



# Assembly and Operating Manual

## AGE-Z 2

Compensation unit in Z-direction

Translation of the original manual

Hand in hand for tomorrow

## Imprint

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### Technical changes:

We reserve the right to make alterations for the purpose of technical improvement.

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Dear Customer,

Thank you for trusting our products and our family-owned company, the leading technology supplier of robots and production machines.

Our team is always available to answer any questions on this product and other solutions. Ask us questions and challenge us. We will find a solution!

Best regards,

Your SCHUNK team

Customer Management

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**Please read the operating manual in full and keep it close to the product.**

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# 1 General

## 1.1 About this manual

This manual contains important information for a safe and appropriate use of the product.

This manual is an integral part of the product and must be kept accessible for the personnel at all times.

Before starting work, the personnel must have read and understood this operating manual. Prerequisite for safe working is the observance of all safety instructions in this manual.

In addition to these instructions, the documents listed under ▶ 1.1.3 [ 6 ] are applicable.

**NOTE:** The illustrations in this manual are intended to provide a basic understanding and may deviate from the actual version.

### 1.1.1 Presentation of Warning Labels

To make risks clear, the following signal words and symbols are used for safety notes.



**⚠ DANGER**

**Dangers for persons!**

Non-observance will inevitably cause irreversible injury or death.



**⚠ WARNING**

**Dangers for persons!**

Non-observance can lead to irreversible injury and even death.



**⚠ CAUTION**

**Dangers for persons!**

Non-observance can cause minor injuries.

**CAUTION**

**Material damage!**

Information about avoiding material damage.

### 1.1.2 Definition of Terms

The term "product" replaces the product name on the title page in this manual.

### 1.1.3 Applicable documents

- General terms of business \*
- Catalog data sheet of the purchased product \*
- Assembly and operating manuals of the accessories \*

The documents labeled with an asterisk (\*) can be downloaded from [schunk.com/downloads](https://schunk.com/downloads).

## 1.2 Warranty

If the product is used as intended, the warranty is valid for 24 months from the ex-works delivery date under the following conditions:

- Observe the specified maintenance and lubrication intervals
- Observe the ambient conditions and operating conditions

Parts touching the workpiece and wear parts are not included in the warranty.

## 1.3 Scope of delivery

The scope of delivery includes

- Compensation unit in Z-direction AGE-Z 2 in the version ordered
- Mechanical connection
- Safety information (product-specific instructions available online)

## 1.4 Accessories

A wide range of accessories are available for this product

For information regarding which accessory articles can be used with the corresponding product variants, see catalog data sheet.

## 2 Basic safety notes

### 2.1 Intended use

The product has been designed to compensate for a process-related offset in Z direction. A mechanical center lock via a positive-locking piston is installed in the unit as standard.

- The product may only be used within the scope of its technical data, ▶ 3 [12].
- When implementing and operating components in safety-related parts of the control systems, the basic safety principles in accordance with DIN EN ISO 13849-2 apply. The proven safety principles in accordance with DIN EN ISO 13849-2 also apply to categories 1, 2, 3 and 4.
- The product is intended for installation in a machine/ automated system or for attachment to a robot. The applicable guidelines for the machine/automated system must be observed and complied with.
- The product is intended for industrial and industry-oriented use.
- Appropriate use of the product includes compliance with all instructions in this manual.

### 2.2 Not intended use

- Any utilization that exceeds or differs from the appropriate use is regarded as misuse.

### 2.3 Constructional changes

#### Implementation of structural changes

Modifications, changes or reworking, e.g. additional threads, holes, or safety devices, can damage the product or impair its functionality or safety.

- Structural changes should only be made with the written approval of SCHUNK.

## 2.4 Ambient conditions and operating conditions

### Required ambient conditions and operating conditions

Incorrect ambient and operating conditions can make the product unsafe, leading to the risk of serious injuries, considerable material damage and/or a significant reduction to the product's life span.

- Make sure that the product is used only in the context of its defined application parameters, ▶ 3 [12].
- Make sure that the product is a sufficient size for the application.
- Make sure that the environment is free from splash water and vapors as well as from abrasion or processing dust. Exceptions are products that are designed especially for contaminated environments.

## 2.5 Personnel qualification

### Inadequate qualifications of the personnel

If the personnel working with the product is not sufficiently qualified, the result may be serious injuries and significant property damage.

- All work may only be performed by qualified personnel.
- Before working with the product, the personnel must have read and understood the complete assembly and operating manual.
- Observe the national safety regulations and rules and general safety instructions.

The following personal qualifications are necessary for the various activities related to the product:

#### Trained electrician

Due to their technical training, knowledge and experience, trained electricians are able to work on electrical systems, recognize and avoid possible dangers and know the relevant standards and regulations.

#### Qualified personnel

Due to its technical training, knowledge and experience, qualified personnel is able to perform the delegated tasks, recognize and avoid possible dangers and knows the relevant standards and regulations.

#### Instructed person

Instructed persons were instructed by the operator about the delegated tasks and possible dangers due to improper behaviour.

#### Service personnel of the manufacturer

Due to its technical training, knowledge and experience, service personnel of the manufacturer is able to perform the delegated tasks and to recognize and avoid possible dangers.

## 2.6 Personal protective equipment

### Use of personal protective equipment

Personal protective equipment serves to protect staff against danger which may interfere with their health or safety at work.

- When working on and with the product, observe the occupational health and safety regulations and wear the required personal protective equipment.
- Observe the valid safety and accident prevention regulations.
- Wear protective gloves to guard against sharp edges and corners or rough surfaces.
- Wear heat-resistant protective gloves when handling hot surfaces.
- Wear protective gloves and safety goggles when handling hazardous substances.
- Wear close-fitting protective clothing and also wear long hair in a hairnet when dealing with moving components.

## 2.7 Notes on safe operation

### Incorrect handling of the personnel

Incorrect handling and assembly may impair the product's safety and cause serious injuries and considerable material damage.

- Avoid any manner of working that may interfere with the function and operational safety of the product.
- Use the product as intended.
- Observe the safety notes and assembly instructions.
- Do not expose the product to any corrosive media. This does not apply to products that are designed for special environments.
- Eliminate any malfunction immediately.
- Observe the care and maintenance instructions.
- Observe the current safety, accident prevention and environmental protection regulations regarding the product's application field.

## 2.8 Malfunctions

### Behavior in case of malfunctions

- Immediately remove the product from operation and report the malfunction to the responsible departments/persons.
- Order appropriately trained personnel to rectify the malfunction.

- Do not recommission the product until the malfunction has been rectified.
- Test the product after a malfunction to establish whether it still functions properly and no increased risks have arisen.

## 2.9 Disposal

### Handling of disposal

The incorrect handling of disposal may impair the product's safety and cause serious injuries as well as considerable material and environmental harm.

- Follow local regulations on dispatching product components for recycling or proper disposal.

## 2.10 Fundamental dangers

### General

- Observe safety distances.
- Never deactivate safety devices.
- Before commissioning the product, take appropriate protective measures to secure the danger zone.
- Disconnect power sources before installation, modification, maintenance, or calibration. Ensure that no residual energy remains in the system.
- If the energy supply is connected, do not move any parts by hand.
- Do not reach into the open mechanism or movement area of the product during operation.

### Possible electrostatic energy

Components or assembly groups may become electrostatically charged. When the electrostatic charge is touched, the discharge may trigger a shock reaction leading to injuries.

- The operator must ensure that all components and assembly groups are included in the local potential equalisation in accordance with the applicable regulations.
- While paying attention to the actual conditions of the working environment, the potential equalisation must be implemented by a specialist electrician according to the applicable regulations.



- The effectiveness of the potential equalisation must be verified by executing regular safety measurements.

### **⚠ WARNING**

#### **Risk of injury due to uncontrolled movements!**

Due to faulty control the product can move uncontrolled and cause serious injuries.

- Do not reach into the movement range of the product during commissioning, conversion and adjustment work.
- Observe the direction of rotation of the product when designing the control.

## **2.10.1 Protection during handling and assembly**

### **Incorrect handling and assembly**

Incorrect handling and assembly may impair the product's safety and cause serious injuries and considerable material damage.

- Have all work carried out by appropriately qualified personnel.
- For all work, secure the product against accidental operation.
- Observe the relevant accident prevention rules.
- Use suitable assembly and transport equipment and take precautions to prevent jamming and crushing.

### **Incorrect lifting of loads**

Falling loads may cause serious injuries and even death.

- Stand clear of suspended loads and do not step into their swiveling range.
- Never move loads without supervision.
- Do not leave suspended loads unattended.

## **2.10.2 Protection during commissioning and operation**

### **Falling or violently ejected components**

Falling and violently ejected components can cause serious injuries and even death.

- Take appropriate protective measures to secure the danger zone.
- Never step into the danger zone during operation.

### 3 Technical Data

Size	50	63	80
Weight [kg]	0.55	0.8	1.7
Operating pressure [bar]			
min.		2	
max.		6	
Compensation path in Z direction [mm]	8	8	10
Ambient temperature [°C]			
min.		+5	
max.		+60	
Noise emission [dB(A)]		≤70	
Pressure medium	Compressed air, compressed air quality according to ISO 8573-1:2010 [7:4:4]		

More technical data is included in the catalog data sheet. Whichever is the latest version.

## 4 Assembly and installation



### **⚠ WARNING**

#### **Risk of injury due to improperly carried out assembly!**

Improperly carried out assembly work can lead to severe injuries and property damage.

- Before beginning work, ensure sufficient assembly clearance.
- Secure components from falling down or over.
- Ensure that all work has been carried out in accordance with the specifications in these instructions.
- Observe tightening torques.



### **⚠ WARNING**

#### **Risk of injury when the machine/system moves unexpectedly!**

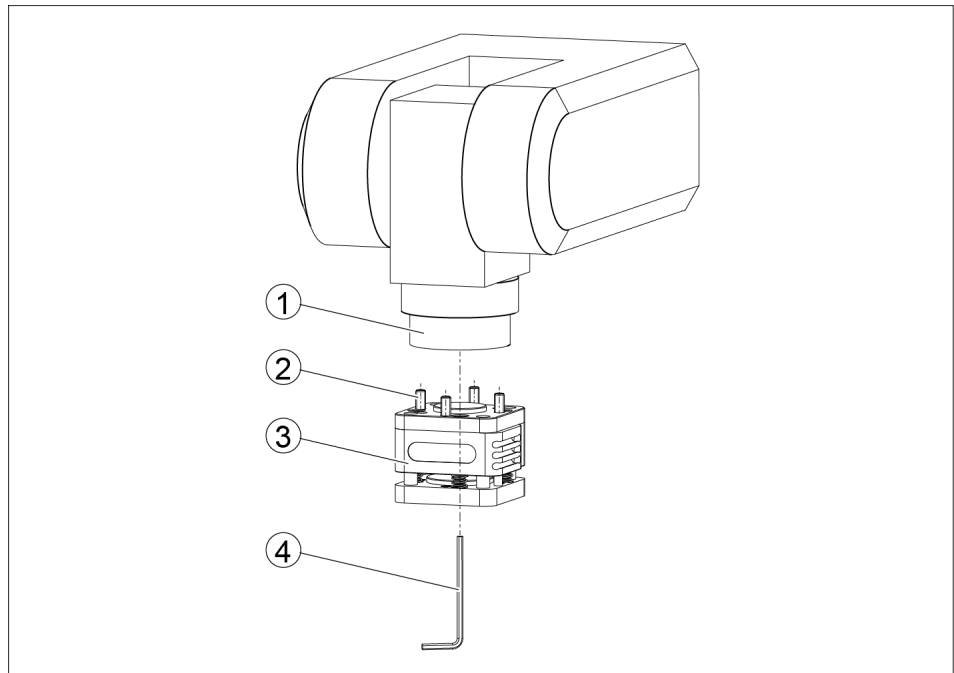
Remove the energy supplies.

Make sure that no residual energy remains in the system.

### **NOTE**

To increase the life of the unit, it is recommended to retract the unit during fast movements and/or heavy loads.

## 4.1 Assembly example



Assembly example

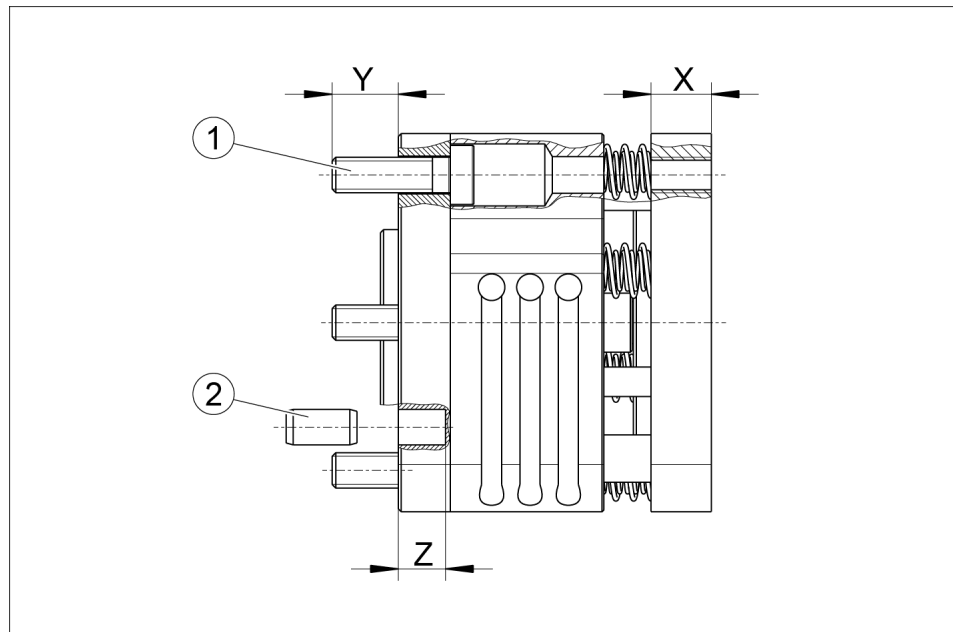
Item	Description	Notes
1	Robot arm	with interface according to DIN ISO 9409
2	Mounting screws	pre-assembled
3	Compensation element AGE-Z 2	
4	Allen key	for fastening the pre-assembled mounting screws (2)

## 4.2 Fastening the product to the robot

### CAUTION

#### Breakage possible due to incorrect assembly!

- Comply with the maximum depth of engagement on the robot and tool side; see table: Permissible fastenings, centering and screw tightening torque.



Mounting of module

Type	Robot interface
AGE-Z 2 - 050	ISO 9409-1-50-4-M6
AGE-Z 2 - 063	ISO 9409-1-63-4-M6
AGE-Z 2 - 080	ISO 9409-1-80-6-M8

Tab.: Permissible fastenings, centering and screw tightening torque

Item	Designation	Size		
		50	63	80
1	Mounting screw thread diameter [mm]	M6	M6	M8
2	Cylindrical pin [mm]	∅6	∅6	∅8
X	Max. depth of engagement on tool side [mm]	10	9	11
Y	Max. depth of engagement on robot side [mm]	11	11	14
Z	Diameter and depth of centering Z [mm]	∅6H7x8	∅6H7x7	∅8H7x8
	Mounting screw tightening torque [Nm]	10	10	25

The required cylindrical pin (2) is included in the enclosed pack. The illustrated mounting screws (1) are pre-mounted in the module.

- 1.** For centering of the AGE-Z 2 the cylindrical pin (2) can be used.
- 2.** AGE-Z 2 can be fastened on the robot interface by tightening the pre-mounted screws (1); see table: Permissible fastenings, centering and screw tightening torque.
- 3.** The pneumatic connection and electric cables are fastened, bundled and mounted with strain relief to ensure maximum freedom of movement during the application.

### 4.3 Compressed air connection

#### CAUTION

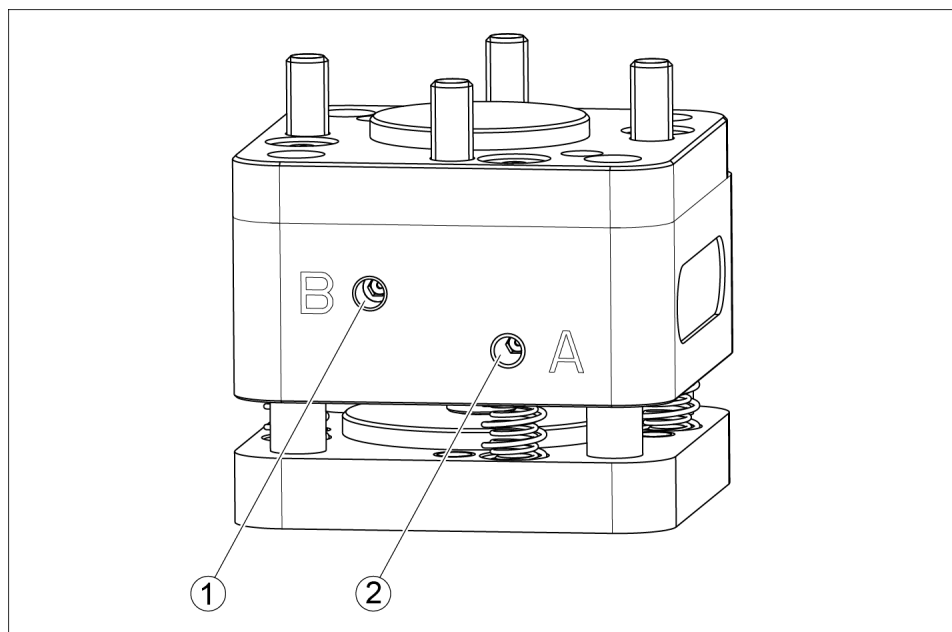
#### Damage to the unit is possible!

If the maximum permissible handling weight or the permissible mass moment of inertia is exceeded, the unit can be damaged.

- A compensating movement always has to be without jerks and bounce.
- You must therefore implement sufficient reduction and/or damping.
- Observe the diagrams and information in the catalog data sheet.

#### CAUTION

Observe the requirements for the air supply, ▶ 3 [📄 12].



Compressed air connection

Item	Designation	Note
1	Connection B, extend	Thread diameter: M5
2	Connections A, retract	Thread diameter: M5

## 4.4 Installing the sensors

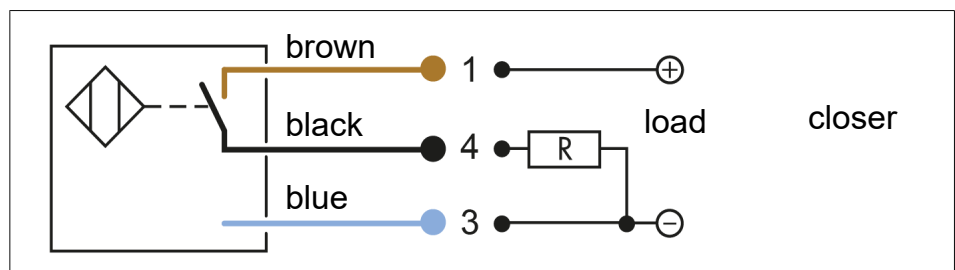
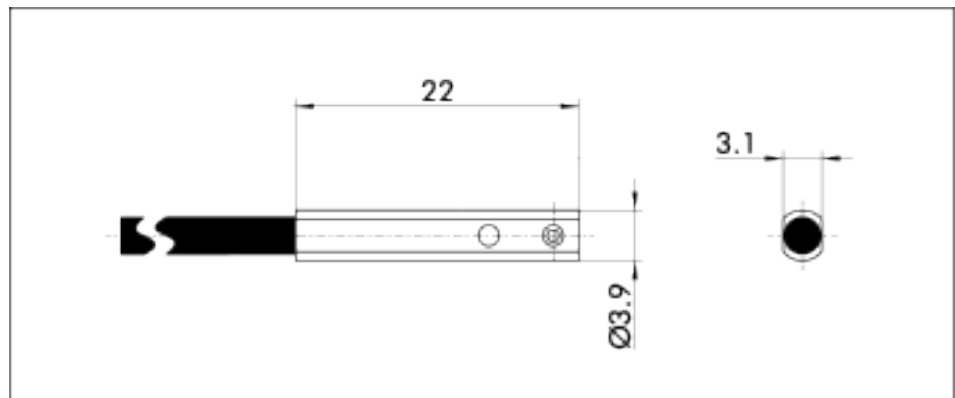
### NOTE

Observe the assembly and operating manual of the sensor for mounting and connecting.

The product is prepared for the use of sensors.

- For the exact type designations of suitable sensors, please see catalog datasheet and Link Übersicht Sensoren.
- For technical data for the suitable sensors, see assembly and operating manual and catalog datasheet.
  - The assembly and operating manual and catalog datasheet are included in the scope of delivery for the sensors and are available at [schunk.com](http://schunk.com).
- Information on handling sensors is available at [schunk.com](http://schunk.com) or from SCHUNK contact persons.

### 4.4.1 Magnetic switch MMS 22



### CAUTION

#### Material damage due to an incorrect tightening torque!

If the threaded pin is tightened with an incorrect tightening torque, the product may be damaged.

- Observe a maximum tightening torque of 10 Ncm for the set-screws.

---

**NOTE**

**Ferromagnetic material changes the switching positions of the sensor. For example: Adapter plate made of ordinary steel.**

At ferromagnetic adapter plates:

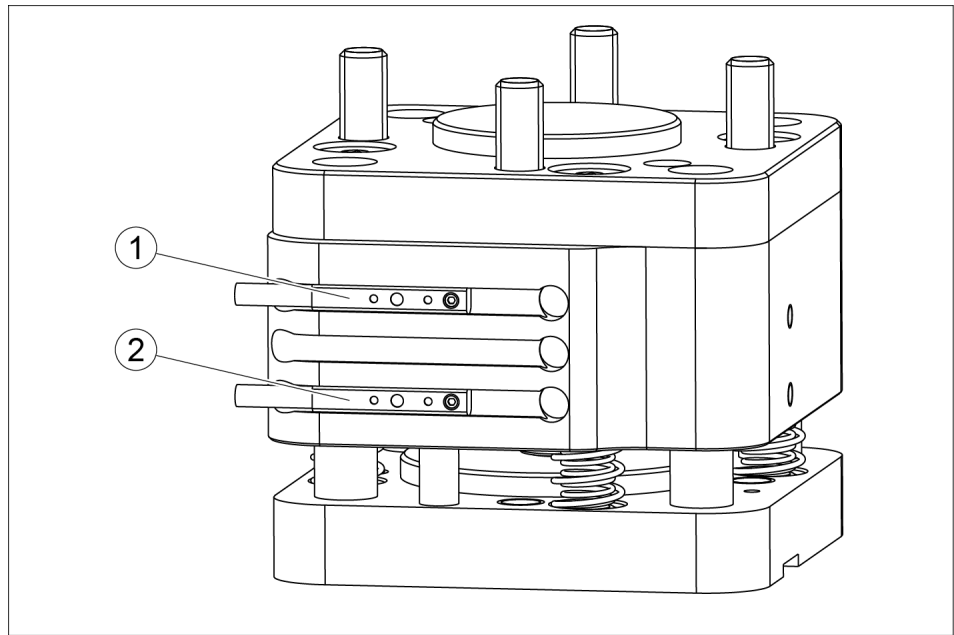
- First mount the product on the adapter plate.
  - Then set the position of the magnetic switch.
- 

---

**NOTE**

- Do not use the sensor as a safety component.
  - Do not pull on the cable of the sensor.
  - Secure the cable and connection plug so that they are not taugt and cannot move during operation.
  - Do not exceed the permitted bending radius of the cable.
  - Do not allow the sensor to come into contact with hard objects and chemicals (e. g., nitric acid, chromic acid and sulfuric acid).
-

The switching function is illustrated in deenergized state.



Magnetic switch

Item	Designation	Item	Designation
1	Magnetic switch 1 "retracted state"	2	Magnetic switch 2 "extended state"

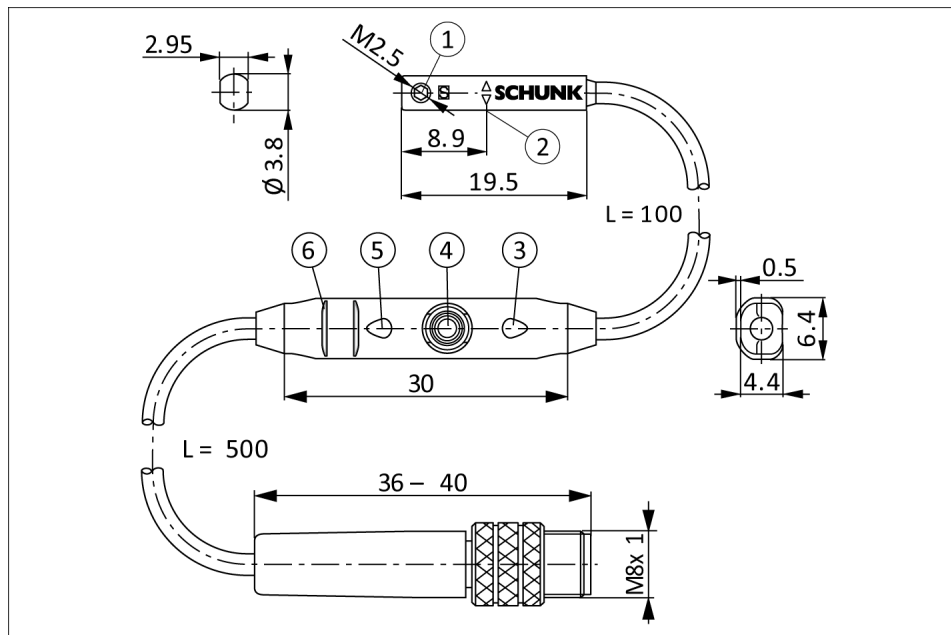
### Compensation unit retracted

1. Apply pressure to connection A.  
⇒ AGE-Z 2 is retracted.
2. Push magnetic switch 1 into the profile groove until it switches.
3. Mount magnetic switch 1 in this position with the screw in the magnetic switch.
4. AGE-Z 2 and retract it again to test the function.

### Compensation unit extended

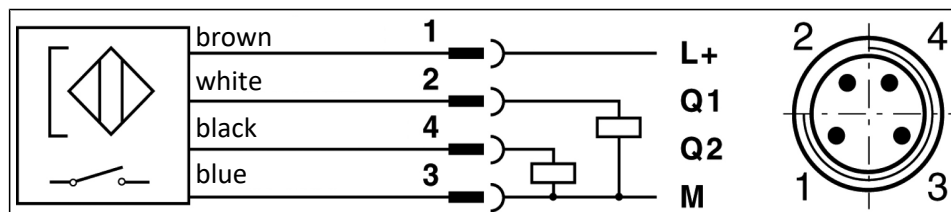
1. Apply pressure to connection B.  
⇒ AGE-Z 2 is extended.
2. Push magnetic switch 2 into the profile groove until it switches.
3. Mount magnetic switch 2 in this position with the screw in the magnetic switch.
4. AGE-Z 2 and retract it again to test the function.

### 4.4.2 Programmable magnetic switch (MMS-P)



MMS-P 22 magnetic switch

1	Fastening screw	4	Teach button
2	Center of sensor element	5	LED indicator
3	LED indicator	6	Rib for cable tie



Connection diagram for PNP-4 conductor (MMS-P 22)

Types that can be ordered catalog:

- MMS-P 22-S-M8-PNP
- MMSK-P 22-S-PNP
- V2-M8-4-2XM8-3

The MMSK-P 22-S-PNP features a cable with open wire strands so that it can be connected with terminal contacts.

The V2-M8-4-2XM8-3 distributor serves to convert the 4-pin connector of the MMS-P 22-S-M8-PNP sensor to two standard M8 connectors with 3 pins each.

#### Installation of the sensor

#### CAUTION

#### Risk of damage to the sensor during assembly.

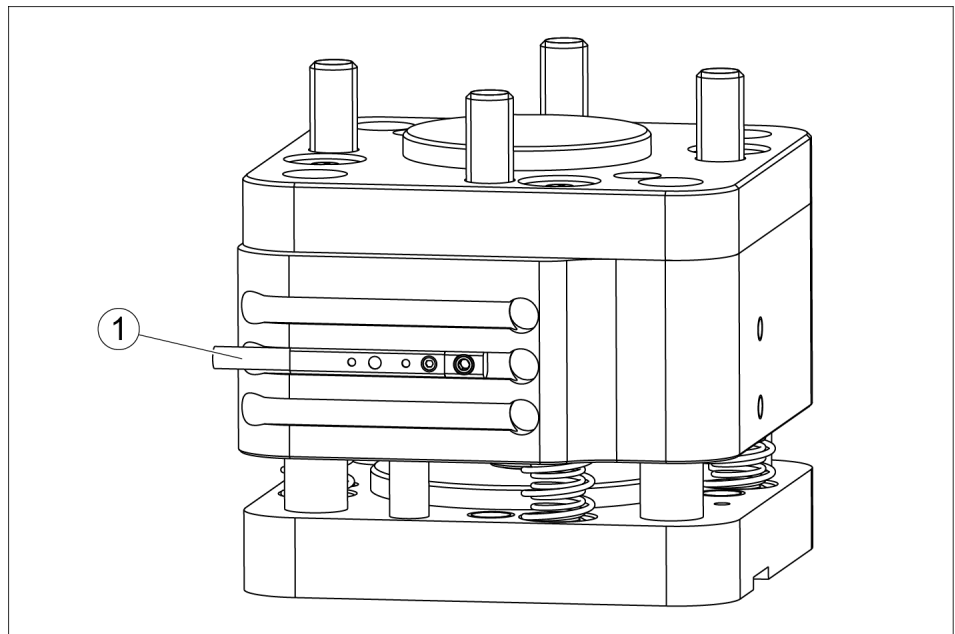
- Observe a maximum tightening torque of 10 Ncm for the set-screws.

**NOTE**

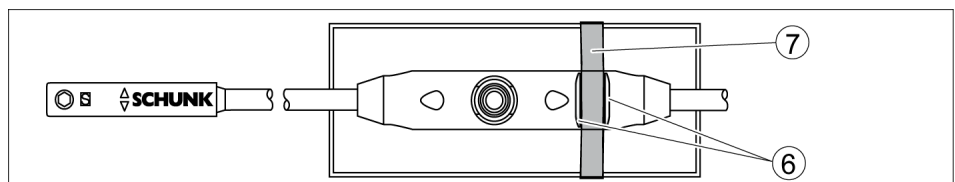
**Ferromagnetic components change the sensor's switching positions. Example: adapter plate made of construction steel.**

For ferromagnetic adapter plates:

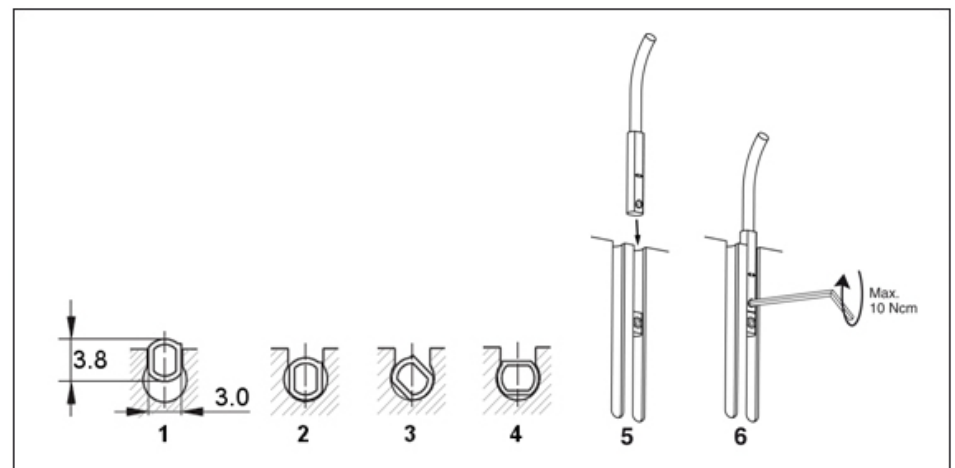
- First mount product to adapter plate
- Then adjust position of the sensors



Magnetic switch MMS-P



1. To relieve the cable, the electronics have to be fixed in place using cable ties (7).  
There are ribs (6) in place on the electronics for mounting purposes.



- 2.** Turn in the sensor (1 - 4).  
OR  
Push the sensor axially into the slot until it contacts the stop (5).
  - 3.** Fix the sensor with an Allen wrench (6).
- 
- 1.** Press Teach button (4) for 2 seconds.  
⇒ After 2 sec., LED 1 (3) flashes.
  - 2.** Move unit to position 1 (e.g. extended).
  - 3.** Briefly press the Teach button (4).  
⇒ LED 1 (3) lights up and LED 2 (5) flashes.
  - 4.** Move unit to position 2.  
⇒ LED 1 (3) should go out as soon as switching point 1 is abandoned.
  - 5.** Briefly press the Teach button (4).  
⇒ LED 2 (5) lights up.
- ⇒ The switching points are set.

## Adjusting the hysteresis

The hysteresis to both switching points will be adjusted automatically corresponding to the characteristics of the magnetic field.

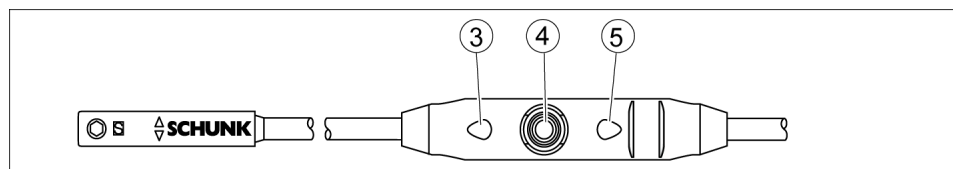
The user can set the switching and triggering points of each position a little bit closer than for the automatic mode. The triggering point is closer to the switching point. At the same time the susceptibility to trouble and damage increases. In the mode of the lowest hysteresis, an error signal (such as jitter or untimely switch off) can be avoided, if the sensor is protected against all types of disturbances (i.e. by shielding). Frequent types of disturbances are change in temperature and electro-magnetic influences.

Within the closest fine-teach mode, SCHUNK cannot guarantee EMC-compatibility any more.

The hysteresis adjustment is used for the manual adjustment of the switching points (if necessary).

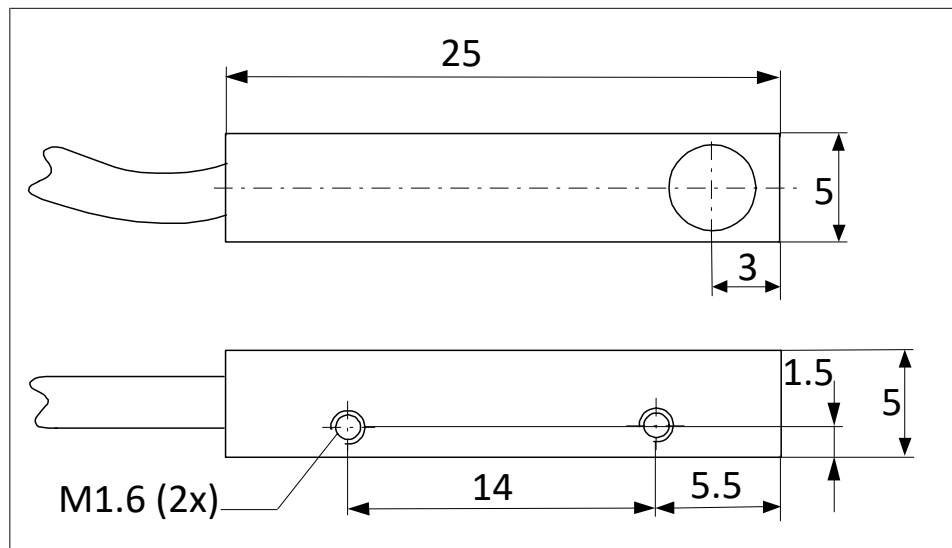
In case that the hysteresis automatically determined by the sensor should be too high or too low after "the adjustment of the switching points", you may correct the value as follows. The sensor avoids a too small hysteresis during hysteresis adjustment.

The smallest detectable stroke difference is 10% of the rotation angle per finger.

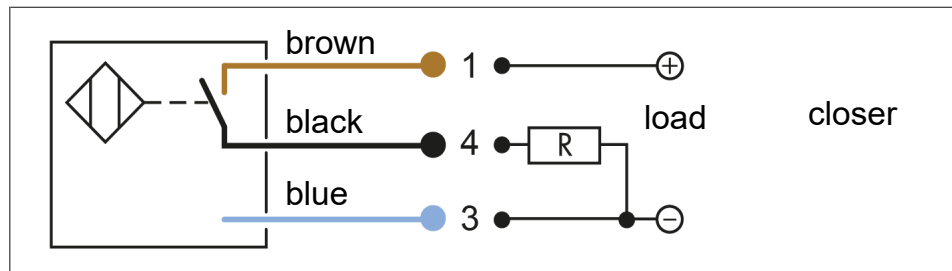


1. Press Teach button (4) for 5 seconds.
  - ⇒ LED 1 (3) blinks from sec. 2 to sec. 5.
  - ⇒ LED 1 goes out after 5 sec.
2. Release Teach button.
3. Move the unit to position "Switch-off point for switching point 1".
4. Briefly press the Teach button (4). LED 1 (3) flashes 2x.
5. Move the unit to position "Switch-off point for switching point 2".
6. Briefly press the Teach button (4).
  - ⇒ LED 2 (5) flashes 2x.
  - ⇒ Assembly of the sensor MMS-P is completed.

### 4.4.3 Inductive proximity switch IN 5



Inductive Proximity Switch



Connection diagram

The inductive proximity switches used are equipped with reverse polarity protection and are short-circuit-proof.

Make sure that you handle the proximity switches properly:

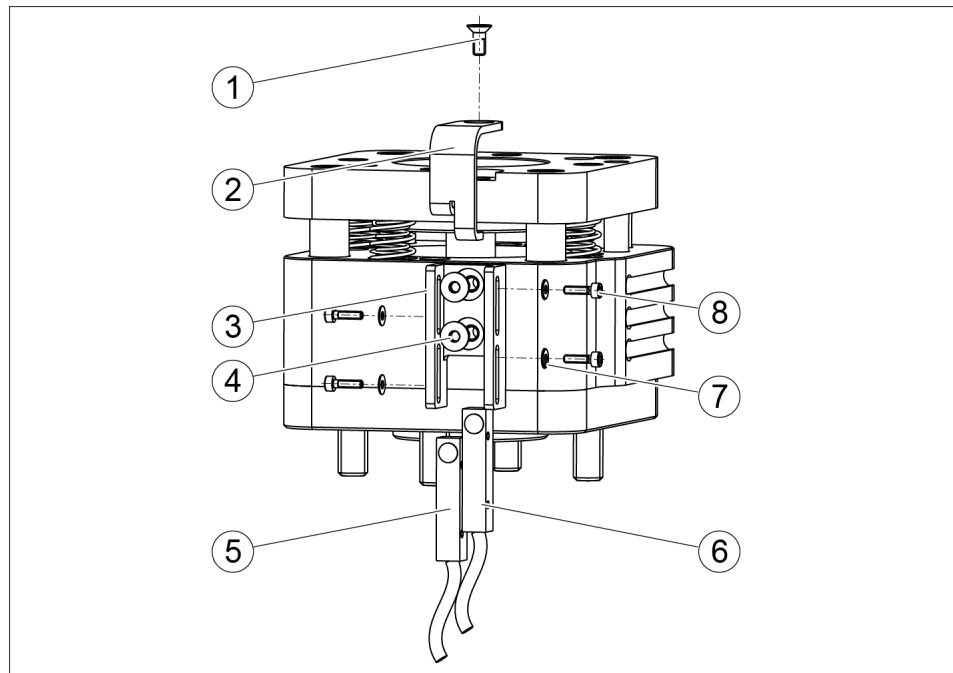
- Do not pull on the cable.
- Do not allow the sensor to dangle from the cable.
- Do not overtighten the mounting screw or mounting clip.
- Please adhere to a permitted bend radius of the cable. (→ catalog)
- Avoid contact of the proximity switches with hard objects and with chemicals, in particular nitric acid, chromic acid and sulphuric acid.

The inductive proximity switches are electronic components, which can react sensitively to high-frequency interference or electromagnetic fields.

- Check to make sure that the cable is fastened and installed correctly. Provide for sufficient clearance to sources of high-frequency interference and their supply cables.

- Parallel switching of several sensor outputs of the same type (nnp, pnp) is permissible, but does not increase the permissible load current.
- Note that the leakage current of the individual sensors (ca. 2 mA) is cumulative.

To mount the IN proximity switches, the product must be retrofitted with a special attachment kit. This attachment kit is available from SCHUNK. See catalog for types that can be ordered.



Inductive proximity switch IN 5

### Assembly of the mounting kit

1. Fasten mount (3) with two screws (4) on the housing.
2. Fasten proximity switches (5) and (6) on the mount (3) with screws (8) and washer (7).
3. Fasten switching lug (2) with screw (1) on the tool flange.

### Configuration of the proximity switch

The switching points of the "retracted" and "extended" position must be set.

#### Unit extended

1. Move unit to "extended" position.
2. Push the proximity switch (6) in the oblong holes completely forward.
3. Pull back the proximity switch (6) until it switches and then 0.5 mm further in the same direction.
4. Tighten screws (8) to secure the switching point.
5. Retract the unit and extend again to test the function.

#### Unit retracted

1. Move unit to "retracted" position.

2. Push the proximity switch (6) in the oblong holes completely forward until it switches and then 0.5 mm further in the same direction.
3. Tighten screws (8) to secure the switching point.
4. Retract the unit and extend again to test the function.

#### **Unit intermediate position**

1. Move unit to position "Extended" in case of query "Unit extended" and "Unit intermediate position" or to position "Retracted" in case of query "Unit retracted" and "Unit intermediate position".
2. Push the free proximity switch in the oblong holes completely forward until it switches and then 0.5 mm further in the same direction.
3. Tighten screws (8) to secure the switching point.
4. Retract the unit and extend again (unit intermediate position) to test the function.

## 5 Troubleshooting

<b>Malfunction/fault occurring</b>	<b>Possible cause/Corrective action</b>
The AGE-Z 2 is leaking air at standstill	Air connection not installed correctly. Unused air connections open.
The AGE-Z 2 is leaking air during operation	The AGE-Z 2 will have to be sent back to the production facility for inspection

## 6 Maintenance

### 6.1 Maintenance and lubrication intervals

#### CAUTION

##### Material damage due to hardening lubricants!

Lubricants harden more quickly at temperatures above 60°C, leading to possible product damage.

- Reduce the lubricant intervals accordingly.

<b>Size</b>	<b>50 – 80</b>
Interval [Mio. cycles]	1.5

### 6.2 Lubrication

During maintenance, certain parts should be coated with oil or grease (basic lubrication). At every maintenance of the AGE-Z 2 all seals must be renewed. The complete sealing kit can be ordered from SCHUNK.

### 6.3 Lubricants/Lubrication points (basic lubrication)

During maintenance, treat all greased areas with lubricant. Thinly apply lubricant with a lint-free cloth.

SCHUNK recommends the lubricants listed.

Lubricant point	Lubricant
Seals and sealing surfaces	SCHUNK grease 1
Linear guides	SCHUNK grease 10

Details regarding SCHUNK lubricant designations are available at [schunk.com/lubricants](https://www.schunk.com/lubricants).

The product contains food-compliant lubricants as standard.

**The requirements of standard EN 1672-2:2020 are not fully met.**

#### NOTE

- Change contaminated food-compliant lubricant.
- Observe information in the safety data sheet from the lubricant manufacturer.

#### CAUTION

**Do not grease the sliding surface between the accumulator piston (3) and compensation body (8)! The O-ring (28) must be free from grease!**

(Position of the item numbers ▶ 7 [31])

## 6.4 Disassembling the product

Position of the item numbers ▶ 7 [📄 31]

### **CAUTION**

**Do not damage any seals while assembling.**

The complete sealing kit can be ordered from SCHUNK.

1. Remove the pressure lines and cable connections.
2. Unscrew the screws (25) and remove robot flange (2); then remove the screws (26).
3. Unscrew screw (30) simultaneously applying counter pressure to screw (27) while at the same time unscrewing the cylinder piston (6) and piston rod (5) from the housing (1).
4. Push the centering piston (4) with the cylinder piston (5) out of the housing (2).
5. Assembly is performed in the reverse order.

## 6.5 Servicing and assembling the product

### Maintenance

- Clean all parts thoroughly and check for damage and wear.
- Treat all greased areas with lubricant.
  - ▶ 6.3 [📄 29]
- Oil or grease bare external steel parts.
- Replace all wear parts / seals.

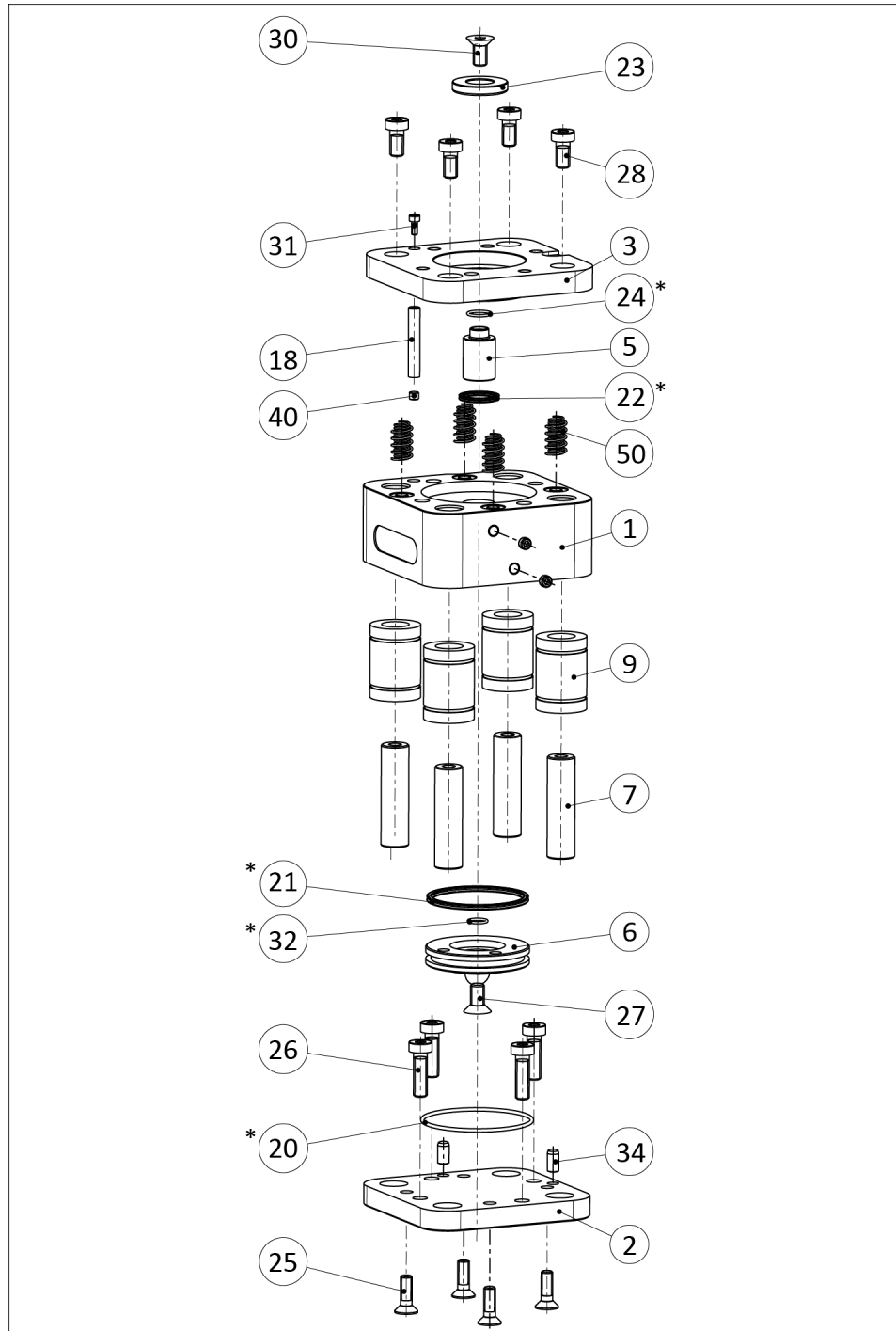
### Assembly

Assembly takes place in the opposite order to disassembly. Observe the following:

- Unless otherwise specified, secure all screws and nuts with Weicon no. 30243 and tighten with the appropriate tightening torque.

## 7 Assembly drawing

The following figure is an example image.  
It serves for illustration and assignment of the spare parts.  
Variations are possible depending on size and variant.



\* Wearing part, replace during maintenance. Included in the seal kit. Seal kit can only be ordered completely.

## 8 Sealing kit

Type	Size	ID number
AGE-Z 2	50	5523399
AGE-Z 2	63	5523400
AGE-Z 2	80	5523401

*Tab.: ID.-No. of the seal kit*

contents of the sealing kit, ► 7 [📄 31].

## 9 Translation of the original declaration of incorporation

in terms of the Directive 2006/42/EG, Annex II, Part 1 Section B.

Manufacturer/  
Distributor                      SCHUNK SE & Co. KG  
Spanntechnik | Greiftechnik | Automatisierungstechnik  
Bahnhofstr. 106 – 134  
D-74348 Lauffen/Neckar

We hereby declare that the partly completed machine described below

Product designation:            Compensation unit in Z-direction / AGE-Z 2 /pneumatic  
ID number                        0324453, 0324454, 0324466, 0324467, 0324483, 0324484

meets the following basic occupational health and safety of the Machinery Directive 2006/42/EC:

No. 1.1.1, No. 1.1.2, No. 1.1.3, No. 1.1.5, No. 1.3.2, No. 1.5.3, No. 1.5.4, No. 1.5.6, No. 1.5.8, No. 1.5.10, No. 1.5.11, No. 1.5.13

The partly completed machinery may not be put into operation until it has been confirmed that the machine into which the partly completed machinery is to be installed complies with the provisions of the Machinery Directive (2006/42/EC). The declaration shall be rendered invalid if modifications are made to the product.

Applied harmonized standards, especially:

EN ISO 12100:2010                Safety of machinery – General principles for design –  
Risk assessment and risk reduction

The special technical documentation according to Annex VII, Part B, belonging to the partly completed machine, has been created.

Person authorized to compile the technical documentation:  
Stefanie Walter, Address: see manufacturer's address

*Signature: see original declaration*

Lauffen/Neckar, October 2024

Dr.-Ing. Manuel Baumeister,  
Head of Systems Engineering,  
Technology & Innovation

## 10 UKCA declaration of incorporation

in accordance with the Supply of Machinery (Safety) Regulations 2008.

Manufacturer/ Distributor                      SCHUNK Intec Limited  
Clamping and gripping technology  
3 Drakes Mews, Crownhill  
MK8 0ER Milton Keynes

We hereby declare that on the date of the declaration the following partly completed machine complied with all basic safety and health regulations found in the "Supply of Machinery (Safety) Regulations 2008".

The declaration shall be rendered invalid if modifications are made to the product.

Product designation:                      Compensation unit in Z-direction / AGE-Z 2 / pneumatic  
ID number                                      0324453, 0324454, 0324466, 0324467, 0324483, 0324484

The partly completed machine may not be put into operation until it has been confirmed that the machine into which the partly completed machine is to be installed complies with the provisions of the "Supply of Machinery (Safety) Regulations 2008".

Applied harmonized standards, especially:

EN ISO 12100:2010                      Safety of machinery – General principles for design –  
Risk assessment and risk reduction

The special technical documentation according to Annex VII, Part B, belonging to the partly completed machine, has been created.

Person authorized to compile the technical documentation:  
Marcel Machado, address: refer to manufacturer's address



Lauffen/Neckar, October 2024

Dr.-Ing. Manuel Baumeister,  
Head of Systems Engineering,  
Technology & Innovation

## 11 Information on the RoHS Directive, REACH Regulation and Substances of Very High Concern (SVHC)

### RoHS Directive

SCHUNK products are classified as "large-scale stationary installations" or as "large-scale stationary industrial tools" within the meaning of Directive 2011/65/EU and its extension 2015/863/EU "on the restriction of the use of certain hazardous substances in electrical and electronic equipment (RoHS)", or fulfill their intended function only as part of one. Therefore products from SCHUNK do not fall within the scope of the directive at this time.

### REACH Regulation

Products from SCHUNK fully comply with the regulations of Regulation (EC) No. 1907/2006 "concerning the Registration, Evaluation, Authorization and Restriction of Chemicals (REACH)" and its amendment 2022/477. SCHUNK attaches great importance to completely avoiding chemicals of concern to humans and the environment wherever possible.

Only in rare exceptional cases do SCHUNK products contain SVHC substances on the candidate list with a mass content above 0.1%. In accordance with Article. 33 (1) of Regulation (EC) No. 1907/2006, SCHUNK complies with its duty to "communicate information on substances in articles" and lists the components concerned and the substances used in an overview that can be viewed at [schunk.com/SVHC](https://schunk.com/SVHC).

*Signature: see original declaration*

Lauffen/Neckar, October 2024

Dr.-Ing. Manuel Baumeister,  
Head of Systems Engineering,  
Technology & Innovation



**SCHUNK SE & Co. KG**  
Spanntechnik | Greiftechnik | Automatisierungstechnik

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