

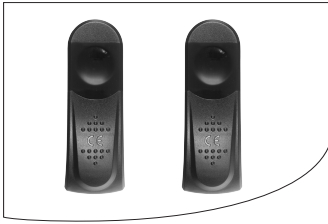
# Mounting and Installation Manual



## Light barrier SX5

for RolloPort SX5 garage door drive

Item no.: 8000 00 51



VBD 607-4 (11.13)

### 1. These instructions...

- ◆ ...describe how to mount and install your **SX5 light barrier**.
- ◆ Before you begin, please read these instructions through completely and follow all the safety instructions.
- ◆ Please store these instructions in a safe place and pass them on to any future owners.
- ◆ Damage resulting from non-compliance with these instructions and safety instructions will void the guarantee. We assume no liability for any consequential damage.

### 2. Key to symbols



#### Risk of fatal electric shock.

This sign warns of danger when working on electrical connections, components, etc. It requires that safety precautions be taken to protect the life and health of the person concerned.



#### Danger area, this concerns your safety.

Please pay particular attention and carefully follow all instructions marked with this symbol.

#### NOTE

This is to draw your attention to information that is important for trouble-free operation.



Please read the operating instructions for the external devices specified at this point (e.g. garage door drive).

### 3. General safety information



#### Work on electrical systems entails the risk of fatal electric shock.

- ◆ Allow only a qualified electrician to perform the electrical connection of the light barrier SX5 in accordance with the connection instructions in this manual.
- ◆ Always remove the power cable plug from the mains socket prior to undertaking any work on the door or door drive.



#### The use of defective equipment can lead to personal injury and damage to property.

Never use defective or damaged equipment. Please contact our Customer Service department in this event.

### 4. Proper use

Use the SX5 light barrier exclusively for:

- ◆ securing garage door movements with the following garage door drives:
  - RolloPort S2
  - RolloPort SX5
  - RolloPost SX5 DuoFern
- ◆ for non-commercial use

Any other usage would be regarded as improper use.

#### Operating conditions:

- ◆ The power supply for the SX5 light barrier is provided by the respective garage door drive. A separate power supply for the light barrier is not required.

### 5. Improper use

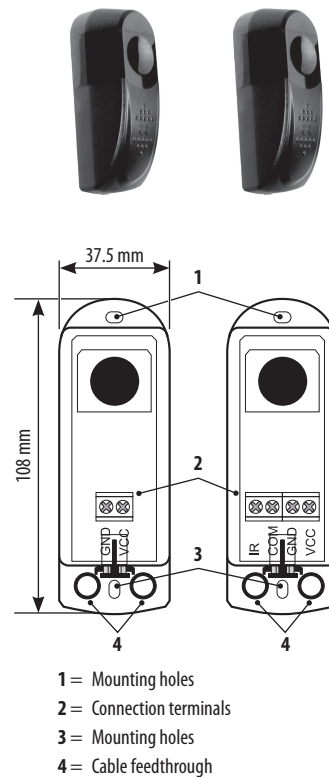
Using the SX5 light barrier for purposes other than previously mentioned is impermissible and is regarded as improper use.

### 5. General view

Figure 1

Transmitter (TX) \*

Receiver (RX) \*



\* You can recognize the transmitter (TX) at the 2-pin and the receiver (RX) on the 4-pin terminal block, see line drawing.

### 6. Functional description

The SX5 light barrier is an infrared sensor consisting of a transmitter (TX) and receiver (RX). It is used to secure the lowering garage door when using automatically-driven garage door drives (e.g. RolloPort SX5 DuoFern).

Transmitter (TX) and receiver (RX) have to be mounted opposite each other.

If the signal of the light barrier is interrupted during the downward movement of the garage door, the garage door stops and the direction is reversed.

The electrical connection and power supply is provided via the respective garage door drive RolloPort SX5 or RolloPort SX5 DuoFern.

### 7. Important information for ensuring the correct installation position.



Observe the safety and installation instructions of the garage door manufacturer and those of the garage door drive.

In doing so, please refer to the respective operating manual.



#### An incorrect installation position may lead to interference with reception.

The receiver may not be exposed to direct sunlight on completion of the installation.

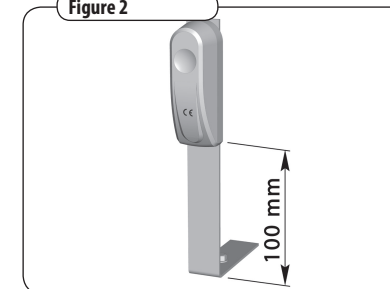
#### The correct installation position:

Transmitter and receiver must be at the same height and installed adjacently, see figures 2/3.

#### The correct installation height:

10 cm from the garage floor to the lower edge of the light barrier.

Figure 2



#### Gap between transmitter and receiver:

Minimum gap: approx. 2 m

Maximum gap: approx. 12 m \*

\* Please refer to chapter 10, Technical Specifications for transmission ranges and environmental conditions.

### 7.1 Installation

#### 1. Remove the respective housing cover of the transmitter / receiver from the base plate.

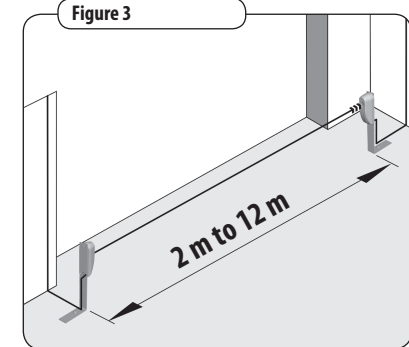
#### 2. Fasten the light barrier in accordance with the on-site conditions, for example:

- ◆ to the garage wall
- ◆ to the door structure
- ◆ to the garage floor

Use commercially available mounting brackets / screws and dowels, etc.

### 7.1 Installation

Figure 3



### 8. Important information regarding the electrical installation



#### Incorrect connection may lead to malfunctions.

- ◆ The electrical connection must comply with the specifications in the operating instructions of the garage door drive and according to the connection diagram in this manual, see chapter 8.1 / Figures 4/5.



#### Mortal danger due to electrocution when working on electrical systems.

- ◆ Switch off the mains power and check that the system is de-energised prior to connecting the light barrier.



#### Damaged cables can lead to short-circuits and destruction of the light barrier and garage door drive.

Lay the connecting cables for the transmitter (TX) and receiver (RX) safely in a conduit or cable duct to the garage door drive.

## 8.1 Connect transmitter (TX) and receiver (RX)



Connection of the transmitter (TX) and receiver (RX) must be undertaken as specified in the manual for the garage door drive.

### Information about the connecting cable

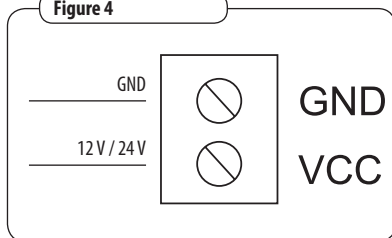
The connecting cables must have in each case a core diameter of minimum  $\varnothing = 0.5 \text{ mm}^2$ .

### Order of connection:

1. **Unplug the power plug from the wall socket or switch off the supply line to the garage door drive before commencing connection of the light barrier.**
2. **Route the respective cables within the conduit or cable duct from the transmitter (TX) / receiver (RX) to the garage door drive.**
3. **Connect the transmitter (TX) and receiver (RX) to the garage door drive. In order to do so, follow the information provided in the operating manual for the respective garage door drive.**

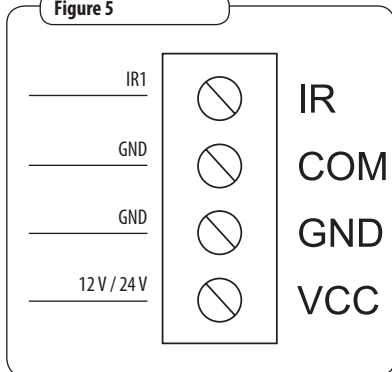
### Terminal assignment in transmitter (TX)

Figure 4



### Terminal assignment in receiver (RX)

Figure 5



## 8.1 Connect transmitter (TX) and receiver (RX)

4. **Close both housings by pressing the housing covers onto the base plates until they click in place.**

### 9. Carry out a function test

1. **Switch the mains power to the garage door drive back on.**
2. **First power the garage door drive to the upper end point.**
3. **Switch the garage door drive to downwards motion.**  
The garage door closes.
4. **Wait 2 seconds and break the light barrier signal.**  
For example, using a long stick.
5. **The garage door must stop and subsequently open up again until it reaches the upper end point.**
6. **After a successful function test the garage door drive (including light barrier) is ready for use.**

## 10. Technical Specifications

Sensor type:	IR (infrared sensor)
Supply voltage:	12 to 24 V AC / DC AC = (50/60 Hz)
Shaft length:	940 mm
Transmission frequency:	2.5 kHz
Transmission range:	12 m to 20 m The range can be reduced by up to 30% as a result of poor weather conditions on site (e. g. fog / haze).
Input signal:	RX = 40 mA TX = 50 mA
Relay output:	150 mA, max. 27 V
Max. angular tolerance between transmitter / receiver:	+/- 5 °
Protection type:	II
Permissible ambient temperature range:	- 20 °C to + 70 °C
Dimensions:	
- height x width x depth:	108 x 37.5 x 36 mm

## 11. Maintenance

Dust and other environmental conditions can affect the function of the light barrier. For this reason, you should clean the front of the transmitter (TX) and receiver (RX) regularly with a damp cloth.

### 12. Regular maintenance



#### Defective door systems and safety equipment results in the risk of injury.



Carry out an annual function test on the light barrier, see chapter 9. In order to do so, follow the information provided in the operating manual for your garage door drive.

### 13. CE Mark and EC Conformity

The **SXS light barrier** (item no. 8000 00 51) complies with the requirements of the current European and national directives.



2004/108/EC  
EMC Directive

Conformity has been verified. The corresponding declarations and documentation are available on file at the manufacturer's premises.

## 14. Warranty conditions

RADEMACHER Geräte-Elektronik GmbH provides a 24-month warranty for new systems that have been installed in compliance with the installation instructions. All construction faults, material defects and manufacturing defects are covered by the warranty.

### The following are not covered by the warranty:

- ◆ Incorrect fitting or installation
- ◆ Non-observance of the installation and operating instructions
- ◆ Improper operation or wear and tear
- ◆ External influences, such as impacts, knocks or weathering
- ◆ Repairs and modifications by third parties, unauthorised persons
- ◆ Use of unsuitable accessories
- ◆ Damage caused by unacceptable excess voltages (e.g. lightning)
- ◆ Operational malfunctions caused by radio frequency overlapping and other such radio interference

## 14. Warranty conditions

RADEMACHER shall remedy any defects, which occur within the warranty period free of charge either by repair or by replacement of the affected parts or by supply of a new replacement unit or one to the same value. There is no general extension of the original warranty period by delivery of a replacement or by repair as per the terms of the warranty.

The warranty shall not comprise further claims, in particular, the warrantor shall not be liable for damages resulting from faultiness of the device. Should the warranty claim not be justified (e.g. upon expiry of the warranty period or in the event of defects beyond the warranty claim), the warrantor may try to repair the device for you at a reasonable/low price.

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\* 30 seconds free of charge, subsequently 14 cents / minute from German fixed line networks and max. 42 cents / minute from German cellular networks.