



## PSEN opII lockout

**PILZ**  
THE SPIRIT OF SAFETY

► PSEN sensor technology

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SD means Secure Digital

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# 1 Introduction

## 1.1 Validity of documentation

This documentation is valid for the product PSEN opII lockout. It is valid until new documentation is published.

This operating manual explains the function and operation, describes the installation and provides guidelines on how to connect the product.

## 1.2 Using the documentation

This document is intended for instruction. Only install and commission the product if you have read and understood this document. The document should be retained for future reference.

## 1.3 Definition of symbols

Information that is particularly important is identified as follows:



### **DANGER!**

This warning must be heeded! It warns of a hazardous situation that poses an immediate threat of serious injury and death and indicates preventive measures that can be taken.



### **WARNING!**

This warning must be heeded! It warns of a hazardous situation that could lead to serious injury and death and indicates preventive measures that can be taken.



### **CAUTION!**

This refers to a hazard that can lead to a less serious or minor injury plus material damage, and also provides information on preventive measures that can be taken.



### **NOTICE**

This describes a situation in which the product or devices could be damaged and also provides information on preventive measures that can be taken. It also highlights areas within the text that are of particular importance.



**INFORMATION**

This gives advice on applications and provides information on special features.

## 2 Safety

### 2.1 Intended use

PSEN opII lockout is a mechanical add-on module for the electrosensitive protective equipment PSEN opII. The add-on module creates an interruption of the protected field, preventing a start-up of the plant.

The add-on module may only be activated and deactivated by qualified personnel, who are present within the hazardous area. Unauthorised deactivation of the add-on module must be prevented by one or two padlocks.



#### NOTICE

The padlock is **not** supplied with the device.

#### Required properties of the padlock:

The padlock must be robust against manipulative removing (we recommend class 4 to EN 12320)

The padlock must meet the requirements in the technical details (see "[Technical details](#) [ 25]").

The padlock has a thin lock body.

The add-on module is compatible with the following PSEN opII products:

- ▶ PSEN opII3F, PSEN opII3H, PSEN opII3B
- ▶ PSEN opII4F, PSEN opII4H, PSEN opII4B

#### The following is deemed improper use in particular

- ▶ Any component or technical modification to the product,
- ▶ Use of the product outside the areas described in this operating manual,
- ▶ Use of the product outside the technical details (see [Technical details](#) [ 25]).

## 2.2 Safety regulations

### 2.2.1 Use of qualified personnel

The products may only be assembled, installed, programmed, commissioned, operated, maintained and decommissioned by competent persons.

A competent person is a qualified and knowledgeable person who, because of their training, experience and current professional activity, has the specialist knowledge required. To be able to inspect, assess and operate devices, systems and machines, the person has to be informed of the state of the art and the applicable national, European and international laws, directives and standards.

It is the company's responsibility only to employ personnel who

- ▶ Are familiar with the basic regulations concerning health and safety / accident prevention,
- ▶ Have read and understood the information provided in the section entitled Safety
- ▶ Have a good knowledge of the generic and specialist standards applicable to the specific application.

## 2.2.2 Warranty and liability

All claims to warranty and liability will be rendered invalid if:

- ▶ The product was used contrary to the purpose for which it is intended
- ▶ Damage can be attributed to not having followed the guidelines in the manual or
- ▶ Operating personnel are not suitably trained.

## 2.2.3 Disposal

- ▶ When decommissioning, please comply with local regulations regarding the disposal of electronic devices (e.g. Electrical and Electronic Equipment Act).

## 2.3 For your safety



### **DANGER!**

#### **Hazard caused by malfunction of pacemakers or implanted defibrillators**

The magnetic field of the PSEN opII lockout may cause malfunctions of pacemakers or implanted defibrillators.

People with a pacemaker or implanted defibrillators must maintain a distance of at least 100 mm to the PSEN opII lockout.



### **DANGER!**

#### **Loss of the safety function by reflection bypass**

Reflection bypass may prevent objects in the hazardous area from being detected, and depending on the application, may result in severe physical injury and death.

- When installing PSEN opII lockout and attaching the padlock, ensure that the front screen of the safety light curtain is not scratched
- Ensure that the safety light curtain is operated only when PSEN opII lockout is in the position **Open** or **Closed**. It is not permitted to operate the safety light curtain in a different position.
- Ensure that the following acceleration values are not exceeded when PSEN opII lockout is closed.
  - Vibration: max 0.2 g
  - Shock: max. 2 g

- ▶ Ensure that during the operation on PSEN opII lockout there are no forces  $\geq 200$  N.
- ▶ Ensure that with a safety light curtain for body protection the PSEN opII lockout is fixed only on the receiver of the safety light curtain.
- ▶ A max. of two PSEN opII lockout may be used on the receiver/transmitter of a safety light curtain.
  - If two PSEN opII lockout are used on a receiver/transmitter with a protected field height  $> 150$  mm, they must be installed with a distance of at least 100 mm.
  - On a receiver/transmitter with a protected field height of  $\leq 150$  mm only a PSEN opII lockout must be used.
- ▶ Ensure that PSEN opII lockout is not used when components are damaged.
- ▶ Ensure that there are no fingers between the base body and the cover.

The cover is held on the base body of the PSEN opII lockout by strong magnets and it might trap fingers when moving.



## 3 Overview

### 3.1 Device view

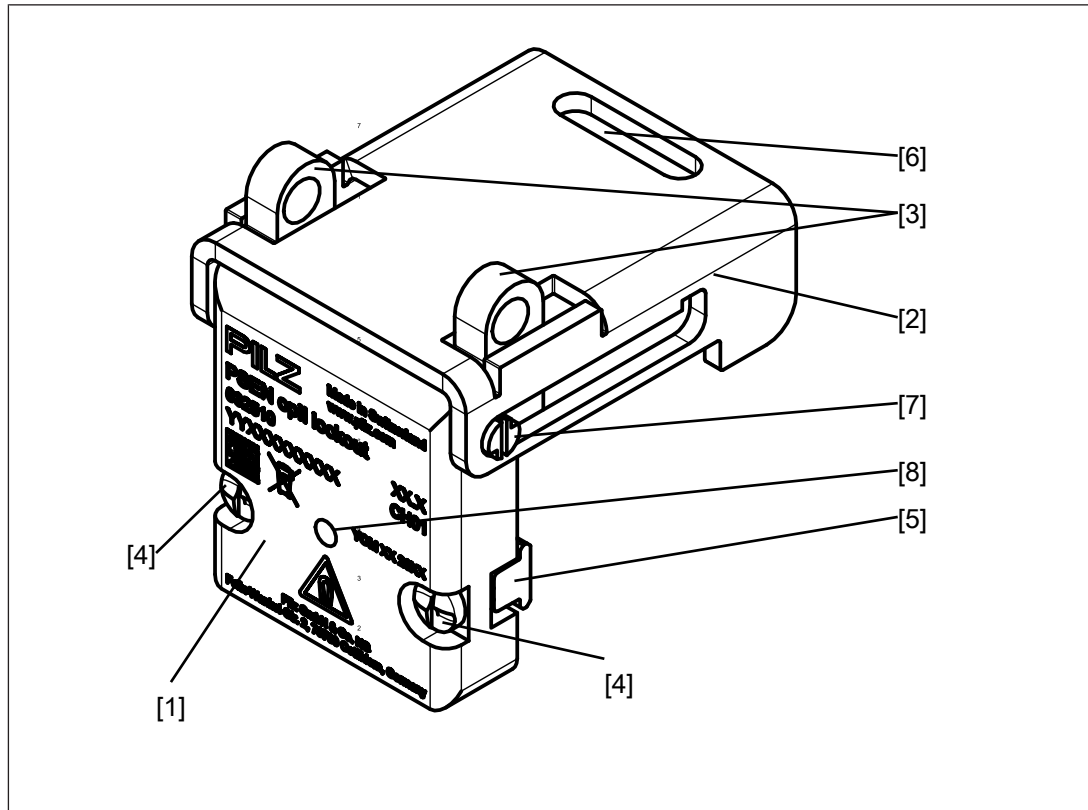


Fig.: External view of PSEN opII lockout– open state

#### Legend

- [1] Base body of the PSEN opII lockout with magnets (not visible) to safeguard the cover in a open state
- [2] Cover for blocking the light beam
- [3] Eyelets for inserting the padlocks
- [4] One-way screws for fixing the PSEN opII lockout
- [5] Slot nut
- [6] Grip slot of the cover
- [7] Axis with retaining geometry
- [8] Drill hole for threaded pin

### 3.2 Scope

- 1 x PSEN opII lockout, pre-assembled
- Installation material
  - 2 x one-way screws M4 x 12 stainless steel A2, with pan head,
  - Slot nuts,
  - Threaded pin with hexagon socket and tip ISO 4027, M3 x 12.

## 4 Function description

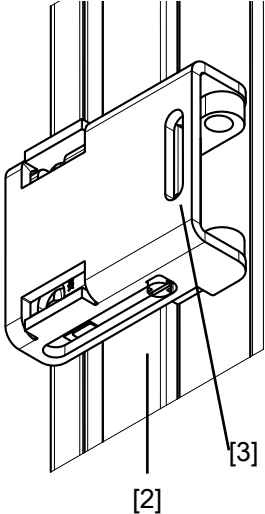
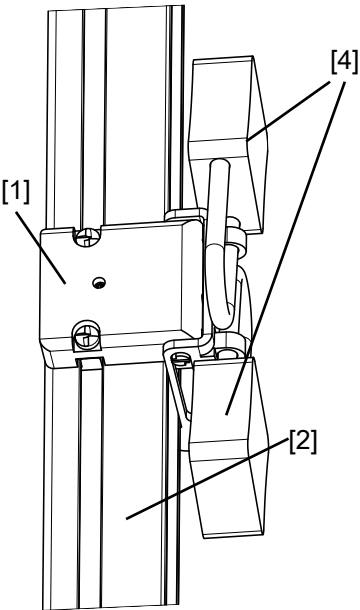
The main components of PSEN opII lockout are a labelled base body and a moveable cover.

The base body is fixed non-slipping in the existing slots to the side of the safety light curtain with the supplied slot nuts and the threaded pin.

In a safety light curtain with body protection the PSEN opII lockout must be fixed to the receiver, with a safety light curtain with finger or hand protection the PSEN opII lockout can be fixed to the receiver or transmitter.

On the base body the cover is fixed that covers the light beam of the safety light curtain and that prevents the clearing of the protected field.

The interlock function of the PSEN opII lockout cover is ensured using padlocks.

|                                                                                                                                                           |                                                                                                                                                               |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                                         |                                                                            |
| Open state of the PSEN opII lockout<br>the cover is held by the magnets on the base body and it does not cover the light beam of the safety light curtain | Closed state of the PSEN opII lockout<br>the cover hides the light beam of the safety light curtain and it is secured with one or two padlocks in the eyelets |
| [1]                                                                                                                                                       | Base body of PSEN opII lockout                                                                                                                                |
| [2]                                                                                                                                                       | Safety light curtain                                                                                                                                          |
| [3]                                                                                                                                                       | Grip slot on the cover                                                                                                                                        |
| [4]                                                                                                                                                       | Padlocks for securing the cover                                                                                                                               |

- The permitted vibration and shock stress differs from the individual states of PSEN opII lockout.

| Permitted shock stress of PSEN opII lockout in state                                                         |                                                                |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Open                                                                                                         | Closed                                                         |
| Max. 0.2 g in accordance with the standard EN 60068 2 6                                                      | Max. 0.2 g in accordance with the standard EN 60068 2 6        |
| 3M4 in accordance with the standard IEC TR 60721-4-3<br>3M7 in accordance with the standard IEC TR 60721-4-3 | Not permitted in accordance with the standard IEC TR 60721-4-3 |

| Permitted shock stress of PSEN opII lockout in state                                                         |                                                                |
|--------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------|
| Open                                                                                                         | Closed                                                         |
| Max. 50 g in accordance with the standard EN 6006827                                                         | Max. 2 g in accordance with the standard EN 6006827            |
| 3M4 in accordance with the standard IEC TR 60721-4-3<br>3M7 in accordance with the standard IEC TR 60721-4-3 | Not permitted in accordance with the standard IEC TR 60721-4-3 |

- Details on vibration and shock stress in the individual states of PSEN opII lockout can be found in the [Technical details](#)  25].

## 5 Installation

There can be any position of PSEN opII lockout with a safety light curtain for finger or hand protection.

In a safety light curtain for body protection the distance must be 7 mm from the begin of the housing of the safety light curtain to the PSEN opII lockout housing.

Use a padlock with the following properties:

- ▶ Thin padlock body.  
The padlock must not touch the front screen of the safety light curtain.
- ▶ The padlock must meet the requirements in the [Technical details](#) [25].

### Required tool

- ▶ Screw-locking, threadlocked, resistance class moderate strength
- ▶ Torque screwdriver for plug tools
  - Plug tools hexagon socket profile, size 1.5 mm
  - Plug tool slot profile

### 5.1 Safety light curtain installed with standard installation kit



#### **DANGER!**

##### **Loss of the safety function by reflection bypass**

Reflection bypass may prevent objects in the hazardous area from being detected, and depending on the application, may result in severe physical injury and death.

- Receiver and transmitter of the safety light curtain must be at least 500 mm apart from each other.
- When installing PSEN opII lockout and attaching the padlock, ensure that the front screen of the safety light curtain is not scratched.



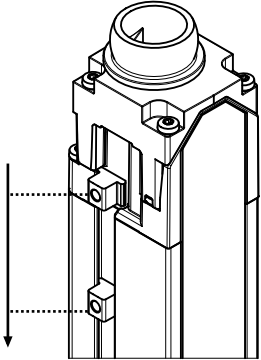
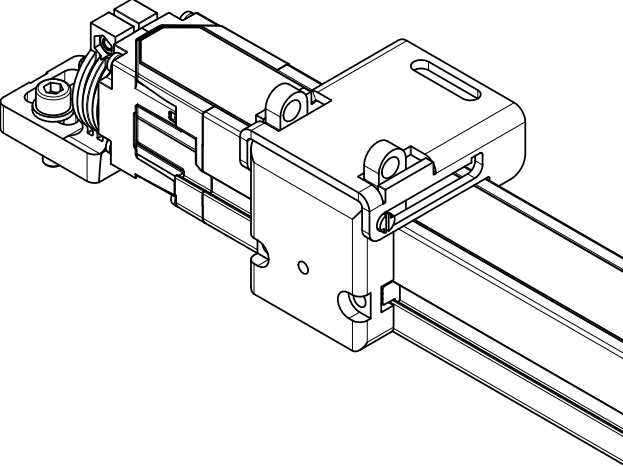
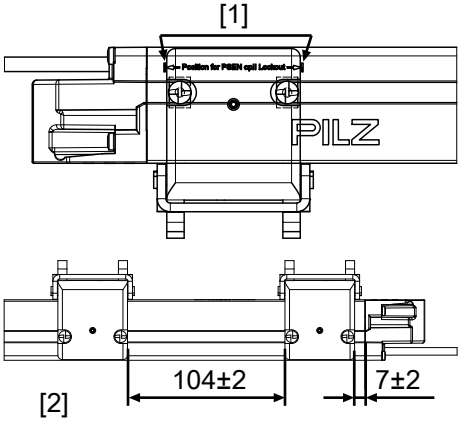
#### **DANGER!**

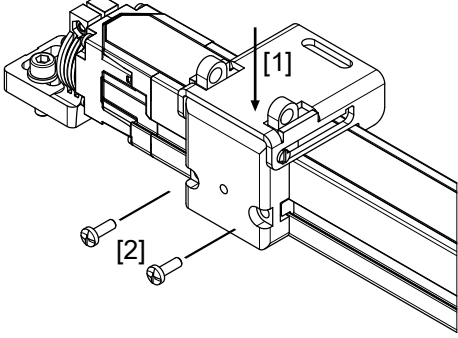
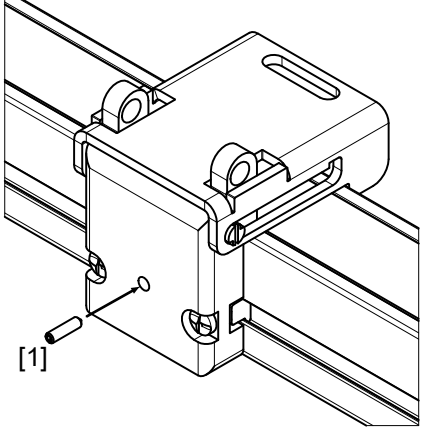
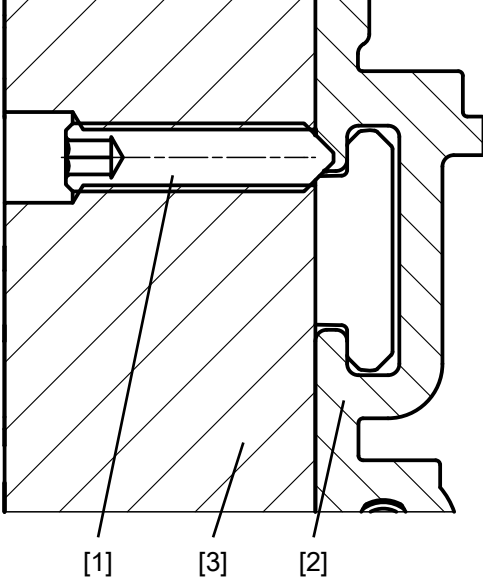
##### **Loss of the safety function by wrong positioning of PSEN opII lockout with a safety light curtain with body protection**

If the PSEN opII lockout is installed in a place where no beam of the safety light curtain is covered, objects in the hazardous area cannot be detected and depending on the application, severe physical injury and death may result

- The PSEN opII lockout must only be installed on the receiver rod, on the positions permitted and described in the procedure.

**Procedure:**

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Insert two slot nuts (supplied) into the slot of the safety light curtain.</p> <p>With a safety light curtain for body protection, only use the receiver of the safety light curtain.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|   | <p>Insert the PSEN opII lockout on the slot nuts on the safety light curtain (see diagram).</p> <p>Please note:</p> <ul style="list-style-type: none"> <li>▶ Make sure you do not damage the front screen of the safety light curtain with the PSEN opII lockout</li> <li>▶ Check whether there is any dirt or foreign body between the base body and the cover, and remove it.</li> </ul>                                                                                                                                                                                                                                                                                                                        |
|  | <p><b>Only for a safety light curtain for body protection:</b></p> <p>Ensure that the PSEN opII lockout is on the relevant position of the <b>receiver</b>.</p> <p>[1] Permitted position of the PSEN opII lockout with a safety light curtain for body protection with position marking</p> <p>[2] Permitted position of two PSEN opII lockout with a safety light curtain for body protection without position marking.</p> <p>If there is not position marking available yet on your safety light curtain, the position of PSEN opII lockout on the <b>receiver</b> can be measured. The distance must be 7 mm from the begin of the housing of the safety light curtain to the PSEN opII lockout housing.</p> |

|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Please note:</p> <ul style="list-style-type: none"> <li>► Ensure that the PSEN opII lockout is on the correct position and that it is evenly seated on the housing of the safety light curtain [1] (if necessary, press [1] slightly in the direction of the arrow).</li> <li>► If there is a dead zone with a safety light curtain with finger, hand or body protection, the PSEN opII lockout must not be placed in the area of the dead zone.</li> </ul> <p>Screw the base body with the one-way screws [2] into the slot nuts. Tighten the one-way screws with <math>2.1 \text{ Nm} \pm 0.2 \text{ Nm}</math>.</p> <p>Secure the one-way screws with a threadlocked screw-locking, resistance class at least moderate strength.</p> <p>Ensure that after securing using screw-locking there are no residues of the screw-locking at the back panel of the housing.</p> |
|   | <p>Screw the threadlock [1] into the base body and tighten the threaded pin with <math>0.4 \text{ Nm} \pm 10 \%</math>.</p> <p>Secure the threaded pin with a threadlocked screw-locking, resistance class at least moderate strength.</p> <p>Ensure that after securing using screw-locking there are no residues of the screw-locking at the back panel of the housing.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|  | <p>The threaded pin [1] creates a trough in the housing of the safety light curtain [2], which prevents the PSEN opII lockout [3] from slipping.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## 5.2 Safety light curtain installed with PSEN opII Adv Bracket Kit



### **DANGER!**

#### **Loss of the safety function by reflection bypass**

Reflection bypass may prevent objects in the hazardous area from being detected, and depending on the application, may result in severe physical injury and death.

- Receiver and transmitter of the safety light curtain must be at least 500 mm apart from each other.
- When installing PSEN opII lockout and attaching the padlock, ensure that the front screen of the safety light curtain is not scratched.



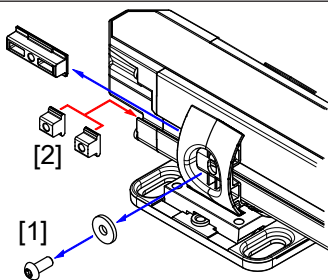
### **DANGER!**

#### **Loss of the safety function by wrong positioning of PSEN opII lockout with a safety light curtain with body protection**

If the PSEN opII lockout is installed in a place where no beam of the safety light curtain is covered, objects in the hazardous area cannot be detected and depending on the application, severe physical injury and death may result

- The PSEN opII lockout must only be installed on the receiver rod, on the positions permitted and described in the procedure.

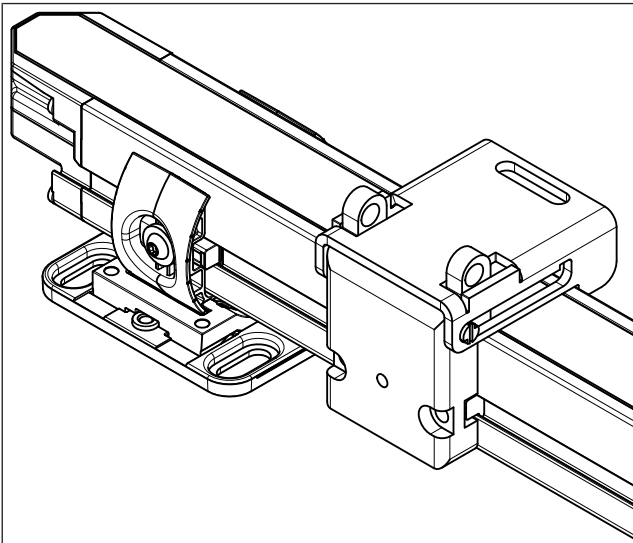
### **Procedure:**



Insert two slot nuts (supplied) into the slot on the safety light curtain. [2].

With a safety light curtain for body protection, only use the receiver of the safety light curtain.

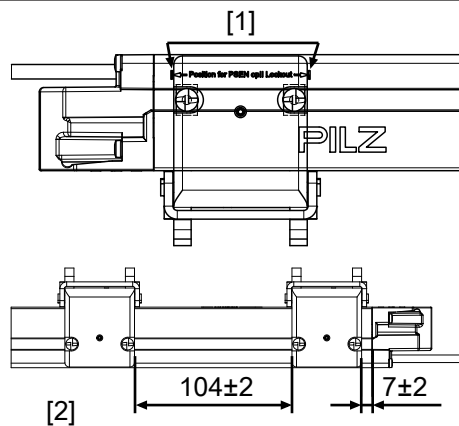
Depending on the required position of the PSEN opII lockout it may be necessary to remove a slot nut one-sided at the PSEN opII Adv Bracket Kit. After entering the slot nuts of the PSEN opII lockout the slot nut of PSEN opII Adv Bracket Kit must be attached again.



Place the PSEN opII lockout on the housing of the safety light curtain.

Please note:

- ▶ Make sure you do not damage the front screen of the safety light curtain with the PSEN opII lockout.
- ▶ Check whether there is any dirt or foreign body between the base body and the cover, and remove it.



**Only for a safety light curtain for body protection:**

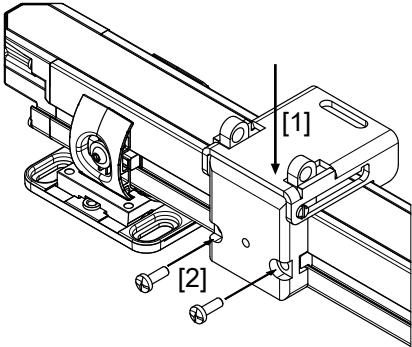
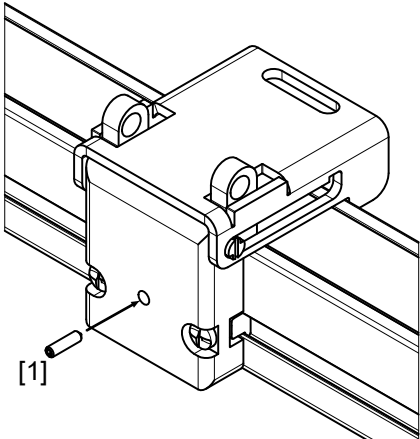
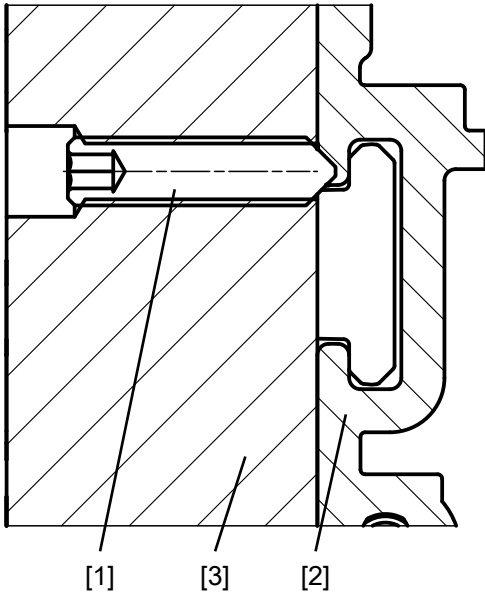
Ensure that the PSEN opII lockout is on the relevant position of the **receiver**.

[1] Permitted position of the PSEN opII lockout with a safety light curtain for body protection with position marking

[2] Permitted position of two PSEN opII lockout with a safety light curtain for body protection without position marking.

If there is not position marking available yet on your safety light curtain, the position of PSEN opII lockout on the **receiver** can be measured. The distance must be 7 mm from the begin of the housing of the safety light curtain to the PSEN opII lockout housing.



|                                                                                     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|-------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|    | <p>Please note:</p> <ul style="list-style-type: none"> <li>► Ensure that the PSEN opII lockout is on the correct position and that is evenly seated on the housing of the safety light curtain [1] (if necessary, press [1] slightly in the direction of the arrow).</li> <li>► If there is a dead zone with safety light curtains with finger, hand or body protection, the PSEN opII lockout must not be placed in the area of the dead zone.</li> </ul> <p>Screw the base body with the one-way screws [2] into the slot nuts. Tighten the one-way screws with <math>2.1 \text{ Nm} \pm 0.2 \text{ Nm}</math>.</p> <p>Secure the one-way screws with a threadlocked screw-locking, resistance class at least moderate strength.</p> <p>Ensure that after securing using screw-locking there are no residues of the screw-locking at the back panel of the housing.</p> |
|   | <p>Screw the threadlock [1] into the base body and tighten the threaded pin with <math>0.4 \text{ Nm} \pm 10 \%</math>.</p> <p>Secure the threaded pin with a threadlocked screw-locking, resistance class at least moderate strength.</p> <p>Ensure that after securing using screw-locking there are no residues of the screw-locking at the back panel of the housing.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|  | <p>The threaded pin [1] creates a trough in the housing of the safety light curtain [2], which prevents the PSEN opII lockout [3] from slipping.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## 5.3 Checking the PSEN opII lockout

Before commissioning the PSEN opII lockout, checks have to be made.



### INFORMATION

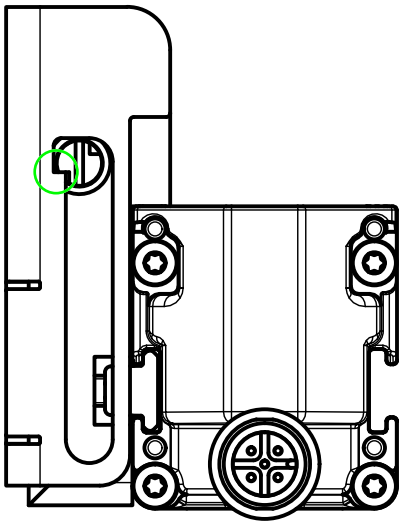
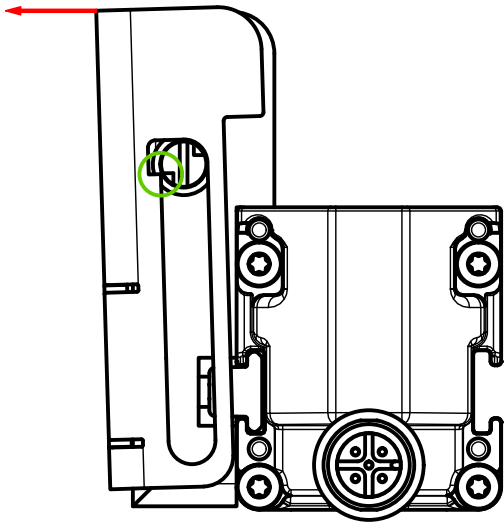
This inspection may only be carried out by qualified personnel.

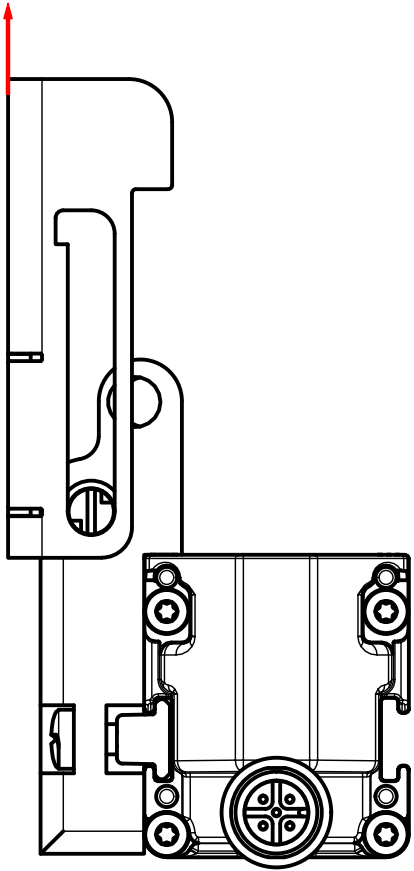
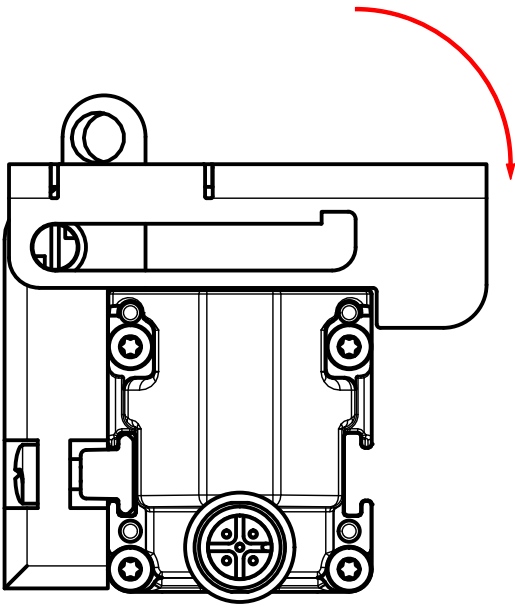
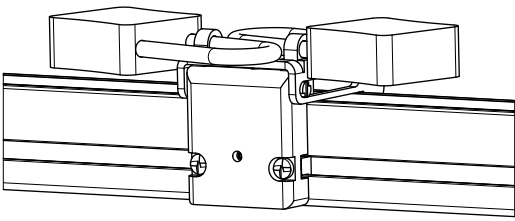
- ▶ Check that PSEN opII lockout is firmly seated and check the fixing on the transmitter/receiver of the safety light curtain.  
One-way screws and threaded pin must be secured with a threadlocked screw-locking.
- ▶ Check the position of the cover of PSEN opII lockout. The cover must be in the position **Open** or **Closed**. It is not permitted to operate the safety light curtain in a different position.  
If the cover cannot be fixed in the **Open** position, the PSEN opII lockout must be replaced.
- ▶ Check that the safety light curtain is fixed correctly.
- ▶ Close the PSEN opII lockout (see [Close PSEN opII lockout](#)  19)).  
The protected field of the safety light curtain must be interrupted and it cannot be rebuilt when PSEN opII lockout is closed.
- ▶ Open the PSEN opII lockout (see [Open PSEN opII lockout](#)  21)).  
Check the safety function of the safety light curtain (see operating manual of the safety light curtain).

## 6 Operation

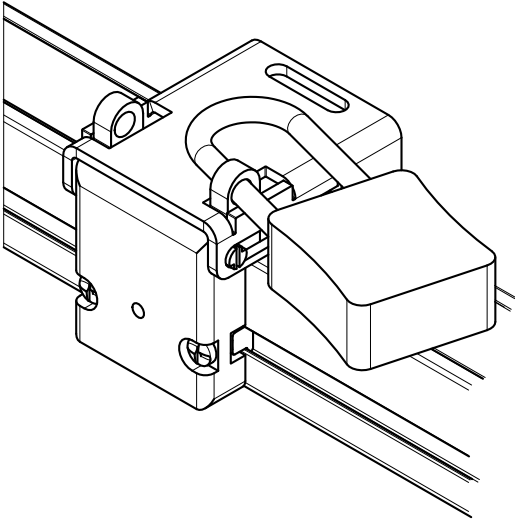
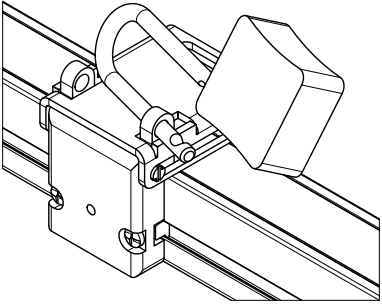
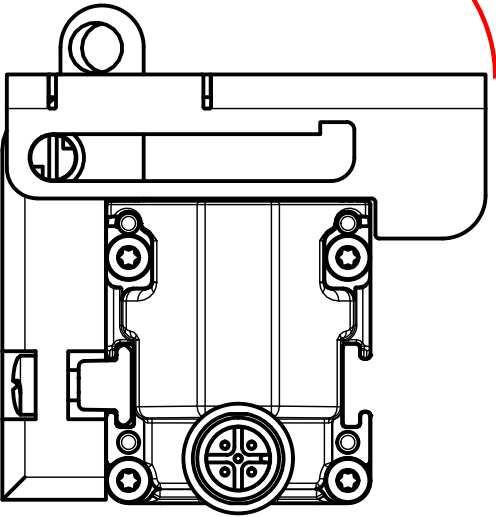
- ▶ The cover of the PSEN opII lockout must be in the position **Open** or **Closed**. It is not permitted to operate the safety light curtain in a different position.
- ▶ Ensure that there are no fingers between the base body and the cover.  
The cover is held on the base body of the PSEN opII lockout by strong magnets and it might trap fingers when moving.
- ▶ Ensure that during the operation on PSEN opII lockout there are no forces  $\geq 200$  N.
- ▶ Check whether there is any dirt or foreign body between the base body and the cover, and remove it.

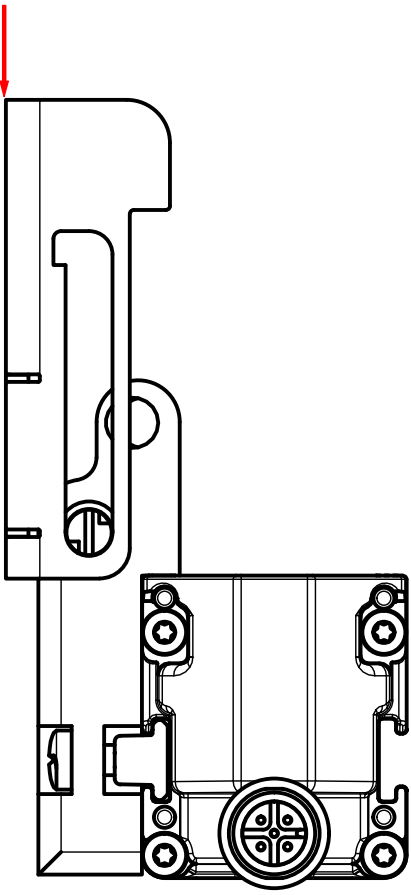
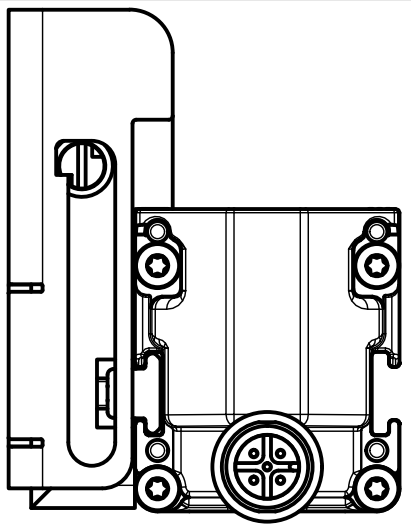
### 6.1 Close PSEN opII lockout

|                                                                                     |                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p><b>State open</b></p> <p>The cover is aligned with the base body and it is held by the magnets</p> <p>The retaining geometry (green circle) is locked into position.</p>                                                        |
|  | <p>Pull the grip slot of the cover in the direction of the arrow. The magnetic force has to be overcome which holds the cover on the base body.</p> <p>The retaining geometry (green circle) is no longer locked into position</p> |

|                                                                                     |                                                                                                                                                                                                                                                                    |
|-------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Use the grip slot to pull out the cover as far as possible of in the direction of the arrow.</p>                                                                                                                                                                |
|  | <p>Turn the cover by 90 ° in the direction of the front screen of the safety light curtain.</p>                                                                                                                                                                    |
|  | <p>Lock the cover with a padlock or two padlocks.</p> <p>The padlock must meet the requirements in the <a href="#">Technical details</a>  25].</p> <p><b>State closed</b></p> |

## 6.2 Open PSEN opII lockout

|                                                                                     |                                                                                                                            |
|-------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------|
|    | <p><b>State closed</b></p> <p>The PSEN opII lockout is protected with one (or two) padlocks from uncontrolled opening.</p> |
|   | <p>Open the padlock or the two padlocks.</p>                                                                               |
|  | <p>Turn the cover by 90 ° in the direction of the base body.</p>                                                           |

|                                                                                     |                                                                                                                                                                   |
|-------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <p>Move the cover in the direction of the arrow until the retaining geometry locks in the axis.</p>                                                               |
|  | <p>The cover is aligned with the base body and it is held by the magnets. The cover is locked in the retaining geometry of the axis.</p> <p><b>State open</b></p> |

## 7 Regular checks and maintenance

It is not necessary to perform maintenance work on the product in normal operation. Please return any faulty products to Pilz.

- ▶ After each operation of an exceptional event (e.g interruption of the protected field, collision) check the position of the cover of PSEN opII lockout. The cover must be in the position **Open** or **Closed**. It is not permitted to operate the safety light curtain in a different position.

If the cover cannot be fixed in the **Open** position, the PSEN opII lockout must be replaced.

- ▶ After each change, check the fixing, position and function of PSEN opII lockout (see [Checking the PSEN opII lockout](#) [📖 18]).

The following measures should also be regarded as modifications:

- The exchange of the safety light curtain
- The exchange of components of the safety light curtain
- A changed connection of the safety light curtain (change from uncoded connection to coded connection)
- Change of the safety light curtain alignment.



### INFORMATION

This inspection may only be carried out by qualified personnel.

- ▶ Check whether there is any dirt or foreign body between the base body and the cover, and remove it.
- ▶ Before every operation, check that PSEN opII lockout is firmly seated.  
One-way screws and threaded pin must be secured with a threadlocked screw-locking.
- ▶ Ensure that the PSEN opII lockout is not used beyond the max. number of locking cycles.

## 8 Dimensions

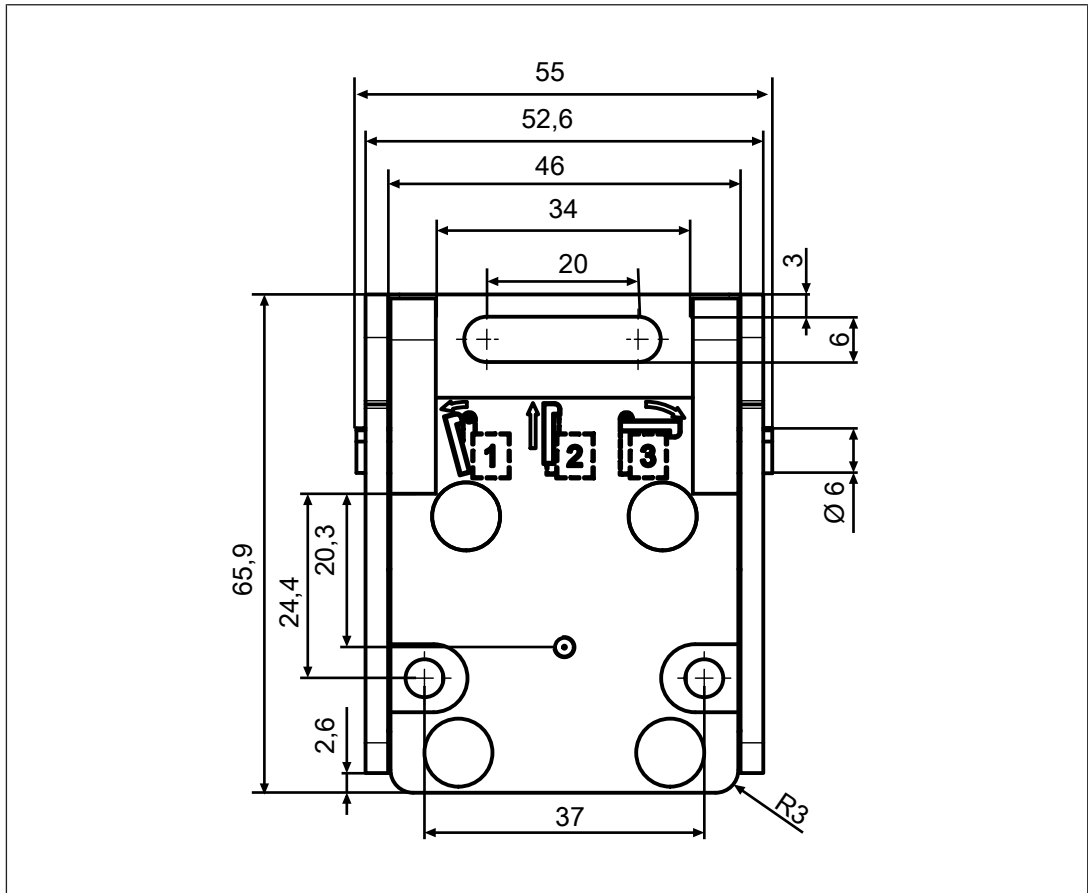


Fig.: Plan view

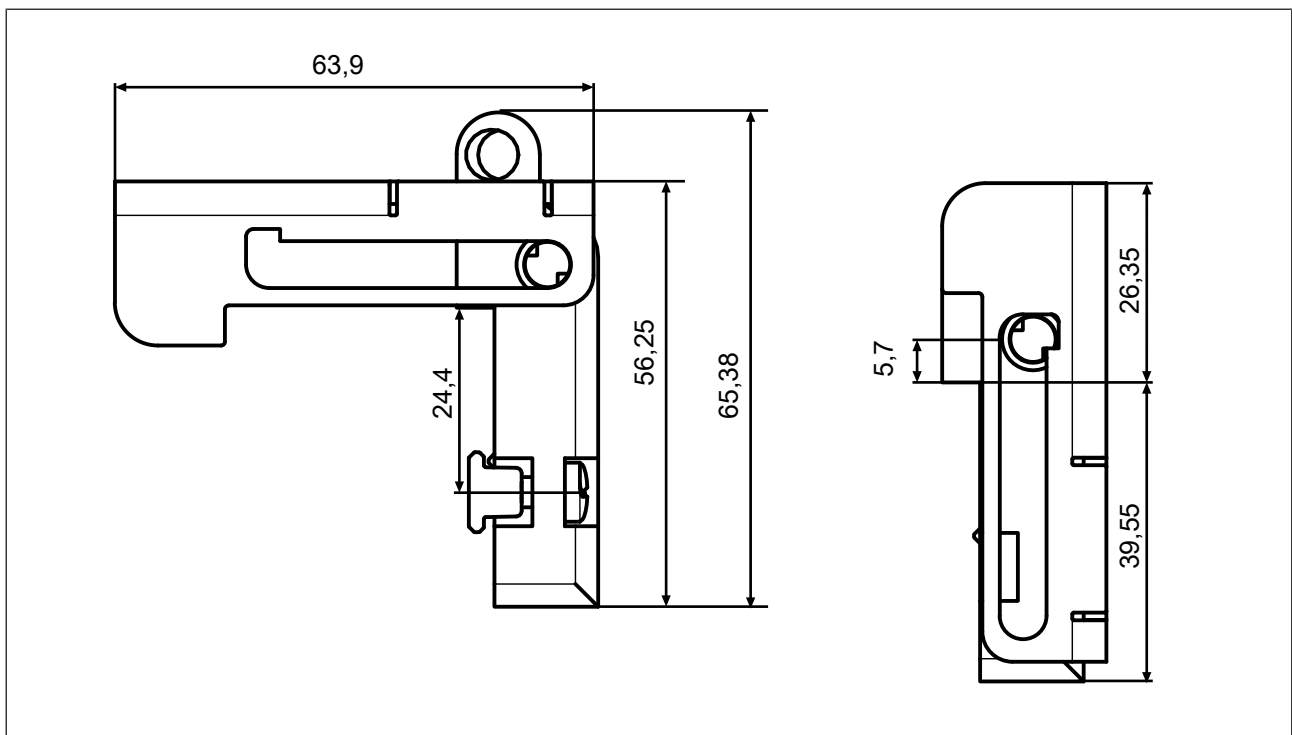


Fig.: View from below: Opened and closed



## 9 Technical details

### Environmental data

#### Ambient temperature

Temperature range **-30 - 60 °C**

#### Storage temperature

Temperature range **-30 - 70 °C**

#### Vibration

valid for lockout in state **closed**  
 In accordance with the standard **EN 60068-2-6**  
 Frequency **10 - 150 Hz**  
 Amplitude **0,75 mm**  
 Acceleration **2 m/s<sup>2</sup>**

#### Vibration

valid for lockout in state **open**  
 In accordance with the standard **EN 60068-2-6**  
 Frequency **10 - 150 Hz**  
 Amplitude **0,75 mm**  
 Acceleration **2 m/s<sup>2</sup>**  
 Bracket **Swivel-Mount**  
 In accordance with the standard **EN 60068-2-6**  
 Class **3M7**  
 Frequency **5 - 150 Hz**  
 Amplitude **10 mm**  
 Acceleration **3g**  
 Bracket **Adv Bracket Kit**  
 In accordance with the standard **EN 60068-2-6**  
 Class **3M4**  
 Frequency **5 - 150 Hz**  
 Amplitude **3,5 mm**  
 Acceleration **1g**  
 Bracket **Swivel-Mount**

#### Shock stress

valid for lockout in state **closed**  
 In accordance with the standard **EN 60068-2-27**  
 Number of shocks **500**  
 Acceleration **2g**  
 Duration **16 ms**

## Environmental data

### Shock stress

|                                 |                 |
|---------------------------------|-----------------|
| valid for lockout in state      | open            |
| In accordance with the standard | EN 60068-2-27   |
| Bracket                         | Swivel-Mount    |
| Number of shocks                | 500             |
| Acceleration                    | 10g             |
| Duration                        | 16 ms           |
| In accordance with the standard | EN 60068-2-27   |
| Bracket                         | Adv Bracket Kit |
| Number of shocks                | 100             |
| Acceleration                    | 25g             |
| Duration                        | 6 ms            |
| Class                           | 3M7             |
| In accordance with the standard | EN 60068-2-27   |
| Bracket                         | Adv Bracket Kit |
| Number of shocks                | 3               |
| Acceleration                    | 50g             |
| Duration                        | 11 ms           |
| In accordance with the standard | EN 60068-2-27   |
| Bracket                         | Adv Bracket Kit |
| Number of shocks                | 500             |
| Acceleration                    | 40g             |
| Duration                        | 6 ms            |
| In accordance with the standard | EN 60068-2-27   |
| Bracket                         | Swivel-Mount    |
| Number of shocks                | 100             |
| Acceleration                    | 15g             |
| Duration                        | 6 ms            |
| Class                           | 3M4             |

## Mechanical data

|                               |                         |
|-------------------------------|-------------------------|
| Max. number of closing cycles | 6.050                   |
| Material                      | Aluminium, steel-coated |
| Fixing screws torque settings | 2,1 Nm +/-0,2 Nm        |
| Torque setting threaded pin   | 0,4 Nm +/- 0,04 Nm      |
| Dimensions                    |                         |
| Height                        | 66 mm                   |
| Width                         | 55 mm                   |
| Depth                         | 22 mm                   |
| Lock shackle diameter min.    | 6 mm                    |
| Lock shackle diameter max.    | 6,5 mm                  |
| Lock shackle height max.      | 50 mm                   |
| Weight                        | 195 g                   |
| Lock weight max.              | 160 g                   |

Where standards are undated, the 2020-07 latest editions shall apply.

## 10 Order reference

| Product type      | Features                                           | Order no. |
|-------------------|----------------------------------------------------|-----------|
| PSEN opII lockout | Add-on module for a safety light curtain PSEN opII | 632510    |

# Support

Technical support is available from Pilz round the clock.

## Americas

### Brazil

+55 11 97569-2804

### Canada

+1 888 315 7459

### Mexico

+52 55 5572 1300

### USA (toll-free)

+1 877-PILZUSA (745-9872)

## Asia

### China

+86 21 60880878-216

### Japan

+81 45 471-2281

### South Korea

+82 31 778 3300

## Australia and Oceania

### Australia

+61 3 95600621

### New Zealand

+64 9 6345350

## Europe

### Austria

+43 1 7986263-0

### Belgium, Luxembourg

+32 9 3217570

### France

+33 3 88104003

### Germany

+49 711 3409-444

### Ireland

+353 21 4804983

### Italy, Malta

+39 0362 1826711

## Scandinavia

+45 74436332

## Spain

+34 938497433

## Switzerland

+41 62 88979-32

## The Netherlands

+31 347 320477

## Turkey

+90 216 5775552

## United Kingdom

+44 1536 462203

**You can reach our  
international hotline on:**

+49 711 3409-222

support@pilz.com

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Headquarters: Pilz GmbH & Co. KG, Felix-Wankel-Straße 2, 73760 Ostfildern, Germany  
Telephone: +49 711 3409-0, Telefax: +49 711 3409-133, E-Mail: [info@pilz.com](mailto:info@pilz.com), Internet: [www.pilz.com](http://www.pilz.com)

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