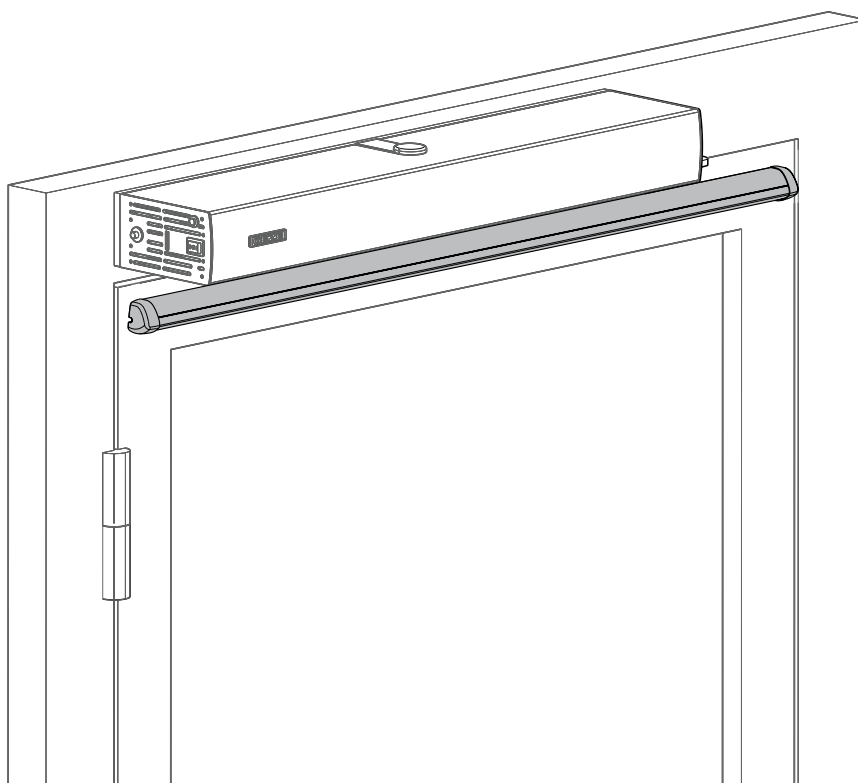




GC 338



152969-02

Original operating instructions for device version V.03

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Symbols and illustrations

Important information and technical notes are highlighted to explain correct operation.

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: there is something you must do here. ► If there are several actions to be taken, keep to the given order.

Abbreviations

BGS	Opposite hinge side
BS	Hinge side
E	Receiver
HSK	Main closing edge
I	Interface
NSK	Secondary closing edge
S	Transmitter

Product liability

In compliance with the liability of the manufacturer for their his products as defined in the German "Product Liability Act", compliance with the information contained in this brochure (product information and intended use, misuse, product performance, product maintenance, obligations to provide information and instructions) must be ensured. Failure to comply releases the manufacturer from his statutory liability.

1 Safety

1.1 Intended use

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

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

1.2 Safety notices

- The mandatory installation, maintenance and repair work must be performed by properly trained personnel authorised by GEZE.
- The device may only be operated with safety extra-low voltage which complies with the Safety Extra-Low Voltage (SELV) requirements in the safety standards based in 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 approval for use in escape and rescue routes ceases.
- 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 directives, standards and country-specific regulations, in particular:
 - ASR A1.7 "Doors and gates"
 - DIN 18650 "Building hardware - Powered pedestrian doors"
 - DIN EN 16005 "Power operated pedestrian doorsets – Safety in use – Requirements and test methods"
 - Accident-prevention regulations, especially BGV A1 "General regulations" and BGV A2 "Electrical systems and equipment"

1.3 Safety conscious working

- Secure workplace against unauthorised entry.
- Watch 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 broken glass.
- 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 non-contact protective device of type 2 according to EN 12978 section 4.3.3 and a protective device of the category 2 PL d according to EN ISO 13849-1.

It is not possible for several systems to influence each other and result in a hazard.

Unintentional stop signals through mutual influence is possible where door leaves move towards one another if their measuring ranges overlap. Such overlap of the measuring ranges can be avoided by moving the sensors in relation to one another.

There is no mutual influence of the sensors of the two door leaves on double-leaf doors.

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

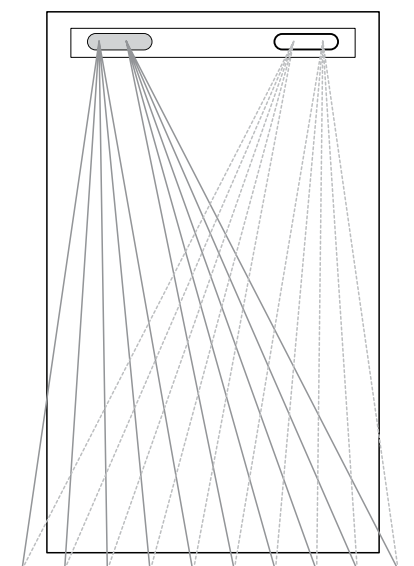
Variant	1200 mm	1500 mm
Anodised aluminium	142219	142757
According to RAL	142825	142827

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

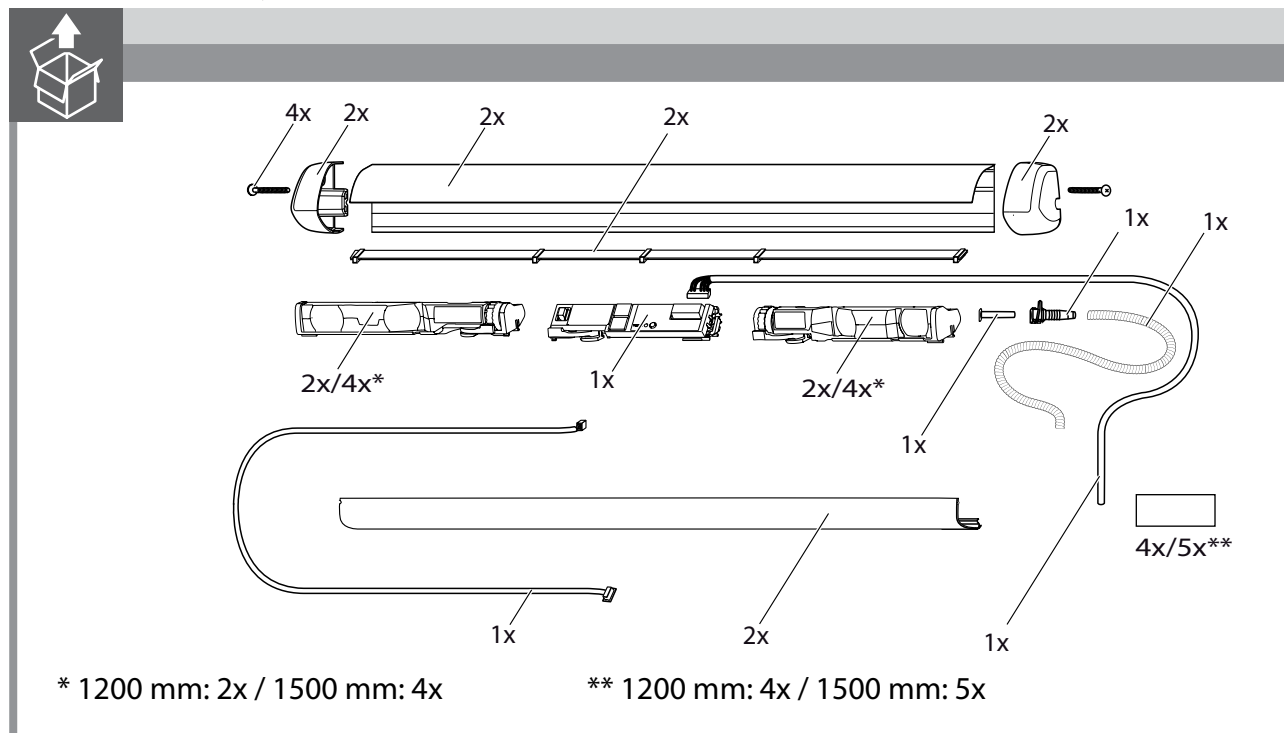
If a person or object interrupts one or more of the light beams, the sensor triggers the switching function.

The detection field 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

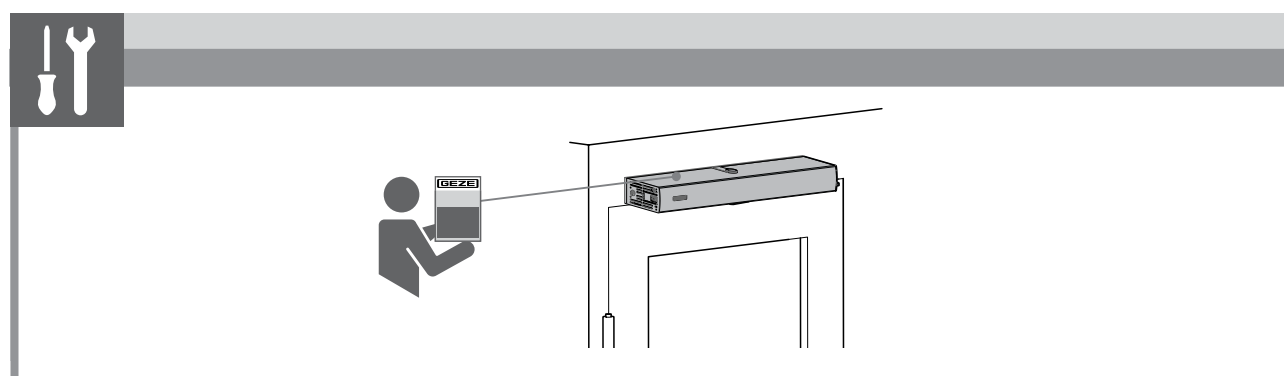


What is supplied by GEZE varies depending on the door type.

2-leaf doors	▫ 2 x 1-leaf door packages
Fire protection doors / glass doors	▫ 1-leaf door package ▫ 1 interface set

4 Work to be done before installation

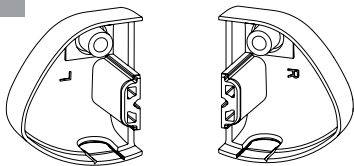
4.1 Installing the drive



4.2 Preparing the door transmission cable

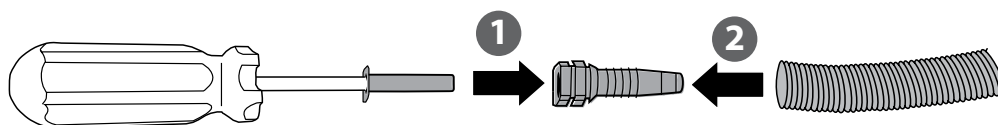
! If only one interface is required, only one door transmission cable and one end cap need to be prepared.

1

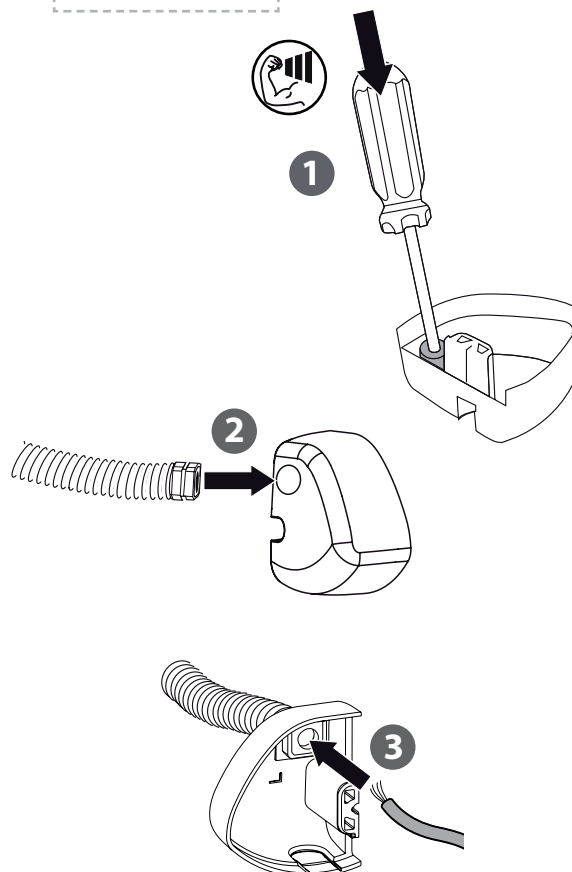
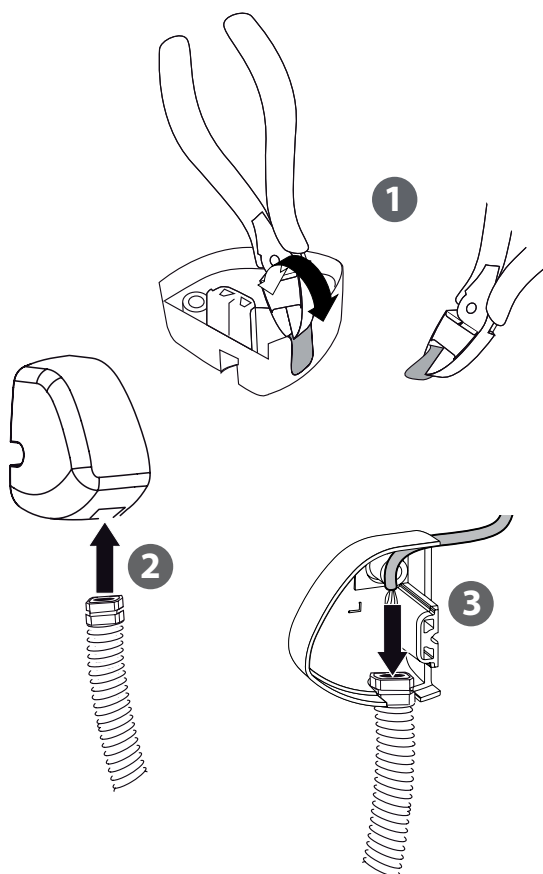
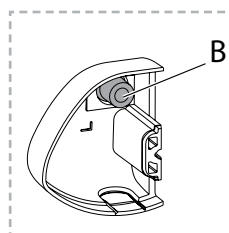
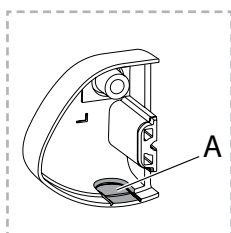


► If the hinge side is on the left, choose the **left** end cap.
If the hinge side is on the right, choose the **right** end cap.

2



3



5 Installation

5.1 Preparation

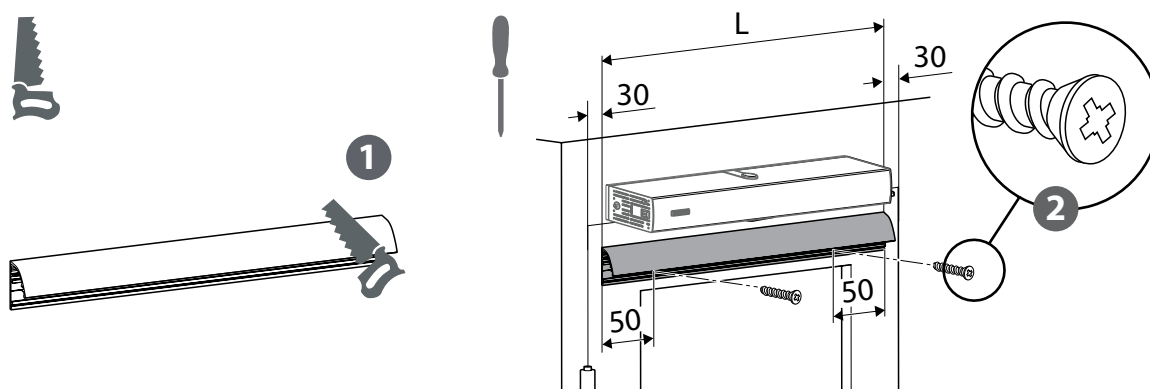


- When two interfaces are used (e.g. on fire protection doors or glass doors), there is no need to drill through the door for the connection cable BS/BGS.
- When a GC GR sensor roller guide rail is used, this must be attached to the door in accordance with the enclosed instructions. Follow the working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



- ▶ Before drilling, check whether drilling through the door is permissible.
- ▶ Use screws with countersunk heads to attach the profile strips in place. 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.

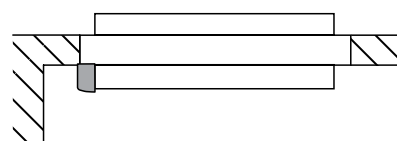
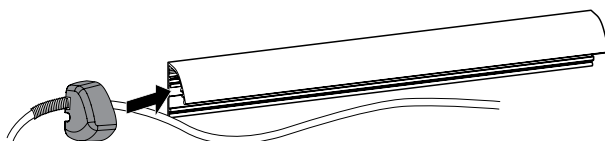
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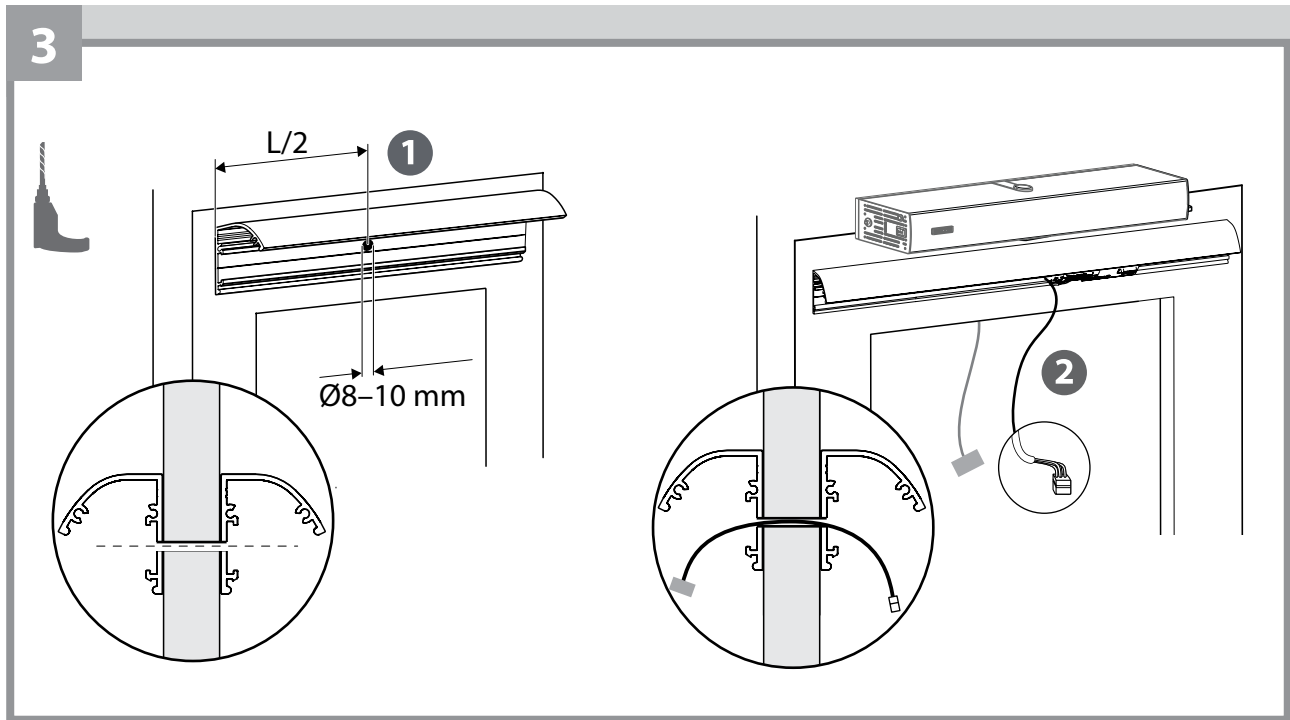
2

Where there is only a little space between door and wall:

- ▶ Attach the suitable cover cap with the hole prepared for the door transmission cable to the profile strip (drive side).
- ▶ Make sure there is sufficient space on the other side of the door as well and attach the end cap before fastening the profile where space is tight.



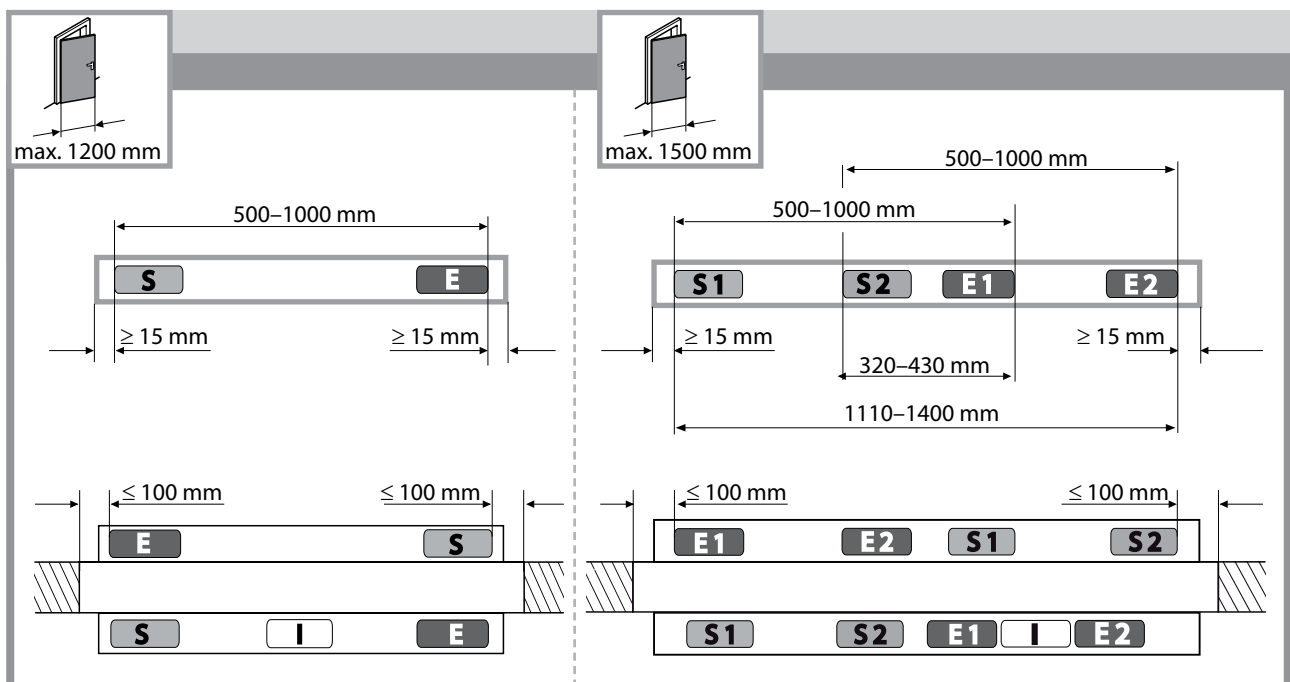
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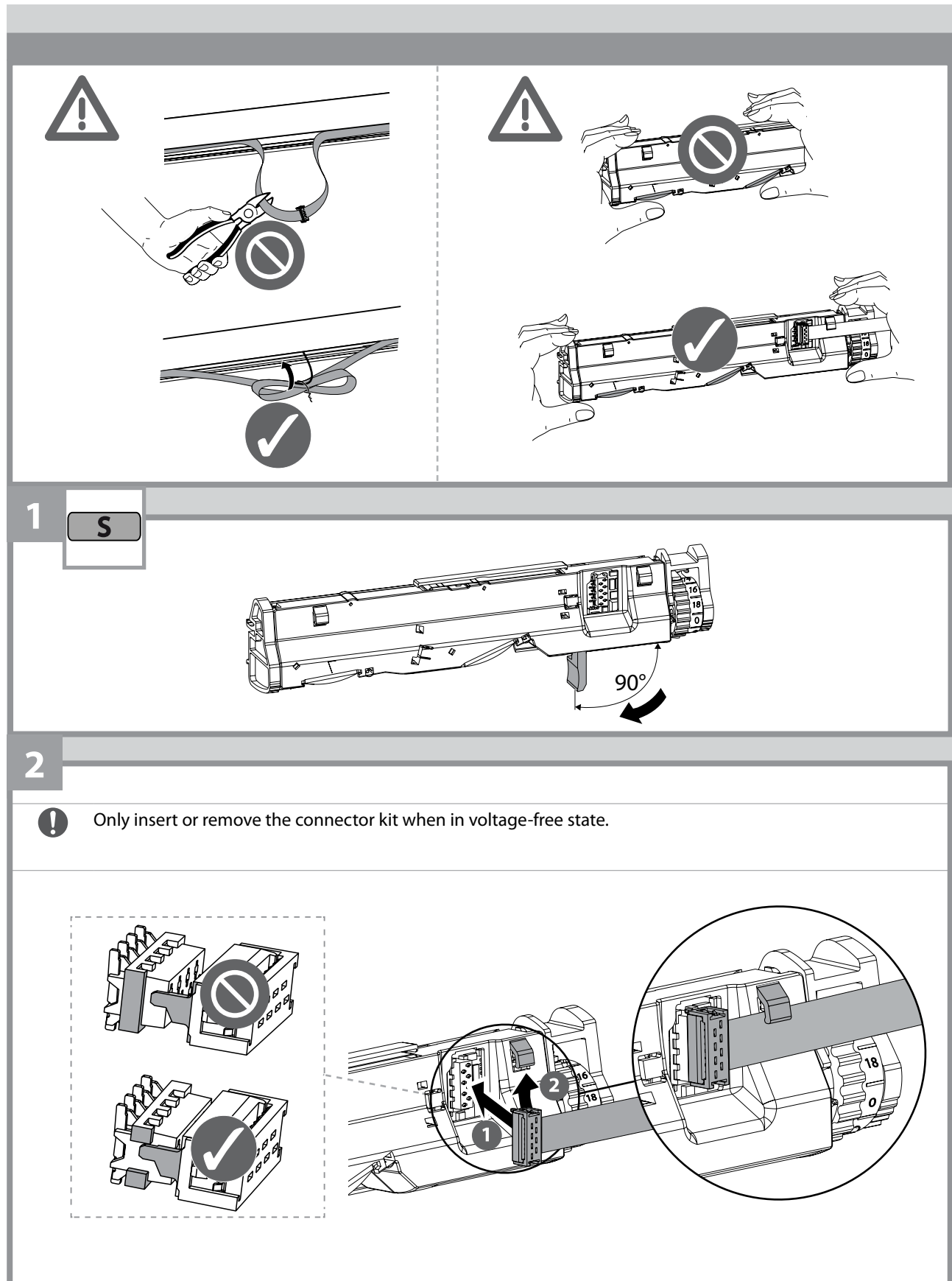
5.2 Position of the modules



The maximum dimensions apply for an installation height of 2.1 m.



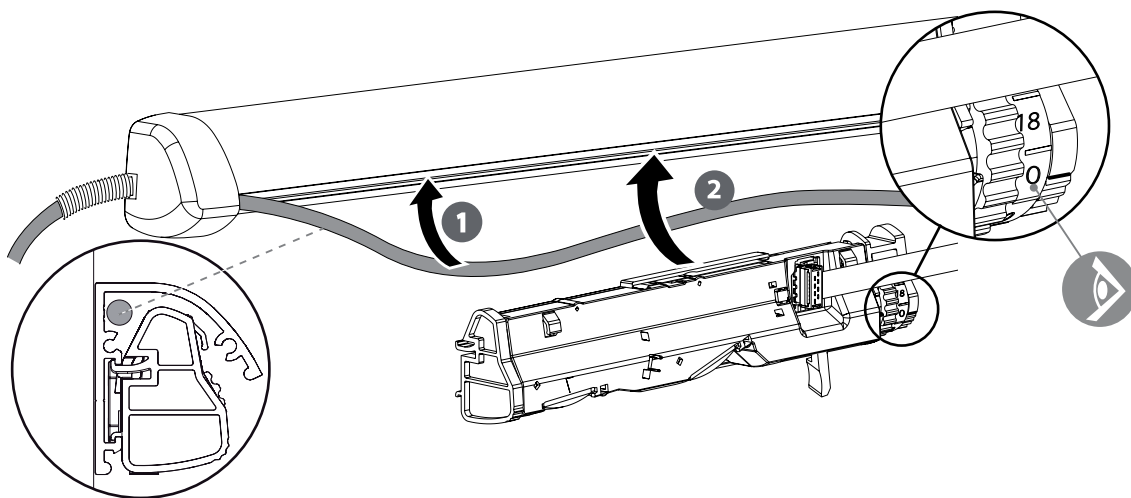
5.3 Installation of the modules



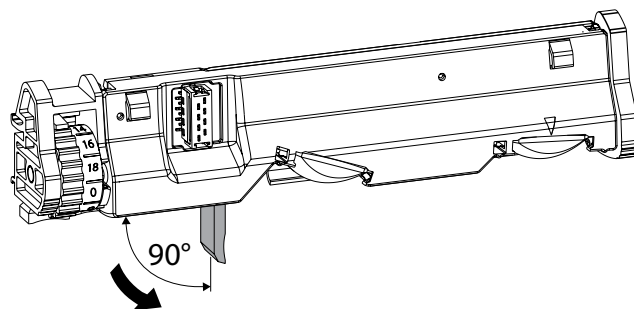
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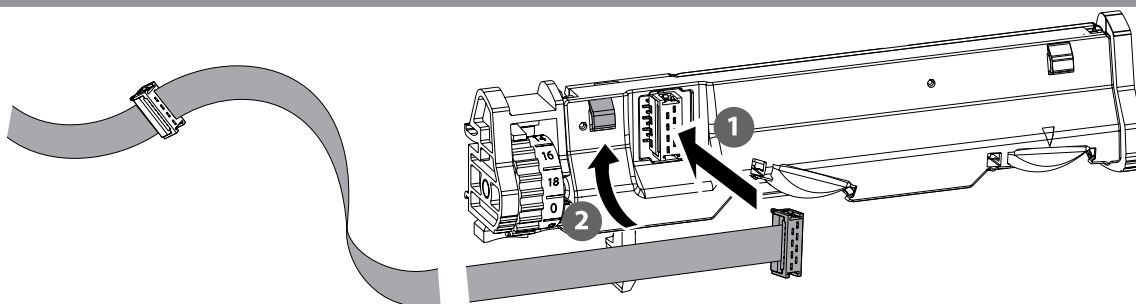
The module has been engaged correctly if it can be moved easily.



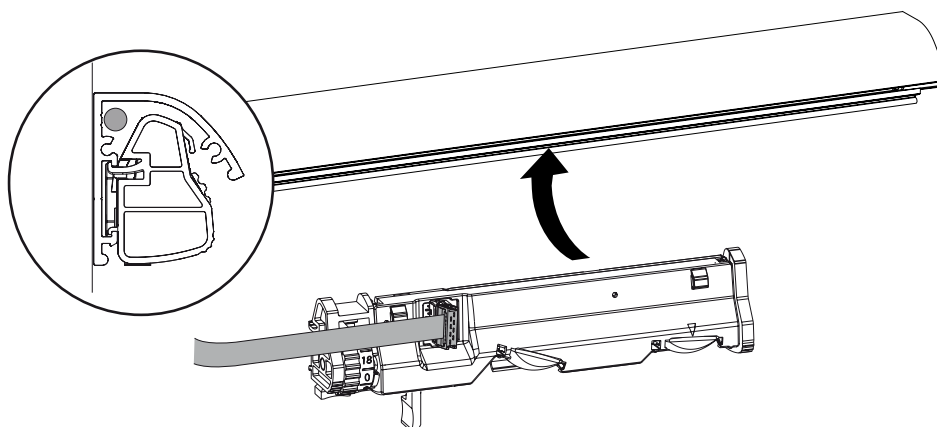
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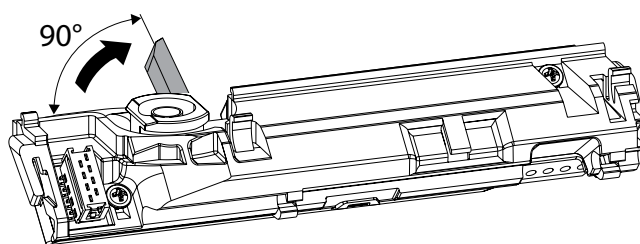
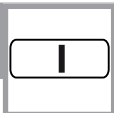
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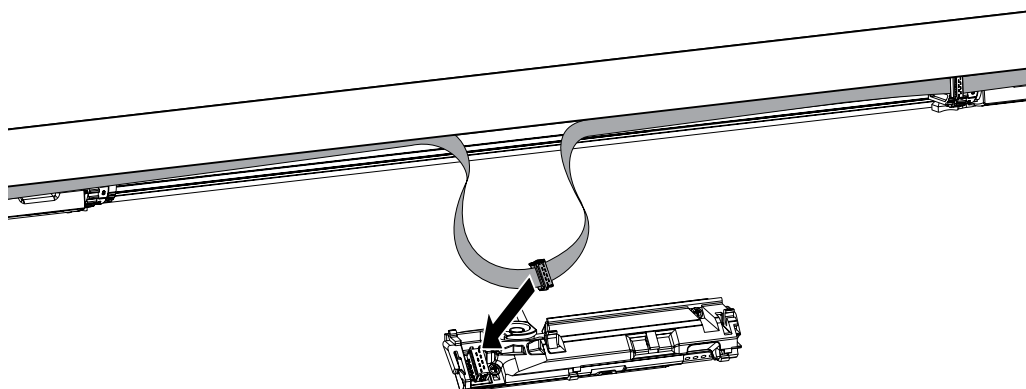
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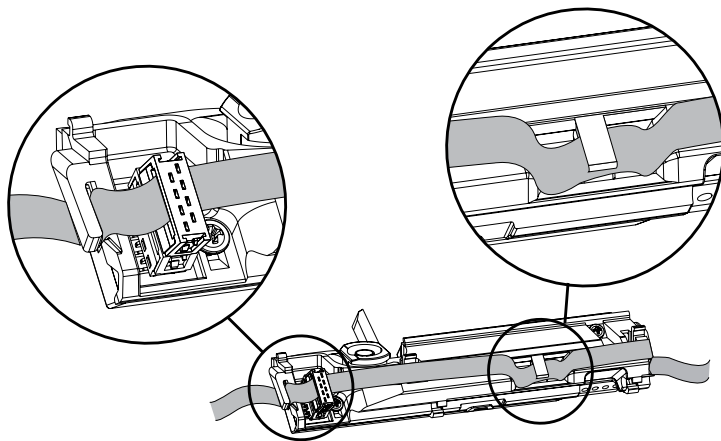
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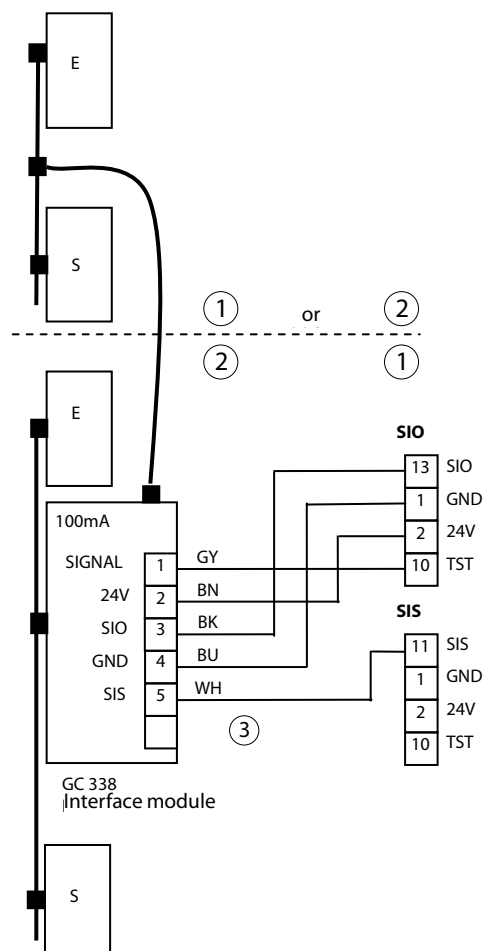
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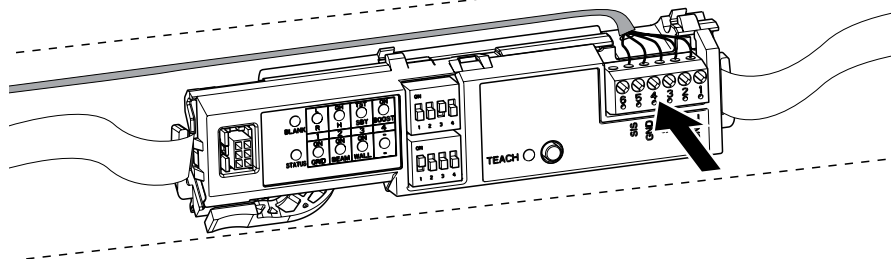
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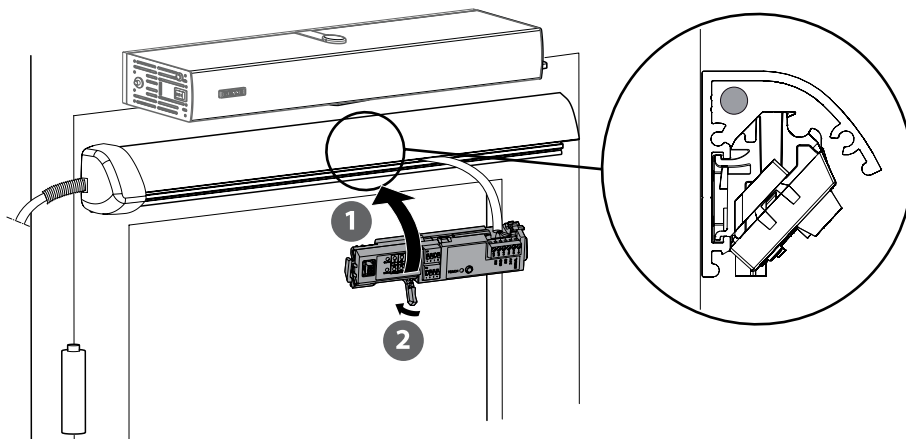
- 1 Opposite hinge side
- 2 Hinge side
- 3 Door transmission cable



10

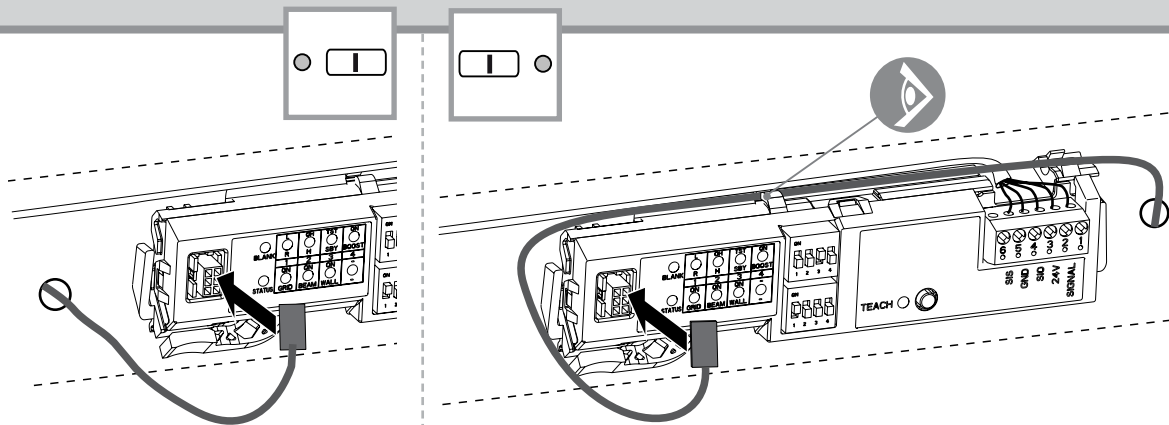


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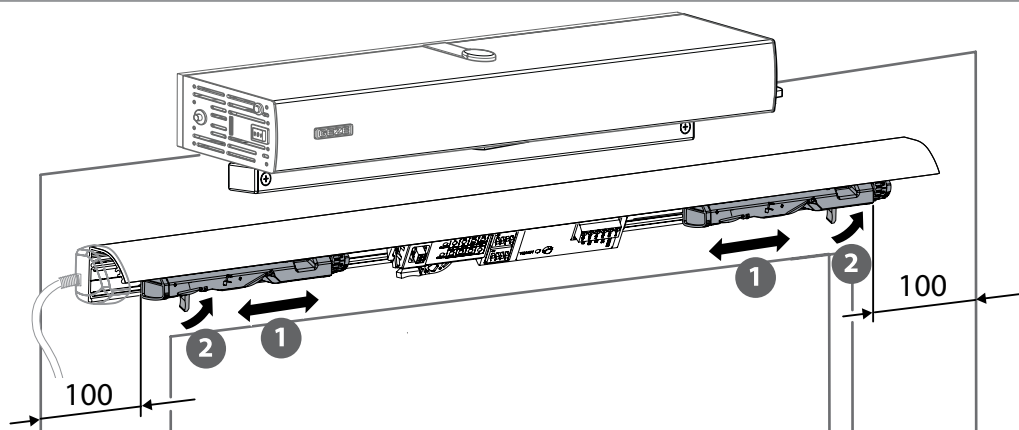


- Engage the interface in the profile strip. Make sure you do not cover the drill hole for the BS/BSG connection cable.

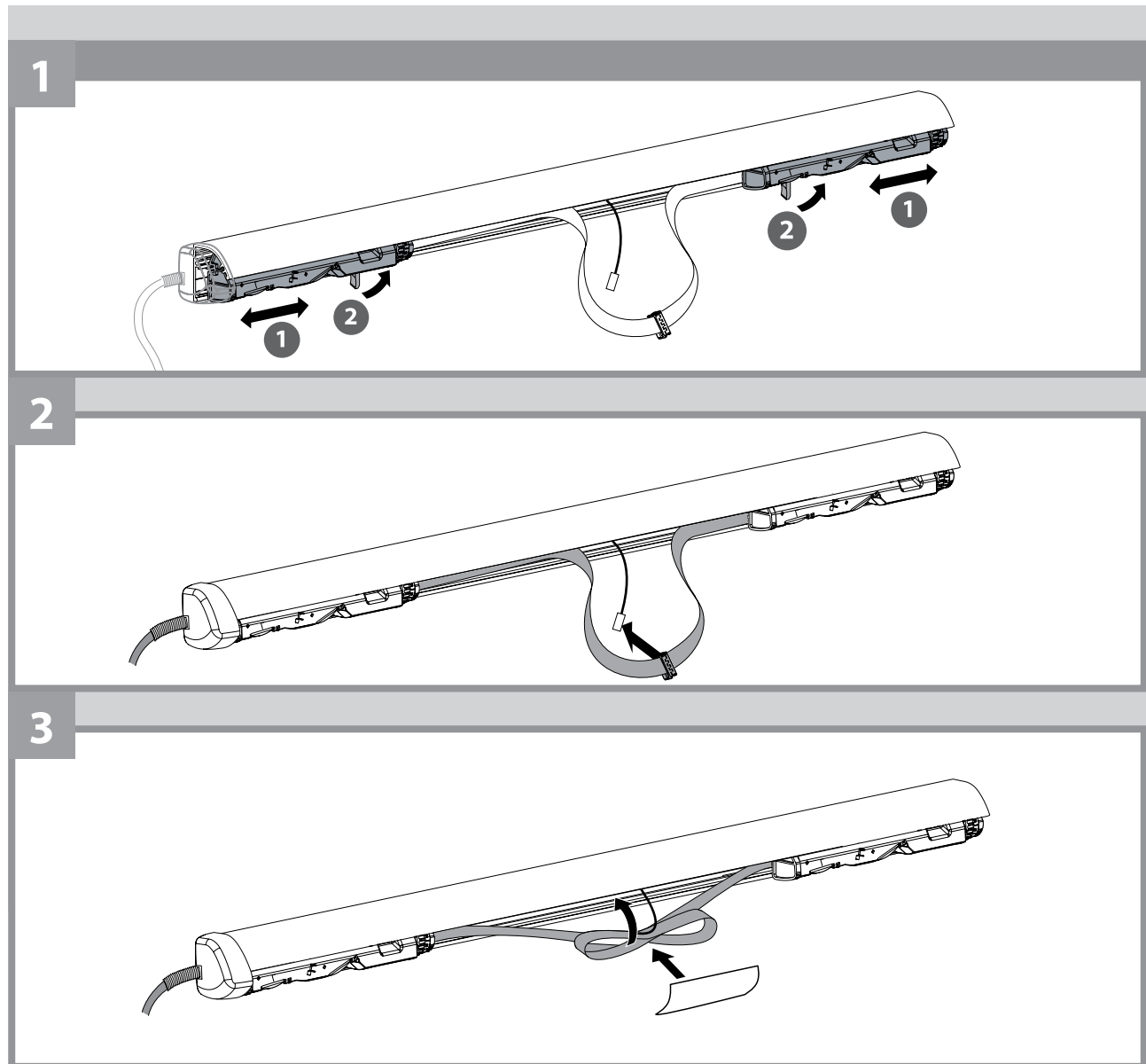
12



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 Drive teach-in

- ▶ Heed the drive wiring diagram.
- ▶ 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.

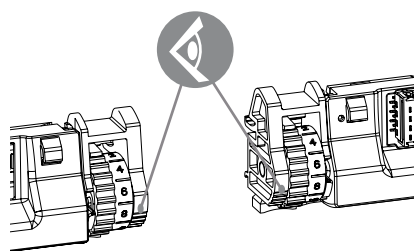
6.2 Sensor teach-in

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.

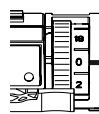
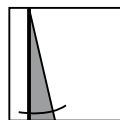
- ▶ Check the position of the setting wheels on **both** sides of the door.



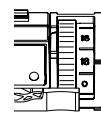
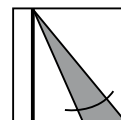
Recommended sensor setting according to DIN 18650/EN 16005:

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

0 = smallest deflection



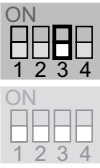
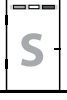
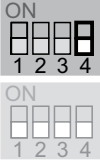
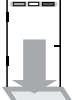
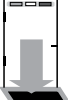
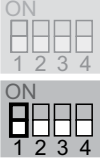
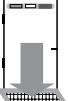
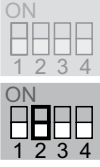
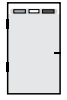
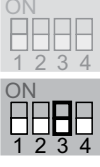
18 = largest deflection



6.2.2 Configuring the DIP switch at the interface

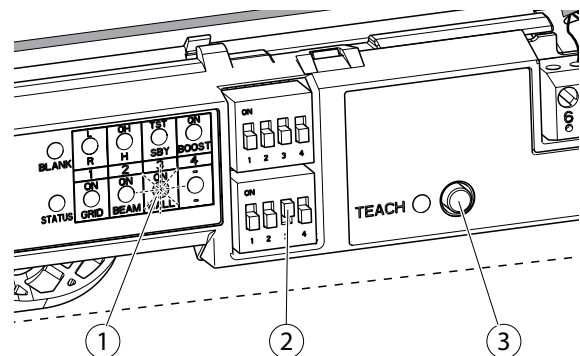
- ▶ Configure the DIP switch before the sensor teach-in process is started.
- ▶ Push the DIP switch **upwards** for the ON position and **downwards** for the OFF position.

Row/DIP	Switch position	OFF/ON Default setting		Comment
Row 1 DIP 1		OFF R (right)	ON L (left)	EDGE: Position of the secondary closing edge to the interface
Row 2 DIP 2		OFF H (hinge side)	ON OH (opposite hinge side)	SIDE: Positioning of the interface

Row/DIP	Switch position	OFF/ON Default setting		Comment
Row 1 DIP 3		OFF SBY (standby) 	ON TST (test) 	SIGNAL: In test mode (ON) the function of the safety sensor is checked regularly by the drive. Standby mode (OFF) also allows the safety sensor to be switched to energy-saving mode. The setting must be carried out corresponding to the drive used (see drive wiring diagram).
Row 1 DIP 4		OFF Normal 	ON Increased 	BOOST: 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 large installation heights are involved. ► Adapt the door speed to the increased response time if necessary.
Row 2 DIP 1		OFF Normal 	ON Grid 	GRID: Can be used with grids, as well as with manhole, steps or downward angle of the floor in the door swivelling range. Switch the GRID mode off in the following installation situations: ▫ frequent changes to the characteristics of the floor (fallen leaves, snow etc.) ▫ large installation height or dark floors (with display: "Function reserve") ▫ no wall blanking (error during teach-in)
Row 2 DIP 2		OFF Comfort beams 	ON Comfort beams 	BEAM: Increases the scanned area for additional safety. Switch on if the conical beam does not collide with a soffit. ► Carry out a teaching run if necessary.
Row 2 DIP 3		OFF Wall blanking inactive 	ON Wall blanking active 	WALL: 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 teach-in with the wall blanking activated, deactivate the GRID mode as well if appropriate.

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 teaching process is used to teach the floor and any walls which may be there.

The TEACH-LED provides information about teaching the floor and the BLANK-LED about teaching the wall. If objects (radiators, projections or columns) 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.
 - No change in operating mode may take place during the teach-in process.
 - No reversing of the door leaf may take place 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 range 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)



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.

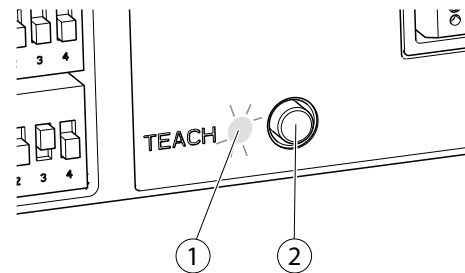
The yellow TEACH-LED (1) begins to flash slowly (1 Hz).
The sensor is learning the floor.

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, activate the drive in such a way that the door opens and closes again.



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

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

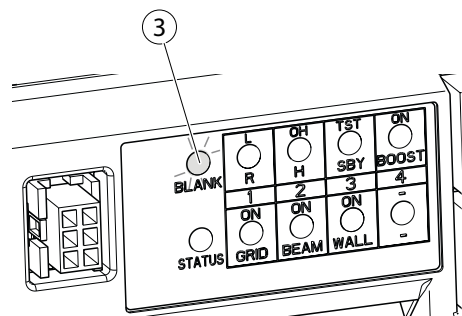
The BLANK-LED (3) indicates whether a wall has been taught completely. If there is a wall near the door and the BLANK-LED (3) is off, the wall has not been taught completely.

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 adjustment.
- ▶ Repeat teach-in.



- 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

- ▶ Heed the wiring diagram of the specific 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.

- ▶ In order to activate energy-saving mode, set the same parameters for testing and the signals SIS and SIO on the drive and at the sensor.
- ▶ Heed the drive wiring diagram 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.

For standard-conform protection the following applies:

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

If the test body is touched:

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

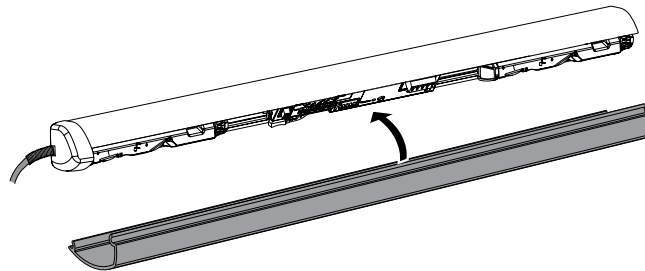
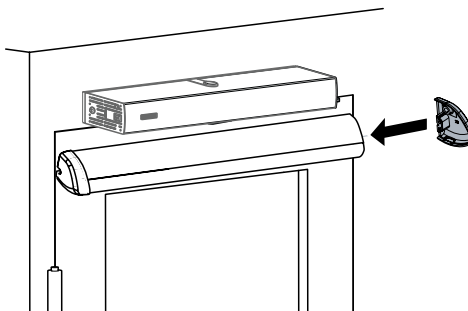
If the door starts to move:

- ▶ 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 Last assembly steps after commissioning

1**2**

8 Special installation situations

8.1 Installation on 2-leaf doors

GC 338 teach-in 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 Door leaves which move towards one another

In the case of door leaves which move towards one another e.g. on adjacent doors, unintentional stop signals are possible due to mutual influence.

- ▶ During sensor teach-in, open the adjacent door leaf completely in advance and carry out the teach-in as though it were a wall.

8.3 Strong effects of external light

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

- ▶ Move the receiver and transmitter to the left or right slightly.
- ▶ 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 door soffit

If doors have a wide door soffit, the conical beams of the transmitter can detect the door soffit.

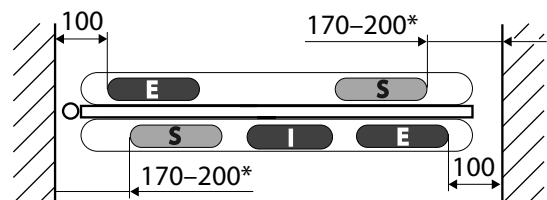
The conical beams can be switched off using BEAM OFF (row 2 – DIP 2 OFF).

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

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

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

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



Reflective door soffit

In the case of reflective or glass soffits:

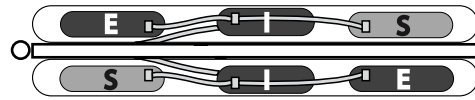
- ▶ Activate GRID mode (row 2 – DIP 1 ON), deactivate BEAM (row 2 – DIP 2 OFF).
- ▶ Cover the soffit during teach-in.

8.5 Installation on fire protection doors / glass doors

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

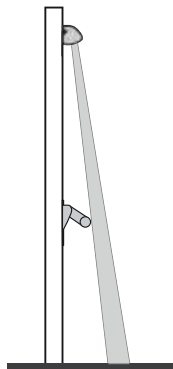
If a cable cannot be routed through the door, an interface has to be installed on both sides.

- ▶ Use the interface set.



8.6 Installation on doors with horizontal pull handles or panic bars

- ! ▶ Adapt the inclination angle of the infrared rays if necessary. Set the inclination angle in such a way that the detection field is in front of the pull handle.



8.7 Installation on doors with vertical pull handles.

- ! The position of the vertical pull handle 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 safety sensor must fit behind the pull handles.

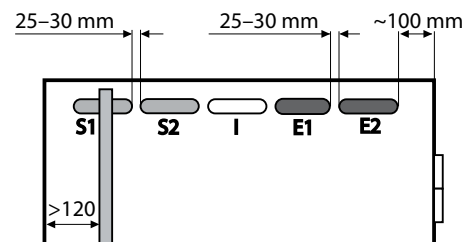


The further the pull handle is from the main closing edge, the smaller the inclination angle can be.

- ! For standard-conform door protection in accordance with DIN 18650/EN 16005, the following is required per door side with pull handle:
 - 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.

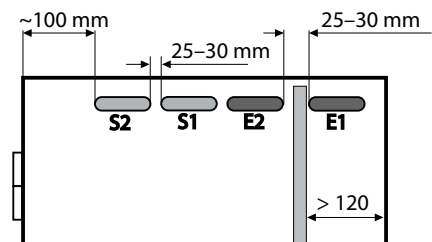
Left-hand pull handle

- ▶ 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 pull handle.
- Transmitter S2 must not be behind the pull handle.
- ▶ 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 pull handle:

- ▶ 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 pull handle.
- Receiver 2 must not be behind the pull handle.
- ▶ 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 enlarge 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.

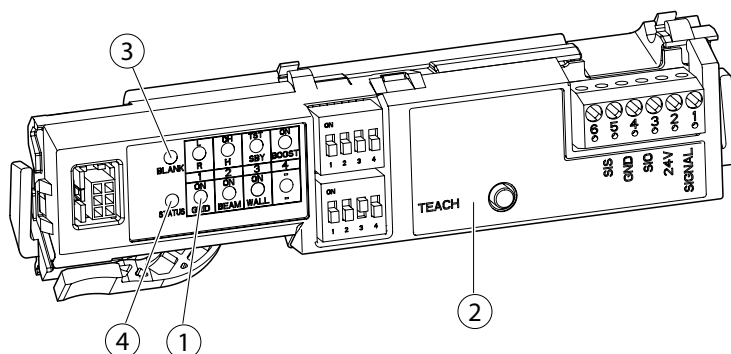
9 LED status and troubleshooting

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

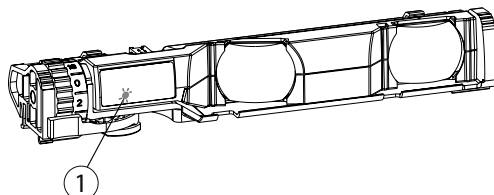
(3) BLANK-LED (green)

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	▶ Check contacting of all modules with the flat ribbon cable. ▶ Replace receiver module.
	Red STATUS-LED on the interface flashes 2x	Receiver-LED flashes 1x	System error in the receiver	▶ Turn the operating voltage off and on again. ▶ Replace receiver module.
		Receiver-LED flashes 2x	Basic width too large	▶ Reduce module distance.
		Receiver-LED flashes 3x	Object in detection field	▶ Remove the object or increase distance to side wall / door soffit.
			Basic width much too large	▶ Reduce module distance.
			Transmitter and receiver modules not aligned correctly to one another	▶ Turn angle setting to the same position. ▶ 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 cables etc. ▶ Check transmitter and receiver modules for damage (bent plastic stopper on the setting wheel), replace if necessary.
			Transmitter module without function	▶ Check contacting of all modules with the flat ribbon cable. ▶ Replace transmitter module.
			Grid in the detection range	▶ Switch on GRID mode. ▶ If the floor cannot be taught despite active GRID mode, deactivate wall blanking as well.
			Transparent or reflective wall within the detection range	▶ Cover the wall during teach-in.
		Receiver-LED flashes 4x	Receiver module faulty	▶ Replace receiver module.
	Red STATUS-LED on the interface flashes 4x		Interface faulty	▶ Replace interface.

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 BS / BGS not set correctly		► Change setting DIP switch row 1 – DIP 2.
			Sensor on the BGS detects object		► Remove the object.
			Floor level on the BGS lower than on the BS (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	Door or sensor profile overcome	Inclination angle on the receiver module: ► Reduce step by step until the sensor changes to detection state, note setting. ► Increase step by step until the sensor changes to detection state, note setting. ► Set to the mean value between these two 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
▫ Yellow TEACH-LED on the interface is off ▫ Red STATUS-LED on the interface is on ▫ Receiver-LED is on	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	► Enlarge angle setting of transmitter and receiver module (Pos. ≥ 12). Watch out for maximum values.
	Door speed during teaching run slower than in 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 safety sensor on door drive.

9.2.4 Errors after operating voltage has been applied

Effect	Cause	Elimination
Red STATUS-LED flashes briefly 1x at an interval of approx. 2.5 s	System is not functional	Check correct number of modules and/or ribbon cable

9.2.5 Errors in operation

Effect		Cause	Elimination
▫ Yellow TEACH-LED on the interface is off ▫ Red STATUS-LED on the interface is on ▫ Receiver-LED is on	Door does not close again after being held open for a longer period	There is a ramp in front of the door or the floor level is lower in opened position than in closed position (–10 cm)	▶ Switch on GRID mode.
	There is no object within the detection range 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 range	
	Sporadic detection during door movement		
			▶ Move the receiver and transmitter to the left or right slightly. ▶ Change the inclination angle of the transmitter and receiver slightly together. ▶ Switch the conical beam off. ▶ Switch on GRID mode.
▫ Yellow TEACH-LED on the interface is off ▫ Red STATUS-LED on the interface is on ▫ Receiver-LED is off	Door is closed, sensor does not react to detection.	Sensor is in energy-saving mode (see DIP switch row 1 – DIP 3)	▶ Open door. The sensor is woken up by the door control. ▶ Check the parameter settings of the testing, SIO and SIS on the drive and on the sensor (see chapter 6.3).
▫ Yellow TEACH-LED on the interface is off ▫ Red STATUS-LED on the interface is off ▫ Receiver-LED is off	Door is closed, no reaction to activation	Parameter settings of the testing, SIO and SIS on the drive and on the sensor differ	▶ Check the parameter settings of the testing, SIO and SIS on the drive and on the sensor (see chapter 6.3).

10 Technical data

Functional principle	Active infrared light sensor with background evaluation
Installation height	1500 to 3500 mm for test 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
Type-tested by German Association for Technical Inspection	

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
	Aluminium finish – length 6 m	079584
	bespoke in metres (available in EV1, aluminium finish und 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
	according to RAL	153126
GC GR	Sensor roller guide rail for Powerturn, Slimdrive EMD and TSA 160 NT	see price list for GEZE automatic door systems
Transmitter module	—	143060
Receiver module	—	143071
Interface module	—	143072
Interface set	comprising interface module, corrugated hose 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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