## Safety and productivity services

SICK LifeTime Services for machines and systems

SICI



## Place your trust in us – SICK LifeTime Services

SICK provides optimal solutions for preventing injuries due to accidents, for safe and effective control of processes, and for protecting the environment. SICK offers cutting-edge technologies for sensors and solutions for industrial applications from factory and logistics automation to process automation.

There where you need us, anywhere in the world SICK LifeTime Services provide uniformly high-quality intelligent services for security, productivity, and sustainable efficiency everywhere in the world. Nearly 400 service employees are available to ensure production availability anytime, anywhere in the world.





#### **Consulting & Design** Globally available experts for cost-effective solutions

# SUPPOR'S

**Product & System Support** Fast and reliable, by telephone or on site



Verification & Optimization Checks and recommendations for increased availability



Upgrade & Retrofits Devolops new potential for machines and systems



Training & Education Employee qualification for increased competitiveness

#### Comprehensive expertise from a single source

Our comprehensive and versatile LifeTime Services are the perfect addition to the comprehensive range of SICK products. The services range from product-independent consulting to traditional product services. Our services are characterized by our exceptionally broad competence, obtained through our experience as the largest focused producer of sensor technology.

## SICK LifeTime Services: the advice of experts



#### Personalized and versatile: our scope of services

Many of the services provided by SICK LifeTime Services are also available separately, independent of SICK products. Our service expertise is based on the unique combination of technical knowledge and decades of experience with both innovative and tried and true products and services, and ranges from simple product support to integrated system solutions.

#### For humans and machines: Industrial Safety Systems services

SICK LifeTime Services improve your investment security, open the door to potential new savings through more efficient processes, and always keep the main goal – safety for humans and for machines – in view. Intelligently coordinated emergency stop strategies, zone concepts, and muting functions optimize production flow, increase machine availability and reduce downtime. Over 10,000 safety inspections per year demonstrate SICK's expertise.





## Increase productivity and motivation – with the assurance that safety provides

Sustainable safety concepts by SICK decrease the risk of accident and also increase motivation and worker satisfaction. The result is higher employee and plant productivity. SICK experts provide advice and can accompany your project from the initial concept to regular maintenance. SICK provides support to risk assessment and commissioning, carries out stoptime measurements, plant walk-throughs, full conformity evaluations, and provides a broad range of training programs.

#### Services for automatic identification

SICK is a reliable partner in all project phases to help your project achieve technical and commercial success. Our services range from application consultation to test runs to evaluate customer applications in SICK's own Logistic Technology Center (LTC), to pattern approval and start-up assistance. For ongoing operations, our services include performance checks, product support, and hotline support.

#### Services for emission control and process control

We lend a personal touch to qualified services and we're there where you need us – in Germany, as well as via our international subsidiaries and agents. Our range of services mesh closely with one another. Our qualified support for client projects includes consultation on measurement projects, the realization of system contracts, on site service, repair of analysis devices, and delivery of spare parts. Our efficient organization ensures short and direct coordination channels. With staff who are committed to their work.



## Modular service contracts - flexible for every requirement

An important part of LifeTime Services from SICK is the modular service concept, which allows every business to draw up its own individual service contract from different service modules.

## For performance, availability and safety

We advise you and you decide which service you'd like to use. With modular service contracts, we accommodate all your requirements. Combine your own individual service contract with different, standardized modules and only pay for what you need. Regardless of the service contract you have chosen, SICK always ensures optimum performance and maximum availability of machines and systems, as well as human safety.

#### Assured productivity - every time

SICK is available to you around the clock and worldwide as an experienced and competent partner throughout the entire life cycle of a machine or system.\* As the operator, you are therefore able to concentrate on increasing productivity, efficiency, and income.

\*Not all services are available in all countries, due to local restrictions on rights of use and service availability.



Service module remote support: With just one call, a SICK-service technician will make sure that your machines and systems are running without problems. In the same way, the whole system can be regularly inspected or its software can be updated.

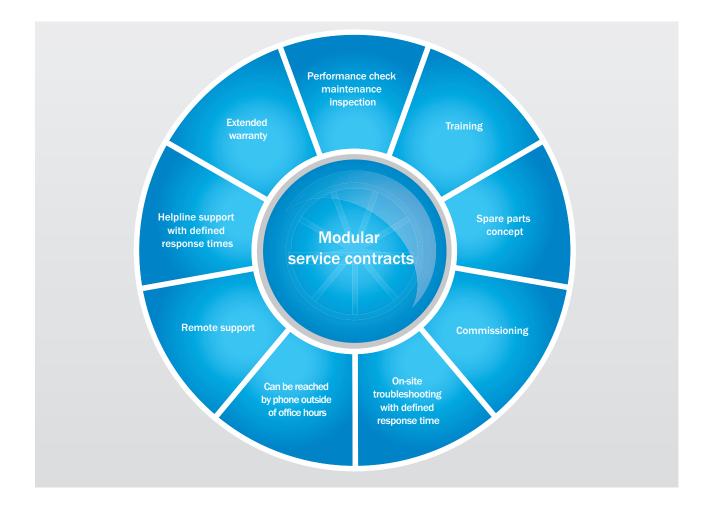
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#### At a glance

- Individual preparation of the service package
- Quick reaction to critical situations
- Regular inspection of machines and systems
- Continuous software updates
- More than 550 service representatives worldwide
- You can contact us round the clock, seven days a week
- Training for machine operators and operating personnel

#### The advantages

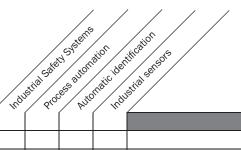
- Regular inspection and continuous improvement of the machine or system
- Maximum system availability and reliability during its entire life cycle
- · Cost reductions due to shorter downtime
- Qualified support team providing error analysis and trouble shooting services
- Target-orientated training programs on products, solutions, and technologies



As part of a modular service contract, you can combine and pay for the service modules you really need.

## **Overview of SICK LifeTime Services**

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Торіс					Fag
Service you can trust					
Good advice from experts					
Modular service contracts					
Overview of SICK LifeTime Services					:
CONSULT – Consulting & Design					1
Plant walk-through	•				1
Risk assessment	•				1:
Safety concept	•				1
Hardware design	•				14
Software design	•				1
Installation	•				1
Commissioning	•				1
CE-conformity check	•				1
Test day in the Logistic Technology Center			•		1
SUPPORT – Product & System Support					2
Commissioning			•		2
Mounting and commissioning		•			2:
Pattern approval			•		2
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# **CONSULT** – globally available experts for cost-effective solutions





#### Note

Please contact your SICK agent to ask which services are available in your country.

#### Secure your investment with Consulting and Design services

SICK LifeTime Services are there from the start: with consulting, customeroriented analyses, configuration and engineering. Secure your investment from the very start with our unique and comprehensive know-how.

#### Selected services

- · Plant walk-through
- Risk assessment
- Safety concept
- Feasibility studies
- · Software and hardware design
- Many additional services

## **Plant walk-through**

#### A contribution to your company's safety culture



#### SCOPE OF SERVICES

- · Appraisal of the safety-related status of all equipment in a manufacturing plant in relation to the development of an appropriate safety strategy
- · Analysis of the current compliance status of the systems based on general data, technical data and safety data

#### YOUR BENEFITS

- · Quick scan to determine the current safety status of the machinery
- · Identification of the most important safety aspects
- · Assistance with the organization of the future approach in relation to safety
- · Conformity with legal and official obligations and responsibilities of the operating organization
- Planning tools for collaboration with health and safety authorities

#### SICK product area

Industrial Safety Systems

#### Of interest to

#### Management

Maintenance **Quality Assurance** Construction Safety Representative **Executive Board** 

#### Part number

1682472



Consulting & Design

Training & Education

## **Risk assessment**



#### Consulting & Design

Product & System Support

Verification & Optimization



**Upgrade & Retrofits** 

Training & Education



#### SICK product area

**Industrial Safety Systems** 

#### Of interest to

#### Management Maintenance **Quality Assurance**

Construction Safety Representative **Executive Board** 

## Part number

1682450

#### A systematic approach to minimizing risks on machines and technical equipment



#### SCOPE OF SERVICES

Preparation of a documented risk assessment using Safexpert® (in accordance with EN ISO 12100, which includes:

- A list of all safety requirements to ensure machine safety
- · Analysis and evaluation of the hazards and risks
- · Evaluation and categorization of all safety-related parts of the control system (category/SIL/PL)
- Proposed solutions to obtain the necessary risk reduction

Necessary measures are imple-

· Avoidance of over-sizing

competitiveness

· Assurance of efficiency and

phase

mented during an early project

#### YOUR BENEFITS

Time and cost savings by involving SICK experts at an early stage

- Compliance with directives and laws is planned as an integral part of a project
- · Potential weak spots are identified at an early stage
- Verified Safety stands for:
- Quality assurance through specified, standardized and audited processes
- Regular qualification testing of executing organs
- Complete, database-supported documentation and traceability via a unique document number
- LIFETIME SERVICES | SICK 12

## Safety concept

#### A safety concept taking standards and directives into account



#### SCOPE OF SERVICES

Development of the necessary solutions for risk reduction as a concept document, which includes:

- Proposals on how to achieve compliance with essential safety requirements and international standards
- Functional description of the overall concept, including safety areas
- Layout including location of the safetyrelated equipment
- Functional safety assessment on safety related parts of the control system, based on a risk analysis and user information
- Dimensioning of the mechanical guarding including heights, safety distances, maximum openings
- Specification of the safety requirements including category, PL, SIL, stop category
- Basis for the preparation of hardware and software concepts

Consulting & Design

Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education





#### SICK product area

Industrial Safety Systems

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Part number

1682451

- Increase in machine safety: Compliance with the essential health and safety requirements and international standards
- Flexibility product-neutral concept
   design
- Overcompliance can be avoided, which ensures effectiveness and commercial competitiveness

## Hardware design

**Conceptional design of safety-related control** 



#### Consulting & Design

**Product & System Support** 



Verification & Optimization

**Upgrade & Retrofits** 

Training & Education



#### SICK product area

**Industrial Safety Systems** 

#### Of interest to

Management Maintenance **Quality Assurance** Construction

Safety Representative **Executive Board** 

## Part number

1682445

## circuits and selection of suitable components



#### SCOPE OF SERVICES

CAD hardware planning in accordance both with the specification and also with relevant regulations and directives, including

- Technical clarification
- · Selection of suitable components
- Terminal diagrams
  - Layout diagrams (control cabinet) •

· Preparation of circuit diagrams

- Parts lists
- Documentation in electronic format

#### YOUR BENEFITS

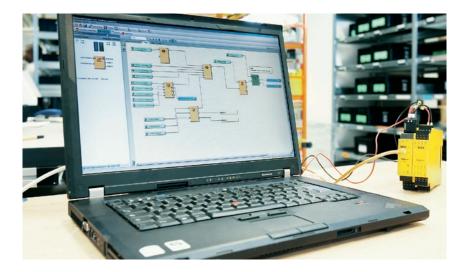
- · Cost savings due to more efficient project implementation
- · Optimal matching of different technologies

#### Verified Safety stands for:

- Quality assurance through specified, standardized and audited processes
  - Regular qualification testing of executing organs
- Complete, database-supported documentation and traceability via a unique document number

## Software design

#### High-quality and reliable programming of safety-related control circuits



#### SCOPE OF SERVICES

- Preparation of safety-relevant application software or configuration based on the existing safety concept
- Preparation of the data exchange with other communication modules
- The range of services includes
  - Technical clarification
  - Specification of the safety-relevant application software,
  - Creation of source code, commenting, cross-reference lists,
  - Verification of application program

#### YOUR BENEFITS

 Standards-based realization of requirements for safety-relevant application software cation software, all work is carried out in accordance with strict application guidelines. Each phase is clearly described. The software is developed in accordance with the V-model

· Cost savings: Efficient project im-

productivity restrictions

plementation minimizes the risk of

· From the planning phase to reali-

zation of the safety-relevant appli-



**Consulting & Design** 

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education





#### SICK product area

Industrial Safety Systems

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

## Installation



Consulting & Design

Product & System Support



Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

#### Pre-assembly of components and equipment



#### SCOPE OF SERVICES

Installation in accordance with specifications, including

• Complete wiring of all opto-electronic protective devices, position switches, emergency switching off/ emergency stop pushbuttons and

mechanical interlocking devices, etc.

- Installation of technical protective devices
- · Wiring verification

#### YOUR BENEFITS

- Cost savings: Minimizing of the risk of productivity restrictions
- Time savings: Reduction in employee pressure and fast project implementation

#### SICK product area

**Industrial Safety Systems** 

#### Of interest to

Management Maintenance **Quality Assurance** Construction

Safety Representative **Executive Board** 

## Commissioning

Commissioning safety-related control circuits with subsequent commissioning check



#### SCOPE OF SERVICES

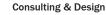
Commissioning of all safety-related machine functions in accordance with the specification including

 Configuration of opto-electronic protective devices and adaptation of the protective and warning fields

#### YOUR BENEFITS

- Protection of workers and machines ensured by means of compliance with standards and regulations
- Cost savings: Minimizing of the risk of productivity restrictions

- Position switches, emergency switching off / emergency stop pushbuttons, interlock systems, guard controls and enabling switches as well as safety functions for hydraulic and electrical drives
- Final safety inspection
- Time savings: Reduction in employee pressure



Product & System Support

Verification & Optimization

Upgrade & Retrofits

Training & Education

#### SICK product area

Industrial Safety Systems

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

## **CE-conformity check**



Consulting & Design

**Product & System Support** 



Verification & Optimization



**Upgrade & Retrofits** 

Training & Education



#### SICK product area

**Industrial Safety Systems** 

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

#### Part number

1682442

We guide you through the worldwide "jungle" of standards



#### SCOPE OF SERVICES

- · CE on site review on the machine • Check the essential hazards in
- relation to the manufacturer's risk assessment
- Check all electrical, pneumatic, hydraulic safety-related control equipment
- · Check essential health and safety requirements
- Check the documentation
- · Check the complete machine documentation (design documentation, risk analysis, etc.)

#### YOUR BENEFITS

- Independent CE-conformance check to prevent liability risks
- · Cost savings: efficient use of expert knowledge

#### Verified Safety stands for:

- Quality assurance through specified, standardized and audited processes
  - Regular qualification testing of executing organs
- Complete, database-supported documentation and traceability via a unique document number

## Test day in the Logistic Technology Center

Evaluating customer applications in the fully-equipped SICK Logistic Technology Center



#### SCOPE OF SERVICES

- Testing customer applications in the fully-equipped test center
- Consultation with qualified SICK
   engineers
- Creating a detailed application report
- Solution recommendations provided by qualified SICK engineers

#### YOUR BENEFITS

- Advance application testing saves time and money
- Experienced engineers provide valuable support and recommendations for application solutions
- Availability of required test equipment

#### SICK product area

Automatic identification

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Part number 1682605

Consulting & Design

**Product & System Support** 

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

## SUPPORT – fast and reliable, by telephone or on site





#### Note

Please contact your SICK agent to ask which services are available in your country.

#### Improve productivity with reliable Product and System Support

With reliability and support you can trust, day in and day out. With SICK LifeTime Services you can be sure that the sensor systems and safety devices in your machines and plants are always fully operational.

#### Selected services

- Commissioning
- · Repairs and spare parts
- · Remote support
- Hotline

## Commissioning

Experienced commissioning engineers configure and parameterize customer-specific applications



#### SCOPE OF SERVICES

- · Mechanical assembly and wiring of SICK components and systems
- ponents to customer applications
- · Functional testing of components/ systems
- Configuration and adaptation of com- Documentation of functionality in the acceptance protocol

#### YOUR BENEFITS

- SICK assumes responsibility for correct installation, commissioning, and functioning of systems/ devices
- Customers can focus on their core competencies
- Reduced demands on customer • technicians
- Optimal system set-up

#### SICK product area

Automatic identification

#### Of interest to

Management Maintenance **Quality Assurance** Construction Safety Representative **Executive Board** 

Product-dependent ordering via local subsidiaries

Verification & Optimization

Consulting & Design

**Upgrade & Retrofits** 

Training & Education

Product & System Support

## Mounting and commissioning



Consulting & Design



Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

#### On site quality control by our service technician



#### MOUNTING SERVICES

- · Installation of electrical and pneumatic cables
- · Mounting devices at the measuring points
- Wiring the devices (power supply & signal cables)
- Mounting the purge air supply
- · Connecting gas mains
- · Connecting external computers

#### COMMISSIONING SERVICES

- Adapting devices to the applications Documenting functionality
- · Setting device parameters
- Orientations to device functions •
- (measuring operation)
- Support for the QAL2 test in accordance with EN14181

#### YOUR BENEFITS

- Problem-free start-up of devices and On-time acceptance systems
- Support in meeting regulatory requirements

Product-dependent ordering via local subsidiaries

SICK product area

**Process automation** 

Of interest to

Management Maintenance **Quality Assurance** 

Construction Safety Representative

**Executive Board** 

## **Initial Verification**

Standardization of identification systems and conformity assessments in accordance with MID

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Braunschweig und Ber	fän	
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#### SCOPE OF SERVICES

- Checking that device hardware conforms to relevant EC typeexamination certificate
- Carrying out metrological tests
- Securing the devices against tampering
- · Attaching the required identification markings
- Generating test documentation
- · Providing the relevant documents with copies

**Consulting & Design** 



Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

#### YOUR BENEFITS

- SICK assumes responsibility for conformity in accordance with MID
- Cost-effective commissioning in conformity with MID (no regulatory official is needed on site)
- Allows implementation as an accounting system
- Very quick ROI (return on investment)
- · Secure legal basis for invoicing

#### SICK product area

Automatic identification

#### Of interest to

Management Maintenance **Quality Assurance** Construction Safety Representative **Executive Board** 

#### Part number

1682623

## **Repairs and spare parts**



Consulting & Design

#### Product & System Support

Verification & Optimization

Upgrade & Retrofits

Training & Education

#### Perfect solutions for all eventualities



#### SCOPE OF SERVICES

#### Spare parts management:

- We will advise you in the acquisition of system-specific spare parts packages and individual spare parts
- Ensuring spare parts availability
- Support in efficient organization of your spare parts warehouse
- Assurance of safety-relevant characteristics

YOUR BENEFITS

#### **Repairs management**

- Finding, diagnosing and rectifying errors, including function testing
- Quick, simple, high-quality order processing
- Findings are documented with detailed repair report

#### SICK product area

All segments

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

- Quick return to operational availability of systems and components
- Efficiently organized spare parts storage
- Reliable use of devices after repair
- Recommendations to avoid malfunctions

### **Remote support**

#### Detailed and rapid analysis for support on site



#### SCOPE OF SERVICES

- Safe, powerful remote maintenance option
- Online remote diagnostics and trou bleshooting by experts
- Customer and interrogator access to the SICK Remote Service Platform
- Document management system specific documents and reports available at any time
- Transparent, clear system overview and logging
- Qualified commissioning and operational support
- Remote service flat rate by experts
- Setup service: installation, setup and training

· Secure, high-availability communi-

Simple and flexible integration into

existing IT Infrastructure (LAN)

Location-independent through 3G

cations platform

cellular option

**Consulting & Design** 

#### Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

#### SICK product area

All segments

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

- Increased availability of your system
- Optimized and projectable maintenance costs
- Qualified support from commissioning through to operational phase
- Reactive and proactive support improves reaction and solution times
- Rapid help from experts in the event of faults

## Troubleshooting





Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

#### Immediate support on site



#### SCOPE OF SERVICES

- Error analysis and repair of malfunc- Documentation of the malfunction tions at customer location
- Adaptation of components/systems in the event of application problems
- · Configuration adaptation and optimization of operational parameters
- and rectification measures
- Documentation to avoid ٠ malfunctions

#### YOUR BENEFITS

· Quick return to operational availability of systems and components

- Competent and quick support by experienced SICK technician
- Recommendations to avoid mal-• functions
- · Repair or replacement of defective components by experienced engineers
- · Documentation of malfunctions and description of repair (service report)

#### SICK product area

All segments

#### Of interest to

Management Maintenance **Quality Assurance** Construction Safety Representative **Executive Board** 

Product-dependent ordering via local subsidiaries

## **Start-up support**

#### System settings and adaptation during new installation



#### SCOPE OF SERVICES

- Support by qualified SICK engineers during the start-up of customer systems
- Customer demands can be adapted easily when necessary

#### YOUR BENEFITS

- In case of difficulty, a professional SICK technician with the required expertise is on site
- System adaptations can be carried out easily and quickly in accordance with the customer's needs
- Requirements can be changed immediately (e.g., interface logs)

• Effective cooperation between SICK, system integrator, and

customer

**Consulting & Design** 

#### Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education



#### SICK product area

Automatic identification

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

# CHECK – checks and recommendations for increased availability





Monitor, assess, control – with SICK LifeTime Services you'll stay on the safe side. Every situation and every plant is different, but our experts will find the right solution for your needs.

#### Selected services

- Bar code tests
- Application support
- Inspections
- Maintenance
- Accident investigation
- Stoptime measurement



#### Note

Please contact your SICK agent to ask which services are available in your country.

## **Initial inspection**

#### Decades of experience to protect your employees



#### SCOPE OF SERVICES

- Compliance with applicable safety standards and regulations
- Determination of the health and safety aspects of the protective device for the protection of mechanical hazards on machinery and systems
- Determination of the correct installation and function of the device
- Check on the effectiveness of the protective device according to the current usage of the machine
- Integration of the protective device in the control system down to signal transfer in accordance with the required category as per safety standards
- Correct interaction with the combined protective devices
- Introduction to SICK device functions for the operator

· High-quality inspection by an ac-

(D-IS-12060-01-01)

tive devices

credited inspection body in accor-

dance with DIN EN ISO/IEC 17020

· Quick familiarity with SICK protec-



#### SICK product area

Industrial Safety Systems

#### Of interest to

#### Management

Maintenance Quality Assurance Construction Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

#### YOUR BENEFITS

- Assurance of safety and component availability
- Supplement to the machine documentation in relation to compliance with machine safety by means of a safety report
- Quick identification of the safety status of the machine by the means of the SICK inspection seal



Product & System Support

**Consulting & Design** 

Verification & Optimization

Upgrade & Retrofits

**Training & Education** 

## **Periodic inspection**



Product & System Support

**Consulting & Design** 



Verification & Optimization

Upgrade & Retrofits

Training & Education



#### SICK product area

Industrial Safety Systems

#### Of interest to

#### Management

Maintenance Quality Assurance Construction

Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

#### Decades of experience to protect your employees



#### SCOPE OF SERVICES

- Compliance with applicable safety standards and regulations
- Determination of the health and safety aspects of the protective device for the protection of mechanical hazards on machinery and systems
- Determination of the correct installation and function of the device
- Check on the effectiveness of the protective device according to the current usage of the machine
- Integration of the protective device in the control system down to signal transfer in accordance with the required category as per safety standards
- Correct interaction with the combined protective devices
- Introduction to SICK device functions for the operator

- Assurance of safety and component availability
- Supplement to the machine documentation in relation to compliance with machine safety by means of a safety report
- Quick identification of the safety status of the machine by the means of the SICK inspection seal
- High-quality inspection by an accredited inspection body in accordance with DIN EN ISO/IEC 17020 (D-IS-12060-01-01)
- Quick familiarity with SICK protective devices

## **Machine safety inspection**

## The individual safety check – determine the safety status of your machines and systems



#### SCOPE OF SERVICES

Safety inspection that includes:

- Check all guards are aligned properly
- Disconnection of hydraulic and pneumatic energy sources to check expected response
- Function check on all guards, emergency stop/emergency switching off and other safety features
- Check whether all dangerous movements are stopped as required
- Check the correct installation and function of the AOPD
- Check the effectiveness of the protective device according to the current usage of the machine
- Correct interaction with combined protective devices



**Consulting & Design** 

**Product & System Support** 

Verification & Optimization

**Upgrade & Retrofits** 

**Training & Education** 

#### SICK product area

Industrial Safety Systems

#### Of interest to

#### Management

Maintenance Quality Assurance Construction Safety Representative Executive Board

Part number

1682447

- Quick overview to determine the safety status of the machine
- Basis for compliance with the requirements as per directives on work equipment
- Monitoring inspection cycles as part of service contracts
- High-quality inspection by an accredited inspection body in accordance with DIN EN ISO/IEC 17020 (D-IS-12060-01-01)



## **Electrical equipment check**



Product & System Support

**Consulting & Design** 



Verification & Optimization

**Upgrade & Retrofits** 

Training & Education



#### SICK product area

**Industrial Safety Systems** 

#### Of interest to

#### Management

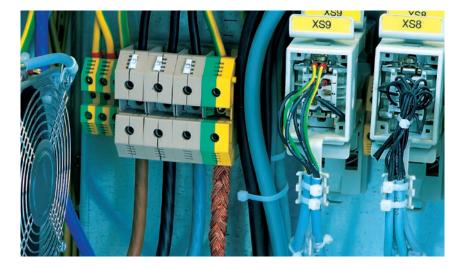
Maintenance **Quality Assurance** Construction

Safety Representative **Executive Board** 

#### Part number 1682384

#### LIFETIME SERVICES | SICK 32

"The invisible hazard" - inspection to protect against electrical risks



#### SCOPE OF SERVICES

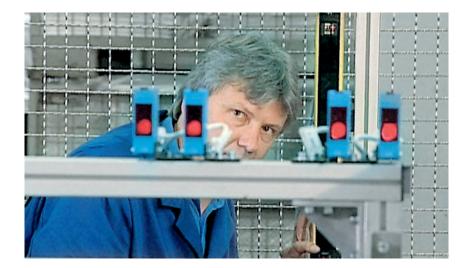
Determination of correct function of the protective bonding circuit as per the requirements of IEC 60204-1.

- · Confirmation of minimum crosssection and designation of protective conductors
- Protection against direct contact
- · Protection against residual voltages of active components
- · Confirmation of the connections of the protective bonding circuit
- Compliance with the required limits for insulation resistances/ residual currents
- Voltage test
- · Determination whether the transfer resistances exceed the permitted tolerance band
- · Measuring method without complex interruption of existing cables

- · Guaranteed quality of the measurement through approved measuring devices and reproducible documentation
- · Preparation of a measurement report for machine documentation
- Identify hazards due to electric shock early on
- · Increased safety, availability and productivity
- High-quality inspection by an accredited inspection body in accordance with DIN EN ISO/IEC 17020 (D-IS-12060-01-01)
- · Compliance with the applicable safety standards

## **Accident investigation**

## Cause analyses for accidents and incidents



#### SCOPE OF SERVICES

#### A. Basic check

- Assessment of the equipment to be checked
- Determination of the primary cause of the accident and underlying aspects that triggered the accident
- Analysis of the equipment, drawings, operation and safety-related control measures; Proposals for solutions to prevent a repetition of the event

#### B. Additional detailed check

- Detailed analysis of the equipment to be checked
- Implementation of a safety inspection to determine the exact cause of the accident
- Complete risk assessment, based on an evaluation of the hazards
- Final document on the investigative file

#### YOUR BENEFITS

- Independent review of an accident or near-accident at a machine
   Assurance that the cause of an accident or near-accident is con
  - Assurance that the cause of an accident or near-accident is completely checked and measures are initiated to prevent a repetition of the event

**Consulting & Design** 

Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education

## SICK product area

Industrial Safety Systems

#### Of interest to

#### Management

Maintenance Quality Assurance Construction Safety Representative Executive Board



## **Stoptime measurement**



Product & System Support

Consulting & Design



Verification & Optimization

Upgrade & Retrofits

Training & Education



#### SICK product area

Industrial Safety Systems

#### Of interest to

#### Management

Maintenance Quality Assurance Construction

Safety Representative Executive Board

Part number 1681650

Accredited methods ensure high quality and reproducible results



#### SCOPE OF SERVICES

- Undertaking of 10 measurements per dangerous movement of the machine for regular monitoring of the stopping/run-down time
- Standards-based calculation of the correct safety distance from the hazard point to the protective device

Note:

In multi-axis systems a measurement is required for each dangerous movement

- Ensured quality of the measurement through approved measuring devices and reproducible documentation
- Attachment of a label with the key data directly to the machine
- Preparation of a measurement report for the machine documentation
- High-quality inspection by an accredited inspection body in accordance with DIN EN ISO/IEC 17020 (DAT-I-003/01)
- Definition of dangerous risks

## Maintenance

#### For longer service life and less wear



#### SCOPE OF SERVICES

 Scope of services A: Quality control in accordance with EN 14181.
 Ensuring quality of the measuring device that is subject to the EU directives 2001/80/EC and 2000/76/EC and other emissions measurement requirements.

Detection, checking and documentation of drift and precision on the zero point and reference point in accordance with QAL3, one of the requirements under EN 14181

#### YOUR BENEFITS

- Ongoing plant availability
- Ensuring measurement accuracy of the analysis devices

 Scope of services B: Operational monitoring and documentation. Checking the variability and validity of the calibration function

· Meeting the regulatory requirements

**Consulting & Design** 

Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education



#### SICK product area

Process automation

#### Of interest to

Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

## **Performance check**



Verification & Optimization

Product & System Support

Consulting & Design

Upgrade & Retrofits

**Training & Education** 

#### To maintain optimal performance of components and systems during the operational phase



#### SCOPE OF SERVICES

- Static and dynamic read test
- Test measurement with defined test bodies
- Operational and communication test
  Monitoring the scanner environment for damage to the belt, code residue on the strip, mechanical damage to the portal, etc.
- Checking the mechanical alignment
- · Removing dust and deposits

#### YOUR BENEFITS

- Maximum availability and reliability during operation times
- The customer receives documentation of system performance and current plant condition
- Consultation and implementation of measures for improving system performance

#### SICK product area

Automatic identification

#### Of interest to

#### Management Maintenance Quality Assurance Construction Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

#### 2013-02 Subject to change without notice

# **RETROFIT** – uncovers new potential for machines and plants





#### Note

Please contact your SICK agent to ask which services are available in your country.

## Increase performance through forward-looking Upgrade and Retrofits

Often it's the economical alternative to a new purchase: new technologies for existing machines and plants. With a SICK retrofit, you can substantially increase the productive lifespan of your plant.

#### Selected services

- Machine retrofitting
- Sensor upgrade
- Sensor replacement
- Technological retrofitting

## **Upgrade kits**

Individually tailored replacement packages for "old" protective equipment

**Consulting & Design** 

Product & System Support

Verification & Optimization

**Upgrade & Retrofits** 

Training & Education



#### SCOPE OF SERVICES

- Tailor-made upgrade kits for older and phased out sensors and protective devices
- System modernization by upgrading older and phased out sensors

#### YOUR BENEFITS

- Ensure availability of machines
- Secure spare part availability
- High functionality by using innovative technology

- and protective devices to higher functionality products
- Efficient assembly and installation
- Commissioning and Safety inspection possible
- Preventative exchange of older and phased out sensors
- · Optimize productivity
- Avoid costly and unplanned machine downtime

#### SICK product area

All segments

#### Of interest to

Management Maintenance Quality Assurance Construction

Safety Representative Executive Board

Product-dependent ordering via local subsidiaries

# TRAIN – employee qualification for increased competitiveness





#### Note

Please contact us for our separate training program.

#### Note

Please contact your SICK agent to ask which services are available in your country.

## Build competence through qualified Training and Education

The human factor is the decisive one in ensuring machine and plant safety. With SICK's training your employee performance will reach new heights.

#### Selected services

- User training
- Seminars
- Webtraining

## Seminars and user training

#### Comprehensive training program to qualify your employees



#### SCOPE OF SERVICES

- Customer-specific and standard training programs on site, at SICK, or via WebEx
- · Basic and advanced courses, product training, maintenance training
- · Structured and customer-specific training documentation
- · Explanation of systems and their components

#### YOUR BENEFITS

- · After a maintenance course, customer staff will be able to address problems, carry out first-level troubleshooting, and help reduce downtime
- · Use of "hands-on" training to support the learning process

#### SICK product area

All segments

#### Of interest to

Management Maintenance **Quality Assurance** Construction Safety Representative **Executive Board** 

Product-dependent ordering via local subsidiaries



**Product & System Support** 

Verification & Optimization

**Upgrade & Retrofits** 

**Training & Education** 





#### Safety and productivity overview: the five service areas

SICK LifeTime Services provide intelligent services in the area of sensors and applications, from factory and logistics automation to process automation. More than 400 service employees are available to provide support worldwide. Service contracts provide scheduled maintenance costs and substantially reduce administrative effort. For example, this includes automatic scheduling reminders for the annual inspections required for protective equipment.



#### Secure your investment with Consulting and Design services

SICK LifeTime Services are there from the start: with consulting, customer-oriented analyses, configuration and engineering. Secure your investment from the very start with our unique and comprehensive know-how.

#### CONSULT – globally available experts for cost-effective solutions

Plant walk-through Risk assessment

Safety concept

•

Feasibility studiesSoftware and hardware design



#### Improve productivity with Product and System Support

With reliability and support you can trust, day in and day out. With SICK LifeTime Services you can be sure that the sensor systems and safety devices in your machines and systems are always fully operational.

#### SUPPORT – fast and reliable, by telephone or on site

- Commissioning
- Remote support
- Repairs and spare parts
- Hotline







# CHECK

#### Increase safety with Verification and Optimization

Monitor, assess, control – with SICK LifeTime Services you will stay on the safe side. Every situation and every system is different, but our experts will find the right solution for your needs.

#### CHECK - checks and recommendations for increased availability

- Bar code tests
- Application support
- Inspections

- Maintenance
- Accident investigation
- Stoptime measurement



#### Increase performance through Upgrade and Retrofits

Often it is the economical alternative to a new purchase: new technologies for existing machines and systems. With a SICK retrofit, you can substantially increase the productive lifespan of your system.

#### **RETROFIT** – uncovers new potential for machines and systems

- Sensor replacement
- Sensor upgrade

Machine retrofitting

Technological retrofitting



#### **Build competence through Training and Education**

The human factor is the decisive one in ensuring machine and system safety. With SICK's training your employee performance will reach new heights.

TRAIN - employee qualification for increased competitiveness

• User training

Webtraining

Seminars

#### **SICK** at a glance



#### Leading technologies

With a staff of more than 5,800 and nearly 50 subsidiaries and representations worldwide, SICK is one of the leading and most successful manufacturers of sensor technology. The power of innovation and solution competency have made SICK the global market leader. No matter what the project and industry may be, talking with an expert from SICK will provide you with an ideal basis for your plans – there is no need to settle for anything less than the best.



#### Unique product range

- Non-contact detecting, counting, classifying, positioning and measuring of any type of object or media
- Accident and operator protection with sensors, safety software and services
- Automatic identification with bar code and RFID readers
- Laser measurement technology for detecting the volume, position and contour of people and objects
- Complete system solutions for analysis and flow measurement of gases and liquids



#### Comprehensive services

- SICK LifeTime Services for safety and productivity
- Application centers in Europe, Asia and North America for the development of system solutions under real-world conditions
- E-Business Partner Portal www.mysick.com – price and availabi-lity of products, requests for quotation and online orders

Worldwide presence with subsidiaries in the following countries:

Australia Belgium/Luxembourg Brasil Ceská Republika Canada China Danmark Deutschland España France Great Britain India Israel Italia Japan

México Nederland Norge Österreich Polska România Russia Schweiz Singapore Slovenija South Africa South Korea Suomi Sverige Taiwan Türkiye **United Arab Emirates** USA

Please find detailed addresses and additional representatives and agencies in all major industrial nations at www.sick.com

