

Electric Control Valves

Types 3213/5857, 3213/5824,

Types 3214/5824, 3214/3374, 3214/3274

with safety function:

Types 3213/5825, 3214/5825, 3214/3374, 3214/3274

SAMSON

Pneumatic Control Valves

Types 3213/2780-1, 3213/2780-2, 3214/2780-2



*Type 3213/5857
Electric Control Valve*



*Type 3214-5824
Electric Control Valve*



*Type 3213/2780-2
Pneumatic Control Valve
version for steam*



*Type 3214/3274
Electric Control Valve*

Mounting and Operating Instructions

EB 5868/5869 EN

Edition February 2009



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Typetest

Electric actuators with safety function in conjunction with valves are typetested according to DIN 32730 by the German technical inspectorate TÜV. Register number available on request.

General safety instructions



- ▶ *The control valves may only be mounted, started up or serviced by fully trained and qualified personnel, observing the accepted industry codes and practices. Make sure employees or third persons are not exposed to any danger.
All safety instructions and warnings in these mounting and operating instructions, particularly those concerning assembly, start-up and maintenance, must be observed.*
- ▶ *The control valves fulfill the requirements of the European Pressure Equipment Directive 97/23/EC. Valves with a CE marking have a declaration of conformity which includes information about the applied conformity assessment procedure. The declaration is available on request.*
- ▶ *For appropriate operation, make sure that the control valve is only used in applications where the operating pressure and temperature do not exceed the operating values which are based on the valve sizing data submitted in the order.
The manufacturer does not assume any responsibility for damage caused by external forces or any other external influence!
Any hazards which could be caused in the control valve by the process medium, the operating pressure, the signal pressure or by moving parts are to be prevented by means of the appropriate measures.*
- ▶ *Proper shipping and appropriate storage of the control valve are assumed.*

Caution!



- ▶ *For installation and maintenance, make sure the relevant section of the pipeline is depressurized and, depending on the process medium, drained as well. If necessary, allow the control valve to cool down or warm up to reach ambient temperature prior to starting any work on the valve.*
- ▶ *The electric actuators have been designed for use in electrical power installations. For wiring and maintenance, you are required to observe the relevant safety regulations.*
- ▶ *Only use power interruption devices which are protected against unintentional reconnection of the power supply.*
- ▶ *Take special care when making adjustments on live parts. Do not remove any covers!*

1 Design and principle of operation

The control valves consist of a Type 3213 or Type 3214 Globe Valve (balanced) and either an electric or pneumatic actuator. Valves in DN 15 to 50 sizes have a force-locking connection and valves in DN 65 to 250 sizes have a form-fit connection.

The process medium flows through the valve in the direction indicated by the arrow. The position of the valve plug determines the flow rate over the cross-sectional area released between the plug (3) and valve seat (2). The plug is moved by a change in the control signal acting on the actuator. In balanced valves, the upstream pressure is transferred through the hole in the plug stem (6) to the outside of the bellows and the downstream pressure to the inside of the

bellows. The forces acting on the valve plug are thus eliminated and the valve is fully balanced.

Control valves with safety function (Type 5825, Type 3374-21, Type 3274-23 Actuators) are equipped with a spring-return mechanism. On interruption of the safety interlock circuit or when the power fails, the control valve closes.

For the pneumatic control valves, the fail-safe action of the Type 2780-1 and 2780-2 Pneumatic Actuator is determined by the actuator springs in either the top or bottom diaphragm chamber to either close the valve (actuator stem extends) or open the valve (actuator stem retracts) when the signal pressure fails. The Type 2780-2 Actuator allows integral positioner attachment.

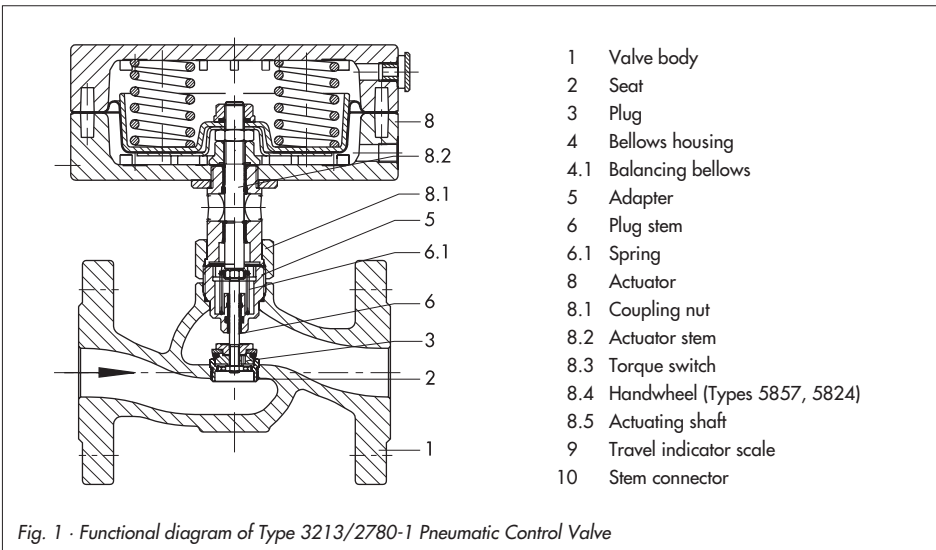


Fig. 1 · Functional diagram of Type 3213/2780-1 Pneumatic Control Valve

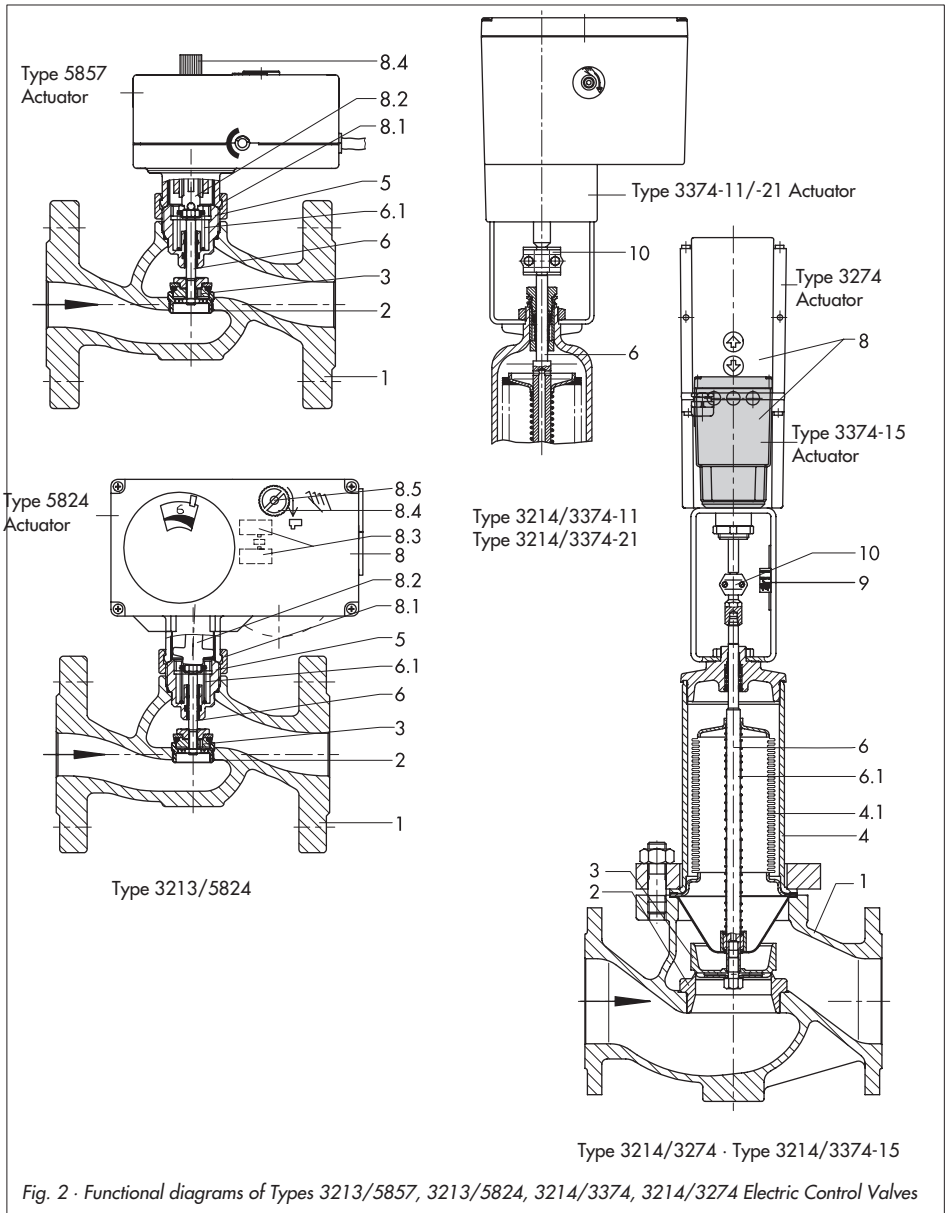


Fig. 2 - Functional diagrams of Types 3213/5857, 3213/5824, 3214/3374, 3214/3274 Electric Control Valves

1.1 Versions

▶ Type 3213 Globe Valve with unbalanced plug

	PN	DN	EB*
Electric control valves			
Type 3213/5857	25	15 to 25	5857
Type 3213/5824	25	15 to 25	5824
	16	32 to 50	
... with safety function (typetested)			
Type 3213/5825	25	15 to 25	5824
	16	32 to 50	
Pneumatic control valves			
Type 3213/2780-1	25	15 to 25	5840
	16	32 to 50	
Type 3213/2780-2	25	15 to 25	
	16	32 to 50	

* Refer to the mounting and operating instructions (EB) for more details on the actuators.

▶ Type 3214 Globe Valve with pressure-balanced plug

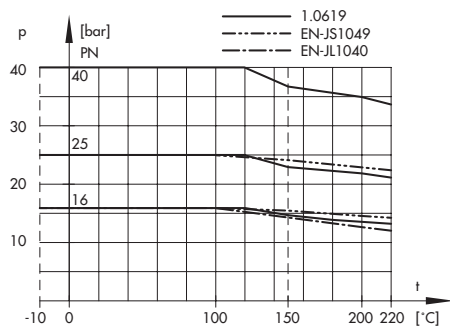
	PN	DN	EB*
Electric control valves			
Type 3214/5824	16 to 40	15 to 50	5824
Type 3214/3374		65 to 250	8331
Type 3214/3274		125 to 250	8340
... with safety function (typetested)			
Type 3214/5825	16 to 40	15 to 50	5824
Type 3214/3374-21		65 to 250	8331
Type 3214/3274-23		125 to 250	8340
Pneumatic control valves			
Type 3214/2780-2	16 to 40	65 to 100	5840

* Refer to the mounting and operating instructions (EB) for more details on the actuators.

1.2 Technical data

Pressure-temperature diagram

All permissible pressures and differential pressures specified in the tables are restricted by this diagram and the nominal pressure rating.



1a. Type 3213 Globe Valve

Nominal size	DN	15	20	25	32	40	50
Nominal pressure		PN 25			PN 16		
Permissible temperature (upright)	°C	150			150		
Version for steam	°C	200			On request		
Rated travel	mm	6			12		
Rangeability		50 : 1					
Leakage class		Class I (< 0.05 % of K _{VS} coefficient)					

Materials

Nominal pressure	PN 16	PN 25
Valve body	EN-JL1040 (GG-25)	EN-JS1049 (GGG-40.3)
Seat	1.4305	1.4305
Plug	1.4305 with metal sealing	Brass with EPDM soft sealing or FPM (FKM) seal
Special version	–	K _{VS} = 0.1 to 2.5: 1.4305 with metal sealing
Plug stem	1.4305	
Spring	1.4310	
Guided nipple	Brass with EPDM seal or FPM (FKM) seal	
Insulating section (version for steam)	1.4571	

Nominal size and K_{VS} coefficients

Nominal size	DN	15	20	25	32	40	50	
Rated travel	mm	6	6	6	12	12	12	
K _{VS} coefficient		4	6.3	8	16	20	32	
Max. differential pressure in bar								
Type 5824/Type 2780		10	10	10	2.9	2.9	1.6	
Type 5857		5	5	5	–	–	–	
Special version								
K _{VS} coefficient		0.1 · 0.16 · 0.25 · 0.4 · 0.63 · 1.0 · 1.6	2.5	2.5	–	–	–	40
Max. differential pressure in bar								
Type 5824/Type 2780		20	10	10	–	–	1	
Type 5857		20	5	5	5	–	–	

1b. Type 3214 Globe Valve

Nominal size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250		
Nominal pressure		PN 16 to 40														
Perm. temperature (upright)	°C	150 ¹⁾						220			150 ¹⁾					
Version up to 220 °C	°C	220						-								
Rated travel	mm	6			12			15			30					
Rangeability		50 : 1						40 : 1			30 : 1					
Leakage class		Class I (< 0.05 % of K _{V5} coefficient)														

¹⁾ Special version with metal-seated plug or plug with PTFE soft sealing: 220 °C

Materials

Nominal pressure		PN 16	PN 25	PN 40
Valve body		EN-JL1040 ¹⁾	EN-JS1049 or 1.0619	1.0619
Seat and plug	DN 15 to 100	CrNi steel · Special version with EPDM soft sealing		
	DN 125 to 250	CrNiMo steel with EPDM soft sealing · Special version with metal sealing		
Plug stem		1.4301		
Bellows housing		1.0425		
Balancing bellows		1.4571		
Guided nipple	DN 15 to 50	Brass with EPDM seal or FPM (FKM) seal		
Packing	DN 65 to 250	V-ring packing PTFE with carbon		
Insulating section for version up to 220 °C		1.4305 with EPDM seal or FPM (FKM) seal		

¹⁾ Special version EN-JS1049 or 1.0619

Nominal sizes and K_{V5} coefficients

Nominal size	DN	15	20	25	32	40	50	65	80	100	125	150	200	250
Rated travel	mm	6	6	6	12	12	12	15	15	15	30	30	30	30
K _{V5} coefficient		4	6.3	8	16	20	32	50	80	125	200	320	500	600
	With flow divider	-	-	-	-	-	-	38	60	95	150	210	315	375
Reduced K _{V5} coefficient		2.5	2.5 · 4	2.5 · 4 · 6.3	8	8 · 16	8 · 16 · 20	-						
Max. differential pressure	bar	25	25	25	25	25	25	20 ¹⁾	20 ¹⁾	16	16	12 ²⁾	10 ²⁾	10 ²⁾

¹⁾ With Type 2780-2 Actuator: $\Delta p = 16$ bar

²⁾ A special version is needed when Type 3274 Actuator in DN 150 to 250 is used for steam applications

2. Electric actuators

Type	5857 ¹⁾	5824 ²⁾				5825 ²⁾				
		-10	-20	-13	-23	-10	-20	-13	-23	
Mounted on globe valves										
Type 3213	•	•	•	•	•	•	•	•	•	•
Type 3214		•	•	•	•	•	•	•	•	•
Nominal size	DN	15 to 25	15 to 25	32 to 50	15 to 25	32 to 50	15 to 25	32 to 50	15 to 25	32 to 50
Fail-safe action		Without	Without				With			
Rated travel	mm	6	6	12	6	12	6	12	6	12
Transit time for rated travel	s	20	35	70	18 ⁵⁾	36 ⁵⁾	35	70	18 ⁵⁾	36 ⁵⁾
Transit time for fail-safe action	s	–	–				4	6	4	6
Fail-safe action		–	–				Stem extends			
Thrust	kN	0.3	0.7				0.5			
Electrical connection		230 V, 50 Hz ³⁾ 24 V, 50 Hz 24 V, 60 Hz ⁴⁾ 24 V DC ⁴⁾	24 V, 50 Hz 230 V, 50 Hz 120 V, 60 Hz		230 V, 50 Hz		24 V, 50 Hz 230 V, 50 Hz 120 V, 60 Hz		230 V, 50 Hz	
Power consumption (approx.)	VA	3 ^{3)/5 ⁴⁾}	3		6		4		8	
Manual override		Handwheel	Handwheel				4 mm hex wrench			
Permissible temperatures										
Ambient	°C	0 to 50								
Degree of protection (mounted upright)		IP 42	IP 54 (mounted upright)							
Additional electrical equipment										
Limit switch		–	Two · Max. 230 V, 3 A; cannot be retrofit!							
Potentiometer		–	One · 0 to 1000 Ω ±15 % (90 % of final value at rated travel); Max. 1 mA, 5 V							
Electric positioner		Only for 24 V AC/DC only	One · 24 V version only Optionally 0(2) to 10 V or 0(4) to 20 mA							

1) Refer to EB 5857 EN for version with positioner

2) Refer to EB 5824 EN for version with positioner

3) Only version without positioner

4) Only version with positioner

5) Actuator with faster motor

Design and principle of operation

Type	3374			3374 ¹⁾				
	-11	-15	-21	-12	-16	-23		
Mounted on globe valves								
Type 3213								
Type 3214	•	•	•	•	•	•		
Nominal size	DN	65 to 100	125 to 250	65 to 100	125 to 250			
Fail-safe action	Without		With	Without		With		
Rated travel	mm	15	30	15	30	30	15	30
Transit time for rated travel	s	120	240	120	120	120	60 ²⁾	120 ²⁾
Transit time for fail-safe action	s	–		12	–		21.5 ²⁾	43 ²⁾
Fail-safe action	–		Stem extends	–		Stem extends		
Thrust	kN	2.5		2.0	3.0		3.4	3.0
Electrical connection	230 V/24 V, 50 Hz ¹⁾			230/110/24 V, 50/60 Hz				
Power consumption (approx.)	VA	Max. 18			Approx. 90			
Manual override	Hex wrench			Electric	Mech.	Electric		
Permissible temperatures								
Ambient	°C	5 to 60			–10 to 60			
Degree of protection (mounted upright)	IP 54/IP 65 with cable gland			IP 65				
Additional electrical equipment								
Limit switch	Two			Three				
Potentiometer	Two			Two				
Electric positioner	One			One				

¹⁾ Other frequencies and voltages on request

²⁾ Shorter transit times on request

3. Pneumatic actuators

Type		2780-1	2780-2
Actuators mounted on Type 3213/3214 Globe Valves			
Type 3213		•	
Type 3214		•	•
Nominal size	DN	15 to 50	15 to 100
Diaphragm area	cm ²	120	120
Maximum supply pressure	bar	4	4
Fail-safe action		Reversible by changing the location of the springs	
Bench range	bar	0.4 to 1	0.4 to 2 ¹⁾
Required supply pressure	bar	1.4	2.4
Permissible temperature	°C	-10 to 80 (special version: -35 to 120)	
Number of actuator springs		3	6 (3 for DN 15 to 25)
Loading pressure connection		ISO 288/1, G 1/8; 1/8 NPT	-

¹⁾ With Type 3214, DN 65 to 100: 2.1 to 3.3 bar for fail-safe action with stem extends - 0.4 to 1.4 bar for stem retracts

Materials

Type	2780-1/-2
Actuator housing	Aluminum GD-ALSi12 ¹⁾
Diaphragm	NBR
Springs	Spring wire C ¹⁾
External bolts	Chromated steel
Bushing	CW617N (CuZn40Pb)

¹⁾ Without paint or surface treatment

2 Installation

2.1 Mounting position

The mounting position of the control valves is upright in the pipeline. However, other mounting positions may be possible on request.

Choose the place of installation that allows you to freely access the control valve even after the entire plant has been completed. Install a strainer upstream of the control valve to prevent any sealing parts, weld spatter or other foreign matter carried along by the process medium from impairing the proper functioning of the valve, in particular, the tight shut-off.

Note!

The valve body must be installed free of stress and with the least amount of vibrations possible. If necessary, support the piping near the connections.

Flush the pipeline thoroughly before installation.

2.2 Strainer

Install the strainer with the filter element facing downwards upstream of the valve inlet. Install the strainer with the flow direction as indicated by the arrow on the body.

Choose the place of installation to allow enough space to remove the filter.

2.3 Additional installation instructions

We recommend to install a hand-operated shut-off valve both upstream of the strainer and downstream of the control valve to be able to shut down the plant for cleaning and maintenance, and when the plant is not used for longer periods of time.

3 Attaching the actuator to the valve

If the actuator has not already been mounted on the valve by the manufacturer or the original actuator is to be replaced with another actuator, remove the transportation protection and proceed as follows.

3.1 Type 5857 Actuator

1. Turn the handwheel (see section 6) counterclockwise **disconnected from the power supply** to retract the actuator stem as far as it will go.
2. Place the actuator on the connection piece and secure with the coupling nut (tightening torque: 20 Nm).

3.2 Type 5824/5825 Actuators

Type 5824

1. Turn the handwheel (see section 6) counterclockwise to retract the actuator stem as far as it will go.

- Place the actuator on the connection piece and secure with the coupling nut (tightening torque: 20 Nm).

Type 5825

- Unfasten the front cover and place a 4 mm hex screwdriver on the red actuating shaft.
- Retract the actuator stem by turning the screwdriver **counterclockwise only** and only until the travel final value is reached, at the maximum, which activates the bottom torque switch.

Caution!

Do not turn the actuator stem too far, otherwise it will be ruined.

- Hold the screwdriver in place. Secure the actuator and connection piece with the coupling nut (tightening torque: 20 Nm).
- Remove screwdriver and carefully refasten the front cover.

3.3 Type 3274 and Type 3374-15 Actuators

- Place the actuator on the valve yoke and secure with ring nut.
- Position both clamps of the stem connector over the ends of the actuator and plug stems. Secure stem connector in place with two hexagon head screws.
- Move the actuator to its end position (see section 6) and align the travel indicator with the tip of the stem connector.

3.4 Type 3374-11/-21 Actuators


- Place the actuator with its yoke on the valve bonnet and fasten tight with hexagon nut.
- Position both clamps of the stem connector over the ends of the actuator and plug stems. Secure stem connector in place with two hexagon head screws.

3.5 Type 2780-1/-2 Actuators

Note: A rod-type yoke (1400-7414) is required to combine Type 2780-2 Actuator with Type 3214 Valve.

- Apply signal pressure to the loading pressure connection of actuator with fail-safe action "Actuator stem extends" (see section 5) to retract the actuator stem.
- Place the actuator on the connection piece and secure with the coupling nut (tightening torque: 20 Nm).

4 Electrical connections

 Upon installing the electrical cables, you are required to observe the regulations concerning electrical power installations according to DIN VDE 0100 as well as the regulations of your local power supplier.

Use a suitable power supply to ensure that no dangerous voltages from the system or parts of the system reach the device in standard operation or in case of a fault.

Warning!

Only connect the device to the main power network when the power is switched off. Make sure the power cannot be switched on unintentionally!

Additional electrical equipment

The actuators can be equipped with limit switches, potentiometers or with a positioner for input signals from 4 or 0 to 20 mA or alternatively 2 or 0 to 10 V.

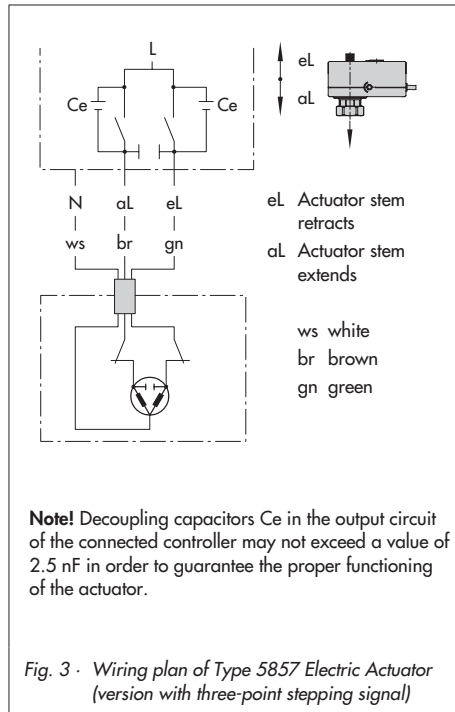
More details concerning electrical connection and operation can be found in the mounting and operating instructions of the corresponding actuators.

4.1 Type 5857 Electric Actuator

1. Connect the power supply over the 2.5 m cable.

The control signals of the connected controllers are connected to the terminals **eL** and **aL**:

- ▶ If a voltage is applied to **eL**, the actuator stem retracts into the actuator (direction of action "Stem retracts").
- ▶ If a voltage is applied to **aL**, the actuator stem extends out of the actuator (direction of action "Stem extends").



4.2 Type 5824/5825, Type 3374 Electric Actuators

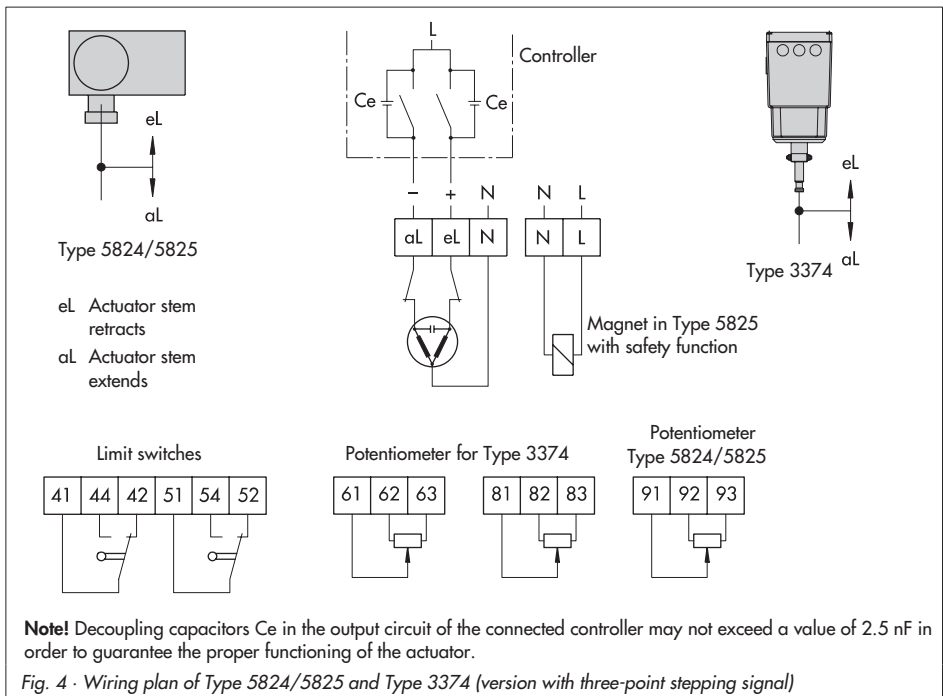
1. Unfasten the housing cover.
2. Guide the connecting wires through the cable entries and fasten them to the terminals.

The control signals of the controller are connected to the terminals **eL** and **aL**:

- ▶ If a voltage is applied to **eL**, the motor retracts the actuator stem.
- ▶ If a voltage is applied to **aL**, the motor extends the actuator stem.

Actuators operated in parallel must be controlled over separate contacts since the use of just one common “open” and “closed” contact could cause the actuators to hunt in the final positions.

3. For the Type 5825 and Type 3374-2x Actuators with fail-safe action, the terminals L and N must additionally be supplied with a voltage. When the voltage supply is interrupted, the control valve remains in the final position determined by the fail-safe action (actuator stem extends, valve closed).
4. Refasten the housing cover.



4.3 Type 3274 Actuator

1. Unscrew the housing cover at the side.
2. Lead the lines through the cable glands on the housing to the terminals. The N and L terminals must be continuously supplied with a voltage, otherwise the actuator will remain in its last position. Actuators with safety function move to the fail-safe position
3. Connect the grounding conductor to the separate grounding terminal on the inside wall of the housing.
4. Screw the housing cover at the side back on.

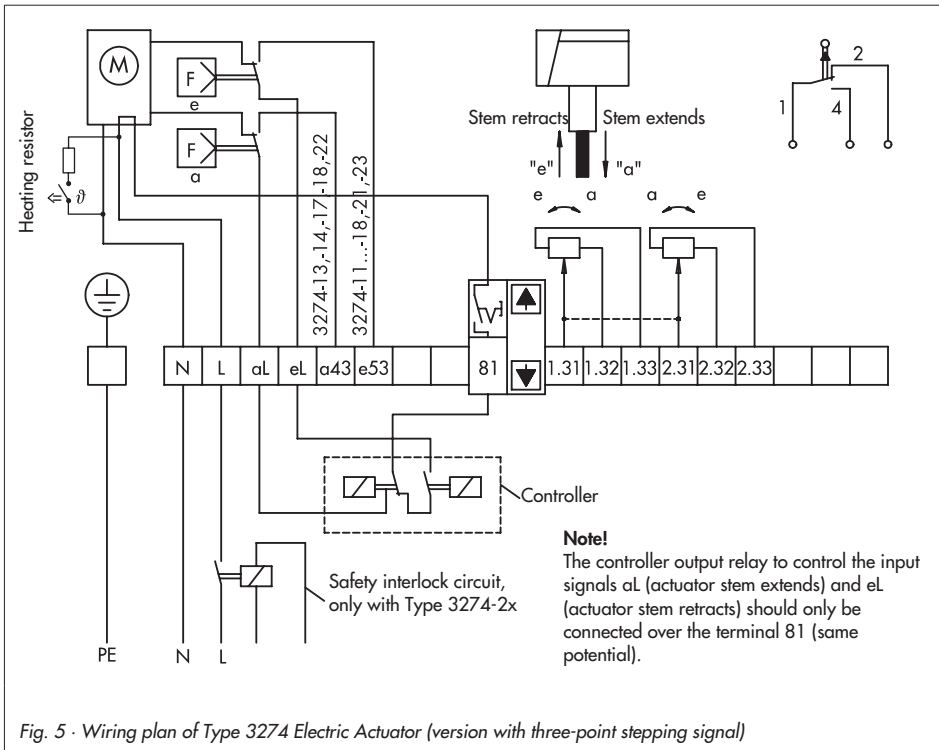


Fig. 5 · Wiring plan of Type 3274 Electric Actuator (version with three-point stepping signal)

5 Pneumatic connection of Type 2780-1/-2 Actuators

Type 2780-1

1. Connect the signal pressure to actuators with **"Actuator stem retracts"** (FA) to loading pressure connection (3):
When the signal pressure is reduced or upon supply air failure, the springs move the actuator stem downwards, causing the valve to close.

Connect the signal pressure to actuators with **"Actuator stem extends"** (FE) to loading pressure connection (4):
When the signal pressure is reduced or upon supply air failure, the springs move the actuator stem upwards, causing the valve to open.

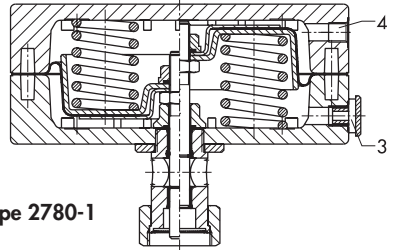
2. Screw the vent plug in the opposite connection which is not used.

Type 2780-2

The Type 2780-2 Actuator is designed for integral attachment of a positioner. The signal pressure is routed to the diaphragm chamber by the switchover plate attached to the left or right side of the yoke. The fail-safe position required determines how the positioner is attached and how the switchover plate is positioned.

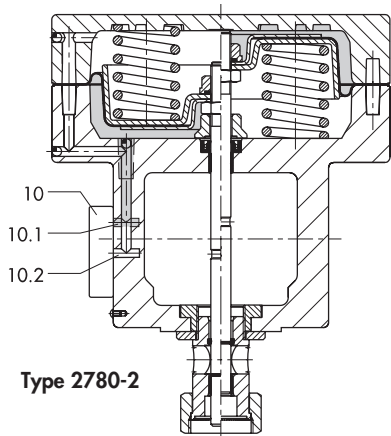
If the actuator is operated without a positioner, a connecting plate must be used instead of the switchover plate.

Refer to EB 5840 EN for details on how to connect the pneumatic actuator.



Type 2780-1

- Actuator stem
extends retracts
- 3 Loading pressure connection: Stem extends
 - 4 Loading pressure connection: Stem retracts



Type 2780-2

- Actuator stem
extends retracts
- 10 Switchover and connecting plate
 - 10.1 Signal pressure input: Actuator stem extends
 - 10.2 Signal pressure input: Actuator stem retracts

Fig. 6 · Pneumatic connection

6 Operation – Manual override

6.1 Type 5857 Actuator

The plug is moved to the required position by turning the handwheel.

Caution!

Only activate the handwheel when the actuator is disconnected from the power supply.

6.2 Type 5824/5825 Actuators

For **Type 5824**, the plug can be moved to the desired position by turning the handwheel.

For **Type 5825** with safety function, remove the front cover and place a 4 mm hex screwdriver on the actuating shaft. To move the actuator stem in the opening direction, **turn the hex screwdriver only in the counterclockwise direction!**

Note!

After the fail-safe action has been triggered by the magnet, the valve cannot be kept in position.

6.3 Type 3374 Actuator

To operate the manual override, place a 4 mm Allen key on the red actuating shaft located at the side of the actuator housing. A key is delivered with the actuator and is attached to the bottom of the actuator housing.

The manual override of actuators with safety function only functions when the power supply (terminals N and L) is connected.

Note!

After the fail-safe action has been triggered by the magnet, the valve cannot be kept in position.

6.4 Type 3274 Actuator

6.4.1 Version with mechanical override

Type 3274-16

Press the black button on top of the actuator. Place a socket wrench (24 mm) on the shaft end of the rack-and-pinion drive protruding from the housing and turn it until the required valve position is reached.

As soon as the button is released, the actuator operates according to the controller signal again.

If the valve is to remain in the manually adjusted position, the terminal 81 must be disconnected as described in section 6.4.3.

Note!

A hydraulic actuator can move its position even when it is switched off due to external or internal forces (springs) caused by leakages inside the actuator. This should be taken into account in cases where a valve is to be kept open.

6.4.2 Version with electric override

Type 3274-12/-23

The actuator stem can be either retracted or extended by pressing one of the two pushbuttons located on the side cover to bring the attached valve into the required position.

After releasing the button, the actuator uses the controller signal again.

To deactivate, for example, the priority of the control signal during start-up of the plant and to keep control valve in a certain position, the terminal 81 must be disconnected as described in section 6.4.3.

The red marking pin is no longer visible. Refasten cover and switch on power.

The control signal is now interrupted and the valve can be moved to the desired position by pressing the pushbutton IN or OUT. The valve will then remain in the adjusted position.

If the control signal of the controller should have priority again:

- ▶ Switch off power and remove cover.
- ▶ Firmly press the button until it engages and the red pin becomes visible again.
- ▶ Refasten cover and switch on power.

6.4.3 Disconnect terminal 81

1. **Switch off power!**
2. Undo the two fastening screws on the side housing cover and remove cover.
3. Place a screwdriver at the terminal 81 under the white button and lever up button until it engages.

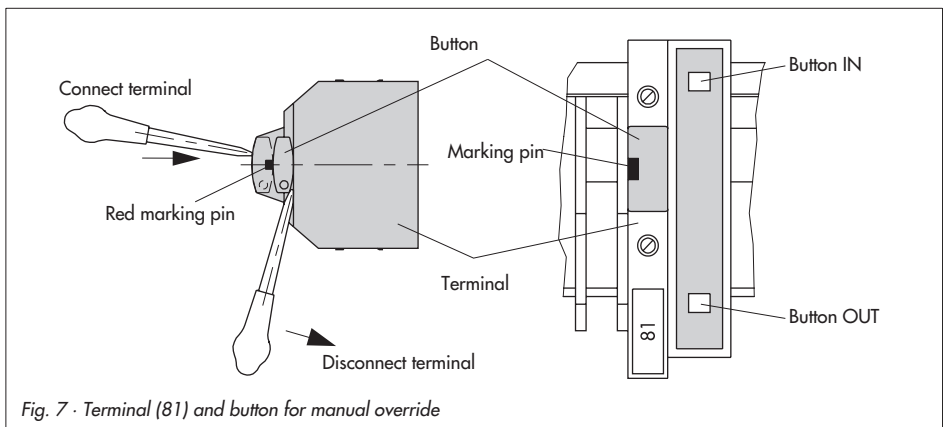


Fig. 7 · Terminal (81) and button for manual override

7 Maintenance

The control valves are subject to natural wear. Depending on the conditions the valves are operated in, they need to be checked at regular intervals.

If leakage to the atmosphere occurs, it may be due to a defective packing or balancing bellows.

If the valve does not seal properly, the tight shut-off may be impeded by dirt or other impurities caught between the seat and plug, or by damaged seat facing.

Remove the parts, clean them thoroughly and replace them, if necessary.

Warning!

For maintenance work on the valve, make sure the relevant section of the pipeline is depressurized and, depending on the process medium, drained as well.

For high medium temperatures, allow the section of the pipeline to cool down before you start.

Make sure the supply pressure or electric power supply and control signals are interrupted or blocked to prevent any risks from moving parts at the control valve.

As valves are not free of cavities, there might still be residual medium in the valve. This applies, in particular, for valve versions with balancing bellows.

We recommend removing the valve from the pipeline.

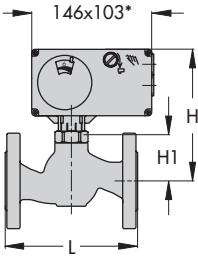
8 Dimensions in mm and weights

Actuators mounted on Type 3213 Globe Valves

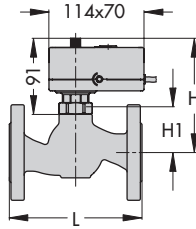
DN	15	20	25	32	40	50
Actuators mounted on Type 3213 Globe Valve						
Length L	130	150	160	180	200	230
Height H1	60	60	60	125	125	125
Height H						
Type 3213/5857	150	150	150	–	–	–
Type 3213/5824 Type 3213/5825 Type 3213/2780-1	190	190	190	255	255	255
Type 3213/2780-2	290	290	290	355	355	355
Weight, approx. kg (version for steam + 0.3 kg)						
Type 3213/5857	3.0	3.6	4.0	–	–	–
Type 3213/5824 Type 3213/5825	3.1	3.7	4.1	12.5	14.5	16.5
Type 3213/2780-1	4.3	4.9	5.3	13.5	15.5	17.5
Type 3213/2780-2	5.5	6.1	6.5	14.7	16.7	18.7

Type 3213 Globe Valve

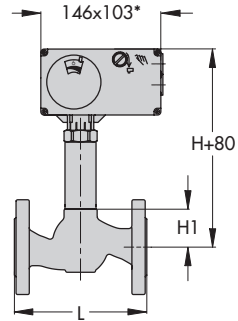
Electric control valves



Type 3213/5857
DN 15 to 25



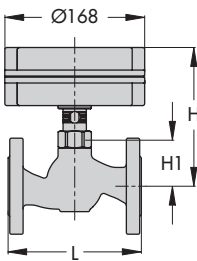
Type 3213/5824-xx
Type 3213/5825-xx
DN 15 to 50



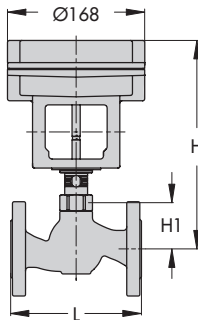
Version for steam
Type 3213/5824-xx
Type 3214/5825-xx
DN 15 to 50

* Dimensions for Type 5824-x3:
146 x 136

Pneumatic control valves



Type 3213/2780-1:
DN 15 to 50



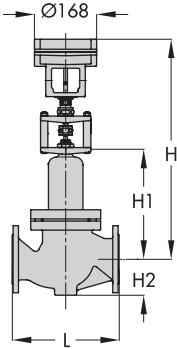
Type 3213/2780-2:
DN 15 to 50

Actuators mounted on Type 3214 Globe Valves

DN	15	20	25	32	40	50	65	80	100	125	150	200	250
Actuators mounted on Type 3214 Globe Valves													
Length L	130	150	160	180	200	230	290	310	350	400	480	600	730
Height H1	235	235	235	235	235	235	305	305	355	580	710	860	860
Height H													
Type 3214/5824	350	350	350	350	350	350	-	-	-	-	-	-	-
Type 3214/2780-2	-	-	-	-	-	-	583	583	633	-	-	-	-
Type 3214/3374	-	-	-	-	-	-	599	599	649	784	914	1064	1064
Type 3214/3274 ¹⁾	-	-	-	-	-	-	-	-	-	900	1030	1180	1180
Height H2	55	55	55	72	72	72	100	100	120	145	175	270	270
Height H3													
Type 3214/3374	-	-	-	-	-	-	-	-	-	1034	1164	1314	1314
Type 3214/3274 ¹⁾	-	-	-	-	-	-	-	-	-	1050	1180	1330	1330
Weight, approx. kg (version up to 220 °C: + 0.3 kg · Version for PN 25 and PN 40 + 15 %)													
Type 3214/5824 Type 3214/5825	7.3	7.5	8.5	15.0	15.5	18.0	-	-	-	-	-	-	-
Type 3214/3374	-	-	-	-	-	-	35	40	47	77	118	261	305
Type 3214/3274	-	-	-	-	-	-	-	-	-	87	128	271	315
Type 3214/2780-2	-	-	-	-	-	-	50.7	55.7	62.7	-	-	-	-

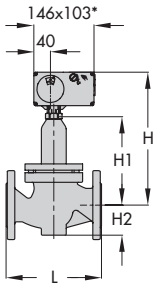
¹⁾ Add 95 mm to the H and H3 dimensions for Type 3274-12 and Type 3274-16 Actuators.

Control valves with Type 3214 Globe Valve
Pneumatic control valves

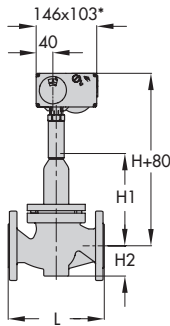


Type 3214/2780-2,
DN 65 to 100

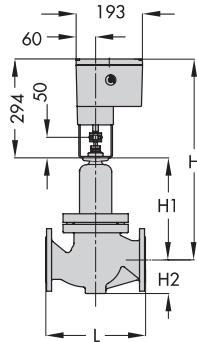
Control valves with Type 3214 Globe Valve
Electric control valves



Type 3213/5824-xx
Type 3214/5825-xx

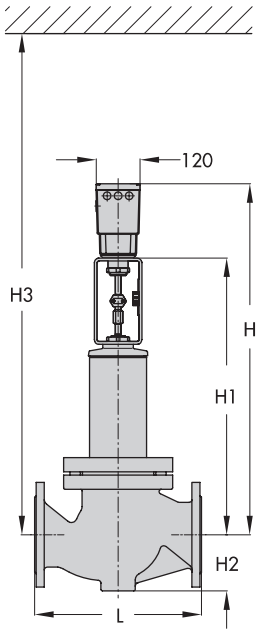


Version up to 220 °C
Type 3214/5824-xx
Type 3214/5825-xx

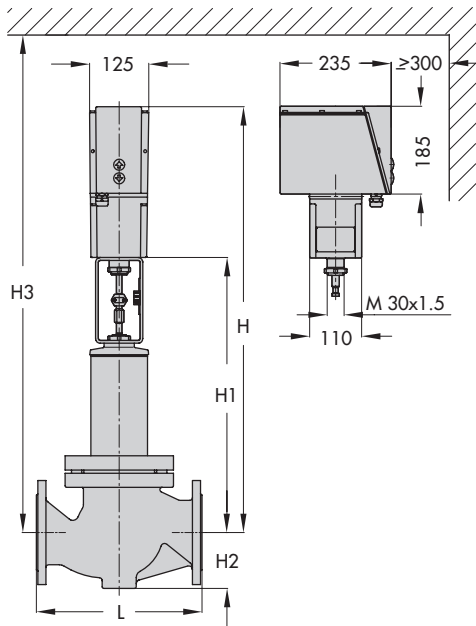


Type 3214/3374-11
Type 3214/3374-21
DN 65 to 100

* Dimensions for Type 5824-x3: 146 x 136



Type 3214/3374-15
DN 125 to 250



Type 3214/3274
DN 125 to 250



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