Type 2060, 2061, 2063, 2064, 2065

Max. stroke limitation / Min., max. stroke limitation
Electrical position indicator / Inductive proximity switch

Max. Hubbegrenzung / Min., max. Hubbegrenzung
Elektrischer Stellungsrückmelder / Induktiver Näherungsschalter

Limitation de course max. / Limitation de course min. max.
Indicateur de position électrique / Détecteur de proximité inductif

Accessories

Zubehör
Accessoires

MAN 1000333119 EN Version: BStatus: RL (released | freigegeben) printed: 08.12.2025

Operating Instructions 2510/01_EU-ML_00810584 / Original DE

Assembly instructions for accessories

Content:

1 ABOUT THESE INSTRUCTIONS

The instructions provide a description of the procedure for installing and commissioning the accessories for Types 2060, 2061, 2063, 2064 and 2065. Keep these instructions to hand at the operation site.

The instructions contain important safety information.

- Read these instructions carefully.
- Observe the safety instructions and the intended use.
- All persons working on the device must read and understand these instructions.

1.1 Symbols

DANGER!

Warns of immediate danger.

- Failure to observe these instructions will result in death or serious injuries.

WARNING!

Warns of a potentially hazardous situation.

- Failure to observe these instructions may result in serious injuries or death.

CAUTION!

Warns of potential danger.

- Failure to observe these instructions may result in moderate or minor injuries.

NOTE!

Warns of damage.
- Failure to observe the warning may result in damage to the device or the equipment.

Indicates important additional information, advice and recommendations.

Refers to information in these operating instructions or in other documentation.

- Highlights instructions to avoid a danger.

→ Highlights a work step which you must carry out.

1.2 Definition of terms

The term “device” used in these instructions always refers to Type 2060, 2061, 2063, 2064, 2065.

Control function	Definition
A (CF A)	Closed by spring force in rest position.
B (CF B)	Opened by spring force in rest position.
I (CF I)	Actuating function via reciprocal pressurisation.

2 INTENDED USE

- The actuators and their accessories must only be used for the intended applications described in the respective operating instructions and only in connection with third-party devices and components recommended or approved by Bürkert. Any other or additional use is not considered part of the intended use.
- Observe the instructions in these assembly instructions, as well as the usage conditions and permissible data specified in the operating instructions and on the type labels of the components used.
- Proper and safe operation of the devices requires proper transport, storage and installation as well as careful operation and maintenance.

3 BASIC SAFETY INSTRUCTIONS

These safety instructions do not take into account any

- unforeseen occurrences or events that may arise during installation, operation or maintenance of the devices.
- local safety regulations that are within the operator's scope of responsibility, including those relating to the installation personnel.

DANGER!

Danger – high pressure.

- Before loosening lines and valves, turn off the pressure and vent the lines.

Danger – electrical voltage.

- Before reaching into the device or the system, switch off the power supply and secure it against reactivation.
- Observe the applicable accident prevention and safety regulations for electrical devices.

Risk of injury when unscrewing the transparent cap.

The transparent cap must not be under pressure when unscrewing it.

- When unscrewing the transparent cap, **only** the lower piston chamber may be pressurized with compressed air via the lower pilot air port.

WARNING!

General hazardous situations.

To prevent injuries, ensure that:

- The system cannot be activated unintentionally.
- Installation and maintenance tasks must only be performed by authorised technicians, using the appropriate tools. Use only original spare parts.
- The process must be restarted in a defined or controlled manner after an interruption in the power supply or pneumatic supply.

Please observe the following in order to protect against damage to the device:

- When screwing the electrical position feedback indicator in or out, never use the socket as a lever, but grasp the screw-in base of the position feedback indicator.

The actuators and accessories have been developed in accordance with recognised safety engineering standards and conform to the state of the art. Nevertheless, dangerous situations may occur. Only operate the devices when they are in perfect condition and in compliance with the operating instructions.
Observe the work instructions, their sequence and the safety instructions and safety markings when installing the respective components.

3.1 Type-specific safety and warning notices

3.1.1 Safety instructions for actuators 175 and 225 (Ø in mm)

WARNING!

Risk of injury and malfunction due to parts springing out or slipping out of place.

The actuators contain preloaded springs that can spring out or slip out of place if not opened properly.

- The Ø 175 mm and 225 mm actuators must only be opened by the manufacturer.

3.1.2 Note for actuators 50, 63, 80, 100, 125 (Ø in mm)

NOTE!

Damage to the actuators due to use of the wrong tool.

- Only the specific tools provided for the purpose by Bürkert must be used to screw on the actuator cover.

3.1.3 Note for actuators DN80 125 (Ø in mm)

NOTE!

For the variant of the actuator DN80 Ø 125, operation with maximum stroke limitation, min./max. stroke limitation and handwheel not permitted.

4 GENERAL INFORMATION

4.1 Contact addresses

Germany Bürkert Fluid Control Systems
Sales Center
Christian-Bürkert-Str. 13-17
D-74653 Ingelfingen
Tel. + 49 (0) 7940 - 10 91 111
Fax + 49 (0) 7940 - 10 91 448
Email: info@burkert.com

International
You will find the contact addresses on the last pages of the printed operating instructions and also in the Internet at:
country.burkert.com

4.2 Warranty

A precondition for the warranty is that the actuators and accessories are used as intended observing the specified usage conditions.

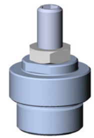
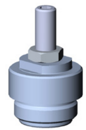
4.3 Recommended auxiliary materials

The following auxiliary materials are recommended for installing the accessories:

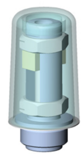
Auxiliary material	Name	Manufacturer and Internet address
Seal and lubrication materials	Multi silicone grease OKS 1110	OKS Schmierstoffe GmbH www.oks-germany.com
Liquid adhesive	LOCTITE 274	Henkel Loctite Deutschland GmbH www.loctite.de

5 ACCESSORIES OVERVIEW

5.1 Stroke limitation, single variant

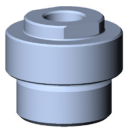
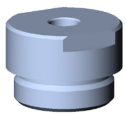
	**Actuator size 50 (D), 70 (M)** (Ø in mm) Specifics: • Only for control function A • To limit the upper end position
	**Actuator size 90 (N), 130 (P)** (Ø in mm) Specifics: • Only for control function A • To limit the upper end position

5.2 Min./max. stroke limitation

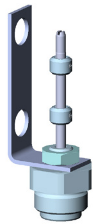
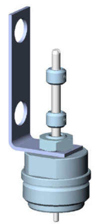
	**Actuator size 50 (D), 70 (M)** (Ø in mm) Specifics: • Only for control function A • To limit the upper and lower end positions • For flow direction below the seat

	**Actuator size 90 (N), 130 (P)** (Ø in mm) Specific details: • To limit the upper and lower end positions • With optical position indicator • Only for flow direction below the seat • Reduction of pilot pressure for actuator size 130 (P) with control function I

5.3 Threaded nipple for inductive proximity switch M12 × 1

	**Actuator size 50 (D), 70 (M)** Specific details: • Only for control function A • For feedback on the upper end position
	**Actuator size 90 (N), 130 (P)** Specific details: • Only for control function A • For feedback on the upper end position

5.4 Mounting bracket for 2 inductive proximity switches M12 × 1

	**Actuator size 50 (D) to 70 (M)** Specific details: • For feedback on the upper and lower end positions
	**Actuator size 90 (N), 130 (P)** Specific details: • For feedback on the upper and lower end positions

5.5 Type 8697 electric position feedback indicator (with adaptation)

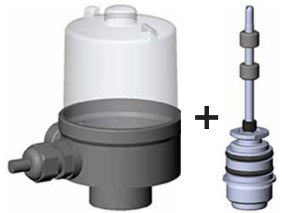
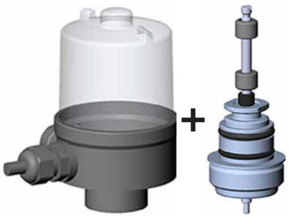
	**Actuator size 50 (D) to 70 (M)** Specific details: • For feedback on the upper and lower end positions • With optical position indicator
	**Actuator size 90 (N), 130 (P)** Specific details: • For feedback on the upper and lower end positions • With optical position indicator

Fig.1: Type 8697 electric position feedback indicator (with adaptation)

6 OPTION: MAXIMUM STROKE LIMITATION

WARNING!

Risk of injury from flying debris.
When using this option with flow direction above the seat, there is a risk that parts of the device may be thrown off by strong opening impacts.
▶ Only use this option if the flow direction is below the seat.

Only apply the maximum stroke limitation option in the following cases:
- Control function A

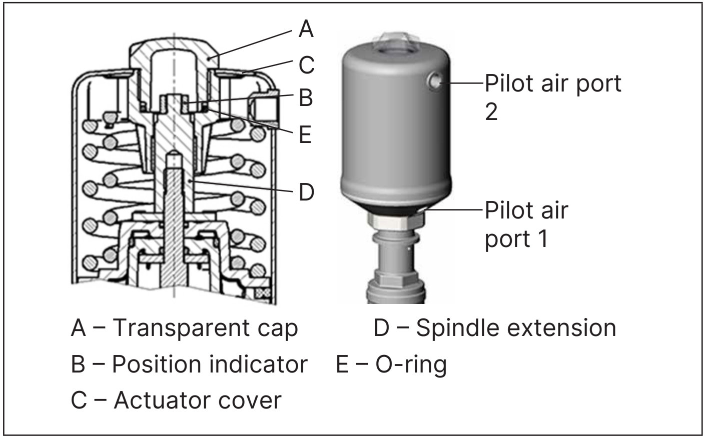


Fig.2: Illustration of parts for actuator sizes D, M, N and P

6.5.1 Pre-installation work

DANGER!

Risk of injury due to high pressure and escaping medium.

- Before working on the system or device, switch off the pressure and vent or empty the lines.

→ Shut off the medium supply.

→ Switch off the pilot air.

→ Drain the valve body.

→ Unscrew the transparent cap (A) from the actuator cover (C).

DANGER!

Risk of injury from high pressure.

Without the transparent cover, the actuator vents straight upwards when pilot pressure is applied to the wrong port.

- For control functions A and I, apply pilot pressure only to port 1.

→ To dismantle the position indicator (B), move the actuator to the upper end position:
apply pilot pressure to port 1.

→ Unscrew position indicator (B) from spindle extension (D).

6.5.2 Installation of the maximum stroke limiter

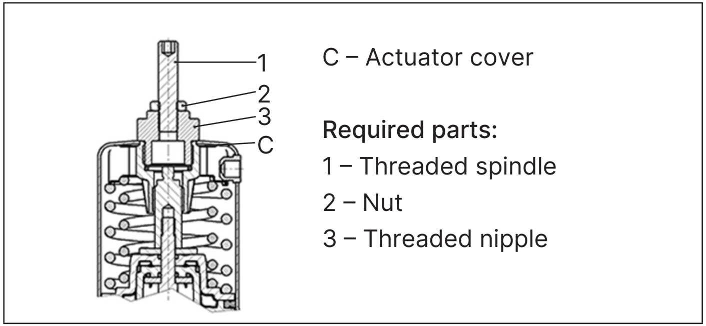


Fig.3: Install maximum stroke limiter

→ Screw the threaded nipple (3) into the actuator cover (C). Observe tightening torques:

Actuator D and M: 20 Nm
Actuator N and P: 25 Nm

→ Adjust the upper end position by turning the threaded spindle (1).

→ Secure the threaded spindle (1) with a nut (2).

→ Check the valve for functionality and tightness.

7 OPTION: MIN. AND MAX. STROKE LIMITERS

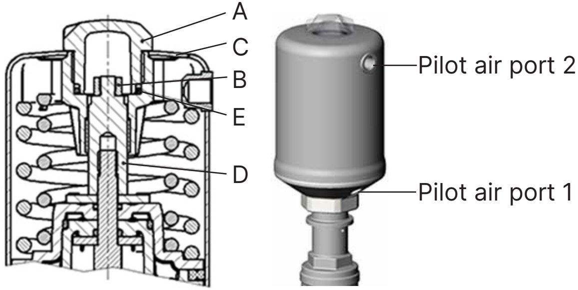
WARNING!

Risk of injury from flying debris.
When using this option with flow direction above the seat, there is a risk that parts of the device may be thrown off by strong opening impacts.

▶ Only use this option if the flow direction is below the seat.

Only apply the maximum stroke limitation option in the following cases:

- Control function A



A – Transparent cap
B – Position indicator
C – Actuator cover
D – Spindle extension
E – O-ring

Fig.4: Illustration of parts for actuator sizes D, M, N and P

7.5.1 Pre-installation work

DANGER!

Risk of injury due to high pressure and escaping medium.

- Before working on the system or device, switch off the pressure and vent or empty the lines.

→ Shut off the medium supply.
→ Switch off the pilot air.
→ Drain the valve body.
→ Unscrew the transparent cap (A) from the actuator cover (C).

DANGER!

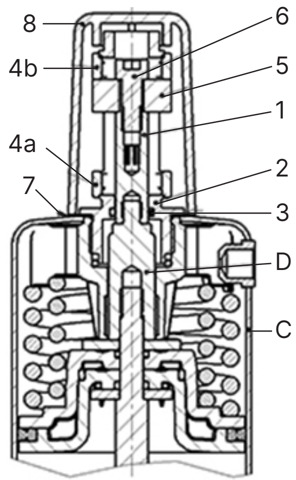
Risk of injury from high pressure.

Without the transparent cover, the actuator vents straight upwards when pilot pressure is applied to the wrong port.

- For control functions A and I, apply pilot pressure only to port 1.

→ **Control function A and I:**
To dismantle the position indicator (B), move the actuator to the upper end position:
apply pilot pressure to port 1
(a pressure pulse is sufficient for CF I).
→ Unscrew position indicator (B) from spindle extension (D).
→ **For actuator size N and P:**
→ Check the position of the O-ring (E) and, if necessary, reposition it on the base.

7.5.2 Installation of min. and max. stroke limiters, actuator sizes D and M



C – Actuator cover

D – spindle extension (actuator)

Required parts:

1 – Spindle (stroke limiter)

2 – Tube

3 – O-ring 10 × 2

4a/4b – 2 nuts M20 × 1.5

5 – Bar

6 – Cheese head screw M6 × 16

7 – Flat seal

8 – Cover

Fig.5: Installation of minimum and maximum stroke limiters, actuator sizes D and M

→ Fit the O-ring (3) into the bore of the tube (2).

→ Grease the tube (2) and spindle (1) with, e.g., OKS 1110 multi-silicone grease.

→ To secure the spindle (1), apply a little Loctite 274 to the threaded hole in the spindle.

→ Screw spindle (1) onto spindle extension of actuator (D) (hexagon socket SW4).

→ Fit the flat seal (7) onto the tube (2).

→ Screw the nut (4a) all the way down onto the tube (2).

→ Grease the tube (2) in the running area of the O-ring (3) with, e.g., OKS 1110 multi-silicone grease.

→ Carefully pull the tube (2) over the spindle (1), taking care not to damage the O-ring (3).

→ **Control function B:**
Place the bar (5) onto the spindle (1) and screw the tube (2) into the actuator cover (C) (2-sided with SW17). Observe the tightening torque of 20 Nm.

→ **Control function A and I:**
Screw tube (2) into actuator cover (C) (2-sided with SW17). Observe the tightening torque of 20 Nm. Place the bar (5) onto the spindle (1).

→ To secure the cheese head screw (6), apply a little Loctite 274 to the thread of the cheese head screw.

→ Screw the cheese head screw (6) into the spindle (1).

→ Screw the upper nut (4b) onto the tube (2).

→ Limit the stroke accordingly using the upper nut (4b).

→ Screw the cover (8) on hand-tight.

→ Check the valve for functionality and tightness.

! Observe the curing time of Loctite before putting the valve into operation.

7.1 Installation of min. and max. stroke limiters, actuator size N and P

WARNING!

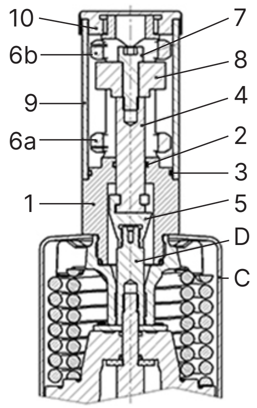
Risk of injury from flying debris.

When using this option

- with flow direction above the seat
- With actuator size P (130 mm) with CF I and a pilot pressure of > 5 bar, there is a risk that parts of the device may be thrown off by strong opening impacts.

→ Option only to be used with flow direction below the seat.

→ For actuator size P (130 mm) with CF I, reduce the pilot pressure to a maximum of 5 bar.



C – Actuator cover
D – spindle extension (actuator)

Required parts:

1 – Tube
2 – O-ring 15 × 2
3 – O-ring 40 × 2
4 – Spindle (stroke limiter)
5 – Spindle coupling
6a/6b – 2 nuts M30 × 1.5
7 – Cheese head screw M8 × 25
8 – Bar
9 – Protective tube (acrylic glass)
10 – Cover

Fig.6: Installation of minimum and maximum stroke limiters, actuators N and P

→ To secure the spindle coupling (5), apply some Loctite 274 to the threaded hole.

→ Screw the spindle coupling (5) onto the spindle extension of the actuator (D) (SW13).

→ Screw the nut (6a) all the way down onto the tube (1).

→ Fit the O-ring (3) into the tube (1).

→ Grease the spindle (4) in the running area of the O-ring (2) with e.g. OKS 1110 multi-silicone grease.

→ Grease the O-ring (2) in the tube (1) with, for example, OKS 1110 multi-silicone grease.

→ Carefully pull the tube (1) over the spindle (4), taking care not to damage the O-ring (2).

→ **Control function B:**
Place the bar (8) on the stroke limiter spindle (4) and screw the tube (1) into the actuator cover (C).
Observe the tightening torque of 25 Nm.

→ **Control function A and I:**
Screw the tube (1) into the actuator cover (C) (2-sided, SW24), tightening torque 25 Nm. Place the bar (8) onto the spindle of the stroke limiter (4).

→ To secure the cheese head screw (7), apply some Loctite 274 to the thread of the cheese head screw.

→ Screw the cheese head screw (7) into the spindle (4).

→ Screw the upper nut (6b) onto the tube.

→ Limit the stroke accordingly using the nuts (6a) (6b).

→ Slip the protective tube (9) onto the tube (1).

→ Screw the cover (10) on hand-tight.

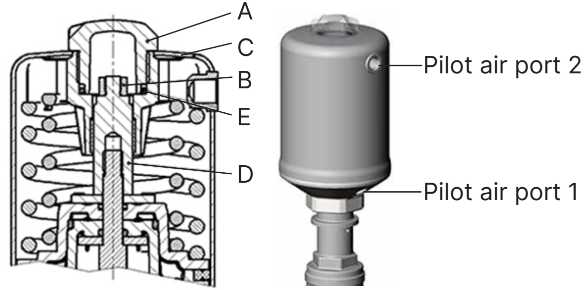
→ Check the valve for functionality and tightness.

> **!** Observe the curing time of Loctite before putting the valve into operation.

8 OPTION: THREADED NIPPLE FOR INDUCTIVE PROXIMITY SWITCH M12 X 1

> **!** Only use this option for:
> - Control function A.

This option allows an inductive proximity switch M12 X 1 (e.g. Turck or Balluf) to be adapted for flush mounting on the actuator. This option detects the upper end position of the actuator. The target is the spindle extension. The proximity switch is not included in the scope of delivery.



A – Transparent cap
B – Position indicator
C – Actuator cover
D – Spindle extension
E – O-ring

Fig.7: Illustration of parts for actuator sizes D, M, N and P

8.1 Pre-installation work

DANGER!

Risk of injury due to high pressure and escaping medium.

- Before working on the system or device, switch off the pressure and vent or empty the lines.

→ Shut off the medium supply.

→ Switch off the pilot air.

→ Drain the valve body.

→ Unscrew the transparent cap (A) from the actuator cover (C).

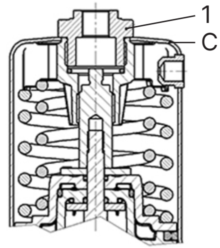
DANGER!

Risk of injury from high pressure.

Without the transparent cover, the actuator vents straight upwards when pilot pressure is applied to the wrong port.

- For CF A, apply pilot pressure only to port 1.

8.2 Installation of the threaded nipple



C – Actuator cover

Required parts:

1 – Threaded nipple

Fig.8: Illustration of parts for actuator sizes D, M, N and P

→ Screw the threaded nipple (1) into the actuator cover (C). Observe the tightening torque of 15 Nm.

NOTE!

A proximity switch that is screwed in too deeply can be damaged by the valve's switching motion.

→ Align the screw-in depth of the proximity switch with the upper end position of the actuator (note the switching distance of the proximity switch).

→ To install the proximity switch, move the actuator to the upper end position:
apply pilot pressure to port 1.

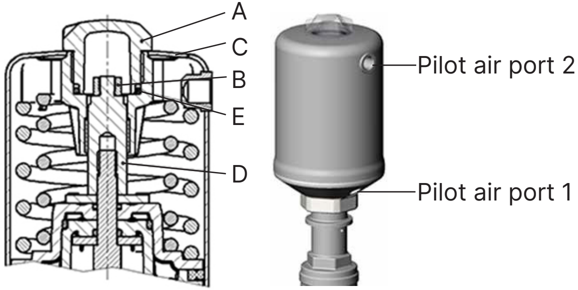
→ Screw the proximity switch into the threaded nipple (1).

→ Secure the screw-in depth of the proximity switch using a locknut (included with the proximity switch).

→ Check the valve for functionality and tightness.

9 OPTION: MOUNTING BRACKET FOR 2 INDUCTIVE PROXIMITY SWITCHES M12 X 1

This option allows two M12 × 1 inductive proximity switches (e.g. Turck or Balluf) to be adapted for flush mounting on the actuator. The upper and lower end positions of the actuator are detected. The target is the switch cam. Lower proximity switches are not included in the scope of delivery.



A – Transparent cap
B – Position indicator
C – Actuator cover
D – Spindle extension
E – O-ring

Fig.9: Illustration of parts for actuator sizes D, M, N and P

9.1 Pre-installation work

DANGER!

Risk of injury due to high pressure and escaping medium.

- Before working on the system or device, switch off the pressure and vent or empty the lines.

→ Shut off the medium supply.

→ Switch off the pilot air.

→ Drain the valve body.

→ Unscrew the transparent cap (A) from the actuator cover (C).

DANGER!

Risk of injury from high pressure.

Without the transparent cover, the actuator vents straight upwards when pilot pressure is applied to the wrong port.

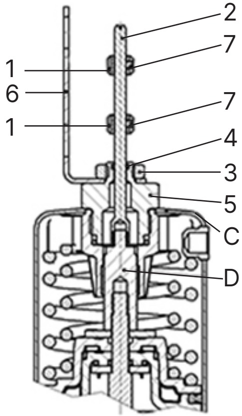
- For control functions A and I, apply pilot pressure only to port 1.

→ CF A and I:
To dismantle the position indicator (B), move the actuator to the upper end position:
apply pilot pressure to port 1 (a pressure pulse is sufficient for CF function I).

→ Unscrew position indicator (B) from spindle extension (D).

→ Check the position of the O-ring (E) and, if necessary, reposition it on the base.

9.2 Installation of the mounting bracket, actuator size D and M



C – Actuator cover

D – spindle extension (actuator)

Required parts:

1 – Switch cam

2 – Switch spindle

3 – Hexagon nut

4 – O-ring 5 × 1.5

5 – Threaded spindle

6 – Mounting bracket

7 – Setscrews M3 × 3

Fig.10: Install mounting bracket for 2 proximity switches, actuator size D and M

9.2.1 Installation of the mounting bracket

→ Apply some Loctite 274 to the M6 threaded hole in the switch spindle (2).

→ Fit the O-ring (4) into the undercut of the threaded nipple (5).

→ Lubricate switch spindle (2) and O-ring (4) with e.g. OKS 1110 multi-silicone grease.

→ Guide the threaded nipple (5) over the switch spindle (2) and screw it into the actuator cover (C). Observe the tightening torque of 15 Nm.

→ Screw the switch spindle (2) onto the threaded connection of the spindle extension D using a screwdriver, max. tightening torque: 1 Nm.
This is made easier by moving the actuator to the upper end position.
Control function A and I:
Apply pilot pressure to port 1 (a pressure pulse is sufficient for CF I).

→ Fasten the mounting bracket (6) with nut (3) onto the threaded nipple (5).

→ Slide the two switch cams (1) onto the switch spindle (2) and screw in the setscrews (7) (do not tighten).

9.2.2 Installation of the proximity switch

! The proximity switch is not included in the scope of delivery.

→ Secure the proximity switch using two nuts (normally included with the proximity switch) in the holes provided on the mounting bracket (6).

→ Adjust the screw-in depth of the proximity switches to the respective switching distance to the switch cams.

! If necessary, loosen the mounting bracket (6) on the nut (3) and turn it around the actuator shaft.

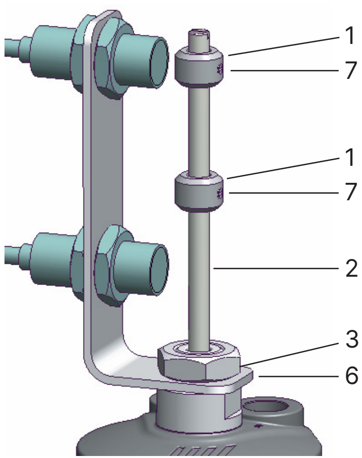
9.2.3 Positioning of the switch cams

→ Align the position of the lower shift cam (1) with the lower proximity switch while the actuator is in the lower end position. Fixing the shift cam (1) to the switch spindle (2) using a setscrew (7).
Tightening torque 0.4...0.6 Nm.

→ Align the position of the upper switch cam (1) with the upper proximity switch while the actuator is in the upper end position. Fixing the shift cam (1) to the switch spindle (2) using a setscrew (7).
Tightening torque 0.4...0.6 Nm.

→ Check the valve for functionality and tightness.

Observe the curing time of Loctite before putting the valve into operation.



1 – Switch cam (2 x)
2 – Switch spindle
3 – Nut
6 – Mounting bracket
7 – Setscrew

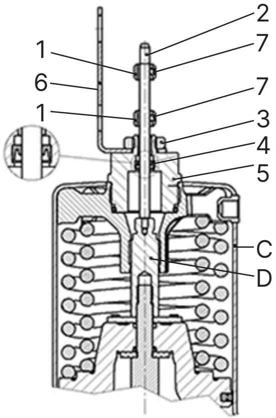
Fig.11: Positioning of the switch cams

For **CF A**, the lower end position is the rest position. The upper end position is achieved by applying a pilot pressure to port 1.

With **CF B**, the lower end position is achieved by applying pilot pressure to port 1. The upper end position is the rest position.

With **CF function I**, the lower end position is achieved by a pressure pulse on port 2 and the upper end position by a pressure pulse on port 1.

9.3 Installation of the mounting bracket, actuator size N and P



C – Actuator cover

D – spindle extension (actuator)

Required parts:

1 – Switch cam

2 – Switch spindle

3 – Hexagon nut

4 – Lip seal 5 × 10 × 4

5 – Threaded nipple

6 – Mounting bracket

7 – M3 setscrews

Fig.12: Installation of mounting bracket for 2 proximity switches, actuator size N and P

9.3.1 Installation of the proximity switch

> **!** The proximity switch is not included in the scope of delivery.

→ Secure the proximity switch using two nuts (normally included with the proximity switch) in the holes provided on the mounting bracket (6).

→ Adjust the screw-in depth of the proximity switches to the respective switching distance to the switch cams.

> **!** If necessary, loosen the mounting bracket (6) on the nut (3) and turn it around the actuator shaft.

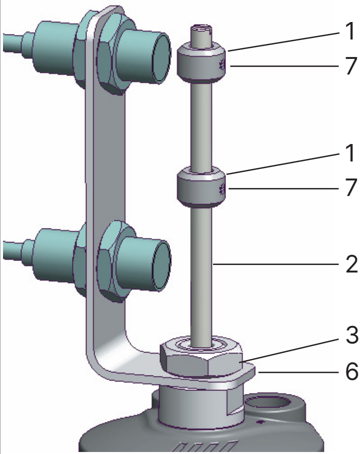
9.3.2 Positioning of the switch cams

→ Align the position of the lower shift cam (1) with the lower proximity switch while the actuator is in the lower end position. Fixing the shift cam (1) to the switch spindle (2) using a setscrew (7).
Tightening torque 0.4...0.6 Nm.

→ Align the position of the upper switch cam (1) with the upper proximity switch while the actuator is in the upper end position. Fixing the shift cam (1) to the switch spindle (2) using a setscrew (7).
Tightening torque 0.4...0.6 Nm.

→ Check the valve for functionality and tightness.

> **!** Observe the curing time of Loctite before putting the valve into operation.



1 – Switch cam (2 x)
2 – Switch spindle
3 – Nut
6 – Mounting bracket
7 – Setscrew

Fig.13: Positioning of the switch cams

For **CF A**, the lower end position is the rest position. The upper end position is achieved by applying a pilot pressure to port 1.

With **CF B**, the lower end position is achieved by applying pilot pressure to port 1. The upper end position is the rest position.

With **CF function I**, the lower end position is achieved by a pressure pulse on port 2 and the upper end position by a pressure pulse on port 1.

10 OPTION: STROKE LIMITER INOX ACTUATOR SIZE 32 (B)

WARNING!

Danger – high pressure.

- Switch off the pressure and bleed the lines before converting the devices.

NOTE!

This option is only applicable to:

- Control function A
- Pilot air port G1/8

This option makes the open valve position continuously adjustable on a “normally closed” actuator (control function A) and thus set the desired flow rate.

Due to the design, this solution is only available for actuator size 32 (B) with valve actuators that have a bottom-mounted G1/8 pilot air port (currently only for Types 2063 and 2080).

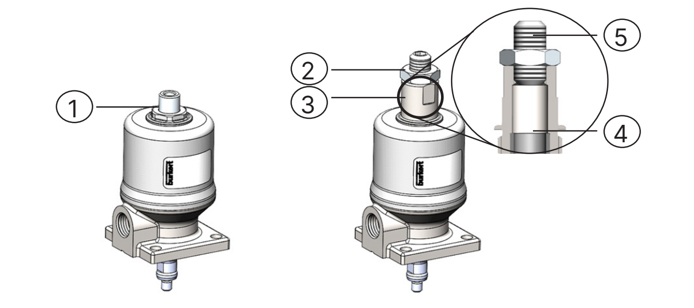


Fig.14: Components of stroke limiter

Preparatory work

→ Interrupt the supply of the medium flow.

→ Drain the valve body.

Installation

→ Unscrew hex nipple (1) from the actuator.

→ Check the correct grouting of the guide bushing (4) in the threaded nipple (3).

→ Screw the stroke limiter into the actuator and tighten with a tightening torque of 6 Nm.

Setting the stroke limiter

→ Loosen locknut (2).

→ Pressurise valve with compressed air.

→ Set desired flow rate via setscrew (5).
Screw in for lower flow rate
Unscrew for higher flow rate

→ Fix position with locknut (1).

11 OPTION: ACTUATOR BLOCKING CLASSIC/INOX

DANGER!

Danger – high pressure.

- Switch off the pressure and bleed the lines before converting the devices.

Risk of injury when unscrewing the transparent cap.

The transparent cap must not be under pressure when unscrewing it.

- When unscrewing the transparent cap/actuator blocking, **only** the lower piston chamber may be pressurised with compressed air via the lower pilot air port.

NOTE!

This option is only applicable to:

- **Control function A**

This option makes it possible to block a "normally closed" actuator (control function A) while open. In certain situations, for example when the entire valve needs to be autoclaved, no pilot air is available to the actuator. This is what the actuator blocking was developed to do. In normal operation, it replaces the transparent cap, the O-ring and the visual position indicator.

If the actuator needs to be temporarily blocked while open, the pilot pressure must be applied to open the valve. Then, the actuator blocking can be unscrewed, rotated 180° and screwed onto the spindle. If the pilot pressure is no longer applied, the valve remains open.

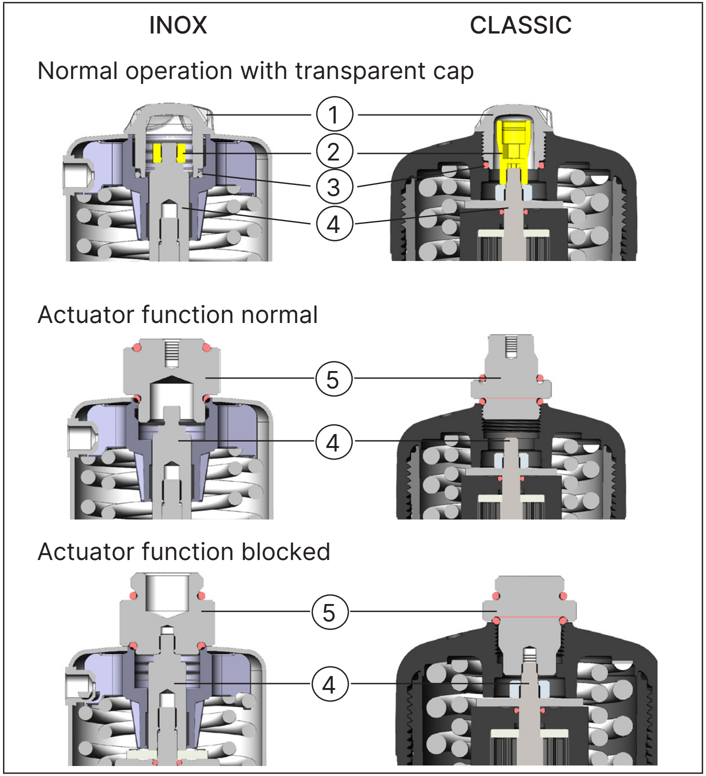


Fig.15: Installation actuator blocking

Preparatory work

→ Interrupt the supply of the medium flow.

→ Drain the valve body.

Installation

→ Unscrew transparent cap (1) from the actuator cover (3).

→ Remove O-ring (3).

→ Apply pilot pressure to connection 1 or the lower pilot air port.

→ Unscrew position indicator (2) from spindle extension (4).

Actuator function normal:

→ Screw the external thread of the actuator blocking (5) into the actuator cover until it stops.

Actuator function blocked:

→ Screw the internal thread of the actuator blocking (5) onto the spindle extension (4) of the actuator until it stops.

→ Pilot pressure must be applied to loosen the actuator blocking.

12 OPTION: DEAD MAN'S LEVER INOX ACTUATOR SIZE 32 (B)

WARNING!

Danger – high pressure.

- Switch off the pressure and bleed the lines before converting the devices.

NOTE!

This option is only applicable to:

- Control function A
- Actuator size 32 (B)

This option makes it possible to convert a pneumatic "normally closed" actuator (control function A, actuator size 32 (B)) into a dead man's switch, which can be manually operated.

In certain sections of the system, such as sampling points, it may make sense to use an actuator that can be operated by a "push function" instead of a valve operated pneumatically or by handwheel. In this way, it can be ensured that valves are only left open when the operating personnel perform a manual override. Otherwise, the valve closes on its own.

NOTE!

The handles must be installed without the valve body in order to avoid damaging the sealing element.

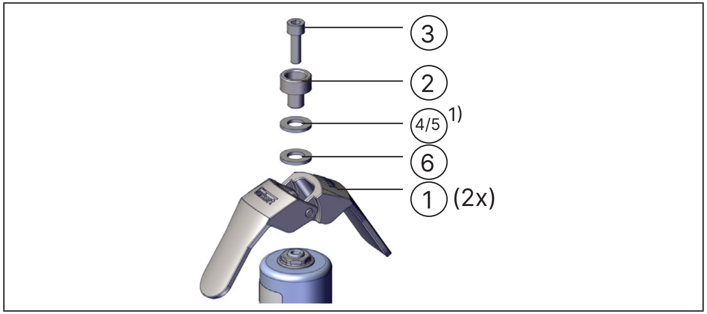


Fig.16: Components of dead man's lever

Position washers on the stop bushing

→ Slide plastic washers (4 and 5) in the correct order on the stop bushing (2).

---

1)

NOTE!

The number of plastic washers necessary (4 and 5) varies depending on the valve type:

- Type 2060: 1 thin plastic washer
- Type 2063: 1 thick plastic washer
- Type 2080: 1 thin and 1 thick plastic washer

→ Slide metal washer (6) on last. This ensures an even distribution of the actuating force.

Join the handles together

→ Slide handles (1) into one another.

Fasten assembly on the actuator.

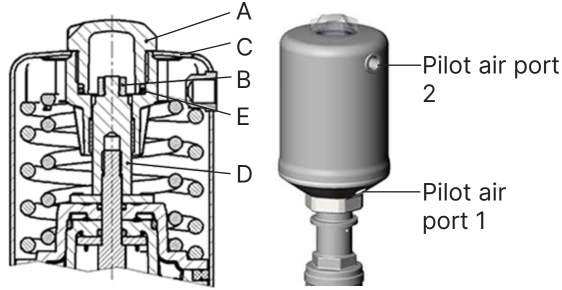
→ Attach the joined handles.

→ Fasten the entire assembly on the actuator with screw (3). Tightening torque max. 2.5 Nm.

→ Use medium-strength screw lock to prevent the connection from coming loose during operation.

The necessary actuating force is approx. 2 kg for Type 2080 and approx. 3 kg for Types 2060/2063.

13 OPTION: POSITION FEEDBACK INDICATOR TYPE 8697



A – Transparent cap
B – Position indicator
C – Actuator cover
D – Spindle extension
E – O-ring

Fig.17: Illustration of parts for actuator sizes D, M, N and P

13.1 Pre-installation work

→ Shut off the medium supply.

→ Switch off the pilot air.

→ Drain the valve body.

→ Unscrew the transparent cap (A) from the actuator cover (C).

DANGER!

Risk of injury from high pressure.

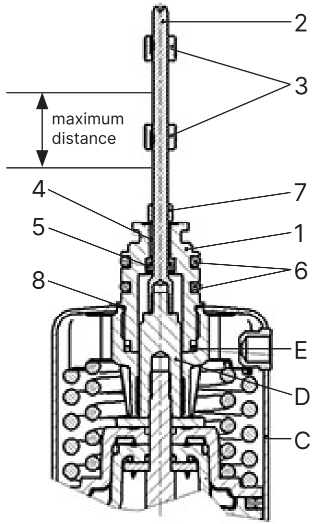
Without the transparent cover, the actuator vents straight upwards when pilot pressure is applied to the wrong port.

- For control functions A and I, apply pilot pressure only to port 1.

→ **Control function A and I:**
To dismantle the position indicator (B), move the actuator to the upper end position:
apply pilot pressure to port 1 (a pressure pulse is sufficient for CF I).

→ Unscrew position indicator (B) from spindle extension (D).

13.2 Installation of position feedback indicator, actuator size D and M



C – Actuator cover
D – spindle extension (actuator)
E – O-ring
Required parts:
1 – Guide element
2 – Switch spindle
3 – Switch cam
4 – Guide bushing
5 – Lip seal
6 – O-rings
7 – Spacer sleeve
8 – Sealing washer

Fig.18: Install electric position feedback indicator Type 8697, actuator size D and M

13.2.1 Fit the switch spindle

NOTE!

Damage to the lip seal due to improper installation.

The lip seal is pre-assembled in the guide element and must be “engaged” in the undercut.

- **When installing the switch spindle, take care not to damage the lip seal.**

→ Push the switch spindle (2) through the guide element (1).

→ To secure the switch spindle (2), apply some screw locking paint (Loctite 290) to the threaded hole in the switch spindle.

→ Check the correct position of the O-ring (6).

→ Screw the guide element (1) to the actuator cover (C). Maximum tightening torque 8 Nm.

→ Screw the switch spindle (2) onto the spindle extension (D). A slot is provided at the top for this purpose. Maximum tightening torque 1 Nm.

→ Slide the spacer sleeve (7) onto the switch spindle (2) up to the guide element (1).

13.2.2 Position the shift cam on the switch spindle

→ Push the lower shift cam (3) up to the spacer sleeve (7).

→ Move the upper switch cam (3) to a distance of 3 mm from the start of the spindle.

! Ensure that the distance between the two switch cams is at its maximum (see “Fig.18”).

→ Slide the electrical position feedback indicator onto the actuator.

→ Push the electrical position feedback indicator down to the actuator and turn it to the desired position.

NOTE!

If there is excessive tightening torque when tightening the fastening screw the degree of protection IP65/IP67 cannot be guaranteed.

- **The fastening screw must only be tightened to a maximum tightening torque of 0.5 Nm.**

→ Attach the electrical position feedback indicator to the actuator using the two side fastening screws. Only tighten the fastening screws slightly. Maximum tightening torque 0.5 Nm.

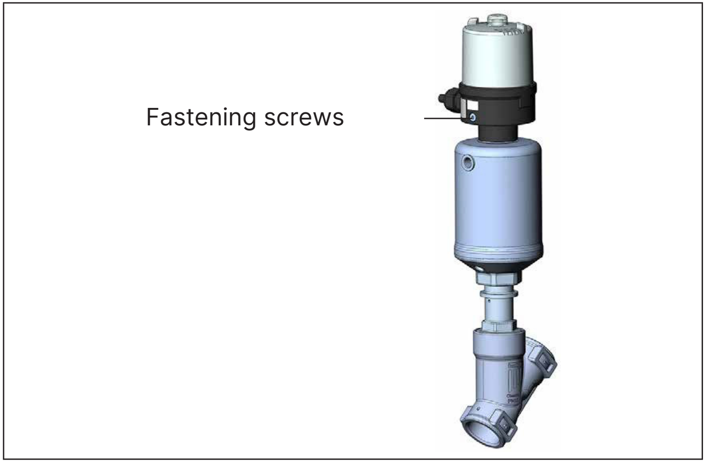
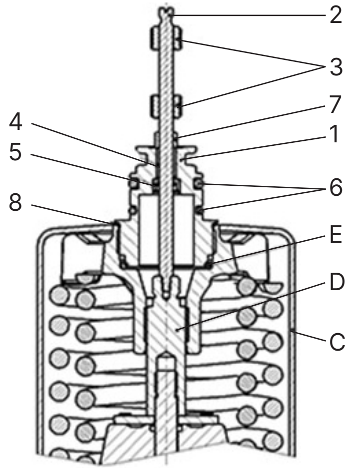


Fig.19: Tighten the fastening screws

13.3 Installation of position feedback indicator, actuator sizes N and P



C – Actuator cover
D – spindle extension (actuator)
E – O-ring

Required parts:

1 – Guide element
2 – Switch spindle
3 – Switch cam
4 – Guide bushing
5 – Lip seal
6 – O-rings
7 – Spacer sleeve
8 – Sealing washer

Fig.20: Install electric position feedback indicator Type 8697, actuator size N and P

13.3.1 Fit the switch spindle

NOTE!

Damage to the lip seal due to improper installation.

The lip seal is pre-assembled in the guide element and must be "engaged" in the undercut.

- **When installing the switch spindle, take care not to damage the lip seal.**

→ Push the switch spindle (2) through the guide element (1).

→ To secure the switch spindle (2), apply some screw locking paint (Loctite 290) to the threaded hole in the switch spindle.

→ Check the correct position of the O-ring (6).

→ Screw the guide element (1) to the actuator cover (C). Maximum tightening torque 8 Nm.

→ Screw the switch spindle (2) onto the spindle extension (D). A slot is provided at the top for this purpose. Maximum tightening torque 1 Nm.

→ Slide the spacer sleeve (7) onto the switch spindle (2) up to the guide element (1).

13.3.2 Position the shift cam on the switch spindle

→ Push the lower shift cam (3) up to the spacer sleeve (7).

→ Move the upper switch cam (3) to a distance of 3 mm from the start of the spindle.

Ensure that the distance between the two switch cams is at its maximum (see "Fig.20").

→ Slide the electrical position feedback indicator onto the actuator.

→ Push the electrical position feedback indicator down to the actuator and turn it to the desired position.

NOTE!

If there is excessive tightening torque when tightening the fastening screw the degree of protection IP65/IP67 cannot be guaranteed.

- **The fastening screw must only be tightened to a maximum tightening torque of 0.5 Nm.**

→ Attach the electrical position feedback indicator to the actuator using the two side fastening screws. Only tighten the fastening screws slightly. Maximum tightening torque 0.5 Nm.

Fig.21: Tighten the fastening screws

13.4 Electrical installation

Electrical installation is described in the operating instructions for Type 8697. The operating instructions can be found on the Internet at: country.burkert.com

14 ORDER NUMBERS

Product	Actuator size	Order No.
Maximum stroke limit	D (50)	699 550
	M (70)	
	N (90)	699 994
	P (130)	
Minimum/maximum stroke limitation	D (50)	699 986
	M (70)	
	N (90)	699 998
	P (130)	
Threaded nipple for inductive proximity switch	D (50)	698 536
	M (70)	
	N (90)	698 537
	P (130)	
Mounting bracket for 2 inductive proximity switches	D (50)	699 990
	M (70)	
	N (90)	699 992
	P (130)	
Type 8697 electrical position feedback indicator (adapter kit for FA05)	D (50)	699 551
	M (70)	
	N (90)	580 000
	P (130)	

FLUID CONTROL SYSTEMS

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