



RFMS Pro

FLEXIBLE DESIGN AND HIGH THROUGHPUT IN A SINGLE SYSTEM

Track and trace systems

SICK
Sensor Intelligence.

CONTINUOUS HIGH THROUGHPUT: WITH RFMS Pro FROM SICK

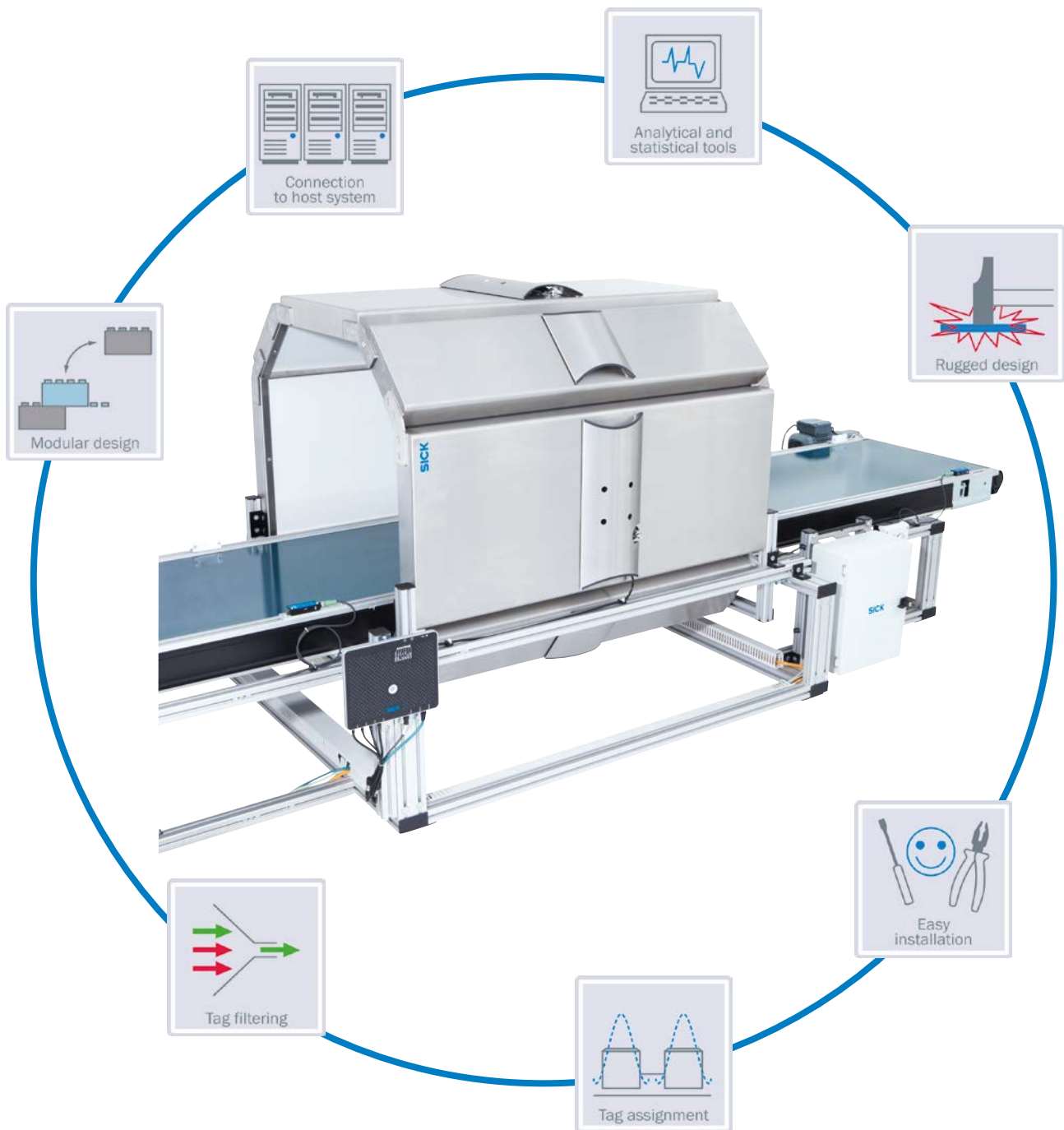
SICK's Radio Frequency Modular System (RFMS Pro) is a decisive contribution towards process optimization and transparency in the delivery chain – both today and in the future. The RFMS Pro demonstrates its strengths for goods-in and picking in conveying lines: the innovative modular concept offers top flexibility in design and commissioning. The integrated installation wizard supports simple, cost-effective on-site commissioning. The intelligent assignment algorithm allows objects to be placed closely next to other on the belts.

The IDpro from SICK integrates the RFMS Pro easily in any application – even in combination with other technologies for automatic identification (laser scanner or camera, for example). In addition, a solution to measure the volume can be integrated to output the dimension of the particular object. The advantage: all required data are output via one unit and one interface.

RFID: identification solutions without gaps

The radio-based RFID technology of the RFMS Pro brings cutting-edge benefits for fully automated monitoring and control of the material flow:

- External influences (like frost, abrasion or soiling) do not adversely affect the identification process
- Identification takes place directly without visual contact to the RFID tag
- Individual items can be identified even when in bulk, which saves time and costs.
- An intelligent assignment algorithm then assigns the tags to the corresponding object in cases where several objects are in the scanning area
- Final RFID tag assignment is completed even in start-stop operation: e.g., when the conveying line restarts after a stop
- Information can be modified decentralized on the RFID tag or overwritten – without having to integrate a central database

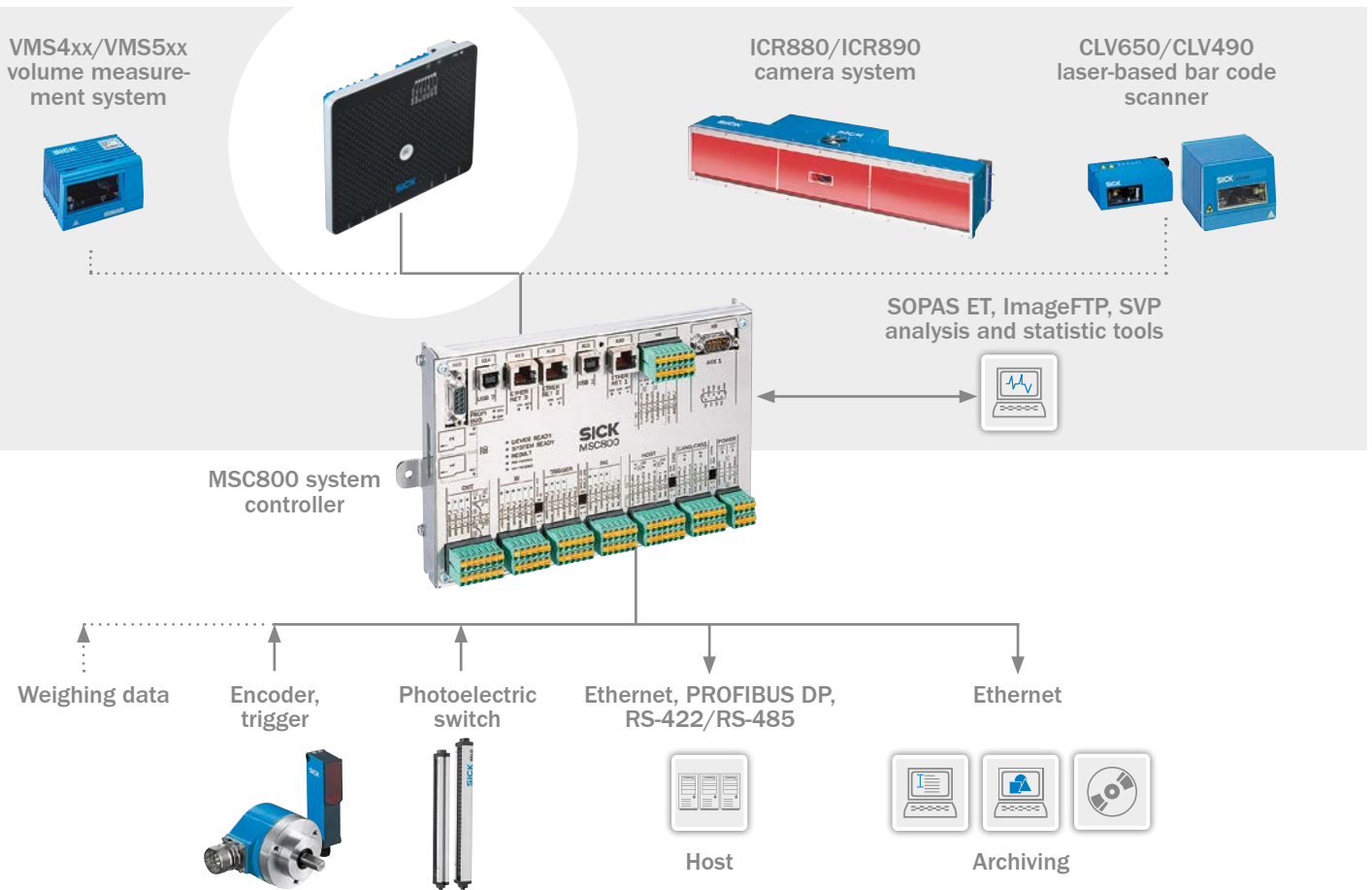


RFMS Pro: COMBINES PROVEN SOLUTIONS WITH INNOVATION

The track-and-trace system RFMS Pro from SICK combines proven components and sensors that are in widespread use in the industry to provide an innovative full-scale solution:

- MSC800 system controller: the hardware with integrated assignment algorithm in the controller stands for highest reliability
- RFU630 read/write device for identification with RFID
- Incremental encoder to determine the position and speed of the object, and also measure the distance between objects
- Photoelectric switch to trigger the object
- Optional: bar code scanner or image-based code reader for object identification
- Optional: VMS4xx volume measurement system for measuring the object dimension

All customer-specific parameters are saved on the SD card in each sensor – for quick and easy device replacement.

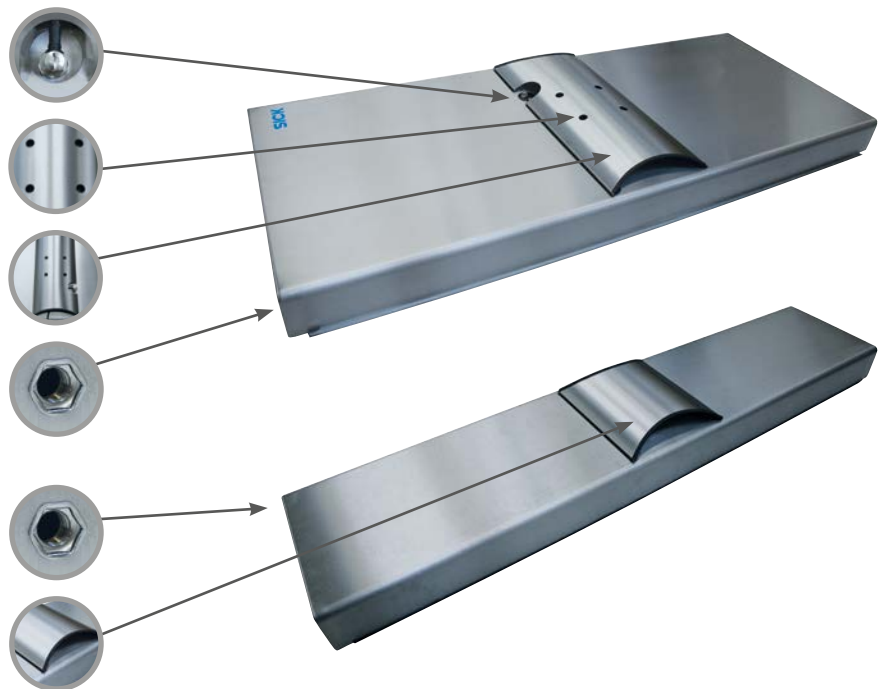


RFMS Pro: TAILORED FOR YOUR APPLICATION

The RFMS Pro track and trace system is based on the patented, modular concept from SICK. Two modules, standard mechanics and the self-supporting design make the RFMS Pro a tailored solution in terms of cost and layout. For different dimensions and thus best-possible price strategy of your RFID project.

Module features:

- An angled plug is used to connect the antenna directly to the module
- The cable channel mounted on the module can be used to route the cables. This means that no further cable routing is necessary.
- Four mounting holes in the cable channel enable quick installation of the antenna.
- The M8 thread in the module allows simple mounting of the adapter plates
- The modules are self-supporting, an additional frame is not required



Technical data overview:

| | Module 1 | Module 2 |
|--------------------|---------------------------|---------------------------|
| Dimensions | 1,200 mm x 500 mm x 80 mm | 1,200 mm x 250 mm x 80 mm |
| Weight | 17 kg | 9 kg |
| Integrated antenna | ✓, optional | - |

OPTIMIZATION AND TRANSPARENCY AT THE RIGHT POINT: RFMS Pro IN THE APPLICATION



The RFMS Pro track and trace system from SICK demonstrates its strengths precisely at those points in the supply chain where there is potential for process optimization: when comparing and monitoring incoming and outgoing goods. For picking For identification of objects positioned close to one another on conveying lines Or at article level when recording master data.

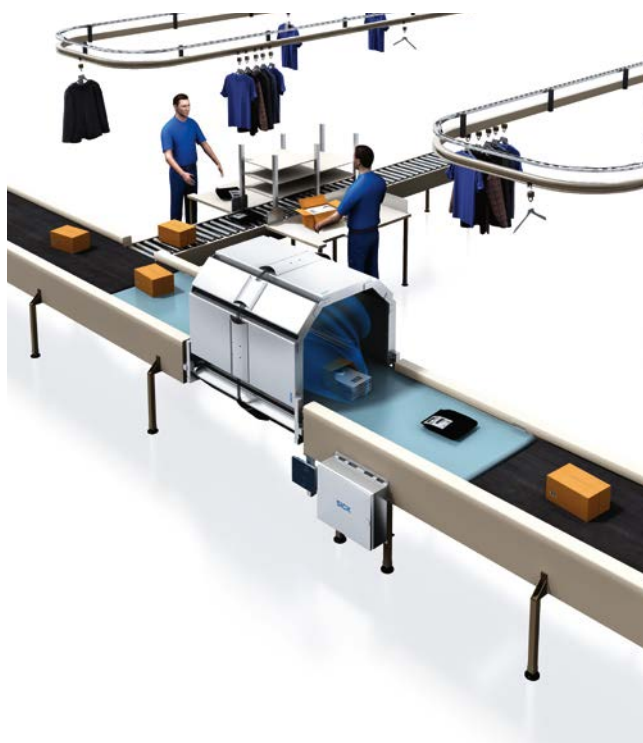
Enhanced monitoring and transparency: goods in

Always know where the goods are: RFMS Pro reads the RFID tags continuously and fully automatically – even for objects that are close together on the conveying line. RFMS Pro gives you full control and transparency for goods received – fast and reliable.



Fewer wrong deliveries: picking and goods out

Make sure that you customer receives exactly what was ordered: RFMS Pro keeps you in the picture – and minimizes costs. For picking and outgoing goods, RFMS Pro ensures that precisely those goods that were ordered are delivered. This minimizes wrong deliveries and expensive returns.



FLEXIBLE DESIGN AND HIGH THROUGHPUT IN A SINGLE SYSTEM



Product description

The RFMS Pro (Radio Frequency Modular System) track and trace system is an industrial-grade system from SICK. This system features interrogators for RFID identification, a central controller with integrated assignment algorithm and incremental encoders that determine object position on the conveyor belt. The

innovative module design makes it possible to quickly change the mechanical setup for various logistics applications. The installation wizard integrated in the configuration software from SICK makes simple, cost-effective on-site commissioning possible. The result: Complete transparency in the supply chain.

At a glance

- Standard modules with or without antenna
- Self-supporting modules
- Proven assignment algorithm for RFID tags on objects
- Static tag detection and filtering
- Integrated service, monitoring and diagnostic tools
- Object-based data output on relevant interfaces such as Ethernet, serial interface or PROFIBUS
- Parameter cloning of all components

Your benefits

- Wide range of tunnel design options with only two standard modules requires very little planning and design work
- Quick and easy commissioning of the modules reduces installation time
- Minimal space between objects ensures a high throughput
- Simple integration with SICK's ID-pro makes it easy to add bar code scanners to an application
- Maintenance-free design saves time and money
- High-quality system components are from a single source, ensuring system reliability and easy integration
- Self-supporting modules require no additional frame, eliminating additional design and material costs

Additional information

- Detailed technical data X-0
- Ordering information X-0
- Dimensional drawing X-0

➔ www.mysick.com/en/RFMS_Pro

For more information, just enter the link or scan the QR code and get direct access to technical data, CAD design models, operating instructions, software, application examples and much more.



Detailed technical data

The exact device specifications and performance data of the product may deviate from the information provided here, and depend on the application in which the product is being used and the relevant customer specifications.

General notes

| | |
|-----------------------|---|
| Items supplied | 1 x MSC800-1100 1 x RFU630-04xx 1 x DFV60 1 x WL18 Connection cables, frame and shielding, quantity of modules and triple patch antennas Depending on application |
| Usage | Reading and assignment of RFID tags |

Features

| | |
|-----------------------------------|--|
| Frequency band | 865 MHz ... 868 MHz (ETSI), 902 MHz ... 928 MHz (FCC), others on request |
| MTBF | > 80.000 h |
| MTTR (Mean time to repair) | < 10 min, per device |
| Field of application | Indoor Industrial environment |

Performance

| | |
|---|---|
| Number of codes per reading interval | Depending on application |
| RFID standard | EPCglobal UHF Class 1 Generation 2, ISO/IEC 18000-6 C |
| Number of objects per second | Max. 300 tags |

Interfaces

| | |
|--------------------------------|---|
| Connection types | 3 x serial 2 x Ethernet 1 x PROFIBUS DP 1 x USB 13 x digital input, opto isolated, reverse polarity protected 4 x digital output, PNP +24 V, 30 mA 2 x floating output 2 x CAN bus |
| Data transmission rate | Serial: 300 bit/s ... 57,600 bit/s Ethernet: 10 bit/s ... 100 bit/s PROFIBUS DP: ≥ 12 MBaud CAN bus: ≥ 500 kbit/s |
| Reading pulse | Photoelectric sensor |
| Data protocol | Ethernet: FTP, TCP/IP, Server/Client CAN bus: SICK protocol |
| Output data | XML ASCII Customer protocol |
| Function | Ethernet: data output, parameter set-up, analyses USB: data output, parameter set-up, analyses |
| Configuration interface | Ethernet Serial SOPAS Engineering Tool |

Mechanics/electronics

| | |
|-------------------------------|---|
| Dimensions system (L x W x H) | 1,200 mm x 119 mm x 500 mm (module 1) 1,200 mm x 119 mm x 259 mm (module 2) |
| Enclosure rating | IP 65 ¹⁾ IP 54 ¹⁾ |
| Electrical connection | Serial: Sub-D, 9-pin Ethernet: RJ45 PROFIBUS DP: Sub-D, 9-pin |
| Supply voltage | 100 V AC ... 264 V AC |
| Mains frequency | 50 Hz ... 60 Hz |
| Power consumption | 50 W, without load |
| Fixing | At conveyor or floor |
| Housing | Assembled by two different moduly types |
| Housing material | Brushed stainless steel |
| Total weight | 17 kg, at 500 mm height, without sensors 9 kg, at 259 mm height, without sensors 19 kg, sensors |
| Housing color | Metallic |

¹⁾ Depending on antennas.

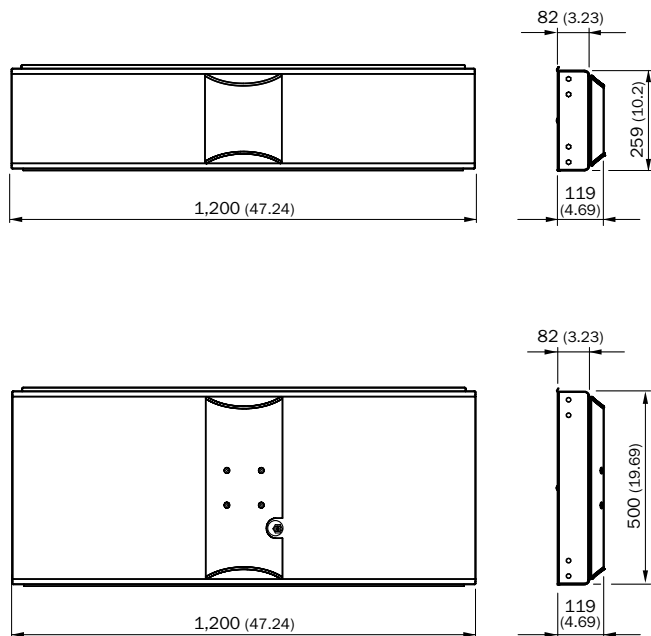
Ambient data

| | |
|-------------------------------|-------------------|
| Ambient temperature operation | 0 °C ... +40 °C |
| Ambient storage temperature | -20 °C ... +70 °C |

Ordering information

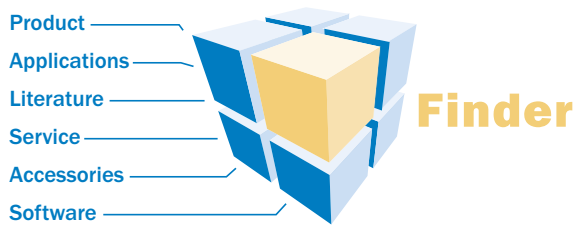
| Application | Model name | Part no. |
|--|------------|------------|
| Master data acquisition, Receiving area, outgoing area, conveyor | RFMS Pro | On request |

Dimensional drawing (Dimensions in mm (inch))



WWW.MYSICK.COM – SEARCH ONLINE AND ORDER

Search online quickly and safely - with the SICK "Finders"

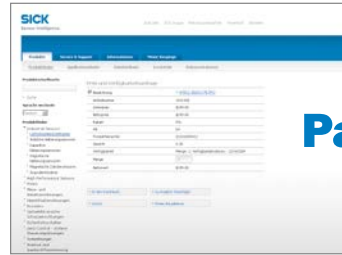


Product Finder: We can help you to quickly target the product that best matches your application.

Applications Finder: Select the application description on the basis of the challenge posed, industrial sector, or product group.

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Efficiency – with the E-Commerce-Tools from SICK



Find out prices and availability

Determine the price and possible delivery date of your desired product simply and quickly at any time.

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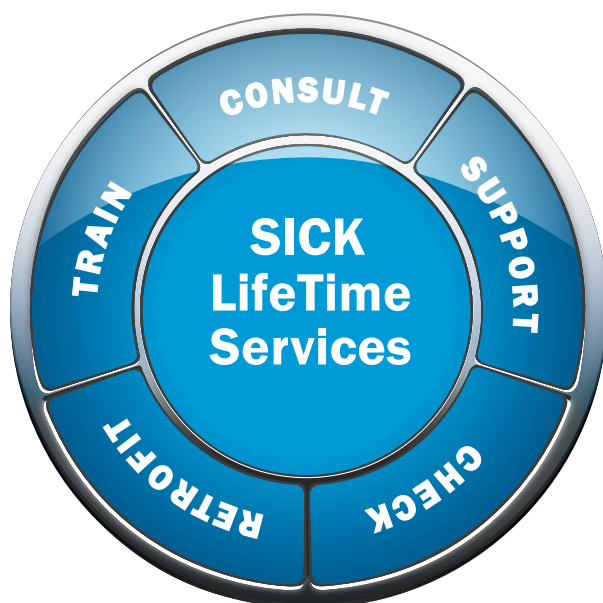
You can have a quote generated online here. Every quote is confirmed to you via e-mail.

Order online

You can go through the ordering process in just a few steps.

FOR SAFETY AND PRODUCTIVITY: SICK LIFETIME SERVICES

SICK LifeTime Services is a comprehensive set of high-quality services provided to support the entire life cycle of products and applications from system design all the way to upgrades. These services increase the safety of people, boost the productivity of machines and serve as the basis for our customers' sustainable business success.



Consulting & Design

Globally available experts for cost-effective solutions



Product & System Support

Fast and reliable, by telephone or on location



Verification & Optimization

Checks and recommendations for increased availability



Upgrade & Retrofits

Uncovers new potential for machines and systems



Training & Education

Employee qualification for increased competitiveness

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for factory, logistics, and process automation. With more than 6,000 employees and over 40 subsidiaries 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, Belgium/Luxembourg, Brasil, Česká republika, Canada, China, Danmark, Deutschland, España, France, Great Britain, India, Israel, Italia, Japan, Magyarország, 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