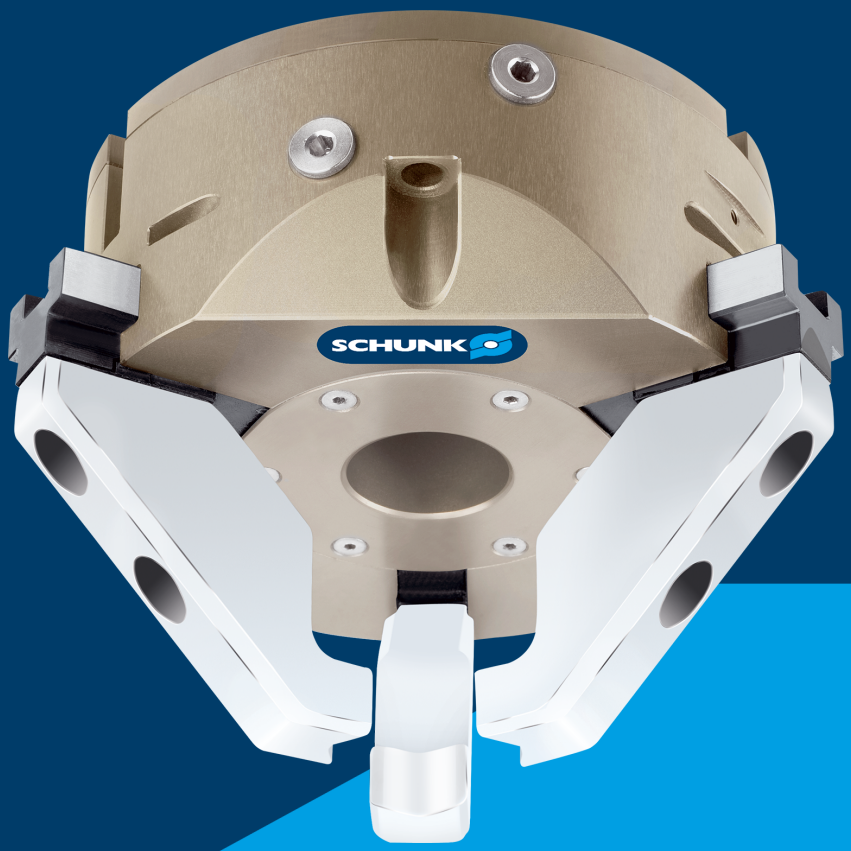


Assembly and Operating Manual

PZB

Centric Gripper with centre hole

Translation of the original manual

Hand in hand for tomorrow

Imprint

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

Document number: 389363

Version: 09.00 | 08/12/2025 | en

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
Tel. +49-7133-103-2503
Fax +49-7133-103-2189
cmg@de.schunk.com

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

Table of Contents

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 ▸ 1.1.2 [🗋 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.

NOTICE

Material damage!

Information about avoiding material damage.

1.1.2 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**.

1.1.3 Sizes

This operating manual applies to the following sizes:

- PZB 64
- PZB 80
- PZB 100
- PZB 125
- PZB 160

1.1.4 Variants

This operating manual applies to the following variations:

- PZB
- PZB – high-temperature (V/HT)

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

- Centric Gripper with centre hole PZB in the version ordered
- Assembly and Operating Manual
- Accessory pack

1.3.1 Accessories kit

Accessory pack for	ID number
PZB 64	5510447
PZB 64 – High-temperature (HT)	395510447
PZB 80	5512990
PZB 80 – High-temperature (HT)	395512990
PZB 100	5510448
PZB 100 – High-temperature (HT)	395510448
PZB 125	5511360
PZB 125 – High-temperature (HT)	395511360
PZB 160	5510449
PZB 160 – High-temperature (HT)	395510449

Content of the accessories pack: ▸ 6.5 [🗋 31].

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.

1.4.1 Seal kit

Seal kit for	ID number
PZB 64	0370774
PZB 80	0370775
PZB 100	0370776
PZB 125	0370777
PZB 160	0370778
PZB 160 – High-temperature (HT)	390370778

contents of the sealing kit, ▸ 6.5 [🗋 31].

2 Basic safety notes

2.1 Intended use

The product is designed exclusively for gripping and temporarily holding workpieces or objects.

- The product may only be used within the scope of its technical data, ▸ 3 [🗋 15].
- The product is intended for installation in a machine/ automated system. The applicable guidelines for the machine/ automated system must be observed and complied with.
- The product is intended for industrial and industry-oriented use. Its use outside enclosed spaces is only permitted if suitable protective measures are taken against outdoor exposure. The product is not suitable for use in salty air.
- The product can be used within the permissible load limits and technical data for holding workpieces during simple machining operations, but is not a clamping device according to EN 1550:1997+A1:2008.
- Appropriate use of the product includes compliance with all instructions in this manual.
- Any utilization that exceeds or differs from the appropriate use is regarded as misuse.

2.2 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.

2.3 Spare parts

Use of unauthorized spare parts

Using unauthorized spare parts can endanger personnel and damage the product or cause it to malfunction.

- Use only original spare parts or spares authorized by SCHUNK.

2.4 Gripper fingers

Requirements for the gripper fingers

Accumulated energy can make the product unsafe and risk the danger of serious injuries and considerable material damage.

- Only change gripper fingers if no residual energy can be released.
- Make sure that the product and the top jaws are a sufficient size for the application.

2.5 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 [🗋 15].

2.6 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.

2.7 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.

2.8 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.

2.9 Transport

Handling during transport

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

- When handling heavy weights, use lifting equipment to lift the product and transport it by appropriate means.
- Secure the product against falling during transportation and handling.
- Stand clear of suspended loads.

2.10 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.

2.11 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.

2.12 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.

2.12.1 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.

2.12.2 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.

2.12.3 Protection against dangerous movements

Unexpected movements

Residual energy in the system may cause serious injuries while working with the product.

- Switch off the energy supply, ensure that no residual energy remains and secure against inadvertent reactivation.
- Never rely solely on the response of the monitoring function to avert danger. Until the installed monitors become effective, it must be assumed that the drive movement is faulty, with its action being dependent on the control unit and the current operating condition of the drive. Perform maintenance work, modifications, and attachments outside the danger zone defined by the movement range.

- To avoid accidents and/or material damage, human access to the movement range of the machine must be restricted. Limit/prevent accidental access for people in this area due through technical safety measures. The protective cover and protective fence must be rigid enough to withstand the maximum possible movement energy. EMERGENCY STOP switches must be easily and quickly accessible. Before starting up the machine or automated system, check that the EMERGENCY STOP system is working. Prevent operation of the machine if this protective equipment does not function correctly.

2.12.4 Protection against electric shock

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.

2.13 Notes on particular risks

⚠ DANGER

Risk of fatal injury from suspended loads!

Falling loads can cause serious injuries and even death.

- Stand clear of suspended loads and do not step within their swiveling range.
- Never move loads without supervision.
- Do not leave suspended loads unattended.
- Wear suitable protective equipment.

⚠ WARNING

Risk of injury from objects falling and being ejected!

Falling and ejected objects during operation can lead to serious injury or death.

- Take appropriate protective measures to secure the danger zone.

⚠ WARNING

Risk of injury due to unexpected movements!

If the power supply is switched on or residual energy remains in the system, components can move unexpectedly and cause serious injuries.

- Before starting any work on the product: Switch off the power supply and secure against restarting.
- Make sure, that no residual energy remains in the system.

⚠ WARNING

Risk of injury from crushing and impacts!

Serious injury could occur during movement of the base jaw, due to breakage or loosening of the gripper fingers or if the workpiece is lost.

- Wear suitable protective equipment.
- Do not reach into the open mechanism or the movement area of the product.

⚠ WARNING

Risk of injury from sharp edges and corners!

Sharp edges and corners can cause cuts.

- Use suitable protective equipment.

3 Technical Data

	PZB				
Designation	**64**	**80**	**100**	**125**	**160**
Stroke per jaw [mm]	4.0	6.0	8.0	10.0	13.0
Closing force [N]	400	800	1200	2100	4000
Opening force [N]	490	990	1550	2670	5160
Weight [kg]	0.32	0.62	1.1	1.9	3.6
Recommended workpiece weight [kg]	2.0	4.0	6.0	10.5	20.0
Air consumption per cylinder volume [cm3]	16.0	35.0	80.0	150.0	330.0
Nominal working pressure [bar]	6.0				
Min. pressure [bar]	2.0				
Max. pressure [bar]	8.0				
Closing time [s]	0.04		0.1	0.16	0.3
Opening time [s]	0.04		0.9	0.14	0.4
Max. permissible finger length [mm]	50.0	64.0	80.0	100.0	125.0
Max. permitted weight per finger [kg]	0.15	0.3	0.5	0.95	1.75
Repeatability [mm]	0.01				0.02
Diameter of the centre hole [mm]	7.5	15.0	20.0	25.0	36.5

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

Designation	**PZB**
Ambient temperature [°C] min. max.	 −10 +90
Protection class IP *	40
Noise emission [dB(A)]	≤ 70

* For use in dirty ambient conditions (e.g. sprayed water, vapors, abrasion or processing dust) SCHUNK offers corresponding product options as standard. SCHUNK also offers customized solutions for special applications in dirty ambient conditions.

4 Assembly

4.1 Connections

4.1.1 Mechanical connection

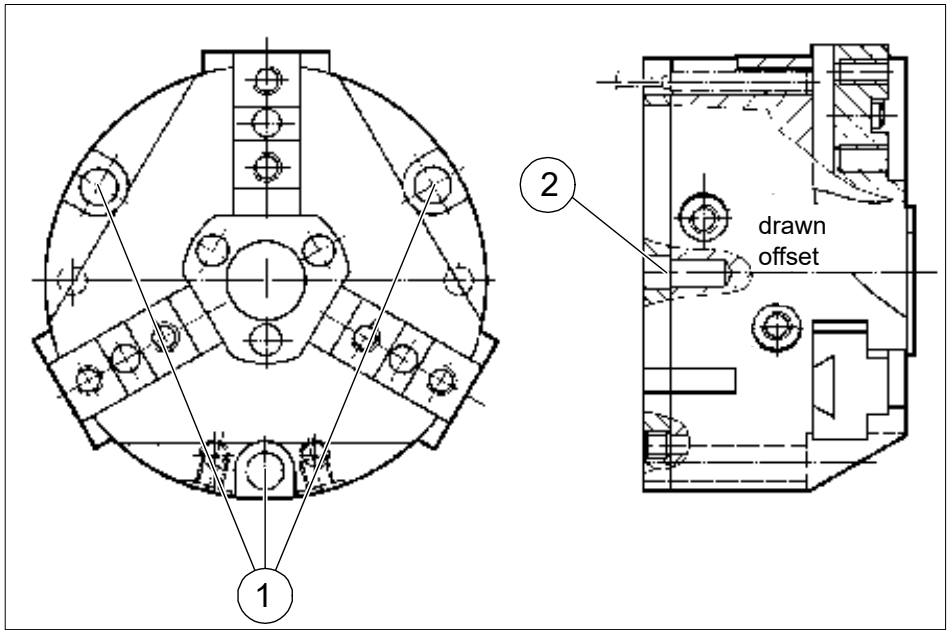
Evenness of the mounting surface

The values apply to the whole mounting surface to which the product is mounted.

Edge length	Permissible unevenness
< 100	< 0.02
> 100	< 0.05

Tab.: Requirements for evenness of the mounting surface (Dimensions in mm)

Montieren



mounting possibillities

Tab.: mounting material (provided by customer)

Item	Mounting	PZB				
		64	80	100	125	160
1	Screw EN ISO 4762	3 x M4	3 x M6	3 x M6	3 x M8	3 x M8
2	for cylindrical pint	Ø 4m6	Ø 5m6	Ø 5m6	Ø 6m6	Ø 6m6

NOTE

- Fix the module on the proposed fixing bores.
- Mount the module using the mounting bores
- Mount the top jaws using the mounting bores provided.

4.1.2 Pneumatic connection

NOTICE

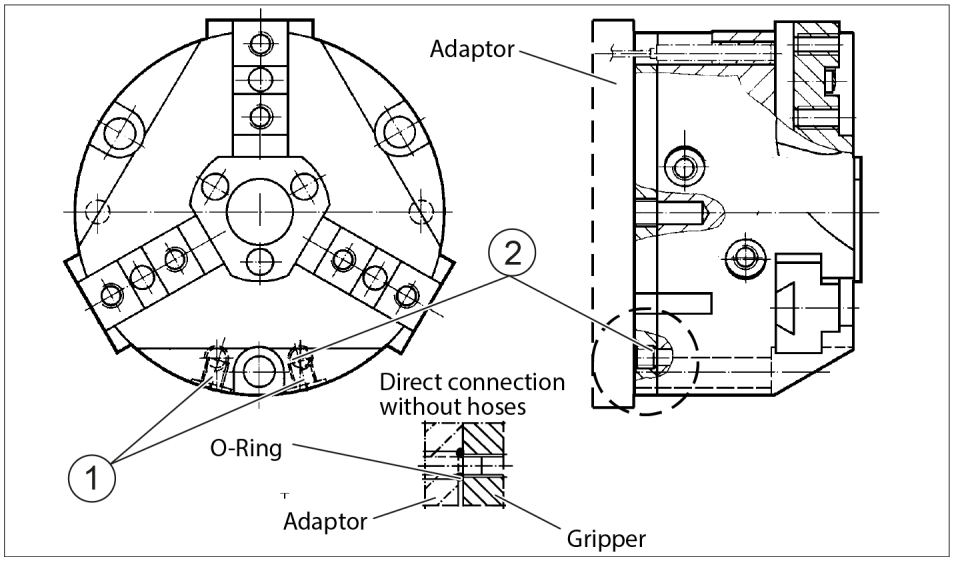
Risk of damage to the gripper!

If the maximum permissible finger weight or the permissible mass moment of inertia of the fingers is exceeded, the gripper can be damaged.

- As a rule, a jaw movement must take place without impact and bouncing.
- To do this, carry out sufficient throttling and/or damping if necessary.
- Observe specifications in the catalog data sheet.

NOTE

- Observe the requirements for the compressed air supply, ▸ 3 [🗋 15].
- In case of compressed air loss (cutting off the energy line), the components lose their dynamic effects and do not remain in a secure position. However, the use of a SDV-P pressure maintenance valve is recommended in this case in order to maintain the dynamic effect for some time. Product variants are also offered with mechanical gripping force via springs, which also ensure a minimum clamping force in the event of a pressure drop.



Item	Connection	PZB				
		64	80	100	125	160
1	Main connections (Hose connection) (A = open, B = close)	2 x M5	2 x M5	2 x M5	2 x R1/8 "	2 x R1/8 "
2	Hose-free direct connection (a = open, b = close)	2 x M4	2 x M4	2 x M5	2 x M5	2 x M4

Tab.: Thread diameter of the air connections

- Open only the air connections that are needed.
- Close unused main air connections using the screw plugs from the enclosed pack.
- For a hose-free direction connection, use the O-rings from the enclosed pack.

4.2 Mounting the sensor

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

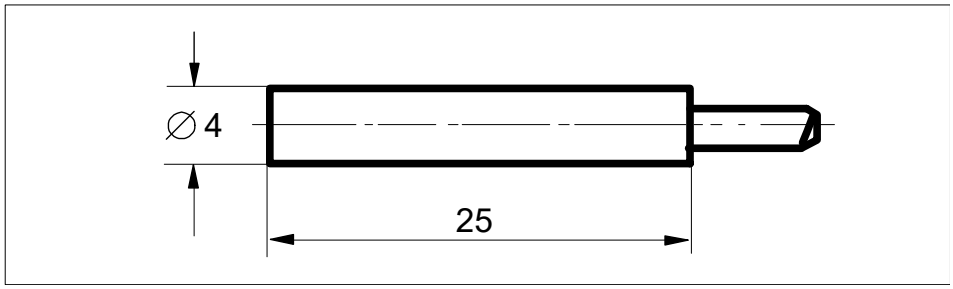
The product is prepared for the use of sensors.

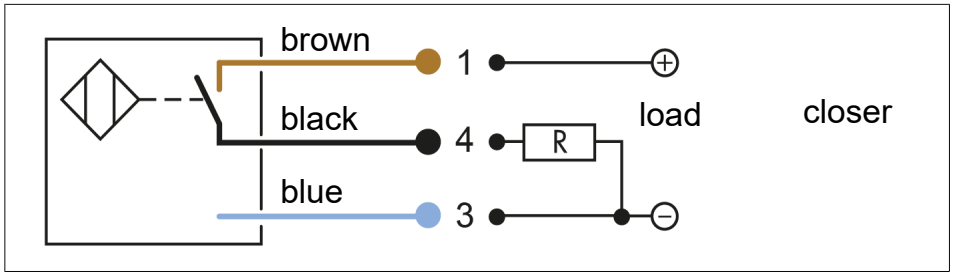
- For the exact type designations of suitable sensors, please see catalog datasheet and ▶ 4.2.1 [🗋 18].
- For technical data for the suitable sensors, see assembly and operating manual and catalog datasheet.
  - The assembly and operating manual and catalog datasheet are included in the scope of delivery for the sensors and are available at **schunk.com**. .
- Information on handling sensors is available at **schunk.com** or from SCHUNK contact persons.

4.2.1 Overview of sensors

Designation	PZB				
	64	80	100	125	160
Inductive proximity switch IN 40	X				
Inductive proximity switch IN 80	X	X	X	X	X
Flexible position sensor FPS-S M8		X	X	X	X

4.2.2 Inductive proximity switch IN 40





Types that can be ordered (☞ catalog):

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.

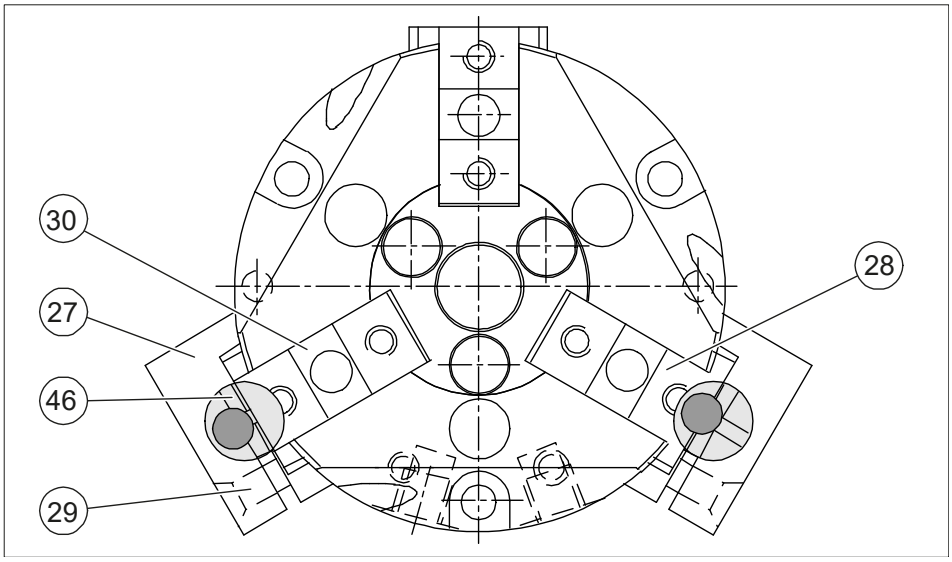
The inductive proximity switches are electronic components, which can react sensitively to high-frequency interference or electromagnetic fields.

- 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 (npn, pnp) is permissible, but does not increase the permissible load current.
- Note that the leakage current of the individual sensors (approx. 2 mA) is cumulative.

Mounting and adjusting of the proximity switch

NOTE

Interrogation with proximity switches INW 40/S (2 closer) is adjustable.



Gripper open:

1. Put the gripper onto “open” position
2. Carefully push the proximity switch into the eccentric insert (46), until the base jaw contacts themilled step (30).
3. NDraw back the proximity switch by appr. 0.5 mm.
4. Turn the eccentric insert by means of a key SW 8 until the proximity switch is switching.
5. Fix the eccentric insert (46) with a jamming screw (29).
6. Control function by closing and opening the gripper.

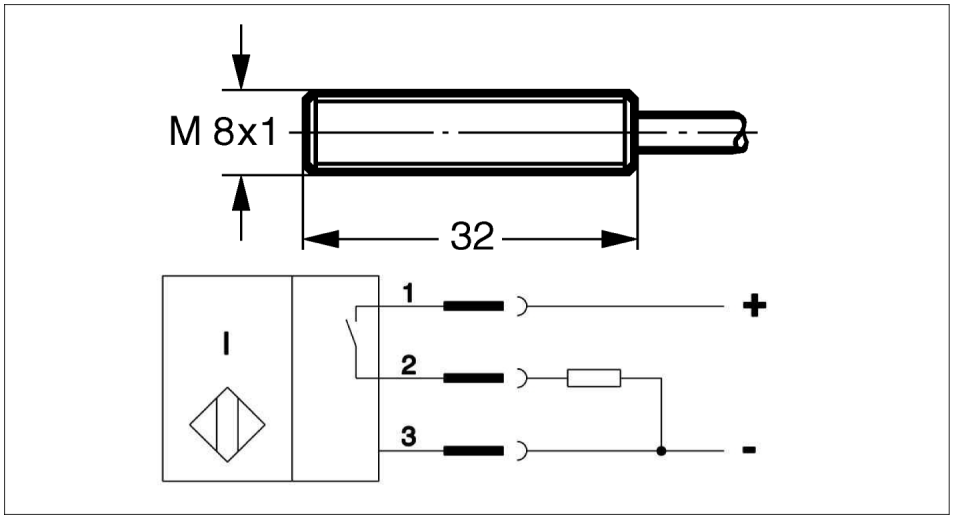
Gripper closed:

1. Put the gripper onto “closed” position.
2. Carefully push the proximity switch into the eccentic insert (46) until the base jaw contacts the milled undercut (28).
3. Draw back the proximity switch by appr. 0.5 mm.
4. Turn the eccentric insert by means of a key SW 8 until the proximity switch is switching.
5. Fix the eccentric insert (46) with a jamming screw (29).
6. Control function by closing and opening the gripper.

Component gripped

1. Clamp the component to be gripped.
2. Carefully push the proximity switch into the eccentric insert (46), until it contacts the base jaw (28 or 30).
3. Draw back the proximity switch by appr. 0.5 mm.
4. Turn the eccentric insert (46) by means of a key SW 8 until the proximity switch is switching.
5. Fix the eccentric insert (46) with a jamming screw (29).
6. Control function by closing and opening the gripper.

4.2.3 Inductive proximity switch IN 80



Connection example for IN 80

1	brown	2	black	3	blue

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.

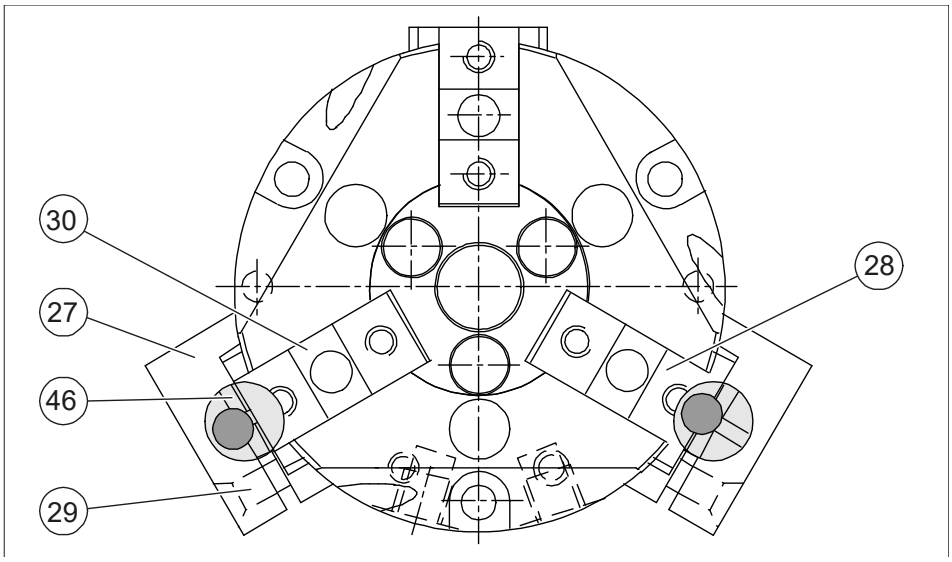
The inductive proximity switches are electronic components, which can react sensitively to high-frequency interference or electromagnetic fields.

- 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 (npn, 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.

Mounting and Adjusting of the proximity switch for PZB 64

NOTE

For interrogation with proximity switch INW 80/S and INW 80/O the positions “gripper open” and “gripper closed” can be interrogated.



Gripper open:

1. Put the gripper onto “open” position
2. Carefully push the proximity switch into the eccentric insert (46), until the base jaw contacts themilled step (30).
3. Draw back the proximity switch by appr. 0.5 mm.
4. Turn the eccentric insert (46) by means of a key SW 8 until the proximity switch is switching.
5. Fix the eccentric insert (46) with a jamming screw (29).
6. Control function by closing and opening the gripper.

Gripper closed:

1. Put the gripper onto “closed” position.
2. Carefully push the proximity switch into the eccentic insert (46) until the base jaw contacts the milled undercut (28).
3. Draw back the proximity switch by appr. 0.5 mm.
4. Turn the eccentric insert (46) by means of a key SW 8 until the proximity switch is switching.
5. Fix the eccentric insert (46) with a jamming screw (29).
6. Control function by closing and opening the gripper.

Component gripped:

1. Clamp the component to be gripped.
2. Carefully push the proximity switch into the eccentric insert (46), until it contacts the base jaw (28 or 30).
3. Draw back the proximity switch by appr. 0.5 mm.
4. Turn the eccentric insert (46) by means of a key SW 8 until the proximity switch is switching.
5. Fix the eccentric insert (46) with a jamming screw (29).
6. Control function by closing and opening the gripper.

Adjustment of the proximity switch INW 80/S and INW 80/0

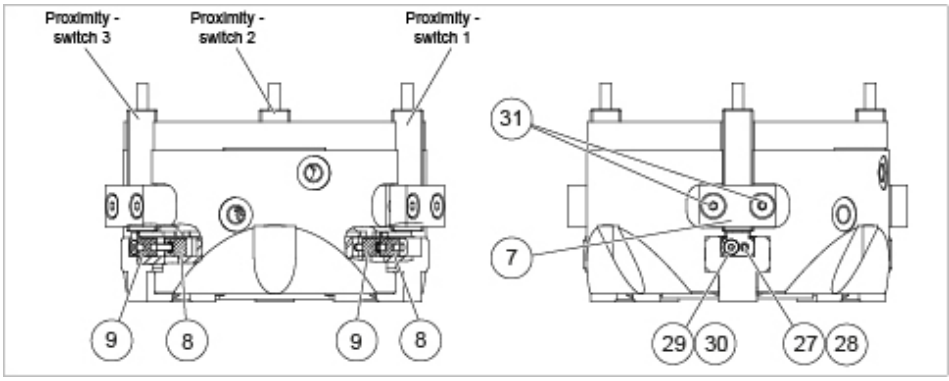
UFor being able to monitor the two end positions gripper “open” and gripper “closed” with the proximity switch INW 80/S and INW 80/0, the two eccentric inserts (46) have to be removed from the bracket (27) and be replaced by the proximity switches.

For this purpose, the closer for position gripper “0pen” and the opener for position gripper “closed” is necessary.

Moreover the bracket for position gripper “open” are supported by a spacer plate (thickness = 2.5 mm) and a bracket the for position gripper "closed" with a spacer plate (thickness = 1 mm) and sometimes longer screws (21) for fastening have to be used.

The corresponding spacer plates and fastening screws are supplied in the enclosed pack ▸ 6.5 [🗋 31]. By changing the switching distance, the switching point may be slightly changed.

Assembly and adjustment of the proximity switch for PZB 80



NOTE

The open switching point position for proximity switches 1 and 2, and the closed position for proximity switch 3 were pre-set by SCHUNK.

Gripper open:

1. Insert proximity switches 1 or 2 as far as the stop in the brakket (7) and fasten it by tightening the screw (31).
2. Move the gripper to the „open“ position and perform a function test.

Gripper closed:

1. Insert proximity switch 3 as far as the stop in the bracket (7) and fasten it by tightening the screw (31).
2. Move the gripper to the „closed“ position and perform a function test.

Part gripped (0.D. gripping):

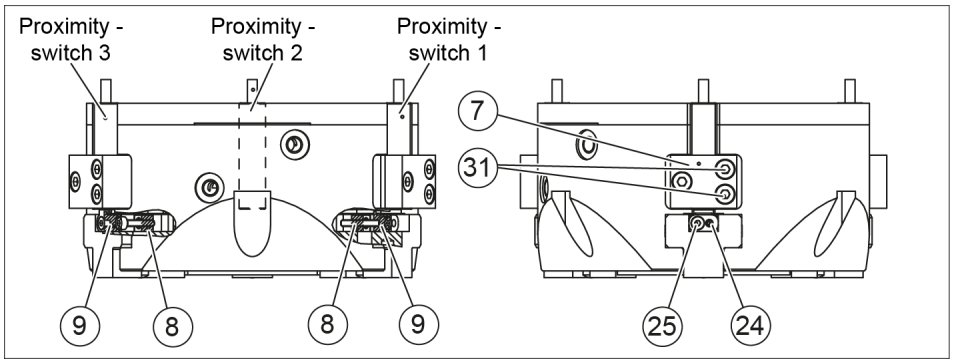
1. Insert proximity switch 3 as far as the stop in the bracket (7) and fasten it by tightening the screw (31).
2. Clamp the component to be gripped.

3. Undo the screw (30).
4. Move the operating cam position by turning the screw (28). The operating cam must be moved outwards until the proximity switch no longer responds. Then move the operating cam in again until the proximity switch begins to switch. Finally, fix this switching point by tightening the screw (30) again.
5. Perform a function test by opening and closing the gripper.

Part gripped (I.D. gripping):

1. Insert proximity switch 1 or 2 as far as the stop in the bracket (7) and fasten it by tightening the screw (31).
2. Clamp the component to be gripped.
3. Undo the screw (29).
4. Move the operating cam position by turning the screw (27). The operating cam must be moved inwards until the proximity switch no longer responds. Then move the operating cam out again until the proximity switch begins to switch. Finally, fix this switching point by tightening the screw (29) again.
5. Perform a function test by opening and closing the gripper.

Assembly and adjustment of the proximity switch for PZB 100, 125 and 160



NOTE

The open switching point position for proximity switches 1 and 2, and the closed position for proximity switch 3 were pre-set by SCHUNK.

Gripper open:

1. Insert proximity switches 1 or 2 as far as the stop in the brakket (7) and fasten it by tightening the screw (31).
2. Move the gripper to the „open“ position and perform a function test.

Gripper closed:

1. Näherungsschalter 3 auf Anschlag in den Klemmhalter (7) schieben und durch Anziehen der Schraube (31) befestigen.

2. Move the gripper to the „closed“ position and perform a function test.

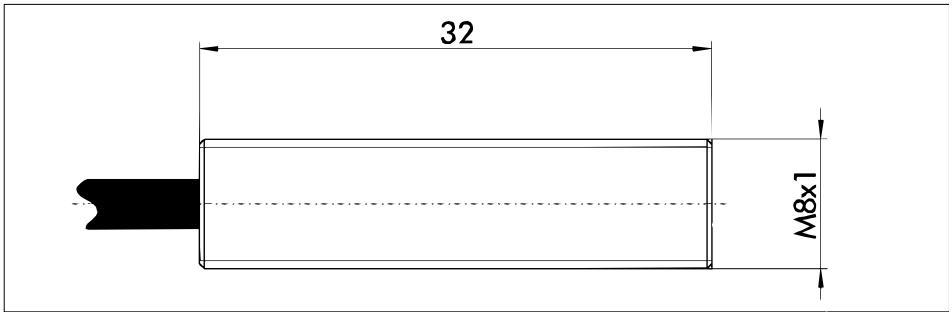
Part gripped (O.D. gripping):

1. Insert proximity switch 3 as far as the stop in the bracket (7) and fasten it by tightening the screw (31).
2. Clamp the component to be gripped.
3. Undo the screw (25).
4. Move the operating cam position by turning the screw (24). The operating cam must be moved outwards until the proximity switch no longer responds. Then move the operating cam in again until the proximity switch begins to switch. Finally, fix this switching point by tightening the screw (25) again..
5. Perform a function test by opening and closing the gripper.

Part gripped (I.D. gripping):

1. Insert proximity switches 1 or 2 as far as the stop in the brakket (7) and fasten it by tightening the screw (31).
2. Clamp the component to be gripped.
3. Undo the screw (25).
4. Move the operating cam position by turning the screw (24). The operating cam must be moved inwards until the proximity switch no longer responds. Then move the operating cam out again until the proximity switch begins to switch. Finally, fix this switching point by tightening the screw (25) again.
5. Perform a function test by opening and closing the gripper.

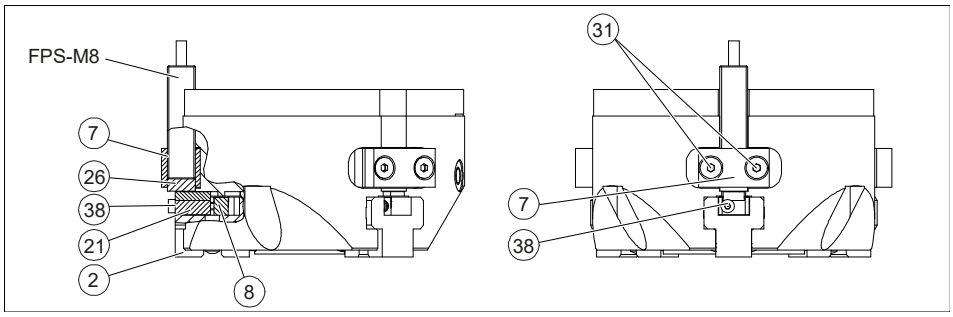
4.2.4 Flexible position sensor FPS



To use the flexible position sensor FPS-M8, the grippers have to be retrofitted with a special mounting kit. This mounting kit is available from SCHUNK for the models below (see catalog):

PZB 80, PZB 100, PZB 125, PZB 160

Mounting of the mounting kit PZB 80

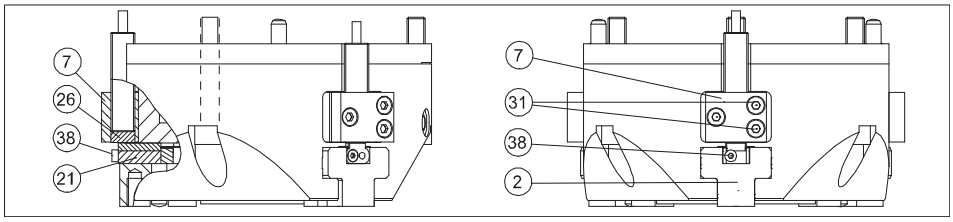


Position of the item numbers ▸ 6.5 [🗋 31]

1. Remove the operating cam for monitoring along with the inductive proximity switch (9) and the two screws (27 / 29 and 28 / 30) from the base jaw (2).
2. With the chamfered side to the front, insert the operating cam (21) into the base jaw (2) and screw it with the screw provided (38)
3. First insert the spacer (26) and then flexible position sensor FPS-M8 through the bracket (7) into the special hole drilled in the housing (1) to the stop, and clamp the sensor in this position by tightening the screw (31).

⇨ The adjustment of the sensor is described in the operating manual of the sensor.

Mounting of the mounting kit PZB 100 - 160



Position of the item numbers ▸ 6.5 [🗋 31]

1. Remove the operating cam for monitoring along with the inductive proximity switch (9) and the two screws (24 and 25) from the base jaw (2).
2. With the chamfered side to the front, insert the operating cam (21) into the base jaw (2) and screw it with the screw provided (38).
3. First insert the spacer (26) and then flexible position sensor FPS-M8 through the bracket (7) into the special hole drilled in the housing (1) to the stop, and clamp the sensor in this position by tightening the screw (31).

⇨ The adjustment of the sensor is described in the operating manual of the sensor.

5 Troubleshooting

5.1 Product is not moving

Possible cause	Corrective action
Base jaws jam in housing, e.g. mounting surface is not sufficiently even.	Check the evenness of the mounting surface. ▸ 4.1.1 [🗋 16]
	Loosen the mounting screws of the product and actuate the product again.
Pressure drops below minimum.	Check air supply. ▸ 4.1.2 [🗋 17]
Compressed air lines switched.	Check compressed air lines. ▸ 4.1.2 [🗋 17]
Proximity switch defective or set incorrect.	Readjust or change sensor.
Unused air connections open.	Close unused air connections.
Flow control valve closed.	Open the flow control valve.
Component part defective.	Replace component or send it to SCHUNK for repair.

5.2 Product is not executing the complete stroke

Possible cause	Corrective action
Dirt deposits between cover and piston.	Clean and if necessary re-lubricate.
Dirt deposits between basic jaws and guidance.	Disassemble and clean the product.
Pressure drops below minimum.	Check air supply. ▸ 4.1.2 [🗋 17]
Mounting surface is not sufficiently flat.	Check the evenness of the mounting surface. ▸ 4.1.1 [🗋 16]
Component part defective.	Replace component or send it to SCHUNK for repair.

5.3 Product opens or closes abruptly

Possible cause	Corrective action
Too little grease in the mechanical guiding areas.	Clean and lubricate product. ▸ 6 [🗋 29]
Compressed air lines blocked.	Check compressed air lines of damage.
Mounting surface is not sufficiently flat.	Check the evenness of the mounting surface.
One-way flow control valve is missing or adjustet incorrectly.	Install and adjust one-way flow control valve.
Loading too large.	Check permissible weight and length of the gripper fingers.

5.4 Gripping force is dropping

Possible cause	Corrective action
Compressed air can escape.	Check seals, if necessary, disassemble the product and replace seals.
Too much grease in the mechanical movement space.	Clean and lubricate product.
Pressure drops below minimum.	Check air supply. ▶ 3 [🗋 15]
Component part defective.	Replace component or send it to SCHUNK for repair.

5.5 Product does not achieve the opening and closing times

Possible cause	Corrective action
Compressed air lines are not installed optimally.	If present: Open the flow control couplings on the product to the maximum that the movement of the jaws occurs without bouncing and hitting.
	Check compressed air lines.
	Inner diameters of compressed air lines are of sufficient size in relation to compressed air consumption.
	Keep compressed air lines between the product and directional control valve as short as possible.
	Flow rate of valve is sufficiently large relative to the compressed air consumption.
	NOTICE! The throttle check valve must not be removed, even if the product has not reached the opening and closing times.
	If you still cannot achieve the open and close times in the latest catalog, we recommend the use of quick-air-vent-valves directly at the product.
Loading too large.	Check permissible weight and length of the gripper fingers.

6 Maintenance

6.1 Notes

Original spare parts

Use only original spare parts of SCHUNK when replacing spare and wear parts.

Replacement of the housing and base jaws

The base jaws and the guides in the housing are matched to each other. To replace these parts, send the product to SCHUNK with a repair order.

6.2 Maintenance intervals

NOTICE

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.

Interval (million cycles) bei PZB 64 – 160	Maintenance work
2	Clean all parts thoroughly, check for damage and wear, if necessary replace seals and wearing parts, ▸ 6.4 [🗋 30]. The seals are in the enclosed sealing kit. ▸ 1.4.1 [🗋 7].
2	Clean all parts thoroughly, check for damage and wear, if necessary replace seals and wearing parts, ▸ 6.5 [🗋 31] Oil or grease external steel parts.

Tab.: Maintenance- and lubrication interval

6.3 Lubricants/Lubrication points

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

SCHUNK recommends the lubricants listed.

Greasing area	Lubricant
Metallic sliding surfaces	SCHUNK grease 3
Seals and sealing surfaces	SCHUNK grease 1
Bore hole at the piston	SCHUNK grease 1

Details regarding SCHUNK lubricant designations are available at **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.

6.4 Disassembly and assembly

6.4.1 Dissambling of the product

Position of the item numbers ▸ 6.5 [🗋 31]

1. Remove all air feedings.
2. Loosen the screws (12) and remove the protection sleeve (5).
3. Mark the piston's position of installation (3) and of the base jaws (2 or 28 and 30 for PZB 64) in the housing.
4. Remove the screws (11) and take off the cover (4).
5. Disassemble the cylinder piston (6)
   for **PZB 64 and 80** by removing the safety rings (10 or 25) and the washers (43 or 26) underneath.
   for **PZB 100 and PZB 160** by unscrewing the cylinder piston (6). Herefore please use an adjustable key.
6. Press the piston (3) in direction **»a«** out of the housing.
7. Draw the base jaws (2 – or 28 and 30 for PZB 64) out of the housing.

6.4.2 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.
  - Position of the wearing parts ▸ 6.5 [🗋 31]
  - Seal kit ▸ 1.4.1 [🗋 7]

Assembly

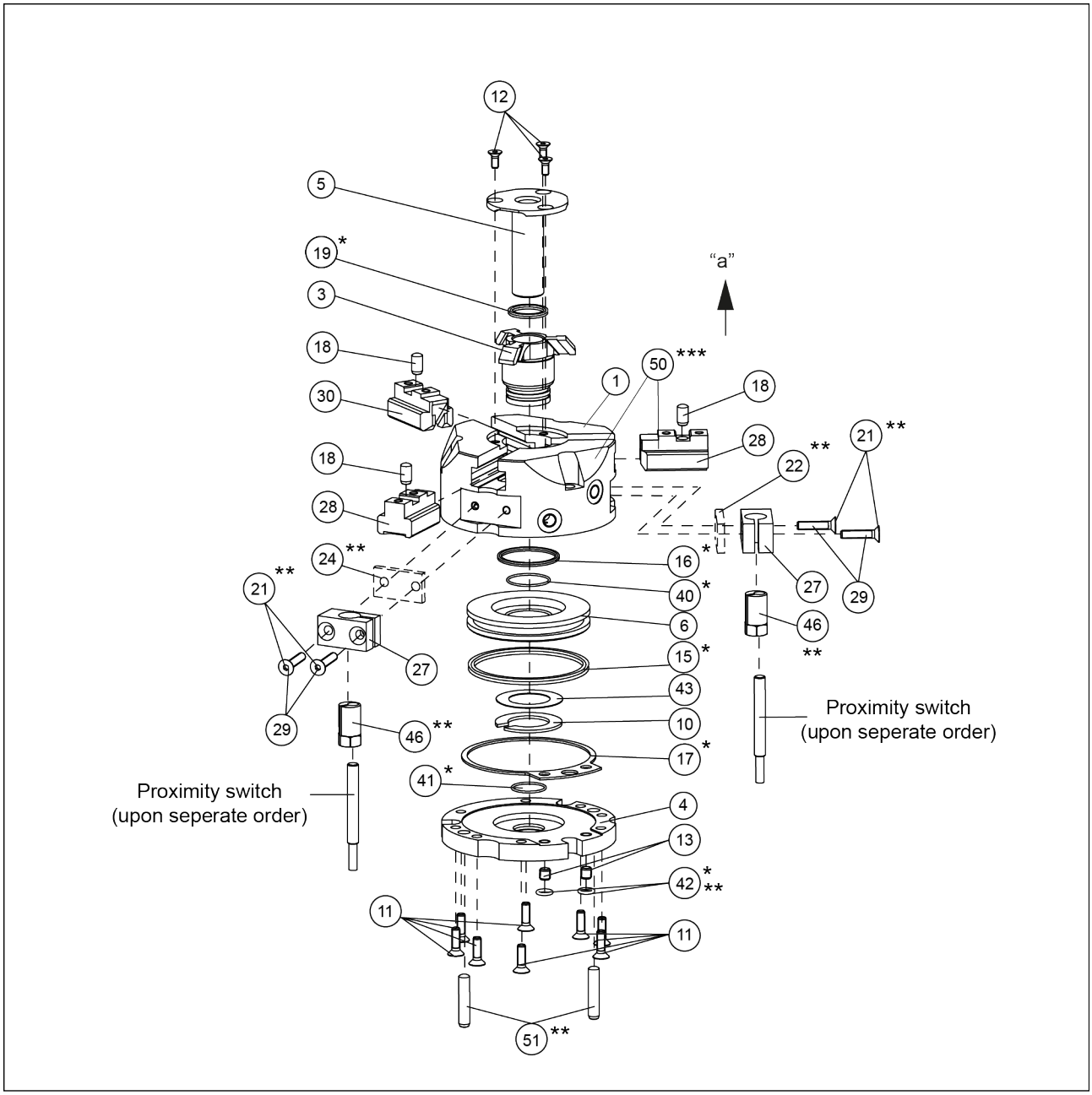
Assembly takes place in the opposite order to disassembly.
Observe the following:

- Unless otherwise specified, secure all screws and nuts with Loctite no. 243 and tighten with the appropriate tightening torque.

6.5 Drawings

The following figures are example images.
They serve for illustration and assignment of the spare parts.
Variations are possible depending on size and variant.

6.5.1 PZB 64

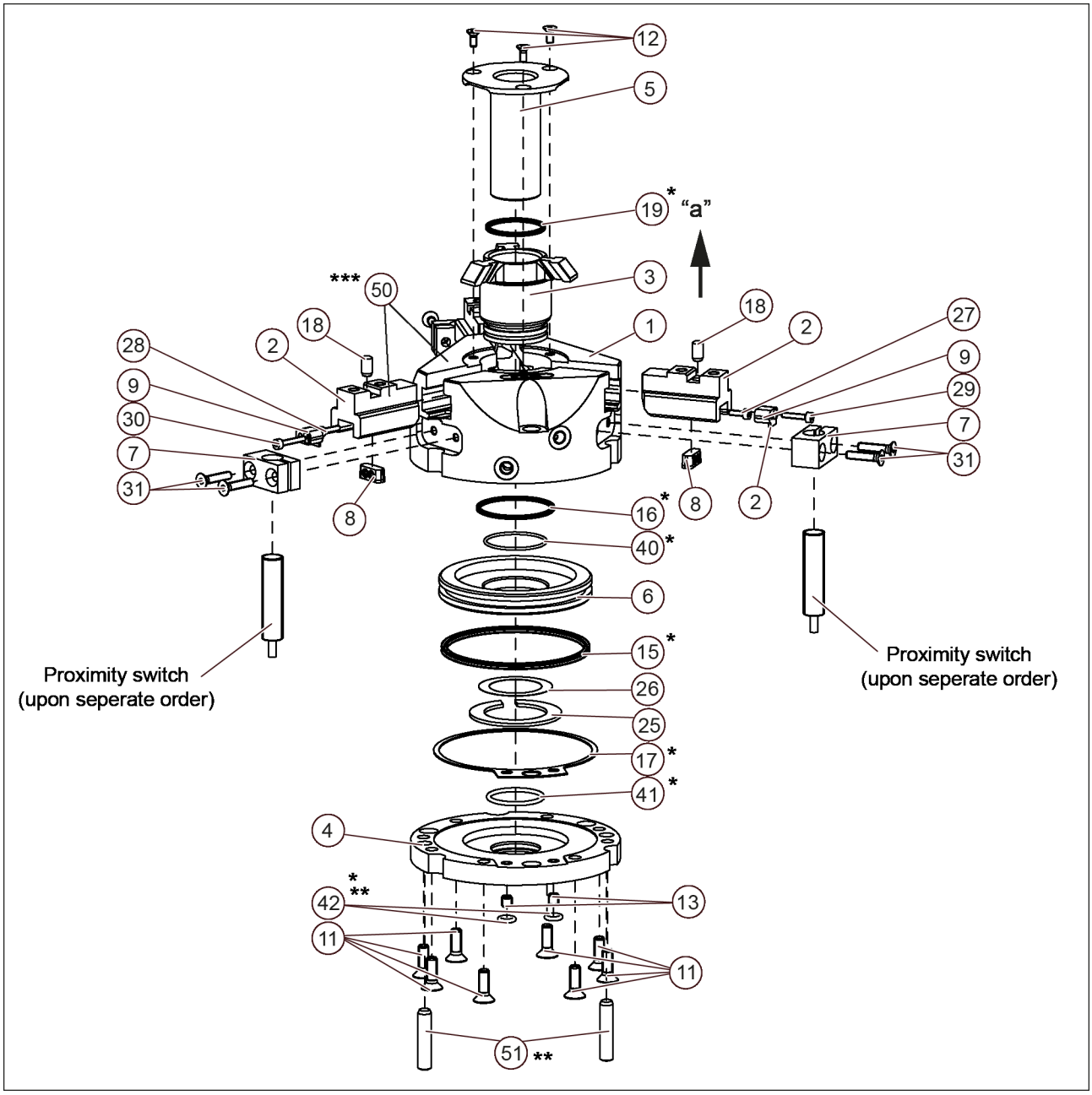


* Wearing part, replace during maintenance.
Included in the seal kit. Seal kit can only be ordered completely.

** Contained in accessory pack.

*** Positions are adapted to each other and can not be replaced by the customer.

6.5.2 PZB 80

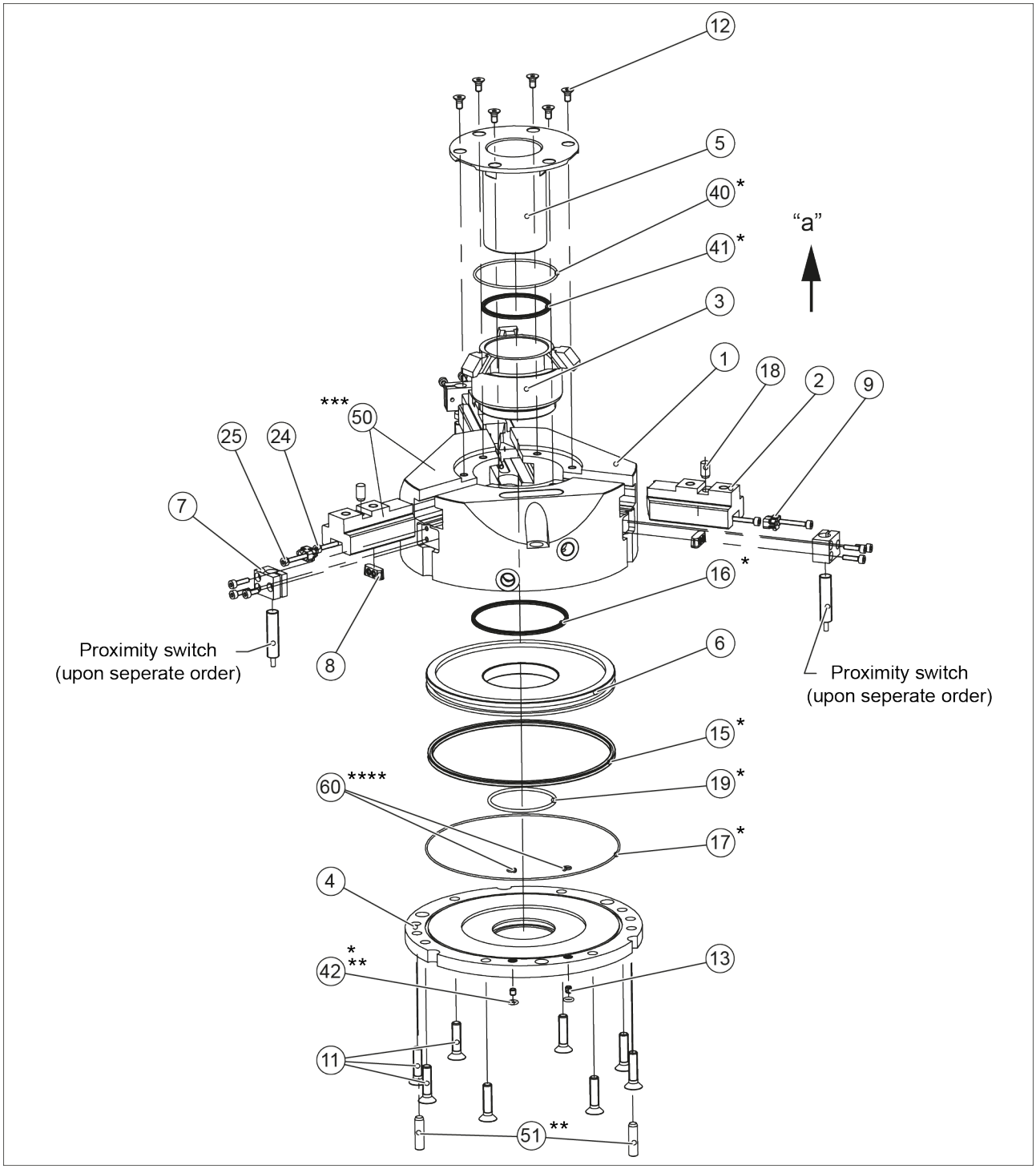


* Wearing part, replace during maintenance.
Included in the seal kit. Seal kit can only be ordered completely.

** Contained in accessory pack.

*** Positions are adapted to each other and can not be replaced by the customer.

6.5.3 PZB 100 – 160



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

** Contained in accessory pack.

*** Positions are adapted to each other and can not be replaced by the customer.

**** only for PZB 125 / 160

7 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:	Centric Gripper with centre hole / PZB /pneumatic
ID number	0300345...0300349

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, February 2023

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

8 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:	Centric Gripper with centre hole / PZB / pneumatic
ID number	0300345...0300349

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, February 2023

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

SCHUNK SE & Co. KG
Spanntechnik | Greiftechnik | Automatisierungstechnik

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