, PA, PVC).

A compensating element (membrane) prevents the plastic tubes from misting up and the entry of liquids. The cable is fed into the device through the proven PG connector.

Product Features

- Enclosure rating IP 67
- Operating temperatures from 0 °C ... +55 °C
- Compact design (50 mm acrylic tubes)
- V4A stainless steel caps and brackets
- PMMA acrylic glass

Customer Benefits

- High durability
- Resistant against common cleaning agents
- Wash down rated
- High availability
- Higher production quality due to use of resistant materials
- Cost savings due to longer lasting products
- Replacement of hard guards by light curtains
- Faster entrance for operators and service
- Cost savings in cleaning time and agents



Multiple Light Beam Safety Devices and Safety Light Curtains

Technical data and order information

- Type 2 and Type 4 according to IEC 61496
- Resistant materials V4A, PMMA, PA, PVC
- Enclosure rating IP 66, IP 67
- C4000 Micro, C2000:
 - Protective field height (depending on type) 150 mm ... 1200 mm
 - Sensing range (depending on type) 0 m ... 14.5 m
 - Resolution (depending on type) 14 mm / 30 mm
- M2000:
 - Number of beams 2, 3, 4
 - Sensing range 0 ... 19 m

IP67 Housing with integrated sender or receiver unit C2000, including 15 m PVC cable

Resolution [mm]	Sensing range [m]	Protection field height [mm]	Sender unit		Receiver unit	
			Type	Order no.	Type	Order no.
30	0 ... 4.5	300	C25S-030103C11	1024187	C25E-030303C11	1024188
		450	C25S-045103C11	1024190	C25E-045303C11	1024191
	0 ... 14.5	300	C25S-030203C11	1024189	C25E-030303C11	1024188
		450	C25S-045203C11	1024192	C25E-045303C11	1024191

IP67 Housing with integrated sender or receiver unit C4000 Micro, including 15 m PVC cable

Resolution [mm]	Sensing range [m]	Protection field height [mm]	Sender unit		Receiver unit	
			Type	Order no.	Type	Order no.
14	1 ... 4	300	C45S-0301AA220	1025722	C45E-0301BG220	1025726
		450	C45S-0401AA220	1025727	C45E-0401BG220	1025731
30	0 ... 4.5	300	C45S-0303AA220	1025724	C45E-0303AG220	1025725
		450	C45S-0403AA220	1025729	C45E-0403AG220	1025730

IP67 Housing with integrated sender or receiver unit M2000, including 15 m PVC cable

Number of beams [mm]	Sensing range [m]	Beam separation [mm]	Sender unit		Receiver unit	
			Type	Order no.	Type	Order no.
2	0 ... 19	500	M25S-02150C112	1024208	M25E-02150C112	1024209
3	0 ... 19	400	M25S-03140C112	1024210	M25E-03140C112	1024211
4	0 ... 19	300	M25S-04130C112	1024212	M25E-04130C112	1024213

Accessories, Mounting

Accessory	Description	Order no.
Stainless steel bracket	4 pieces pivoting	2023708
Reinforced stainless steel bracket	4 pieces pivoting, vibration resistance 5 g, 10 Hz ... 55 Hz, shock resistance 10 g, 16 ms	2026850

Safety Photoelectric Switches and Safety Light Curtain

For more products see www.mysick.com



- ✓ Splash
- ✓ Dry

For cold store use down to $-10\text{ }^{\circ}\text{C}$ / $-40\text{ }^{\circ}\text{C}$



Product Description

For cold storage applications, we offer solutions for the protection of hazardous points, hazardous areas and access areas. Most standard devices can be used

in areas down to $-10\text{ }^{\circ}\text{C}$. We provide special products for lower temperatures down to $-40\text{ }^{\circ}\text{C}$.

Product Features

- Single-beam photoelectric safety devices down to $-40\text{ }^{\circ}\text{C}$
- Multiple light beam safety devices M4000 down to $-10\text{ }^{\circ}\text{C}$
- Safety light curtain M4000 Curtain down to $-10\text{ }^{\circ}\text{C}$
- Special cold store solutions
- Safety light curtain C4000 Cold Store down to $-30\text{ }^{\circ}\text{C}$

Customer Benefits

- Use of safety light curtains and multiple light beam safety devices in minus temperature applications without limitation
- Alternative to mechanical safety devices/guards – fast access for manual feed and service issues
- The use of resistive materials offers the possibility of cleaning with aggressive agents – money savings due to long lasting products

Safety Photoelectric Switches and Safety Light Curtain

Technical data and order information

- Multiple light beam safety device M4000 family down to -10 °C
- Safety light curtain M4000 family down to -10 °C
- Safety light curtain IP67 Housing with heating down to -30 °C
- Single-beam photoelectric safety switch with front lense heating down to -40 °C

Single-beam photoelectric safety switch

Family	Type according to IEC/EN 61496	Performance Level according to IEC 13849	Sensing range [m]	Operating temperature [°C]	Heating	Sender unit		Receiver unit	
						Type	Order no.	Type	Order no.
L2000/L27	Type 2	PL c	0 ... 35	-40 ... +60	Front screen heating	L27S-3D2450	2043877	L27E-3P2450	2043876
L2000/L21	Type 2	PL c	0 ... 16	-40 ... +55	-	L21S-21KA1A	6034872	L21E-21KA1A	6034873
			0 ... 60	-40 ... +55	-	L21S-33MA2A	6034870	L21E-33MA2A	6034871
L4000/L41	Type 4	PL e	0 ... 10	-40 ... +55	-	L41S-21KA1A	6034864	L41E-21KA1A	6034865
			0 ... 60	-40 ... +55	-	L41S-33MA2A	6034863	L41E-33MA2A	6034862
WSU/EU26/3 ¹⁾	Type 4	PL e	0 ... 70	-25 ... +55	Front screen heating	WSU26/3-103A00	1047984	WEU26/3-103A00	1047985

¹⁾Successor of WSU/WEU26/2, available from January 2010

Multiple light beam safety devices and heated device columns

Family	Type according to IEC/EN 61496	Performance Level according to IEC 13849	Sensing range [m]	Operating temperature [°C]	Heating	Type	Order no.
M4000 Family	Type 4	PL e	0 ... 70	-10 ... +55	-	All variants available, product information → www.mysick.com	
Heated device column for M4000, 2-beam	-	-	-	-15 ... +55	Front screen heating 230 V	PUM12-S02	2019564
Heated device column for M2000, 3-beam	-	-	-	-15 ... +55	Front screen heating 230 V	PUG12-S01	2025441

Safety light curtains IP67 Housing with heating

Family	Type according to IEC/EN 61496	Performance Level according to IEC 13849	Sensing range [m]	Operating temperature [°C]	Heating	Sender unit		Receiver unit	
						Type	Order No.	Type	Order no.
C4000 Micro, 14 mm resolution, protection field height 600 mm	Type 4	PL e	1 ... 4	-30 ... +55	Heating 230 V integrated	C45S-S007	1041165	C45E-S007	1041166

¹⁾Other protection field heights from 150 mm to 1200 mm or other resolutions upon request, incl. PVC cable, 15 m

S3000 Cold Store Safety Laser Scanner

For more products see www.mysick.com



- ✓ Splash
- ✓ Dry

For cold store use down to $-30\text{ }^{\circ}\text{C}$



Product Description

Conventional safety devices cannot cope with the extreme conditions in cold areas. This is not the case with the innovative S3000 Cold Store safety laser scanner from SICK – the compact solution for protecting storage areas, ve-

hicles, or doors and gates in cold areas. Whether vertical or horizontal, stationary or mobile, the new S3000 Cold Store offers unrivaled performance – even when used at $-30\text{ }^{\circ}\text{C}$.

Product Features

- Unique range of ambient operating temperature $-30\text{ }^{\circ}\text{C}$... $+50\text{ }^{\circ}\text{C}$
- Compact device with integrated heating system
- IP 67 enclosure rating
- 7 m safety range
- Up to 4 different safety fields
- 7-segment display for rapid diagnostics

Customer Benefits

- Ready to use
- Safety up to 76 m^2 with just one device
- Master/slave combination = maximum functionality with minimum wiring
- Intelligent link to bus systems = safe communication and servicing outside cold store areas
- Switchable field shapes = flexible in all situations

CE

IP67

S3000 Cold Store Safety Laser Scanner

Technical data and order information

- External device monitoring (EDM)
- Configuration via CDS-Software tool
- Interfaces: Enhanced Functional Interface (EFI), RS-232
- Safety field range up to 7 m
- Warning field range up to 49 m
- Static inputs for protection field switching
- Supply voltage 24 V DC +20 % to -30 %

Scanner

Safety laser scanner	Safety field range [m]	Field sets	Response time [ms]	Enclosure rating	Temperature range [°C]	Scan angle	Type	Order no.
S3000 Cold Store	7	4	60	IP 67	-30 to +50	180°	S31A-7011CA	1041648
Further scanners								
S3000 Professional	5.5	8	60	IP 65	-10 to +50	190°	S30A-6011DA	1019600
S300 Expert	2	8	80	IP 65	-10 to +50	270°	S30B-2011GA	1045353

Accessories and spare parts of S3000 Cold Store

Accessory	Description	Order no.
Mounting bracket	For installation on walls, metal, weight approx. 1.6 kg (incl. mounting material)	2018303
Service cable	Cable to parametrize, pretailored for RS-232. For integration into existing wiring	2019561
Drying agent cartridge	With screw-in thread M36 x 1.5	5306179
Connection cable	Connection cable for self-tailoring, 13-pins, diameter 0.56 mm ² (AWG20) 100 m ring, not supposed for heating supply	6025729
Plug element	Plug element 16-pins for system plug article no. 2018301	6004379
System plug	16-pins system plug, housing included	2018301

Safety Switches and Safety Command Devices



Safely equipped for all cases



Product Description

Sliding and hinged doors, as well as flaps are safeguarded either by safety switches with separate actuator or by reed-

safety switches. Safety locking devices are always applied when immediate opening of the doors is not permitted.

Product Features

- For different requirements SICK offers several housing designs from small to compact
- Inductive safety switches offer non-contact detection of position and do not wear over time
- Emergency stop pushbuttons ES21 are applied for the Emergency stop

function. They could be integrated either in a machine control panel or as surface mount version for direct mounting on a machine.

- Housing material: plastic
- Metal housing material at inductive safety switches: plastic/metal

Customer Benefits

- Complete systems solutions – to the safety switches you also get the suitable safe control solution
- The locked state is always monitored at safety locking devices – either by a LED or by a monitoring contact
- With the connectors of the non-contact safety switches easy exchange is possible
- Magnetic safety switches with LED status display: helpful indication on-site

- Inductive safety switches have a large operating range, which makes them independent from tolerances of fitting. This simplifies installation and adjustment
- Emergency stop pushbuttons with visible indication of switching position; panel type mounting ensures correct assembly of the pushbutton with the contact block

Safety Switches and Safety Command Devices

Technical data and order information

- Enclosure rating IP 67 or IP 69K
- Max. Operating temperatures from -20 °C ... +80 °C

Electo-mechanical safety switches

Family	Solenoid Monitoring Number of contacts		Door Monitoring Number of contacts		Housing design	Remark	Type	Order no.
	positive opening N/C	N/O	positive opening N/C	N/O				
i12S	-	-	2	1	Small	Safety switch	i12-SB213	6025059
			-	-	Small	Actuator	iE12-F1	5308842
i16S	-	-	2	0	Compact	Safety switch	i16-SA203	6025063
			-	-	Compact	Actuator	iE16-F1	5311129
i17S	-	-	2	1	Compact	Safety switch	i17-SA213	6025067
			-	-	Compact	Actuator	iE17-S1	5311130
i14 Lock	2	1	0	0	Narrow	Safety locking device	i14-M0213	6025060 ²⁾
	-	-	-	-	Narrow	Actuator	iE14-S1	5311133
i10 Lock	2	1	1 ¹⁾	0	Small	Safety locking device	i10-M0233	6022580
	-	-	-	-	Small	Actuator	iE10-S1	5306527

¹⁾ N/C – not a positive opening N/C ²⁾ Enclosure rating IP 65

Non-contact safety switches

Family	Sensor principle	Enclosure rating	Contacts		Electrical connection	Housing design	Installation	Type	Order no.
			N/C	N/O					
RE	Magnetic	IP 67	0	2	M8 plug connector	Cuboid – small	-	RE13-DAC	6036769
			0	3	Cable - 5 m	Cuboid – compact	-	RE27-DA05L	6034343
			1	1	M8 plug connector	Cuboid – compact	-	RE21-DAC	6036767
IN4000	Induktive	IP 69K	-	-	M12 plug connector	Cylindrical M30	Non flush	IN40-D0202K	6027392
			-	-	M12 plug connector	Cylindrical M18	Non flush	IN40-D0303K	6027391
			-	-	M12 plug connector	Cylindrical M18	Flush	IN40-D0304K	6037684

Emergency stop pushbuttons ES21

Family	Number of contacts		Remark	Type	Order no.
	positive opening N/C	N/O			
ES21	2	1	Surface mount version	ES21-SA10F1	6036148
	2	1	Panel mount version	ES21-SB10G1	6036492

Accessories

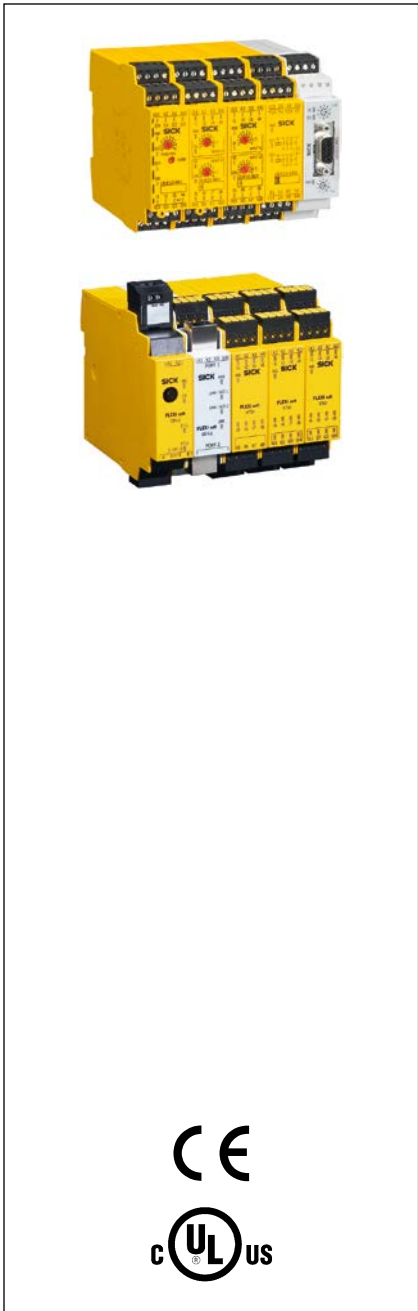
Description	Length	Type	Order no.
Cable for RE safety switches	5 m	DOL-0804-G05M	6009872
Cable for IN4000 safety switches	10 m	DOL-1204-G10M	6010543
T-junction for serial connection of IN4000 safety switches	-	IN40-A2121N	5315025

Flexi Classic and Flexi Soft Safety Controllers

For more products see www.mysick.com

✓ Dry

Modular and application-oriented



Product Description

Flexi safety controllers are open and modular expandable systems for the comfortable interconnection and intuitive

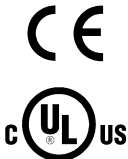
configuration of safety solutions, allowing easy the integration into the machine control.

Product Features

- Direct connection of every sensor type
- The controller grows with the application
- Integration into all networks: PROFIBUS-DP, Ethernet /IP, PROFINET IO, ...
- Flexi Classic: easy configuration and full commissioning using a screwdriver only
- Flexi Soft: intuitive, graphical, function block based configuration software "Flexi Soft Designer", free download at www.sens-control.com

Customer Benefits

- Optimal granularity prevents superfluous inputs and outputs
- 8 up to 144 I/Os, system grows according to the needs
- "10 Min to green" easiest configuration and diagnostics
- Flexi Classic: configuration and device replacement via screwdriver
- Flexi Soft: intuitive software, free of charge including multi lingual project documentation and wiring plan



Technical data and order information

- SIL3 (IEC 61508) / Performance Level e (EN ISO 13849)
- Number of I/Os : 104 (Flexi Classic) / 144 (Flexi Soft)
- LED indicators for status and error diagnostics
- Up to 2 A per transistor output
- Logical connections for the Flexi Classic: AND, OR, Muting, Bypass
- 38 function blocks for the Flexi Soft

Flexi Classic

Description	Number of inputs	Number of outputs	Type	Order no.
Main module	4	4	UE410-MU3T5	6026136
Expansion module	4	4	UE410-XU3T5	6032470
Input expansion	8	0	UE410-8DI	6026139
Ethernet /IP Gateway	0	4 (non safe)	UE410-EN1	1042964
PROFINET IO Gateway	0	4 (non safe)	UE410-EN4	1044078
PROFIBUS DP Gateway	0	4 (non safe)	UE410-PRO3	6028407
CANopen Gateway	0	4 (non safe)	UE410-CAN3	6033111

Flexi Soft

Description	Number of inputs	Number of outputs	Type	Order no.
Main module ¹⁾	0	0	FX3-CPU000000	1043783
Main module with EFI ¹⁾	0	0	FX3-CPU130002	1043784
Expansion module	8	4	FX3-XTI084002	1044125
Input expansion	8	0	FX3-XTDI80002	1044124
Ethernet /IP Gateway	0	4 (non safe)	FX0-GENT00000	1044072
Modbus TCP Gateway	0	4 (non safe)	FX0-GMOD00000	1044073
PROFINET IO Gateway	0	4 (non safe)	FX0-GPNT00000	1044074
PROFIBUS DP Gateway	0	4 (non safe)	FX0-GPRO00000	1044075

¹⁾ The memory module has to be ordered separately.

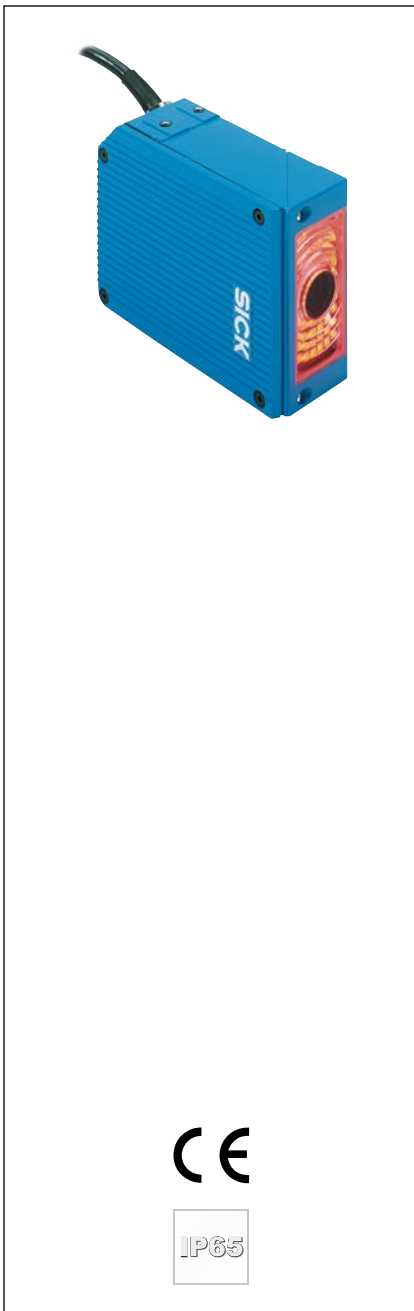
Accessories for Flexi Classic and Flexi Soft

Family	Description	Type	Order no.
Flexi Classic	Operating instructions, application examples and configuration tool	Flexi Classic Mini-CD	2040332
	Antimanipulation covers (10 Pcs.)	AM-Cover	5319789
	Safety relay	UE10-2FG	1043916
	Safety relay, expandable	UE12-2FG	1043918
Flexi Soft	Memory module for the configuration	Memory Plug	1043700
	Configuration software	Flexi Soft CD	2045931
	Safety relay	UE10-2FG	1043916
	Safety relay, expandable	UE12-2FG	1043918



✓ Dry

Highest code reading performance
for stationary and high-speed applications



IP65

Product Description

The image code readers of the ICR84x-2 product family combine the latest technology for rapid computing performance with high-quality matrix sensors. Industry-compatible IP 65 housings, integrated illumination, user-friendly image recording, and decoding with rapid image and data output via standardized interfaces allow quick implementation in many food & beverage applications. Whether on substrate, directly marked

(DPM) or misaligned: ICR84x-2 image code readers read 1D and 2D codes even with weak contrasts, poor markings and in dirty surroundings – thanks to progressive decoders. A large number of device variants offer the right solution for your application. Optimum adjustment for the application can be achieved in just a few steps by using the convenient Live Image and Auto-Setup function.

Product Features

- Easy to program with Live Image and Auto-Setup configuration
- Omni-directional reading even of destroyed and directly marked codes
- Identification while stationary and at high transport speeds due to new camera sensor technologies and windowing functionality
- Identification of up to 30 objects per second
- Fast image and data transfer via Ethernet interface
- Plastic window and IP 65 housing

Customer Benefits

- Fast, cost-effective commissioning via easy user interface with Live Image and Auto-Setup configuration
- Rapid, reliable decoding of low contrast, directly marked codes guaranteed even during movement
- Omni-directional reading of 1D and 2D codes permit the reliable identification of misaligned packages
- Solution for varied applications thanks to many different optical versions with different resolutions and reading distances
- Industrial IP 65 housing for rough environmental conditions in production

ICR845 Camera-based Code Readers

Technical data and order information

- Dry zone
- Enclosure rating IP 65 (with cover IP 65, RJ45)
- Operating voltage 15 V DC ... 30 V DC
- Electrical connection: serial cable with 15-pin D-Sub HD connector (0.9 m male), Ethernet RJ45 socket at the device
- Operating temperature: 0 °C ... +40 °C
- With integrated optics, including illumination and lens, as well as C-mount version available

ICR845 versions for near- to mid-range reading

Variant	Reading window	Min. resolution [mm]	Field of view focus [mm]	Min. reading distance [mm]	Max. reading distance [mm]	Min./Max. distance at resolution of [mm]	Focus distance [mm]	Type	Order no.
High Density	Straight emission	0.15	28 x 18	38	62	0.25	50	ICR845-2A0020	1044617
	Lateral emission	0.15	28 x 18	38	62	0.25	50	ICR845-2A1020	1044616
Mid Range	Straight emission	0.25	44 x 32	95	155	0.5	80	ICR845-2C0020	1043740
	Lateral emission	0.25	44 x 32	95	155	0.5	80	ICR845-2C1020	1043739

ICR845 versions for long-range reading

Variant	Reading window	Min. resolution [mm]	Field of view focus [mm]	Min. reading distance [mm]	Max. reading distance [mm]	Min./Max. distance at resolution of [mm]	Focus distance [mm]	Type	Order no.
Extended Long Range	Straight emission	0.3	66 x 42	120	240	0.5	175	ICR845-2E0020	1047749
	Lateral emission	0.3	66 x 42	120	240	0.5	175	ICR845-2E1020	1047750
FlexLens (C-mount)	Straight emission	0.1	Depending on lens	Depending on lens	Depending on lens	Depending on lens	Depending on lens	ICR845-2L0020	1046574

Accessories

Accessory	Description	Type	Order no.
Mounting bracket	2 x M5 x 16	-	2039465
Compact connection module	15-pin D-Sub; 4 x cable glands	CDB620-001	1042256
Parameter cloning modul	Allows rapid sensor replacement, without a manual parametrization of the replaced sensor	CMC600	1042259
Ethernet cable set IP 65	Incl. cable (1 m), adapter frame and screws	-	2039986
Ethernet cover IP 65, RJ45	Incl. screws, if no Ethernet connection necessary	-	2048510

CLV62x and CLV63x 1D Bar Code Scanners

For more products see
www.mysick.com

✓ Dry

Powerful, flexible, easy to use



Product Description

The bar code scanners of the CLV600 product family offer reliable identification of bar codes in many applications of the food & beverage industry: identification of bar codes on reflecting surfaces like packages of potato chips, or checking the production batch for the correct label. A large number of device variants

offer the right solution for nearly all applications. Optimum adjustment for the application can be achieved in just a few steps by using the convenient Auto-Setup function. All scanners of the CLV600 product family are available with lexan windows.

Product Features

- Enclosure rating IP 65, also for the connectivity
- Optional lexan window
- Excellent reading performance even on highly reflective material
- Transport speed of up to 6 m/s (1000 ft/min)
- Autofocus (CLV650)
- CAN and Ethernet TCP/IP/Ethernet IP on board
- Highly flexible data sorting and formatting
- Integrated web server for diagnostics

Customer Benefits

- Time-saving setup with the intelligent Auto-Setup function
- Customized output data formation reduces the programming effort in the PLC
- Easy to use teach-in function for a predefined match code to verify the correct label on a production batch
- Cost reduction, since no external Ethernet gateway is needed
- Easy diagnosis with integrated web server
- Fast replacement of a bar code scanner with optional parameter cloning module CMC600



CLV62x and CLV63x 1D Bar Code Scanners

Technical data and order information

- Enclosure rating IP 65, also for the connectivity
- Operating voltage: 18 V DC ... 30 V DC
- Operating temperature: 0 °C ... +40 °C
- Ambient light immunity: 2.000 lx, on bar code
- Electrical connection:
Ethernet version: rotating plug unit with 2 x M12 round plug-in connectors (12-pin plug, 4-pin socket)

1D bar code scanner CLV62x with lexan window

Read area	Reading field	Scanner design	Code resolution [mm]	Minimum reading distance [mm]	Maximum reading distance [mm]	Min./Max. reading distance (at code resolution) [mm]	Type	Order no.
Mid Range	Frontal	Line	0.2 ... 1.0	60	365	1	CLV620-0121	1044573
	Frontal	Line	0.15 ... 0.5	55	200	0.5	CLV622-0121	1044794
Short Range	Lateral (105°)	Raster	0.15 ... 0.5	40	185	0.5	CLV622-3121	1043068

1D bar code scanner CLV63x with lexan window

Read area	Reading field	Scanner design	Code resolution [mm]	Minimum reading distance [mm]	Maximum reading distance [mm]	Min./Max. reading distance (at code resolution) [mm]	Type	Order no.
Long Range	Frontal	Line	0.35 ... 1.0	60	735	1	CLV630-0121	1047278
		Raster	0.35 ... 1.0	60	735	1	CLV630-1121	1046959
	Oscillating mirror	Line	0.35 ... 1.0	45	659	1	CLV630-6121	1047279
Mid Range	Frontal	Line	0.25 ... 0.5	90	450	0.5	CLV631-0121	1044574
Short Range	Frontal	Line	0.2 ... 0.5	60	285	0.5	CLV632-0121	1047280
	Oscillating mirror	Line	0.2 ... 0.5	45	245	0.5	CLV632-6121	1046368

Accessories for the CLV600 product family

Description	Type	Order no.
Compact connection module: 15-pin D-Sub; 4 x cable glands	CDB620-001	1042256
Ethernet cable: M12, 4-pin Ethernet to Host RJ45, plug/plug 2 m	Cable 2 m	6034414
Cable, M12, 12-pin to CDB620, 15-pin D-Sub, socket/plug	Cable 2 m	2041834
Mounting bracket	-	2020410
Parameter cloning module: allows a rapid sensor replacement, without a manual parametrization of the replaced sensor	CMC600	1042259

IT4800i Industrial Hand-held Scanner

✓ Dry

Mobile and robust – for 1D and 2D codes



Product Description

Thanks to the latest matrix chip technology, the hand-held IT4800i scanners identify bar codes, stacked codes, 2D codes as well as OCR fonts. The scanners read omni-directionally. This makes scanning easier and faster. The IT4800i

has a IP 54 housing and is equipped with shock absorbing rubber bumpers. This makes it an ideal choice for daily usage in harsh environments. The device is also available as cordless radio version.

Product Features

- Reliable identification of 1D, stacked codes, 2D codes as well as OCR-A and -B fonts.
- Reading distances up to 330 mm
- Green LED aiming line
- Horizontal motion tolerance up to 50 cm/sec
- IP 54 housing, withstands 50 drops from 2 m
- Bluetooth version for cordless operation (IT4820i)

Customer Benefits

- 1D, stacked, 2D codes, OCR-A, OCR-B with only one device
- High productivity thanks to fast decoding and easy use
- High availability thanks to robust housing without moving parts
- Intuitive scanning thanks to omni-directional code reading and high motion tolerance
- High user convenience thanks to light weight and ergonomic housing design
- Increased flexibility through corded and cordless versions



IT4800i Industrial Hand-held Scanner

Technical data and order information

- IP 54
- Min. 50 drops from 2 m height
- 5 ... 14 V DC power supply
- Operating temperature: 0 °C ... +50 °C
- Reading distance up to 330 mm
- PS/2, USB or RS-232 interface
- IT4800i: scanner plus quick start guide, w/o cable and power supply
- IT4820i: kit containing cordless scanner, radio base station IT2020, USB cable and power supply

IT4800i

Min. resolution 1D [mm]	Min. resolution 2D [mm]	Interfaces	Type	Order no.
0.21	0.38	PS/2, USB, RS232TTL	IT4800iSR051CE	6028683
		RS232 TRUE	IT4800iSR031CE	6028682
0.19	0.25	PS/2, USB, RS232TTL	IT4800iSF051CE	6028635
		RS232 TRUE	IT4800iSF031CE	6028634

IT4820i

Min. resolution 1D [mm]	Min. resolution 2D [mm]	Interfaces	Type	Order no.
0.21	0.38	PS/2, USB, RS232TTL	IT4820iSRUSBKITBE	6034076
0.19	0.25	PS/2, USB, RS232TTL	IT4820iSFUSBKITBE	6034078

Accessories

Description	Valid for IT4800ixx051	Valid for IT4800ixx031	Valid for radio base station IT2020	Order no.
Spiral cord USB, 2.8 m	✓	-	✓	6032516
Spiral cord RS232TTL-Cable, 2.4 m, additional power supply needed	✓	-	-	6012109
Spiral cord PS/2, 2.8 m	✓	-	✓	6012110
Spiral cord RS232 TRUE, 2.4 m, additional power supply needed	-	✓	-	6010819
Straight RS232 TTL cable 2.4 m, Power on Pin 9	-	-	✓	6028186
Power supply, input 100 ... 220 V AC, output 5 V DC, plus EU safety plug	✓	✓	-	6034941
Power supply, input 100 ... 220 V AC, output 9 V DC, plus EU safety plug	-	-	✓	6034352
Wall holder	✓	✓	-	6028229
Adjustable arm for wall holder	✓	✓	-	6028231

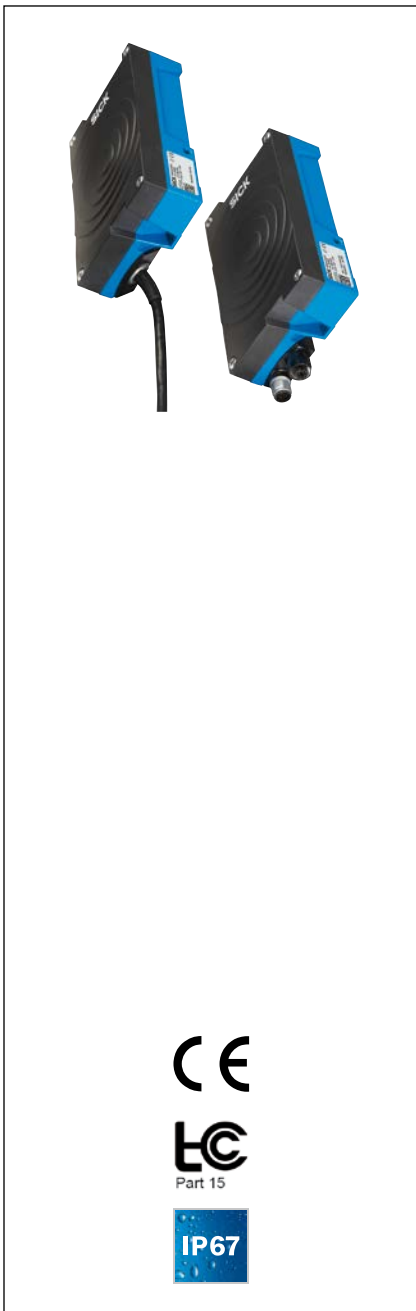
RFH620 RFID Proximity Interrogator

For more products see www.mysick.com



- ✓ Splash
- ✓ Dry

Intelligent identification



Product Description

The RFH620 is a read/write unit with ranges of up to 160 mm for ISO/IEC 15693-compliant transponders. It performs tasks reliably within the bin management. Existing plants can be economically and flexibly expanded thanks to its compact housing and integrated

antenna. The support of common field-bus systems via its universal connection technology simplifies integration into almost all applications. These devices can be used worldwide because they meet CE and FCC radio requirements.

Product Features

- Same platform as CLV6xx for the electrical connection, user interface and accessories
- SICK SOPAS operating system
- Integrated Micro-SD card for parameter cloning
- IP 67
- Operating temperature range: -25 °C ... +60 °C

Customer Benefits

- Long-term investment due to standard ISO 15693 compatibility
- High availability of low priced transponders
- Maintenance-free
- Integrated Ethernet TCP/IP
- Minimum MTTR (mean time to repair) due to parameter cloning
- Easy handling with SOPAS

RFH620 RFID Proximity Interrogator

Technical data and order information

- Frequency: 13.56 MHz
- Standard: ISO 15693 18000-3M1
- Sender power: 200 mW
- Operating voltage: 10 ... 30 V DC
- Power consumption: 5 W
- Dimensions: 147 x 88 x 39 mm³
- Enclosure rating: IP 67
- Operating system: SOPAS
- Data Interface Serial: RS-232, RS-422/485
- Data Interface CAN: CAN-Open, SICK CAN Sensor Network
- Data Interface PROFIBUS: with CDF600

Proximity interrogator RFH620

Electrical connection	Ethernet	Digital I/Os		Type	Order no.
		In	Out		
Cable with 15-pin D-Sub plug	-	2 (+ 2 add. with CMC600)	2 (+ 2 add. with CMC600)	RFH620-1000001	1044838
Two M12 circular connectors (12-pin plug, 4-pin receptacle)	TCP/IP	1 (+ 2 add. with CMC600)	0 (+ 2 add. with CMC600)	RFH620-1001201	1044839

Accessories

Description	Type	Order no.
Basic connection module	CDB620-001	1042256
External parameter memory for integration in CDB620	CMC600-101	1042259
PROFIBUS-DP Proxy	CDF600-0100	1041251
Cable, 2 m, M12 socket, 12-pin / D-Sub plug, 15-pin	-	2041834
Ethernet cable, 2 m, plug M12 / RJ45 plug	-	6034414
Communication cable RS-232 to PC, 3 m	-	2014054
Mounting bracket	-	2048551
Micro-SD card, 512 MB	-	4051366
RFID ISO card, PVC, white	-	6037848
RFID disk transponder with hole Ø 30 mm, black	-	6034740
RFID disk transponder with hole Ø 50 mm, black	-	6033781

Additional accessories in Product Information RFH620, Order no. 8013102



- ✓ Splash
- ✓ Dry

Reliable contrast detection on packaging materials



Product Description

KT contrast sensors from SICK detect minimum contrast levels at maximum speeds, for example print marks on foil or packaging. Based on the reflection

principle, they detect small differences in grey values between mark and background on matt, glossy or transparent surfaces.

Product Features

- RGB technology (red, green, blue), white LED or laser, to provide excellent contrast resolution
- Display to visualize contrast signal (KT5 Display)
- 10 kHz switching frequency
- Teach-in via user panel or external wire
- Different teach-in and potentiometer variants dedicated to individual needs
- Analog output
- Automatic gloss adoption for high-gloss materials
- Different sensing distances and light spot sizes (KT5)
- Robust, standard metal housing (KT5)
- Small plastic housing (KT3)

Customer Benefits

- Best performance with all kinds of packaging materials (yellow mark/white background)
- Robust operation with fluttering materials and glossy materials
- High position accuracy for packaging quality
- Easy teach-in and highly visible light spot for easy and fast adjustment (easy to start)
- Easy integration due to small housing size



Technical data and order information

- Connection M12
- Shock/vibration resistance to IEC 68
- Operating temperature up to 55 °C

KT3 – high performance in a small housing / wet zone

Sender	Adjustment	Sensing distance [mm]	Output	Type	Order no.
RGB	2-point teach-in	12.5 +/-2	PNP	KT3W-P1116	1019338
			NPN	KT3W-N1116	1019337
	Dynamic teach-in	12.5 +/-2	PNP	KT3W-P1115	1025326
			NPN	KT3W-N1115	1025325
White	2-point teach-in	12.5 +/-2	PNP	KT3M-P1116	1044235
			NPN	KT3M-N1116	1044593
Laser, red	2-point teach-in	20 ... 60	PNP	KT3L-P3216	1026244
			NPN	KT3L-N3216	1025245

KT5-2 – standard metal housing / splash zone

Sender	Special	Adjustment	Sensing distance [mm]	Output	Type	Order no.
RGB	Display	2-point teach-in	10 +/-3	NPN	KT5W-2N1116D	1026540
				PNP	KT5W-2P1116D	1026538
			20 +/-3	PNP	KT5W-2P1216D	1026577
				PNP	KT5W-2P1316D	1026578
	Teach-button	2-point teach-in	10 +/-3	PNP	KT5W-2P1116	1018044
				NPN	KT5W-2N1116	1018045
				PNP/NPN	KT5W-2B1116	1043006
		Dynamic teach-in	10 +/-3	PNP	KT5W-2P1113	1016629
				NPN	KT5W-2N1113	1016630
				PNP	KT5W-2P1151	1044400
White	Analog output	Potentiometer	10 +/-3	PNP	KT5M-2P1151	1044400

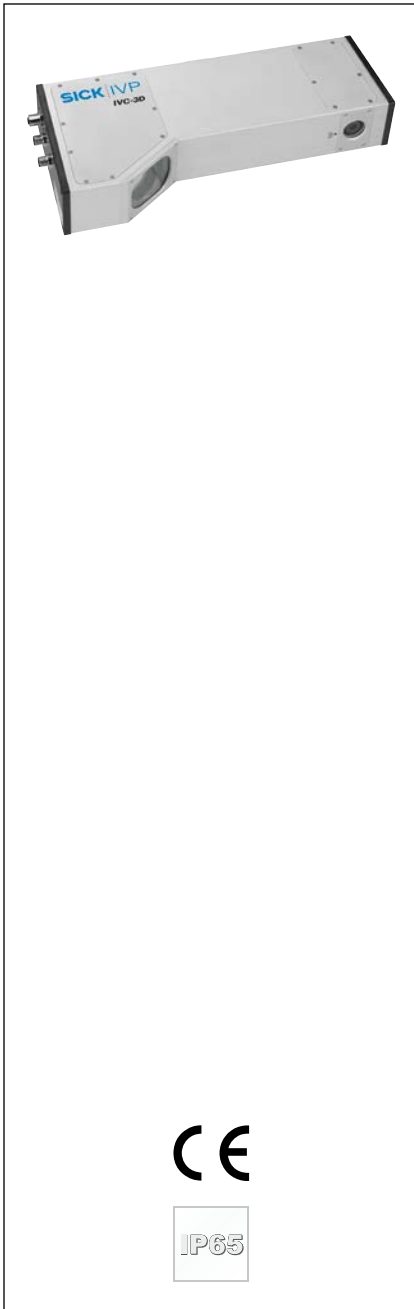
Accessories

Description	Length [m]	Contacts	Connector	Sensor type	Type	Order no.
Connector M12	2	4	Straight	KT3	DOL-1204-G02M	6009382
			Angled	KT3	DOL-1204-W02M	6009383
		5	Straight	KT5-2	DOL-1205-G02M	6008899
			Angled	KT5-2	DOL-1205-W02M	6008900
Mounting brackets	-	-	-	KT3	BEF-KHS-L01	2023057
				KT5-2	BEF-KHS-G01	2022464
				KT5-2	BEF-KHS-K01	2022718



✓ Dry

3D vision made easy



IP65

Product Description

IVC-3D is factory-calibrated and self-contained, combining imaging, lighting and analysis into one robust camera housing. Food applications often deal with portioning or measuring height and volume in order to keep the process well tuned, to avoid packaging problems

and to ensure high quality. Whether it is important to cost optimize by means of precise portioning or to reduce waste, IVC-3D has unique capabilities to inspect height, shape and volume, and can therefore provide a better solution than conventional 2D vision systems.

Product Features

- Contrast-independent, reliable also when object colors vary or are the same as the background
- Operates stand-alone, no PC needed after configuration
- Easy-to-use graphical user interface for fast application development
- Factory-calibrated, millimeter measures at production speed
- Easy encoder connection
- Robust, IP 65 housing

Customer Benefits

- IVC-3D makes advanced 3D shape inspections easy and cost-efficient
- Self-contained, all required lighting and analysis software is included, saving you time and cost
- The easy-to-use graphical user interface ensures fast application development both in IVC-2D and IVC-3D; only having to learn one software means a wise investment
- The included OPC server and support of Ethernet/IP gives you simple interfacing with PLCs, robots and control systems

Technical data and order information

- Function: object location, 3D inspection, 3D verification, 3D measuring and 3D OCR/OCV and code reading
- Max. performance: 5000 3D profiles/second
- 3 B-type, program controlled outputs, trigger output
- 3 program controlled inputs (1 trigger input)
- Communication interfaces: Fast Ethernet (10/100 Mbit/s), TCP/IP, UDP/IP, Ethernet/IP, OPC server, RS-485
- Data store and retrieve: images and data can be stored to and retrieved from flash and stored via FTP
- Operator interfaces: application specific operator interfaces can be created using ActiveX (COM) or as web page, included OPC server enables data exchange with e.g. SCADA systems
- Housing material: anodized aluminium, connectors of nickel plated brass, windows of compound safety glass or PMMA plastic
- Power supply: 24 V DC \pm 20%
- Ambient temperature, operation: 0 °C ... +40 °C

Short device name	Height resolution [mm]	Laser class	Weight [kg]	Dimensions (L x W x H) [mm]	Type	Order no.
IVC-3D 30, plastic windows	0.015	Class II / 2M	3.2	294 x 69 x 163	IVC-3D31112	1046810
IVC-3D 50, plastic windows	0.04	Class II / 2M	3.2	294 x 69 x 163	IVC-3D21112	1041710
IVC-3D 100, plastic windows	0.05	Class II / 2M	3.2	294 x 69 x 163	IVC-3D51112	1046912
IVC-3D 200, plastic windows	0.2	Class II / 2M	4	387 x 69 x 163	IVC-3D11112	1042152
IVC-3D 300, plastic window	1.2	Class II / 2M	4	387 x 69 x 163	IVC-3D41112	1048269

Accessories

Description	Type	Order no.
Calibration object for IVC-3D 30	IVCAL-P030	2043674
Calibration object for IVC-3D 50 and 100	IVCAL-P050	2042582
Calibration object for IVC-3D 200	IVCAL-P200	2042579
Calibration object for IVC-3D 300	IVCAL-P300	2042542
I/O extension box with 2 Ethernet ports, 4 in / 8 out	I/O extension box	6037654

Inspector I10 and I20 Vision Sensors

For more products see
www.mysick.com



- ✓ Splash
- ✓ Dry

An intelligent vision solution



Product Description

No matter in what position your product comes down the line, the Inspector is up to the challenge – verifying completeness and quality – even in varying ambient light situations. Thanks to the robust and reliable design and IP 67 metal housing, it is perfect for the toughest environments. The key to solve vision problems is to work on a good quality

image and apply robust algorithms. The Inspector comes with a unique integrated dome light that delivers high quality images even on glossy and reflective surfaces – without complex setups. Apart from easy-to-use setup, the sophisticated SOPAS PC interface also offers monitoring, statistic read-out, image recording and emulator testing.

Product Features

- High-speed part inspection
- Robust pattern match to locate parts independent of position, rotation and scale
- Multi-reference object teaching and multi-feature inspections
- Unique, even dome illumination or high power ring light
- Easy-to-use step configuration in PC including emulator
- Industrial Ethernet
- Tough, IP 67-rated metal housing

Customer Benefits

- The high-speed part inspection guarantees quality assurance without production overhead
- The easy-to-use configuration in SOPAS, including emulator for offline configuration and testing, will reduce downtime in production to a minimum
- The included industrial Ethernet for configuring and monitoring via the network will reduce installation complexity and enhance flexibility in the production line



IP67

Inspector I10 and I20 Vision Sensors

Technical data and order information

- Part inspection toolset with object locator, contour inspection, edge pixel counter and pixel counter
- Performance of max. 250 fps and typical 45 fps
- SOPAS software for configuration, operation stand-alone
- 4 x configurable digital inputs, 24 V
- 3 x digital outputs, 24 V
- Interface 100 MB Fast Ethernet
- Housing material: IP 67 painted aluminum
- Front window: compound safety glass or PMMA plastic
- Power supply 24 V DC \pm 20 %
- Ambient temperature operation: 0 °C ... +45 °C

Inspector

Short device name	Working distance [mm]	Working distance internal illumination [mm]	Field of view internal illumination [mm ²]	Optics	Light source	Output by logical expressions	I/O Box extension	Type	Order no.
Inspector I10 Standard	50 ... ∞	50 ... 200	20 x 20 ... 72 x 72	Fixed	White ring light, 6 x high-power-LEDs	no	no	VSPI-1R111	1042779
Inspector I10 Dome	50 ... ∞	50	30 x 30	Fixed	White dome light	no	no	VSPI-1D111	1044038
Inspector I20 Flex	50 ... ∞	50 ... 200	20 x 20 ... 72 x 72	Exchangeable	White ring light, 6 x high-power-LEDs	yes	yes	VSPI-2F111	1046732
Inspector I20 Dome	50 ... ∞	50	30 x 30	Fixed	White dome light	yes	yes	VSPI-2D111	1046733

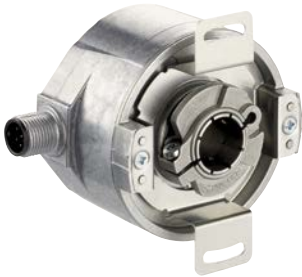
Accessories

Description	Inspector variant				Type	Order no.
	I10 Standard	I10 Dome	I20 Flex	I20 Dome		
Inspector angled bracket					BEF-WK-EPA	2045167
3 m Ethernet cable					SSL-2J04-G03ME	6029630
5 m Ethernet cable	✓	✓	✓	✓	SSL-2J04-G05ME	6035389
10 m Ethernet cable					SSL-2J04-G10ME	6030928
T-splitter for Inspector					-	6034950
I/O extension box, 4 in / 8 out	-	-	✓	✓	-	6037654
I/O extension module, 8 out	-	-	✓	✓	-	6037750
Lens focal length 10 mm	-	-	✓	✓	OBJ-B010028BA	2049415
Lens focal length 16 mm	-	-	✓	✓	OBJ-B016018BA	2049418
Lens focal length 4.3 mm	-	-	✓	✓	OBJ-B004320BA	2049491

DFS60 Incremental Encoders

✓ Dry

In a class of its own



Product Description

The DFS60 is a high-resolution incremental encoder in a 60 mm housing. With a maximum of 65,536 lines, the DFS60 is unique in its class. Excellent concentricity and exceptional robustness are achieved thanks to the large distance between the ball bearings which support the encoder shaft. With electrical isolation between motor shaft and encoder, the DFS60 version with through hollow shaft has a feature which substantially increases interference immunity and reliability. The DFS60 can therefore be

used in harsh ambient conditions in any industrial application.

Product options:

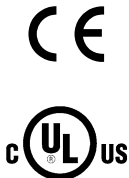
- Interfaces TTL/RS422, HTL/push-pull
- Face mount flange and servo flange
- Blind hollow shaft and through hollow shaft
- Cable outlet 1.5 m; 3 m and 5 m – can be used radially or axial
- Connector outlet M12 or M23
- 1 to 65,536 lines programmable by customer

Product Features

- Compact housing \varnothing 60 mm
- High resolution incremental encoder family up to 16 bit
- Number of lines from 1 ... 65,536, zero-pulse width and level of output signals programmable by customer
- Universally pluggable cable outlet for radial or axial use
- Connector outlets M23 and M12 available
- Face mount and servo flange
- Hollow shafts up to \varnothing 15 mm or 5/8" or isolated variants available
- Zero pulse teach possible

Customer Benefits

- Customer programmability reduces stocking costs and system downtimes
- Pluggable cable outlet in radial or axial direction enables customized solutions with various cable lengths and cable-end connectors
- Excellent run-out also at high operating speed
- Capable of meeting the requirements of applications needing a high resolution



Technical data and order information

- Working temperature range (Type B, A): -20 °C ... +100 °C
- Storing temperature range: -40 °C ... +100 °C
- Enclosure rating shaft: IP 65
- Enclosure rating housing: IP 67 (face mount flange, blind hollow shaft)
- Enclosure rating housing: IP 65 (through hollow shaft)
- Electrical interface: TTL/RS422, HTL/push pull, HTL/push pull, HTL/TTL programmable
- Supply voltage: 4.5 ... 5.5 V at TTL/RS422, 10 ... 32 V at TTL/RS422 und HTL/push pull, 4.5 ... 32 V at TTL/HTL programmable
- Programmability: Type B: number of lines up to 10,000, Type A: number of lines up to 65,536
- Connection type: connector M12, 8-pin, radial

Incremental encoders

Mechanical interface	Shaft diameter [mm]	Type	Order no.
Face mount flange	10 x 19	DFS60B-S4PC10000	1036721
Blind hollow shaft	10	DFS60B-BDPC10000	1036775
	12	DFS60B-BEPC10000	1036776
	15	DFS60B-BHPC10000	1036779
Through hollow shaft	10	DFS60B-TDPC10000	1036915
	12	DFS60B-TEPC10000	1036916
	15	DFS60B-THPC10000	1036919

Accessories

Accessory	Description	Cable length [m]	Type	Order no.
Programming Tool	-	-	PGT-08-S	1036616
Adapter cable PGT-08-S incremental with cable connector	M12 8-pin female, ready-made with cable 4 x 2 x 0.08 mm ² , screened	0.5	DSL-2D08-G0M5AC3	2046579
Cable connector	M12 8-pin male, for field assembly (adapter side), 4 ... 8 mm, screened, straight	-	STE-1208-GA	6028370
	M12 8-pin female, for field assembly (adapter side), 4 ... 8 mm, screened, straight	-	DOS-1208-GA	3028369
	M12 8-pin female, ready-made with cable 4 x 2 x 0.25 mm ² , screened, flexible (adapter side)	2	DOL-1208-G02MAC1	6032866
		5	DOL-1208-G05MAC1	6032867
10		DOL-1208-G10MAC1	6032868	
	20	DOL-1208-G20MAC1	6032869	

LFV200 Level Sensors

For more products see
www.mysick.com

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

For all kinds of fluids –
independent, flexible and rugged



Product Description

The LFV200 is a universal level sensor for detecting pre-defined levels in systems for liquids, precisely to a millimeter. Regardless of maximum filling amounts in containers, providing a “Full” signal to prevent overfilling, an “Empty” signal for refilling or a “Dry-run” signal for pump protection, the LFV200 works independently of the liquid and is wear-free and maintenance-free. The sturdy stainless steel tuning fork is piezoelectrically

energized and vibrates at its resonance frequency. Once the tuning fork is covered with liquid, the resonance frequency changes. This change is reliably detected by the integrated electronics and converted into a switching signal. Its polished surface (Ra <math><0.8 \mu\text{m}</math>) in connection with the available process connections make the sensor suitable even for applications with maximum hygienic requirements.

Product Features

- Works in all kinds of liquids
- Commissioning without filling
- Media temperature up to 150 °C
- Immune to deposit formation
- Very high repeatability
- EHEDG- and FDA-compliant
- CIP- and SIP-compliant
- Polished surface

Customer Benefits

- Maintenance-free limit sensor, reduced maintenance costs
- No calibration required
- Fast commissioning saves time
- Sensor test in mounting position
- Low installation costs
- Flexible level sensor

CE

FDA

IP67

§ 191
WHG

Technical data and order information

- Fluid density: >0.7 kg/l
- Process temperature: -40 °C ... +150 °C
- Surface: Ra < 0.8 µm
- Enclosure rating: IP 67
- Stainless steel housing: 1.4404 (316L)
- Sensor material: 1.4404 (316L)
- Electronic: transistor output PNP
- Electrical connection: M12 X 1, 4-Pin

LFV200

Certificate	Process connection	Type	Order no.
Without	Tri-Clamp 1"	LFV200-XXHCLTPM	6036533
	Tri-Clamp 2"	LFV200-XXHCNTPM	6036534
	DN25 DIN11851	LFV200-XXHRLTPM	6036535
	DN40 DIN11851	LFV200-XXHRMTPM	6036536
	DN50 DIN11851	LFV200-XXHRNTPM	6036537
WHG	Tri-Clamp 1"	LFV200-XXHCLTPM	6036538
	Tri-Clamp 2"	LFV200-XXHCNTPM	6036539
	DN25 DIN11851	LFV200-XXHRLTPM	6036540
	DN40 DIN11851	LFV200-XXHRMTPM	6036541
	DN50 DIN11851	LFV200-XXHRNTPM	6036542

Accessories

Round connector M12 connecting cable "Food & Beverage", 4-pin

Description	Cable length [m]	Type	Order no.
Female, straight	2	DOL-1204-G02MN	6028128
	5	DOL-1204-G05MN	6028130
	10	DOL-1204-G10MN	6028132
Female, right angle	2	DOL-1204-W02MN	6028129
	5	DOL-1204-W05MN	6028131
	10	DOL-1204-W10MN	6028133

Weld-in flange stainless steel 316L

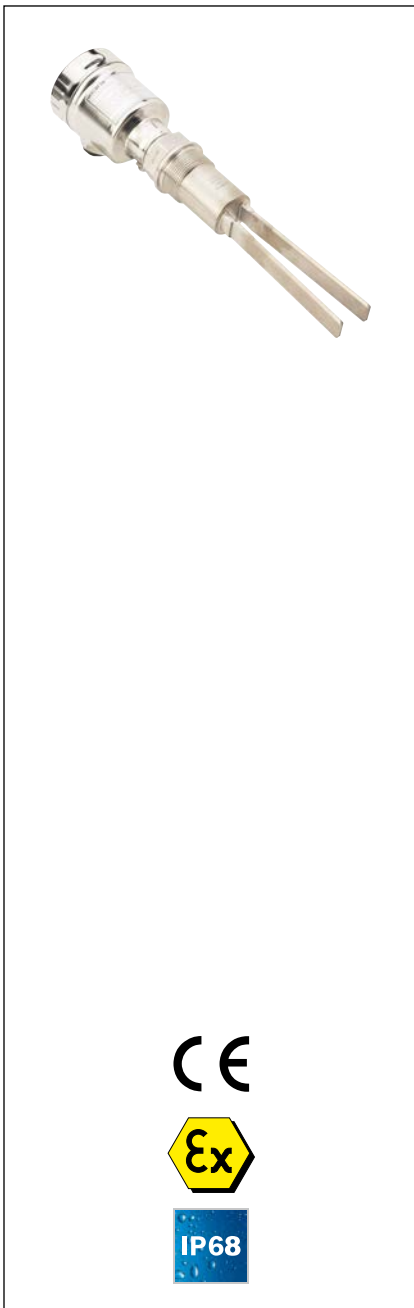
Description	Type	Order no.
Tri-Clamp 1"	BEF-FL-TCLI10-LFV2	5321678
Tri-Clamp 2"	BEF-FL-TCLI20-LFV2	5321679
DN25 DIN11851	BEF-FL-851D25-LFV2	5321527
DN40 DIN11851	BEF-FL-851D40-LFV2	5321459
DN 50 DIN11851	BEF-FL-851D50-LFV2	5321528

LBV300 Level Sensors

For more products see
www.mysick.com

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

For all kinds of bulk material – independent, flexible and rugged



Product Description

The level sensors of the LBV300 series fulfil their tasks signalling full, empty or demand states ruggedly, reliably and highly accurately. The measurement principle of the tuning fork reacts to changes in density, therefore they operate independently of silo shape, tank material and they are also wear-free and maintenance-free. The sturdy stainless steel tuning fork is piezoelectrically energized and vibrates at its resonance

frequency. If the tuning fork is covered with bulk material, the resonance frequency changes. This change is reliably detected by the integrated electronics and converted into a switching signal. While the LBV310 sensor is principally used to signal full states or mounted laterally for demand or empty states, the LBV320 with suspension cable and the tube-extended LBV330 are used for vertical mounting in silos.

Product Features

- Rugged device design
- Flexible basic concept allows customer-specific solutions
- Immune to deposit formation
- Commissioning without filling
- Media temperature up to 250 °C
- Very high repeatability
- ATEX-certified (1D/2D)
- Extension tube and cable version available for vertical mounting

Customer Benefits

- Maintenance-free limit sensor, reduced maintenance costs
- No calibration required
- Fast commissioning saves time
- Sensor test in mounting position
- Low installation cost
- Flexible level sensor



Technical data and order information

- Fill material density: >0.008g/cm³
- Enclosure rating: IP 66/67 or IP 66/68 (0.2 bar)
- Process temperature up to 250 °C
- Stainless steel housing
- Sensor material: 1.4404, 1.4462, PUR
- Process connection: G 1 1/2
- Cable entry: M20 x 1.5

LBV310 compact version

Certificate	Process temperature [°C]	Electronic	Type	Order no.
Without	-50 ... 150	Relay	LBV310-XXAGDRVMX	6039275
		Transistor output	LBV310-XXAGDTVMX	6039278
Atex	-50 ... 150	Relay	LBV310-LKAGDRVMX	6039276
		Transistor output	LBV310-LKAGDTVMX	6039277

LBV320 cable version

Certificate	Process temperature [°C]	Electronic	Cable length [mm]	Type	Order no.
Without	-20 ... 80	Relay	5000	LBV320-XXT-GDRVMX05000	6039280
		Transistor output	5000	LBV320-XXT-GDTVMX05000	6039279
Atex	-20 ... 80	Relay	5000	LBV320-GXT-GDRVMX05000	6039281
		Transistor output	5000	LBV320-GXT-GDTVMX05000	6039282

LBV330 extension tube

Certificate	Process temperature [°C]	Electronic	Probe length [mm]	Type	Order no.
Without	-50 ... 150	Relay	1500	LBV330-XX-AGDRVMX1500	6039284
		Transistor output	1500	LBV330-XX-AGDTVMX1500	6039283
Atex	-50 ... 150	Relay	1500	LBV330-LK-AGDRVMX1500	6039286
		Transistor output	1500	LBV330-LK-AGDTVMX1500	6039285

Accessories for LBV330

Description	Type	Order no.
Lock fitting: -1 ... 16 bar process connection G2A / 316L	BEF-MU-316G20-ALBV	5322462

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PHT Pressure Sensor

- ✓ Aggressive
- ✓ Wet
- ✓ Splash
- ✓ Dry

For sanitary applications – a clean solution



Product Description

With its flush-mounted stainless steel membranes and the large range of hygienic process connectors, the pressure sensor series PHT is perfectly suited for

sanitary applications in the food and beverage, pharmaceutical and cosmetics industry

Product Features

- Robust and precise pressure measurement technology
- Flush-mounted, hermetically sealed stainless steel membrane with roughness $R_a < 4 \mu\text{m}$
- Wetted parts stainless steel 1.4435
- CIP-/SIP-resistant
- Large range of hygienic process connectors available
- Stainless steel housing with enclosure rating of up to IP 68
- Field housing (IP 67) optionally available

Customer Benefits

- Safe operation based on EHEDG certification
- High reliability and availability thanks to robust design and use of high-grade materials
- Optimized solutions due to versatile configurability

Technical data and order information

- Gauge pressure sensor
- Output signal 4 ... 20 mA, 2-wire
- Accuracy 0.5% of span
- Process temperature -20 °C ... +150 °C
- Delivery without sealing

Measurement range [bar]	Process connection							Variant Form F DN 25/32
	Tri-Clamp 1 1/2"	Clamp DIN 32676		Female union nut				
		DN 32	DN 40	DIN 11851		DIN 11864-1 Type A		
				DN 40	DN 50	FDN 40	DN 50	
Electrical connector M12 x 1, 4-pin								
0 ... 0.25	6039291	6039298	6039305	6039312	6039319	6039326	6039333	6039340
0 ... 0.6	6039292	6039299	6039306	6039313	6039320	6039327	6039334	6039341
0 ... 1	6039293	6039300	6039307	6039314	6039321	6039328	6039335	6039342
0 ... 2.5	6039294	6039301	6039308	6039315	6039322	6039329	6039336	6039343
0 ... 6	6039295	6039302	6039309	6039316	6039323	6039330	6039337	6039344
0 ... 10	6039296	6039303	6039310	6039317	6039324	6039331	6039338	6039345
0 ... 25	6039297	6039304	6039311	6039318	6039325	6039332	6039339	6039346
L-Connector according to DIN EN 175301-801 A								
0 ... 0.25	6039347	6039354	6039361	6039368	6039375	6039382	6039389	6039396
0 ... 0.6	6039348	6039355	6039362	6039369	6039376	6039383	6039390	6039397
0 ... 1	6039349	6039356	6039363	6039370	6039377	6039384	6039391	6039398
0 ... 2.5	6039350	6039357	6039364	6039371	6039378	6039385	6039392	6039399
0 ... 6	6039351	6039358	6039365	6039372	6039379	6039386	6039393	6039400
0 ... 10	6039352	6039359	6039366	6039373	6039380	6039387	6039394	6039401
0 ... 25	6039353	6039360	6039367	6039374	6039381	6039388	6039395	6039402
Stainless steel field housing								
0 ... 0.25	6039403	6039410	6039417	6039424	6039431	6039438	6039445	6039452
0 ... 0.6	6039404	6039411	6039418	6039425	6039432	6039439	6039446	6039453
0 ... 1	6039405	6039412	6039419	6039426	6039433	6039440	6039447	6039454
0 ... 2.5	6039406	6039413	6039420	6039427	6039434	6039441	6039448	6039455
0 ... 6	6039407	6039414	6039421	6039428	6039435	6039442	6039449	6039456
0 ... 10	6039408	6039415	6039422	6039429	6039436	6039443	6039450	6039457
0 ... 25	6039409	6039416	6039423	6039430	6039437	6039444	6039451	6039458

Accessories

Round connector 12 connecting cable "Food & Beverage", 4-pin

Description	Cable length [m]	Type	Order no.
Female, straight	2	DOL-1204-G02MN	6028128
	5	DOL-1204-G05MN	6028130
	10	DOL-1204-G10MN	6028132
Female, right angled	2	DOL-1204-W02MN	6028129
	5	DOL-1204-W05MN	6028131
	10	DOL-1204-W10MN	6028133

SICK sensor solutions for all industrial markets

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Seeing details, understanding the big picture.

SICK is a worldwide leading manufacturer of intelligent sensors and sensor solutions for all areas of factory, logistics and process automation. The company's comprehensive product portfolio is always oriented to delivering customer benefits.

Years of practical experience and thousands upon thousands of application solutions go into creating precisely those products that will support your effort to design processes more efficiently and economically.

SICK sensors take on tasks like measuring, detecting, safeguarding, identifying and positioning, for example. And they do the job in all areas of industrial production and logistics.

SICK sensors are almost everywhere: they detect production differences and quality deviations, and optimize workflows in all automated production processes. As part of accident prevention and personnel protection, they safeguard access to robot stations and automatic conveyor sections, and they ensure the efficient flow of material in automatic identification systems.

Let's talk about the best solution for your automation tasks.

INDUSTRIAL SENSORS



- Photoelectric sensors
- Inductive proximity sensors
- Capacitive proximity sensors
- Magnetic proximity sensors
- Magnetic cylinder sensors

IDENTIFICATION SOLUTIONS



- Bar code scanners
- Camera-based code readers (1D/2D/OCR)
- Mobile hand-held scanners
- RFID
- Connection and mounting technology

MEASURING AND DETECTION SOLUTIONS



- Indoor laser measurement technology
- Outdoor laser measurement technology

SYSTEM SOLUTIONS



- Volume measurement systems
- Code reading systems
- Hybrid systems and further system solutions

SICK sensor solutions for all industrial markets

HIGH-PERFORMANCE SENSORS



- Contrast sensors
- Color sensors
- Luminescence sensors
- Fork sensors
- Array sensors
- Distance sensors
- Ultrasonic sensors
- Optical data transmission
- Position finders
- Automation light grids

VISION



- Vision sensors
- Smart cameras
- 3D cameras
- Vision illumination

OPTO-ELECTRONIC PROTECTIVE DEVICES



- Safety laser scanners
- Laser scanners
- Safety camera systems
- Safety light curtains
- Multiple light beam safety devices
- Single-beam photoelectric safety switches
- Mirror and device columns
- Outdoor safety systems
- Upgrade kits

SAFETY SWITCHES



- Electro-mechanical safety switches
- Non-contact safety switches
- Safety command devices

sens:CONTROL – SAFE CONTROL SOLUTIONS



- Safety relays
- Safety controllers
- Network solutions

ENCODERS



- Motor feedback systems
- Positioning encoders

INDUSTRIAL INSTRUMENTATION



- Level sensors
- Pressure sensors

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 6,500 employees and over 50 subsidiaries and equity investments as well as numerous representative offices worldwide, we are always close to our customers. 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 various 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 round out 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:

Australia, Austria, Belgium/Luxembourg, Brazil, Czech Republic, Canada, China, Denmark, Finland, France, Germany, Great Britain, Hungary, India, Israel, Italy, Japan, Mexico, Netherlands, Norway, Poland, Romania, Russia, Singapore, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Turkey, United Arab Emirates, USA

Detailed addresses and additional representatives → www.sick.com