# SENSOR SOLUTIONS:
# FOR MORE EFFICIENT AUTOMATION

Sensors, systems, and services

## SICK
Sensor Intelligence.

# SEAMLESSLY NETWORKED

Networked production and control processes in complex machine environments determine the industrial future. Sensor intelligence is required for the highly complex process of converting physical signals into sensor information. Intelligent sensor systems from SICK are already being used to support dynamic, real-time-optimized, and self-organized industrial processes. For reliable network communication, it is essential that the required data is clearly defined and integrated into the networked data world. Selecting the right type of communication for a defined path plays an important part.
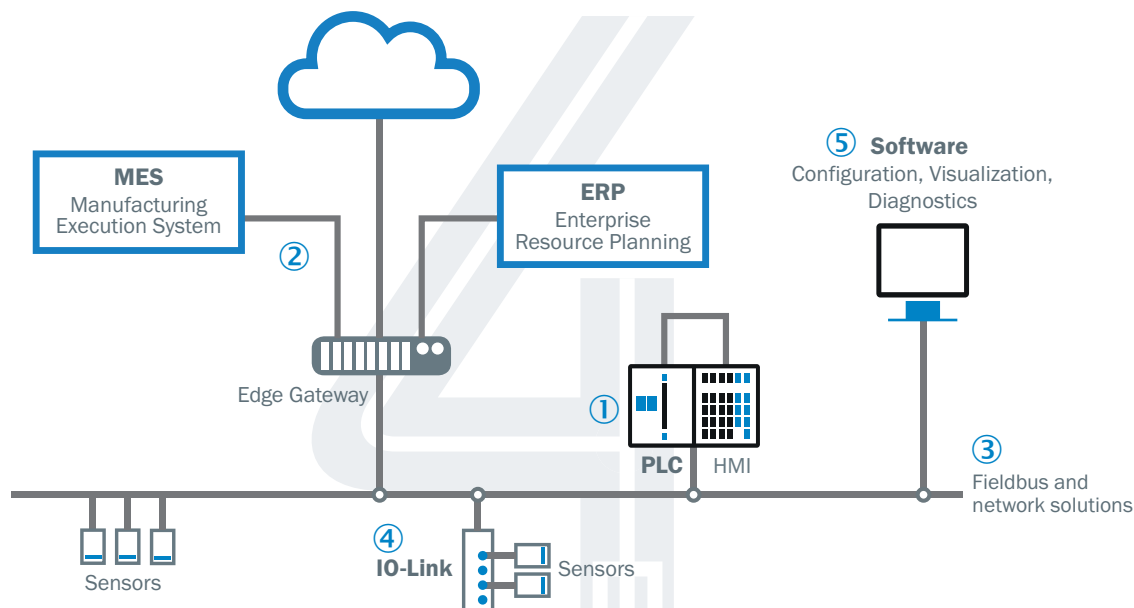
## Sensors intelligently networked

① **Easy integration into the PLC, engineering tools, and HMI**
SICK offers an exceptionally wide range of tools for integrating sensors and safety controllers. These tools are perfectly tailored to your requirements, which may include generic integration using device description files, a standardized interface (e.g., TCI, FDT/DTM) for configuration and diagnostics or integration into the PLC program using function blocks.

② **ERP, MES, and cloud: vertical integration into higher-level systems**
Especially when it comes to Industry 4.0, integration capability and continuity are important features of intelligent and future-proof communication structures. That is why SICK offers several options for integrating the process, status, and diagnostics information of sensors into visualization systems and automation networks. Integration tools from SICK enable straightforward and fast integration into your custom HMI solution, irrespective of the technology used.

## Focusing on the right solution

③ **Industrial communication, interfaces, and fieldbus solutions**
Maximum flexibility and the right solution for any application: The fieldbus and network solutions from SICK allow you to connect sensors and safety controllers to any and all standard automation systems. Guaranteeing quick and easy access to the available data.

④ **IO-Link: Industry 4.0 for everyone**
Communication technology that is independent of manufacturer is considered an "enabling technology" for innovative sensor solutions and supports the global availability of data and information required by Industry 4.0. Switching devices and simple sensors, in particular, can benefit from this fast and cost-effective method of connecting to the data world.

⑤ **Configuration, programming, visualization, and diagnostics**
Our software tools support you when setting up the connection and when performing configuration and diagnostics on sensors and safety controllers from SICK. The intuitive user interface enables fast and simple design and implementation of the application.

➜ **www.sick.com/industrial-communication**
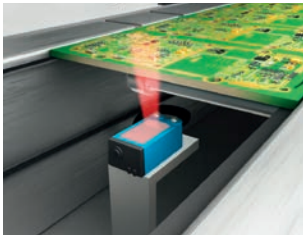
## Photoelectric sensors

- Miniature photoelectric sensors
- Small photoelectric sensors
- Compact photoelectric sensors
- Cylindrical photoelectric sensors
- Fiber-optic sensors and fibers
- MultiTask photoelectric sensors
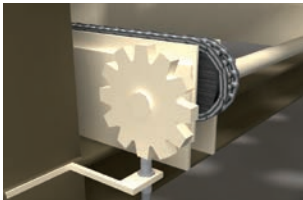
## Proximity sensors

- Inductive proximity sensors
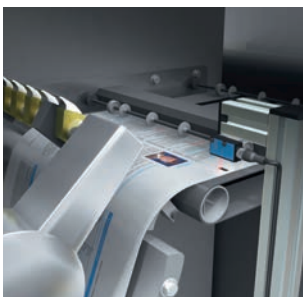- Capacitive proximity sensors
- Magnetic proximity sensors
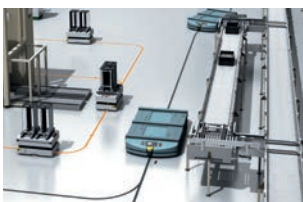
## Line guidance sensors

- Optical line guidance sensors
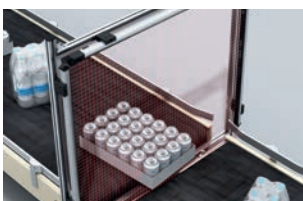- Magnetic line guidance sensors

## Magnetic cylinder sensors

- Position sensors
- Sensors for T-slot cylinders
- Sensors for C-slot cylinders
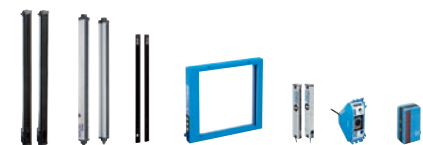- Sensor adapters for other cylinder types

## Registration sensors

- Contrast sensors
- Color sensors
- Luminescence sensors
- Fork sensors
- Array sensors
- Register sensors
- Glare sensors
- Pattern sensors

## Automation light grids

- Measuring automation light grids
- Switching automation light grids

## Opto-electronic protective devices

- Safety laser scanners
- Safety light curtains
- Safety camera systems
- Multiple light beam safety devices
- Single-beam photoelectric safety switches
- Mirror columns and device columns
- Upgrade kits for opto-electronic protective devices

## Safety switches

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

## sens:Control – safe control solutions

- Safe series connection
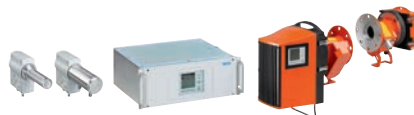- Safety controllers
- Safety relays

## Safety systems and solutions

- Safety systems
- Safety solutions

## Gas analyzers

- Gas transmitters
- In-situ gas analyzers
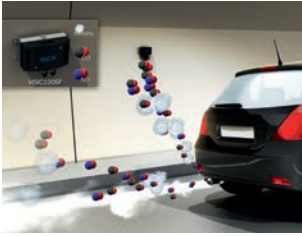- Extractive gas analyzers

## Dust measuring devices

- Scattered light dust measuring devices
- Transmittance dust measuring devices
- Gravimetric dust measuring devices

## Analyzer solutions
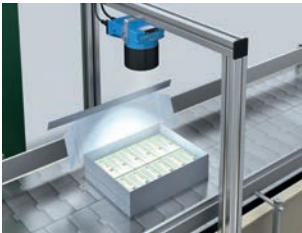
- CEMS solutions
- Process solutions

## Traffic sensors

- Tunnel sensors
- Overheight detectors
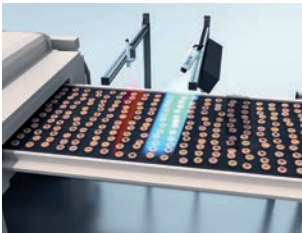- Visual range measuring devices

## Ultrasonic gas flow measuring devices

- Volume flow measuring devices
- Mass flow measuring devices
- Flow velocity measuring devices
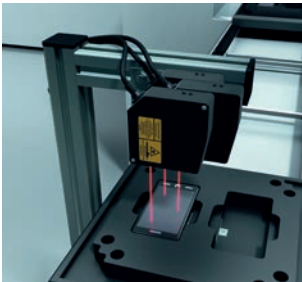- Gas flow meters
- Flow computers

## Identification solutions

- Image-based code readers
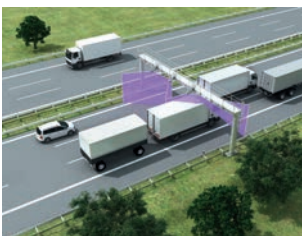- Bar code scanners
- RFID
- Hand-held scanners

## Vision

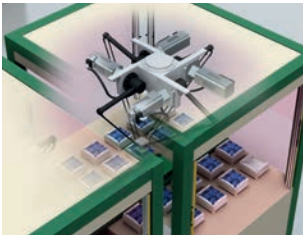- 2D vision
- 3D vision

## Distance sensors

- Displacement measurement sensors
- Mid range distance sensors
- Long range distance sensors
- Linear measurement sensors
- Ultrasonic sensors
- Optical data transmission

## Detection and ranging solutions

- 2D LiDAR sensors
- 3D LiDAR sensors
- Radar sensors

## Motor feedback systems

- Motor feedback system rotary HIPERFACE®
- Motor feedback system rotary HIPERFACE DSL®
- Motor feedback system rotary incremental
- Motor feedback system rotary incremental with commutation
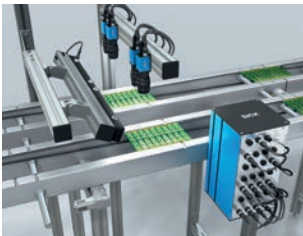- Motor feedback system linear HIPERFACE®

## Encoders and inclination sensors

- Absolute encoders
- Incremental encoders
- Linear encoders
- Wire draw encoders
- Safety encoders
- Inclination sensors
- Measuring wheel encoders
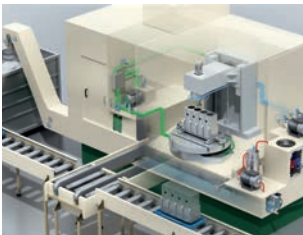
## Fluid sensors

- Level sensors
- Pressure sensors
- Flow sensors
- Temperature sensors

## Integration products

- Sensor Integration Machine
- 4Dpro connectivity
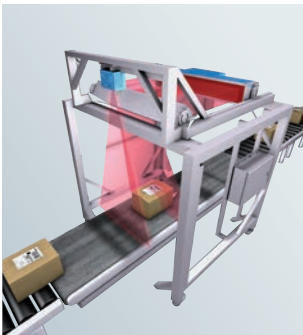
## System solutions

- Customized analyzer systems
- Driver assistance systems
- Robot guidance systems
- Object detection systems
- Profiling systems
- Quality control systems
- Security systems
- Track and trace systems

## Software products

- SICK AppSpace software
- Analytics Solutions
- Integrated Managing Solutions

Learn more about SICK product portfolio at →**www.sick.com/products**

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- ☑ Check your history of all your orders and quotes.
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- ☑ Use the direct order to quickly order a big amount of products.
- ☑ Check the status of your orders and quotes and get information on status changes by e-mail.
- ☑ Save time by using past orders.
- ☑ Easily export orders and quotes, suited to your systems.
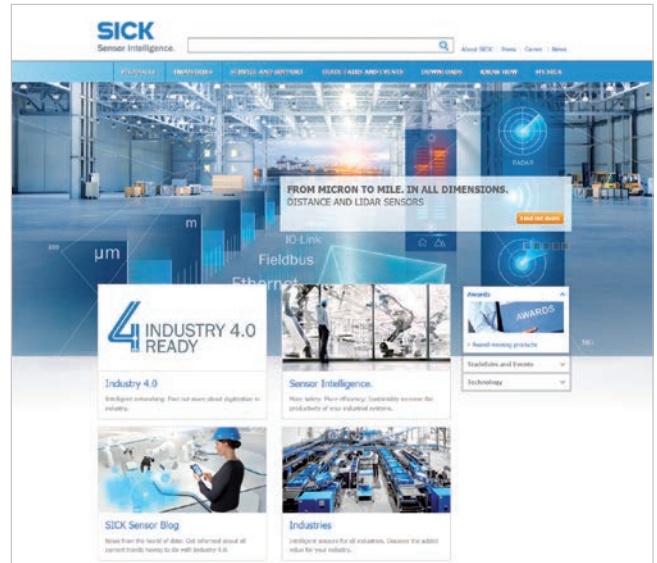
# SERVICES FOR MACHINES AND PLANTS: SICK LifeTime Services

The comprehensive and versatile LifeTime Services are the perfect addition to the extensive range of products from SICK. The services range from product-independent consulting to traditional product services.

**Consulting and design**
Safe and professional

**Product and system support**
Reliable, fast, and on-site

**Verification and optimization**
Safe and regularly inspected

**Upgrade and retrofits**
Easy, safe, and economical

**Training and education**
Practical, focused, and professional

# SICK AT A GLANCE

**SICK**
Sensor Intelligence.

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 8,800 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its 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.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the 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 SICK a reliable supplier and development partner.

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

**That is "Sensor Intelligence."**

**Worldwide presence:**

Australia, Austria, Belgium, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, Hong Kong, India, Israel, Italy, Japan, Malaysia, Mexico, Netherlands, New Zealand, Norway, Poland, Romania, Russia, Singapore, Slovakia, Slovenia, South Africa, South Korea, Spain, Sweden, Switzerland, Taiwan, Thailand, Turkey, United Arab Emirates, USA, Vietnam.

Detailed addresses and further locations ➔ **www.sick.com**

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