

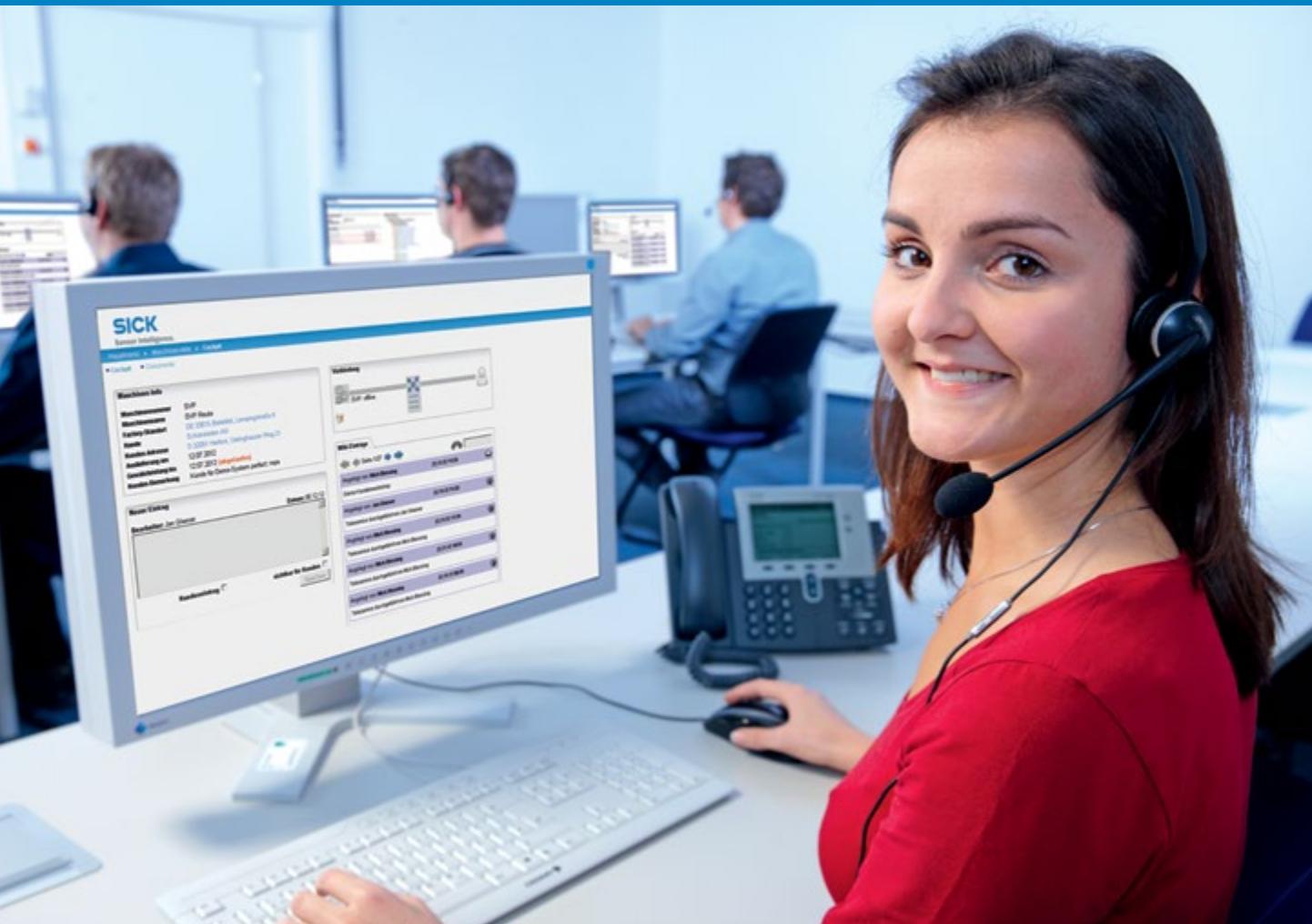


SERVICES BY SICK

SICK
Sensor Intelligence.



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SICK is a leading manufacturer of sensor solutions for factory, logistics and process automation. By harnessing the power of innovation and focusing on customer needs, SICK has become a major player in many industries with a strong presence throughout the world.

User requirements have been the driving force at SICK. Internal and external sources of technologies are used to create our innovative sensing solutions – from simple to state-of-the-art. Our product portfolio is characterized by flexibility and cost-effectiveness. Nearly all of our products adapt to varying automation and ease-of-use requirements.

Our customers receive recommendations for solutions that meet their requirements. SICK's recommendations are based on the task involved and are not limited by product range.

SICK's decades long market presence ensures that users receive sophisticated, reliable products. For customers, that means greater peace of mind in the solution they have selected that is further enhanced by SICK's global support.

Services by SICK

SICK supports our customers with a comprehensive portfolio of service offerings and serves as your service partner throughout the LifeTime of your product or system.

SICK's full range of services is the perfect compliment to its innovative products and systems to create a complete solution. Service offerings are categorized into several areas of competence. SICK's experience as a market leading service organization provides you with the highest level of technical expertise, maximizing your productivity and efficiency.

Consulting & Design
Technology support from planning to turn-key solution



Product & System Support
Fast and reliable, by on-site, remote access, or telephone



Verification & Optimization
Performance checks and preventative maintenance for maximized uptime



Upgrade & Retrofit
Easy upgrades and technology updates



Training & Education
Continuous learning with product & systems training and industry standards education



CONSULTING & DESIGN



CONSULTING & DESIGN SERVICES

For customers who want support earlier in the design process, Services by SICK are there for you from the start with Consultation & Design Services. No matter the industry, we bring the experts on-site to assist you on the front end of your project. Detailed analysis and reporting gives you the tools to ensure your project meets your goals. Bringing in SICK's experts at the beginning of your project for specific design elements or turn-key solutions will not only save you time and money, but will ensure you are utilizing the latest technologies to maximize performance and ensuring compliance with the latest safety standards.



CONSULTATIVE & DESIGN SAFETY SERVICES

Using SICK's dedicated safety experts, we will evaluate existing design or turn-key solutions to ensure safety standards while meeting your productivity needs. Using SICK's systematic approach to safeguarding, we offer Consulting & Design services as well as verification safety services, which will be described further in the Verification & Optimization section.

Machine Guarding Risk Assessment

During a risk assessment, a SICK Certified Safety Applications Specialist will evaluate the hazards at each task of operation and provide a report that documents the performance level required / category compliance with industry standards. The report includes a mitigation plan in the case of compliance gaps.

Safety Concept

Using the Machine Guard Risk Assessment output, SICK's Safety Concept service is the engineering design for the safety solution. The design will include proper component selection, electrical design and tie-in to existing circuitry, software design, and mechanical perimeter fencing and point-of-operation guarding. The details are documented in a comprehensive report package, including electrical schematics, Bill of Materials, solution layout for liability records and integration and go-live support. Installation, commissioning, and integration can be supported by SICK or the customer.

INTEGRATION SERVICES

SICK sensor and safety applications can be connected into higher levels of the automation pyramid through Industry 4.0 concepts. There is an opportunity for integration projects within these applications which are just beyond the sensor level. These services assist customers in make real-time decisions and to drive productivity optimization. Implementation is by SICK's Sensor & Safety Integration (S&SI) team.

Industry 4.0 Consulting

SICK can advise customers interested in an Industry 4.0 partner. Using SICK's global industry knowledge and experience, I4.0 design and consultation services are available to assist customers in resource planning, real-time information gathering, energy efficiency, installation productivity, and throughput.

CONSULTING & DESIGN

VISION SERVICES

SICK's Vision Services aim to increase efficiency, improve quality, and increase flexibility of your machine. Considering your current design or a complete turn-key solution, Vision Services can optimize your machine performance through a Vision Assessment, Vision Concept, and Vision Validation (discussed in the Verification & Optimization section).

Vision Assessment

Vision Assessments are used to select the proper technology to meet project and performance requirements. A feasibility study is performed to verify that performance requirements can be achieved and to validate acceptance test criteria. The Vision Assessment Report documents the solution details and begins the design process.

Vision Concept

The Vision Concept is the design process and includes defining the scope of work and documenting the specific description of operation. Additionally, the Vision Concept Report details a Bill of Materials, electrical schematic, mechanical prints, and software configuration. The comprehensive report provides the details needed to perform installation, commissioning, and integration, which SICK can provide as part of a turn-key solution.

EPA COMPLIANCE & PROCESS SERVICES

SICK is an industry expert in air pollution control and Continuous Emission Monitoring (CEM) systems. Let us ensure your products are operating according to EPA (Environmental Protection Agency) standards and best-in-class testing methods.

Compliance Testing Support

Optimal Continuous Emission Monitoring (CEM) performance prior to your annual compliance testing, or Relative Accuracy Test Audit (RATA), can increase your chance of success. Compliance testing support can include:

- Quarterly audit
- Preventative maintenance
- Spare part kits
- On-site support during the RATA

Acid Gas (SO₃/H₂SO₄) Consultation

One of SICK's application experts will travel to your facility and review your unique site conditions. This includes discussion and review of the specific air pollution control equipment setup, DSI injection scheme and desired controls. Based on this information, a recommendation will be made regarding the best process and location to install the SO₃ monitor to most effectively meet your needs.

Application Consulting

Members of our application engineering team come from multiple engineering disciplines with experience in nearly any industry. Our expert engineers can answer your technical questions and provide guidance on the selection of SICK's products, systems and services.

Customer Project Management (CPM)

CPM is the standard methodology used to oversee complex projects from order entry through acceptance. A Customer Project Manager will be assigned to be a single point of contact and will facilitate timely communication to ensure that any required information exchange takes place consistently and accurately throughout the project. They work within the pre-defined scope of work and coordinate changes as they arise.

PRODUCT & SYSTEM SUPPORT



Product and System Support

During the implementation of your service, SICK can provide start-up services to maximize product and system performance. Following installation, projects are transferred to SICK's Technical Support Team who is available for all technical aspects.

Installation and Commissioning

SICK offers system and component installations for customers who are looking for a supplier to take full responsibility for the installation of products or systems. Expert Field Service Technicians conduct installations and ensure proper configuration and performance of all SICK components before obtaining a customer's acceptance. Not only do SICK technicians ensure that the system and components are installed correctly and efficiently, but they can also optimize equipment at the customer site to achieve the highest level of performance.

PRODUCT & SYSTEM SUPPORT



On-Site Technical Support

When you simply want a SICK representative on-site for help, you can rely on SICK's experienced network of field service and application professionals. These individuals are strategically located throughout the US and can respond quickly to resolve product and system related issues.

24/7 Helpline Support

To accommodate customers who have extended hours of operation, SICK offers a program that grants phone access to Technical Support 24 hours a day, 7 days a week. Sold on an annual per-site basis, the 24/7 Helpline Support Program connects customers to a Technical Support team equipped to troubleshoot and diagnose product and system problems.

Remote Service

Remote service capabilities improve the ability to troubleshoot and reduce costly downtime. SICK's Remote Service Program was specifically designed for customers as a secure and safe way for SICK's authorized Field Service personnel to connect to a product and assist with problem diagnosis. Sold as a one-year subscription on a per-site basis, Remote Service requires hardware and/or software to be initially installed. Ideally, travel costs are eliminated as further technical help is received remotely instead of on-site.

Extended Warranty

SICK offers the option of Extended Warranties to its customers who want to have additional service protection for their products and systems beyond the original factory warranty period. The program is designed to provide an affordable and planned alternative to unpredictable repair expenses.

Bench Repair

Our Bench Repair service uses manufacturing personnel and processes to repair, restore, and test SICK's wide range of products to ensure original factory specifications and to maximize the operational life of the equipment. Once SICK receives your product, our technical experts will inspect it and assess needed repairs. Once work is complete, we will ship the repaired product back to you.

Acid Gas (SO3/H2SO4) Certification

Success of an accurate and repeatable control loop includes comparison of the SO3 monitor output to a known reference method. SICK has developed a partnership with a knowledgeable and qualified testing group, known in the industry for best-in-class Controlled Condensate Method (CCM) testing. The testing group will come to your site and perform a comprehensive correlation of the analyzer output to the CCM. This process ensures that your analyzer will provide an output, directly tied to the EPA (Environmental Protection Agency) defined reference method.

VERIFICATION & OPTIMIZATION



Verification & Optimization

The Verification & Optimization offerings are services that help ensure peak operating performance and compliance with industry standards. As changes in manufacturing processes and equipment configurations occur these services will help ensure that operational excellence is maintained through regular interval preventative maintenance upkeep as well as ensuring proper safe guarding through routine inspections and compliance with relevant standards.

Preventative Maintenance

Preventative Maintenance ensures that equipment continues to operate at optimal levels and helps prevent unexpected downtime. A SICK Field Service Technician utilizes a maintenance checklist to inspect ambient conditions, damage, alignment, contamination, application-specific parameters, and functionality of the SICK product. From this inspection information, the customer can decide which measures to implement. For applicable products, spare part kits with a single part number have been created, which can be sent to the customer site with purchase prior to scheduled maintenance. Preventative maintenance is offered by-the-day, or as an annual agreement.

Validation of Functional Safety

After implementing a safety solution, an important final step is the Validation of Functional Safety. Performing a Validation of Functional Safety prior to go-live is the final record that tests and proves the design's thoroughness and implementation quality. Testing is conducted, guided by a test plan generated in the previous Risk Assessment, comparing the results to the design specifications. Validation testing ensures that all of the designed protective measures have been implemented and are functioning as expected. In addition, the Validation documents the use of certified employee competency to assure that no new concerns were created.

SICK's Safety Validation Services Include:

- Physical testing and fault simulation
- Measuring machine stop time to calculate safety distance requirements
- Checking current safeguarding solution for performance
- Checking functionality of all safety features
- Checking whether all dangerous movements are stopped as required
- Checking the correct installation and function of safety devices

Safety Inspection

Safety Inspections are performed by a SICK certified Safety Specialist who thoroughly tests the operational functionality as well as the implementation quality of protective measures. Safety Inspections can be performed annually after the initial implementation (suggested) and on any brand of device to prove performance and compliance with industry standards. Successful passing of a Safety Inspection, results in a report and a traceable, dated seal by the Certified Safety Specialist.

Stop Time Measurement

SICK's Stop Time Measurement (STM) offering measures the safe distance to verify between the hazard and the protective measure. This service requires the usage of a calibrated and certified measurement device which references local standards for pass/fail criteria. STM results are documented in a report considered part of a complete Safety Solution technical documentation package.

Vision Validation

After installing and commissioning a Vision Solution, Vision Validation ensures that the vision system solution is performing according to the original Acceptance Test Criteria. The Validation Report provides documentation of configuration, testing setup, and the acceptance test results.

UPGRADE & RETROFIT

**Upgrade & Retrofits**

Whether you need to migrate to the latest technology or retrofit existing devices with a replacement, SICK's Upgrade & Retrofit services are an economical alternative to purchasing an entire new line or piece of machinery. In many cases, existing brackets and cables can be used. Depending on customer needs, SICK can also develop customizations according to the application requirements. Parameter cloning modules are available for many products, offering fast and simple device replacement. Using the knowledge of SICK's sales force and the technological advances of our products, you can substantially increase the productivity and lifespan of your system quickly and economically.

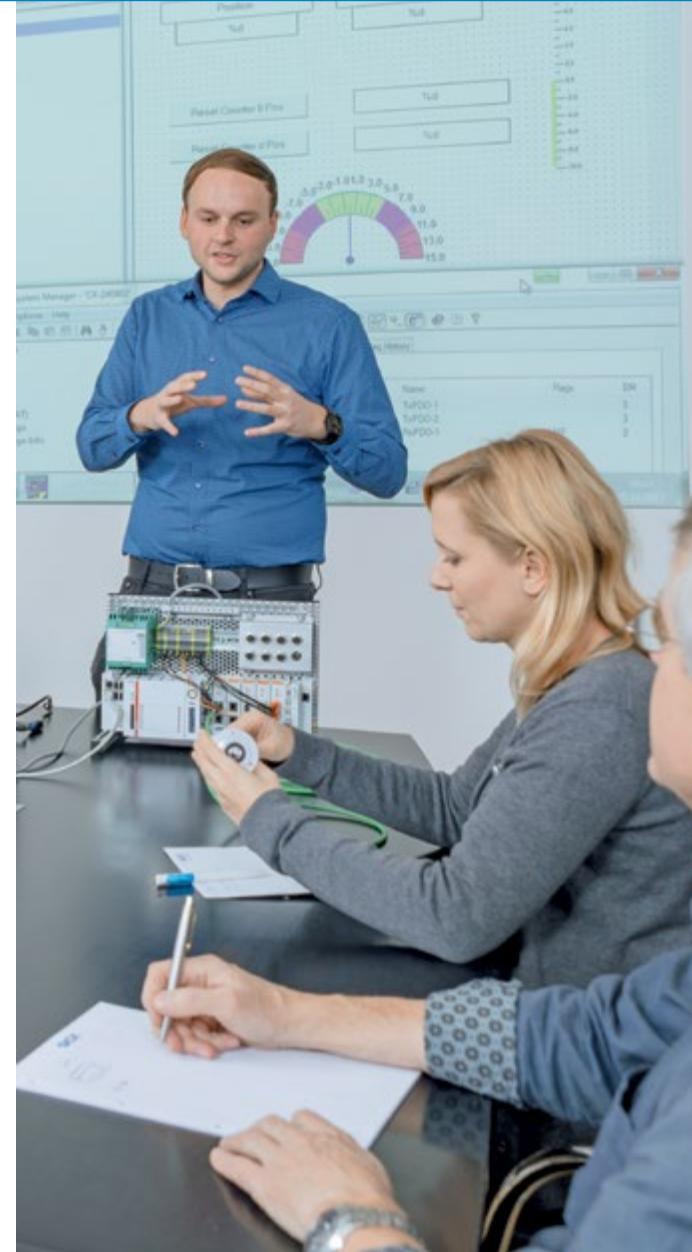
TRAINING & EDUCATION

**Product & System Training**

SICK recognizes that high-level training is just as important as providing high-level products, therefore we have an experienced training staff ready to fulfill your training needs. We have standardized training available covering a wide range of products and systems. Each training has been tailored with objectives and benefits targeted towards a specific job function. With this variety to choose from, customers can easily find a course or develop a training path to fit their employees' needs from basic familiarity with SICK products & systems, day-to-day maintenance, or optimization for peak performance. Our training programs will give you and your colleague's confidence working with SICK's safety products and systems. This knowledge leads to decreased downtime and improved line efficiencies.

Safety Education

SICK's Safety Education Program is performed by our product and industry experts. Up-to-date industry knowledge, including the relevant standards and regulations, help you perform your job more effectively. Using the knowledge provided by SICK, you can more successfully respond to everyday professional demands.



CUSTOM SOLUTIONS

**Service Agreements**

SICK offers a variety of service options for our customers to maintain safe and efficient solutions for the life of your products and machines. Service Agreements are an additional option that allow you to develop customized service solutions for your specific service needs.

Any of the SICK services described can be commercially bundled into a service agreement for added customer convenience. This could include automatic scheduling reminders for the inspections required for protective equipment, routine performance assessments at a given period during the year, or scheduled validation and testing of mission critical solutions in any application. Some of the most common Service Agreements are annual 24x7 Helpline Support with Remote Service as well as Preventative Maintenance. The choices are endless. To find out more about Service Agreements and how they can be implemented for your operation, contact your SICK sales representative.

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With almost 7,000 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, Brazil, Canada, Chile, China, Czech Republic, Denmark, Finland, France, Germany, Great Britain, Hungary, 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 additional representatives → www.sick.com