

SIM200

Sensor Integration Machine

SICK
Sensor Intelligence.



Described product

SIM200

Manufacturer

SICK AG
Erwin-Sick-Str. 1
79183 Waldkirch
Germany

Production location

SICK PCA
55438 Minneapolis, MN
USA

Legal information

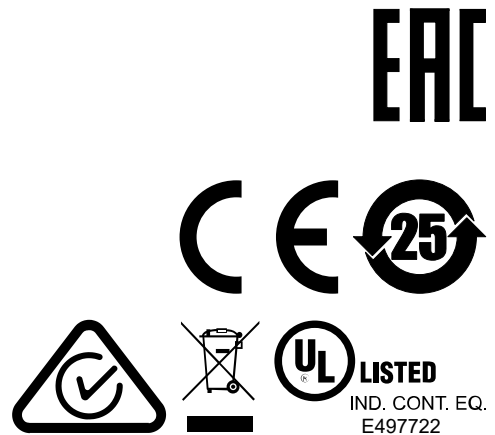
This work is protected by copyright. Any rights derived from the copyright shall be reserved for SICK AG. Reproduction of this document or parts of this document is only permissible within the limits of the legal determination of Copyright Law. Any modification, abridgment or translation of this document is prohibited without the express written permission of SICK AG.

The trademarks stated in this document are the property of their respective owner.

© SICK AG. All rights reserved.

Original document

This document is an original document of SICK AG.



Contents

| | | |
|----------|---|-----------|
| 1 | About this document..... | 5 |
| 1.1 | Information on the operating instructions..... | 5 |
| 1.2 | Explanation of symbols..... | 5 |
| 1.3 | Further information..... | 6 |
| 2 | Safety information..... | 7 |
| 2.1 | General safety notes..... | 7 |
| 2.2 | Notes on UL approval..... | 7 |
| 2.3 | Intended use..... | 7 |
| 2.4 | Improper use..... | 7 |
| 2.5 | Internet protocol (IP) technology..... | 8 |
| 2.6 | Limitation of liability..... | 8 |
| 2.7 | Modifications and conversions..... | 8 |
| 2.8 | Requirements for skilled persons and operating personnel..... | 9 |
| 2.9 | Operational safety and particular hazards..... | 9 |
| 3 | Product description..... | 11 |
| 3.1 | Device view..... | 11 |
| 3.2 | Functionality..... | 11 |
| 3.3 | SICK AppSpace..... | 11 |
| 3.4 | Preset Ethernet interfaces..... | 12 |
| 4 | Transport and storage..... | 13 |
| 4.1 | Transport..... | 13 |
| 4.2 | Transport inspection..... | 13 |
| 4.3 | Storage..... | 13 |
| 5 | Mounting..... | 14 |
| 5.1 | Overview of mounting procedure..... | 14 |
| 5.2 | Scope of delivery..... | 14 |
| 5.3 | Preparing for mounting..... | 14 |
| 5.4 | Mounting the device..... | 14 |
| 6 | Electrical installation..... | 16 |
| 6.1 | Important notes..... | 16 |
| 6.2 | Preparing the electrical installation..... | 16 |
| 6.3 | Assembling the cables (optional)..... | 16 |
| 6.4 | Overview of connections..... | 17 |
| 6.5 | Pin allocation of the connections..... | 17 |
| 6.6 | Connecting peripheral devices..... | 18 |
| 6.7 | Connecting voltage supply..... | 19 |
| 7 | Commissioning..... | 20 |
| 7.1 | Preparatory commissioning..... | 20 |

| | | |
|-----------|--------------------------------|-----------|
| 8 | Operation..... | 21 |
| 8.1 | Status LEDs..... | 21 |
| 9 | Maintenance..... | 22 |
| 9.1 | Cleaning..... | 22 |
| 9.2 | Maintenance plan..... | 22 |
| 10 | Decommissioning..... | 23 |
| 10.1 | Disposal..... | 23 |
| 11 | Technical data..... | 24 |
| 11.1 | Features..... | 24 |
| 11.2 | Interfaces..... | 24 |
| 11.3 | Mechanics and electronics..... | 25 |
| 11.4 | Ambient data..... | 25 |
| 12 | Annex..... | 26 |
| 12.1 | Dimensional drawings..... | 26 |
| 12.2 | Licenses..... | 26 |

1 About this document

1.1 Information on the operating instructions

These operating instructions provide important information on how to use devices from SICK AG.

Prerequisites for safe work are:

- Compliance with all safety notes and handling instructions supplied.
- Compliance with local work safety regulations and general safety regulations for device applications

The operating instructions are intended to be used by qualified personnel and electrical specialists.



NOTE

Read these operating instructions carefully to familiarize yourself with the device and its functions before commencing any work.

The operating instructions are an integral part of the product. Store the instructions in the immediate vicinity of the device so they remain accessible to staff at all times. Should the device be passed on to a third party, these operating instructions should be handed over with it.

These operating instructions do not provide information on operating the machine or system in which the device is integrated. For more information, refer to the operating instructions of the specific machine or system.

1.2 Explanation of symbols

Warnings and important information in this document are labeled with symbols. Signal words introduce the instructions and indicate the extent of the hazard. To avoid accidents, damage, and personal injury, always comply with the instructions and act carefully.



DANGER

... indicates a situation of imminent danger, which will lead to a fatality or serious injuries if not prevented.



WARNING

... indicates a potentially dangerous situation, which may lead to a fatality or serious injuries if not prevented.



CAUTION

... indicates a potentially dangerous situation, which may lead to minor/slight injuries if not prevented.



NOTICE

... indicates a potentially harmful situation, which may lead to material damage if not prevented.



NOTE

... highlights useful tips and recommendations as well as information for efficient and trouble-free operation.

1.3 Further information



NOTE

Further documentation for the device can be found on the online product page at:

- www.sick.com/SIM200

There, additional information has been provided depending on the product, such as:

- Model-specific online data sheets for device types, containing technical data, dimensional drawing, and specification diagrams
 - EU declarations of conformity for the product family
 - Dimensional drawings and 3D CAD dimension models of the device types in various electronic formats
 - Other publications related to the devices described here
 - Publications dealing with accessories
-

2 Safety information

2.1 General safety notes

The following safety notes must always be observed regardless of specific application conditions:

- The device must only be mounted, commissioned, operated, and maintained by professionally qualified safety personnel.
- Electrical connections with peripheral devices must only be made when the voltage supply is disconnected.
- The device is only to be operated when mounted in a fixed position.
- The device voltage supply must be protected in accordance with the specifications.
- The specified ambient conditions must be observed at all times.
- The electrical connections to peripheral devices must be screwed on correctly.
- The pin assignment of pre-assembled cables must be checked and adjusted if necessary.
- These operating instructions must be made available to the operating personnel and kept ready to hand.

2.2 Notes on UL approval

UL Environmental Rating: Enclosure type 1

2.3 Intended use

The device is a programmable control and evaluation unit for IO-Link sensors and sensors with digital inputs and outputs. The device also acts as a link between system and plant controls, and the connected terminal devices. The device is mainly used in an industrial environment in production, testing, and control. Other applications are possible depending on the device-specific properties.

The device is programmed on a PC by using the development environment software SICK AppSpace. Depending on the application, a browser-based, graphical user interface (HMI) can be created, which provides opportunities defined by the application developer to influence an application at operator level.

The device offers various interfaces for controlling, programming, and operating purposes, which can be activated as necessary via development environments, control systems (programmable logic controllers), or applications.

However, configuration, programming, and control requires various technical skills, depending on how the device is connected and used.

2.4 Improper use

Any use outside of the stated areas, in particular use outside of the technical specifications and the requirements for intended use, will be deemed to be incorrect use.

- The device does not constitute a safety component in accordance with the respective applicable safety standards for machines.
- The device must not be used in explosion-hazardous areas, in corrosive environments or under extreme environmental conditions.
- Any use of accessories not specifically approved by SICK AG is at your own risk.



WARNING

Danger due to improper use!

Any improper use can result in dangerous situations.

Therefore, observe the following information:

- Product should be used only in accordance with its intended use.
 - All information in these operating instructions must be strictly observed.
 - Shut down the product immediately in case of damage.
-

2.5 Internet protocol (IP) technology



NOTE

SICK uses standard IP technology in its products. The emphasis is placed on availability of products and services.

SICK always assumes the following prerequisites:

- The customer ensures the integrity and confidentiality of the data and rights affected by its own use of the aforementioned products.
 - In all cases, the customer implements the appropriate security measures, such as network separation, firewalls, virus protection, and patch management.
-

2.6 Limitation of liability

Relevant standards and regulations, the latest technological developments, and our many years of knowledge and experience have all been taken into account when compiling the data and information contained in these operating instructions. The manufacturer accepts no liability for damage caused by:

- Non-adherence to the product documentation (e.g., operating instructions)
- Incorrect use
- Use of untrained staff
- Unauthorized conversions or repair
- Technical modifications
- Use of unauthorized spare parts, consumables, and accessories

With special variants, where optional extras have been ordered, or owing to the latest technical changes, the actual scope of delivery may vary from the features and illustrations shown here.

2.7 Modifications and conversions



NOTICE

Modifications and conversions to the device may result in unforeseeable dangers.

Interrupting or modifying the device or SICK software will invalidate any warranty claims against SICK AG. This applies in particular to opening the housing, even as part of mounting and electrical installation.

2.8 Requirements for skilled persons and operating personnel



WARNING

Risk of injury due to insufficient training.

Improper handling of the device may result in considerable personal injury and material damage.

- All work must only ever be carried out by the stipulated persons.

This product documentation refers to the following qualification requirements for the various activities associated with the device:

- **Instructed personnel** have been briefed by the operator about the tasks assigned to them and about potential dangers arising from improper action.
- **Skilled personnel** have the specialist training, skills, and experience, as well as knowledge of the relevant regulations, to be able to perform tasks delegated to them and to detect and avoid any potential dangers independently.
- **Electricians** have the specialist training, skills, and experience, as well as knowledge of the relevant standards and provisions, to be able to carry out work on electrical systems and to detect and avoid any potential dangers independently. The electrician must comply with the provisions of the locally applicable work safety regulation.

The following qualifications are required for various activities:

Table 1: Activities and technical requirements

| Activities | Qualification |
|--|--|
| Mounting, maintenance | <ul style="list-style-type: none"> ■ Basic practical technical training ■ Knowledge of the current safety regulations in the workplace |
| Electrical installation, device replacement | <ul style="list-style-type: none"> ■ Practical electrical training ■ Knowledge of current electrical safety regulations ■ Knowledge of the operation and control of the devices in their particular application |
| Commissioning, configuration | <ul style="list-style-type: none"> ■ Basic knowledge of the computer operating system used ■ Basic knowledge of the design and setup of the described connections and interfaces ■ Basic knowledge of data transmission |
| Operation of the device for the particular application | <ul style="list-style-type: none"> ■ Knowledge of the operation and control of the devices in their particular application ■ Knowledge of the software and hardware environment for the particular application |

2.9 Operational safety and particular hazards

Please observe the safety notes and the warnings listed here and in other chapters of this product documentation to reduce the possibility of risks to health and avoid dangerous situations.



WARNING

Electrical voltage!

Electrical voltage can cause severe injury or death.

- Work on electrical systems must only be performed by qualified electricians.
 - The power supply must be disconnected when attaching and detaching electrical connections.
 - The product must only be connected to a voltage supply as set out in the requirements in the operating instructions.
 - National and regional regulations must be complied with.
 - Safety requirements relating to work on electrical systems must be complied with.
-



WARNING

Risk of injury and damage caused by potential equalization currents!

Improper grounding can lead to dangerous equipotential bonding currents, which may in turn lead to dangerous voltages on metallic surfaces, such as the housing. Electrical voltage can cause severe injury or death.

- Work on electrical systems must only be performed by qualified electricians.
 - Follow the notes in the operating instructions.
 - Install the grounding for the product and the system in accordance with national and regional regulations.
-

3 Product description

3.1 Device view

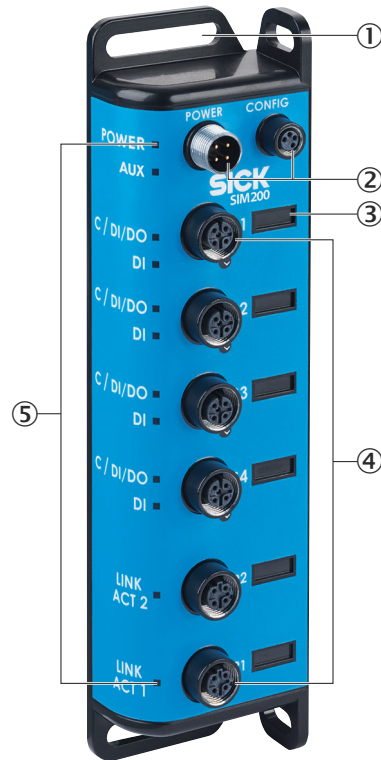


Figure 1: SIM200 device view

- ① Elongated drill holes for mounting
- ② Connection for power and configuration
- ③ Removable user-defined port labels
- ④ Connections for sensors and Ethernet
- ⑤ Status indicators

3.2 Functionality

The SIM200 Sensor Integration Machine – part of the SICK AppSpace eco-system – is opening up new possibilities for application solutions.

Data from IO-Link sensors and sensors with digital inputs and outputs can be evaluated, archived and transmitted.

The SICK AppSpace open software platform enables tailor-made application programs to be developed for demanding applications.

The HMI and data visualization features can be provided on any browser-enabled notebook, PC, or tablet. The application software (app) is developed in SICK AppStudio.

3.3 SICK AppSpace



Detailed instructions on the SICK AppStudio as well as programming the device can be found at supportportal.sick.com.

3.4 Preset Ethernet interfaces



NOTE

Preset IP address of the ETHERNET interfaces:

- ETHERNET P1/ P2: 192.168.0.1
-

Changing the IP address

The IP address can be changed using the SICK “SOPAS-ET” PC tool. This is described in detail in the “SIM Getting Started Guide”, which is available for download from the SICK AppSpace area of the SICK Support Portal.

4 Transport and storage

4.1 Transport

For your own safety, please read and observe the following notes:



NOTICE

Damage to the product due to improper transport.

- The device must be packaged for transport with protection against shock and damp.
- Recommendation: Use the original packaging as it provides the best protection.
- Transport should be performed by trained specialist staff only.
- The utmost care and attention is required at all times during unloading and transportation on company premises.
- Note the symbols on the packaging.
- Do not remove packaging until immediately before you start mounting.

4.2 Transport inspection

Immediately upon receipt in Goods-in, check the delivery for completeness and for any damage that may have occurred in transit. In the case of transit damage that is visible externally, proceed as follows:

- Do not accept the delivery or only do so conditionally.
- Note the scope of damage on the transport documents or on the transport company's delivery note.
- File a complaint.



NOTE

Complaints regarding defects should be filed as soon as these are detected. Damage claims are only valid before the applicable complaint deadlines.

4.3 Storage

Store the device under the following conditions:

- Do not store outdoors.
- Store in a dry area that is protected from dust.
- Do not expose to any aggressive substances.
- Protect from sunlight.
- Avoid mechanical shocks.
- Storage temperature: see "Technical data", page 24.
- For storage periods of longer than 3 months, check the general condition of all components and packaging on a regular basis.

5 Mounting

5.1 Overview of mounting procedure

**NOTE**

The mounting procedure described here for the device meets the requirements for use in the target system.

Additional or different requirements may become necessary in the laboratory and during preparation, and should be taken into account as necessary, see "Commissioning", page 20. If you have any questions or anything remains unclear in this regard, please contact our service team.

-
- Mounting the device.
 - Connect the cables.
 - Connecting peripheral devices.
 - Connecting the voltage supply.

5.2 Scope of delivery

- SIM200
- 20 port labels
- Safety note
- Optional: ordered accessories

**NOTE**

For a list of cables suitable for use with the device, see: supportportal.sick.com.

5.3 Preparing for mounting

Installation requirements

- Select the mounting site: Plan space requirements and sufficient distance from other devices. Be aware of the possibility of heat dissipation.
- Unpack the device and allow to acclimatize to avoid formation of condensation.
- Prepare vibration reduction measures, if necessary.

Preparing for mounting

1. Place the device at the mounting site.
2. Mark the mounting holes.
3. Proceed to drill the mounting holes.

5.4 Mounting the device

**NOTE**

The coating around the mounting screws must be removed for the ground connection to the housing.

-
- Set the device on the mounting site.
 - Fasten device with two M6 screws (max. 0.8 Nm) and corresponding washers on opposite device sides.

**NOTICE**

Use self-locking or lock nuts on mounting sites that are exposed to vibrations to prevent the holding plates from loosening.

6 Electrical installation

6.1 Important notes

**WARNING****Risk of injury and damage caused by electrical current!**

Due to equipotential bonding currents, incorrect earthing can lead to the following dangers and faults: Voltage is applied to the metal housing, cable fires due to cable shields heating up, the product and other devices become damaged.

- Generate the same ground potential at all grounding points.

**NOTICE**

Equipment damage due to incorrect supply voltage!

- Only operate the device with the specified supply voltage.
- Please read the notes on electrical installation.

The connection of the network and IO-Link cable of the SIM200 must be voltage-free ($U_V = 0\text{ V}$). The following information must be observed, depending on the connection type:

- Even when the wiring is looped through, the total current of the module must not exceed 4 A.
- An incorrect supply voltage may result in damage to the device. Operation is only permitted in a short-circuit protected system with max. 8 A.
- Only apply voltage/switch on the voltage supply ($U_V > 0\text{ V}$) once all electrical connections have been established.

6.2 Preparing the electrical installation

To carry out the electrical installation, you will need:

- Connection cables for the peripheral devices, including the corresponding data sheets
- Voltage supply cable
- If customers assemble the cables: crimping tool, ferrules, soldering iron, and other installation material

6.3 Assembling the cables (optional)

For a list of cables suitable for use with the device, see:

supportportal.sick.com or at www.sick.com.

Customer assembly of the cables is only necessary in special cases. Ensure a sufficient length of cable is provided, e.g. for strain-relief clamps.

**NOTICE****Risk of damage/malfunction due to incorrect PIN assignment**

Incorrect wiring of the male connectors/female connectors can lead to damage to or malfunctions in the system.

- Observe data sheets provided by the cable manufacturer.
- Observe the pin assignment.

6.4 Overview of connections

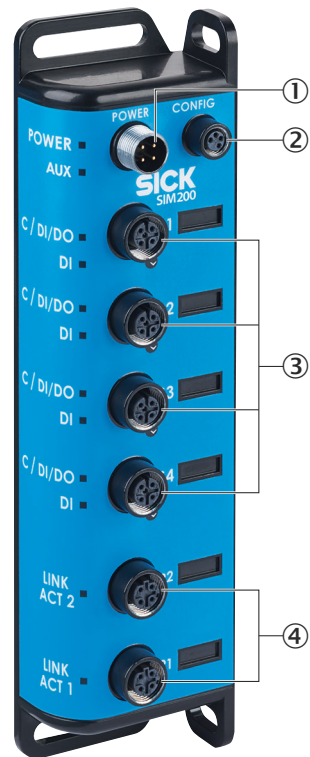


Figure 2: SIM200 connection overview

- ① POWER: Input of voltage supply
- ② CONFIG: Configuration with SOPAS ET
- ③ S1-S4: 4 x sensor connections for IO-Link sensors and sensors with digital inputs and outputs
- ④ P1-P2: 2 x Ethernet connections

6.5 Pin allocation of the connections

6.5.1 POWER

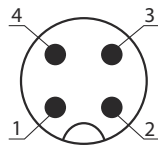


Table 2: POWER pin assignment, M12 - 4-pin, A-coded, male

| PIN | Signal | Function |
|-----|----------|------------------------------|
| 1 | +24 V IN | IN1 supply voltage, max. 4 A |
| 2 | NC | Not connected |
| 3 | GND | Ground |
| 4 | NC | Not connected |

6.5.2 CONFIG

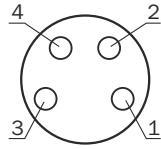


Table 3: CONFIG pin assignment, M8 - 4-pin, female

| PIN | Signal | Function |
|-----|---------|--------------|
| 1 | +5 V IN | +5 V nominal |
| 2 | - Data | |
| 3 | + Data | |
| 4 | GND | Ground |

6.5.3 Sensor 1 - 4 / IO-Link

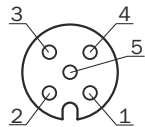


Table 4: Pin assignment S1 - S4 / IO-Link, M12 - 5-pin A-coded, female

| PIN | Signal | Function |
|-----|---------------------------|--|
| 1 | + 24 V | Supply voltage for peripherals, configurable |
| 2 | Input 2 | Switching input |
| 3 | GND | Ground |
| 4 | C/Q or input 1 / output 1 | C/Q IO-Link or configurable digital input/output |
| 5 | NC | Not connected |

6.5.4 Ethernet P1/ P2

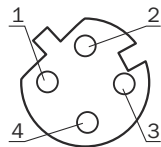


Table 5: P1/P2 pin assignment, M12 - 4-pin, A-coded, female

| PIN | Signal | Function |
|-----|--------|------------|
| 1 | TX + | Sender + |
| 2 | RX + | Receiver + |
| 3 | TX - | Sender - |
| 4 | RX - | Receiver - |

6.6 Connecting peripheral devices

The device can be connected to a wide range of IO-Link sensors and sensors with digital inputs and outputs.

The required pin assignments can be found in the data sheets for the peripherals to be connected as well as in the relevant connection descriptions, see ["Pin allocation of the connections"](#), page 17.

1. If necessary, assemble connection cables, see ["Preparing the cables"](#).
2. Connect the cables to peripheral devices.
3. Route the cables to the device using installation materials (cable channels, cable ties, etc.). When doing so, pay attention to cable strain relief.
4. Connect cables to the relevant device connections.
5. Seal unused connections with dummy plugs.

6.7 Connecting voltage supply



NOTICE

Risk of damage to peripheral devices!

If peripheral devices are connected when the voltage supply is also applied, these devices can become damaged.

- Only connect peripheral devices when the voltage supply is disconnected.

1. Ensure that the voltage has been disconnected by the user.
2. Connect voltage supply cable(s) to the device.
3. Lay the cable(s) with strain relief.
4. Have the user connect the voltage supply.
5. Have the user activate the voltage.

7 Commissioning

7.1 Preparatory commissioning

Commissioning for preparatory purposes and under laboratory conditions differs in some respects from commissioning in the target system.

In general, all safety and hazard warnings applicable to mounting (see ["Mounting", page 14](#)) and electrical installation (see ["Important information"](#)) must also be observed under laboratory conditions. In addition, further notes must be taken into consideration to guarantee the most effective preparation possible:

- Only connect those devices to the product that you want to configure or program.
- Operate the connected device in a controlled and contained network environment for the time being to check network communication if necessary.
- Note the company standards that apply to the use of inspection and testing devices.
- For initial programming, work under ideal conditions for sensor recognition.
- Use the largest possible deviations from these ideal conditions to check the programming with respect to its error tolerance and reliability, and to determine error limit values.

Procedure

1. Place the device on a non-slip base.
2. Connect the required peripheral devices, see ["Connecting peripheral devices"](#).
3. Connect the network connection.
4. Connect the voltage supply.
5. Switch on the voltage supply.

8 Operation




8.1 Status LEDs






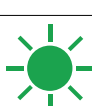





When the device is operating, the operational status of the connections is indicated visually by status LEDs.

Using these status indicators, the operator can find out quickly and easily whether the device and the peripherals are working properly or whether any faults or errors have occurred.

Monitoring the visual indicators is part of the routine inspection carried out on the device and the machine/plant area into which the device is incorporated.

Meaning of symbols

| Symbol | Meaning |
|---|-------------|
|  | LED off |
|  | LED on |
|  | LED flashes |

| Designation | LED behavior | Description |
|-----------------------------------|---|---|
| POWER |  | Voltage not applied to the connection. |
| |  | Voltage applied.* |
| AUX |  | User-defined, configurable with AppSpace |
| |  | |
| S1 - S4 C/ DI/ DO |  | Pin 4: IO-Link communication active |
| |  | Pin 4: No IO-Link communication active |
| S1 - S4 DI |  | Additional digital input on pin 2 |
| |  | No additional digital input on pin 2 |
| P1/P2 LINK ACT 1 LINK ACT 2 |  | Connection not established with Ethernet. |
| |  | Connection established with Ethernet. |
| |  | Data transmission via Ethernet |

* Time delay before availability due to boot process (approx. 60 s)

9 Maintenance

9.1 Cleaning



NOTICE

Equipment damage due to improper cleaning.

Improper cleaning may result in equipment damage.

- Only use recommended cleaning agents and tools.
- Never use sharp objects for cleaning.

- ▶ The device must be cleaned regularly from the outside to guarantee heat dissipation and therefore operation. Clean using a dry towel or an industrial vacuum cleaner. Do not use cleaning agents.

9.2 Maintenance plan

During operation, the device works maintenance-free.

Depending on the assignment location, the following preventive maintenance tasks may be required for the device at regular intervals:

Table 6: Maintenance plan

| Maintenance work | Interval | To be carried out by |
|---|--|----------------------|
| Check device and connecting cables for damage at regular intervals. | Depends on ambient conditions and climate. | Specialist |
| Clean housing. | Depends on ambient conditions and climate. | Specialist |

10 Decommissioning

10.1 Disposal

**CAUTION****Risk of injury due to hot device surface.**

The surface of the device can become hot during operation.

- Before commencing disassembly, switch off the device and allow it to cool down as necessary.
-

If a device can no longer be used, dispose of it in an environmentally friendly manner in accordance with the applicable country-specific waste disposal regulations. Do not dispose of the product along with household waste.

**NOTICE****Danger to the environment due to improper disposal of the device.**

Disposing of devices improperly may cause damage to the environment.

Therefore, observe the following information:

- Always observe the national regulations on environmental protection.
 - Separate the recyclable materials by type and place them in recycling containers.
-

11 Technical data



NOTE

The relevant online data sheet for your product, including technical data, dimensional drawing, and connection diagrams can be downloaded, saved, and printed from the Internet:

- www.sick.com/SIM200

Please note: This documentation may contain further technical data.

11.1 Features

| Feature | Parameter |
|-----------------------------|--|
| Task | data recording, evaluation, and archiving |
| Supported devices (excerpt) | IO-Link sensors, sensors with digital inputs and digital outputs |
| Technology | Embedded hardware architecture: <ul style="list-style-type: none"> • ARM Cortex M7 + netX51 |
| | Software: <ul style="list-style-type: none"> • Can be programmed within the SICK AppSpace environment • SICK Interface & Algorithm API |
| RAM | 512Mb (netX51) |
| Flash memory | 4 GB |
| Programming software | SICK AppStudio |
| Sensor data processing | According to SICK Interface & Algorithm API |

11.2 Interfaces

| Feature | Parameter |
|---|---|
| ETHERNET | |
| Quantity | 2 (with switch) |
| Data transmission rate | 10/100 Mbit/s |
| Protocol | ICMP, TCP, UDP |
| IO-Link | |
| Quantity | 4 (SENSOR S1 to S4) |
| Function | IO-Link master V1.1 |
| Port class | A |
| Data transmission rate | max. 230 kBaud |
| Digital switching inputs/outputs | |
| S1 – S4 | Input: 1 each Inputs/Outputs: 1 each (can be configured) |
| CONFIG | |
| Quantity | 1 |
| Function | USB, for configuration |

11.3 Mechanics and electronics

| Feature | Parameter |
|--------------------------|---|
| Electrical connection | POWER: 1 x M12, 4-pin male connector, A-coded CONFIG: M8, 4-pin female connector SENSOR S1 - S4, IO-Link master: 4 x M12, 5-pin female connector, A-coded ETHERNET: 2 x M12, 4-pin female connector, D-coded |
| Supply voltage | 10 ... 30 V DC |
| Operating current | Must be limited by external power supply unit to max. 4 A |
| Power consumption | 4.2 W max., without connected sensors |
| Power output | Max. 72 W total (all connections) |
| Output current | |
| | SENSOR S1 - S4, IO Max. output current to switching output pins: 200 mA |
| | SENSOR S1 - S4, IO Max. output current to power supply pins: 500 mA |
| Housing material | zinc |
| Housing color | Black |
| Protection class | III |
| Short-circuit protection | In accordance with VDE 0160 |
| Weight | 520 g |
| Dimensions (W x D x H) | 213.9 x 57 x 38.3 mm |

11.4 Ambient data



CAUTION

This equipment is not intended for use in residential areas and may not provide adequate protection against radio reception in these environments.

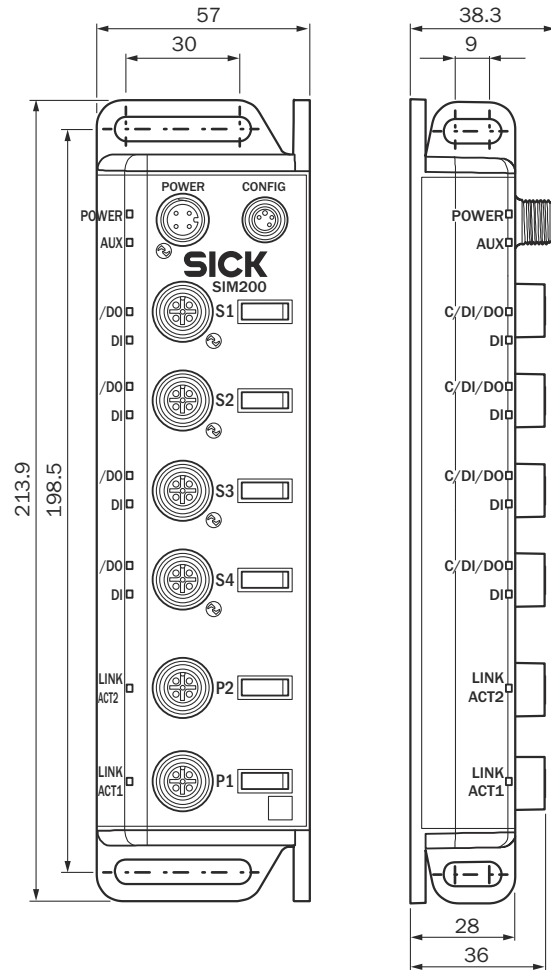
| Feature | Parameter |
|-------------------------------------|---|
| Electromagnetic compatibility (EMC) | EN 61000-6-2 EN 61000-6-4 |
| Vibration resistance | EN 60068-2-6 |
| Shock resistance | EN 60068-2-27 |
| Enclosure rating | IP67 (requires blind plugs to be inserted into unused connections) ¹ |
| Ambient operating temperature | -40 °C ... +55 °C |
| Storage temperature | -40 °C ... +75 °C |
| Permissible relative humidity | 90%, non-condensing |

¹ When cables are not attached, the connection caps delivered with the device must be tightened with 0.35 Nm.

12 Annex

12.1 Dimensional drawings

All measurements in mm.



12.2 Licenses

SICK uses open source software which is published by the rights holders under a free license. Among others, the following license types are used: GNU General Public License (GPL version 2, GPL version 3), GNU Lesser General Public License (LGPL), MIT license, zlib license and licenses derived from the BSD license.

This program is provided for general use without warranty of any kind. This warranty disclaimer also extends to the implicit assurance of marketability or suitability of the program for a particular purpose.

More details can be found in the GNU General Public License. View the complete license texts here: www.sick.com/licenses/texts. Printed copies of the license texts are also available on request.

Australia

Phone +61 (3) 9457 0600
1800 33 48 02 – tollfree
E-Mail sales@sick.com.au

Austria

Phone +43 (0) 2236 62288-0
E-Mail office@sick.at

Belgium/Luxembourg

Phone +32 (0) 2 466 55 66
E-Mail info@sick.be

Brazil

Phone +55 11 3215-4900
E-Mail comercial@sick.com.br

Canada

Phone +1 905.771.1444
E-Mail cs.canada@sick.com

Czech Republic

Phone +420 234 719 500
E-Mail sick@sick.cz

Chile

Phone +56 (2) 2274 7430
E-Mail chile@sick.com

China

Phone +86 20 2882 3600
E-Mail info.china@sick.net.cn

Denmark

Phone +45 45 82 64 00
E-Mail sick@sick.dk

Finland

Phone +358-9-25 15 800
E-Mail sick@sick.fi

France

Phone +33 1 64 62 35 00
E-Mail info@sick.fr

Germany

Phone +49 (0) 2 11 53 010
E-Mail info@sick.de

Greece

Phone +30 210 6825100
E-Mail office@sick.com.gr

Hong Kong

Phone +852 2153 6300
E-Mail ghk@sick.com.hk

Hungary

Phone +36 1 371 2680
E-Mail ertesites@sick.hu

India

Phone +91-22-6119 8900
E-Mail info@sick-india.com

Israel

Phone +972 97110 11
E-Mail info@sick-sensors.com

Italy

Phone +39 02 27 43 41
E-Mail info@sick.it

Japan

Phone +81 3 5309 2112
E-Mail support@sick.jp

Malaysia

Phone +603-8080 7425
E-Mail enquiry.my@sick.com

Mexico

Phone +52 (472) 748 9451
E-Mail mexico@sick.com

Netherlands

Phone +31 (0) 30 229 25 44
E-Mail info@sick.nl

New Zealand

Phone +64 9 415 0459
0800 222 278 – tollfree
E-Mail sales@sick.co.nz

Norway

Phone +47 67 81 50 00
E-Mail sick@sick.no

Poland

Phone +48 22 539 41 00
E-Mail info@sick.pl

Romania

Phone +40 356-17 11 20
E-Mail office@sick.ro

Russia

Phone +7 495 283 09 90
E-Mail info@sick.ru

Singapore

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Slovakia

Phone +421 482 901 201
E-Mail mail@sick-sk.sk

Slovenia

Phone +386 591 78849
E-Mail office@sick.si

South Africa

Phone +27 10 060 0550
E-Mail info@sickautomation.co.za

South Korea

Phone +82 2 786 6321/4
E-Mail infokorea@sick.com

Spain

Phone +34 93 480 31 00
E-Mail info@sick.es

Sweden

Phone +46 10 110 10 00
E-Mail info@sick.se

Switzerland

Phone +41 41 619 29 39
E-Mail contact@sick.ch

Taiwan

Phone +886-2-2375-6288
E-Mail sales@sick.com.tw

Thailand

Phone +66 2 645 0009
E-Mail marcom.th@sick.com

Turkey

Phone +90 (216) 528 50 00
E-Mail info@sick.com.tr

United Arab Emirates

Phone +971 (0) 4 88 65 878
E-Mail contact@sick.ae

United Kingdom

Phone +44 (0)17278 31121
E-Mail info@sick.co.uk

USA

Phone +1 800.325.7425
E-Mail info@sick.com

Vietnam

Phone +65 6744 3732
E-Mail sales.gsg@sick.com

Detailed addresses and further locations at www.sick.com