

GC 338



152969-03

**GEZE**




Original operating instructions for device version V.03

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## Symbols and illustrations

In order to ensure correct installation, important information and technical notes are listed below.

Symbol	Meaning
	Means "important information"; Information on avoiding material damage, understanding a concept or optimising the operation sequences
	Means "additional Information"
	Symbol for an action: This means you have to do something. ▶ If there are several actions to be taken, keep to the given order.

## Abbreviations

<b>OHS</b>	Opposite hinge side
<b>HS</b>	Hinge side
<b>E</b>	Receiver
<b>HSK</b>	Main closing edge
<b>I</b>	Interface
<b>NSK</b>	Secondary closing edge
<b>S</b>	Transmitter

## Product liability

In accordance with the manufacturer's liability for its products as defined in the German "Product Liability Act", the information contained in this brochure (product information and intended use, misuse, product performance, product maintenance, information and instruction obligations) must be adhered to. Failure to comply releases the manufacturer from its statutory liability.

### 1 Safety

#### 1.1 Intended use

The GC 338 sensor strip may only be used to protect swing and revolving doors with GEZE drives. The minimum object size is 20 x 30 x 70 cm (reference body CA according to EN 16005 upright). The sensor can be used to secure swing and revolving doors against impact and trapping of the human body.

Any use other than the intended use, as well as all changes to the product, are not permissible.

#### 1.2 Safety notes

- The prescribed mounting, maintenance and repair work must be performed by personnel authorised by GEZE.
- The device must only be operated with safety extra-low voltage that complies with the Safety Extra-Low Voltage (SELV) requirements in the safety standards based on IEC 60950.
- The country-specific laws and regulations are to be observed during safety-related tests.
- If unauthorised changes are made to the system, GEZE cannot be held liable in any way whatsoever for any resulting damage, and the statement of approval for use in escape and rescue routes is no longer valid.
- GEZE does not accept any warranty for combinations with third-party products.
- Only original GEZE parts may be used for repair and maintenance work.
- Observe the latest versions of guidelines, standards and country-specific regulations, in particular:
  - ASR A1.7 "Doors and gates"
  - DIN 18650 "Building hardware – Automatic door systems"
  - DIN EN 16005 "Power operated pedestrian door sets – Safety in use – Requirements and test methods"
  - Accident-prevention regulations, especially BGV A1 "General regulations" and BGV A2 "Electrical installations and equipment"

### 1.3 Safety-conscious working

- Secure workplace against unauthorised entry.
- Watch the swivelling range of long system parts.
- Secure the cover/drive panels against falling.
- Attach safety stickers to glass leaves.
- Danger of injury with opened drive. Hair, clothing, cables, etc. can be drawn in by rotating parts!
- Danger of injury caused by unsecured crushing, impact, drawing-in or shearing spots!
- Danger of injury due to glass breakage.
- Danger of injury due to sharp edges in the drive.
- Danger of injury during installation through freely moving parts.

### 1.4 Environmentally conscious working

- When disposing of the door system, separate the different materials and have them recycled.

## 2 Validity

Valid for devices from version:

Transmitter	V.03	SW:C
Receiver	V.03	SW:H
Interface	V.03	SW:H



The functions the sensor can operate are determined by the module with the lowest software/hardware status.

## 3 Description

The GC 338 sensor is a type 2 non-contact safety device according to EN 12978 section 4.3.3 and a protective device of the category 2 PL d according to EN ISO 13849-1.

Mutual interference between several sensor systems with dangerous effects is not possible.

Unwanted stop signals due to mutual interference are possible on converging door leaves if their measuring spots overlap. Such overlapping of the measuring spots could be minimised by moving the sensors relative to each other. There is no mutual interference between the sensors of the two door leaves on double-leaf doors.

The GC 338 sensor strip has active infrared sensors for detecting people for automatic swing doors and revolving doors in the 1200 mm and 1500 mm variants.

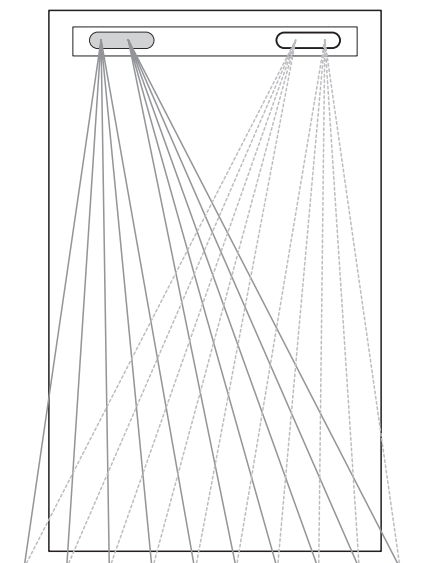
Variant	1200 mm	1500 mm
EV 1	142219	142757
According to RAL	142825	142827

The sensor forms an almost rectangular universal detection area for each door side.

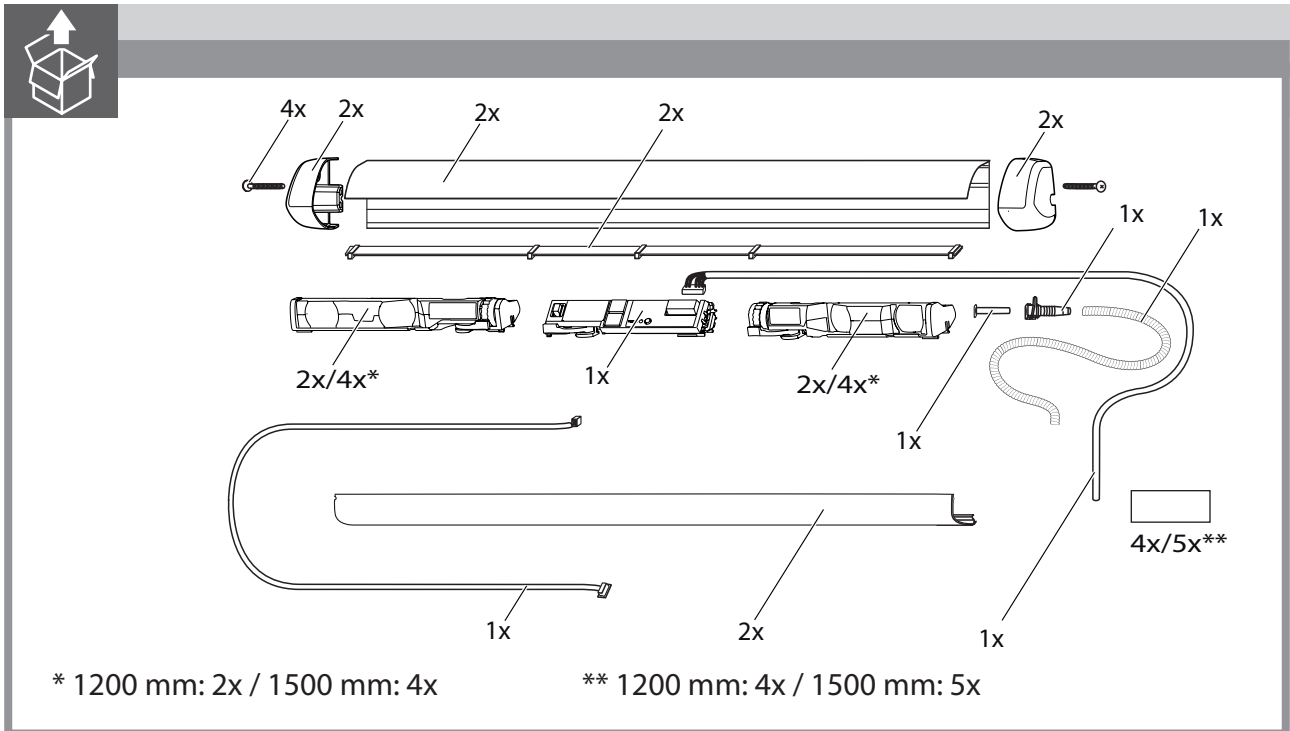
If a person or object interrupts one or more of the light beams, the sensor triggers the switching function.

The detection area automatically adjusts to the door width, whereby the sensor switches off any superfluous beams. The slight angle of the outer beams makes the main and secondary closing edges of doors safer.

The sensor system has been designed as a modular system and can be adapted to various door widths and environmental conditions.



### 3.1 Supplied by GEZE

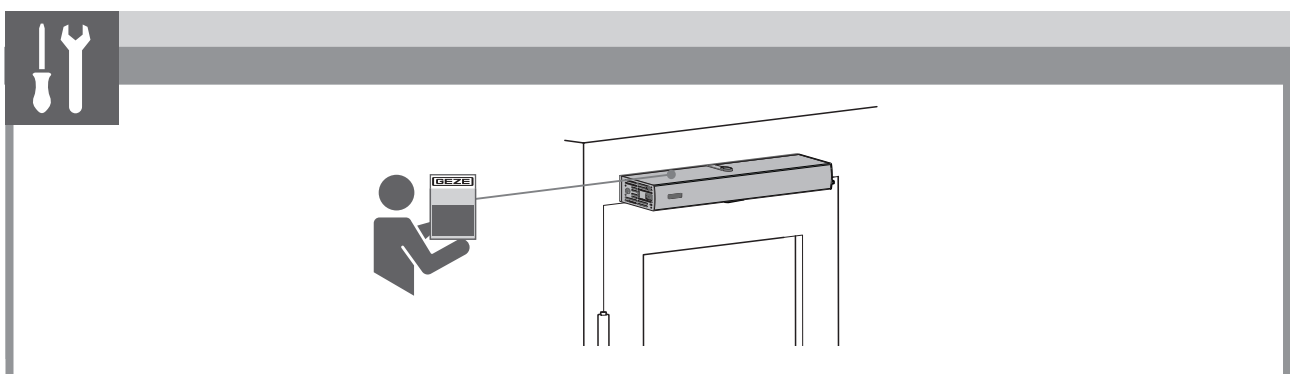


What is supplied by GEZE varies depending on the type of door.

2-leaf doors	<ul style="list-style-type: none"> <li>▫ 2 x 1-leaf door packages</li> </ul>
Fire protection doors / glass doors	<ul style="list-style-type: none"> <li>▫ 1-leaf door package</li> <li>▫ 1 interface set</li> </ul>

## 4 Work to be done before installation

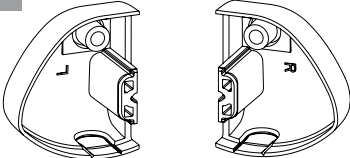
### 4.1 Installing the drive



## 4.2 Preparing the door transmission cable

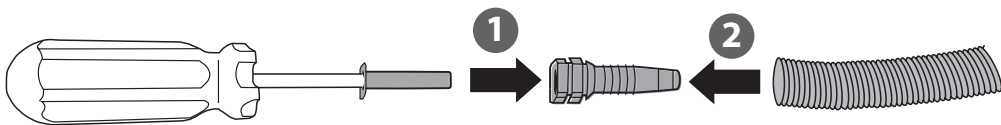
**!** If only one interface is required, only one door transmission cable and one end cap need to be prepared.

**1**

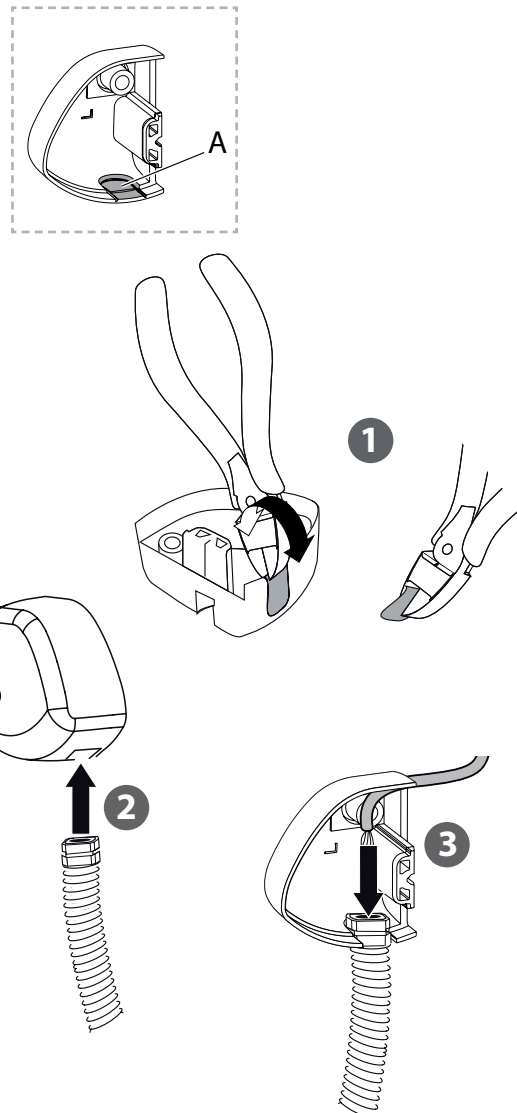


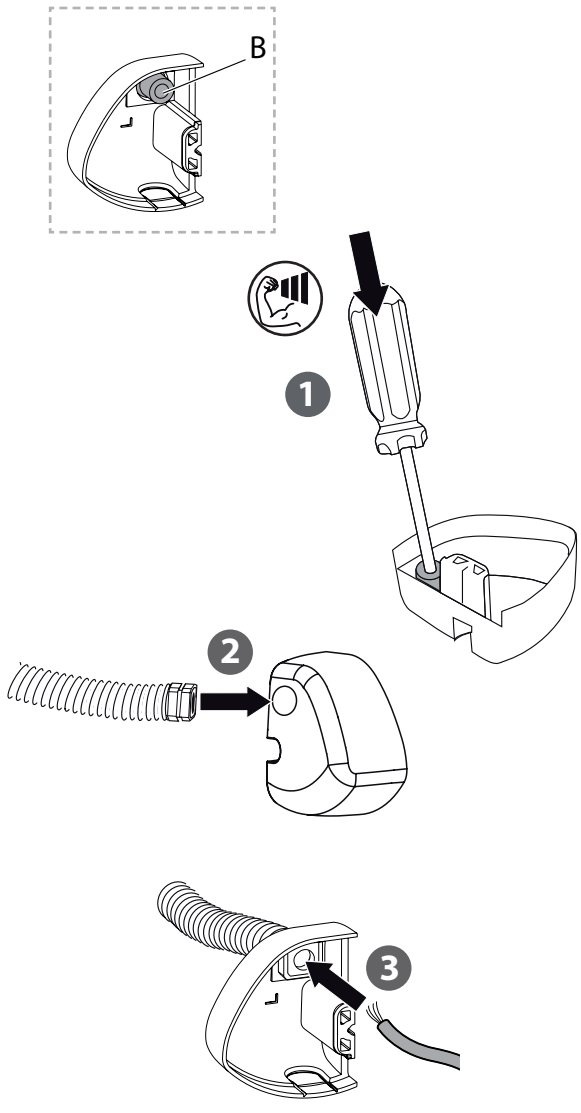
► If the hinge side is on the left, choose the **left** end cap.  
If the hinge side is on the right, choose the **right** end cap.

**2**



**3**





## 5 Installation

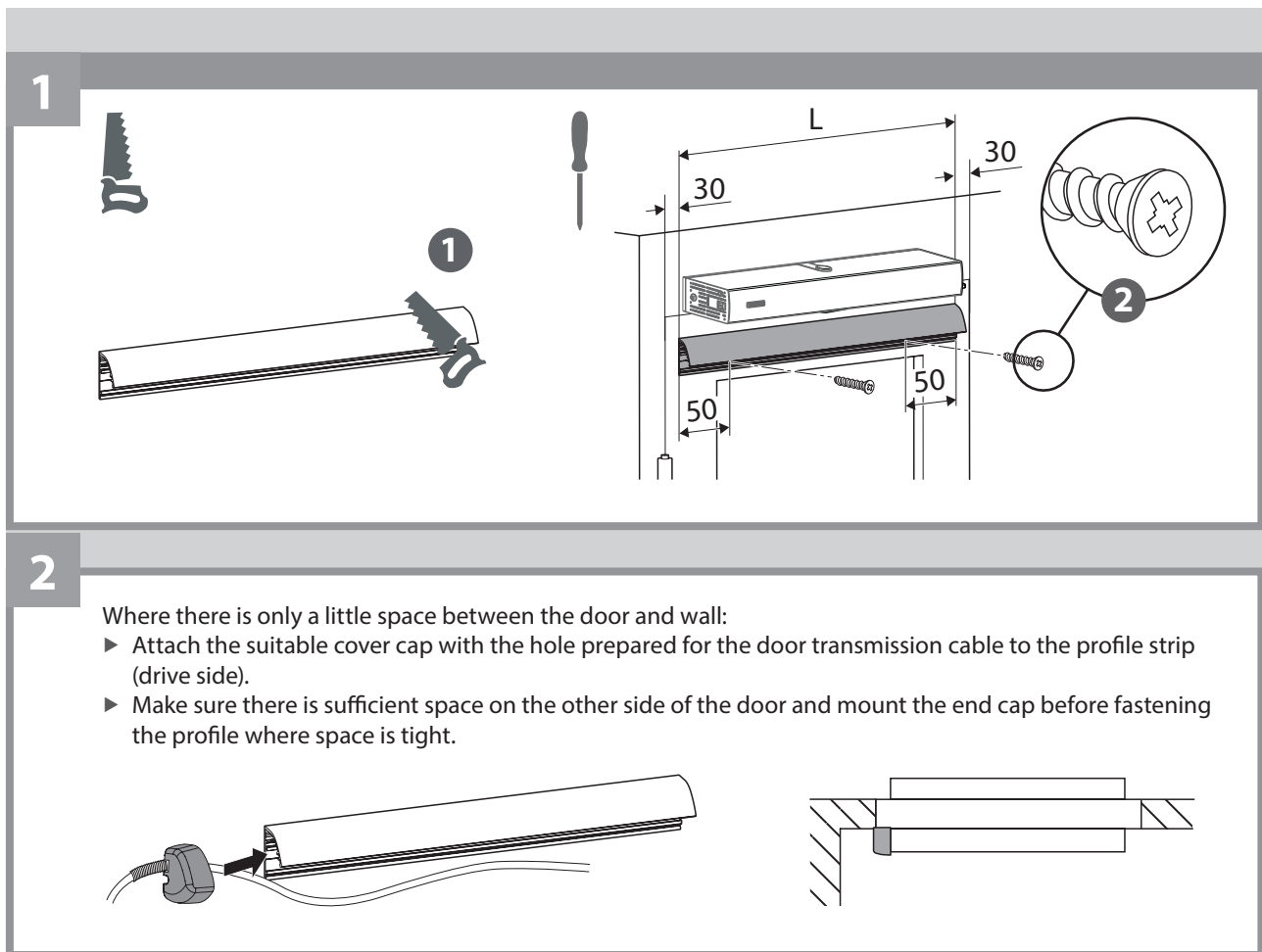
### 5.1 Preparations

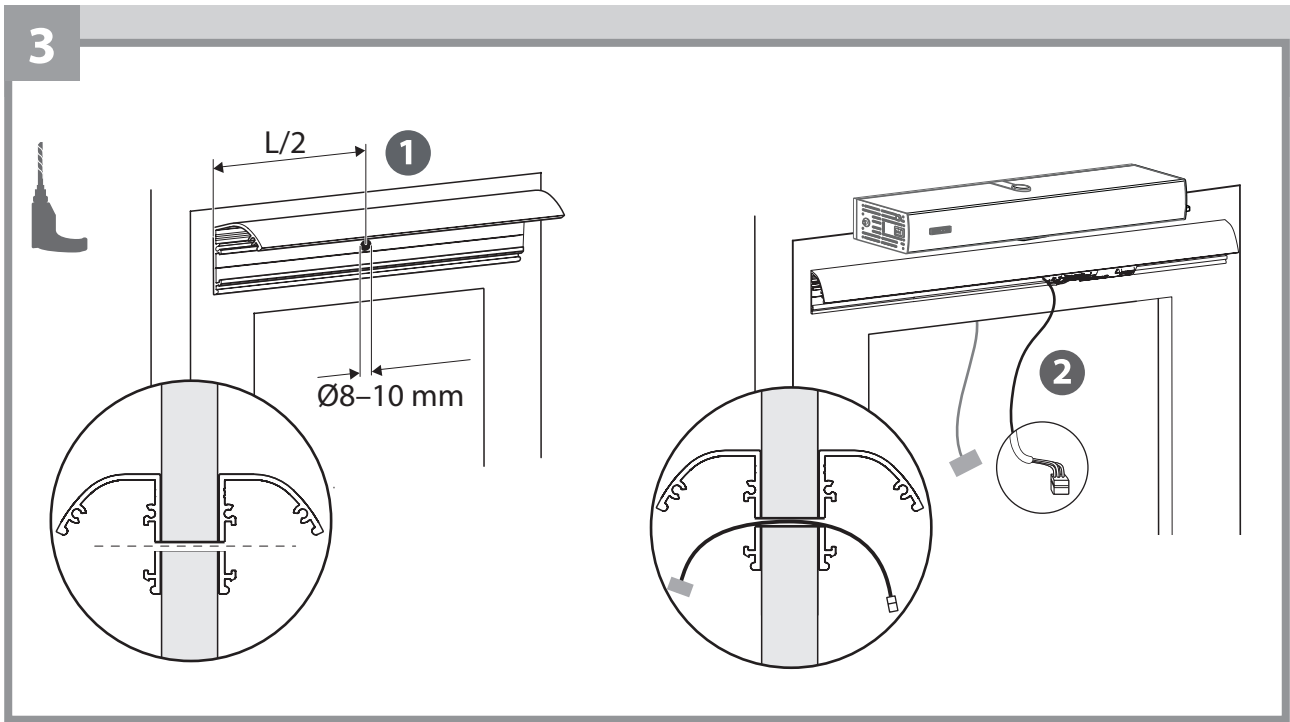


- When two interfaces are used (e.g. on fire protection doors or glass doors), there is no need to drill through the door for the connection cable HS/OHS.
- When a GC GR sensor roller guide rail is used, this must be attached to the door in accordance with the enclosed instructions. Follow the working steps shown below to mount the sensor to the sensor roller guide rail.



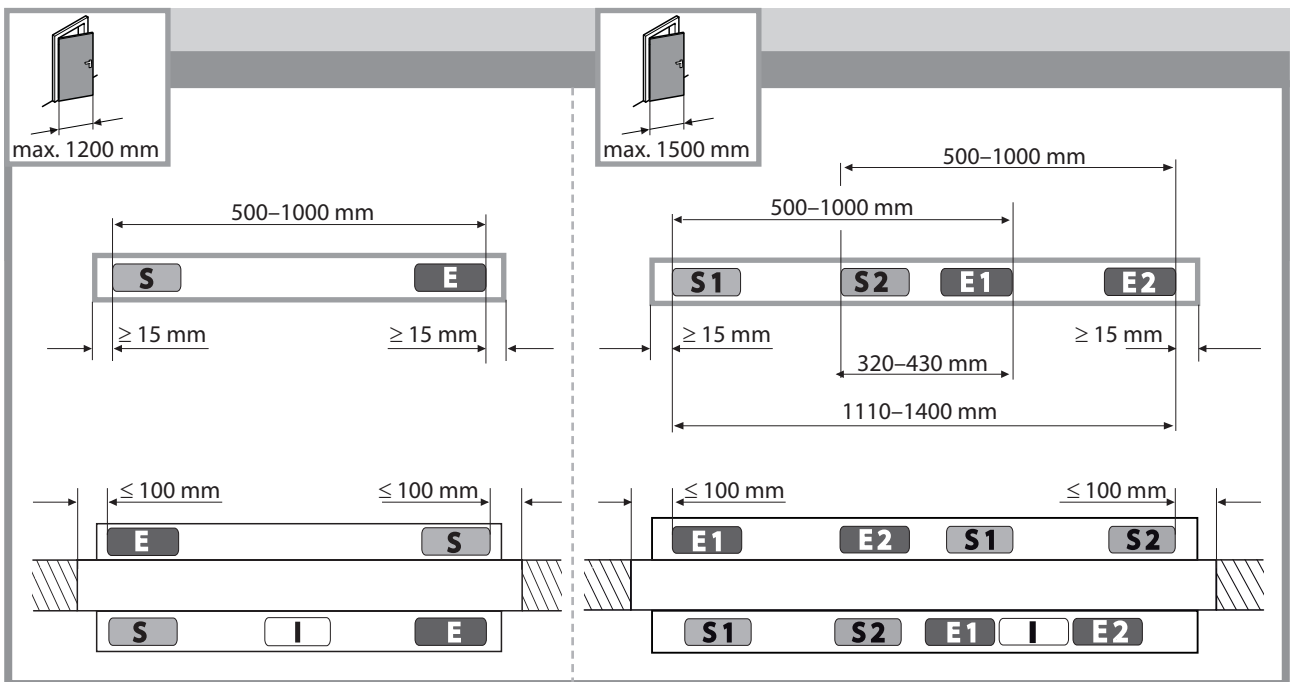
- ▶ Before drilling, check whether drilling through the door is permissible.
- ▶ Use countersunk head screws to mount the profile strips. It is helpful to countersink the drill holes. This guarantees that the modules can be moved.
- ▶ Use a weather hood in non-covered external areas.





### 5.2 Position of the modules

**i** The maximum dimensions apply to an installation height of 2.1 m.





### 5.3 Installation of the modules

The diagram illustrates the correct and incorrect ways to handle the sensor strip during installation. On the left, two scenarios are shown: the top one shows a hand using side cutters to cut the strip, marked with a warning triangle and a 'no' symbol; the bottom one shows the strip being cut with a pair of scissors, marked with a checkmark. On the right, two scenarios are shown: the top one shows a hand pulling the strip from a connector, marked with a warning triangle and a 'no' symbol; the bottom one shows a hand inserting the strip into a connector, marked with a checkmark.

**1** **S**

The diagram shows the sensor strip being rotated 90 degrees, as indicated by the curved arrow and the '90°' label.

**2**

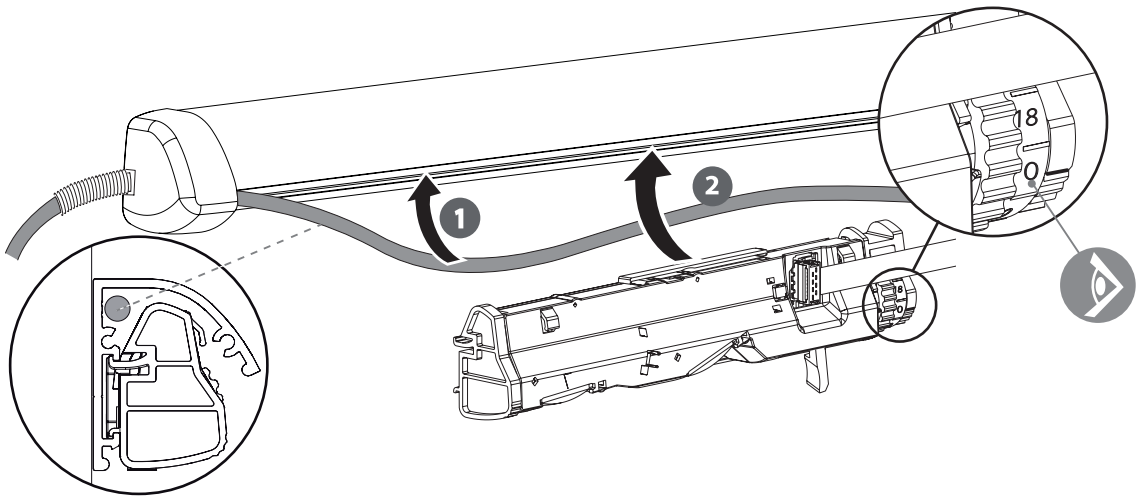
**!** Only insert or remove the connector kit when in voltage-free state.

The diagram shows the connector kit being inserted into the sensor strip. On the left, two views of the connector kit are shown: the top one is marked with a 'no' symbol, and the bottom one is marked with a checkmark. On the right, a detailed view shows the connector kit being inserted into the sensor strip, with arrows 1 and 2 indicating the direction of insertion. The sensor strip is labeled with '16' and '18'.

3

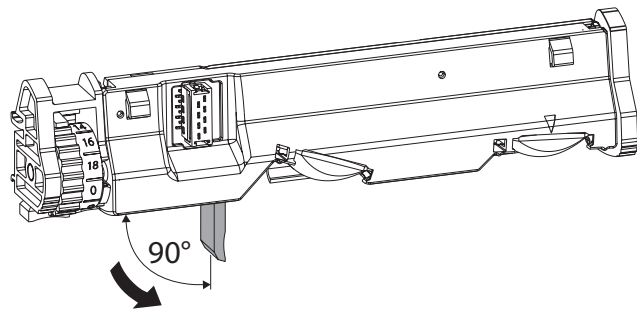
i

The module has been engaged correctly if it can be moved easily.

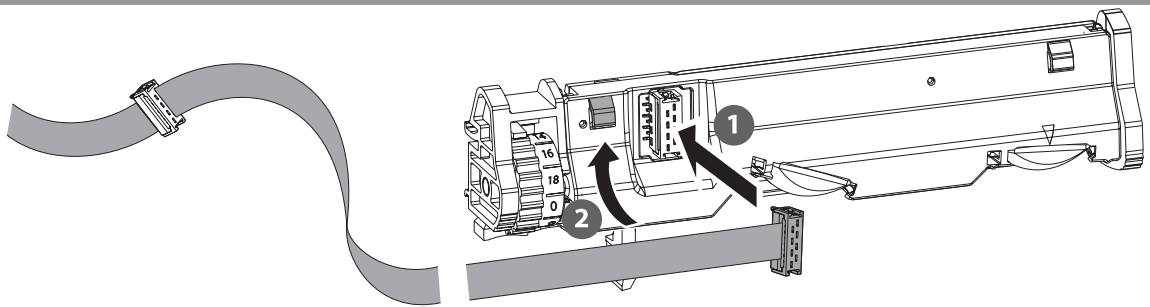


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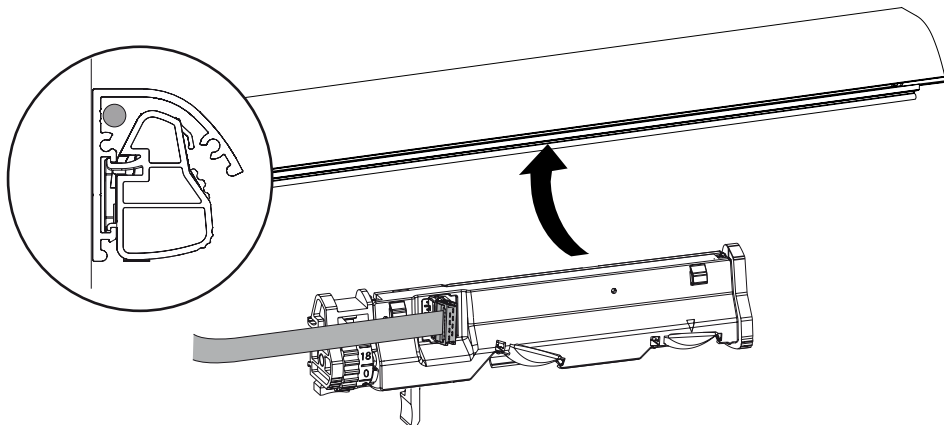
E



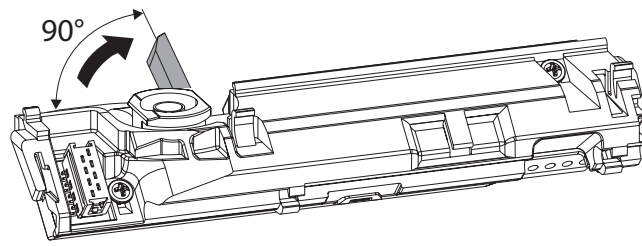
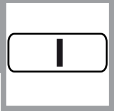
5



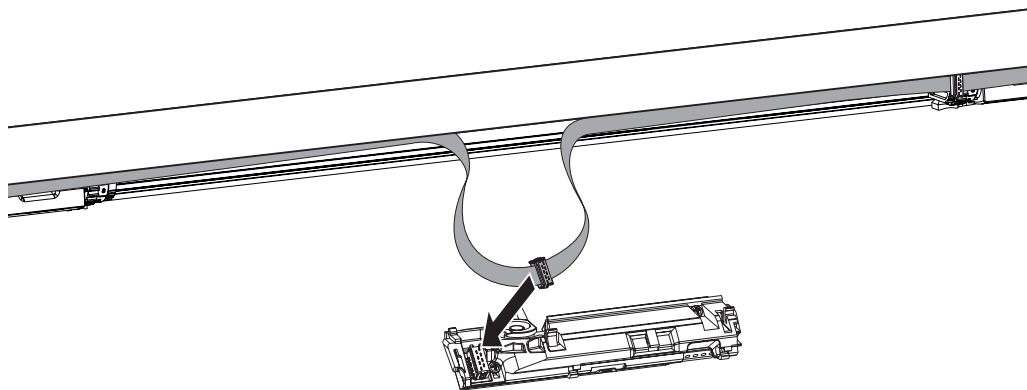
6



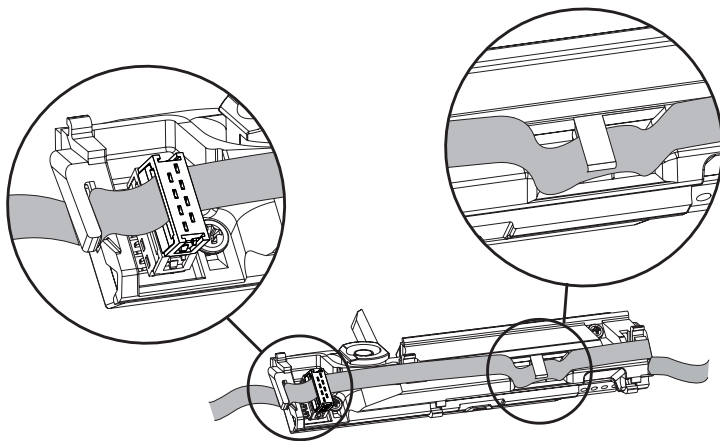
7



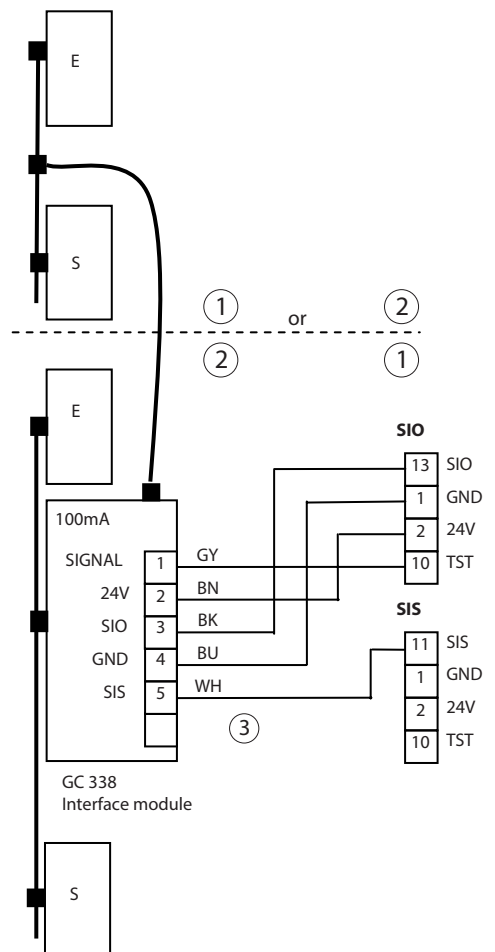
8



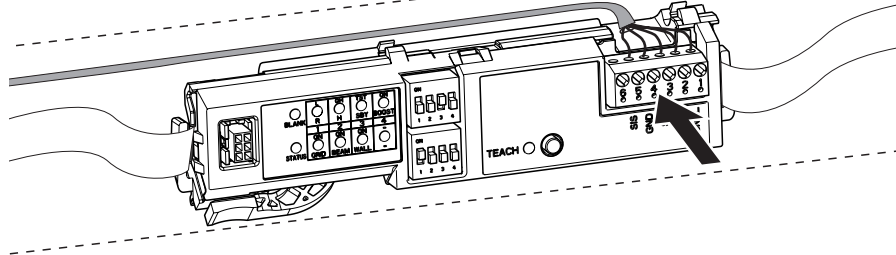
9



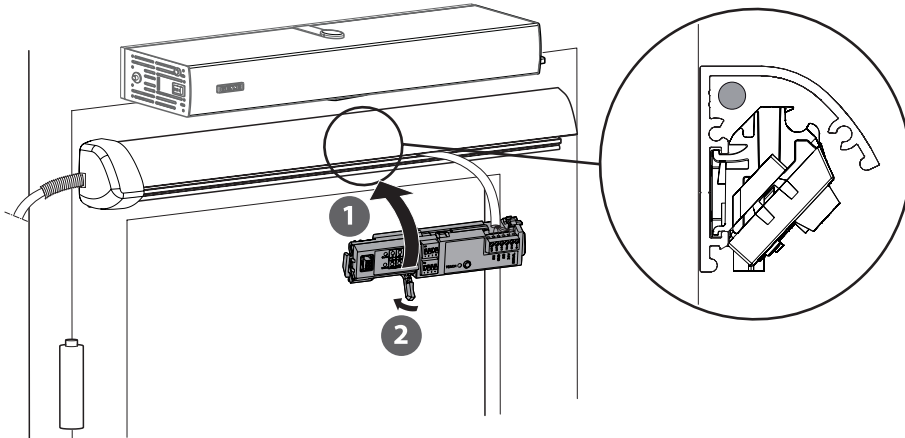
- 1 Opposite hinge side
- 2 Hinge side
- 3 Door transmission cable



10

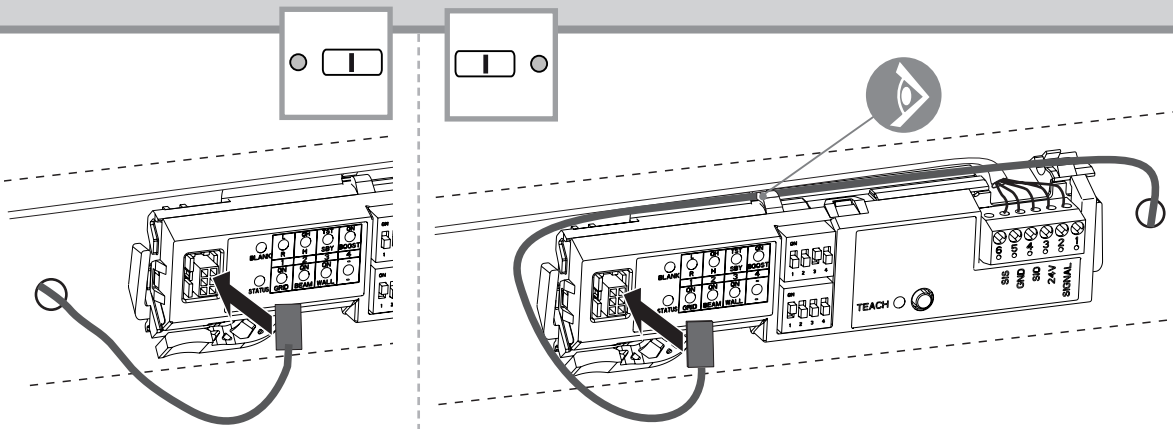


11

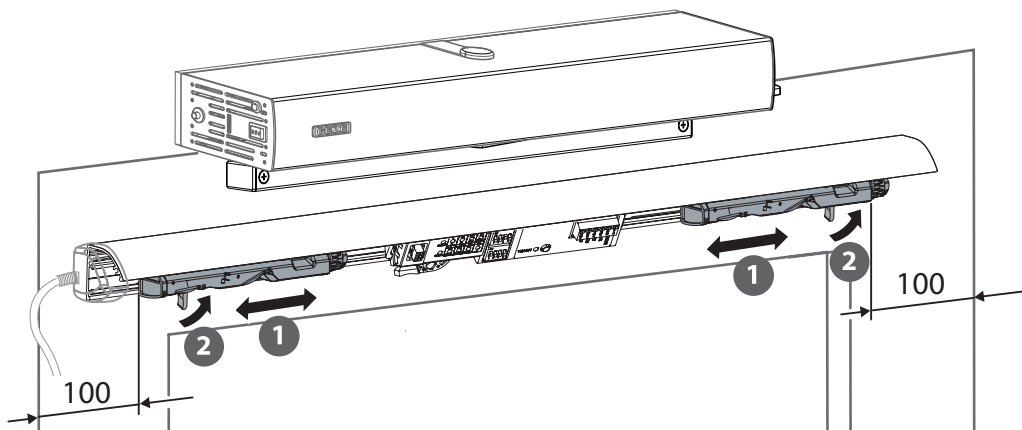


► Engage the interface in the profile strip. Make sure you do not cover the drill hole for the HS/OHS connection cable.

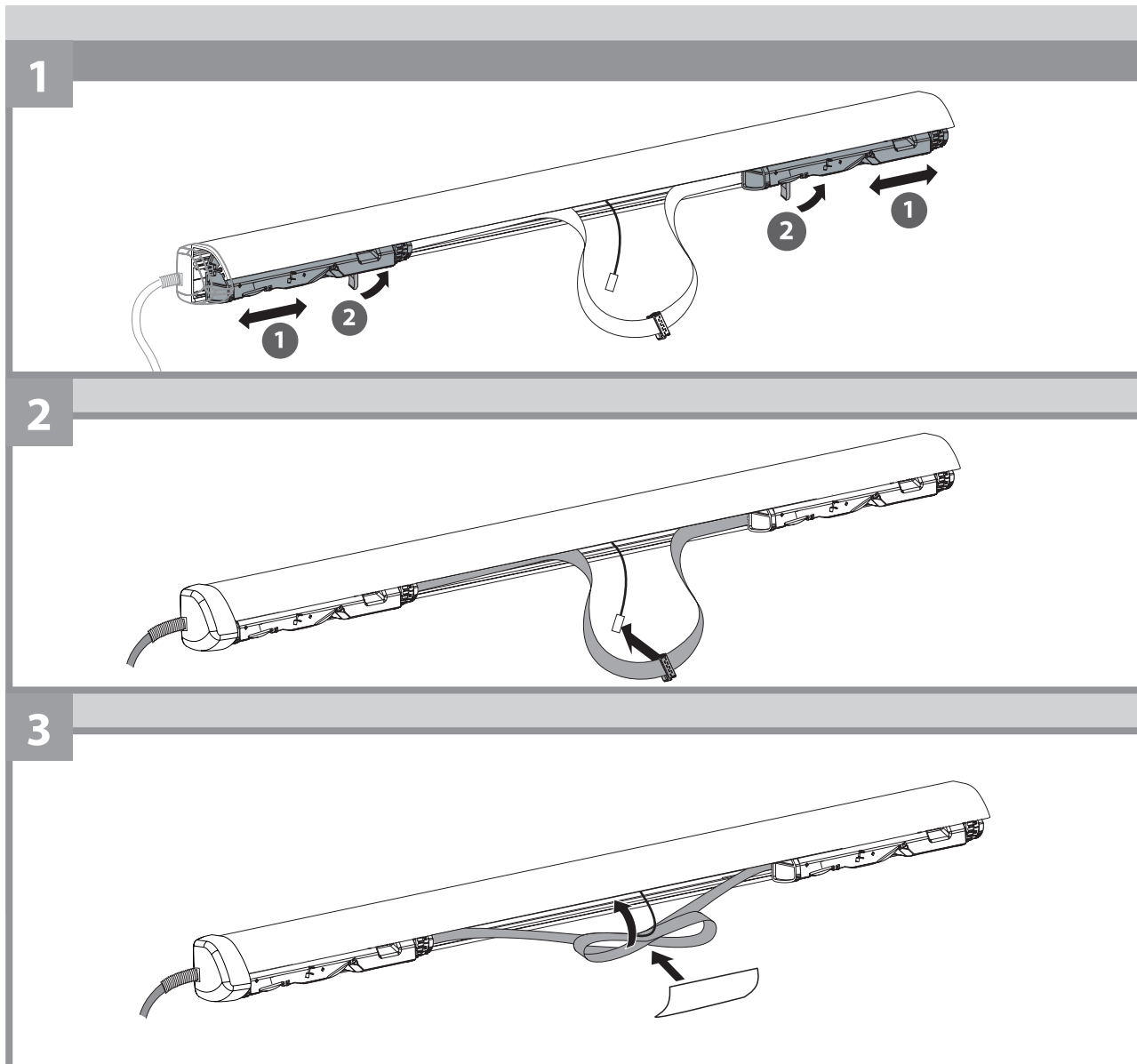
12



13



## 5.4 Preparing the transmitter and the receiver for the other side of the door



## 5.5 Special installation situations

**!** The special installation situations are described in chapter 8.

## 6 Commissioning

### 6.1 Teaching the drive

- ▶ Refer to the wiring diagram of the drive.
- ▶ Teach the drive without closing/opening safety sensor (SIO/SIS): Set SIS/SIO to “not used”.

Following successful teach-in:

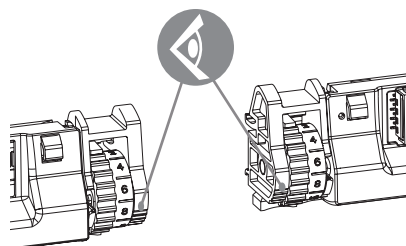
- ▶ Set the required opening and closing speed for the drive.
- ▶ Insert the sensor on the drive.

### 6.2 Sensor teach-in

#### 6.2.1 Preparing the transmitter and the receiver

**!** All the receivers/transmitters on the same side of the door must have the same angle setting.

- ▶ Check the position of the setting wheels on **both** sides of the door.

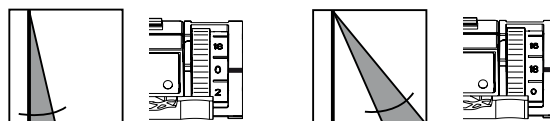


Recommended sensor setting according to DIN 18650/EN 16005:

Setting of setting wheel	Installation height [m]
4	1.9–2.2
2	2.5
1	3.0
0	3.5

0 = smallest deflection



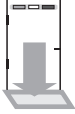
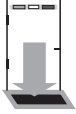


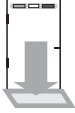
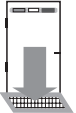



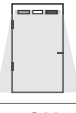



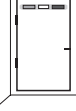
18 = largest deflection



#### 6.2.2 Configuring the DIP switch at the interface

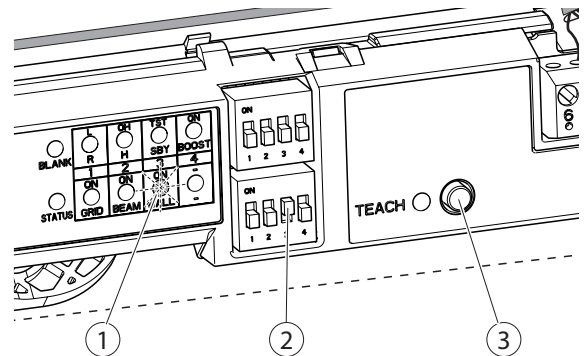
- ▶ Configure the DIP switch before the sensor teach-in process is started.
- ▶ Push the DIP switch **upwards** for the ON position and **downwards** for the OFF position.

Row/DIP	Switch position	OFF/ON <b>Default setting</b>		Comment
Row 1 DIP 1	 ON 1 2 3 4  OFF 1 2 3 4	<b>OFF</b> R (right) 	<b>ON</b> L (left) 	EDGE: Position of the secondary closing edge to the interface
Row 1 DIP 2	 ON 1 2 3 4  OFF 1 2 3 4	<b>OFF</b> H (hinge side) 	<b>ON</b> OH (opposite hinge side) 	SIDE: Positioning of the interface
Row 1 DIP 3	 ON 1 2 3 4  OFF 1 2 3 4	<b>OFF</b> SBY (standby) 	<b>ON</b> TST (test) 	SIGNAL: In test mode (ON) the function of the sensor strip is checked regularly by the drive. Stand-by mode (OFF) also allows the sensor strip to be switched to energy-saving mode. The setting must be carried out corresponding to the drive used (see drive wiring diagram).

Row/DIP	Switch position	OFF/ON Default setting		Comment
Row 1 DIP 4	 	<b>OFF</b> Normal 	<b>ON</b> Increased 	<b>BOOST:</b> Reduces the sensitivity of the receiver and increases the response time from 50 ms to 200 ms. Activate this wherever very dark floors, stainless steel thresholds or high mounting heights are involved. ▶ If necessary, adjust the door speed to the increased reaction time.
Row 2 DIP 1	 	<b>OFF</b> Normal 	<b>ON</b> Grid 	<b>GRID:</b> Enables use with gratings, even with a shaft, steps or sloping floors in the door swing area. Switch the GRID mode off in the following installation situations: <ul style="list-style-type: none"> <li>▫ frequent changes to the characteristics of the floor (fallen leaves, snow etc.)</li> <li>▫ high mount height or dark floors (with display: "Function reserve")</li> <li>▫ Faulty wall blanking (error during teach-in)</li> </ul>
Row 2 DIP 2	 	<b>OFF</b> Comfort beams 	<b>ON</b> Comfort beams 	<b>BEAM:</b> Increases the detection range for additional safety. Switch on if the deflected beam does not collide with a jamb. ▶ Carry out a teaching run if necessary.
Row 2 DIP 3	 	<b>OFF</b> Wall blanking inactive 	<b>ON</b> Wall blanking active 	<b>WALL:</b> Makes teaching of a wall possible. If the door opens against a wall, the wall blanking feature can be activated. A teaching run is necessary. ▶ Set parameter for wall blanking in the drive if necessary. ▶ If an error occurs during sensor teach-in when wall blanking is activated, deactivate GRID mode if necessary.

If one or more DIP switches (2) are changed, the corresponding green DIP-LED flashes. (1)

- ▶ Press the red "TEACH" button (3) 1x.  
The DIP switch setting is confirmed and applied.  
The LEDs switch off after 20 seconds.



- 1 DIP-LED green
- 2 DIP switch
- 3 "TEACH" push button red



To display the settings again:

- ▶ Press the "TEACH" push button (3) briefly 1x.
  - The DIP-LEDs on the DIP switches set to ON light up green.

### 6.2.3 Starting the teach-in process

The teach-in process is used to memorise any floors and walls which may be there.

The TEACH-LED provides information about the teach-in of the floor and the BLANK-LED provides information about the teach-in of the wall. If objects (radiators, projections or pillars) unsuitable for the teach-in process are in front of the wall, the sensor only teaches the wall up to the detection of the unsuitable object.

- ! ▶ Before teaching the sensor: Put the movement detector out of operation.
- ▶ Make sure there are no objects in the direct vicinity of the sensors.
  - Do not change operating mode during the learning process.
  - The door leaf must not be reversed during the teach-in process.
- ▶ The sensor must be taught again if there is a change in drive speed.

If there is a grid or any steps or ramps near the door swivelling range:

- ▶ Switch the GRID mode to ON.

If the grid is larger than the door width:

- ▶ Cover the area of the floor detected by the sensor (e.g. with paper or a painter's sheet).

If there is no wall within the detection area of the door:

- ▶ Set WALL to OFF.

If there is a glass wall within the swivelling range of the door:

- ▶ Cover the glass wall for the teach-in process (e.g. with paper or a painter's sheet up to a height of approx. 1 m)

- i GEZE recommends teaching the drive and the sensor separately:
    - ▶ Set the parameter closing/opening safety sensor (SIO/SIS) to "active".
- If the door is reversed, teach-in may have to be repeated.

#### Starting the teach-in process

LEDs light up:

- ▶ Press the "TEACH" push button (2) 1x.

LEDs do not light up:

- ▶ Press the "TEACH" push button (2) 2x.

The yellow TEACH-LED (1) begins to flash slowly (1 Hz).  
The sensor is learning the floor.

WALL OFF:

The TEACH-LED (1) goes off, the teach-in has been completed successfully. The BLANK-LED (3) remains off during the teach-in.

WALL ON:

- ▶ As soon as the yellow TEACH-LED (1) flashes faster, control the operator so that the door opens and closes again.

As soon as the TEACH-LED (1) has stopped flashing, the sensor has been taught.

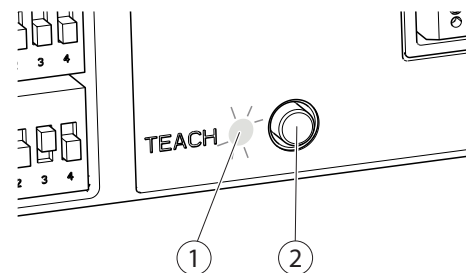
The BLANK-LED (3) indicates whether a wall has been taught completely. If there is a wall near the door and the BLANK-LED (3) is off, the wall has not been taught completely.

If the door does not open completely:

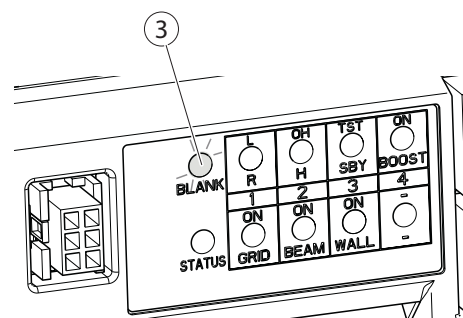
- ▶ Set wall blanking on the drive (row 2 – DIP 3 ON).

If the teach-in was not successful:

- ▶ Check the position of the modules and the angle setting.
- ▶ Repeat teach-in.



- 1 TEACH-LED yellow
- 2 "TEACH" push button



- 3 BLANK-LED green

- ! If settings have been changed on individual modules:
  - ▶ Repeat sensor teach-in (see chapter 6.2).



## 6.3 Putting the drive and sensor into operation



Before the drive and the sensor can be put into operation, the teach-in processes must have been completed correctly. In case of faulty function:

- ▶ See chapter 8.2.

- ▶ Refer to the wiring diagram of drive.

Deactivated energy-saving mode:

- ▶ Set "Input signals", "SI1 – terminal SIS" and "SI3 – terminal SIO" to "NC" (factory setting).
- ▶ Set "Output signals", "Testing SI" to "Testing with 24 V".

Active energy-saving mode (row 1 – DIP 3 OFF):



The energy-saving mode is not supported by every drive.

- ▶ To activate energy-saving mode, test and parameterise the SIS and SIO signals on the drive and sensor at the same time.
- ▶ Refer to the wiring diagram of the drive for this.

- ▶ Set "Input signals", "SI1 – terminal SIS" and "SI3 – terminal SIO" to "Frequency".
- ▶ Set "Output signals", "Testing SI" to "Energy-saving mode".

If the BLANK-LED does not light up, the wall can be detected as an obstacle by the sensor. The drive does not open completely. Wall blanking must be optimised on the drive:

- ▶ Check the scanned area of the sensor: Use a sheet of paper to check the distance between sensor field and main closing edge (near the floor and at handle height).
- ▶ Check the inclination angle of the sensor.

The following applies to standard-compliant protection:

- The door movement must stop when the sensor detects something, before the reference body is touched.

If the reference body is touched:

- ▶ Increase the angle settings on all modules or reduce the door speed.
- If the reference body is directly at the door leaf, the door must not move.

If the door starts to move:

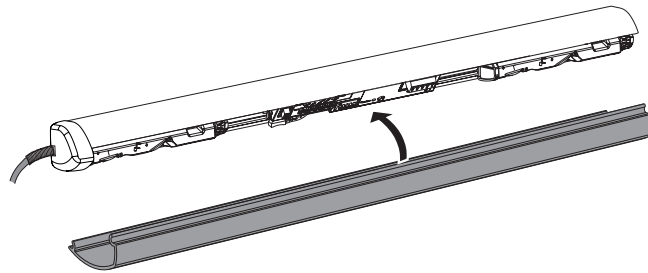
- ▶ Reduce the inclination angle on all modules.



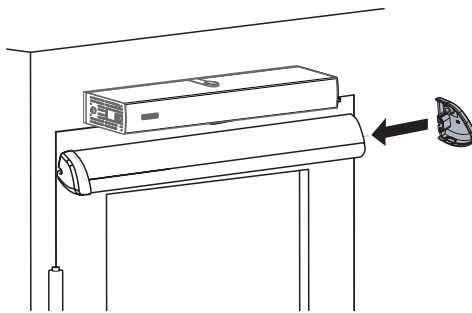
- ▶ If the inclination angle or the position of the modules has been changed, teach the sensor again.

## 7 Final assembly steps after commissioning

1



2



- ▶ Stick the GEZE logo on the right-hand side of the sensor cut-out profile.

## 8 Special installation situations

### 8.1 Installation on 2-leaf doors

#### Teach-in GC 338 on 2-leaf doors

- ! During teach-in on 2-leaf doors, opening and closing must not take more than 20 seconds.
  - ▶ After teach-in, the hold-open time can be extended as required.
  - ▶ Set parameters for safety reserves and testing.

Alternatively, teach-in for the GC 338 sensors on the active leaf and passive leaf can be carried out separately.

- ▶ First teach the sensors on the active leaf in 1-leaf mode.
- ▶ Then teach the sensors on the passive leaf in 2-leaf mode.

### 8.2 Converging door leaves

If door leaves converge, e.g. on neighbouring doors, unwanted stop signals are possible due to mutual interference.

- ▶ When teaching in the sensor, open the neighbouring door leaf completely in advance and teach it in as a wall.

### 8.3 Strong external light exposure

In the case of strong effects of external light and/or reflective floors:

- ▶ Move the receiver and transmitter slightly to the left or right.
- ▶ Change the inclination angle of the transmitter and receiver together.
- ▶ Deactivate the conical beams (row 2 – DIP 2 OFF) and activate GRID mode (row 2 – DIP 1 ON).

### 8.4 Installation on doors with jamb

If doors have a wide door jamb, the exposed beams of the transmitter can detect the door jamb.

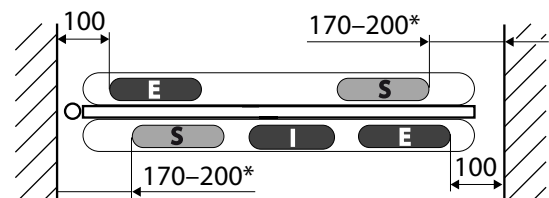
The exposed beams can be switched off using BEAM OFF (row 2 – DIP 2 OFF).

If the exposed beams are considered necessary, the transmitter must be at a sufficient distance to the door jamb.

The receiver can usually be positioned 100 mm away from the closing edge.

The following applies for the distance of the transmitter to the jamb:

Installation height [mm]	* Distance door jamb and modules [mm]
1900–2100	~ 170
> 2100	~ 200



#### Reflecting door jamb

In the case of reflective or glass jambs:

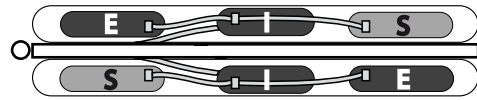
- ▶ Activate GRID mode (row 2 – DIP 1 ON), deactivate BEAM (row 2 – DIP 2 OFF).
- ▶ Cover the jamb during teach-in.

## 8.5 Installation on fire protection doors / glass doors

- ! ▶ Make sure the DIP switch setting of the interfaces is correct.

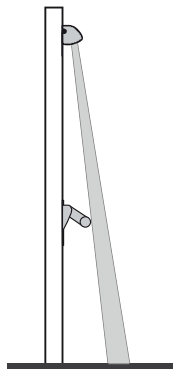
If a cable cannot be routed through the door, an interface has to be installed on both sides.

- ▶ Use the interface set.



## 8.6 Installation on doors with horizontal handle-bars or panic bars

- ! ▶ Adapt the inclination angle of the infrared rays if necessary. Adjust the inclination angle so that the detection area is in front of the handle-bar.



## 8.7 Installation on doors with vertical handle-bars

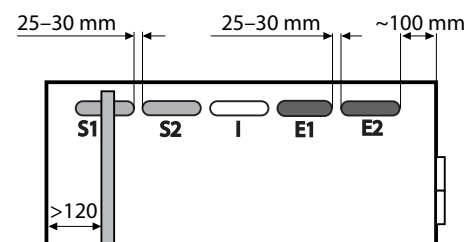
- ! The position of the vertical handle-bar must be so far away from the main closing edge that the transmitter can still protect the main closing edge.
  - ▶ Check the scanned area according to DIN 18650 / EN 16005.
  - The sensor strip must fit behind the handle-bars.

i The further the handle-bar is from the main closing edge, the smaller the inclination angle can be.

- ! For standard-compliant door protection in accordance with DIN 18650/EN 16005, the following is required per door side with handle-bar:
  - 2 transmitter modules
  - 2 receiver modules
 The inclination angle of all transmitters and receivers on one side of the door must be set the same.

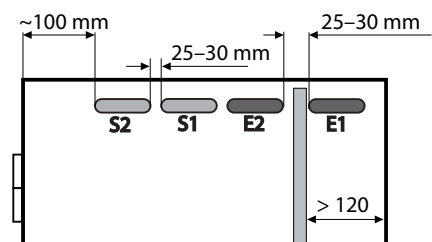
### Left-handle-bar

- ▶ Place transmitter S1 as far left as possible.
  - ▶ Position transmitter 2 approx. 25–30 mm to the right of transmitter 1 or 10 mm to the right of the handle-bar.
- Transmitter S2 must not be behind the handle-bar.
- ▶ Position receiver 2 approx. 100 mm away from the secondary closing edge.
  - ▶ Position receiver 1 approx. 25–30 mm to the left of receiver 2.



### Right-hand push-bar

- ▶ Place receiver 1 as far to the right as possible.
  - ▶ Position receiver 2 approx. 25–30 mm to the left of receiver 1 or 10 mm to the left of the handle-bar.
- Receiver 2 must not be behind the handle-bar.
- ▶ Position transmitter 2 approx. 100 mm away from the secondary closing edge.
  - ▶ Position transmitter 1 approx. 25–30 mm to the right of transmitter 2.



- ▶ If teach-in is not possible, move the modules slightly or increase the inclination angle of all transmitters and receivers.
  - In this case, however, the door might no longer be protected according to DIN 18650/EN 16005.

## 8.8 Installation on revolving doors

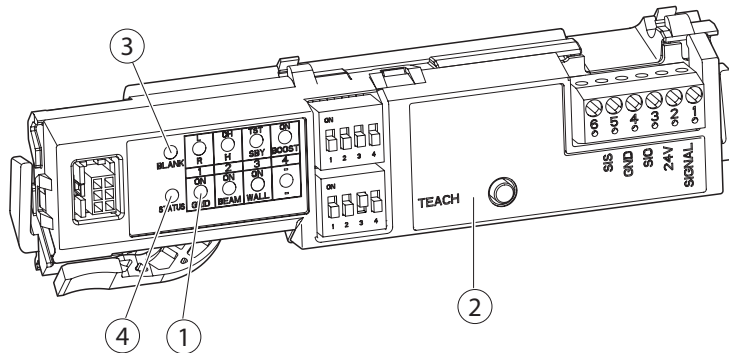
See separate instructions in wiring diagram DCU 6.

## 9 LED status and troubleshooting

### 9.1 LED status display

**!** The transmitter module does not have an LED status display or error display.

#### 9.1.1 Interface



##### (1) DIP-LED (green)

Lights up	DIP position ON
Off	DIP position OFF
Flashes slowly	Setting changed ("TEACH" push button must be pressed)

##### (2) TEACH-LED (yellow)

Lights up	Learning mode ready
Flashes slowly (1 Hz)	Teach-in of the floor
Flashes quickly (2 Hz)	Wall blanking
Flickering (8 Hz)	Teach-in required
Off	Ready for operation

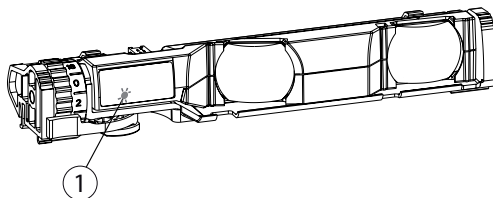
##### (3) BLANK-LED (green)

Lights up	Wall blanking active
Off	Wall blanking not active or only partly active

##### (4) STATUS-LED (red)

Lights up	Detection
Flashes quickly	No function reserve
Off	No detection, no error

#### 9.1.2 Receiver module



##### (1) LED (red)

Lights up	Detection
Flashes quickly	No function reserve
Off	No detection

## 9.2 Troubleshooting

### 9.2.1 Errors following teaching of the floor

Effect		Cause	Elimination	
Yellow TEACH-LED is flickering on the interface	Red STATUS-LED on the interface is off	Receiver-LED is off	Receiver without function <ul style="list-style-type: none"> <li>▶ Check contacting of all modules with the flat ribbon cable.</li> <li>▶ Replace receiver module.</li> </ul>	
	Red STATUS-LED on the interface flashes 2x	Receiver-LED flashes 1x	System error in the receiver	<ul style="list-style-type: none"> <li>▶ Turn the operating voltage off and on again.</li> <li>▶ Replace receiver module.</li> </ul>
		Receiver-LED flashes 2x	Basic width too large	<ul style="list-style-type: none"> <li>▶ Reduce module distance.</li> </ul>
		Receiver-LED flashes 3x	Object in detection area	<ul style="list-style-type: none"> <li>▶ Remove the object or increase distance to side wall / door jamb.</li> </ul>
			Basic width much too large	<ul style="list-style-type: none"> <li>▶ Reduce module distance.</li> </ul>
			Transmitter and receiver modules not aligned correctly to one another	<ul style="list-style-type: none"> <li>▶ Turn angle setting to the same position.</li> <li>▶ Check transmitter and receiver modules to make sure that they have been engaged in the profile correctly and are not subject to any pressure due to power cables etc.</li> <li>▶ Check transmitter and receiver modules for damage (bent plastic stopper on the setting wheel), replace if necessary.</li> </ul>
			Transmitter module without function	<ul style="list-style-type: none"> <li>▶ Check contacting of all modules with the flat ribbon cable.</li> <li>▶ Replace transmitter module.</li> </ul>
		Grid in the detection range	<ul style="list-style-type: none"> <li>▶ Switch on GRID mode.</li> <li>▶ If the floor cannot be taught despite active GRID mode, deactivate wall blanking as well.</li> </ul>	
		Transparent or reflective wall within the detection area	<ul style="list-style-type: none"> <li>▶ Cover the wall during teach-in.</li> </ul>	
	Receiver-LED flashes 4x	Receiver module faulty	<ul style="list-style-type: none"> <li>▶ Replace receiver module.</li> </ul>	
Red STATUS-LED on the interface flashes 4x	Interface faulty	<ul style="list-style-type: none"> <li>▶ Replace interface.</li> </ul>		

## 9.2.2 Errors following wall teach-in

Effect		Cause		Elimination
Yellow TEACH-LED is flickering on the interface	Red STATUS-LED on the interface is on	Receiver-LED flashes 1x	Memory access error receiver module	▶ Repeat the teach-in process.
	Red STATUS-LED on the interface flashes 3x	Receiver-LED flashes 1x	Assignment of the interface to HS / OHS not set correctly	▶ Change setting DIP switch row 1 – DIP 2.
			Sensor on the opposite hinge side detects object	▶ Remove the object.
			Floor level on the opposite hinge side lower than on the hinge side (step, threshold)	▶ Switch on GRID mode and compensate floor level during the teach-in process if necessary.
Yellow TEACH-LED on the interface is off	Red STATUS-LED on the interface is off	Receiver-LED is on	Memory access error interface (green DIP-LEDs are flashing)	▶ Repeat the teach-in process.
	Red STATUS-LED on the interface is on	Receiver-LED is off	Sensor does not react. Door does not open.	▶ Change setting DIP switch row 1 – DIP 3.
	Red STATUS-LED on the interface flashes quickly	Receiver-LED flashes quickly	Function reserve too low	Inclination angle on the receiver module: ▶ Reduce step by step until the sensor changes to detection status, note setting. ▶ Increase step by step until the sensor changes to detection state, note setting. ▶ Set to the average of both values.
			Very dark or reflective background	▶ Switch BOOST mode on. Please note: This lengthens the sensor response time.

## 9.2.3 Wall is detected despite teaching run

Effect	Cause	Elimination
<ul style="list-style-type: none"> <li>▫ Yellow TEACH-LED on the interface is off</li> <li>▫ Red STATUS-LED on the interface is on</li> <li>▫ Receiver-LED is on</li> </ul>	Assignment of the interface to NSK not set correctly	▶ Change setting DIP switch row 1 – DIP 1.
	Angle setting of transmitter and receiver module on the hinge side set too steeply	▶ Increase angle setting of transmitter and receiver module (Pos. ≥ 12). Pay attention to maximum values.
	Door speed slower during teach-in travel than during operation	▶ Carry out wall teach-in at normal or higher door speed.
	Reversing speed higher than normal opening speed	▶ Carry out wall teach-in at higher door speed. After the teaching run, the speed can be reduced again.
	No smooth wall	▶ Blank out sensor strip on the door drive.




## 9.2.4 Errors after operating voltage has been applied

Effect	Cause	Elimination
<ul style="list-style-type: none"> <li>▫ Red STATUS-LED flashes briefly 1x at an interval of approx. 2.5 s</li> </ul>	System is not functional	<ul style="list-style-type: none"> <li>▶ Check correct number of modules and/or ribbon cable</li> </ul>

## 9.2.5 Errors in operation

Effect	Cause	Elimination	
<ul style="list-style-type: none"> <li>▫ Yellow TEACH-LED on the interface is off</li> <li>▫ Red STATUS-LED on the interface is on</li> <li>▫ Receiver-LED is on</li> </ul>	Door does not close again after being held open for a longer period	<ul style="list-style-type: none"> <li>▶ Switch on GRID mode.</li> </ul>	
	There is no object within the detection area or the receiver remains in detection state even after the detected object has been removed		There are bumps in the floor (> 5 cm) in the detection area
	Sporadic detection during the door cycle		<ul style="list-style-type: none"> <li>▶ Move the receiver and transmitter to the left or right slightly.</li> <li>▶ Change the inclination angle of the transmitter and receiver slightly together.</li> <li>▶ Switch the deflected beam off.</li> <li>▶ Switch on GRID mode.</li> </ul>
<ul style="list-style-type: none"> <li>▫ Yellow TEACH-LED on the interface is off</li> <li>▫ Red STATUS-LED on the interface is on</li> <li>▫ Receiver-LED is off</li> </ul>	Door is closed, sensor does not react to detection	Sensor is in energy-saving mode (see DIP switch row 1 – DIP 3)	<ul style="list-style-type: none"> <li>▶ Open door. The sensor is woken up by the door control.</li> <li>▶ Check the parameter settings of the testing, SIO and SIS on the drive and on the sensor (see chapter 6.3).</li> </ul>
<ul style="list-style-type: none"> <li>▫ Yellow TEACH-LED on the interface is off</li> <li>▫ Red STATUS-LED on the interface is off</li> <li>▫ Receiver-LED is off</li> </ul>	Door is closed, no reaction to activation	Parameter settings of the testing, SIO and SIS on the drive and on the sensor differ	<ul style="list-style-type: none"> <li>▶ Check the parameter settings of the testing, SIO and SIS on the drive and on the sensor (see chapter 6.3).</li> </ul>

## 10 Technical data

Functional principle	Active infrared light sensor with background evaluation
Installation height	1500 to 3500 mm for reference body CA upright, conformity according to DIN 18650 and EN 16005
Light transmitter	IRED, 850 nm
Safety integrity level	SIL 2
Performance level (at 40°C)	PL d, category 2
Operating voltage	24 V DC $\pm$ 20 %
Type of switching	Bright method
Response time	52 ms / 200 ms in BOOST mode
Signal input	Active high (>15 V)
Switching voltage/current	30 V DC; max. 100 mA, short-circuit proof
Ambient temperature	-30 °C to 60 °C
Humidity	< 90 % relative, non-condensing
IP rating	IP54 according to EN 60529
Connection	Supply terminal (6-pole)
Material	Profile strip: Aluminium Sensor window: PC End caps: PA
Statement of approval/certificates	Type-tested
Conformity	

## 11 Accessories / Spare parts

Material	Description	Material no.
End caps	Set comprising left and right end cap Material: PA	142226
Sensor cut out profile	EV1 – length 6 m	079581
	Mill finish – length 6 m	079584
	bespoke in metres (available in EV1, mill finish and according to RAL)	100269
Sensor window profile	Length 4 m, material: PC	118856
Weather hood (transparent)	1200 mm	142227
	1500 mm	142232
Adapter for sensor link arm for Powerturn, Slimdrive EMD and TSA 160 NT		144352
	acc. to RAL	153126
GC GR	Sensor roller guide rail for Powerturn, Slimdrive EMD and TSA 160 NT	see GEZE price list for "Automatic door systems"
Transmitter module	—	143060
Receiver module	—	143071
Interface module	—	143072
Interface set	comprising interface module, flexible tube and door transmission cable 5 m	149098
Cable set	comprising flat ribbon connecting cable 2 m with 5 connectors and door connection cable hinge side/ opposite hinge side	149237
Door transmission cable	5 metres; Li9Y-11YM 5x 0.34	153203

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