RMS3xx

Radar sensors

SICK
Sensor Intelligence.

Described product

RMS3xx

Manufacturer

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Germany

Legal information

Original document

This document is an original document of SICK AG.

Contents

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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.

2 Safety information

2.1 Intended use

The RMS3xx radar sensor is used for area monitoring. Within a defined detection area, the sensor detects static and moving objects, and triggers a switching signal upon detection of a corresponding object.

Distance zones can be defined and these zones can be assigned various functions.

The distance of the objects, the speed and the direction of the movement within the detection area are calculated and provided via the data telegram.

All object data can be provided via Ethernet. The ability to provide it via the CAN protocol is in the planning stages.

The SOPAS ET software from SICK AG must be used to operate the RMS3xx.

> **NOTE**
> The radar sensor is approved for operation in countries listed in the RMS3xx "Regulatory Notes" technical information (no. 8021596). This document is included with the device. The operation of the device in other countries can interfere with protected frequency ranges.
>
> - Only use the device in countries in which it has been approved.
> - When reselling the device, inform the buyer about the regional approval restrictions.

SICK AG assumes no liability for losses or damage arising from the use of the product, either directly or indirectly. This applies in particular to use of the product that does not conform to its intended purpose and is not described in this documentation.

Health hazards as a result of high-frequency electromagnetic radiation

The RMS3xx radar sensor is designed for operation in accordance with ETSI EN 300440. During operation, the exposition limit values defined in EN 62311 must be upheld.

In order to limit human exposure to electromagnetic fields, suitable safety distances must be maintained during both short-term and long-term work in the radiation range of the antenna. The minimum distance between the antenna and the human body during continuous operation is 20 cm.

Country-specific aspects which must be taken into account during operation of the RMS3xx can be found in the RMS3xx "Regulatory Compliance Information" technical information publication (no. 8021596), which is included with the product.

2.2 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.

2.3 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.

2.4 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.

2.5 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	■ Basic practical technical training ■ Knowledge of the current safety regulations in the workplace
Electrical installation, device replacement	■ Practical electrical training ■ Knowledge of current electrical safety regulations ■ Knowledge of the operation and control of the devices in their particular application
Commissioning, configuration	■ 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	■ Knowledge of the operation and control of the devices in their particular application ■ Knowledge of the software and hardware environment for the particular application

2.6 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 Scope of delivery

The delivery of the device includes the following components:

Piece	Component	Comment
1	Device in the version ordered	Without connecting cables and brackets
1	Set of protective caps for electrical connections	Included or possibly attached to the device
1	Printed RMS3xx "Regulatory Notes" technical information (no. 8021596)	Informs about the countries for which an approval exists; names country-specific aspects which are to be taken into account during operation of the RMS3xx.
1	Printed safety notes, multilingual	Brief information and general safety notes

Components not contained in the delivery:

Component	Comment
SOPAS_ET configuration software	Available online at **www.sick.com**
Telegram Listing RMS3xx, English (no. 8021531)	Detailed description of the telegrams, available online at **www.sick.com/RMS3xx**

3.2 Status indicators
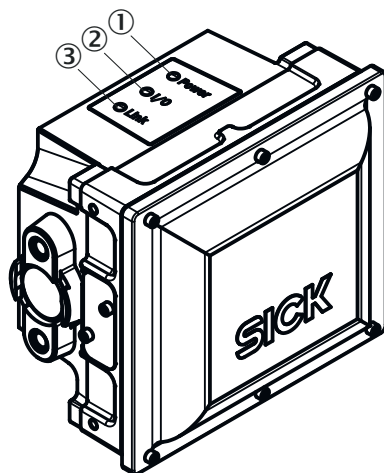
Figure 1: Status indicators

① Power
② I/O
③ Link

LED	Light pattern / color	Description
Power	- / -	Device off
	● / yellow	Initialization phase
	● / green	Device is ready
	☀ / red	Device error
	☀ / violet	Firmware update in progress
	☀ / green	Firmware update complete

LED	Light pattern / color	Description
I/O	● / green	No object detection
	● / yellow	Information field object detection
	● / red	Warning field object detection
Link	- /-	No connection
	● / green	Ethernet connection
	☀ / green	Data transmission via Ethernet connection
	● / yellow	CAN connection
	☀ / yellow	Data transmission via CAN connection

☀ = illuminated; ☀ = flashing

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 Unpacking

- To protect the device against condensation, allow it to equilibrate with the ambient temperature before unpacking if necessary.
- Handle the device with care and protect it from mechanical damage.
- To avoid ingress of dust and water, only remove the protective caps of the electrical connections just before attaching the connecting cable.

4.3 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.

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

4.4 Storage

Store the device under the following conditions:

- Recommendation: Use the original packaging.
- Do not store outdoors.
- Store in a dry area that is protected from dust.
- To allow any residual dampness to evaporate, do not package in airtight containers.
- Do not expose to any aggressive substances.
- Protect from sunlight.
- Avoid mechanical shocks.
- Storage temperature: see "Technical data", page 26.

- Relative humidity: see "Technical data", page 26.
- 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 Mounting instructions

- Observe the technical data.
- Protect the sensor from direct sunlight.
- To prevent condensation, avoid exposing the device to rapid changes in temperature.
- The mounting site has to be designed for the weight of the device.
- It should be mounted so that it is exposed to as little shock and vibration as possible. Optional mounting accessories are available, see "Accessories", page 29.
- Use of a weather hood and a mounting bracket is recommended for outdoor installations. Information about optional accessories, "Accessories", page 29.

6 Electrical installation

6.1 Wiring instructions

> ℹ️ **NOTE**
> Pre-assembled cables can be found online at:
>
> • www.sick.com/RMS3xx

> ⚠️ **NOTICE**
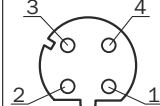> **Faults during operation and device or system defects!**
> Incorrect wiring may result in operational faults and defects.
>
> ▪ Follow the wiring notes precisely.

• Connect the connecting cables in a de-energized state. Do not switch on the voltage supply until installation is complete and all connection work on the device and controller has been finished.
• Isolate the wires of unused digital outputs at the control cabinet.
• Use proper connecting cables and male connectors for the application or environmental conditions, see "Accessories", page 29.
• The specified device enclosure rating is valid only with suitable mating connectors or with the protective caps installed.
• Electrical protection class III and ES1 supply voltage.
• The supply voltage must be as specified in the technical data, see "Technical data", page 26.
• Configure the circuits connected to the device as ES1 circuits or as SELV circuits (SELV = Safety Extra Low Voltage). The voltage source must meet the requirements of ES1 (EN 62368-1) or SELV (EN 60950-1).
• The voltage supply via a power supply unit must be capable of buffering a brief power failure of up to 20 ms.
• Prevent product damage caused by short-circuit: The device supply voltage input is equipped with reverse polarity protection. The internal functional earth is directly connected to the metal housing of the device. The internal functional earth also corresponds to the negative pole of the supply voltage.

6.2 Connection diagram
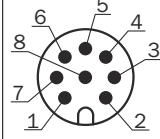
Ethernet

Table 2: Pin assignment for Ethernet connection

Male/female connector	Pin	Short form	Signal description
M12 female connector, 4-pin D-coded	1	TX+	Transmit data positive
	2	RX+	Receive data positive
	3	TX-	Transmit data negative
	4	RX-	Receive data negative
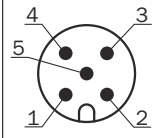
CAN I/O

Table 3: Pin assignment for CAN I/O connection

Male/female connector	Pin	Short form	Signal description
M12 male connector, 8-pin A-coded	1	CAN H	CAN high
	2	CAN L	CAN low
	3	IN2	Input 2
	4	GND IN1/2	Earth input 1/2
	5	OUT2	Output 2
	6	OUT3	Output 3
	7	GND	Earth
	8	OUT4	Output 4

Power

Table 4: Pin assignment Power connection

Male/female connector	Pin	Short form	Signal description
M12 male connector, 5-pin A-coded	1	L+	Supply voltage: +9.5 ... +36 V DC
	2	IN1	Input 1
	3	GND	Earth
	4	OUT1	Output 1
	5	GND IN1/2	Earth input 1/2

6.3 Connection options

The following figures illustrate connection examples.
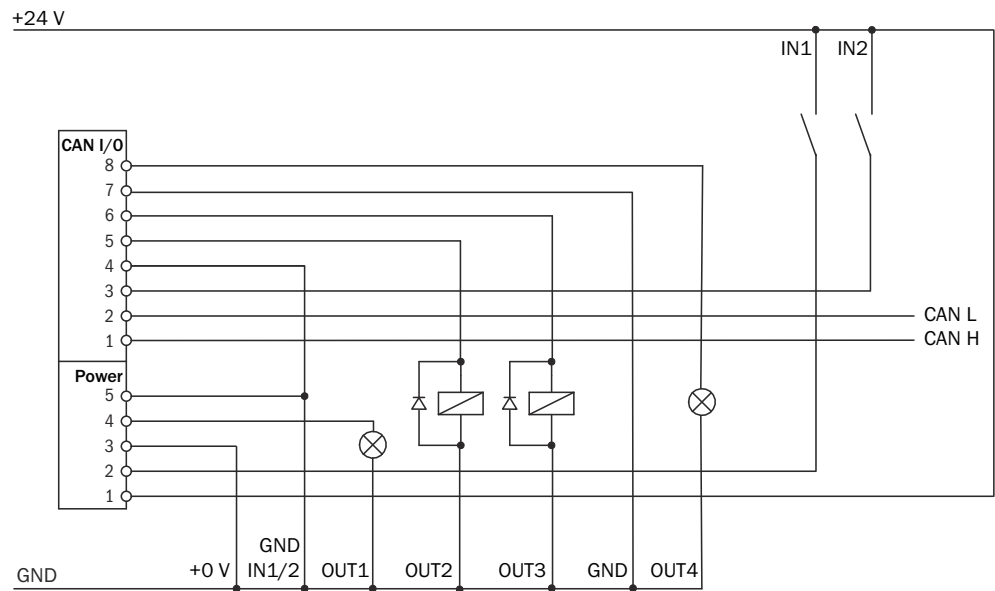
Figure 2: PNP outputs connection example
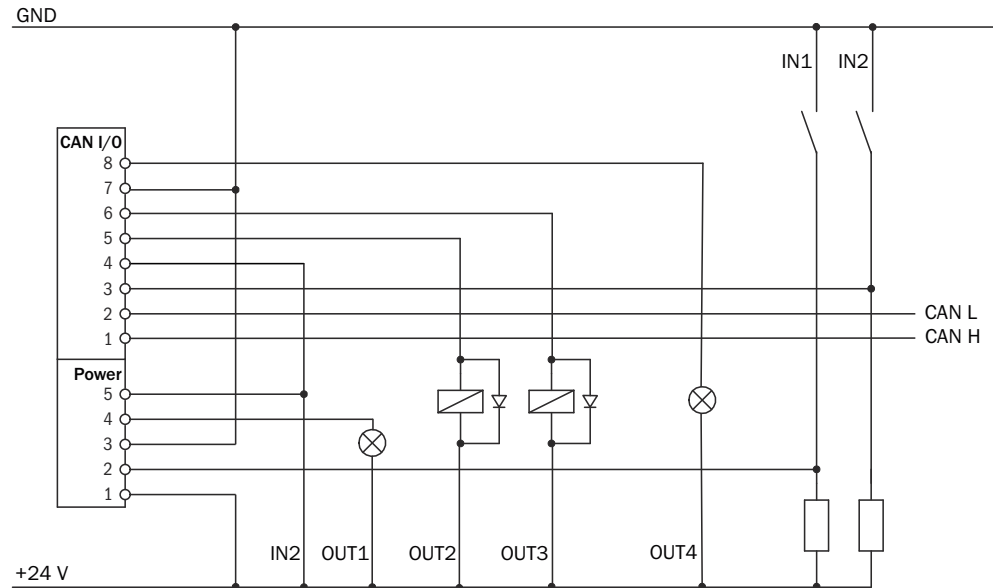
Figure 3: NPN outputs connection example

6.4 Connecting the device electrically

1. Ensure the voltage supply is not connected.
2. Connect the device according to the connection diagram, .

Figure 4: RMS3xx connection overview

① Ethernet
② CAN I/O
③ Power

3. Switch on the supply voltage.
✓ The initialization phase starts, the Power LED lights up yellow. As soon as the Power LED lights up green, the device is ready for operation.

7 Operation

7.1 General advice

The device works fully automatically in normal operation and requires no operator intervention.
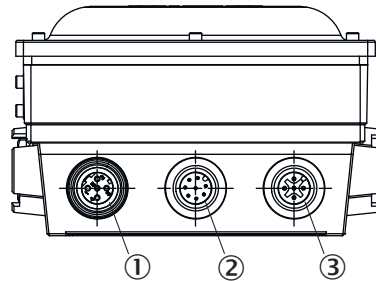
Configuration is done using the SOPAS Engineering Tool (SOPAS ET) software, see "Operation via SOPAS ET", page 18. The device must be connected to a computer via an interface for this purpose.

The measurement data and measuring ranges can be check using the graphical view. Please note that the software cannot display the data in real time, therefore not all measured values that the device delivers will be displayed.

7.2 Switching on / Switching off

1. Disconnect the device from the voltage supply to switch it off.
✓   The device switches off. The device configuration remains unchanged, measured values are lost.
2. Connect the device to the voltage supply.
✓   The device starts with the last saved configuration data.

7.3 Operation via SOPAS ET

Version 3.3.3 and higher of the SOPAS Engineering Tool (SOPAS ET) software can be used to configure the device and for service and diagnostic purposes.

To configure the device, you will require a computer with SOPAS ET installed and a free Ethernet connection. Alternatively, the connection can be established via a USB connection using an Ethernet USB adapter.

> **(i) NOTE**
> The current version of the SOPAS ET software can be downloaded from www.sick.com/SOPAS_ET. The respective system requirements for installing SOPAS ET are also specified there.

1. Connect the communication interface (Ethernet, 4-pin M12 female connector) of the device to the computer.
2. Switch on and start the computer.
3. Supply the device with voltage (5-pin M12 male connector, supply voltage 10 … 30 V DC).
✓   After successful initialization, the two status LEDs light up green. The device is ready for use.

> **(i) NOTE**
> To use SOPAS ET with the device, you need a device description file (SDD, SOPAS Device Description) for this device. You can install this within SOPAS ET using the device catalog. The device description file is saved on the device and can be installed there. Alternatively, installation is possible from the SICK website (Internet connection required).

Following installation of the device description file, the device can be selected from the device catalog and added to a project.

A connection to the device is established via the communication interface. The connection must be activated for data transmission (**online**).

Certain functions (e.g., Edit parameters) require you to be logged in to the device (**Device** menu > **Log In**, **User Level**: Authorized customer, **Password** (factory default): client).

Information about the device is displayed in the device window and the device can also be configured here (**Device**> **Open** menu).

> **ℹ️ NOTE**
>
> The device window opens with the **Field evaluation** application. To output measured values, the **Distance measurement** application must be activated in the **Default settings** view.

Description of the device window

The device window features various views supporting a selection of functions.

Available views and functions:

- **Start**: Start device configuration with display of information about the device (left-hand side) and display of the current scan (right-hand side).
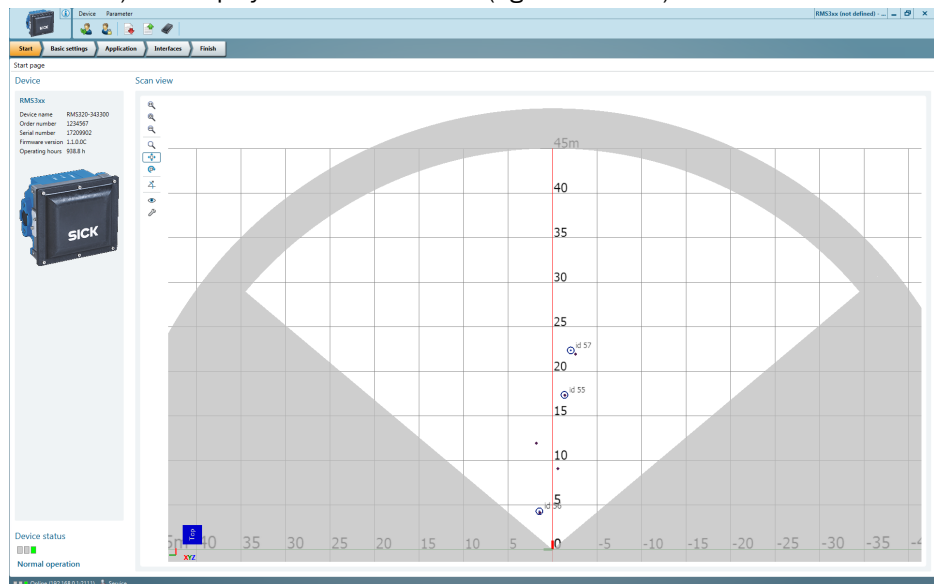
The scan view can be customized with the assistance of various tools (to the left of the scan view), for example:

🔍: Resets scan display to default view.

🔄: rotates scan display.

: changes perspective.

- **Default settings**: scans display (left-hand side), selects the device application, enters the device parameters and the mounting location (right-hand side):

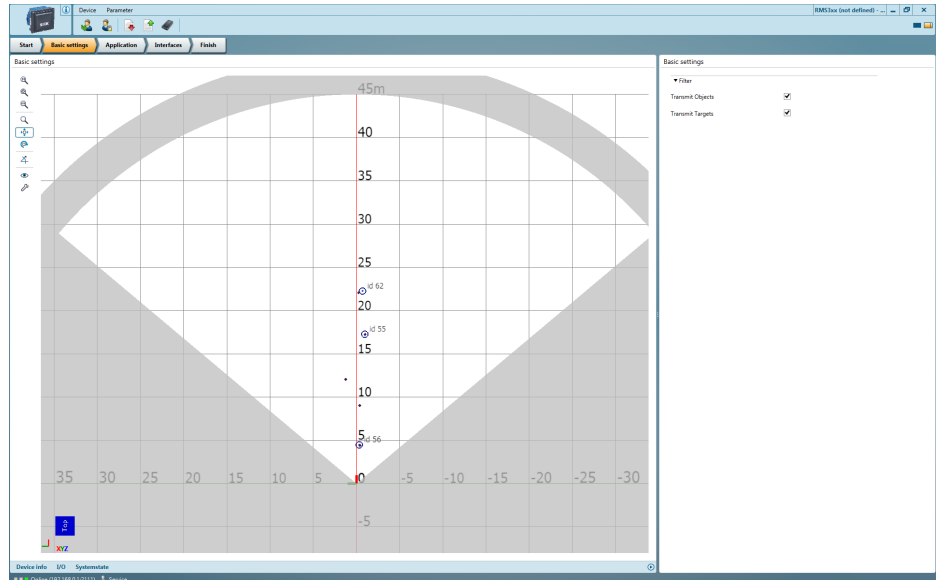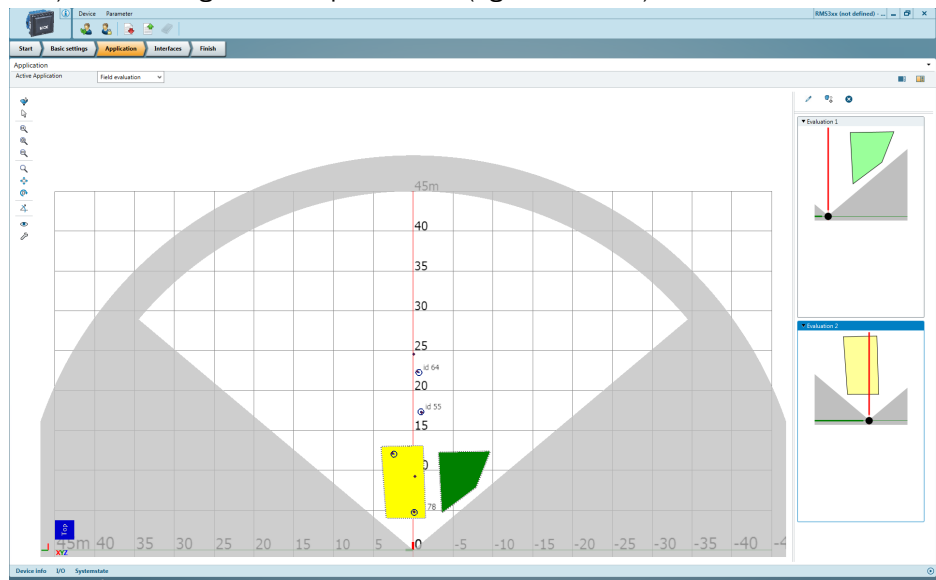- **Application** (field evaluation): Scan display for adapting the field geometry (left-hand side) and entering detection parameters (right-hand side):

The **Edit field points** tool (mouse pointer in the list of tools to the left of the scan view) can be used to customize the field geometry with the assistance of the mouse pointer. Alternatively, the field vertices can also be customized by entering the coordinate values in the **Field coordinates** mask.

Table 5: Options for editing the field geometry with the mouse pointer

Function	Procedure
Scale field	Drag square red handle.
Rotate field	Drag round black handle.
Customize field shape	Drag square green handle.
Add field vertices	Double-click in required position.
Delete field vertices	Click to select square green handle and press the [del] key.
Delete field	Press the [del] key without first selecting a green handle.
Insert new field (function is only available if a field has not been created)	Select the **Insert field points** tool, click to set field vertices, and double-click last field vertex to close the field.

- **Interfaces**. Configuration of the interfaces (left-hand side) and input of communication parameters (right-hand side).
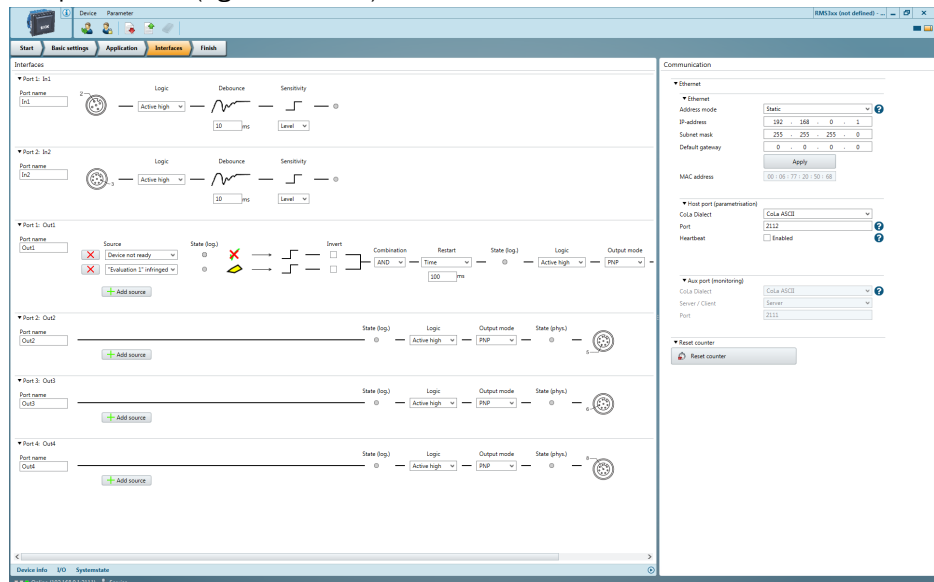
- **Complete**: scans display (left-hand side) and buttons for finalizing the device configuration and for system diagnosis.
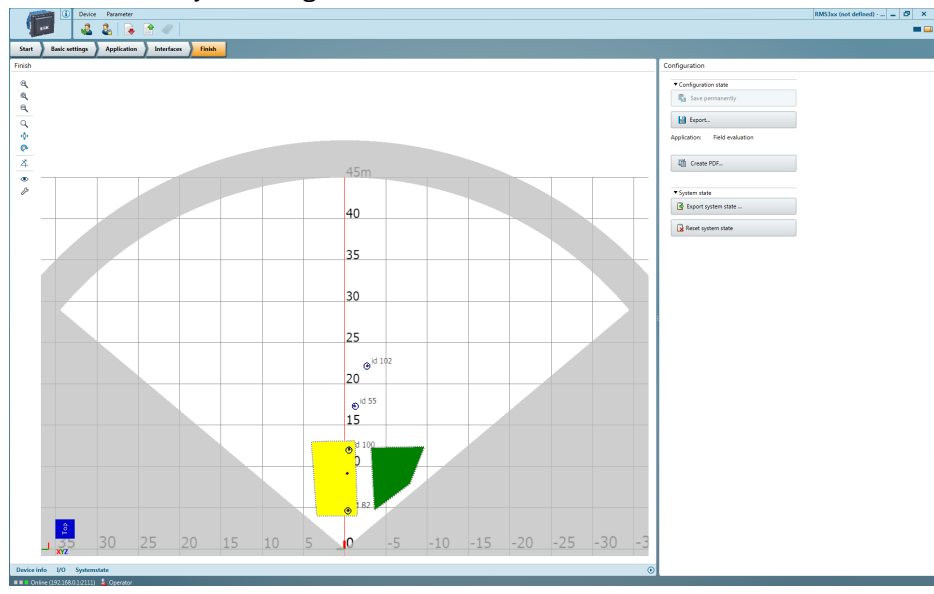
> **NOTE**
> Changes to parameters that are made in SOPAS ET are not saved automatically in the device. After you have completed the configuration, you must save it in the device permanently by pressing the **Save permanent** button.

Terminal program description

The terminal program is started in the main window of SOPAS via the **Tools** > **Terminal** menu.
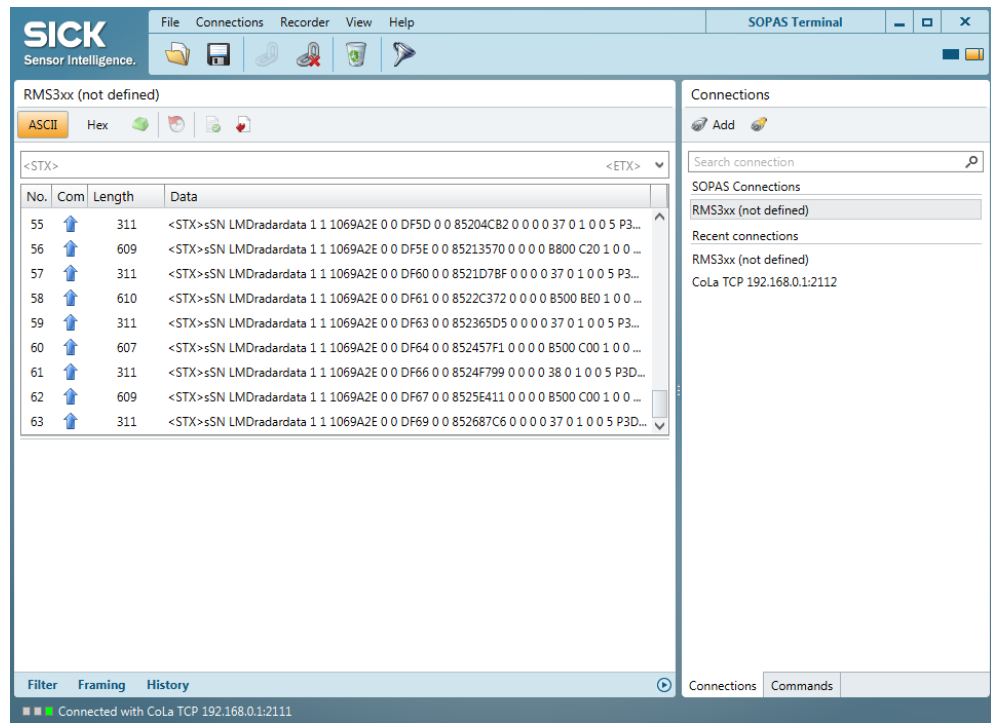
> **NOTE**
>
> A description of the telegrams can be found in the **Technical Information Telegram Listing RMS3xx** publication (English, no. 8021531).

8 Maintenance

8.1 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. Recommended: Every 3 months.	Specialist
Check the screw connections and plug connectors.	Depends on the place of use, ambient conditions or operating requirements. Recommended: At least every 6 months.	Specialist
Check that all unused connections are sealed with protective caps.	Depends on ambient conditions and climate. Recommended: At least every 6 months.	Specialist

9 Troubleshooting

9.1 General faults, warnings, and errors

Possible faults and corrective actions are described in the table below for troubleshooting. In the case of faults that cannot be rectified using the information below, please contact SICK Service. To find your agency, see the final page of this document.

> **i** **NOTE**
> Before calling, make a note of all type label data such as type designation, serial number, etc., to ensure faster telephone processing.

Table 7: Fault table

Fault description	Possible causes	Troubleshooting
LEDs do not light up.	No voltage supply connected.	Connecting the voltage supply.
Power LED flashes red.	Device error. Radar measurement not possible.	Contact SICK customer service. For address, see rear side.
I/O LED lights up red.	Warning field object detection.	Check detection area for objects in the warning field.
No connection between SOPAS ET PC software and the device.	Connection dropped.	Verify connections.
Objects are not detected.	Objects in the detection area.	Check the alignment of the detection area.
No switching signals are output via the I/O interface.	No detection signals present. Device configuration faulty. Bad connection.	Check alignment of the detection area, device configuration and connections.
No data is output via the Ethernet interface.	Device configuration faulty. Poor data connection.	Check device configuration and connections.
No data is output via the CAN interface.	The option to output data via the CAN interface is not yet available.	Use the Ethernet interface.

9.2 Repairs

Repair work on the device may only be performed by qualified and authorized personnel from SICK AG. Interruptions or modifications to the device by the customer will invalidate any warranty claims against SICK AG.

9.3 Returns

▶ Do not dispatch devices to the SICK Service department without consultation.
▶ The device must be sent in the original packaging or an equivalent padded packaging.

> **i** **NOTE**
> To enable efficient processing and allow us to determine the cause quickly, please include the following when making a return:

- Details of the contact person
- Description of the application
- Description of the fault that occurred

9.4 Disposal

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.

10 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/RMS3xx
>
> Please note: This documentation may contain further technical data.

10.1 Features

Measurement principle	FMCW
Radio equipment approval	See "Regulatory Compliance Information" technical information (no. 8021596) included with the product
Frequency band	24.05 GHz … 24.25 GHz
Transmitting power	+12.7 EIRP(dBm)
Aperture angle	± 8° vertical ± 50° horizontal
Operating range	1 m … 45 m [1] 20 m typical (1 m² RCS [2]) 40 m typical (10 m² RCS [3])

[1]   No detection possible at < 1 m
[2]   Typical radar cross section value for a pedestrian
[3]   Typical radar cross section value for a car

Working range diagram

Dimension in m (feet) ①

vertical (16°) ②	1.4 (4.6)	2.8 (9.2)	4.2 (13.9)	5.6 (18.4)	7.0 (23.0)	8.4 (27.6)	9.8 (32.3)	11.2 (36.9)	12.7 (41.6)
horizontal (100°) ③	11.9 (39.1)	23.8 (78.2)	35.8 (117.3)	47.7 (156.4)	59.6 (159.5)	71.5 (234.6)	83.4 (273.7)	95.3 (312.8)	107.3 (351.9)

Distance in m (feet) ④	0	5 (16.40)	10 (32.81)	15 (49.21)	20 (65.26)	25 (82.02)	30 (98.43)	35 (114.83)	40 (131.23)	45 (147.64)

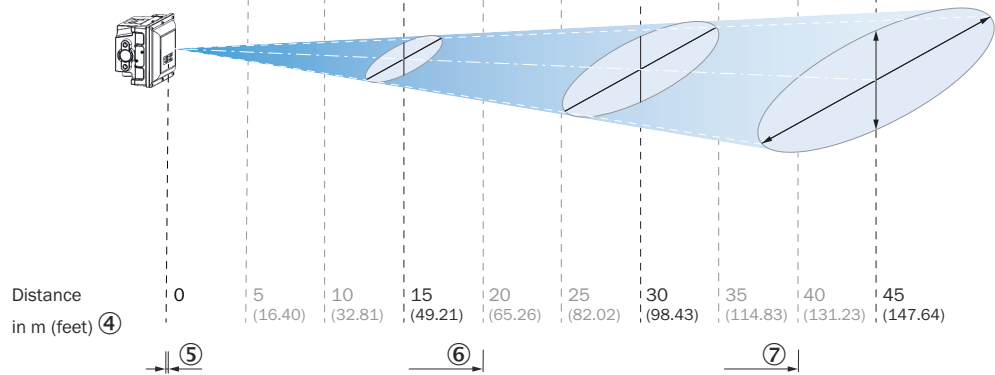*Figure 5: RMS3xx working range diagram, decimal separator: period*

① Dimensions in meters (feet)
② Vertical (aperture angle 16°)
③ Horizontal (aperture angle 100°)
④ Distance in meters (feet)
⑤ Up to 1 m: No detection

⑥   Up to 20 m: Working range for objects with 1 m² RCS (typical radar cross section for a person)

⑦   Up to 45 m: Working range for objects with 10 m² RCS (typical radar cross section for a person)

10.2   Performance

Initialization time	≤ 15 s
Update rate	≤ 60 ms
Integrated application	Field evaluation
Number of field sets	Up to 6 fields

10.3   Interfaces

Ethernet	✓ Function: configuration, data output
CANopen	In progress
Digital inputs	2 (electrically isolated from the supply voltage , U_e = max. 36 V DC, I_e = max. 5 mA, opto-decoupled, reverse polarity protected, adjustable debounce time)
Digital outputs	4 (not electrically isolated from the supply voltage, PNP/NPN/PP configurable, U_a = U_V - 1.5 V DC, I_A ≤ 100 mA (typical), short-circuit protected, temperature protected)

10.4   Mechanics/electronics

Connection type	1 x M12 male connector, 8-pin, A-coded 1 x M12 male connector, 5-pin, A-coded 1 x M12 female connector, 4-pin, D-coded
Supply voltage	9.5 V DC … 36 V DC ES1, energy-limited circuit in accordance with UL/IEC/EN 61010-1 or Class 2 (NEC, UL1310)
Power consumption	≤ 21 W (with a typical load of the 4 digital outputs of 100 mA and 36 V DC supply voltage) < 6 W (typical, without digital output load)
Housing	Aluminum
Housing color	Blue
Enclosure rating	IP67 (EN 60529: 1991-10/A2: 2000-02) [1]
Protection class	III (EN 61140:2006-08)
Electrical safety	EN 62368-1 (2014-08)
Weight	500 g
Dimensions (L x W x H)	85 mm x 97 mm x 60.75 mm

[1]   In connected state with suitable mating plug or protective cap mounted on the connections

Dimensional drawing
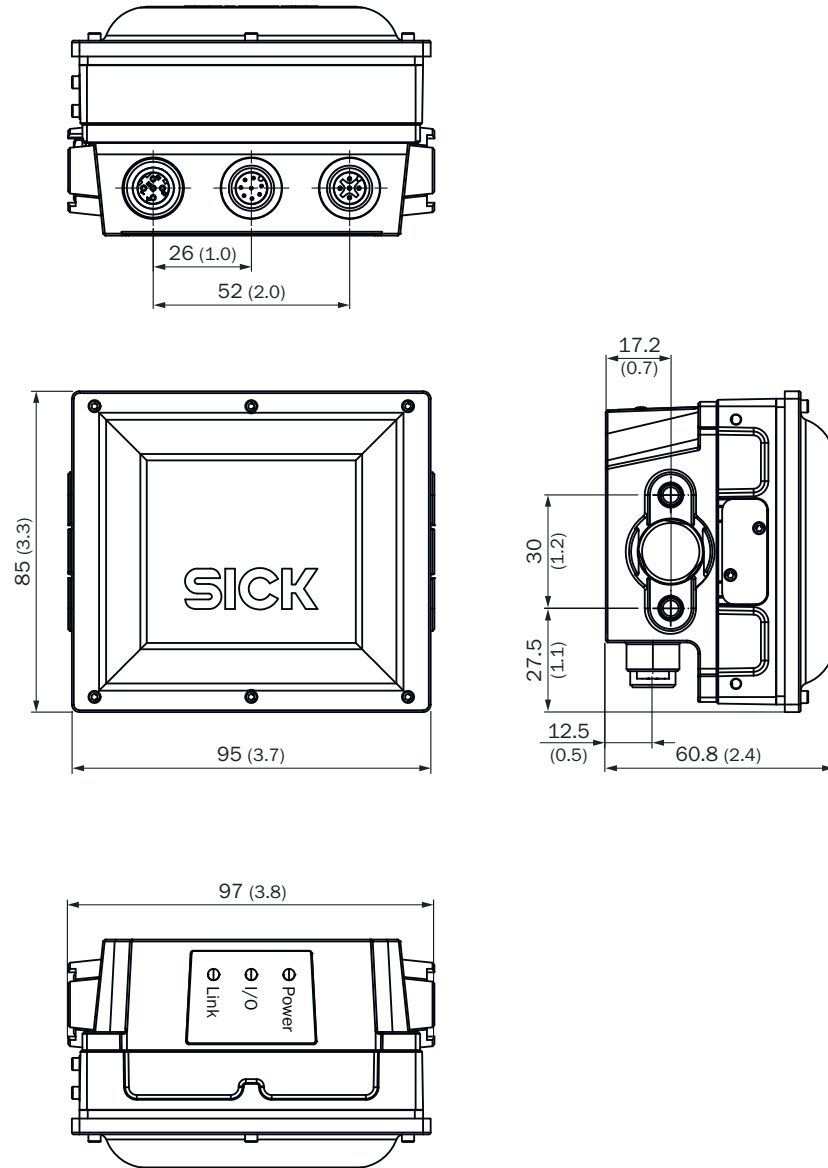
Figure 6: Dimensional drawing RMS3xx (dimensions in mm (inch))

10.5 Ambient data

Electromagnetic compatibility (EMC)	ETSI EN 301 489-1 ETSI EN 301 489-3 EN 61000-6-2
Vibration resistance	EN 60068-2-6:2008-02
Shock resistance	EN 60068-2-27:2009-05
Ambient operating temperature	–40 °C ... +65 °C
Storage temperature	–40 °C ... +85 °C
Ambient humidity	0% ... 90%, non-condensing

11   Accessories

> **NOTE**
> Accessories and where applicable mounting information can be found online at:
>
> - **www.sick.com/RMS3xx**

12 Annex

12.1 EU declaration of conformity/Certificates

The EU declaration of conformity and other certificates can be downloaded from the Internet at:

- **www.sick.com/RMS3xx**

12.2 Licenses

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

12.3 Cybersecurity

Protection against cybersecurity threats requires a comprehensive and holistic cybersecurity concept that must be continuously monitored and maintained. Such a concept consists of organizational, technical, process-related, electronic and physical defense levels and sets up appropriate measures for the different types of risk. SICK's products and solutions must be regarded as an integral part of this concept.

Information on Cybersecurity can be found at: **www.sick.com/psirt** .

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