PSEN b5

PSEN sensor technology

Operating Manual-1002471-EN-03

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SD means Secure Digital

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Introduction

Validity of documentation

This documentation is valid for the product PSEN b5. 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.

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.

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.

Overview

Scope

- Gate mounting plate with bolt
- Frame plate with latch
- Adapter for installing PSEN cs type actuator
- Adapter for installing PSEN me type actuator
- Fastening clip
- Screws (M4) for installing the adapter and the fastening clip
- Washers and spring rings for installing the adapters

Unit features

The bolt consists of a

- Gate mounting plate with bolt and handle, which is attached to the safety gate, and a
- Frame plate, which is fitted to the safety gate frame.

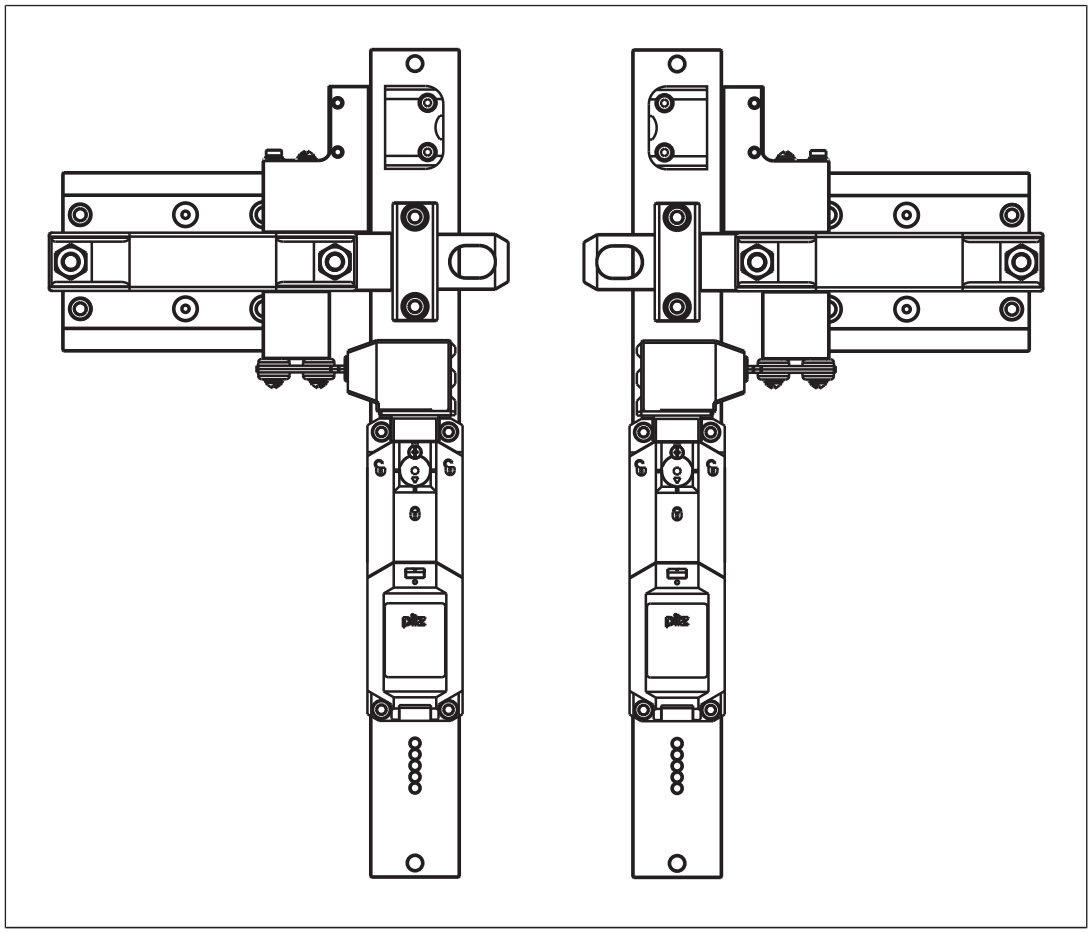


Fig.: Left: Bolt with safety switches assembled for left hinged gate; Right: Bolt with safety switches assembled for right hinged gate

Fig.: Left: Adapter PSEN cs; Right: Adapter PSEN me

The PSEN cs or PSEN me type actuator is installed on the gate mounting plate using an adapter. The corresponding safety switch is installed on the frame plate. If the operator opens the safety gate, the safety switch is actuated simultaneously.

The bolt is suitable for right and left hinged gates. A padlock may also be fitted through the slot on the bolt. This stops the bolt from being opened or closed unintentionally or without authorisation.
The bolt is suitable for installing on standard aluminium profiles and machine enclosures.

Safety

Only install and commission the bolt if you have read and understood these operating instructions plus the operating instructions for the PSEN cs safety switches and are familiar with the applicable regulations for health and safety at work and accident prevention.

Please note:

- Do not use the safety switch and actuator as a limit stop.
- Always test the function with one of the approved evaluation devices.

Intended use

The bolt is used as a mechanical guard locking device in accordance with EN ISO 12100-2 and EN 1088. It is designed for use as a mechanical interlock in conjunction with a safety switch of type

- PSEN cs3.1
- PSEN cs4.1
- PSEN cs4.2
- PSEN me1S
- PSEN me1.2S
- PSEN me1.21S
- PSEN me1M

Possible combinations of safety switches

The bolt can be used

- only with one safety switch PSEN cs
- only with one safety switch PSEN me
- or with a safety switch PSEN cs in conjunction with a safety switch PSEN me

A padlock can also be used to protect the bolt from unauthorised opening and closing.

The bolt may **not** be used on its own as a safety component to avoid hazardous plant or machine statuses.

INFORMATION

If PLe is required, for gate monitoring for example, a safety switch PSEN cs can also be installed in addition to a safety switch PSEN me.

Installation

CAUTION!

Do not install the bolt until you have read and understood the operating instructions for the safety switches PSEN cs or PSEN me! Pay particular attention to the information on operating distances and installation. Make sure that you comply with the technical details!

Installing the gate mounting plate and frame plate

INFORMATION

Installation is only possible when the bolt is open!

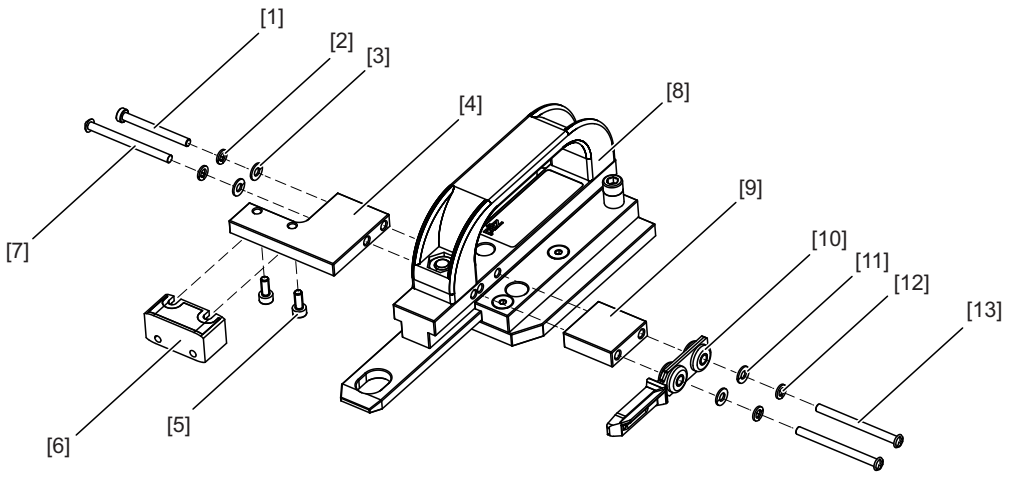
During installation make sure that:

- The installation surface on the gate and gate frame is flat.
- The top edge of the gate mounting plate is offset against the top edge of the frame plate by 55 mm (see also Dimensions [14]).

INFORMATION

To increase manipulation protection we recommend that you make at least one screw each unusable at the gate mounting plate and at the frame plate after installation.

Install safety switches PSEN cs and PSEN me



Legend

Actuator PSEN cs

[1] Hexagonal screw M4x40 (1x)
[2] Spring ring (2x)
[3] Washer (2x)
[4] Adapter for actuator PSEN cs
[5] Fixing screw M4x10 (2x)
[6] Actuator PSEN cs
[7] One-way screw M4x50 (1x)
[8] Gate mounting plate with bolt and handle

Actuator PSEN me

[9] Adapter for actuator PSEN me

[10] Actuator PSEN me

[11] Washer (2x)

[12] Spring ring (2x)

[13] One-way screw M4x50 (2x)

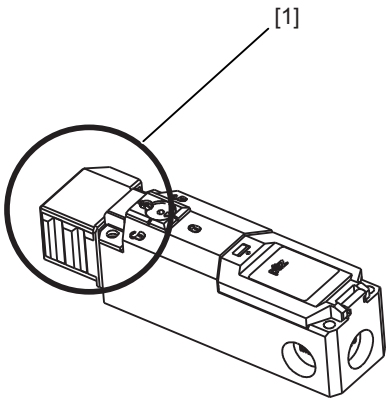
Installing the actuator

1. Install the two actuators [6] and [10] together with the corresponding adapters, as shown.
2. Secure the one-way screws [7] and [13] as shown.
3. Close the mounting holes of the actuator PSEN cs [6] using the corresponding seals. This is described in the operating manual of the safety switch PSEN cs.

Installing the safety switches

INFORMATION

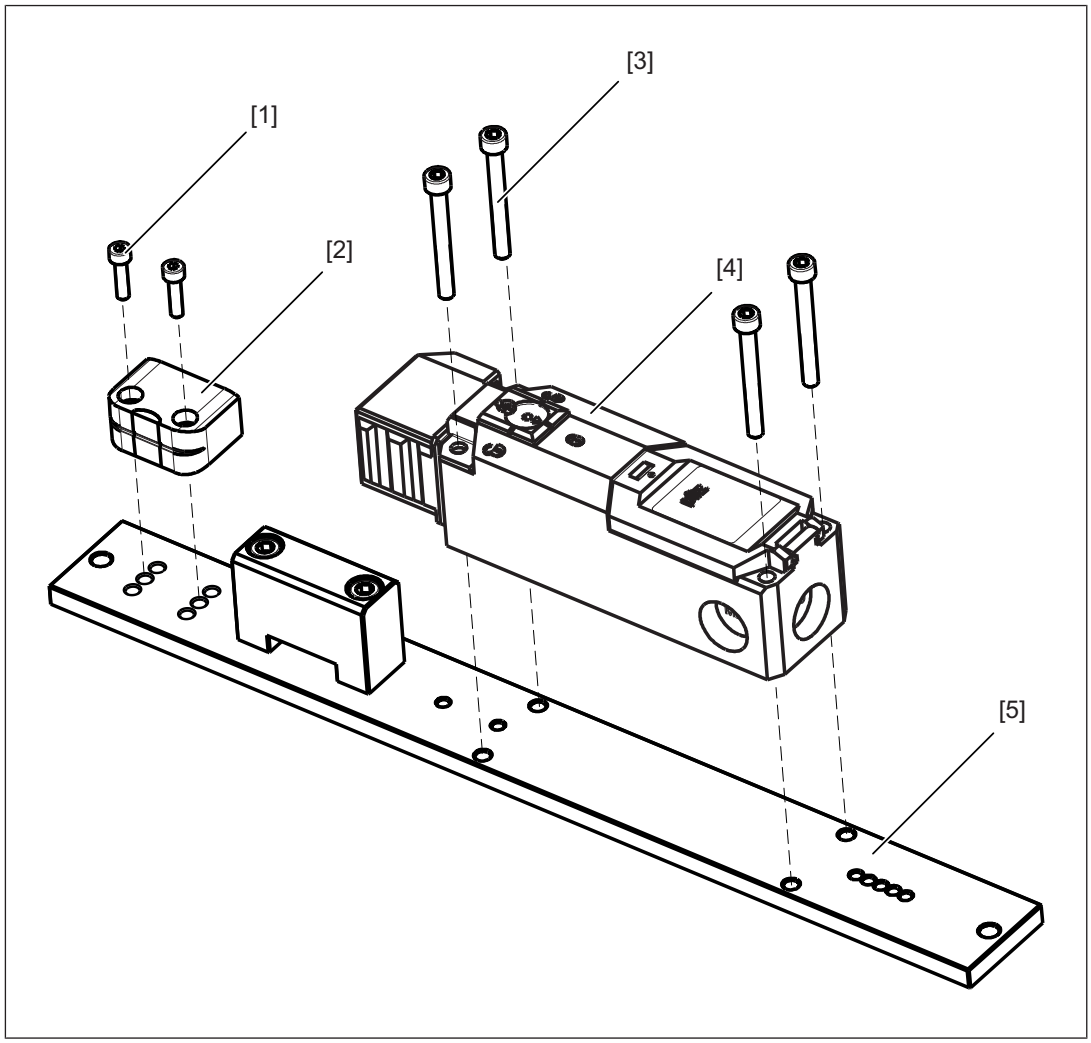
Please note the following when installing the PSENm safety switch:
Align the actuator head for a left or right-hinged gate prior to installation!
The necessary steps are described in the operating manual of PSEN me.



Legend

Safety switch PSEN me

[1] Actuator head



Legend

Safety switch PSEN cs

[1] Fixing screw M4x10 (2x)

[2] Safety switch PSEN cs

Safety switch PSEN me

[3] Fixing screw M5x45 (4x)

[4] Safety switch PSEN me

[5] Frame plate

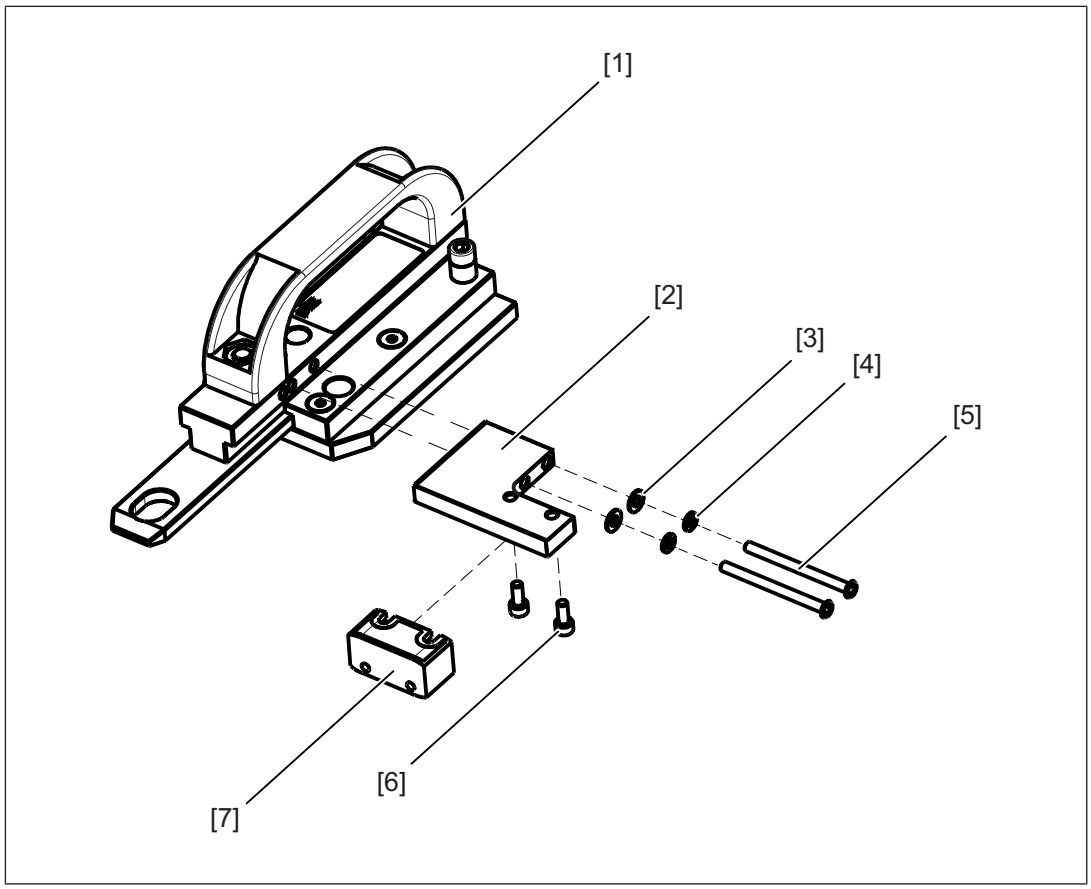
Installing the safety switches

⇨ Install the safety switches [2] and [4] on the frame plate [5] as shown.

INFORMATION

To increase manipulation protection we recommend that you make at least one screw on each safety switch [2] and [4] unusable after installation.

Installing only safety switch PSEN cs



Legend

Actuator PSEN cs

[1] Gate mounting plate with bolt and handle

[2] Adapter for actuator PSEN cs

[3] Washer (2x)

[4] Spring ring (2x)

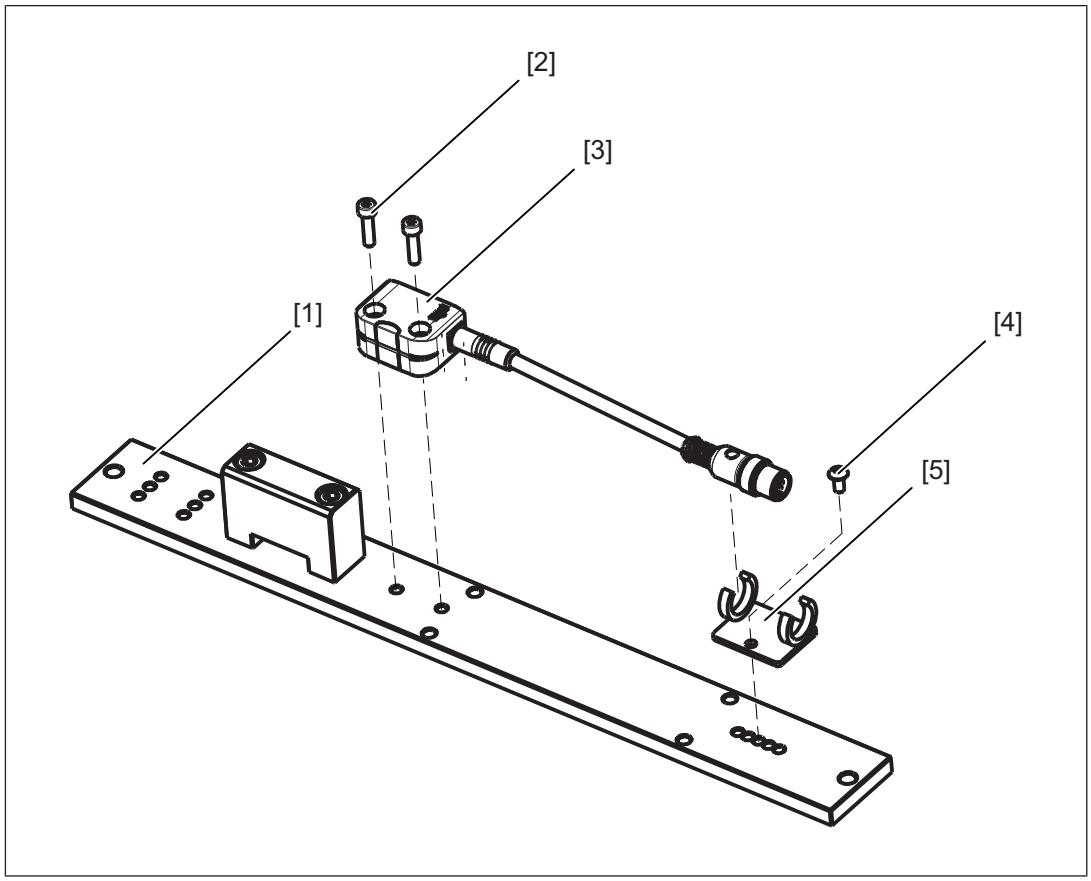
[5] One-way screw M4x50 (2x)

[6] Fixing screw M4x10 (2x)

[7] Actuator PSEN cs

Installing the actuator

1. Install the actuator PSEN cs [7] together with the corresponding adapter as shown.
2. Secure the one-way screw [5] as shown.
3. Close the mounting holes of the actuator PSEN cs [7] using the corresponding seals. This is described in the operating manual of the safety switch PSEN cs.



Legend

Safety switch PSEN cs

[1] Frame plate

[2] Fixing screw M4x10 (2x)

[3] Safety switch PSEN cs

[4] Fixing screw M4x8 (1x)

[5] Fastening clip

Installing the safety switches

⇨ Install the safety switch [3] on the frame plate [1] as shown.

INFORMATION

The fastening clip [5] serves to contain the plug-in connection of the safety switch and the outgoing cable. The length of the cable may vary based on tolerance. Accordingly, the fastening clip [5] can be fixed in one of the holes using the fixing screw [4]. The fastening clip is available from Escha Bauelemente GmbH, order no 8047664.

INFORMATION

To increase manipulation protection we recommend that you make at least one screw each unusable at the gate mounting plate and at the frame plate after installation.

Installing only safety switch PSEN me

Installing the actuator

1. Install the actuator PSEN me together with the corresponding adapter plate as shown under "Install safety switches PSEN cs and PSEN me [📖 8]".
2. Secure the one-way screw as shown.
3. Please note the details on installation listed there.

Installing the safety switches

⇨ Install the safety switch PSEN me on the frame plate as described under "Install safety switches PSEN cs and PSEN me [📖 8]".

▸ Please note the details on installation listed there.

Dimensions in mm

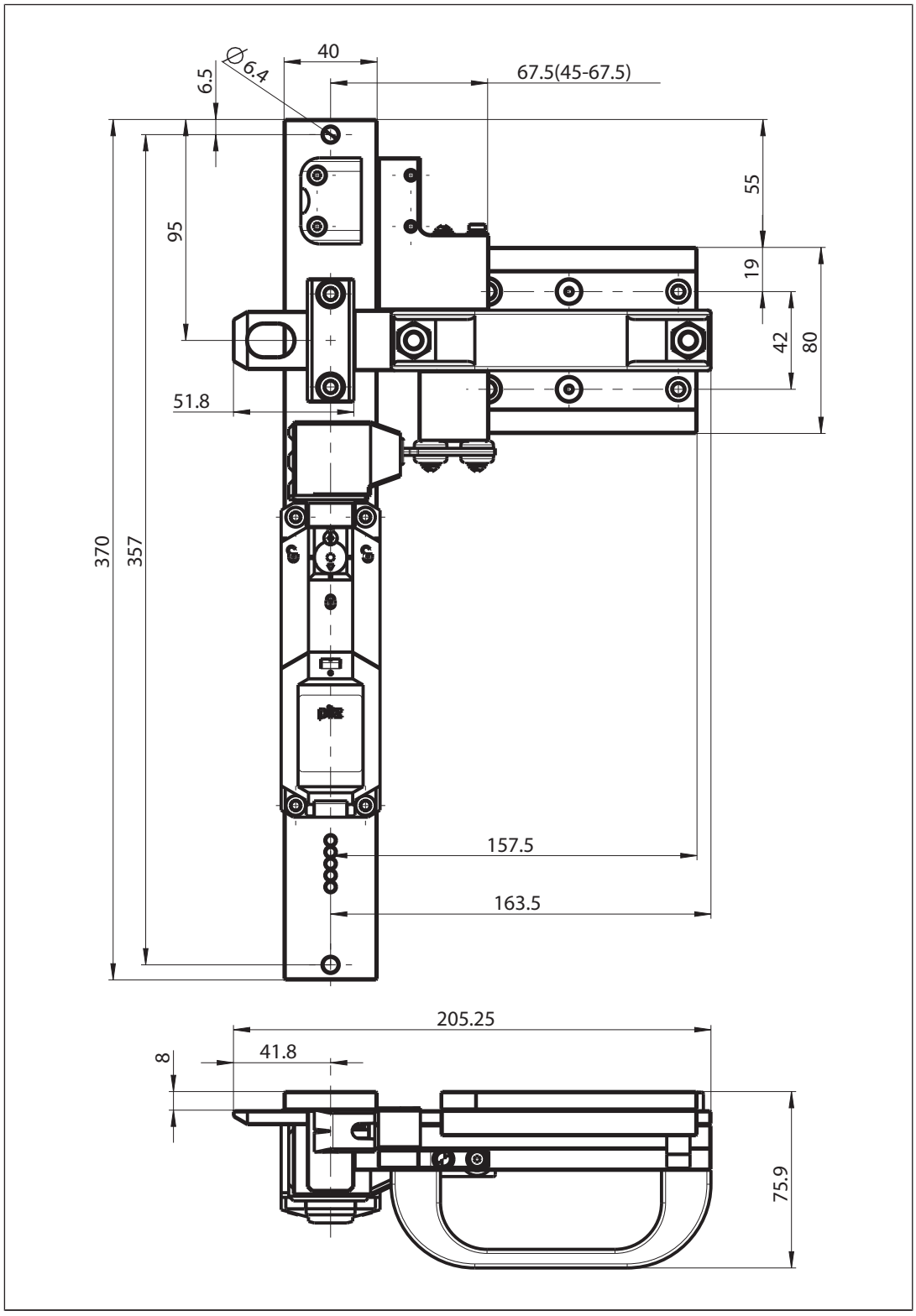


Fig.: Installation and dimensions for PSEN b5, using a right-hinged gate as an example

Technical details

General	
Approvals	-
Mechanical data	
Escape release available	**No**
Material	**Aluminium, plastic, nickel-plated steel**
Weight	**1.230 g**

Order reference

Product

Product type	Features	Order no.
PSEN b5	Mechanical bolt, can be combined with PSEN me1, PSEN cs3 and PSEN cs4	540 015

Accessories

Product type	Operation	Features	Order no.
PSEN cs3.1a/PSEN cs3.1	Transponder technology	Safety gate system, coded	541 011
PSEN cs3.1p/PSEN cs3.1	Transponder technology	Safety gate system, coded	541 010
PSEN cs3.1 M12/8-0.15m/ PSEN cs3.1	Transponder technology	Safety gate system, coded	541 009
PSEN cs3.1 M12/8-1.5m/ PSEN cs3.1	Transponder technology	Safety gate system, coded	541 014
PSEN cs3.1n/PSEN cs3.1	Transponder technology	Safety gate system, coded	541 003
PSEN cs4.1a/PSEN cs4.1	Transponder technology	Safety gate system, fully coded	541 111
PSEN cs4.1p/PSEN cs4.1	Transponder technology	Safety gate system, fully coded	541 110
PSEN cs4.1 M12/8-0.15m/ PSEN cs4.1	Transponder technology	Safety gate system, fully coded	541 109
PSEN cs4.1n/PSEN cs4.1	Transponder technology	Safety gate system, fully coded	541 103
PSEN cs4.2a/PSEN cs4.1	Transponder technology	Safety gate system, uniquely coded	541 211
PSEN cs4.2p/PSEN cs4.1	Transponder technology	Safety gate system, uniquely coded	541 210
PSEN cs4.2 M12/8-0.15m/ PSEN cs4.1	Transponder technology	Safety gate system, uniquely coded	541 209
PSEN cs4.2n/PSEN cs4.2	Transponder technology	Safety gate system, unique, fully coded	541 203

Product type	Operation	Features	Order no.
PSEN me1S/1AS	Mechanical, spring force	Safety gate system, guard locking with spring force, standard actuator, supply voltage 24 VAC/DC	570 000
PSEN me1.2S/1AS	Mechanical, spring force	Safety gate system, guard locking with spring force, standard actuator, supply voltage 110 … 230 VAC	570 006
PSEN me1M/1AS	Mechanical, magnetic force	Safety gate system, guard locking with magnetic force, standard actuator, supply voltage 24 VAC/DC	570 004

Support

Technical support is available from Pilz round the clock.

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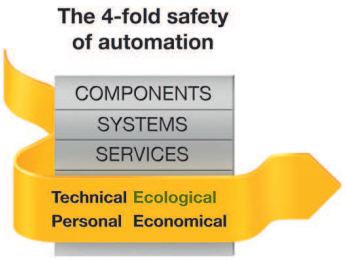

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