MOUNTING AND OPERATING INSTRUCTIONS

EB 8331-3 EN

Translation of original instructions



Type 3374 Electric Actuator
Version with three-step signal

Edition May 2025

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 this document, contact SAMSON's After-sales Service (aftersalesservice@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

Note

Additional information

Tip

Recommended action

1 Safety instructions and measures 5
1.1 Notes on possible severe personal injury 6
1.2 Notes on possible personal injury 6
1.3 Notes on possible property damage 7
1.4 Warnings on the device 8

2 Markings on the device 9
2.1 Nameplate 9

3 Design and principle of operation 10
3.1 Mounting types 10
3.2 Non-floating torque switches 11
3.3 Fail-safe action 11
3.4 Additional equipment 11
3.5 Technical data 12
3.6 Dimensions 14

4 Shipment and on-site transport 18
4.1 Accepting the delivered goods 18
4.2 Removing the packaging from the actuator 18
4.3 Transporting the actuator 18
4.4 Lifting the actuator 18
4.5 Storing the actuator 18

5 Installation 19
5.1 Installation conditions 19
5.2 Preparation for installation 19
5.3 Mounting the actuator 19
5.3.1 Construction with integrated yoke (form B) 19
5.3.2 Construction with ring nut (form A) 22
5.4 Installing additional equipment 24
5.4.1 Retrofitting limit contacts 24
5.4.2 Installing the resistance transmitters 27
5.5 Electrical connection 30

6 Start-up 32
6.1 Adjusting the limit contacts 32
6.2 Adjusting the resistance transmitter 33

7 Operation 34
7.1 Manual mode 34
7.1.1 Mechanical override 34
7.1.2 Special version with handwheel 34

8 Malfunctions 35
8.1 Troubleshooting 35
8.2 Emergency action 35

9 Servicing 36

10 Decommissioning 37

11 Removal 38
11.1 Construction with integrated yoke 38
11.2 Construction with ring nut 38

12 Repair 40
12.1 Returning the actuator to SAMSON 40

13 Disposal..... 41

14 Certificates..... 42

15 Appendix..... 49
15.1 Parts for retrofitting and accessories..... 49
15.2 After-sales service..... 51

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 product (Type 3374). Work on the control valve on which the device is mounted or on the pipeline 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. Use of the device is no longer permitted in this case.

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 declarations of conformity and certificates are included in Chapter 14.

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 documents

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 (PICV)

▶ 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 Globe 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 8111/8112 for Type 3321 Globe 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 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 remove any covers to perform adjustment work on live parts.

The electric actuator is protected against water jets (IP65; older versions are protected against spray water, IP54).

⇨ Use the cable grip of the mounted cable glands.

⇨ Mount cable glands on versions with IP54.

1.2 Notes on possible personal injury

⚠ WARNING

Crush hazard arising from moving parts.

The following applies to the form-fit version of the electric actuator:
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 fingers 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.

⚠ WARNING

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

Over time, markings, labels and nameplates on the device 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 electric actuator is designed for use according to regulations for low-voltage installations.

⇨ Observe the permissible tolerances of the supply voltage.

NOTICE

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 torque.

NOTICE

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.

NOTICE

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.

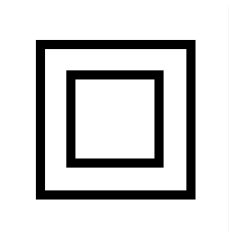
⇨ Make sure that single wires of multi-core or fine-stranded conductors do not touch neighboring terminals.

NOTICE

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

⇨ Use the mounted cable glands.

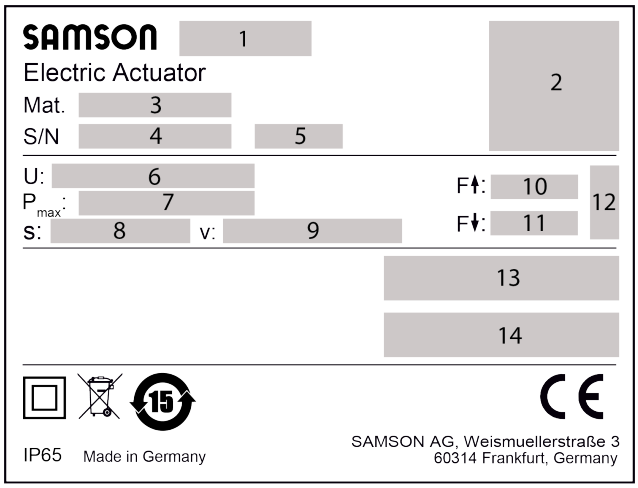
1.4 Warnings on the device

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 Identification code (scannable)
3 Material number
4 Serial number
5 Date of manufacture
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 Direction of action (fail-safe action)



Retracts



Extends

13 Resistance transmitter



14 Mechanical limit contacts



3 Design and principle of operation

The Type 3374 Electric Actuator is a 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 Non-floating torque switches

The actuator is equipped with two fixed torque switches.

They switch the control signal to a separate terminal after the end position is reached. This allows a further actuator to be controlled.

3.3 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 (register number on request).

3.4 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 transmitter

The actuator can optionally be equipped with two resistance transmitters. They 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.

3.5 Technical data

Table 1: *Technical data · General*

Type 3374	-10	-11	-15	-17	-21	-25	-26	-27	-31	-35	-36
Style[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										
Operating mode	S1 - 100 % according to EN 60034-1										
Cable entry	3x M20x1.5 cable gland (polyamide) with lock nut (metal), suitable for 6 to 12 mm cable diameter										
Permissible temperature ranges[2]											
Ambient	5 to 60 °C										
Storage	-25 to +70 °C										
Humidity	5 to 95 % relative humidity, no dew formation										
Material	Housing and cover: Plastic (glass-fiber reinforced PPO)										
Safety											
Degree of protection[3]	IP65 according to EN 60529 with mounted cable glands, suspended mounting position not permitted according to EN 60664-1										
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										

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

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 7) 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												
	Normal	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 transmitter		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.

3.6 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. SAMSON recommends a minimum clearance of 600 mm.

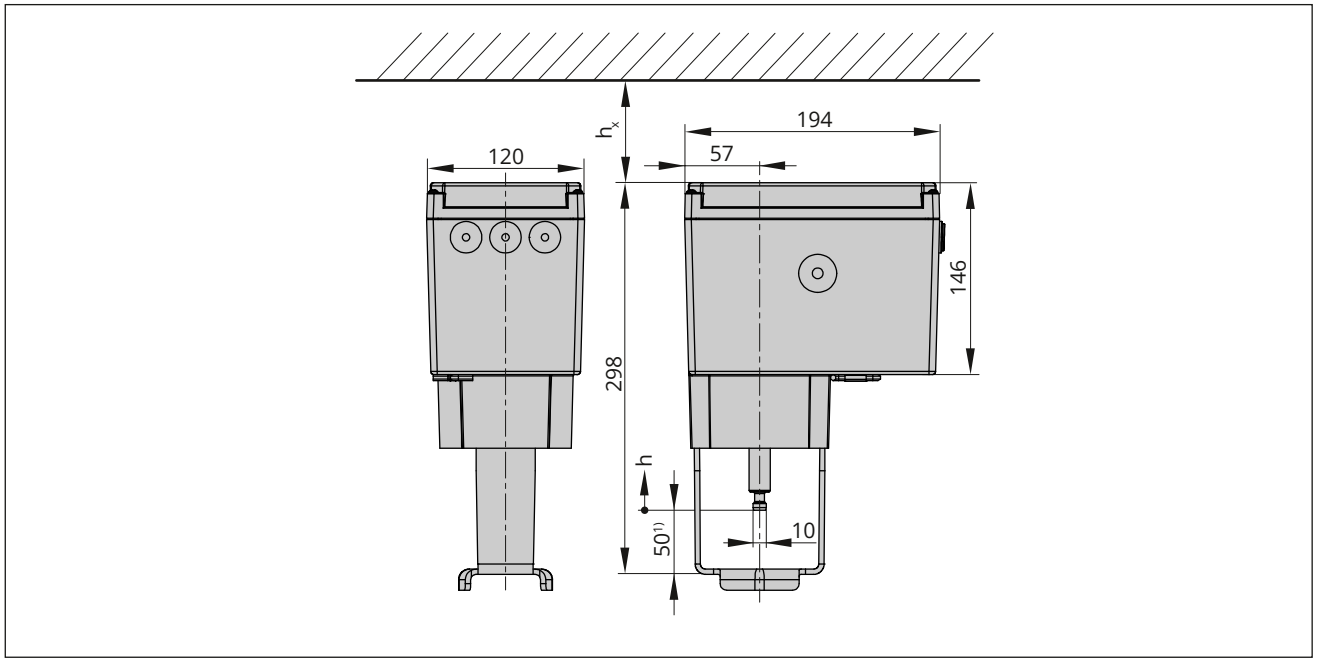


Fig. 3: *Dimensions in mm · Type 3374-10, -11, -21 and -31 (form B)*

1) When the actuator stem is fully extended

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	

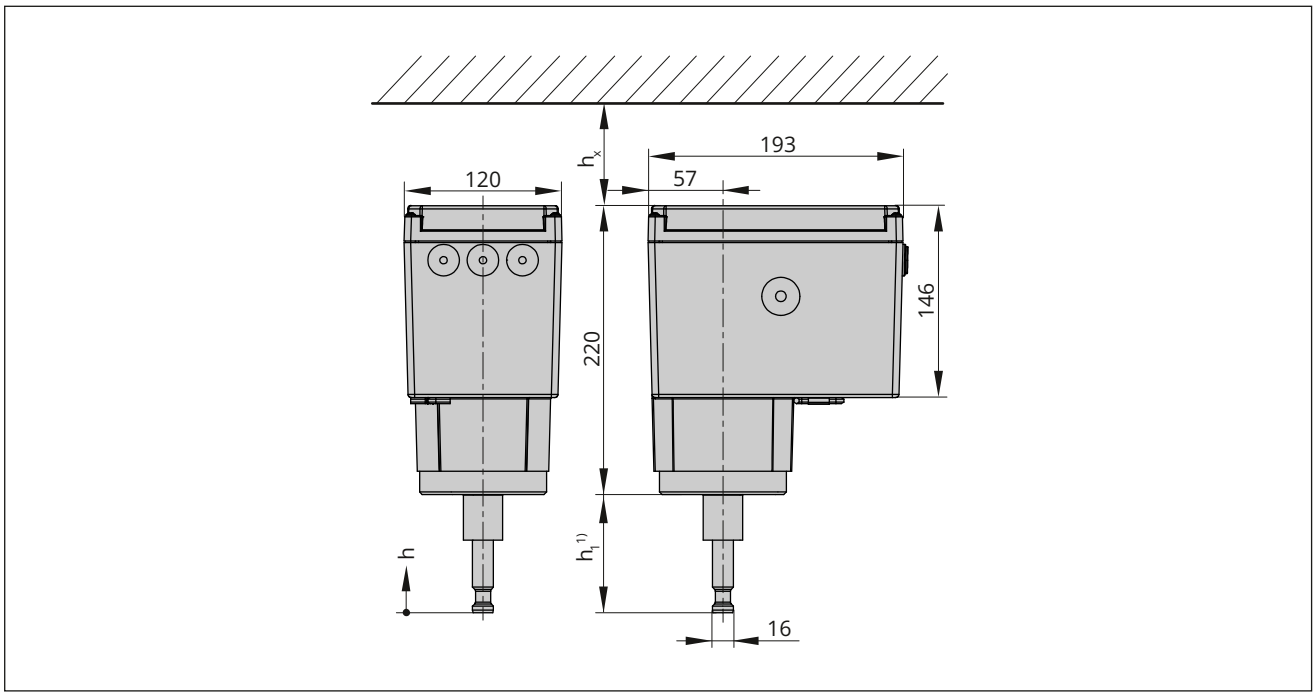


Fig. 4: *Dimensions in mm · Type 3374-15, -17, -26 and -36 (form A)*

1) When the actuator stem is fully extended

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			

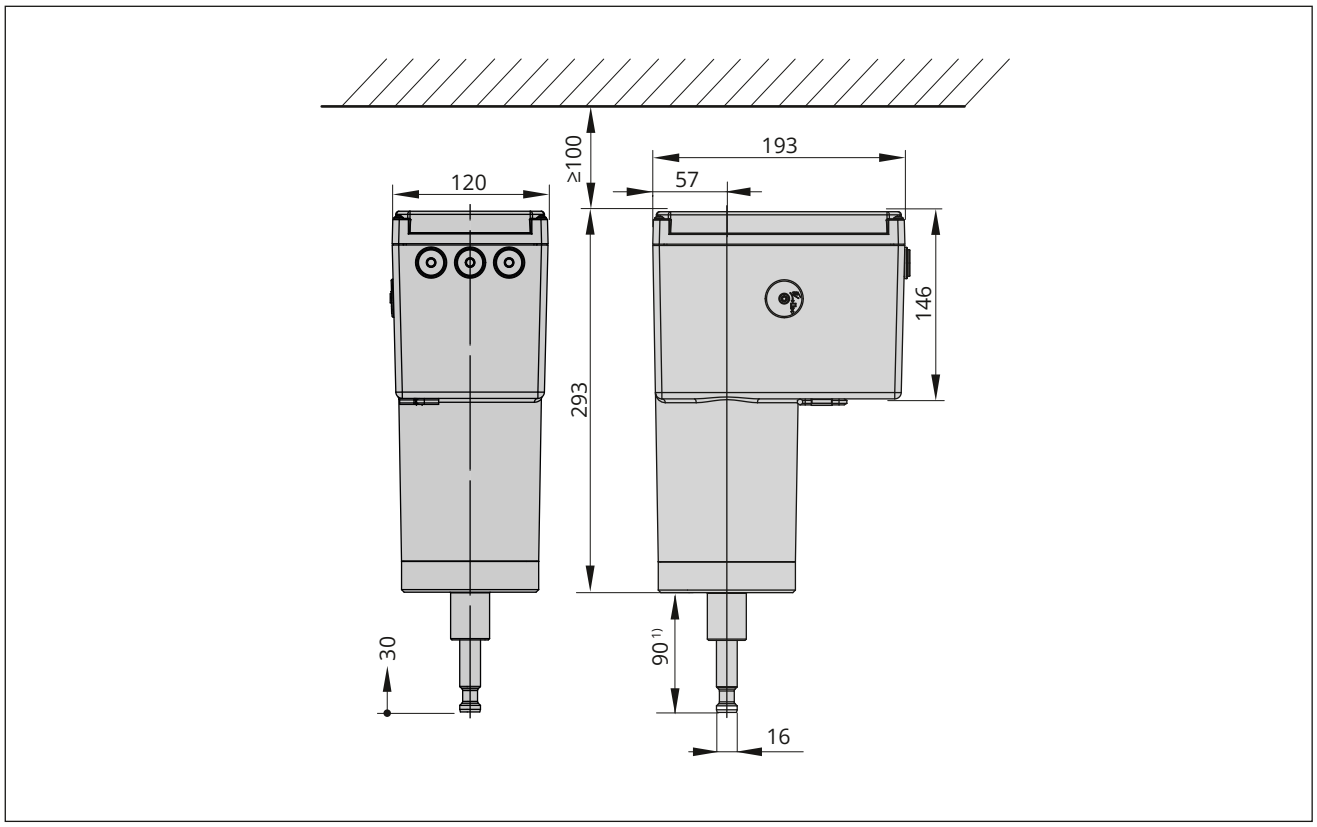


Fig. 5: *Dimensions in mm · Type 3374-25 and -27, form A version*

1) When the actuator stem is fully extended

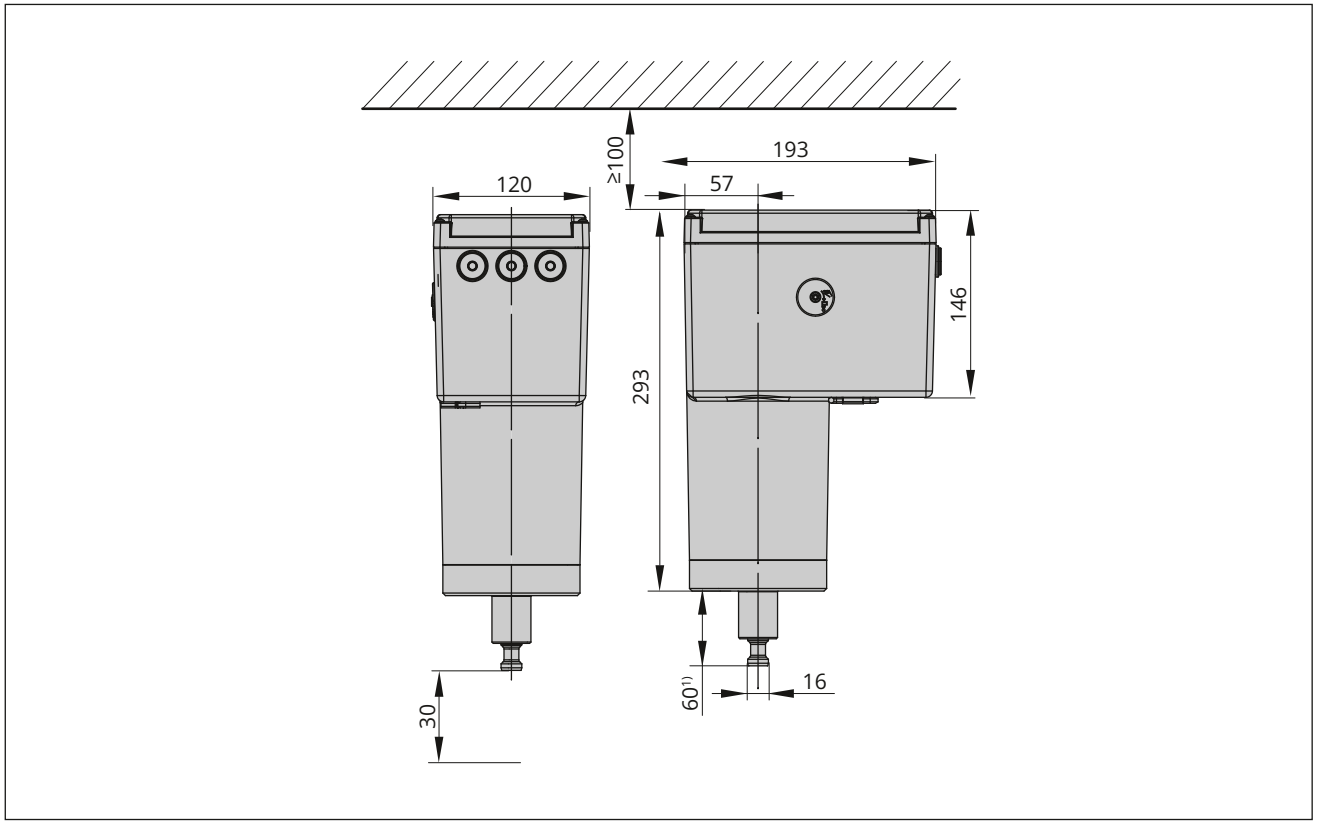


Fig. 6: *Dimensions in mm · Type 3374-35, form A version*

1) When the actuator stem is fully retracted

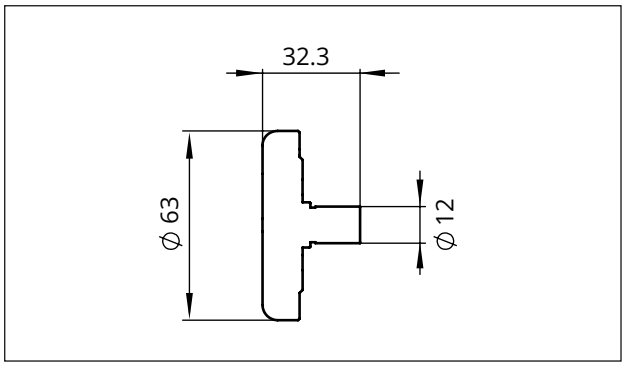


Fig. 7: *Dimensions in mm · Handwheel as special version*

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 IP 8331-3 EN document	
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 range 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 longer storage periods.*

⇨ *Contact SAMSON in case of different storage conditions or longer storage times.*

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.

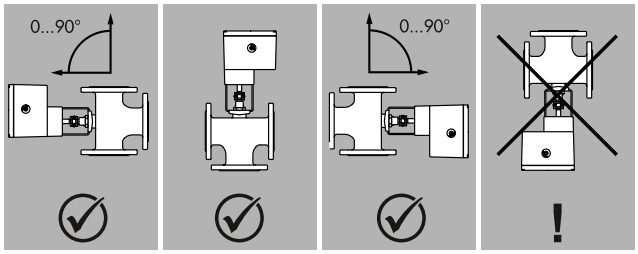


Fig. 8: *Mounting position*

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. 11.

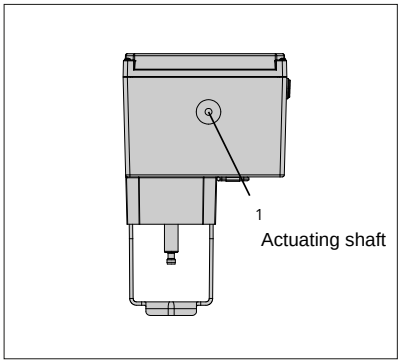


Fig. 9: *Actuating shaft for manual override (version with integrated yoke)*

1 Actuating shaft

1. Remove protective covers and unscrew nut (6) from the valve.

2. Retract actuator stem (3) (see Chapter 7.1.1).

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.*

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.



Fig. 10: *For example, Type 3374-21 Electric Actuator, mounted on a Series V2001 Globe Valve*

Types 3374-10/-11/-21/-31
Connection with yoke (form B)
Mounting on Series V2001 Valves (DN 15 to 50)
Type 3260, DN 65 to 150
Type 3214, DN 65 to 100

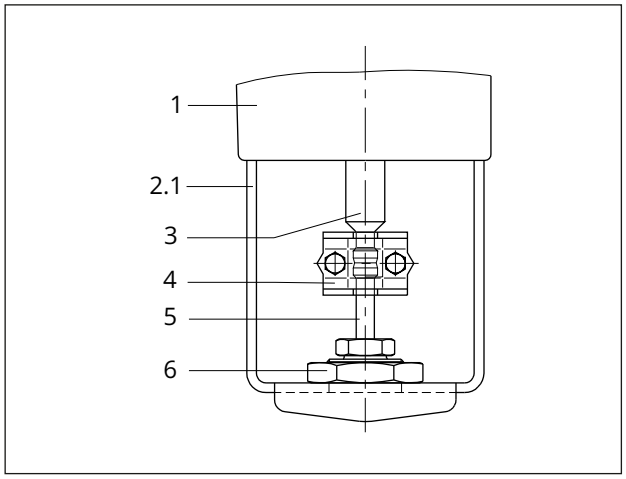


Fig. 11: *Mounting · Version with integrated yoke*

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. 12.

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 7.1.1).
   "Actuator stem extends" fail-safe action: Connect the supply voltage and retract the actuator stem using the manual override (see Chapter 7.1.1).
3. Place the actuator with yoke on the valve and fasten using the screws (11).

i ***Note***

A spacer (see Chapter 15) is required to mount a Type 3323 Three-way Valve.

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. 13) from the V2001 mounting kit and tighten.

Types 3374-10/-11/-21/-31
Connection with yoke (form B)
Mounting on Series V2001 Valves (DN 65 to 100)

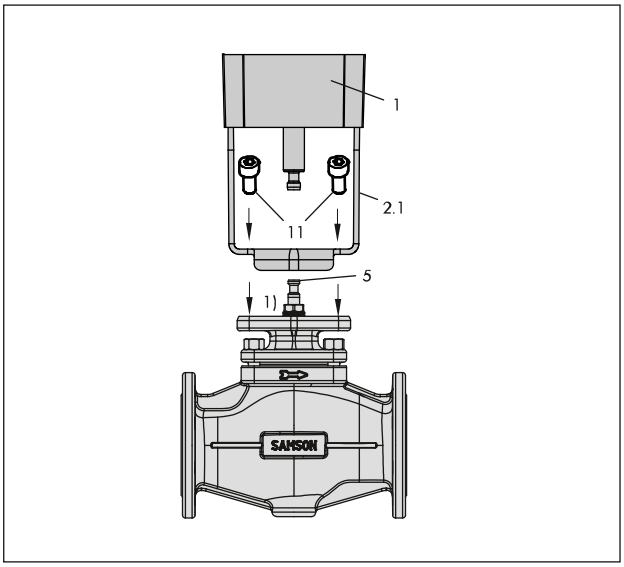


Fig. 12: *Mounting · Version with actuator yoke and V2001 accessories*

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.

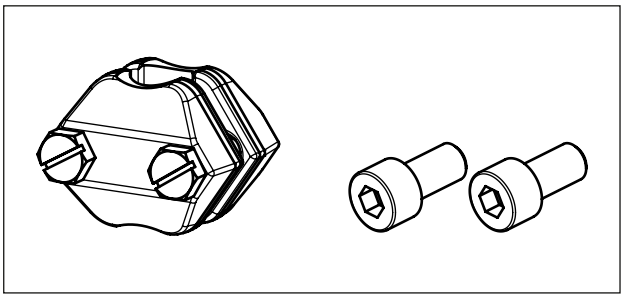


Fig. 13: *Mounting kit V2001*

i *Note*

The V2001 mounting kit is not included in the scope of delivery. It is available as an accessory (see Chapter 15.1).

5.3.2 Construction with ring nut (form A)

For mounting on:

- Series 240
- Series 250 (M30x1.5)
- Type 3214 balanced by a bellows (DN 125 to 250)
- Type 3260 (DN 65 to 100)
- Type 3260 (DN 100 to 150)

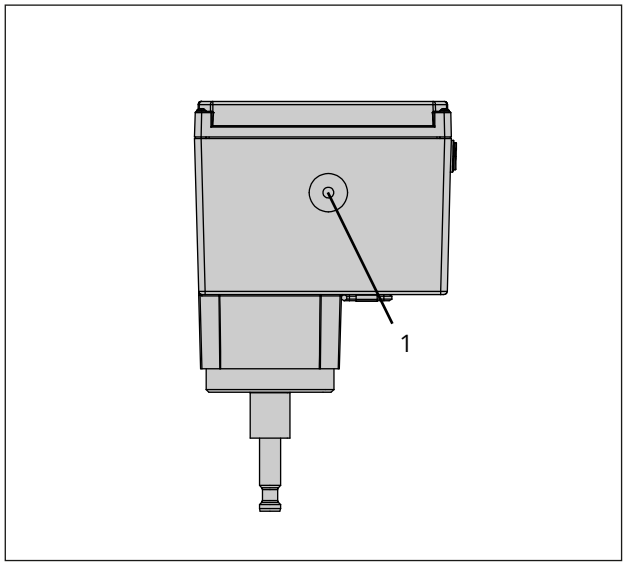


Fig. 14: *Actuating shaft for manual override (version with ring nut)*

1 Actuating shaft

Mounting on Series 240 and 250 Valves

⇨ See Fig. 15 (Series 240).

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 7.

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.*

4. Place actuator on the valve bonnet (2.3) and secure using the ring nut (7).

Tightening torque	150 Nm

5. When the stem connector nut (8) rests on the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.
6. Move actuator stem (3) to the end position (valve closed) as described in Chapter 7.1.1.
7. Align travel indicator scale (10) with the middle of the stem connector (4) and screw tight.

Types 3374-15, -17, -25, -26, -27, -35, -36
Connection with ring nut (form A)
Mounting on Series 240 Valves:

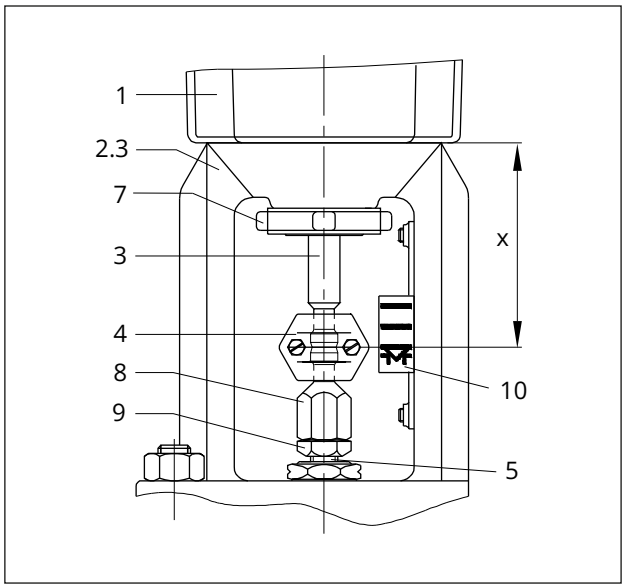


Fig. 15: *Mounting on Series 240 Valves*

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 7.1.1).

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 actuator on the valve and secure using the ring nut (7). If necessary, retract the actuator stem slightly beforehand.

Tightening torque	150 Nm

3. When the stem connector nut (5) rests on the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.

4. Move actuator stem (3) to the end position (valve closed) as described in Chapter 7.1.1.
5. Align travel indicator scale (10) with the middle of the stem connector (4) and screw tight.

Types 3374-15, -27
Connection with ring nut (form A)
Mounting on Type 3214 (DN 125 to 250), balanced by a bellows

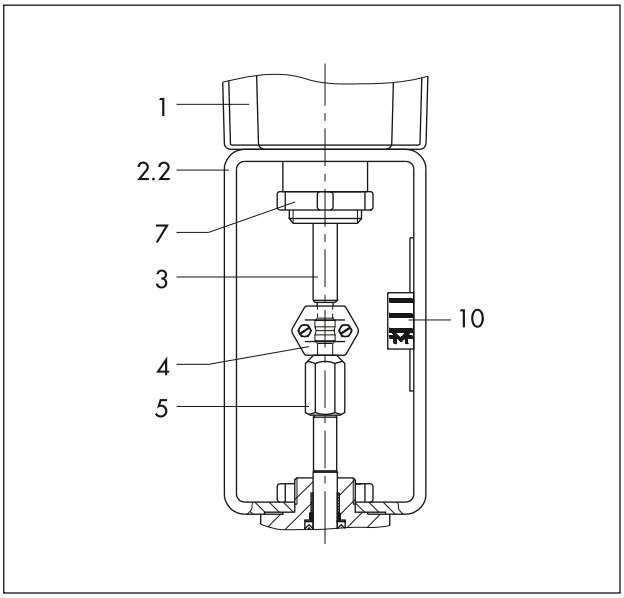


Fig. 16: *Mounting on Type 3214*

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. Retract the actuator stem as described in Chapter 7.1.1.

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 tighten.
3. Place actuator on the additional yoke and fasten using hex nut (2).

Tightening torque	150 Nm

4. When the stem connector nut (5) rests on the actuator stem (3), attach both stem connector clamps (4) and fasten with screws.

5. Move the actuator stem (3) to the end position (valve closed) as described in Chapter 7.

Types 3374-15, -27
Connection with ring nut (form A)
Mounting on Type 3260 (DN 65 to 150) and Type 3214 (DN 125 to 250), valves balanced by a diaphragm

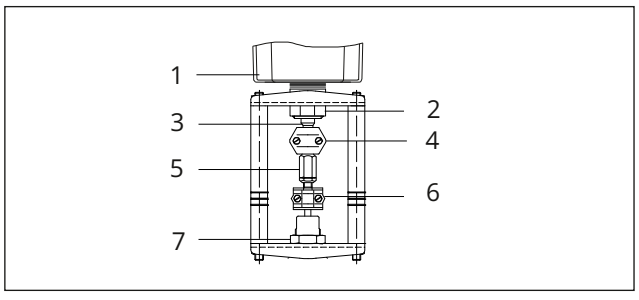


Fig. 17: *Mounting on Type 3260 Valve (DN 65 to 150) and Type 3214 (DN 125 to 250), valves balanced by a diaphragm*

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 25.*
– *See "Actuator with resistance transmitters", Page 27.*

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.

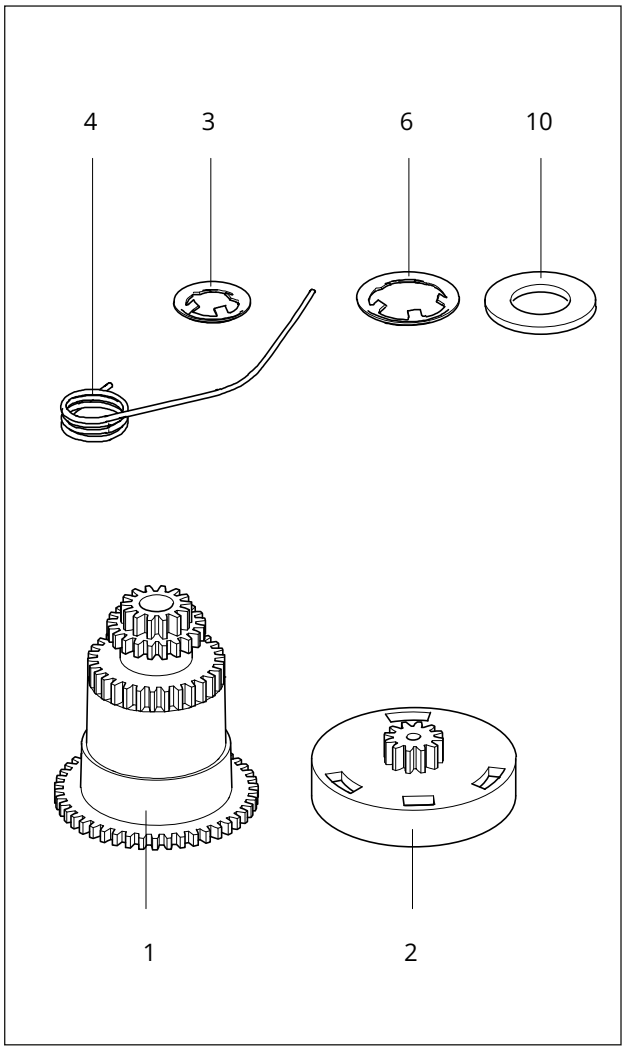


Fig. 18: *Basic unit*

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

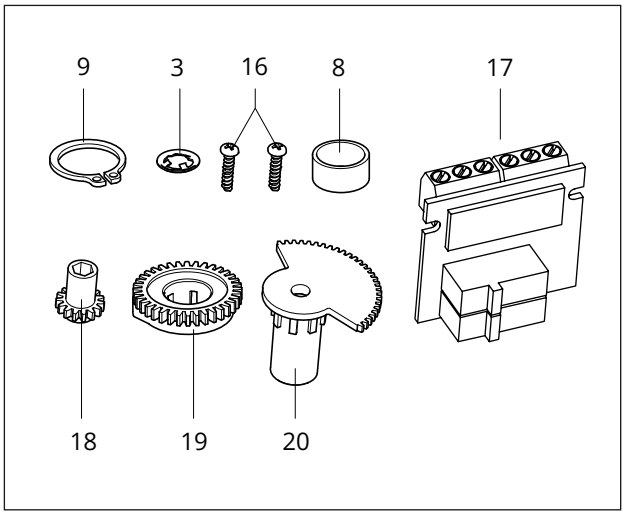


Fig. 19: *Mechanical limit contacts · Retrofit kit*

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 7).
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 6.
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.

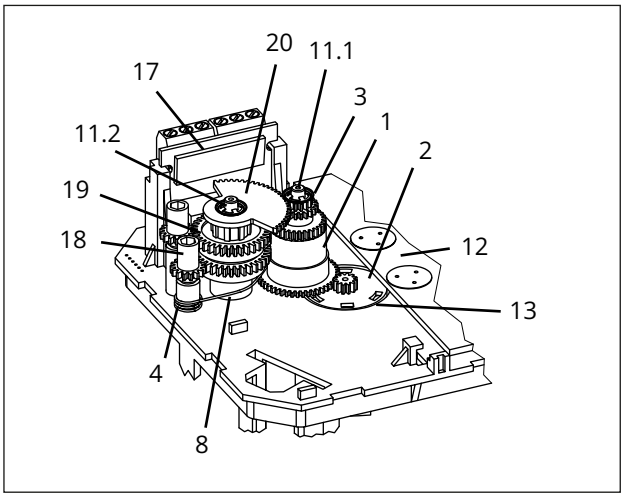


Fig. 20: *Inside view of Type 3374 Actuator*

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

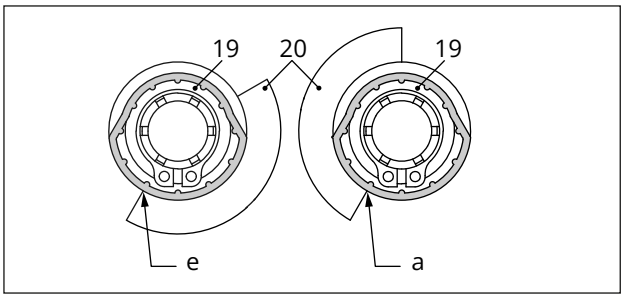


Fig. 21: *Contact cam and switch carrier*

e Actuator stem retracted
a Actuator stem extended
19 Contact cam
20 Switch carrier

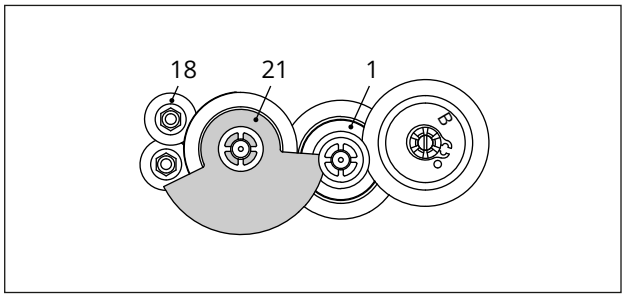


Fig. 22: *Contact cam unit with actuator stem retracted*

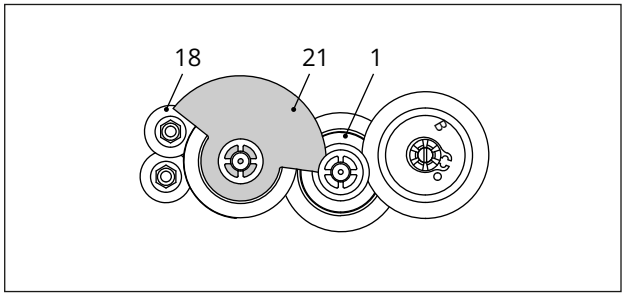


Fig. 23: *Contact cam unit with actuator stem extended*

1 Intermediate gear
18 Adjustment gear
21 Contact cam

Actuator with resistance transmitters

⇨ See Fig. 24.

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 7).
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.

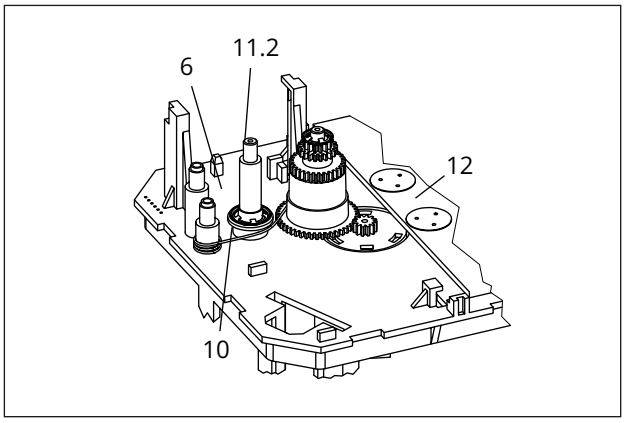


Fig. 24: *Inside view · Type 3374 Actuator with resistance transmitters*

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 Chapter 15).

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 Fig. 26.*
– *Actuators with limit contacts: see Fig. 27.*

Actuators without limit contacts

If the actuator does not have limit contacts, an additional retrofit kit (see Fig. 26) is required.

1. Unscrew fastening screws. Slide the actuator board (12) from its guiding to the right.
2. Remove the actuator board and replace it with a board carrying the resistance transmitters.
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. 25).
10. Slide the actuator board (12) into its guiding. Make sure that all the gears are properly engaged.
11. Fasten down the board.

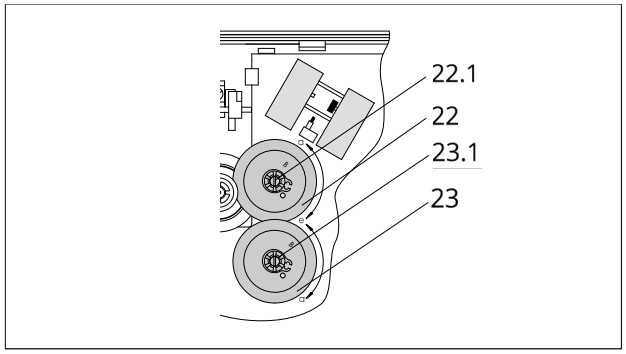


Fig. 25: *Gears with retaining rings*

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

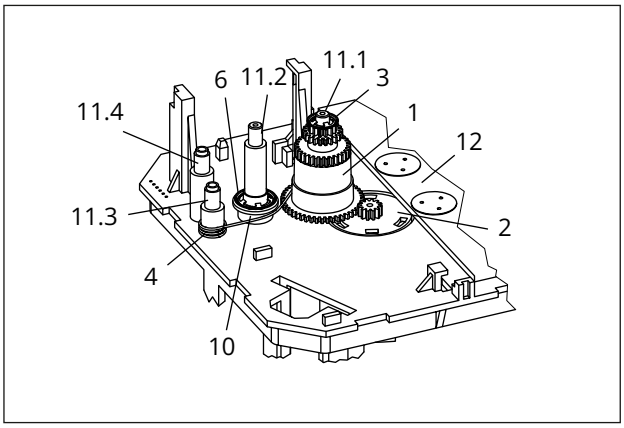


Fig. 26: *Inside view of Type 3374 Actuator without limit contacts*

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

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 7).
3. Unscrew fastening screws. Slide the actuator board (12) from its guiding to the right.
4. Remove the actuator board and replace it with a board carrying the resistance transmitters.
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.

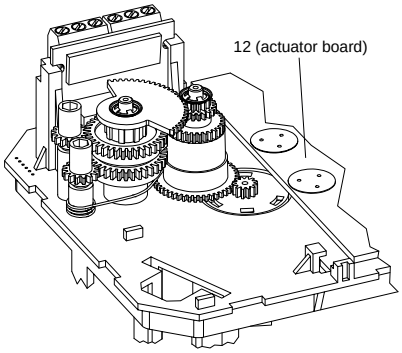


Fig. 27: *Inside view · Type 3374 Actuator with limit contacts*

12 Actuator board

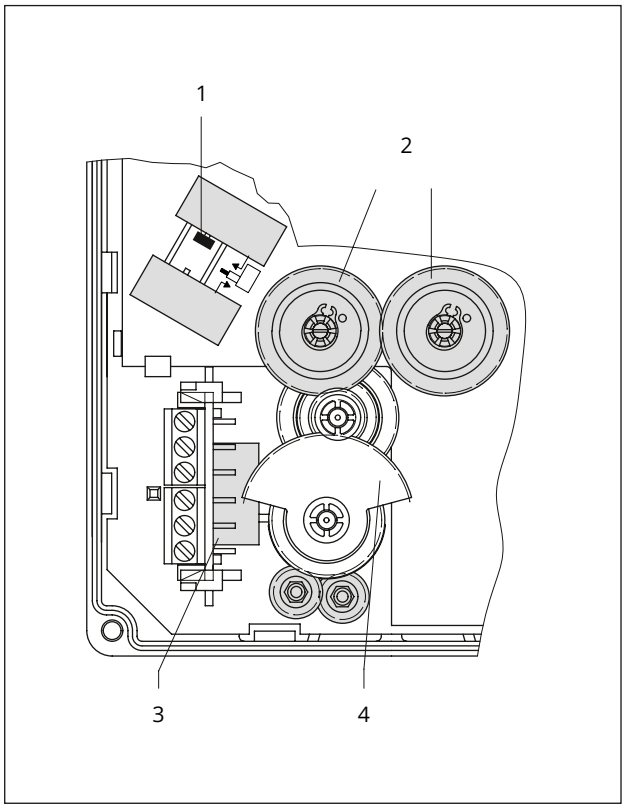


Fig. 28: *Partial view with opened cover · Type 3374*

1 Torque switches
2 Actuator gears for resistance transmitter
3 Limit contacts
4 Contact cams for 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 distribution system operator.*

⇨ *For electrical installation, observe the relevant electrotechnical regulations and the accident prevention regulations that apply in the country of use. In Germany, these are the VDE regulations and the accident prevention regulations of the employers' liability insurance.*

⇨ *Observe the relevant electrotechnical regulations of the country of use as well as the technical connection requirements of your local distribution system operator.*

⇨ *Before connecting wiring, performing any work on the device or opening the device, disconnect the supply voltage and protect it against unintentional reconnection.*

⇨ *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.*

⇨ *Only use protective equipment that can be protected against unintentional reconnection of the power supply.*

⇨ *Do not remove any covers to perform adjustment work on live parts.*

⇨ *Keep the housing cover closed in the energized state.*

⇨ *Do not touch the live wire ends of the switching output L'.*

⇨ *Insulate the wire ends when the switching output is not used.*

⇨ *Do not touch the live switching output L'.*

⚠ 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.*

⇨ Connect the wiring according to the following wiring plans.

⇨ Guide the cables to the spring-cage terminals from the top (see Table 4).

i *Note*

The permissible outside diameter of the lines used is 6 to 12 mm.

Table 4: *Cables and stranded wires that can be used*

Cable	Conductor cross-section
Single-wire H05(07) V-U [1)]	0.2 to 1.5 mm²
Fine-wire H05(07) V-K [1)]	0.2 to 1.5 mm²
With wire ferrule according to DIN 46228-1	0.25 to 1.5 mm²
With wire ferrule with collar according to DIN 46228-4	0.25 to 0.75 mm²

1) Length of insulation to be stripped off the conductor ends: 10 mm

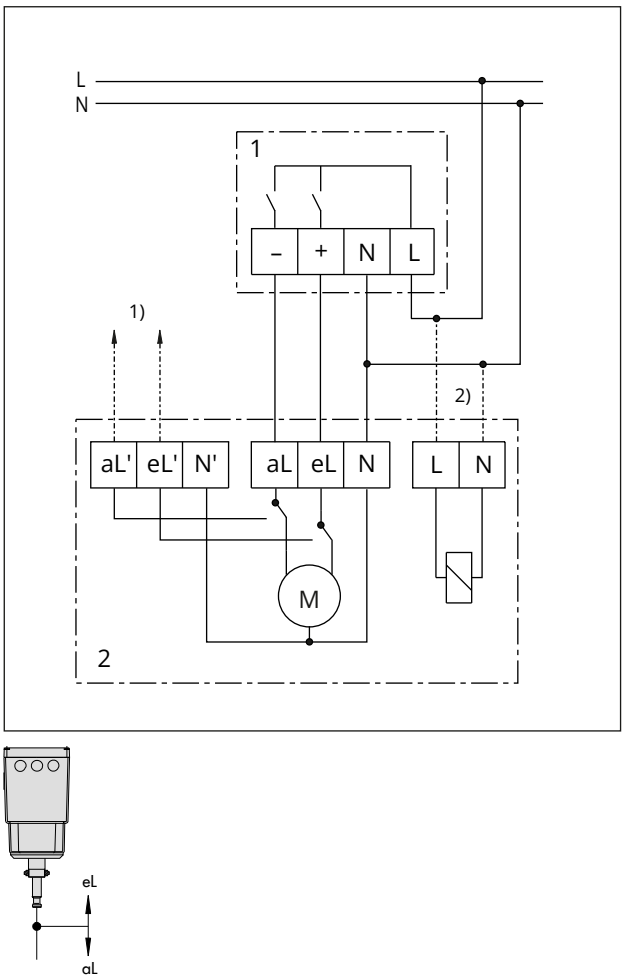


Fig. 29: *Electrical connection*

1 Controller

2 Type 3374 Electric Actuator

1) Signal feedforward for cascade control of several actuators after an actuator reaches its end position

2) Only for version with fail-safe action
The 'N' connection is not connected to the N terminals for actuator control. As a result, it is possible to connect an external supply for 'L' and 'N' connections.

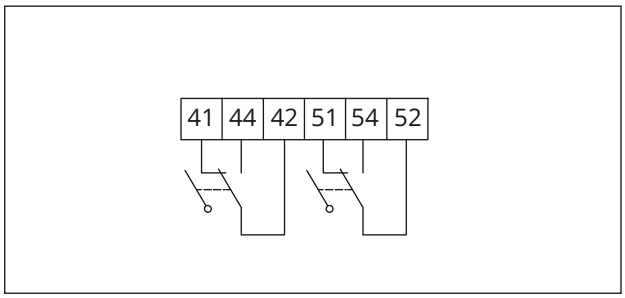


Fig. 30: *Mechanical limit contacts*

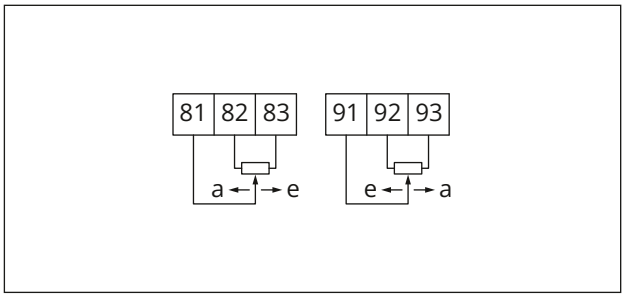


Fig. 31: *Resistance transmitter*

6 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 3.5).

6.1 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.

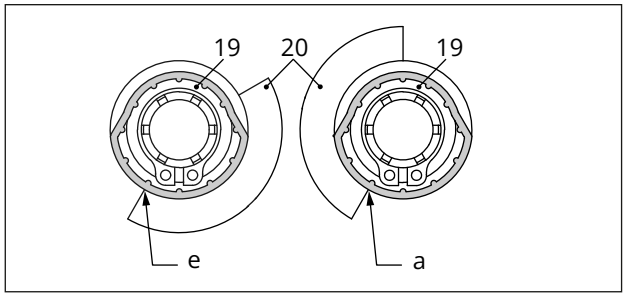


Fig. 32: *Contact cam and switch carrier*

e Actuator stem retracted
a Actuator stem extended
19 Contact cam
20 Switch carrier

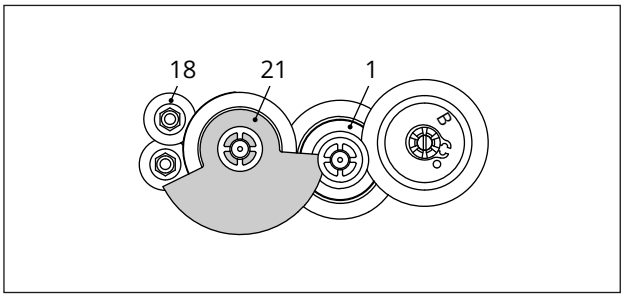


Fig. 33: *Contact cam unit with actuator stem retracted*

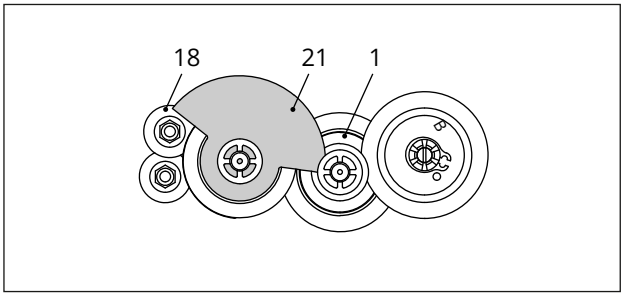


Fig. 34: *Contact cam unit with actuator stem extended*

1 Intermediate gear
18 Adjustment gear
21 Contact cam

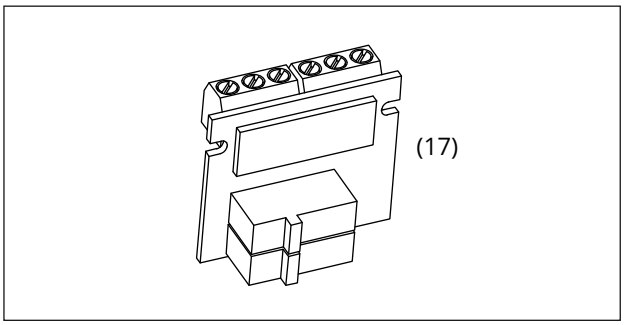


Fig. 35: *Limit contact board (17)*

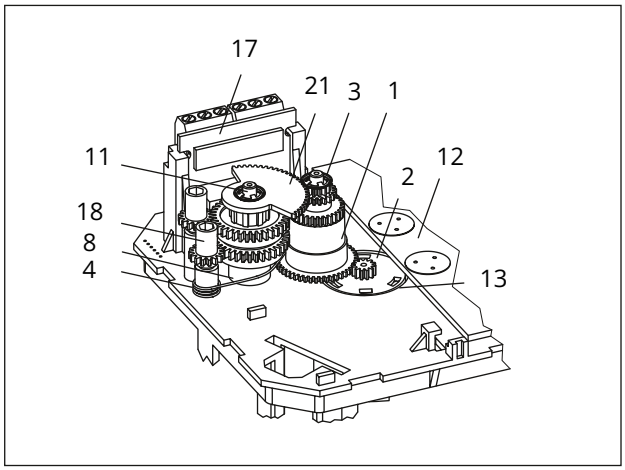


Fig. 36: *Inside view · Retrofitting limit contacts*

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

6.2 Adjusting the resistance transmitter

The gears of the resistance transmitters (22 and 23, see Fig. 37) 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.

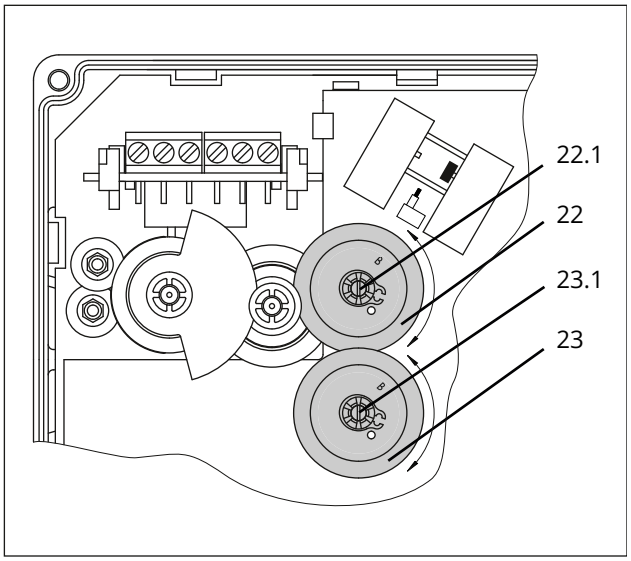


Fig. 37: *Zero adjustment*

Legend for Fig. 37

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

7 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.

7.1 Manual mode

7.1.1 Mechanical override

To operate the manual override, place a 4 mm hex wrench on the red actuating shaft located at the side of the housing (see Fig. 38).
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.

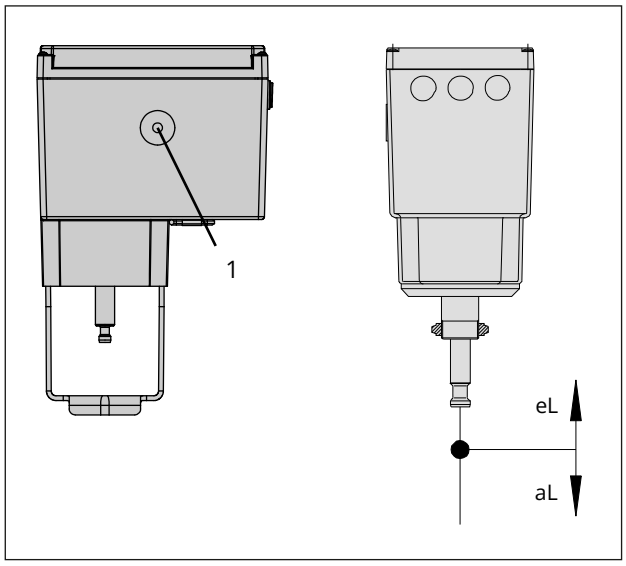


Fig. 38: *Mechanical override*

1 Actuating shaft

i *Note*

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

7.1.2 Special version with handwheel

The additional handwheel is used for mechanical override in the special version of the electric actuator with handwheel (see Fig. 39).



Fig. 39: *Special version with handwheel*

8 Malfunctions

8.1 Troubleshooting

⇨ See Table 5.

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 its full range.	No or incorrect supply voltage connected.	⇨ Check the supply voltage and connections.

8.2 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.

9 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.

10 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 put the electric actuator out of operation 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.

i *Note*

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

11 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.*

11.1 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 7.1.1.
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 7.1.1.
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.

11.2 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 7.
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 7.
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.

12 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.*

12.1 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 11).
2. Proceed as described on our website at ▶ www.samsongroup.com > Service > After-sales Service > Returning goods.

13 Disposal



SAMSON is a producer registered in Europe, agency in charge
▶ www.samsongroup.com > About SAMSON > Environment, Social & Governance > Material Compliance > Waste electrical and electronic equipment (WEEE)
WEEE reg. no.: DE 62194439

Information on substances listed as substances of very high concern (SVHC) on the candidate list of the REACH regulation can be found in the document “Additional Information on Your Inquiry/Order”, which is added to the order documents, if applicable. This document includes the SCIP number assigned to the devices concerned. This number can be entered into the database on the European Chemicals Agency (ECHA) website (▶ https://www.echa.europa.eu/scip-database) to find out more information on the SVHC contained in the device.

Note

SAMSON can provide you with a recycling passport on request. Simply e-mail us at aftersalesservice@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.

⇨ Observe local, national and international refuse regulations.

⇨ Do not dispose of components, lubricants and hazardous substances together with your other household waste.

14 Certificates

The following certificates are included on the next pages:

– EU declarations of conformity

– Declaration of incorporation

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

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

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.

ppa.

Marcus Miertz
Senior Vice President Sales and Marketing

i.V. G. Nahler

Gert Nahler
Director Automation Technology

EU DECLARATION OF CONFORMITY

Translation of the German original

Module D / N° CE-0062-PED-D-SAM 001-25-DEU-rev-A

For the following products, SAMSON hereby declares under its sole responsibility:

Devices	Series	Type	Version
Control valve for hot water and steam with fail-safe action in heating systems	3374-25/-27 Actuator (1800 N/3000 N force)		Type 3374-25 with Type 3241, 42-36 E (2423E), Type 3374-27 with Type 3241, 3214 (2814), Certificate no.: 01 202 969/B-24-0010, typetested according to DIN EN 14597:2015
Control valve for hot water and steam with fail-safe action in heating systems	3374-21/-26 Actuator (2000 N force)		With Type 3241, 42-36 E, 3214, 3321, 3531 EU-type examination (production type), Module B, Certificate no.: CE-0062-PED-B3.1-SAM 001-26-DEU, typetested according to DIN EN 14597:2015
Control valve for water and steam with fail-safe action in heating systems	5725-310/-313/-320/-323 Actuator 5725-810/-820 Actuator 5825-10/-13/-20/-23 Actuator (500 N force) (model number 2770)		With Type 3214 (2814), 2423 (2823), 3213 (2710), 3222 (2710), 2488 (2730), 2489 (2730) EU-type examination (production type), Module B, Certificate no.: 01 202 641/B-19-0017-01, typetested according to DIN EN 14597:2015, Annex DX
Control valve for water and steam with fail-safe action in heating systems	5827-A11/-A12/-A14/-A15 Actuator 5827-A21/-A22/-A24/-A25 Actuator		With Type 3214 (2814), 2423 (2823), 3213 (2710), 3222 (2710), 2488 (2730), 2489 (2730) EU-type examination (production type), Module B, Certificate no.: 01 202 641/B-19-0017-01, typetested according to DIN EN 14597:2015, Annex DX
Safety shut-off device for gas burners and gas equipment	240	3241G Valve	Equipment for gas and pressure devices Shut-off valve, automatic, valve class D Types 3241-1-Gas and 3241-7-Gas Material 1.0619 or 1.4408, soft seal with bellows, DN 15 to 150, PN 40 Type 3271 or 3277 Actuator with 3/2-way solenoid valve, EU-type examination (production type), Module B, Certificate no.: CE-0062-PED-B3.1-SAM 001-24-DEU

Conformity with the following requirement:

Directive of the European Parliament and of the Council on the harmonization of the laws of the Member States relating to the making available on the market of pressure equipment	2014/68/EU	of 15 May 2014
Conformity assessment procedure applied for liquids according to Article 4(1)	Module D	Certificate no.: N°CE-0062-PED-D-SAM 001-25-DEU-rev-A by Bureau Veritas 0062

The manufacturer's quality management system is monitored by the following notified body:
Bureau Veritas Services SAS, 4 place des Saisons, 92400 Courbevoie, France

4C00507045 | English | 1.2 | Revision: 15

Applied harmonized standards and technical standards: EN 16668, ASME B16.34, EN 60534-4, DIN EN 161:2013-04 (3241G), DIN EN 16678:2016-02 (3241G)

Manufacturer: SAMSON AKTIENGESELLSCHAFT, Weismüllerstraße 3, 60314 Frankfurt am Main, Germany

Frankfurt am Main, 25 February 2026



Dr. Andreas Widl
Chairman of the Executive Board (CEO)



ppa. Sebastian Krause
Vice President Product Development

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 Electric Control Valve consisting of Type 3214 Valve and Type 3374, Type 3274 or Type 3375 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:

- Types 3214/3374, 3214/3274, 3214/3375 Electric Control Valves:
  Mounting and Operating Instructions EB 5868-1

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, 14 January 2025

ppa. Steffen Runkwitz

Steffen Runkwitz
Vice President
Global Sourcing

i. V. P. Scheermesser

Peter Scheermesser
Director
Product Maintenance & Engineered Products

Revision no. 00

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

ppc.

Norbert Tollas
Senior Vice President
Global Operations

i. V. P.

Peter Scheermesser
Director
Product Maintenance & Engineered Products

Revision no. 00

DECLARATION OF INCORPORATION
TRANSLATION

Declaration of Incorporation in Compliance with Machinery Directive 2006/42/EC

For the following product:
Type 3374 Actuator

We certify that the Type 3374 Electric Actuator is partly completed machinery as defined in the Machinery Directive 2006/42/EC and that the safety requirements stipulated in Annex I, 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 and 1.5.8 are observed. The relevant technical documentation described in Annex VII, part B has been compiled.

Products we supply must not be put into service until the final machinery into which it is to be incorporated has been declared in conformity with the provisions of the Machinery Directive 2006/42/EC.

Operators are obliged to install the products observing the accepted industry codes and practices (good engineering practice) as well as the mounting and operating instructions. Operators must take appropriate precautions to prevent hazards that could be caused by the process medium and operating pressure in the valve as well as by the signal pressure and moving parts.

The permissible limits of application and mounting instructions for the products are specified in the associated mounting and operating instructions; the documents are available in electronic form on the Internet at www.samsongroup.com.

For product descriptions refer to:
- Type 3374 Electric Actuator: Mounting and Operating Instructions EB 8331-3/EB 8331-4

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

Comments:
- See mounting and operating instructions for residual hazards.
- Also observe 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, 27 April 2022

i.V.
Stephan Giesen
Director
Product Management

i.V.
Sebastian Krause
Director
Development Valves and Actuators

15 Appendix

15.1 Parts for retrofitting and accessories

Table 7: *Parts for retrofitting and accessories*

Parts for retrofitting/accessories	Order no.
Set including three M20x1.5 polyamide cable glands with metal lock nut (A/F 23/24), suitable for 6 to 12 mm cable diameter (spare part)	1400-8828
Mounting kit V2001	1400-9515
Spacer to mount the actuator on Type 3323 Valve	0340-3031
Yoke to mount the actuator on Type 3260 Valve (DN 65 to 80)	1890-8696
Yoke to mount the actuator on Type 3260 Valve (DN 100 to 150)	1400-8822
Basic unit for limit contacts and/or resistance transmitters	1400-8829
Mechanical limit contacts	100213441
Resistance transmitter	⇨ See Table 8.
Gear wheel for resistance transmitter PCB	1992-5885

Table 8: *Resistance transmitters · Selecting the actuator board* [1)]

Type 3374		-10	-11	-15	-17	-21	-26	-31	-36	-25	-27	-35
Supply voltage	Stroking speed	Order no.										
230 V, 50 Hz	0.125 mm/s	100216330			–	100216332				–		
	0.25 mm/s	100216334			–	100216337				–		
	0.1 mm/s	–			100216334	–				100216337		
24 V, 50 Hz	0.125 mm/s	100216320			–	100216322				–		
	0.25 mm/s	100216325			–	100216327				–		
	0.1 mm/s	–			100216325	–				100216327		

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.

15.2 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:

▶ aftersalesservice@samsongroup.com

The addresses of SAMSON AG, its subsidiaries, representatives and service facilities worldwide can be found on our website (▶ www.samsongroup.com) or in all product catalogs.

Please submit the following details:

- Type designation
- Material number
- Serial number

SAMSON AKTIENGESELLSCHAFT
Weismüllerstraße 3 · 60314 Frankfurt am Main, Germany
Phone: +49 69 4009-0 · Fax: +49 69 4009-1507
samson@samsongroup.com · www.samsongroup.com

2026-08-26 | English | 4000512034 | 1.19