



EB 8331-3 EN

Translation of original instructions



Type 3374 Electric Actuator

Version with three-step signal



Note on these mounting and operating instructions

These mounting and operating instructions (EB) assist you in mounting and operating the device safely. The instructions are binding for handling SAMSON devices. The images shown in this document are for illustration purposes only. The actual product may vary.

- ⇒ For the safe and proper use of these instructions, read them carefully and keep them for later reference.
- ⇒ If you have any additional questions not related to the contents of these instructions, contact SAMSON's After-sales Service Department (aftersaleservice@samsongroup.com).



Documents relating to the device, such as the mounting and operating instructions, are available on our website:
▶ <https://www.samsongroup.com/en/downloads/documentation>

Definition of signal words

⚠ DANGER

Hazardous situations which, if not avoided, will result in death or serious injury

⚠ WARNING

Hazardous situations which, if not avoided, could result in death or serious injury

ⓘ NOTICE

Property damage message or malfunction

ℹ Note

Additional information

💡 Tip

Recommended action

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1 Safety instructions and measures

Intended use

The Type 3374 Electric Actuator is designed to operate a mounted globe valve used in industrial applications as well as in heating, ventilation and air-conditioning systems. The actuator is designed to operate under exactly defined conditions (e.g. thrust, travel). Therefore, operators must ensure that the actuator is only used in operating conditions that meet the specifications used for sizing the actuator at the ordering stage. In case operators intend to use the actuator in applications or conditions other than those specified, contact SAMSON.

SAMSON does not assume any liability for damage resulting from the failure to use the device for its intended purpose or for damage caused by external forces or any other external factors.

⇒ Refer to the technical data for limits and fields of application as well as possible uses (see Chapter 3).

Reasonably foreseeable misuse

The actuator is not suitable for the following applications:

- Use outside the limits defined during sizing and by the technical data
- Outdoor use

Furthermore, the following activities do not comply with the intended use:

- Use of non-original spare parts
- Performing service and repair work not described

Qualifications of operating personnel

The product (Type 3374) must be mounted, started up, serviced and repaired by fully trained and qualified personnel only; the accepted industry codes and practices must be observed. According to the mounting and operating instructions, trained personnel refers to individuals who are able to judge the work they are assigned to and recognize possible hazards due to their specialized training, their knowledge and experience as well as their knowledge of the applicable standards.

Personal protective equipment

No personal protective equipment is required for the direct handling of the electric actuator. Work on the control valve may be necessary when mounting or removing the device.

- ⇒ Observe the requirements for personal protective equipment specified in the valve documentation.
- ⇒ Check with the plant operator for details on further protective equipment.

Revisions and other activities

Revisions, conversions or other modifications of the product (Type 3374) are not authorized by SAMSON. They are performed at the user's own risk and may lead to safety hazards, for example. Furthermore, the product may no longer meet the requirements for its intended use.

Safety features

The actuator automatically switches off when one of the end positions is reached.

Upon supply voltage failure, a valve, which has a Type 3374 Electric Actuator with fail-safe action mounted on it, moves to a certain fail-safe position. The direction of the fail-safe action is specified on the nameplate of SAMSON actuators.

Warning against residual hazards

The product (Type 3374) has a direct influence on the control valve. To avoid personal injury or property damage, plant operators and operating personnel must prevent hazards that could be caused in the control valve by the process medium, the operating pressure, the signal pressure or by moving parts by taking appropriate precautions.

Plant operators and operating personnel must observe all hazard statements, warnings and caution notes in these mounting and operating instructions, especially for installation, start-up and service work.

Responsibilities of the operator

Operators are responsible for proper use and compliance with the safety regulations. Operators are obliged to provide these mounting and operating instructions to the operating personnel and to instruct them in proper operation. Furthermore, operators must ensure that operating personnel or third parties are not exposed to any danger.

Responsibilities of operating personnel

Operating personnel must read and understand these mounting and operating instructions as well as the specified hazard statements, warnings and caution notes. Furthermore, operating personnel must be familiar with the applicable health, safety and accident prevention regulations and comply with them.

Referenced standards, directives and regulations

The product (Type 3374) with a CE marking fulfills the requirements of the following Directives:

- RoHS Directive 2011/65/EU
- EMC Directive 2014/30/EU
- Low-voltage Directive 2014/35/EU

The product (Type 3374) with a UKCA marking fulfills the requirements of the following Regulations:

- SI 2016 No. 1091 (The Electromagnetic Compatibility Regulations 2016)
- SI 2016 No. 1101 (The Electrical Equipment (Safety) Regulations 2016)
- SI 2012 No. 3032 (The Restriction of the Use of Hazardous Substances in Electrical and Electronic Equipment Regulations 2012)

The product (Type 3374) with an EAC marking fulfills the requirements of the following Directives:

- TR CU 004/2011
- TR CU 020/2011

The declarations of conformity and certificates are included in Chapter Certificates.

The product (Type 3374) with a CE marking is designed for use in low voltage installations.

- ⇒ For wiring, maintenance and repair, observe the relevant safety regulations.

Referenced documentation

The following documents apply in addition to these mounting and operating instructions:

Mounting and operating instructions of the valve on which the electric actuator is mounted, e.g. for SAMSON valves:

- ▶ EB 3018 for Type 42-36 E Pressure-independent Control Valve
- ▶ EB 5861 for Type 3260 Three-way Valve
- ▶ EB 5868-1 for Type 3213 and Type 3214 Globe Valves balanced by a diaphragm
- ▶ EB 5868/5869 for Type 3213 and Type 3214 Valves
- ▶ EB 8012 for Type 3241 Globe Valve (ANSI and JIS version)
- ▶ EB 8015 for Type 3241 Globe Valve (DIN version)
- ▶ EB 8026 for Type 3244 Three-way Valve
- ▶ EB 8113/8114 for Type 3323 Three-way Valve
- ▶ EB 8131/8132 for Type 3531 Globe Valve for Heat Transfer Oil
- ▶ EB 8135/8136 for Type 3535 Three-way Valve for Heat Transfer Oil

1.1 Notes on possible severe personal injury

⚠ DANGER

Risk of fatal injury due to electric shock.

- ⇒ Before connecting the wiring, performing any work on the device or opening the device, disconnect the supply voltage and protect it against unintentional reconnection.
- ⇒ Only use protective equipment that can be protected against unintentional reconnection of the power supply.
- ⇒ Do not open the actuator housing.
- ⇒ Do not remove any covers to perform adjustment work on live parts.

The electric actuator is protected against spray water (IP54).

- ⇒ Avoid jets of water.
- ⇒ Use suitable cable grips at the cable entries.
The cable grip in the cable glands must be approved for such use.

1.2 Notes on possible personal injury

⚠ WARNING

Crush hazard arising from moving parts.

The electric actuator contains moving parts (actuator and plug stems), which can injure hands or fingers if inserted into the actuator.

- ⇒ Do not insert hands or finger into the yoke while the valve is in operation.
- ⇒ Before performing any work on the control valve or opening the electric device, disconnect the supply voltage and protect it against unintentional reconnection.
- ⇒ Do not impede the movement of the actuator or plug stem by inserting objects into their path.

Risk of personal injury due to incorrect operation, use or installation as a result of information on the actuator being illegible.

Over time, markings, labels and nameplates on the actuator may become covered with dirt or become illegible in some other way. As a result, hazards may go unnoticed and the necessary instructions not followed. There is a risk of personal injury.

- ⇒ Keep all relevant markings and inscriptions on the device in a constantly legible state.
- ⇒ Immediately renew damaged, missing or incorrect nameplates or labels.

1.3 Notes on possible property damage

ⓘ NOTICE

Risk of damage to the electric actuator due to the supply voltage exceeding the permissible tolerances.

The Type 3374 Electric Actuator is designed for use according to regulations for low-voltage installations.

- ⇒ Observe the permissible tolerances of the supply voltage.

Risk of damage to the electric actuator due to over-torquing.

Observe the specified torques when tightening the mounting parts of Type 3374 Electric Actuators. Over-torquing leads to parts wearing out more quickly.

- ⇒ Observe the specified tightening torques.

Risk of damage to the electric actuator due to incorrect operation of the manual override.

The actuator stem of the electric actuator can be adjusted manually.

- ⇒ Do not operate the manual override while the actuator is in operation.
- ⇒ Only operate the manual override of actuators without fail-safe action in the de-energized state.

Risk of damage to the electric actuator due to incorrect connection of the voltage.

The electric actuator has terminals to retract the stem (eL terminal) and to extend the stem (aL terminal).

- ⇒ Do not apply a voltage to eL and aL terminals at the same time.


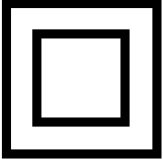
Risk of damage to the connecting cables as a result of being bent, twisted, pulled or squeezed.

- ⇒ Use suitable cable grips at the cable entries.
The cable grip in the cable glands must be approved for such use.

Risk of actuator damage due to foreign particles entering it.

- ⇒ Seal unused cable entries with suitable blanking plugs.
- ⇒ Do not guide cables through blanking plugs into the actuator housing.

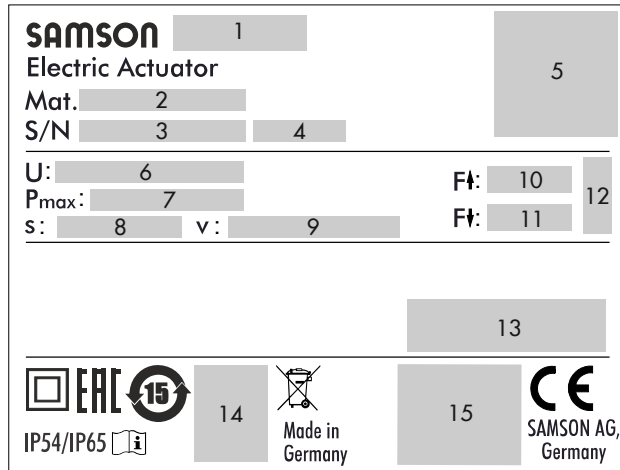
1.4 Warnings on the device

| Warning symbols | Meaning | Location on the device |
|---|---|------------------------|
|  | General warning ⇒ Refer to the mounting and operating instructions. | Inside the actuator |
|  | Class of protection II (only applies when the housing cover is attached and fastened) ⇒ Refer to the mounting and operating instructions. | Actuator housing |

2 Markings on the device

2.1 Nameplate

The nameplate shown was up to date at the time of publication of this document. The nameplate on the device may differ from the one shown.



- 1 Type designation
- 2 Material number
- 3 Serial number
- 4 Date of manufacture
- 5 Data Matrix code
- 6 Supply voltage; power line frequency
- 7 Power consumption
- 8 Rated travel
- 9 Stroking speed
- 10 Thrust (actuator stem retracts)
- 11 Thrust (actuator stem extends)
- 12 Fail-safe action

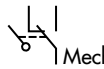


Retracts

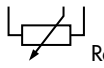


Extends

- 13 Additional electrical equipment



Mechanical limit contacts



Resistance transmitters

- 14 Testing according to DIN EN 14597
- 15 Other mark of conformity

3 Design and principle of operation

The Type 3374 Electric Actuator is linear actuator, which is used in combination with SAMSON valves in industrial plants as well as in heating, ventilation and air-conditioning systems.

The force of the synchronous motor is transmitted to the actuator stem over gearing and a ball screw drive. A three-step signal issued by an electronic controller is used to control the electric actuator. The control signal of the controller is connected to the eL and aL terminals of the actuator. Voltage applied to eL causes the actuator motor to retract the actuator stem. Voltage applied to aL causes the actuator motor to extend the actuator stem. The motor is switched off by torque switches or in case of overload.

3.1 Mounting types

Construction with integrated yoke

The Type 3374 Actuator is available with an integrated yoke (see Fig. 1).

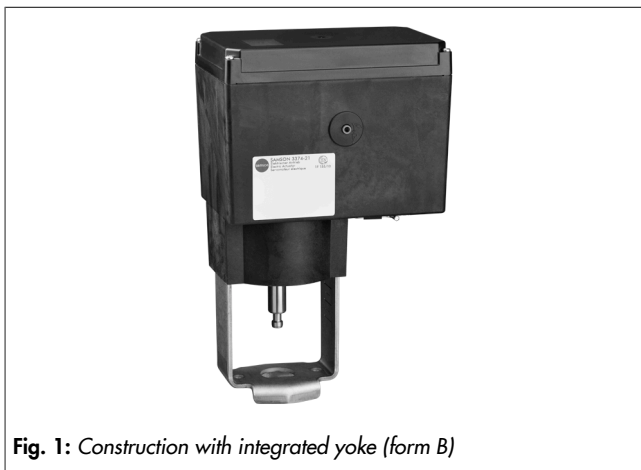


Fig. 1: Construction with integrated yoke (form B)

Construction with ring nut

The Type 3374 Actuator is available with an M30x1.5 ring nut including the necessary stem connecting parts (see Fig. 2).



Fig. 2: Construction with ring nut (form A)

3.2 Fail-safe action

The Type 3374 Actuator is available with fail-safe action. The actuators with fail-safe action have a spring assembly and an electromagnet. The actuator is moved by the force of the spring to the fail-safe position when the electromagnet is de-energized.

The direction of action depends on the actuator version and cannot be reversed.

- **“Actuator stem extends” fail-safe action:**
The actuator stem extends upon supply voltage failure.
- **“Actuator stem retracts” fail-safe action:**
The actuator stem retracts upon supply voltage failure.

NOTICE

Increased wear and shortened service life of the actuator.
⇒ Do not use the fail-safe action to control the valve position.

Testing according to DIN EN 14597

Type 3374 Electric Actuators with “Actuator stem extends” fail-safe action which have a test mark on their nameplate are tested by the German technical surveillance association TÜV according to DIN EN 14597 in combination with different SAMSON valves (the register number is available on request).

3.3 Additional equipment

The actuator can be equipped with the following additional equipment to influence the tasks of control equipment:

- Mechanical limit contacts
- Resistance transmitters

Mechanical limit contacts

Mechanical limit contacts consist of two floating changeover switches. Their switching positions can be changed independently from one another by continuously adjustable cam disks.

The limit contacts are suitable for retrofitting. The retrofitting and adjustment of the mechanical limit contacts is described in Chapter 5.

Resistance transmitters

The actuator can optionally be equipped with two resistance transmitters. They each consist of a potentiometer, which is linked to the gear of the actuator over gear wheels. The resistance value, which is proportional to the valve travel, can be used for position feedback.

It is possible to retrofit the resistance transmitter. It is described in Chapter 5.

3.4 Technical data

Table 1: Technical data - General

| Type 3374 | -10 | -11 | -15 | -17 | -21 | -25 | -26 | -27 | -31 | -35 | -36 |
|--|---|-----|-----|-----|-----------------------|-----|-----|-----|------------------------|-----|-----|
| Form ¹⁾ | B | | A | | B | A | | | B | A | |
| Fail-safe action | Without | | | | Actuator stem extends | | | | Actuator stem retracts | | |
| Testing according to DIN EN 14597 | - | | | | ✓ | | | | - | | |
| Rated travel in mm | 30 | 15 | 30 | 15 | 30 | 15 | 30 | 15 | 30 | 15 | |
| Motor switch-off | Torque switches | | | | | | | | | | |
| Duty type | S1 - 100 % according to EN 60034-1 | | | | | | | | | | |
| Permissible temperature ranges ²⁾ | | | | | | | | | | | |
| Ambient | 5 to 60 °C | | | | | | | | | | |
| Storage | -25 to +70 °C | | | | | | | | | | |
| Material | Housing and cover: Plastic (glass-fiber reinforced PPO) | | | | | | | | | | |
| Safety | | | | | | | | | | | |
| Degree of protection ³⁾ | IP54 according to EN 60529 when blanking plugs are inserted, IP65 with three approved cable glands ⁴⁾ , suspended mounting according to EN 60664-1 not permitted | | | | | | | | | | |
| Class of protection ³⁾ | II according to EN 61140 | | | | | | | | | | |
| Device safety ³⁾ | According to EN 61010-1 | | | | | | | | | | |
| Noise immunity | According to EN 61000-6-2 and EN 61326-1 | | | | | | | | | | |
| Noise emission | According to EN 61000-6-3 and EN 61326-1 | | | | | | | | | | |
| Conformity | CE · UK · EAC | | | | | | | | | | |

1) Form A: with ring nut, form B: with mounted yoke

2) The permissible medium temperature depends on the valve on which the electric actuator is mounted. The limits in the valve documentation apply.

3) Only when the housing cover is attached and fastened

4) Cable glands M20x1.5 with metal nut (A/F 23/24) can be retrofitted (see Chapter 16.1 for accessories)

Table 2: Technical data · Version with three-step signal

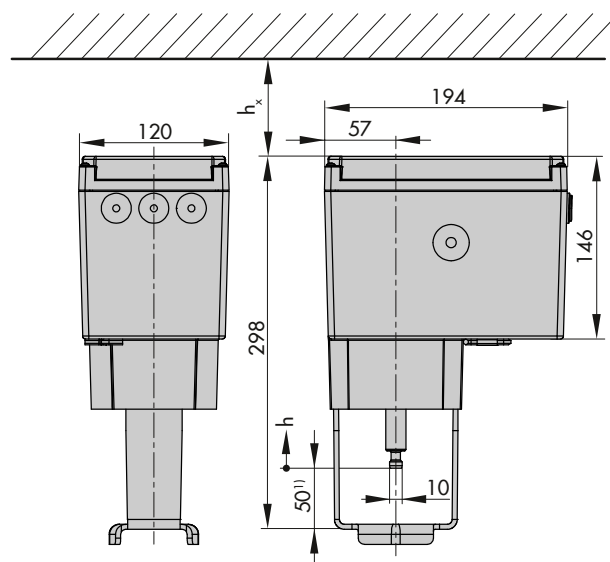
| Type 3374 | -10 | -11 | -15 | -17 | -21 | -25 | -26 | -27 | -31 | -35 | -36 | |
|---|----------|--|-----|-----|-----|---|-----|-------|-----|-------|-----|-------|
| Thrust in kN | | | | | | | | | | | | |
| | Extends | 2.5 | 2.5 | 2.5 | 5 | 2 | 1.8 | 2 | 3 | 2 | 2.1 | 2 |
| | Retracts | 2.5 | 2.5 | 2.5 | 5 | 0.5 | 2.1 | 0.5 | 0.5 | 0.5 | 1.8 | 0.5 |
| Nominal thrust of safety spring in kN | | - | - | - | - | 2 | 1.8 | 2 | 3 | 0.5 | 1.8 | 0.5 |
| Manual override | | With hex wrench | | | | Only possible with hex wrench when supply voltage is connected (see Chapter 8) Adjustment not possible after fail-safe action has been triggered | | | | | | |
| Stroking speed in mm/s | | | | | | | | | | | | |
| Normal | | 0.125 | | | 0.1 | 0.125 | 0.1 | 0.125 | 0.1 | 0.125 | 0.1 | 0.125 |
| Fast | | 0.25 | | | - | 0.25 | - | 0.25 | - | 0.25 | - | 0.25 |
| In the event of fail-safe action | | - | | | | 1.25 | | | | | | |
| Transit time in s for rated travel | | | | | | | | | | | | |
| Normal | | 240 | 120 | 240 | 300 | 120 | 300 | 120 | 300 | 120 | 300 | 120 |
| Fast | | 120 | 60 | 120 | - | 60 | - | 60 | - | 60 | - | 60 |
| In the event of fail-safe action | | - | | | | 12 | 24 | 12 | 24 | 12 | 24 | 12 |
| Electrical connection | | | | | | | | | | | | |
| Supply voltage | | 230 V, +10/-15 % 24 V, +10/-15 % | | | | | | | | | | |
| Power line frequency | | 50 Hz | | | | | | | | | | |
| Power consumption in VA | | | | | | | | | | | | |
| | Standard | 7.5 | | | 13 | 10.5 | 16 | 10.5 | 16 | 10.5 | 16 | 10.5 |
| | Fast | 13 | | | - | 16 | - | 16 | - | 16 | - | 16 |
| Weight in kg (approx.) | | 3.2 | 3.2 | 3.3 | 3.3 | 3.9 | 5.8 | 4.0 | 6.2 | 3.5 | 5.8 | 3.6 |
| Additional equipment | | | | | | | | | | | | |
| Limit contacts | | Two adjustable limit contacts with mechanical changeover switches; max. 240 V AC, max. 1 A, without contact protection ¹⁾ | | | | | | | | | | |
| Resistance transmitters | | Two potentiometers, 0 to 1000 Ω ±15 %, max. 200 mW, usable range approx. 0 to 900 Ω | | | | | | | | | | |

- 1) Contact protection with suitable spark suppression must be fitted for the switching contact. Observe the manufacturer's specifications concerning the connected load to select the appropriate spark suppression. A fuse, which is suitable for the application's circuit, must be used for the short-circuit and overload protection.

3.5 Dimensions

i Note

The dimension h_x indicates the minimum clearance required to be able to operate the actuator. Sufficient clearance must be available to facilitate wiring and operation. We recommend a minimum clearance of 600 mm.



¹⁾ When the actuator stem is fully extended

Fig. 3: Dimensions in mm · Type 3374-10, -11, -21 and -31, version with integrated yoke (form B)

Legend for Fig. 3:

| Type 3374 | Dimension h | Dimension h_x |
|-----------|-------------|-----------------|
| -10 | 30 mm | ≥60 mm |
| -11 | 15 mm | |
| -21 | 15 mm | |
| -31 | 15 mm | |

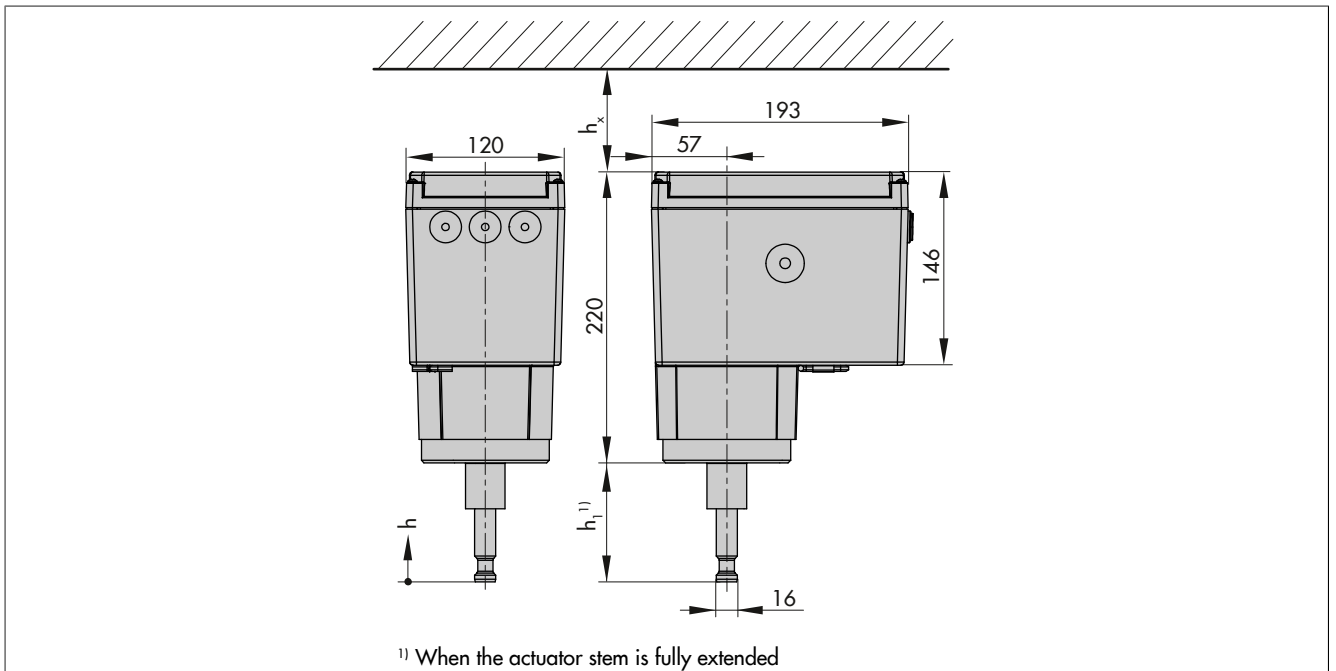


Fig. 4: Dimensions in mm · Type 3374-15, -17, -26 and -36, version with ring nut (form A)

Legend for Fig. 4:

| Type 3374 | Dimension h | Dimension h ₁ | Dimension h _x |
|-----------|-------------|--------------------------|--------------------------|
| -15 | 30 mm | 90 mm | ≥100 mm |
| -17 | | | |
| -26 | 15 mm | 75 mm | |
| -36 | | | |

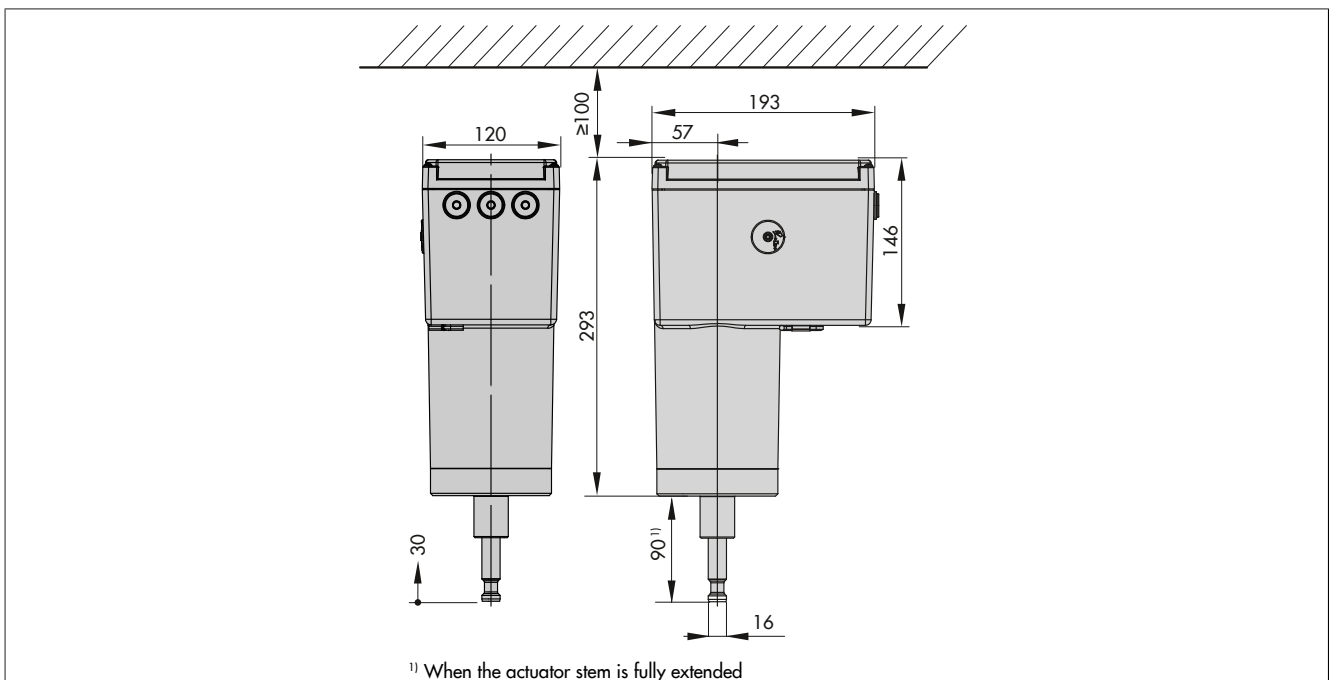


Fig. 5: Dimensions in mm · Type 3374-25 and -27, form A version

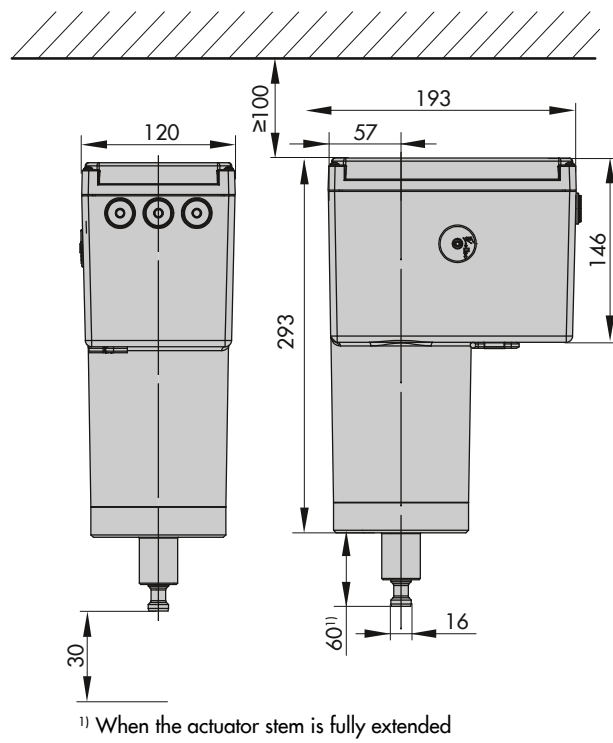


Fig. 6: Dimensions in mm · Type 3374-35, form A version

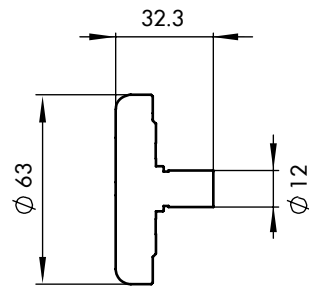


Fig. 7: Dimensions in mm · Handwheel as special version

4 Shipment and on-site transport

The work described in this chapter is to be performed only by personnel appropriately qualified to carry out such tasks.

4.1 Accepting the delivered goods

After receiving the shipment, proceed as follows:

1. Compare the shipment received with the delivery note.
2. Check the shipment for transportation damage. Report any damage to SAMSON and the forwarding agent (refer to delivery note).

4.2 Removing the packaging from the actuator

i Note

Do not remove the packaging until immediately before mounting and start-up.

1. Remove the packaging from the electric actuator.
2. Check scope of delivery.
3. Dispose of the packaging in accordance with the valid regulations.

Table 3: Scope of delivery

| | |
|--|--|
| 1x Type 3374-xx Electric Actuator | |
| 1x Document IP 8331-3 (Important Product Information) | |
| for Types 3374-10, -11, -21, -31: | |
| 1x Accessory 1400-6817, consisting of | |
| | 2x stem connector parts for Ø 10 mm stem |
| | 2x M5 hex screws |
| for Types 3374-15, -17, -25, -26, -27, -35, -36: | |
| 1x Accessory 0900-2679, consisting of | |
| | 2x stem connector parts for Ø 16 mm stem |
| | 2x M6 screws |
| | 1x M30x1.5 ring nut |

4.3 Transporting the actuator

- Protect the actuator against external influences (e.g. impact).
- Protect the actuator against moisture and dirt.
- Observe the permissible transportation temperature of –25 to +70 °C.

4.4 Lifting the actuator

Due to the low service weight, lifting equipment is not required to lift the electric actuator.

4.5 Storing the actuator

! NOTICE

Risk of electric actuator damage due to improper storage.

- ⇒ Observe the storage instructions.
- ⇒ Avoid long storage times.
- ⇒ Contact SAMSON in case of different storage conditions or longer storage periods.

i Note

SAMSON recommends to regularly check the electric actuator and the prevailing storage conditions during long storage periods.

Storage instructions

- Protect the electric actuator against external influences (e.g. impact).
- Protect the electric actuator against moisture and dirt.
- Make sure that the ambient air is free of acids or other corrosive media.
- Observe the permissible storage temperature from –20 to +70 °C.
- Do not place any objects on the electric actuator.

5 Installation

The work described in this chapter is to be performed only by personnel appropriately qualified to carry out such tasks.

5.1 Installation conditions

Work position

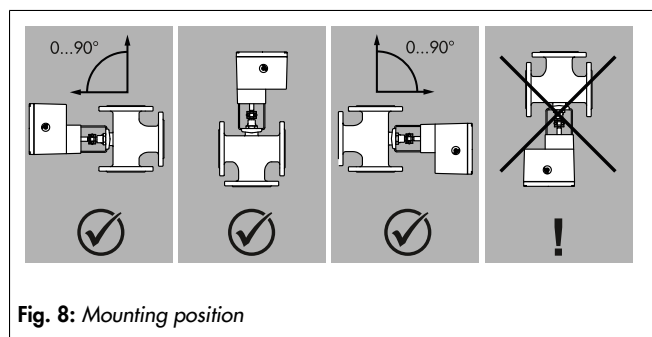
If not described otherwise in the valve documentation, the work position for the control valve is the front view looking onto the operating controls.

Point of installation

The electric actuator must only be used indoors.

Mounting position

The control valve can be installed in the pipeline in any desired position. However, a suspended mounting position of the actuator is not permissible.



5.2 Preparation for installation

Before installation, make sure the following conditions are met:

- The actuator is not damaged.

Proceed as follows:

- ⇒ Lay out the necessary material and tools to have them ready during installation work.

Cover screws

Phillips screws are used to fasten the actuator housing cover. Use a POZIDRIV® PZ2 screwdriver to undo and tighten the screws.

5.3 Mounting the actuator

5.3.1 Construction with integrated yoke (form B)

For mounting on:

- Series V2001 (DN 15 to 50)
- Type 3214 (DN 65 to 100)
- Type 3260 (DN 65 to 80)
- Type 3260 (DN 100 to 150)

⇒ See Fig. 10.

1. Remove protective covers and unscrew nut (6) from the valve.
2. Retract actuator stem (3) (see Chapter 8.1.1).

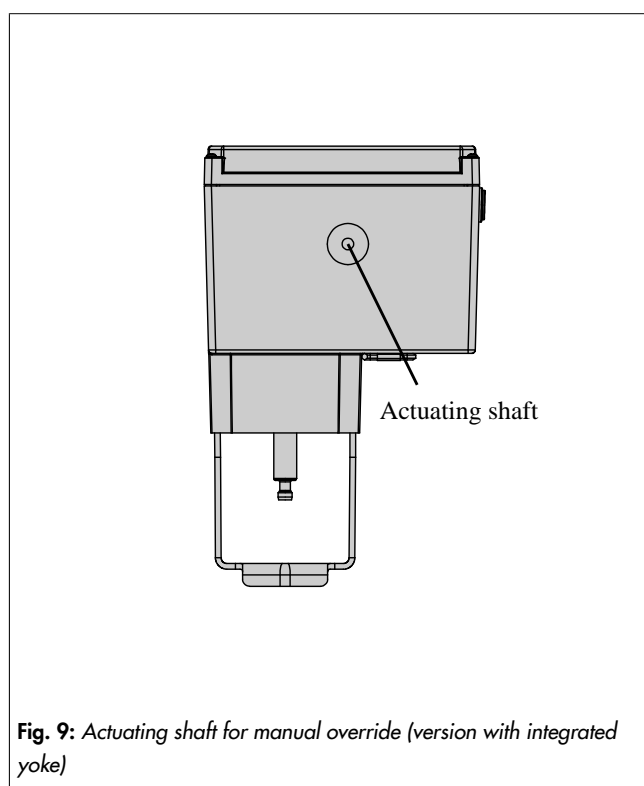


Fig. 9: Actuating shaft for manual override (version with integrated yoke)

i Note

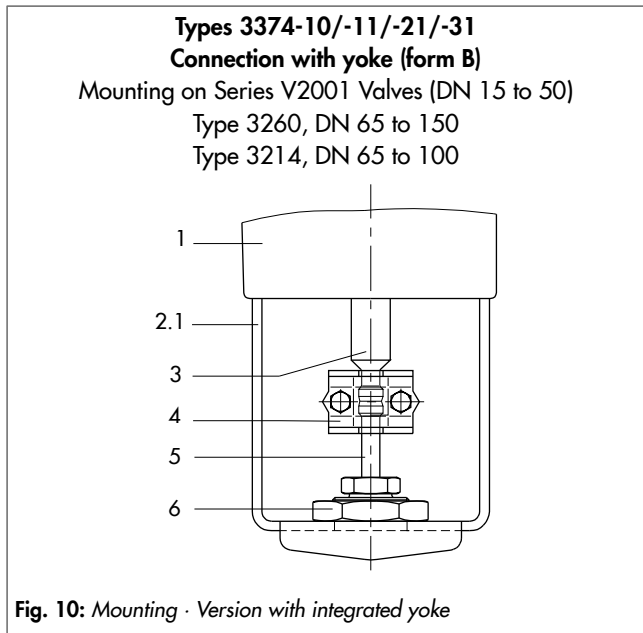
For actuators with "actuator stem extends" fail-safe action (see nameplate in Chapter 2), the supply voltage must be connected to retract the actuator stem.

⇒ To connect the supply voltage, proceed as described in Chapter 5.5.

3. Place the actuator with yoke on the valve and fasten using nut (6, A/F 36).

| | |
|-------------------|--------|
| Tightening torque | 100 Nm |
|-------------------|--------|

4. When the plug stem (5) fits closely onto the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.



- 1 Actuator
- 2.1 Actuator yoke
- 3 Actuator stem
- 4 Stem connector
- 5 Plug stem
- 6 Nut

Mounting on Series V2001 Valves (DN 65 to 100)

⇒ See Fig. 11.

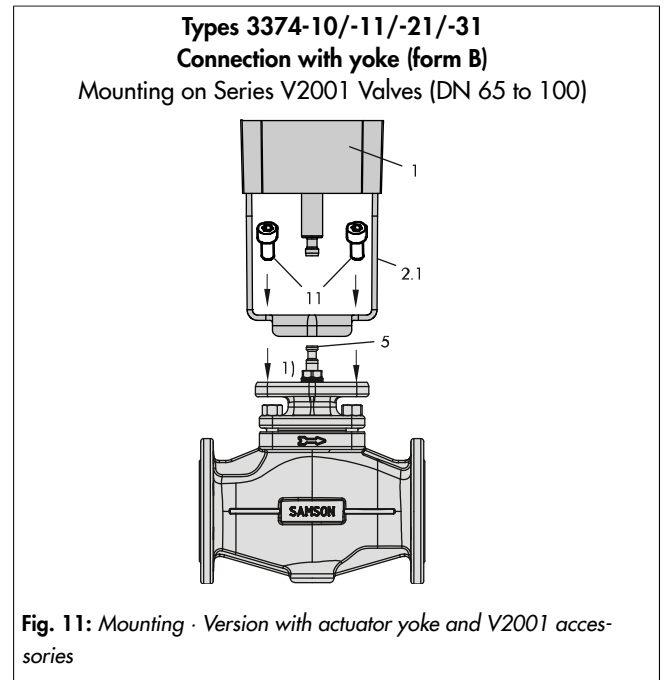
1. Remove protective covers.
2. **Actuator without fail-safe action and with "Actuator stem retracts" fail-safe action:** retract the actuator stem using the manual override (see Chapter 8.1.1).
"Actuator stem extends" fail-safe action: connect the supply voltage and retract the actuator stem using the manual override (see Chapter 8.1.1).

3. Place the actuator with yoke on the valve and fasten using the screws (11).

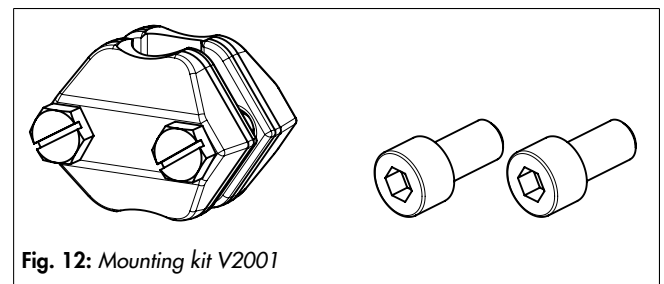
i Note

A spacer (see Appendix) is required to mount a Type 3323 Three-way Valve (DN 65 to 80).

4. Switch off the supply voltage.
⇒ The actuator stem extends.
5. Extend the actuator stem until the actuator stem (3) rests on the plug stem (5).
6. Position the two stem connector clamps (see Fig. 12) from the V2001 mounting kit and fasten tight.



- 1 Actuator
- 2.1 Actuator yoke
- 3 Actuator stem
- 5 Plug stem
- 11 Screws
- 1) A spacer is required here to mount a Type 3323 Three-way Valve (DN 65 to 80).



i Note

The V2001 mounting kit is not included in the scope of delivery. It is available as an accessory (see "Parts for retrofitting and accessories").

5.3.2 Construction with ring nut (form A)

For mounting on:

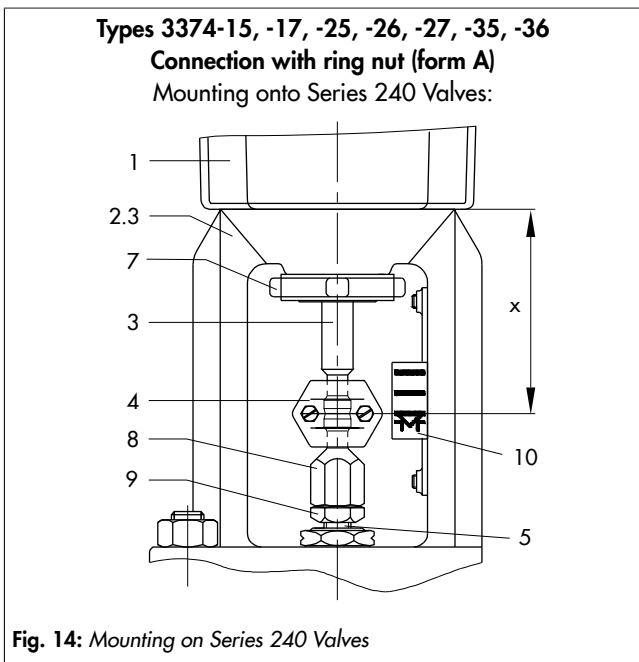
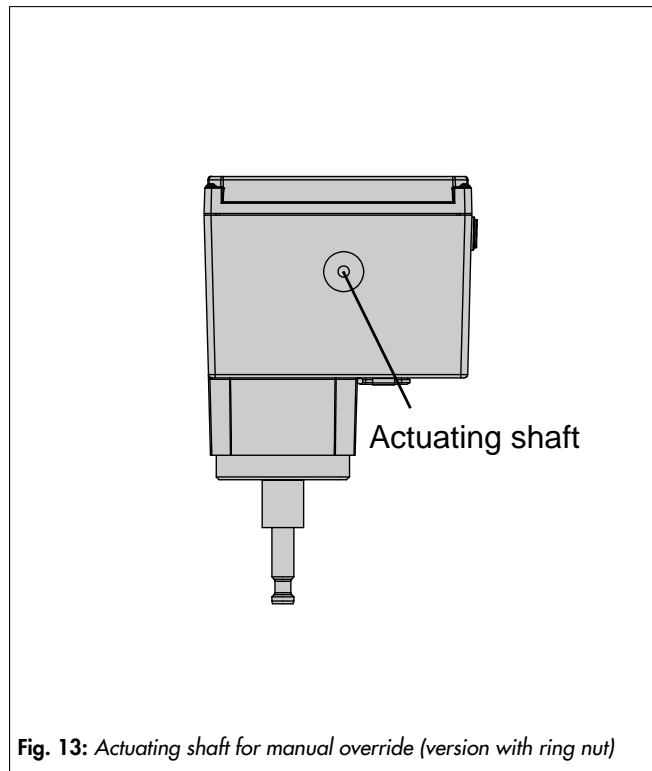
- Series 240
- Type 3214 balanced by a bellows (DN 125 to 250)
- Type 3260 (DN 65 to 100)
- Type 3260 (DN 100 to 150)

Mounting on Series 240 Valves

⇒ See Fig. 14.

Installation

1. Push the plug stem (5) down to close the valve.
2. Turn the stem connector nut (8) until the dimension x measures 75 mm (DN 100 and larger: 90 mm) from the top of the yoke to the middle of the stem connector nut (8). Lock this position with the lock nut (9).
3. Retract actuator stem (3) as described in Chapter 8.



- 1 Actuator
- 2.3 Bonnet
- 3 Actuator stem
- 4 Stem connector
- 5 Plug stem
- 7 Ring nut
- 8 Stem connector nut
- 9 Lock nut
- 10 Travel indicator scale

Mounting on Type 3214 Valve (DN 125 to 250)

⇒ See Fig. 16.

1. Retract actuator stem (3) (see Chapter 8.1.1).

4. Place actuator on the valve bonnet (2.3) and secure using the ring nut (7).
5. When the stem connector nut (8) rests on the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.

| | |
|-------------------|--------|
| Tightening torque | 150 Nm |
|-------------------|--------|

6. Move actuator stem (3) to the end position (valve closed) as described in Chapter 8.1.1.
7. Align travel indicator scale (10) with the middle of the stem connector (4) and screw tight.

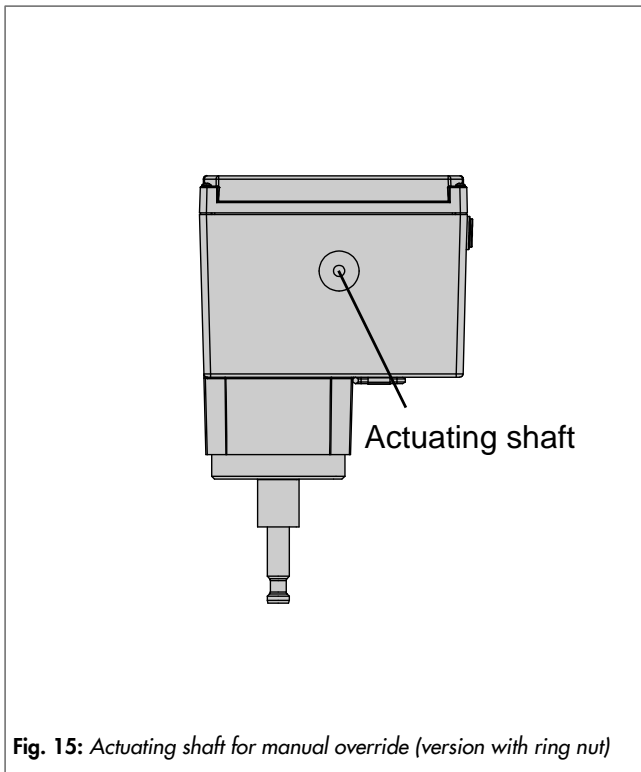


Fig. 15: Actuating shaft for manual override (version with ring nut)

i Note

For actuators with “actuator stem extends” fail-safe action (see nameplate in Chapter 2), the supply voltage must be connected to retract the actuator stem.

⇒ To connect the supply voltage, proceed as described in Chapter 5.5.

2. Place actuator on the valve and secure using the ring nut (7). If necessary, retract the actuator stem slightly beforehand.
3. When the stem connector nut (5) rests on the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.

| | |
|-------------------|--------|
| Tightening torque | 150 Nm |
|-------------------|--------|

4. Move actuator stem (3) to the end position (valve closed) as described in Chapter 8.1.1.
5. Align travel indicator scale (10) with the middle of the stem connector (4) and screw tight.

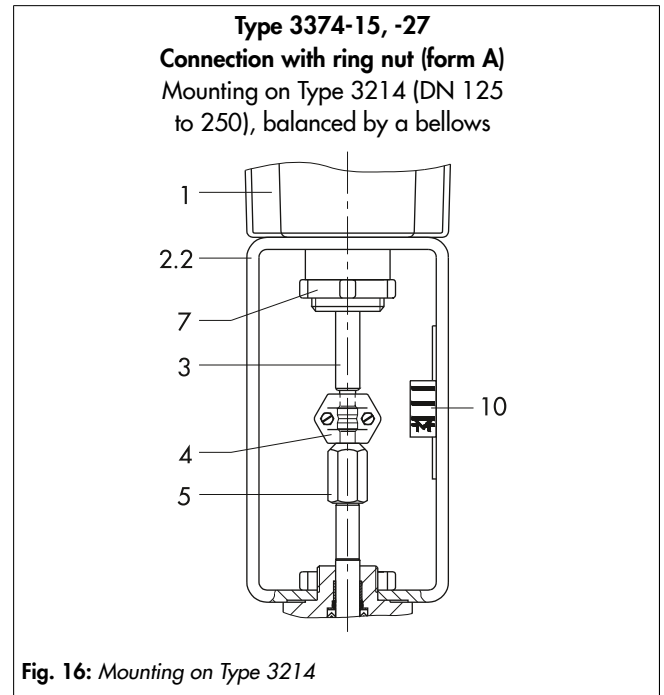


Fig. 16: Mounting on Type 3214

- 1 Actuator
- 2.2 Valve yoke
- 3 Actuator stem
- 4 Stem connector
- 5 Plug stem
- 7 Ring nut
- 10 Travel indicator scale

Mounting on Type 3260 (DN 65 to 150) and Type 3214 (DN 125 to 250), valves balanced by a diaphragm

⇒ See Fig. 17.

1. Actuator without fail-safe action:

Retract actuator stem as described in Chapter 8.1.1.

Actuator with fail-safe action:

Retract the actuator stem electrically in the MAN mode (see Chapter).

Retract actuator stem as described in Chapter 8.1.1.

i Note

For actuators with “actuator stem extends” fail-safe action (see nameplate in Chapter 2), the supply voltage must be connected to retract the actuator stem.

⇒ To connect the supply voltage, proceed as described in Chapter 5.5.

2. Place the additional yoke on the valve and fasten tight.
3. Place actuator on the additional yoke and fasten using hex nut (2).
4. When the stem connector nut (5) rests on the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.

| | |
|-------------------|--------|
| Tightening torque | 150 Nm |
|-------------------|--------|

5. Move actuator stem (3) to the end position (valve closed) as described in Chapter 8.

Type 3374-15, -27
Connection with ring nut (form A)

For mounting on
 Type 3260 (DN 65 to 150) and Type 3214 (DN
 125 to 250), valves balanced by a diaphragm

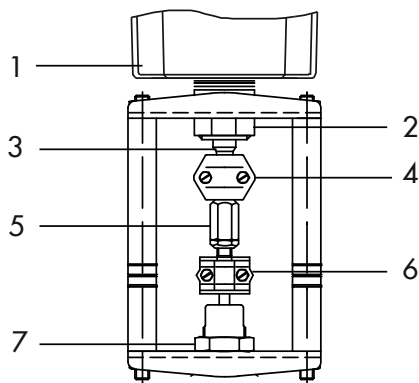


Fig. 17: Mounting on Type 3260 Valve (DN 65 to 150) and Type 3214 (DN 125 to 250), valves balanced by a diaphragm

- 1 Actuator
- 2 Hex nut
- 3 Actuator stem
- 4 Stem connector
- 5 Stem connector nut
- 6 Stem connector
- 7 Hex nut

5.4 Installing additional equipment

⚠ DANGER

Risk of fatal injury due to electric shock.

- ⇒ Before installing electrical accessories, switch off the supply voltage and protect it against unintentional reconnection.
- ⇒ Disconnect the signal lines.

5.4.1 Retrofitting limit contacts

To install the mechanical limit contacts, the following retrofit kits are required depending on the equipment:

- Basic unit (see Fig. 18)
- Mechanical limit contacts (see Fig. 19)

i Note

The retrofitting of the limit contacts varies depending on whether the actuator is fitted with resistance transmitters or not.

- See "Actuator without resistance transmitters", page 21.
- See "Actuator with resistance transmitters", page 22.

i Note

To undo the screws on the housing cover, use a POZIDRIV® PZ2 screwdriver to get enough hold on the screw heads.

i Note

The contact cams (19) are ready-mounted to the cam holder (20) and the retaining rings (9) to form the contact cam unit (21) (see Fig. 21).

💡 Tip

SAMSON recommends applying a small amount of lubricant (e.g. Vaseline) to the spindles on the gear faces and to the sides of the cogs.

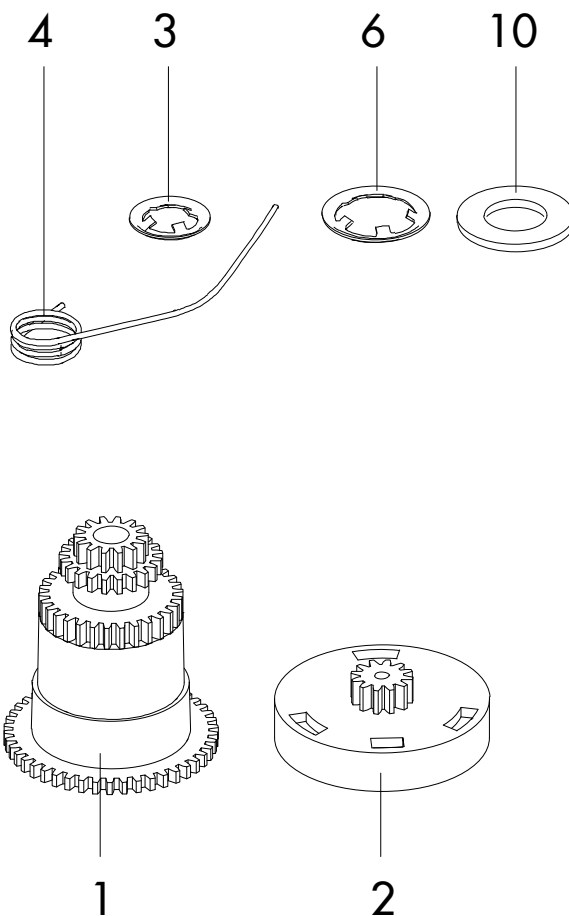


Fig. 18: Basic unit

- 1 Intermediate gear
- 2 Spindle gear
- 3 Serrated ring (for 1)
- 4 Tension spring
- 6 Serrated ring (for 2)
- 10 Shim

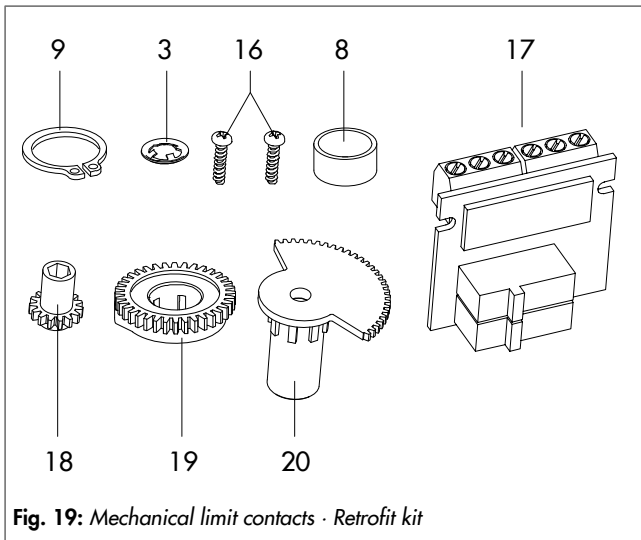


Fig. 19: Mechanical limit contacts - Retrofit kit

- 3 Serrated ring
- 8 Spacer
- 9 Retaining ring
- 16 Screw (WN 1412)
- 17 Terminal board
- 18 Adjustment gear
- 19 Contact cam
- 20 Cam holder

Actuator without resistance transmitters

⇒ See Fig. 20.

1. Undo screws on housing cover and remove the housing cover from the actuator.
2. Move the actuator stem to the end position depending on the fail-safe action "Actuator stem extends" or "Actuator stem retracts" (see Chapter 8).
3. Unscrew fastening screws. Slide the actuator board (12) from its guiding to the right. Slightly lift the board and continue pushing it further towards the cable entry.
4. Clip the spindle gear (2) onto the sleeve (13) and click into place. Make sure the side latch is properly engaged in the groove of the sleeve.
5. Slide the intermediate gear (1) onto the spindle 1 (11.1), mount the serrated ring (3) and push it down as far as it will go.
6. Slide the spacer (8) onto the spindle 2 (11.2).
7. Place the tension spring (4) on to the corresponding spindle, ensuring that the long wire of the tension spring rests on the spacer (8) and on the intermediate gear (1).
8. Place both ready-assembled contact cams (19) with the cog first onto the cam holder (20).
9. Slide adjustment gears (18) onto their spindles and fasten with one screw each. Check whether the adjustment gears can be turned easily. If not, slightly loosen its screw again.
10. Turn both contact cams (19) on the cam holder (20) as illustrated in Fig. 21 corresponding with the position of the actuator stem.
11. Slide the cam holder (20) with both contact cams (19) onto the spindle 2 (11.2) corresponding with the position of the actuator stem as illustrated in Fig. 20. Make sure that the outermost cog of the cam support (20) engages in the

gearwheel of the intermediate gear (1). In addition, the adjustment gears (18) must engage properly in the corresponding gears of the contact cams (19).

12. Secure the cam holder (20) and intermediate gear (1) with the serrated ring (3); push down the serrated ring as far as it will go.
13. Position the terminal board (17) at the base of the support at a 45° angle (approx.) with the switches pointing towards the gears. Swivel the upper end of the terminal board towards the gears until the board is in a vertical position and properly engaged in the support.
14. Slide the actuator board (12) back into its guiding. Make sure that the gears are properly engaged. Fasten the board using screws.
15. Adjust limit contacts as described in Chapter 7.
16. Replace the housing cover. Briefly turn the fastening screws counterclockwise with a screwdriver to center them. Then fasten down the cover by tightening the screws.

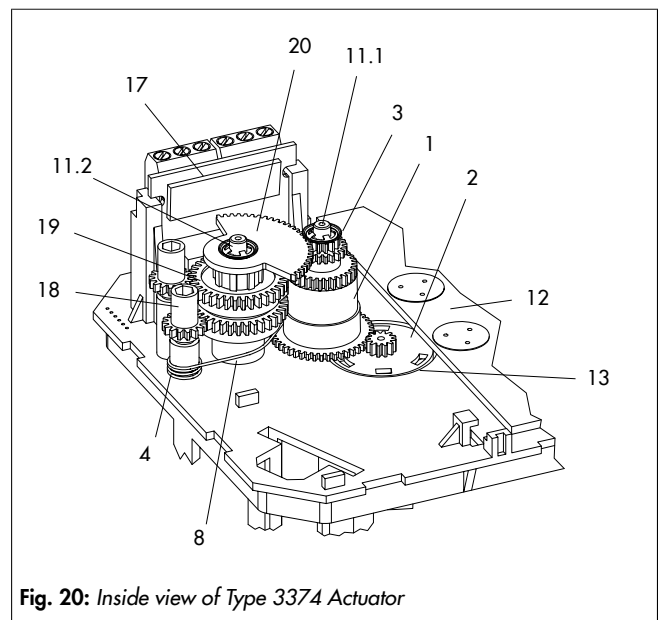


Fig. 20: Inside view of Type 3374 Actuator

- 1 Intermediate gear
- 2 Spindle gear
- 3 Serrated ring
- 4 Tension spring
- 8 Spacer
- 11.1 Spindle 1
- 11.2 Spindle 2
- 12 Actuator board
- 13 Bearing sleeve
- 17 Terminal board
- 18 Adjustment gear
- 19 Contact cam
- 20 Cam holder

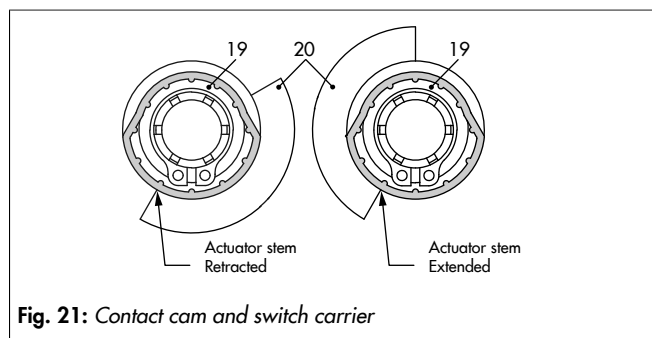


Fig. 21: Contact cam and switch carrier

- 19 Contact cam
- 20 Switch carrier

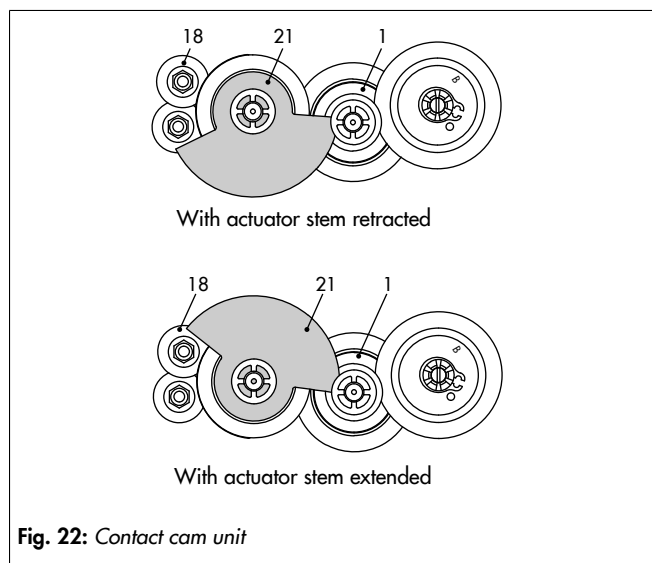


Fig. 22: Contact cam unit

- 1 Intermediate gear
- 18 Adjustment gear
- 21 Contact cam

Actuator with resistance transmitters

⇒ See Fig. 23.

1. Undo screws on housing cover and remove the housing cover from the actuator.
2. Move the actuator stem to the end position depending on the fail-safe action "Actuator stem extends" or "Actuator stem retracts" (see Chapter 8).
3. Remove serrated ring (6) and shim (10) from spindle 2 (11.2).
4. Continue with step 8. in section .

i Note

The basic unit is not required for the version with resistance transmitter.

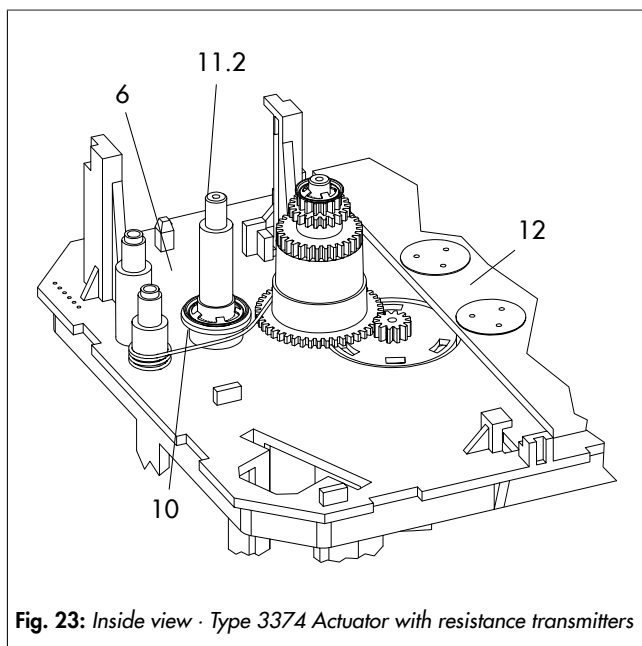


Fig. 23: Inside view · Type 3374 Actuator with resistance transmitters

- 6 Serrated ring
- 10 Shim
- 11.2 Spindle 2
- 12 Actuator board

5.4.2 Installing the resistance transmitters

An actuator board with the corresponding resistance transmitters and gear wheels is required for a resistance transmitter retrofit. Which actuator board is to be used depends on the actuator version as well as the supply voltage and transit time specifications (see Appendix).

i Note

The retrofitting of the resistance transmitters varies depending on whether the actuator is fitted with limit contacts or not.

- Actuators without limit contacts: see description below.
- Actuators with limit contacts: see "step 1", page 23.

Actuators without limit contacts

If the actuator does not have limit contacts, an additional retrofit kit (see Fig. 25) is required.

1. Unscrew fastening screws. Slide the actuator board (12) from its guiding to the right.
2. Slightly lift the board and continue pushing it further towards the cable entry.
3. Clip the spindle gear (2) onto the sleeve (13) and click into place.
Make sure the latch is properly engaged in the groove of the sleeve.
4. Slide the intermediate gear (1) onto the spindle 1 (11.1).
5. Mount the serrated ring (3) and push it down as far as it will go.
6. Place the tension spring (4) onto the spindle 3 (11.3), ensuring that the long wire of the tension spring rests on the intermediate gear (1) and that the short wire of the spring is located between spindle 3 (11.3) and spindle 4 (11.4).

7. Slide the shim (10) onto the spindle 2 (11.2).
8. Mount the serrated ring (6) and push it down as far as it will go.
9. Put the resistance transmitter gears (22 and 23) fitted with retaining rings onto their shafts to correspond with the rated travel of the valve. The rated travel inscription 'A' for 30 mm rated travel or 'B' for 15 mm rated travel must be legible from above (see Fig. 24).
10. Slide the actuator board (12) into its guiding. Make sure that all the gears are properly engaged.
11. Fasten down the board.

- 1 Intermediate gear
- 2 Spindle gear
- 3 Serrated ring
- 4 Tension spring
- 6 Serrated ring
- 10 Shim
- 11.1 Spindle 1
- 11.2 Spindle 2
- 11.3 Spindle 3
- 11.4 Spindle 4
- 12 Actuator board

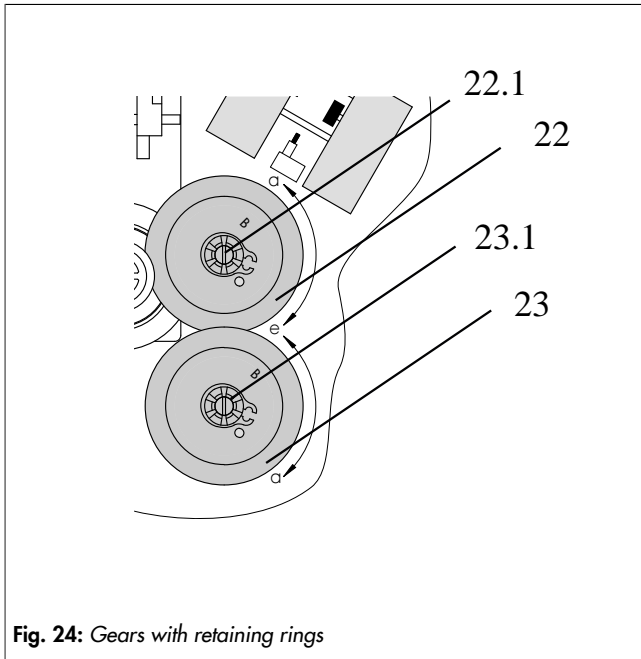


Fig. 24: Gears with retaining rings

- 22 Gear of potentiometer 1
- 22.1 Shaft of potentiometer 1
- 23 Gear of potentiometer 2
- 23.1 Shaft of potentiometer 2

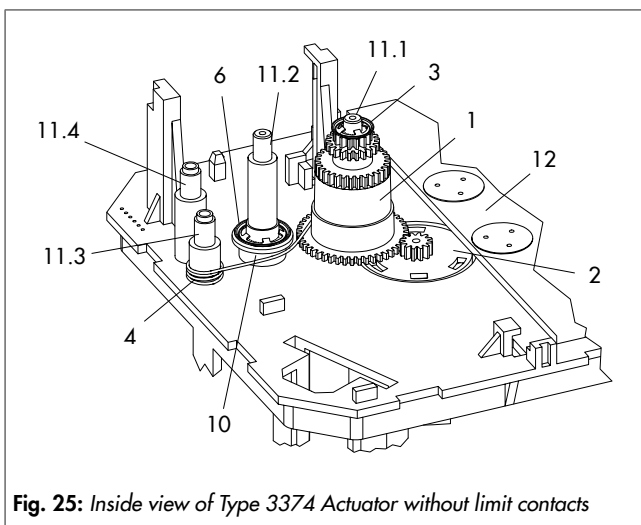


Fig. 25: Inside view of Type 3374 Actuator without limit contacts

Actuators with limit contacts

1. Undo screws on housing cover and remove the housing cover from the actuator.
2. Move the actuator stem to the end position depending on the fail-safe action "Actuator stem extends" or "Actuator stem retracts" (see Chapter 8).
3. Unscrew fastening screws. Slide the actuator board (12) from its guiding to the right.
4. Slightly lift the board and continue pushing it further towards the cable entry.
5. Slide the new actuator board into its guiding. Make sure that all the gears are properly engaged.
6. Fasten down the board.

i Note

The basic unit is not required for the version with limit contacts.

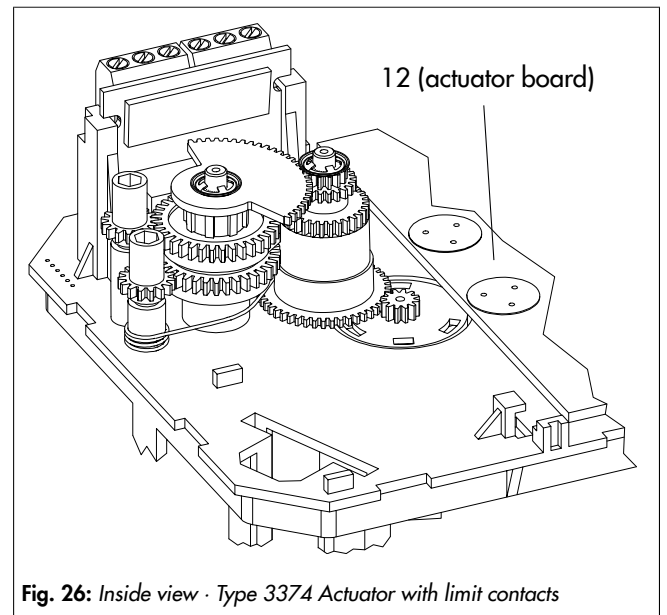


Fig. 26: Inside view - Type 3374 Actuator with limit contacts

5.5 Electrical connection

⚠ DANGER

Risk of fatal injury due to electric shock.

- ⇒ Upon installation of the electric cables, you are required to observe the regulations concerning low-voltage installations according to DIN VDE 0100 as well as the technical connection requirements of your local energy supplier.
- ⇒ Use a suitable voltage supply which does not allow any dangerous voltage to reach the device in normal operation or in the event of a malfunction in the system or any other system parts.
- ⇒ Only perform the electrical connection after disconnecting the supply voltage. Make sure the supply voltage cannot be reconnected unintentionally.
- ⇒ Use approved cable glands with cable grip at the cable entry.

⚠ DANGER

Touching exposed wire ends can cause fatal injury.

Appropriate mechanical fixtures must be mounted in front of the terminals to ensure that the connected wires cannot become loose or be pulled out unintentionally.

- ⇒ Take suitable precautions to prevent wires from disconnecting.

i Note

A maximum of three cable glands can be mounted on the housing for cable entry.

- ⇒ Connect the wiring according to the following wiring plans.
- ⇒ Guide the cables to the spring-cage terminals from the top (observe Table 4).

Table 4: Cables and stranded wires that can be used

| Cable | Cross section |
|--|------------------------------|
| Single-wire H05(07) V-U ¹⁾ | 0.2 to 1.5 mm ² |
| Fine-wire H05(07) V-K ¹⁾ | 0.2 to 1.5 mm ² |
| With wire ferrule according to DIN 46228-1 | 0.25 to 1.5 mm ² |
| With wire ferrule with collar according to DIN 46228-4 | 0.25 to 0.75 mm ² |

1) Length of insulation to be stripped off wire ends: 8 mm

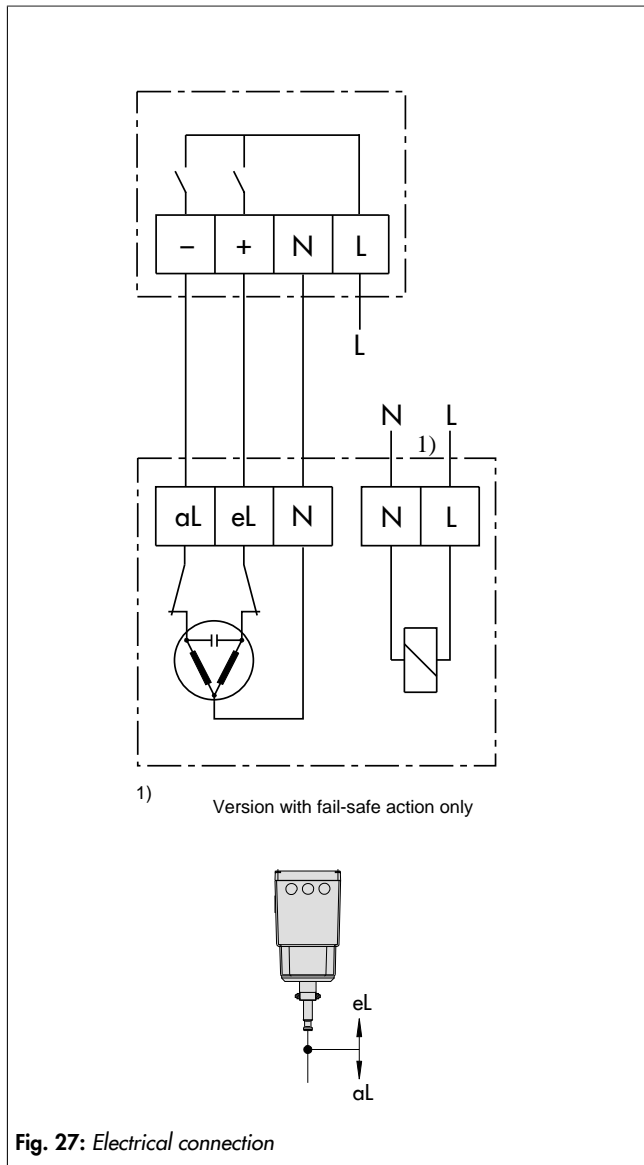


Fig. 27: Electrical connection

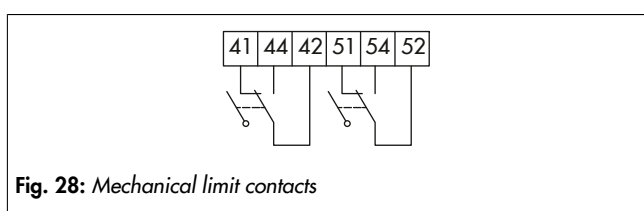


Fig. 28: Mechanical limit contacts

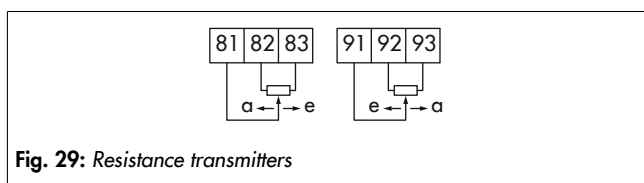


Fig. 29: Resistance transmitters

6 Operation

6.1 Device overview and operating controls



Fig. 30: Operating controls

7 Start-up

Once the actuator has been mounted correctly and the wiring has been performed as described in Chapter 5, the electric actuator is ready for use and can be controlled by a three-step signal (see Chapter 3.4).

7.1 Adjusting the limit contacts

i Note

To undo the screws on the housing cover, use a POZIDRIV® PZ2 screwdriver to get enough hold on the screw heads.

Mechanical limit contacts

1. Undo screws on housing cover and remove the housing cover from the actuator.
2. Connect supply voltage.
3. Move the actuator stem, using manual override or the 'manual level' operating mode, to the point at which the contact should react.
4. Use the 4 mm hex wrench to turn spindle of the adjustment gears (18) for the upper limit contact or for the lower limit contact until the associated contact cam on the cam holder (20) triggers the switch contact of the upper or lower microswitch on the terminal board (17).
5. Replace the housing cover. Briefly turn the fastening screws counterclockwise with a screwdriver to center them. Then fasten down the cover by tightening the screws.

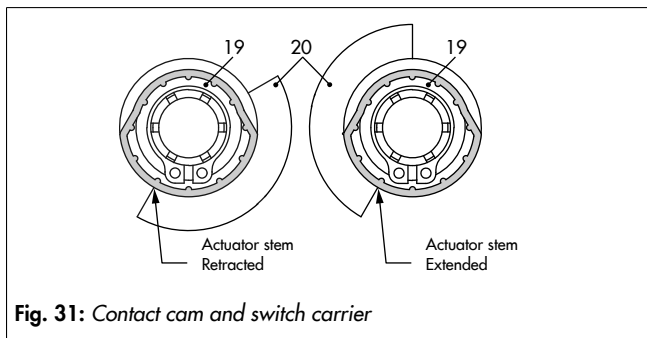


Fig. 31: Contact cam and switch carrier

- 19 Contact cam
- 20 Cam holder

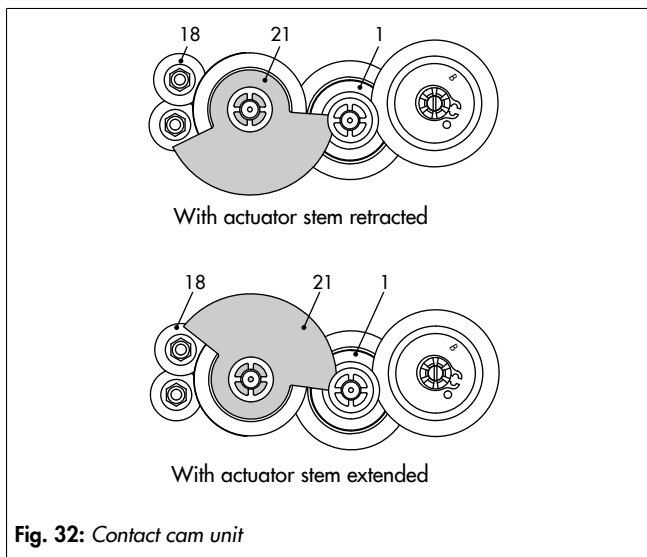


Fig. 32: Contact cam unit

- 1 Intermediate gear
- 18 Adjustment gear
- 21 Contact cam

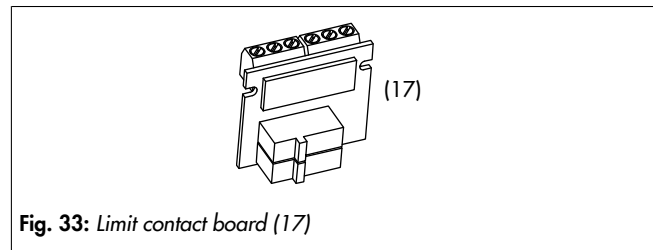


Fig. 33: Limit contact board (17)

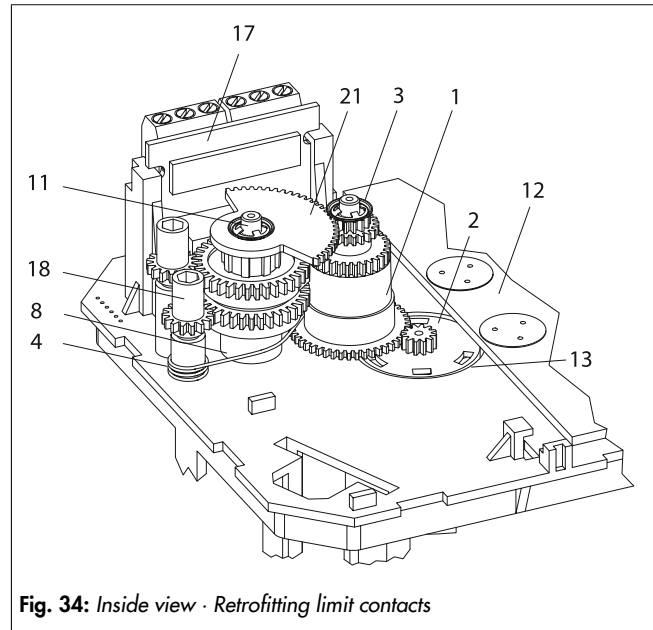


Fig. 34: Inside view - Retrofitting limit contacts

- 1 Intermediate gear
- 2 Spindle gear
- 3 Serrated ring
- 4 Tension spring
- 8 Spacer
- 11 Spindle
- 12 Actuator board
- 13 Bearing sleeve
- 17 Terminal board
- 18 Adjustment gear
- 21 Contact cam unit

7.2 Adjusting the resistance transmitter

The gears of the resistance transmitters (22 and 23, see Fig. 35) must be put onto their shafts to correspond with the rated travel of the valve. The rated travel inscription 'A' for 30 mm rated travel or 'B' for 15 mm rated travel must be legible. If this is not the case, pull both potentiometer gears off their shafts and put them back on again with the reverse side of the wheel facing upwards, ensuring they are aligned fairly flush with the potentiometer shaft.

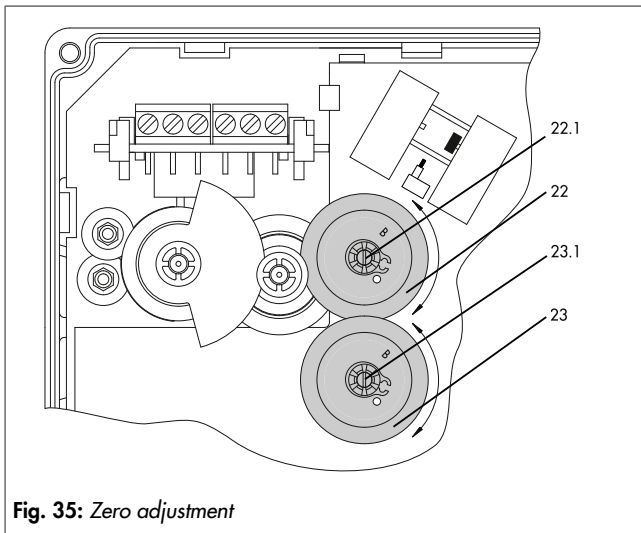


Fig. 35: Zero adjustment

Legend for "Fig. 35: Zero adjustment"

- 22 Gear of potentiometer 1
- 22.1 Shaft of potentiometer 1
- 23 Gear of potentiometer 2
- 23.1 Shaft of potentiometer 2

Zero adjustment

1. Use the motor or manual override to move the valve to the desired end position.
2. Use a screwdriver to adjust the potentiometer shafts (22.1) and (23.1).
3. Calibrate the resistance transmitters using an ohmmeter correspondingly.

Actuator stem extends:

Terminals 81/82 = 0 Ω

Terminals 91/93 = 0 Ω

Actuator stem retracts:

Terminals 81/83 = 0 Ω

Terminals 91/92 = 0 Ω

8 Operation

After connecting the supply voltage, the actuator is ready for use.

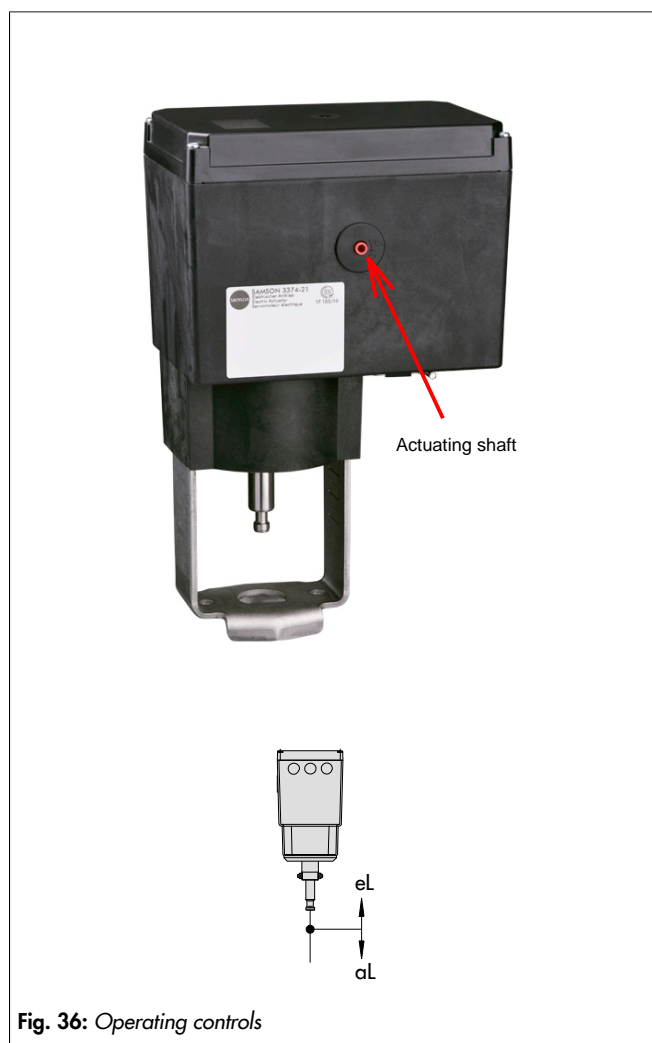
The actuator stem follows the signal applied to the input terminals. The stem moves in the direction depending on which terminal the signal is applied to.

8.1 Manual mode

8.1.1 Mechanical override

To operate the manual override, place a 4 mm hex wrench on the red actuator shaft located at the side of the housing (see Fig. 36).

Turn the hex wrench clockwise to move the actuator in 'aL' direction and counterclockwise to move it in the 'eL' direction. The hex wrench is included in the scope of delivery. It is attached to the bottom of the housing.



8.1.2 Special version with handwheel

The additional handwheel is used for mechanical override in the special version of the electric actuator with handwheel (see Fig. 37).



Fig. 37: Special version with handwheel

i Note

Manual override is only possible in actuators with fail-safe action when the supply voltage (terminals L and N) is connected.

9 Malfunctions

9.1 Troubleshooting

⇒ See Table 5.

i Note

Contact SAMSON's After-sales Service for malfunctions not listed in the table.

Table 5: Troubleshooting

| Malfunction | Possible reasons | Recommended action |
|--|---|---|
| Actuator stem does not move. | Actuator is blocked. | ⇒ Check attachment. ⇒ Remove the blockage. |
| | No or incorrect supply voltage connected. | ⇒ Check the supply voltage and connections. |
| Actuator stem does not move through the whole range. | No or incorrect supply voltage connected. | ⇒ Check the supply voltage and connections. |

9.2 Emergency action

The valve, on which the electric actuator with fail-safe action is mounted, is moved to its fail-safe position upon supply voltage failure (see Chapter 3).

Plant operators are responsible for emergency action to be taken in the plant.

Tip

Emergency action in the event of valve failure is described in the associated valve documentation.

10 Servicing

The work described in this chapter is to be performed only by personnel appropriately qualified to carry out such tasks.

i Note

The electric actuator was checked by SAMSON before it left the factory.

- *The product warranty becomes void if service or repair work not described in these instructions is performed without prior agreement by SAMSON's After-sales Service.*
- *Only use original spare parts by SAMSON, which comply with the original specifications.*

The actuator requires no maintenance.

SAMSON recommends inspection and testing according to the following table:

Table 6: Recommended inspection and testing

| Inspection and testing | Action to be taken in the event of a negative result |
|---|--|
| Check the markings, labels and nameplates on the device for their readability and completeness. | ⇒ Immediately renew damaged, missing or incorrect nameplates or labels. |
| | ⇒ Clean any inscriptions that are covered with dirt and are illegible. |
| Check the electric wiring. | ⇒ Tighten any loose terminal screws (see Chapter 5.5). ⇒ Renew damaged wires. |

11 Decommissioning

The work described in this chapter is to be performed only by personnel appropriately qualified to carry out such tasks.

⚠ DANGER

Risk of fatal injury due to electric shock.

⇒ *Before disconnecting live wires at the device, disconnect the supply voltage and protect it against unintentional reconnection.*

⚠ WARNING

Risk of personal injury due to residual process medium in the valve.

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

⇒ *Wear protective clothing, safety gloves and eye protection.*

⚠ WARNING

Risk of burn injuries due to hot or cold components and pipeline.

Valve components and the pipeline may become very hot or cold. Risk of burn injuries if touched.

⇒ *Allow components and pipeline to cool down or warm up to ambient temperature.*

⇒ *Wear protective clothing and gloves.*

To decommission the electric actuator for repair work or disassembly, proceed as follows:

- ⇒ Put the control valve out of operation. See associated valve documentation.
- ⇒ Disconnect the supply voltage and protect it against unintentional reconnection.
- ⇒ Make sure that a signal from the controller cannot act upon the actuator.

i Note

For versions with "Actuator stem extends" fail-safe action, the supply voltage must remain connected to prevent the actuator stem extending by itself.

- ⇒ *Actuator with fail-safe action move to the defined fail-safe position after the supply voltage is switched off.*

12 Removal

The work described in this chapter is to be performed only by personnel appropriately qualified to carry out such tasks.

⚠ DANGER

Risk of fatal injury due to electric shock.

⇒ Before disconnecting live wires at the device, disconnect the supply voltage and protect it against unintentional reconnection.

⚠ WARNING

Risk of personal injury due to hot components.

⇒ If necessary, allow the pipeline and valve components to cool down.

⚠ WARNING

Risk of personal injury due to residual process medium in the valve.

While working on the valve, residual medium can flow out of the valve and, depending on its properties, cause personal injury, e.g. (chemical) burns.

⇒ Wear protective clothing, safety gloves and eye protection.

12.1 Construction with integrated yoke

Actuator without fail-safe action

1. Check that the actuator is de-energized.
2. Make sure that a signal from the controller cannot act upon the actuator. If necessary, disconnect the wires connecting the controller.
3. Disconnect and remove the wires of the connecting lines at the actuator.
4. Retract actuator stem as described in Chapter 8.1.1.
5. Undo the stem connector parts between the plug and actuator stems.
6. Loosen the nut at the yoke.
7. Lift the actuator off the valve.

Actuator with "Actuator stem extends" fail-safe action

1. Make sure that a signal from the controller cannot act upon the actuator. If necessary, disconnect the wires connecting the controller.
2. Retract actuator stem as described in Chapter 8.1.1.
3. Undo the stem connector parts between the plug and actuator stems.
4. Loosen the nut at the yoke.
5. Lift the actuator off the valve.
6. Disconnect the supply voltage and protect it against unintentional reconnection.
The actuator stem moves to the fail-safe position.
7. Disconnect the wires of the connecting lines at the actuator.
8. Remove the connecting lines.

Actuator with "Actuator stem retracts" fail-safe action

1. Check that the actuator is de-energized.
2. Make sure that a signal from the controller cannot act upon the actuator. If necessary, disconnect the wires connecting the controller.
3. Disconnect the wires of the connecting lines at the actuator.
4. Remove the connecting lines.
5. Undo the stem connector parts between the plug and actuator stems.
6. Loosen the nut at the yoke.
7. Lift the actuator off the valve.

12.2 Construction with ring nut

Actuator without fail-safe action

1. Check that the actuator is de-energized.
2. Make sure that a signal from the controller cannot act upon the actuator. If necessary, disconnect the wires connecting the controller.
3. Disconnect the wires of the connecting lines at the actuator.
4. Remove the connecting lines.
5. Retract actuator stem as described in Chapter 8.
6. Undo the stem connector parts between the plug and actuator stems.
7. Undo the top ring nut or hex nut.
8. Lift the actuator off the valve.

Actuator with "Actuator stem extends" fail-safe action

1. Make sure that a signal from the controller cannot act upon the actuator. If necessary, disconnect the wires connecting the controller.
2. Retract actuator stem as described in Chapter 8.
3. Undo the stem connector parts between the plug and actuator stems.
4. Undo the top ring nut or hex nut.
5. Lift the actuator off the valve.
6. Disconnect the supply voltage and protect it against unintentional reconnection.
The actuator stem moves to the fail-safe position.
7. Disconnect the wires of the connecting lines at the actuator.
8. Remove the connecting lines.

Actuator with "Actuator stem retracts" fail-safe action

1. Check that the actuator is de-energized.
2. Make sure that a signal from the controller cannot act upon the actuator. If necessary, disconnect the wires connecting the controller.
3. Disconnect the wires of the connecting lines at the actuator.
4. Remove the connecting lines.
5. Undo the stem connector parts between the plug and actuator stems.
6. Undo the top ring nut or hex nut.
7. Lift the actuator off the valve.

13 Repair

If the actuator does not function properly according to how it was originally sized or does not function at all, it is defective and must be repaired or exchanged.

! NOTICE

Risk of actuator damage due to incorrect service or repair work.

- ⇒ Do not perform any repair work on your own.
 - ⇒ Contact SAMSON's After-sales Service for service and repair work.
-

! NOTICE

Risk of actuator damage due to incorrect service or repair work.

- ⇒ Do not perform any repair work on your own.
 - ⇒ Contact SAMSON's After-sales Service for service and repair work.
-

13.1 Returning the actuator to SAMSON

Defective actuators can be returned to SAMSON for repair. Proceed as follows to return devices:

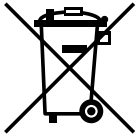
1. Remove the electric actuator from the valve (see Chapter 12).
2. Proceed as described on our website at ► www.samsongroup.com > SERVICE > After-sales Service > Returning goods.

i Note

Further information on returned devices and how they are handled can be found at:

► www.samsongroup.com > Service > After-sales Service

14 Disposal



SAMSON is a producer registered at the following European institution ► <https://www.ewrn.org/national-registers/national-registers>.
WEEE reg. no.: DE 62194439/FR 025665

- ⇒ Observe local, national and international refuse regulations.
- ⇒ Do not dispose of components, lubricants and hazardous substances together with your other household waste.

i Note

SAMSON can provide you with a recycling passport according to PAS 1049 on request. Simply e-mail us at aftersaleservice@samsongroup.com giving details of your company address.

💡 Tip

On request, SAMSON can appoint a service provider to dismantle and recycle the product as part of a distributor take-back scheme.

15 Certificates

The following certificates are included on the next pages:

- EU declaration of conformity
- EC type examination certificate
- UKCA declaration of conformity
- TR CU certificate

The certificate shown was up to date at the time of publishing.
The latest certificate can be found on our website at:

► www.samsongroup.com > Products > Actuators > 3374

15.1 Information on the UK sales region

The following information corresponds to the Pressure Equipment (Safety) Regulations 2016, STATUTORY INSTRUMENTS, 2016 No. 1105 (UKCA marking). It does not apply to Northern Ireland.

Importer

SAMSON Controls Ltd

Perrywood Business Park

Honeycrock Lane

Redhill, Surrey RH1 5JQ

Phone: +44 1737 766391

E-mail: sales-uk@samsongroup.com

Website: ► uk.samsongroup.com



EU Konformitätserklärung / EU Declaration of Conformity / Déclaration UE de conformité

Die alleinige Verantwortung für die Ausstellung dieser Konformitätserklärung trägt der Hersteller/
This declaration of conformity is issued under the sole responsibility of the manufacturer/
La présente déclaration de conformité est établie sous la seule responsabilité du fabricant.

Für das folgenden Produkte / For the following product/ Nous certifions que les produit

Elektrischer Stellantrieb / Electric Actuator / Servomoteur électrique Typ/Type/Type 3374

wird die Konformität mit den einschlägigen Harmonisierungsrechtsvorschriften der Union bestätigt /
the conformity with the relevant Union harmonisation legislation is declared with /
sont conformes à la législation applicable harmonisée de l'Union:

| | |
|-----------------|--|
| EMC 2014/30/EU | EN 61000-6-2:2005, EN 61000-6-3:2007/A1:2011, EN 61326-1:2013 |
| LVD 2014/35/EU | EN 60730-1:2011, EN 61010-1:2010/A1:2019 |
| RoHS 2011/65/EU | EN IEC 63000:2018 |

Hersteller / Manufacturer / Fabricant:

SAMSON AKTIENGESELLSCHAFT
Weismüllerstraße 3
D-60314 Frankfurt am Main
Deutschland/Germany/Allemagne

Frankfurt / Francfort, 2022-10-05

Im Namen des Herstellers/ On behalf of the Manufacturer/ Au nom du fabricant.

Marcus Miertz
Senior Vice President Sales and Marketing

Gert Nahler
Director Automation Technology



UK DECLARATION OF CONFORMITY ORIGINAL



This declaration of conformity is issued under the sole responsibility of the manufacturer.

For the following product:

Electric Actuator Type 3374

the conformity with the following relevant UK regulatory requirements is declared with:

UK Regulation / Statutory Instrument

SI 2016 No. 1091
The Electromagnetic Compatibility Regulations 2016

SI 2016 No. 1101
The Electrical Equipment (Safety) Regulations 2016

SI 2012 No. 3032
The Restriction of the Use of Certain Hazardous Substances
in Electrical and Electronic Equipment Regulations 2012

Designated Standard

EN 61000-6-2:2005
EN 61000-6-3:2007+A1:2011
EN 61326-1:2013

EN 60730-1:2011
EN 61010-1:2010/A1:2019

EN IEC 63000:2018

Manufacturer:

SAMSON AKTIENGESELLSCHAFT
Weismuellerstrasse 3
60314 Frankfurt am Main
Germany

Frankfurt am Main, 2022-12-14

Signed for and behalf of the manufacturer:


Fabio Roma
Vice President Smart Products & Components


Sebastian Krause
Director Development Valves & Actuators



Konformitätserklärung für eine vollständige Maschine

nach Anhang II, Absatz 1.A. der Richtlinie 2006/42/EG

Für folgendes Produkt:

Elektrisches Stellventil Typ 3214/XXXX bestehend aus Ventil Typ 3214 und Antrieb Typ 3374, Typ 3274 oder Typ 3375

Wir, die SAMSON AG, erklären, dass die oben genannte Maschine allen einschlägigen Anforderungen der Maschinenrichtlinie 2006/42/EG entspricht.

Produktbeschreibung siehe:

- Elektrische Stellventile Typ 3214/3374, 3214/3274, 3214/3375:
Einbau- und Bedienungsanleitung EB 5868-1

Folgende technischen Normen und/oder Spezifikationen wurden angewandt:

- VCI/VDMA/VGB – Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen, Mai 2018
- VCI/VDMA/VGB – Zusatzdokument zum „Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen vom Mai 2018“, Stand Mai 2018 in Anlehnung an DIN EN ISO 12100:2011-03

Bemerkung:

Bestehende Restrisiken der Maschine sind den Angaben in der Einbau- und Bedienungsanleitung von Ventil und Antrieb sowie den in der Einbau- und Bedienungsanleitung aufgeführten, mitgelieferten Dokumenten zu entnehmen.

Für die Zusammenstellung der technischen Unterlagen ist bevollmächtigt:
SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany
Frankfurt am Main, 20. October 2023

A handwritten signature in blue ink, appearing to read "ppa. Norbert Tollas".

ppa. Norbert Tollas
Senior Vice President
Global Operations

A handwritten signature in blue ink, appearing to read "i.v. P. Scheermesser".

i.V. Peter Scheermesser
Director
Product Maintenance & Engineered Products

EU DECLARATION OF CONFORMITY

TRANSLATION



Declaration of Conformity of Final Machinery

in accordance with Annex II, section 1.A. of the Directive 2006/42/EC

For the following product:

Type 3214/XXXX-X Electric Control Valve consisting of Type 3214 Valve and TROVIS 5724-X, TROVIS 5725-X, Type 5824, Type 5825, Type 5827, Type 3274 or Type 3374 Actuator

We hereby declare that the machinery mentioned above complies with all applicable requirements stipulated in Machinery Directive 2006/42/EC.

For product descriptions refer to:

- Type 3214/... Electric and Pneumatic Control Valves:
Mounting and Operating Instructions EB 5868/5869

Referenced technical standards and/or specifications:

- VCI, VDMA, VGB: "Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen, Mai 2018" [German only]
- VCI, VDMA, VGB: "Zusatzdokument zum Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen vom Mai 2018" [German only], based on DIN EN ISO 12100:2011-03

Comment:

Information on residual risks of the machinery can be found in the mounting and operating instructions of the valve and actuator as well as in the referenced documents listed in the mounting and operating instructions.

Persons authorized to compile the technical file:

SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany
Frankfurt am Main, 10 October 2023

A handwritten signature in blue ink, appearing to read "ppc. Norbert Tollas".

Norbert Tollas
Senior Vice President
Global Operations

A handwritten signature in blue ink, appearing to read "i.v.P. Peter Scheermesser".

Peter Scheermesser
Director
Product Maintenance & Engineered Products

Zertifikat

EU-Baumusterprüfung (Baumuster) nach Richtlinie 2014/68/EU

Zertifikat-Nr.: 01 202 931/B-15-0030-01

Name und Anschrift des Herstellers: Samson AG
Weismüllerstraße 3
60314 Frankfurt a. M.
Deutschland

Hiermit wird bescheinigt, dass das unten genannte EU-Baumuster die Anforderungen der Richtlinie 2014/68/EU erfüllt.

Geprüft nach Richtlinie 2014/68/EU: **Modul B
EU-Baumusterprüfung (Baumuster)**

Prüfbericht-Nr.: FSP 2051.01/22

Beschreibung des Baumusters: **Antrieb Typ 3374 (2000 N) mit Stellgliedern 3241, 2423 (2823), 2423E (2823), 2422 (2814), 3214 (2814), 3321, 3531 (2811)**
Stellgerät für Heißwasser und Dampf mit Sicherheitsfunktion in heiztechnischen Anlagen

Zeichnungs-Nr.: 1040-0095_Gesamtzeichnung_3241, V09

Fertigungsstätte/Lieferer: wie Hersteller


Gültig bis: 12.2025
Dieses Zertifikat verliert seine Gültigkeit, wenn das Produkt in irgendeiner Weise geändert oder modifiziert wird.

Das CE-Zeichen darf erst am Produkt angebracht und die Konformitätserklärung erst ausgestellt werden, wenn ein korrespondierendes Konformitätsbewertungsverfahren der Richtlinie 2014/68/EU bezogen auf die Produktion/das Produkt vollständig erfüllt ist.

Köln, 04.11.2022



TÜV Rheinland Industrie Service GmbH
Notifizierte Stelle für Druckgeräte, Kennnummer 0035
Am Grauen Stein, D-51105 Köln, DEUTSCHLAND


Wolf Rückwart



СЕРТИФИКАТ СООТВЕТСТВИЯ

№ ЕАЭС RU C-DE.ЭА11.В.00049/19

Серия **RU** № **0197358**

ОРГАН ПО СЕРТИФИКАЦИИ Общества с ограниченной ответственностью «ТМС РУС». Место нахождения (адрес юридического лица): Российская Федерация, 127083, город Москва, улица Верхняя Масловка, дом 20, строение 2; адрес места осуществления деятельности: Российская Федерация, 127083, город Москва, улица Верхняя Масловка, дом 20, строение 2, помещения № 18, 28. Аттестат аккредитации № РОСС RU.0001.11ЭА11 от 02.07.2015. Номер телефона: +7 (495) 221-18-04; адрес электронной почты: info@tms-cs.ru.

ЗАЯВИТЕЛЬ Общество с ограниченной ответственностью «Самсон Контролс». Место нахождения (адрес юридического лица) и адрес места осуществления деятельности: Российская Федерация, 109544, город Москва, бульвар Энтузиастов, дом 2, этаж 5, комната 11. ОГРН 1037700041026. Номер телефона: +7 (495) 777-45-45; адрес электронной почты: samson@samson.ru.

ИЗГОТОВИТЕЛЬ «SAMSON AG Mess- und Regeltechnik». Место нахождения (адрес юридического лица) и адрес места осуществления деятельности по изготовлению продукции: Weismullerstrasse 3, D-60314 Frankfurt am Main, Германия.

ПРОДУКЦИЯ Приводы электрические типы 3274, 3374, 3375, 5724, 5725, 5757, 5824, 5825, 5857. Изготовление в соответствии со стандартами, указанными в приложении к сертификату соответствия на бланке № 0676634. Серийный выпуск.

КОД ТН ВЭД ЕАЭС 8501 10 930 0

СООТВЕТСТВУЕТ ТРЕБОВАНИЯМ технических регламентов Таможенного союза «О безопасности низковольтного оборудования» (ТР ТС 004/2011); «Электромагнитная совместимость технических средств» (ТР ТС 020/2011)

СЕРТИФИКАТ СООТВЕТСТВИЯ ВЫДАН НА ОСНОВАНИИ протоколов сертификационных испытаний № ГБ06-5418, ГБ06-5419, ГБ06-5420 от 18.09.2019, выданных Испытательной лабораторией Ассоциации экспертов по сертификации и испытаниям продукции «Сертификационный центр НАСТХОЛ», аттестат аккредитации РОСС RU.0001.21ГБ06; № 190919-004-006-02/ИР от 24.10.2019, выданных испытательной лабораторией Общества с ограниченной ответственностью «Инновационные решения», аттестат аккредитации РОСС RU.0001.21АВ90; акта о результатах анализа состояния производства № 00062-А от 04.07.2019 органа по сертификации Общества с ограниченной ответственностью «ТМС РУС»; руководств по эксплуатации 3428-ЭП-2019.РЭ, 3428-5720-5750-2018.РЭ. Схема сертификации – 1с.

ДОПОЛНИТЕЛЬНАЯ ИНФОРМАЦИЯ Стандарты, в результате применения которых на добровольной основе обеспечивается соблюдение требований технических регламентов: ГОСТ 12.2.007.0-75 «Система стандартов безопасности труда. Изделия электротехнические. Общие требования безопасности; раздел 8 ГОСТ 30804.6.2-2013 «Совместимость технических средств электромагнитная. Устойчивость к электромагнитным помехам технических средств, применяемых в промышленных зонах»; раздел 7 ГОСТ 30804.6.4-2013 «Совместимость технических средств электромагнитная. Электромагнитные помехи от технических средств, применяемых в промышленных зонах». Назначенный срок службы – 12 лет. Назначенный срок хранения – 2 года. Условия хранения указаны в руководствах по эксплуатации 3428-ЭП-2019.РЭ, 3428-5720-5750-2018.РЭ.

СРОК ДЕЙСТВИЯ С 05.12.2019 **ПО** 04.12.2024

ВКЛЮЧИТЕЛЬНО

Руководитель (уполномоченное лицо) органа по сертификации

(подпись)



Ванькович Евгения Владимировна

(Ф.И.О.)

М.П.

Эксперт (эксперт-аудитор) (эксперты (эксперты-аудиторы))

(подпись)

Ходоров Владимир Игоревич

(Ф.И.О.)

ПРИЛОЖЕНИЕ

К СЕРТИФИКАТУ СООТВЕТСТВИЯ № ЕАЭС RU C-DE.ЭА11.В.00049/19

Серия **RU** № **0676634** Лист 1 из 1

Стандарты, в соответствии с которыми изготавливается продукция

| Обозначение стандарта | Наименование стандарта |
|--------------------------------|---|
| IEC 60730-1:2013 / Cor. 1:2014 | Automatic electrical controls for household and similar use. Part 1. General requirements. Corrigendum 1 |
| EN 61000-6-1:2007 | Electromagnetic compatibility (EMC) - Part 6-1: Generic standards - Immunity for residential, commercial and light-industrial environments |
| IEC 61000-6-2:2016 | Electromagnetic compatibility (EMC). Part 6-2: Generic standards. Immunity for industrial environments |
| EN 61000-6-3:2007 + A1:2011 | Electromagnetic compatibility (EMC). Part 6-3: Generic standards. Emission standard for residential, commercial and light-industrial environments |
| IEC 61010-1:2010 | Safety requirements for electrical equipment for measurement, control, and laboratory use. Part 1: General requirements |
| EN 61326-1:2013 | Electrical equipment for measurement, control and laboratory use. EMC requirements. Part 1: General requirements |

Руководитель (уполномоченное
лицо) органа по сертификации

Эксперт (эксперт-аудитор)
(эксперты (эксперты-аудиторы))

(подпись)

(подпись)



Ванькович Евгения Владимировна
(Ф.И.О.)

Ходоров Владимир Игоревич
(Ф.И.О.)



Einbauerklärung nach Maschinenrichtlinie 2006/42/EG

Für folgendes Produkt:
Stellantrieb Typ 3374

Wir, die SAMSON AG, erklären, dass der elektrische Stellantrieb Typ 3374 eine unvollständige Maschine im Sinne der Maschinenrichtlinie 2006/42/EG ist und die sicherheitstechnischen Anforderungen nach Anhang I Artikel 1.1.2, 1.1.3, 1.1.5, 1.2.1, 1.2.2, 1.2.3, 1.2.5, 1.2.6, 1.3.1, 1.3.2, 1.3.3, 1.3.4, 1.3.7, 1.3.9, 1.4.1, 1.5.3, 1.5.4 und 1.5.8 der Richtlinie eingehalten werden. Die speziellen Unterlagen nach Anhang VII Teil B wurden erstellt.

Die Inbetriebnahme der von uns gelieferten Erzeugnisse darf nur erfolgen, wenn vorher festgestellt wurde, dass die Maschinen oder Anlagen, in die die Produkte eingebaut werden sollen, den Bestimmungen der EG-Maschinenrichtlinie 2006/42/EG entsprechen.

Der Anwender ist verpflichtet, das Erzeugnis den anerkannten Regeln der Technik und der Einbau- und Bedienungsanleitung entsprechend einzubauen und Gefährdungen, die am Stellventil vom Durchflussmedium und Betriebsdruck sowie vom Stelldruck und von beweglichen Teilen ausgehen können, durch geeignete Maßnahmen zu verhindern.

Die zulässigen Einsatzgrenzen und Montagehinweise der Geräte ergeben sich aus der entsprechenden Einbau- und Bedienungsanleitung und stehen im Internet unter www.samsongroup.com in elektronischer Form zur Verfügung.

Produktbeschreibung siehe:

- Elektrischer Antrieb Typ 3374: Einbau- und Bedienungsanleitung EB 8331-3 / EB 8331-4

Folgende technischen Normen und/oder Spezifikationen wurden angewandt:

- VCI/DMA/VGB – Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen, Mai 2018
- VCI/DMA/VGB – Zusatzdokument zum „Leitfaden Maschinenrichtlinie (2006/42/EG) – Bedeutung für Armaturen vom Mai 2018“, Stand Mai 2018 in Anlehnung an DIN EN ISO 12100:2011-03

Bemerkungen:

- Restgefahren siehe Angaben in der Einbau- und Bedienungsanleitung
- Weiterhin sind die in den Einbau- und Bedienungsanleitungen aufgeführten mitgeltenden Dokumente zu beachten.

Für die Zusammenstellung der technischen Unterlagen ist bevollmächtigt:

SAMSON AG, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany
Frankfurt am Main, 11. August 2021

i.V. 

i.V. Stephan Giesen
Zentralabteilungsleiter
Produktmanagement

i.V. 

i.V. Sebastian Krause
Zentralabteilungsleiter
Strategische Entwicklung Ventile und Antriebe

16 Appendix

16.1 Parts for retrofitting and accessories

Table 7: Parts for retrofitting and accessories

| | |
|--|---------------------|
| Mechanical limit contacts | Order no. 1402-0898 |
| Set with three cable glands M20x1.5 with metal nut (A/F 23/24) | Order no. 1400-8828 |
| Mounting kit V2001 | Order no. 1400-9515 |
| Spacer to mount the actuator on Type 3323 Valve (DN 65 to 80) | Order no. 0340-3031 |
| Yoke to mount the actuator on Type 3260 Valve (DN 65 to 80) | Order no. 1890-8696 |
| Yoke to mount the actuator on Type 3260 Valve (DN 100 to 150) | Order no. 1400-8822 |
| Basic unit for limit contacts and/or resistance transmitters | Order no. 1400-8829 |
| Resistance transmitters | See Table 8. |
| Gear wheel for resistance transmitter PCB | Order no. 1992-5885 |

Table 8: Resistance transmitters · Selecting the actuator board ¹

| Supply voltage | | Type 3374 | -10 | -11 | -15 | -17 | -21 | -26 | -31 | -36 | -25 | -27 | -35 |
|----------------|--------------|------------|-----------|-----|-----|-----|-----------|-----|-----|-----|-----|-----|-----|
| 230 V, 50 Hz | Standard | Order no.: | 1180-9601 | | | | 1180-9607 | | | | | | |
| | Faster motor | Order no.: | 1180-9604 | | - | | 1180-9610 | | | - | | | |
| 24 V, 50 Hz | Standard | Order no.: | 1180-9603 | | | | 1180-9609 | | | | | | |
| | Faster motor | Order no.: | 1180-9606 | | - | | 1180-9612 | | | - | | | |

¹ Two gear wheels (order no. 1992-5885) are additionally required for a retrofit; the basic unit (1400-8829) is additionally required for the version without limit contacts and for a retrofit.

16.2 After-sales service

Contact our after-sales service for support concerning service or repair work or when malfunctions or defects arise.

You can reach our after-sales service at the following e-mail address.

▶ aftersaleservice@samsongroup.com

The addresses of SAMSON AG, its subsidiaries, representatives and service facilities worldwide can be found on our website at

▶ www.samsongroup.com or in SAMSON product catalogs.

Please submit the following details:

- Type designation
- Material number
- Serial number



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