



MARITIME SERVICES

ON A SAFE COURSE WITH SICK

SICK LifeTime Services

SICK
Sensor Intelligence.



FOLLOWING THE DIRECTIVES ON THE LONG VOYAGE

Full speed ahead - that only works if everything is running smoothly. The failure of even a single component in a ship's complex system can often have far-reaching consequences. Regulatory compliance is therefore a top priority, for example to counter rising operating costs due to the required conversion to low-sulfur fuel. Precise compliance with the globally applicable directives helps keep to a minimum additional on-board expenses due to inspections by authorities, and helps avoid possible subsequent fines. This is where SICK comes on board: The emission measurement devices from SICK are an essential component of the flue gas desulfurization systems used to comply with the emission directives. It is also necessary, however, to operate these systems correctly and use them reliably – that is part of our comprehensive services.

Seafaring is challenging. Short berthing times in ports, ship crew changeovers, and the wide range of tasks on board are placing increasing demands on the crew.

To ensure the on-board personnel are not left unsupported in the event of exceptional incidents, SICK offers a comprehensive range of services. These services include not only training but also uncomplicated and fast access to relevant information such as diagnostic data. Using simple and well-documented measures, potential failures of the measurement devices can either be directly prevented in the best case scenario, or at least quickly and pragmatically resolved. Furthermore, preventive maintenance helps to avoid unexpected failures altogether and thereby reliably guarantee the availability of the measured values.

In addition to providing, maintaining, and operating emission measurement devices for flue gas desulfurization systems, so-called scrubbers, for the shipping industry, SICK is also looking beyond the horizon. Digital solutions are expected to become increasingly important as well on the world's oceans. That's why we are continuously expanding our range of tailored solutions.



YOUR COURSE – OUR SERVICE

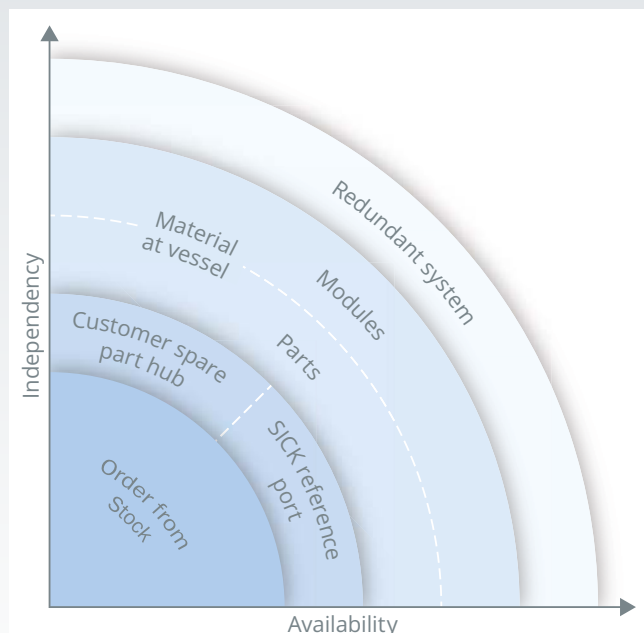
Every customer is unique. SICK is responding to this with tailored solutions. Our aim is to create the best possible initial situation for each individual customer and thereby create the basis for the highest possible system availability. This is achieved, among other things, by the modular design of the analyzers. Easy-to-understand and easy-to-perform maintenance intervals ensure transparency.

We offer our customers freedom of choice, whether it be independent maintenance, the service offerings from SICK, right through to complete redundant systems. The focus is always on the fact that most problems can be prevented by regular maintenance. SICK can guarantee this regularity thanks to its extensive and worldwide network of service experts. We can, however, also train our customers to perform most service activities independently. If the ship has a changing crew, e-learning is a good way to learn the essential maintenance tasks that need to be performed during the year. And with the advantage of being able to undertake the video-supported, web-based training units anytime and anywhere and to repeat them as often as desired. Alternatively, we also offer expert training to impart deeper knowledge, and this too is available online or as classroom training.

Having a good supply of spare parts is another key to success. Thanks to the modular design of the products, it is possible to replace parts at the assembly level. Fast and uncomplicated. They can be stored either by SICK or directly by the customer,



who then has full control over the distribution of the parts. Talk to our contact persons for a solution tailored to your needs. The customer can choose between spare parts and/or modules, or opt for a complete redundant system. The advantage of having a redundant system on board: even in the event of a maintenance failure or malfunction, the customer can take immediate action and keep the ship on course. This reduces any added costs to a minimum.



SERVICE AND PARTS – QUICKLY AT HAND

The graphic presents an overview of the different models for spare parts stocking. You can choose the spare parts service that best suits your requirements. Whether you want to have individual components delivered directly, set up your own spare parts warehouse with assemblies for rapid on-site replacement, or opt for a redundant system: SICK's maritime services extend globally and will keep you on the move. We are happy to advise you on which model – including from a legal perspective – will suit you best.

WE ARE IN THE SAME BOAT TOGETHER

It's not only on the seven seas that you have to be able to rely on your crew. For more than 70 years now, SICK AG has been navigating through many industries worldwide with its customers. Our close collaboration with our customers has made this trip highly successful. And now we are extending it to the water as well – because we understand that we are in the same boat together. So full of confidence and buoyed by all our experience,

we are glad to join you on board. SICK will support you and, thanks to our extensive knowledge, can offer you the optimal service strategy – exactly where it is needed. The costs of operating and maintaining our rugged measurement technology are low because they have been designed for easy and quick maintenance on board.



MANAGING SERVICES RELIABLY

Good service doesn't fall from the sky – nor does it just drift by. The recipe for success of SICK's maritime services lies in their clear structure. It is important for our customers to understand our products in order to operate them safely. Furthermore, we want and need to ensure that our products are both available

worldwide and can be used in a legally compliant manner. Based on these considerations, we came up with a catchy maritime trio: competence, availability and compliance – for the satisfaction of our partners.



EXPERTISE/TRAINING

We share our expertise with our customers. In doing so, we keep the requirements firmly in view. Changing personnel and frequent changes of location make e-learning a successful alternative to online and face-to-face training. That's how we empower your on-site personnel to act independently and successfully.

- Training tailored to customer requirements
- E-learning available anywhere, anytime
- Deepening of device knowledge through online training or on-site training



AVAILABILITY

Only the smooth operation of your equipment on board gives you the security you need. SICK has created several offerings and solutions for this that you can take advantage of as needed.

- Preventive maintenance and spare parts stocking, on board or on shore, right through to a redundant system
- Technical support, remote maintenance, and digital services through maritime service hubs
- Exchangeable modules for fast rectification of faults




COMPLIANCE

For strict compliance with the regulations, proof of correct operation must be provided. SICK supports you in this with suitable documentation. This enables, for example, the original, standards-compliant state to be quickly restored in the event of malfunctions.

- Proof of device conformity to authorities
- Exchangeable modules (new and refurbished) for fast restoration of functionality on site rather than complex repairs
- Retrofitting of measuring components, extension of DeSO_x or DeNO_x components based on currently applicable regulations

MARITIME SERVICES FROM SICK – THERE WHERE YOU NEED US



The maritime service comes to you. Or it's right there where you need it. SICK ensures that our services and spare parts are delivered efficiently anywhere in the world. We are continuously expanding our network of experts and spare parts along the main shipping routes. To meet global requirements, SICK has established several maritime service hubs to coordinate and actively support its worldwide service activities. Qualified personnel from SICK and its partners are available there to provide maintenance, technical support, troubleshooting, and other services related to measurement technology. We also offer customers the opportunity to acquire detailed knowledge about the products and their peripherals in our training centers.

- + Complete service portfolio from a single source
- + Global service network along the main shipping routes
- + Product and service training
- + Support and advice during regulatory inspections
- + All-round service for very high availability of your measuring equipment

Service products at a glance



The right expertise in the right place available

SICK's training concept includes web-based e-learning as well as online and classroom training and is tailored to your individual requirements.

Online and classroom training:

The e-learning modules, which can be accessed via SICK's training platform, provide any-time access to the training content. This allows you to plan flexibly, regardless of location and time.

The online and classroom training is conducted by the service experts at SICK. This ensures the participants receive structured, in-depth technical knowledge. All participants receive a certificate after successfully completing a training course.



Availability is the key to success

SICK provides quick support when necessary so you can focus on your core business.

Support:

SICK offers you expert support worldwide – through direct remote access to your devices, technical support, and short response times.

Maintenance:

Sophisticated maintenance plans and certified technicians ensure smooth processes in line with SICK's spare parts strategy, which focuses on the main shipping routes.

Supported by SICK:

Proactive planning and experienced service staff help you meet deadlines on time. The experts from SICK take on complex tasks such as providing test gases or coordinating service deployments.



Never hold up travelers

Global compliance with regulations thanks to SICK

Modular structure:

The intelligent design of the devices and the ability to quickly replace parts keeps you on track and avoids costly measures. Analyzers can be individually modified in response to changes in regulations and requirements.

Redundancy:

With redundant devices, you benefit from very high device availability and can switch to a secondary device in the blink of an eye. Measured values are therefore available at all times, even during maintenance activities.

Repair concept:

You can, however, also send modules in for repair. SICK's repair lump-sum fees not only provide transparency but also ensure a consistently high quality and short repair times thanks to standardized processes. In addition to repairing a module, we will automatically replace individual wear-and-tear parts. You then receive a warranty for the entire module.

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| Training materials | Web-based training (basic) | + Even with regularly changing crews, knowledge can be transferred at any time and without problems. Independent work on the analyzer |
| Customer training | Installation, commissioning, maintenance, and service for experts (advanced) | + Knowledge transfer down to the detail. High-quality online or face-to-face training geared to the requirements of the participants, including certification |

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| Technical support, remote support | Support by service staff, short response times, remote access via remote connection possible | + Fast support by qualified service staff, worldwide regardless of the time zone or location of a vessel |
| Test gas management, spare parts availability | Intelligent warehousing and worldwide provision of required parts | + Consignment stocks and the coordinated provision of parts at selected ports by SICK ensure very high spare parts availability |
| Maintenance | Maintenance intervals adapted to the requirements | + Setting optimal maintenance intervals extends the product life cycle and guarantees the consistent measurement performance of the analyzers |

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| Module exchange | Modular design of the analyzers | + Easy replacement of defective parts by on-board personnel, supported by video tutorials. Also new and cost-effective refurbished modules with a standard warranty. |
| Repairs | Defective analyzers are analyzed and repaired on-site or at a SICK location | + Our extensive service network ensures smooth processes in the event of a repair. And we provide a warranty on the repaired module or device |
| Flat rate upgrades | The flexible device design allows modifications when needed | + No new purchases as regulations change. The existing analyzers are simply adapted to the new requirements. Retrofitting of DeSO _x or DeNO _x components according to the currently applicable MARPOL directives |

SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 10,400 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