

INSTALLATION AND OPERATING INSTRUCTIONS

1-point magnetic field sensor

MFS02-K-KHC-P1-PNP
MFS02-S-KHC-P1-PNP
MFS01-K-KHC-P1-PNP
MFS01-S-KHC-P1-PNP
DDOC01460

THE KNOW-HOW FACTORY

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1 Supporting documents

NOTICE



Read through the installation and operating instructions before installing or working with the product.

The installation and operating instructions contain important notes for your personal safety. They must be read and understood by all persons who work with or handle the product during any phase of the product lifetime.



The documents listed below are available for download on our website www.zimmer-group.com.

- Installation and operating instructions
- Catalogs, drawings, CAD data, performance data
- Information on accessories
- Technical data sheets
- General Terms and Conditions, including warranty information.

⇒ Only those documents currently available on the website are valid.

In these installation and operating instructions, "product" refers to the product designation on the title page!

2 Safety notices

NOTICE



In accordance with the EC Machinery Directive, the product is not a safety component.

3 Proper use

NOTICE



The product is only to be used in its original state with its original accessories, with no unauthorized changes and within the stipulated parameter limits and operating conditions.

Any other or secondary use is deemed improper.

- ▶ Operate the product only in compliance with the associated installation and operating instructions.
- ▶ Operate the product only when it is in a technical condition that corresponds to the guaranteed parameters and operating conditions.

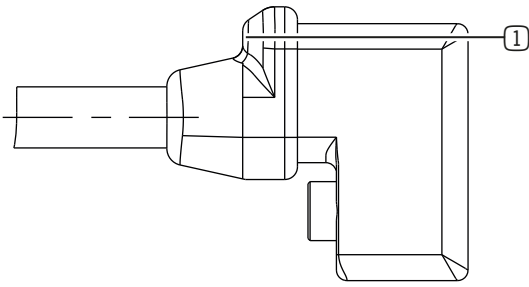
⇒ Zimmer GmbH shall accept no liability for any damage caused by improper use. The operator bears sole responsibility.

4 Personnel qualification

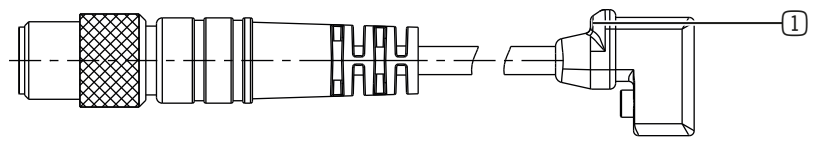
Installation, commissioning and maintenance may only be performed by trained specialists. These persons must have read and understood the installation and operating instructions in full.

5 Product description

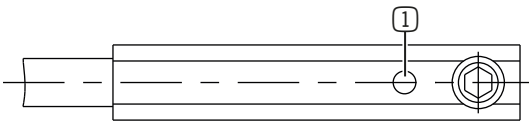
MFS01-K-KHC-P1-PNP



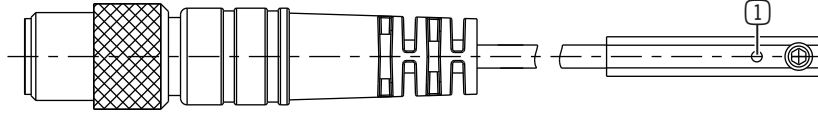
MFS01-S-KHC-P1-PNP



MFS02-K-KHC-P1-PNP



MFS02-S-KHC-P1-PNP



① LED display

6 Technical data

INFORMATION



- ▶ You can find the information in the technical data sheet on our website.
- This data varies within the series, depending on the specific design.
- ▶ Please contact Customer Service if you have any questions.

7 Installation

7.1 Installing MFS01-S-KHC-P1-PNP and MFS01-K-KHC-P1-PNP

NOTICE



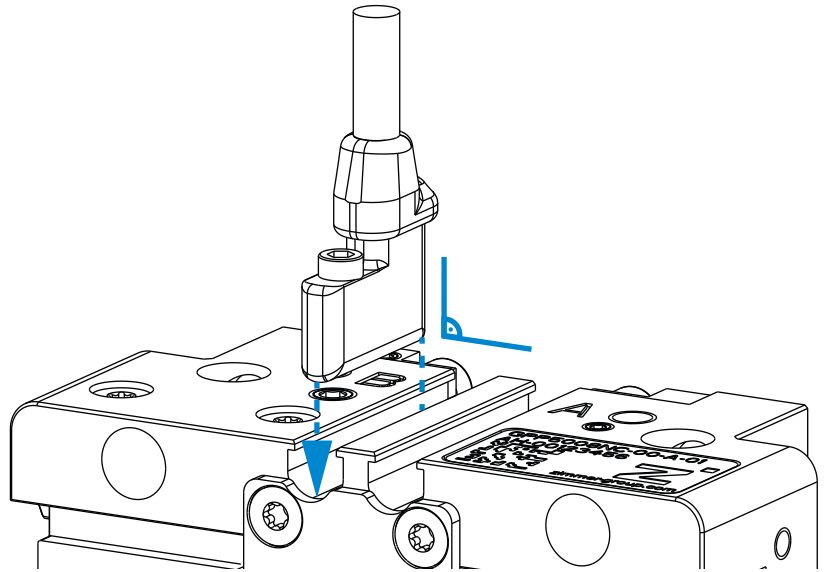
- ▶ Use the included Allen key and/or plastic pin for installation.

INFORMATION



- The sensors can be used for all Zimmer GmbH products with a compatible C-groove and switching distance.
- ▶ You can find the information in the technical data sheet on our website.

- ▶ Slide the sensor into the C-groove from above.

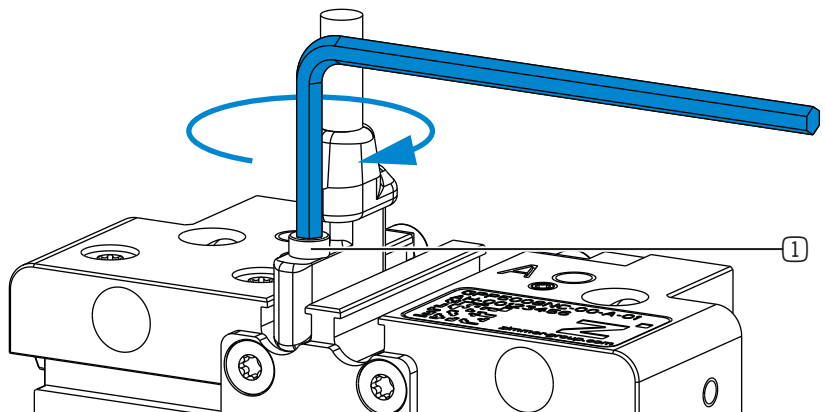


INFORMATION



- ▶ Comply with the tightening torque of 0.1 Nm.

- ▶ Tighten the mounting screw using an Allen key.

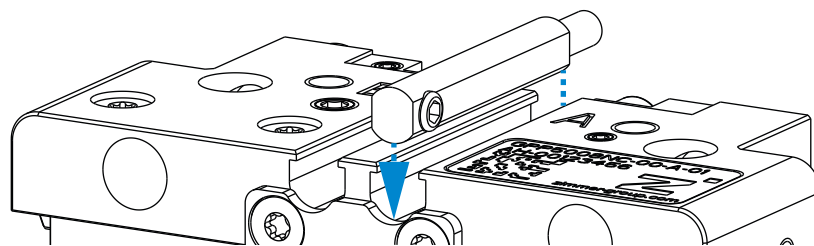


- ② Mounting screw

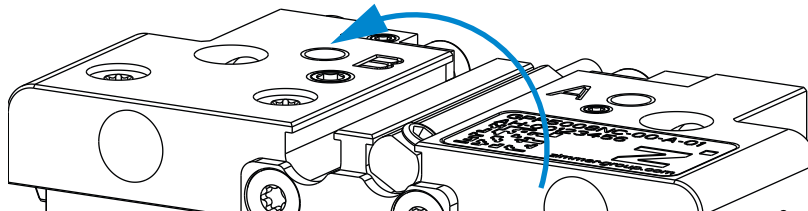
- ▶ Connect the sensor to the operating voltage.

7.2 Mounting MFS02-S-KHC-P1-PNP and MFS02-K-KHC-P1-PNP

- ▶ Push the sensor into the C-groove from above with the mounting screw pointing downwards.



- ▶ Turn the sensor by 90° so that the mounting screw points upwards.

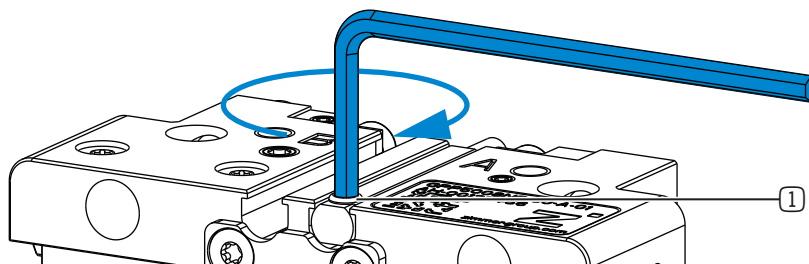


INFORMATION



- ▶ Comply with the tightening torque of 0.1 Nm.

- ▶ Tighten the mounting screw using an Allen key.



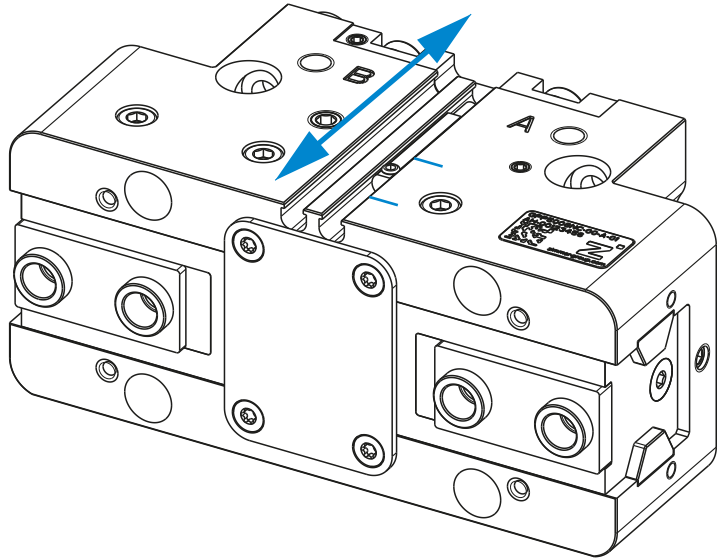
- ② Mounting screw

8 Commissioning

- ▶ Connect the sensor to the operating voltage.

8.1 Defining switching points

- ▶ Push the sensor to the switch-on point.
 - ⇒ The LED display lights up.
- ▶ Mark the edge of the sensor on the product.
- ▶ Push the sensor further until the LED display goes out.
- ▶ Then push the sensor backward until it reaches the second switch point and the LED display lights up again.
- ▶ Mark the edge of the sensor on the product.
- ▶ Position the edge of the sensor centrally between the markings.
- ▶ Check the function.
- ▶ Comply with the tightening torque of 0.1 Nm.
- ▶ Tighten the mounting screw using an Allen key.



9 Maintenance

Operation of the product is maintenance-free.

- ▶ Despite the maintenance-free performance mentioned, check the product regularly for secure screw and plug-in connectors.

Interval	Maintenance work
On a daily basis	▶ Visually inspect all components.
	▶ Replace damaged products or components.
	▶ Clean the product if it is dirty.
	▶ Check the product for secure screw and plug-in connectors.

- ▶ Note that the product could become damaged under the following circumstances:
 - Dirty environment
 - Improper use and use that does not comply with the performance data
 - Permissible temperature range not observed
- ▶ Even though the product is maintenance-free as mentioned above, perform a regular visual inspection to check for any damage or contamination.
- ▶ Have maintenance work that requires disassembly of the product performed by customer service if possible.
- ⇒ Dismantling and reassembling the product without authorization may result in complications, as special installation equipment is required in some cases. Zimmer GmbH accepts no liability for any resulting malfunctions or damage.

10 Decommissioning/disposal

INFORMATION



When the product reaches the end of its operational phase, it can be completely disassembled and disposed of.

- ▶ Disconnect the product completely from the power supply.
- ▶ Dispose of the components properly according to the material groups.
- ▶ Comply with the locally applicable environmental and disposal regulations.

11 Declaration of Conformity

As defined by the EC Directive 2014/30/EU on electromagnetic compatibility

Name and address of the manufacturer:

Zimmer GmbH

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77866 Rheinau, Germany
- ☎ +49 7844 9138 0
- ✉ info@zimmer-group.com
- 🌐 www.zimmer-group.com

We hereby declare that the products described below

- Product designation:** 1-point magnetic field sensor
- Type designation:** MFS02-K-KHC-P1-PNP
MFS02-S-KHC-P1-PNP
MFS01-K-KHC-P1-PNP
MFS01-S-KHC-P1-PNP

conform to the requirements of the Electromagnetic Compatibility Directive 2014/30/EU in its design and the version we put on the market.

The following harmonized standards have been used:

- DIN EN ISO 12100 Safety of machinery - General principles for design - Risk assessment and risk reduction
- DIN EN IEC 60947-5-2 Low-voltage switchgear - Part 5-2: Control units and switch elements - proximity switches
- DIN EN IEC 63000 Technical documentation for evaluating electrical and electronic equipment regarding the restriction of hazardous substances

A full list of applied standards can be obtained from the manufacturer.

Kurt Ross

 Authorized representative for the
 compilation of relevant technical
 documents

Rheinau, Germany, 2021-05-01

 (Place and date of issuance)



 Martin Zimmer
 (Legally binding signature)
 Managing Partner