PRODUCT INFORMATION

# Safe EFI-pro system

## SAFE NETWORKING IN PRODUCTIVE INTERPLAY

Safety systems

SICK
Sensor Intelligence.

# NEXT GENERATION SAFETY SYSTEM FOR THE PROTECTION OF PERSONS

## Optimal interplay in the safety system

The Safe EFI-pro system combines the modular Flexi Soft safety controller with an EFI-pro gateway and safe sensors such as the microScan3 EFI-pro safety laser scanner. The safe connection of actuators from other manufacturers, such as robot controls, can be done via the EtherNet/IP™ CIP Safety™ interface of the EFI-pro gateway.

From the design to commissioning and repair of your application: In addition to the most advanced safety components, SICK also offers services and professional project management tailored just to you.

➜ SICK LifeTime Services


## More options for challenging applications and higher productivity

Up to 6 microScan3 EFI-pro units can be linked into a safe and adaptive environmental perception system - and every single one of them offers a total of up to 128 individually configurable fields and monitoring cases and up to 8 simultaneously monitored protective fields. The result: Gap-less monitoring thanks to the patented safeHDDM® scan technology whose extreme resistance to environmental influences ensures fewer downtimes. Expanded to include the safe monitoring functions, monitoring cases can be adapted dynamically to the respective hazardous situation - for optimally productive and collaborating machines.



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# THE COMPLETE SYSTEM FOR SOLVING CHALLENGING AGV AND ROBOTIC APPLICATIONS

With the Safe EFI-pro system, high productivity with comprehensive safety monitoring is paramount. The system solution consists of perfectly-harmonized safety sensors, a safety controller and safely connected actuators. It is optimally suited for use in challenging applications for protecting robots and automated guided vehicles (AGVs). With more than 65 years of experience in the field of safety solutions and a world-wide service network, SICK is offering a comprehensive total solution from a single source with the Safe EFI-pro system.

## EFI-pro: Safe SICK device communication of the next generation

Based on Ethernet/IP™ CIP Safety™, the EFI-pro offers all benefits of the established and future-proof industrial Ethernet technology. In addition to the quick exchange of safe and unsafe data via all levels of machine communication, optimal linking of innovating sensor solutions and the Flexi Soft safety controller is ensured. This enables new, even more productive safety concepts. The EFI-pro is characterized by its openness, making it an essential component on the path to Industry 4.0 and the Industrial Internet of Things (IIoT).

CIP Safety
EtherNet/IP™
INDUSTRY 4.0 READY


## Quick and cost-effective configuration and commissioning

Easy and extremely intuitive operation: The license-free Safety Designer engineering tool supports the configuration and commissioning of all SICK system components - convenient thanks to the central access point. Linking is very simple as the SICK system components can be integrated easily by drag-and-drop. The standardized Ethernet technology used considerably reduces wiring effort, which helps reduce costs.

## Optimized processes thanks to comprehensive diagnostic options - data up into the cloud

The Safe EFI-pro system enables the quick exchange and transmission of time-synchronized (SNTP – simple network time protocol) processes and diagnostic data of all network components. Non-safety-related protocols (e.g. PROFINET, EtherCAT®, Modbus® TCP, CANopen) can also be integrated via other gateways. Quick analysis, for example of machine downtimes: The extensive diagnostic options of the Safety Designer engineering tool and the transport of data up into a cloud application can optimize your processes. Access to the data can be done centrally via Ethernet, even cable-free via WLAN.

# ONE SYSTEM FOR MORE PRODUCTIVITY WITH AUTOMATED GUIDED VEHICLES

Efficiently solving new and tricky applications in the area of automated guided vehicles: A challenge the Safe EFI-pro system is happy to take on. The comprehensive system solution consisting of a safety controller and safety laser scanner, supplemented to include safety encoders and switches for speed and steering angle detection, takes productivity in logistics to a new level.

## Safety system including safe motion control

The safe motion control functions enable intelligent and safe monitoring case switchover depending on the speed and steering angle and enables optimal protection of automated guided vehicles. SICK also offers suitable safety encoders, e.g. the DFS60 Pro.

With up to 128 individually-configurable monitoring cases per microScan3 EFI-pro, many other statuses can be taken into account, such as load weight. Protective field maintenance is always optimally adapted to the respective situation.



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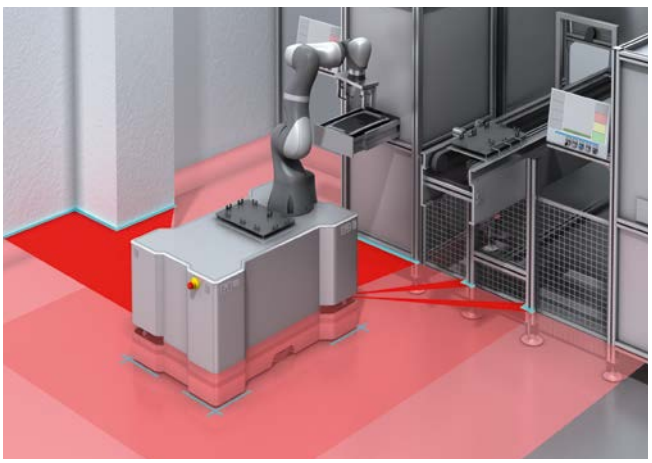
## Extended monitoring functions for increased productivity

Simultaneous protective field monitoring reduces the number of required maintenance case switchovers. The time saved in this way enables a shorter and more efficient protective field design, considerably increasing productivity. In addition, the safety system allows implementation of drive safety functions such as safely-limited speed (SLS), safely-limited position (SLP) or safe speed monitoring (SSM) via safe motion control.

## Precise navigation without additional sensors

Thanks to the safeHDDM® scan technology, the safety laser scanners deliver reliable and precise measurements of surrounding contours which can be passed onto the vehicle control system via Ethernet (UDP and TCP/IP). Challenges such as precise navigation in bottlenecks or localization in large storage areas are considerably simplified, making additional sensors unnecessary.



## Contour detection field for additional functions

Using a previously programmed surrounding contour, the microScan3 EFI-pro identifies defined work positions using the contour detection field. For example, the laser scanner detects when an AGV is located at the intended docking position or monitors whether a person is approaching the AGV at a bottleneck. The safe contour detection fields can be used for monitoring case switchovers, for instance. For that reason, no additional sensors are needed, which saves costs for position switches.

## Compliance with international standards and support with the certification process

Compliance with relevant standards (e.g. DIN EN 1525) for protecting automated guided vehicles is ensured thanks to the use of certified components from SICK, the market leader for safety solutions. A worldwide service network of SICK safety experts is available for quick support on-site.
➜ SICK LifeTime Services

# PRODUCTIVE INTERACTION BETWEEN MAN AND MACHINE

The Safe EFI-pro system makes a valuable contribution to the collaboration between man and machine as the complete system opens up an intelligent path to adaptive and situation-dependent robot protection. The result: Efficient and ergonomic cooperation and collaboration for comprehensive safety monitoring.

## Safety system with safe robot integration

With the microScan3 EFI-pro safety laser scanner and the Flexi Soft with EFI-pro gateway safety controller, an open and powerful system solution is available for robot applications. Integration of robot controls into the safety system is safe and easy and is done directly via EtherNet/IP™ CIP Safety™. The Flexi Soft functions as the originator and triggers the relevant safety functions based on the recorded laser scanner data.



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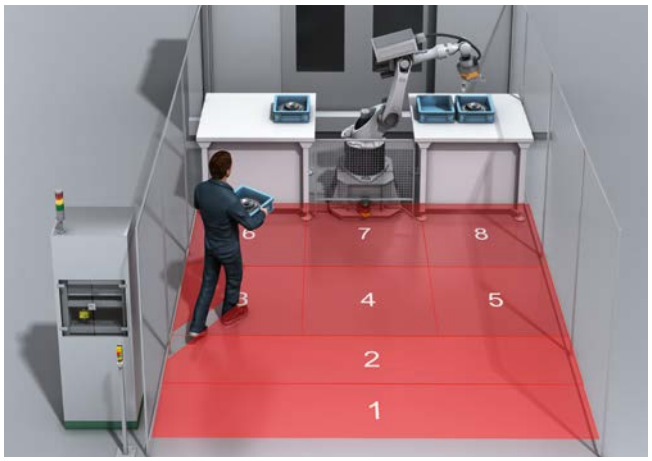
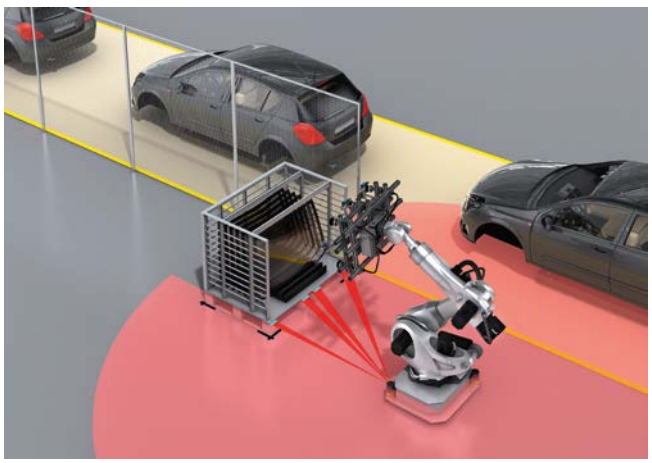



## Lifts productivity to a new level

The monitoring of up to 8 simultaneous protective fields and 8 safe outputs per safety laser scanner allows for robot behavior which adapts to the surrounding situation with minimal monitoring space. For example, the position of a worker can be monitored systematically with simultaneous protective fields and taken into account in the safety logic. This enables optimally productive robot applications.


## Optimal and reliable robot integration

The Safe EFI-pro system enables optimal integration of a robot control via EtherNet/IP™ CIP Safety™. The safety functions of the robot, e.g. force or capacity limitation, are available directly in the logic editor or Flexi Soft. This allows for optimal movement behavior of the robot in every hazardous situation.



## Safe contour detection fields – environmentally-dependent monitoring case switchover

The safety laser scanner safely and reliably detects predefined contours. In this way, selected objects can be reliably identified and certain safety functions, such as monitoring case switchover, can be triggered. Areas in which a Euro pallet is located, for instance, can be blanked systematically.

## Compliance with international standards and support with the certification process

Compliance with relevant standards (e.g., ISO 10218-1/-2) for protecting robot applications is ensured thanks to the use of certified components from SICK, the market leader for safety solutions. A worldwide service network of SICK safety experts is available for quick support on-site.

➜ SICK LifeTime Services

# SAFE NETWORKING IN PRODUCTIVE INTERPLAY

## Product description

The Safe EFI-pro system is the logical next step of the successful EFI interface and enables intelligent protection of AGVs, robots and other challenging applications. The industrial Ethernet-based EFI-pro network technology enables the quick exchange and transmission of secure and non-secure data throughout all levels of communication. The central component is the EFI-pro gateway. It ensures safe and fast networking with innovative sensor solutions from SICK as well as direct integration of robot controls into the Flexi Soft safety controller via EtherNet/IP™ CIP Safety™. The Safe EFI-pro system is therefore a building block for implementing Industry 4.0.

## At a glance

- Industrial Ethernet-based, safe network technology
- Configuration via Safety Designer
- Safe integration of up to 6 safety laser scanners
- Safe integration of robot controls via Ethernet/IP™ CIP Safety™
- Safe, integrated movement monitoring
- Simultaneous monitoring of up to 48 protective fields

## Your benefits

- Optimal interaction in the safety system: Optimal networking of safety sensors, safety controllers and actuators connected via Ethernet/IP™ CIP Safety™
- Fast, intuitive commissioning: Safety Designer for the configuration of SICK system components and clever connectivity
- Secure productivity: Combination of safe motion monitoring, simultaneous protection field monitoring and extended network integration
- Optimized processes: Extensive diagnostic options via Safety Designer and data via Ethernet from the field level into the cloud
- Security of investment: Future-proof industrial Ethernet technology

## More information



→ **www.sick.com/Safe_EFI-pro_System**

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



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## Detailed technical data

### Safe EFI-pro system

Features

| | |
|---|---|
| **Configuration method** | PC with Safety Designer (configuration and diagnostic software) |
| **Performance level** | PL d (EN ISO 13849) [1] |
| **Interfaces of the Flexi Soft modules** | Modular (up to 12 extension modules supported) |
| I/O module FX3-XTIO | 8 safe inputs, 4 safe outputs |
| I/O module FX3-XTDI | 8 safe inputs |
| I/O module FX3-XTDS | 8 safe inputs, 4-6 non-safe outputs |
| I/O module FX0-STIO | 6-8 non-safe inputs, 6-8 non-safe outputs |
| FX3-MOC1 motion control module | A/B incremental encoder, RS-422, Sin/Cos encoder, SSI encoder |
| **Number of monitoring cases** | ≤ 128 (per microScan3 Pro EFI-pro safety laser scanner) |
| **Number of simultaneously monitored protective fields** | ≤ 8 (per microScan3 Pro EFI-pro safety laser scanner) |
| **Response time** | ≥ 130 ms |
| **integration of the safety laser scanner** | via EFI-pro (up to 6 microScan3 EFI-pro safety laser scanners) |
| **integration into the robot control** | EtherNet/IP™ CIP Safety™ |
| **Additional fieldbus interfaces** | EtherCAT®, CANopen, Modbus TCP, PROFINET, EtherNet/IP™ |
| **Drive safety functions** | Safe Stop 1 (SS1)<br>Safe Stop 2 (SS2)<br>Safe operating stop (SOS)<br>Safe speed monitor (SSM)<br>Safely limited speed (SLS)<br>Safe direction (SDI)<br>Safe brake control (SBC)<br>Safe cam (SCA)<br>Safely-limited position (SLP) |

[1] Safety functions via local interfaces of the Flexi Soft safety controller achieve PL e.

## Ordering information

Ordering information for EFI-pro capable products can be found from ➜ Page 10

## At a glance

- Safety controller with modular hardware platform
- Configuration saved in the system plug
- Safe drive monitoring
- License-free Safety Designer configuration software

## Your benefits

- Modular adaptation to the particular requirement means optimum scalability and therefore cost savings
- Intuitive configuration software featuring comprehensive functions for straightforward engineering
- Rapid verification of the safety application: The configuration software provides documentation and a wiring diagram
- The main module's diagnostics interfaces and the configuration storage facility in the system plug enable rapid commissioning, component replacement, and troubleshooting, resulting in minimum downtimes

→ www.sick.com/Flexi_Soft

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

## Ordering information

Other device versions available here → www.sick.com/Flexi_Soft

### Main module

| Configuration | Type | Part no. |
|---|---|---|
| Via software | FX3-CPU000000 | 1043783 |

### Safe gateways

| Fieldbus, industrial network | Type | Part no. |
|---|---|---|
| EFI-pro, EtherNet/IP™ CIP Safety™ | FX3-GEPR00000 | 1069070 |

### Non-safe gateways

| Fieldbus, industrial network | Type | Part no. |
|---|---|---|
| CANopen | FX0-GCAN00000 | 1044076 |
| EtherCAT® | FX0-GETC00000 | 1051432 |
| EtherNet/IP™ | FX0-GENT00000 | 1044072 |
| Modbus | FX0-GMOD00000 | 1044073 |
| PROFINET | FX0-GPNT00000 | 1044074 |

### I/O modules

| Number of safe inputs | Number of non-safe inputs | Number of test outputs | Number of safe outputs | Number of non-safe outputs | Type | Part no. |
|---|---|---|---|---|---|---|
| 8 | – | 2 | 4 | – | FX3-XTI084002 | 1044125 |
| | | 8 | – | – | FX3-XTDI80002 | 1044124 |
| | | 0-2 | – | 4-6 | FX3-XTDS84002 | 1061777 |
| – | 6-8 | – | – | 6-8 | FX0-STI068002 | 1061778 |

### Motion control module

| Description | Type | Part no. |
|---|---|---|
| Safe speed monitoring and safe position monitoring | FX3-MOC100000 | 1057833 |

## Recommended accessories

### Flexi Soft accessories

Plug connectors and cables

| | Brief description | Type | Part no. |
|---|---|---|---|
|  | For FX3-CPU0 and FX3-CPU1, system plug: Voltage supply of the Flexi Soft system and storage of system configuration (without EFI-compatible devices) | FX3-MPL000001 | 1043700 |
|  | Clamping connector, 4-pin, double cable entry | Terminal plug spring | 2045890 |
|  | Clamping connector, 4-pin, single cable entry | Screw terminal connector | 2045891 |

- **Description:** Configuration cable with integrated RS-232 transducer on USB for connecting a sensor configuration connection (M8, 4-pin) to the USB interface of a PC

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, M8, 4-pin, straight<br>Head B: male connector, USB-A, straight<br>Cable: PVC, unshielded | 2 m | DSL-8U04G02M025KM1 | 6034574 |
| | | 10 m | DSL-8U04G10M025KM1 | 6034575 |

### Motion control module accessories

Plug connectors and cables

- **Description:** For direct encoder connection

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, Micro D-Sub, 15-pin, straight<br>Head B: flying leads<br>Cable: shielded | 2 m | Connecting cable | 2067893 |
|  | Head A: male connector, Micro D-Sub, 15-pin, angled<br>Head B: flying leads<br>Cable: shielded | 1.1 m | Connecting cable | 2098351 |
| | | 2 m | Connecting cable | 2077263 |

- **Description:** For connecting FX3-MOC motion control modules to one HTL, TTL, or SIN/COS encoder (e.g., DFS60S Pro)

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, Micro D-Sub, 15-pin, angled<br>Head B: female connector, M12, 8-pin, straight<br>Cable: shielded | 1 m | Connecting cable | 2094403 |
| | | 3 m | Connecting cable | 2094426 |
| | | 5 m | Connecting cable | 2094427 |
| | | 10 m | Connecting cable | 2094428 |

- **Description:** For connecting FX3-MOC motion control modules to an SSI encoder and SIN/COS encoder (e.g., AFS/AFM60S Pro)

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, Micro D-Sub, 15-pin, angled<br>Head B: female connector, M12, 8-pin, straight<br>Cable: shielded | 1 m | Connecting cable | 2094372 |
| | | 3 m | Connecting cable | 2094434 |
| | | 5 m | Connecting cable | 2094435 |
| | | 10 m | Connecting cable | 2094436 |

- **Description:** For connecting FX3-MOC motion control modules to an SSI encoder

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, Micro D-Sub, 15-pin, angled<br>Head B: female connector, M12, 8-pin, straight<br>Cable: shielded | 1 m | Connecting cable | 2094402 |
| | | 3 m | Connecting cable | 2094431 |
| | | 5 m | Connecting cable | 2094432 |
| | | 10 m | Connecting cable | 2094433 |

- **Description:** For connecting FX3-MOC motion control modules to two HTL, TTL, or SIN/COS encoders

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, Micro D-Sub, 15-pin, angled<br>Head B: 2 female connectors, M12, 8-pin, straight<br>Cable: shielded | 0.6 m | Connection cable | 2094381 |
| | | 3 m | Connection cable | 2100634 |

- **Description:** Connection cable between a Y-adapter and a HTL, TTL, SIN/COS or SSI encoder

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, M12, 8-pin, straight<br>Head B: female connector, M12, 8-pin, straight | 2 m | Connection cable | 2099207 |
| | | 5 m | Connection cable | 2099209 |
| | | 10 m | Connection cable | 2099210 |
| | | 20 m | Connection cable | 2099208 |

## Modules and gateways

Encoder/motor feedback connection module

| | Brief description | Type | Part no. |
|---|---|---|---|
|  | Optimized motor feedback splitter box: facility for connecting two encoders/motor feedback systems. Connection to Motion Control Modules FX3-MOC: female connector, D-Sub HD, 15-pin. | FX3-EBX100002 | 2079867 |
|  | Motor feedback splitter box: facility for connecting an encoder/a motor feedback system. Connection to Motion Control Modules FX3-MOC: female connector, D-Sub HD, 15-pin. Connection for additional motor feedback splitter box: female connector, D-Sub HD, 9-pin. | FX3-EBX300002 | 2068728 |
|  | Dual encoder connection unit: facility for connecting two encoders.<br>Connection to Motion Control Modules FX3-MOC: female connector, D-Sub HD, 15-pin. | FX3-EBX400002 | 2068729 |

Plug connectors and cables

- **Description:** For connecting FX3-MOC motion control modules to a motor feedback splitter box or a dual encoder connector unit

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, Micro D-Sub, 15-pin, straight<br>Head B: male connector, D-Sub-HD, 15-pin, straight<br>Cable: shielded | 2 m | Connection cable | 2067798 |
| | | 10 m | Connection cable | 2067799 |
|  | Head A: male connector, Micro D-Sub, 15-pin, angled<br>Head B: male connector, D-Sub-HD, 15-pin, straight<br>Cable: shielded | 2 m | Connection cable | 2077261 |
| | | 10 m | Connection cable | 2077262 |

- **Description:** For connecting two motor feedback splitter boxes

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male connector, D-Sub-HD, 15-pin, straight<br>Head B: male connector, D-Sub, 9-pin, straight<br>Cable: shielded | 0.3 m | Connection cable | 2078260 |
| | | 2 m | Connection cable | 2067800 |
| | | 10 m | Connection cable | 2067801 |

Adapters and distributors

- **Description:** Motor feedback adapter for a Bosch Rexroth servo amplifier with SIN/COS encoder

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
|  | Head A: male and female connector, D-Sub, 15-pin, angled<br>Head B: male connector, M8, 8-pin, straight | 1.5 m | Adapter with cable | 6034428 |
|  | Head A: male and female connector, D-Sub, 15-pin, angled<br>Head B: flying leads | 5 m | Adapter with cable | 6067763 |

Additional accessories ➜ www.sick.com/Flexi_Soft


## At a glance

- Innovative safeHDDM® scanning technology
- High-precision measurement data via Ethernet interface
- Protective field range: up to 9 m, scanning angle: 275°
- Up to 128 freely configurable fields and up to 8 simultaneous protective fields
- Standardized communication interfaces
- System plug with configuration memory

## Your benefits

- Very high plant availability and productivity thanks to the patented safeHDDM® scan technology
- Flexibility for safe automation processes due to simultaneous protective fields, contour detection fields and detailed data output
- Saves time during commissioning and diagnostics thanks to the intuitive Safety Designer software, multi-color display and system plug

→ www.sick.com/microScan3

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

## Ordering information

- **Variant:** microScan3 Core
- **Integration into the controller:** EFI-pro
- **Number of fields:** 8
- **Number of monitoring cases:** 8

| Protective field range | Type | Part no. |
|---|---|---|
| 4 m | MICS3-ABAZ40ZA1P01 | 1092539 |
| 5.5 m | MICS3-ABAZ55ZA1P01 | 1092538 |
| 9 m | MICS3-ABAZ90ZA1P01 | 1094455 |

- **Variant:** microScan3 Pro
- **Integration into the controller:** EFI-pro
- **Number of fields:** 128
- **Number of monitoring cases:** 128

| Protective field range | Type | Part no. |
|---|---|---|
| 4 m | MICS3-CBAZ40ZA1P01 | 1091037 |
| 5.5 m | MICS3-CBAZ55ZA1P01 | 1091038 |
| 9 m | MICS3-CBAZ90ZA1P01 | 1094465 |



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## Recommended accessories

| | Brief description | Type | Part no. |
|---|---|---|---|
| Mounting brackets and plates | | | |
|  | 1 mounting bracket | Mounting kit 1a | 2073851 |
|  | 1 mounting bracket with optics cover protection | Mounting kit 1b | 2074242 |
|  | 1 alignment bracket, alignment with cross-wise axis and depth axis possible, distance between mounting surface and device: 22.3 mm, only in conjunction with mounting kit 1a (2073851) or 1b (2074242) | Mounting kit 2a | 2073852 |
|  | 1 alignment bracket, alignment with cross-wise axis and depth axis possible, distance between mounting surface and device: 52.3 mm, only in conjunction with mounting kit 1a (2073851) or 1b (2074242) | Mounting kit 2b | 2074184 |

| | Brief description | Length of cable | Type | Part no. |
|---|---|---|---|---|
| Plug connectors and cables | | | | |
|  | Head A: female connector, M12, 4-pin, straight<br>Head B: flying leads<br>Cable: PUR, halogen-free, unshielded | 2 m | DOL-1204G02MC75KM0 | 2079290 |
| | | 5 m | DOL-1204G05MC75KM0 | 2079291 |
| | | 10 m | DOL-1204G10MC75KM0 | 2079292 |
| | | 20 m | DOL-1204G20MC75KM0 | 2089703 |
|  | Head A: female connector, M12, 4-pin, angled<br>Head B: flying leads<br>Cable: PUR, halogen-free, unshielded | 2 m | DOL-1204W02MC75KM0 | 2079293 |
| | | 5 m | DOL-1204W05MC75KM0 | 2079294 |
| | | 10 m | DOL-1204W10MC75KM0 | 2079295 |
| | | 20 m | DOL-1204W20MC75KM0 | 2089704 |
|  | Head A: male connector, M12, 4-pin, straight, D-coded<br>Head B: male connector, RJ45, 8-pin, straight<br>Cable: Ethernet, PUR, halogen-free, shielded | 2 m | SSL-2J04-G02ME60 | 6047916 |
| | | 5 m | SSL-2J04-G05ME60 | 6047917 |
| | | 10 m | SSL-2J04-G10ME60 | 6047918 |
| | | 20 m | SSL-2J04-G20ME60 | 6063700 |
|  | Head A: male connector, M12, 4-pin, angled, D-coded<br>Head B: male connector, RJ45, 8-pin, straight<br>Cable: Ethernet, PUR, halogen-free, shielded | 2 m | SSL-2J04-H02ME | 6047911 |
| | | 5 m | SSL-2J04-H05ME | 6045287 |
| | | 10 m | SSL-2J04-H10ME | 6045288 |
| | | 20 m | SSL-2J04-H20ME | 6063701 |

| | Brief description | Type | Part no. |
|---|---|---|---|
| Lens cloths | | | |
|  | Cloth for cleaning the front screen | Lens cloth | 4003353 |
| Cleaning agents | | | |
|  | Plastic cleaner and polish, anti-static, 0.5 liters | Plastic cleaner | 5600006 |
| Test and monitoring tools | | | |
|  Illustration may differ | Alignment aid for detecting the infrared light of SICK sensors. | Alignment aid | 2101720 |

Additional accessories ➜ www.sick.com/microScan3

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# SICK AT A GLANCE

SICK is a leading manufacturer of intelligent sensors and sensor solutions for industrial applications. With more than 9,700 employees and over 50 subsidiaries and equity investments as well as numerous agencies worldwide, SICK is always close to its customers. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents, and preventing damage to the environment.

SICK has extensive experience in various industries and understands their processes and requirements. With intelligent sensors, SICK delivers exactly what the customers need. In application centers in Europe, Asia, and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes SICK a reliable supplier and development partner.

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

**That is "Sensor Intelligence."**

**Worldwide presence:**

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

Detailed addresses and further locations → www.sick.com



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