



Digital electropneumatic Positioner SideControl

- Compact and robust design
- Easy to start using TUNE-Function
- Dynamic positioning system with no air consumption in controlled state
- Intrinsically safe acc. to ATEX II 2 (1) G Ex ia IIC T6 Gb
- Optionally with integrated process controller

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

	Type 8805 Ball valve / Butterfly valve with pneumatic rotary actuator	▶
	Type 2051 Pneumatic rotary actuator	▶
	Type 2301 Pneumatically operated 2 way Globe Control Valve	▶
	Type 2103 2/2 way diaphragm valve with pneumatic stainless steel actuator (Type ELEMENT) for decentralised automation	▶

Type description

The SideControl Positioner Type 8635 is an electropneumatic positioner for pneumatically actuated process valves with linear or part-turn actuators. It is excited in two conductor technology.

Signal processing, control and actuation of the internal positioning system are accomplished with microprocessor controlled electronics. The software function Autotune implemented therein enables automatic adaptation of the positioner to the control valve in use. The positioner is parametrized and operated comfortably via three operating keys and a plain-text display. It is possible to set up a decentralized control system if a process controller with PID characteristics is used.

As an option, the SideControl Positioner Type 8635 can be supplied with approval for use in the Ex area (Zone 1) according to ATEX.

Because of its compact and robust design, the housing is suitable for use in chemical and process engineering.

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1. General technical data

1.1. Positioner SideControl Type 8635

Product properties	
Dimensions	Detailed information can be found in chapter “2. Dimensions” on page 5.
Weight	Ca. 1.5 kg
Material	
Body	Aluminium, hard anodised and plastic-coated
Seal	NBR, Neoprene
Other exterior parts	Stainless steel V4 A
Operation	
Display	Single-line display (inside housing)
Operating keys	Membrane keypad with 3 keys
Commissioning	
Initialisation positioner/process controller	Automatic through TUNE-function (self-tuning of positioner and PID parameters)
Position sensor	
Integrated Position sensor (NAMUR)	High-resolution conductive plastic rotary potentiometer
External remote position sensor	Linear
Measuring range for rotary actuators	Rotation angle: 0...120°
Stroke range for linear actuators	3...130 mm, depending on the lever of the attachment kit
Electrical data	
Operating voltage	Over setpoint signal 4...20 mA, 2-wire technology
Power consumption	< 0.5 W
Input/Output	
Digital output	2 binary outputs (optional), galvanically isolated
Analogue outputs	1 output (optional) 4...20 mA (galvanically isolated)
Input data setpoint and actual value	
Setpoint signal	
Setpoint value setting default	4...20 mA
Load voltage	< 10.2 V DC
Setpoint signal	4...20 mA
Electrical connection	
NAMUR Version	Cable gland: 2x M20 x 1.5 (cable-Ø 6...12 mm) on screw terminals (0.14...1.5 mm ²)
Version with external position sensor for direct mounting on control valve Type 27xx	Cable gland: 2x M20 x 1.5 (cable-Ø 6...12 mm) on screw terminals (0.14...1.5 mm ²) and pre-assembled cable for remote position sensor, length 0.3 m
Remote version in combination with control valve Type 23xx	Cable gland: 2x M20 x 1.5 (cable-Ø 6...12 mm) on screw terminals (0.14...1.5 mm ²) and pre-assembled cable for remote position sensor, length 2.5 m
Pneumatic data	
Control medium	
Dust content	Class 7 (< 40 µm particle size)
Particle density	Class 5 (< 10 mg/m ³)
Pressure dew point	Class 3 (< -20 °C)
Oil content	Class X (< 25 mg/m ³)
Air supply filter	
Mesh size	Exchangeable ca. 0.1 mm
Supply pressure	1.4...6 bar ¹⁾
Pilot air ports	Threaded connection G ¼ (NPT ¼; RC ¼ on request)
Control air temperature	-25...+60°C ²⁾

Actuating system	
Circuit function	Single-acting
Air flow rate	
Actuating system	Aeration and ventilation 55 l/min at 1.4 bar ^{1.)} 170 l/min at 6 bar ^{1.)} $Q_{Nn} = 110 \text{ l}_N/\text{min}$
Internal air consumption	0 l/min
Setting range	
Linear actuator	3...130 mm
Rotary actuators	30...120°
Approvals and certificates	
Protection class	III acc. to DIN EN 61140
Conformity	EMC directive 2014/30/EU
Ignition protection	II 2 (1) G Ex ia IIC T6 Gb acc. to EN 60079-0:2012 and EN 60079-11:2012
ATEX	PTB 04 ATEX 2027
IECEX	IECEX PTB 04.0016
CCC (China Compulsory Certificate)	For devices with Ex approval
Environment and installation	
Installation and mechanical data	
Installation variants	NAMUR acc. to IEC 60534-6-1 resp. VDI/VDE 3845 (IEC 60534-6-2), remote
Installation position	As required, display above or sideways
Valve actuator (type and size)	Rotary and linear actuators acc. to NAMUR, ELEMENT Type 2301, 2300 (Actuator size Ø 70/90/130 mm) and CLASSIC (Actuator size Ø 175/225 mm) in combination with remote version
Adapter kits	
Linear actuator	Acc. to IEC 60534-6-1
Rotary actuators	Acc. to VDI/VDE 3845 (IEC 60534-6-2)
Operating conditions	
Ambient temperature (max.)	-25...+60°C ^{2.)}
Degree of protection	IP65 acc. to EN 60529
Operating altitude	Up to 2000 m above sea level

1.) Pressure data in bar; overpressure to ambient.

2.) Up to +65 °C temperature class T4/T5 or without EEx ia approval.

1.2. Electrical additional data

Description	Functional values		Permissible maximal as per certificate of conformity	
Power Supply	U I	10.2 V 4 mA	Ui Ii Pi	30 V 100 mA 1 W
Process actual value input (only for version with process controller)	Load Load voltage U	10 Ω <200 mV	Ui Ii Ci Pi	30 V 100 mA 14.3 nF 1 W
Binary input	Make/break contact (conf.)	–	Co Lo	5.5 µF 1000 mH
Binary output	U I switching status OPEN I switching status CLOSED	5...11 V DC <1.2 mA >2.1 mA	Ui Ii Pi	30 V 100 mA 1 W
Analogue feedback (Option)	U I	12...30 V 4...20 mA	Uo Io Po	30 V 100 mA 1 W

1.3. Recommendations for isolation transformers

Note:

- DC transformers input 4...20 mA / output 4...20 mA
- Data given without guarantee of accuracy
- For dimensioning and operation of intrinsically safe circuits, the user/owner is responsible.

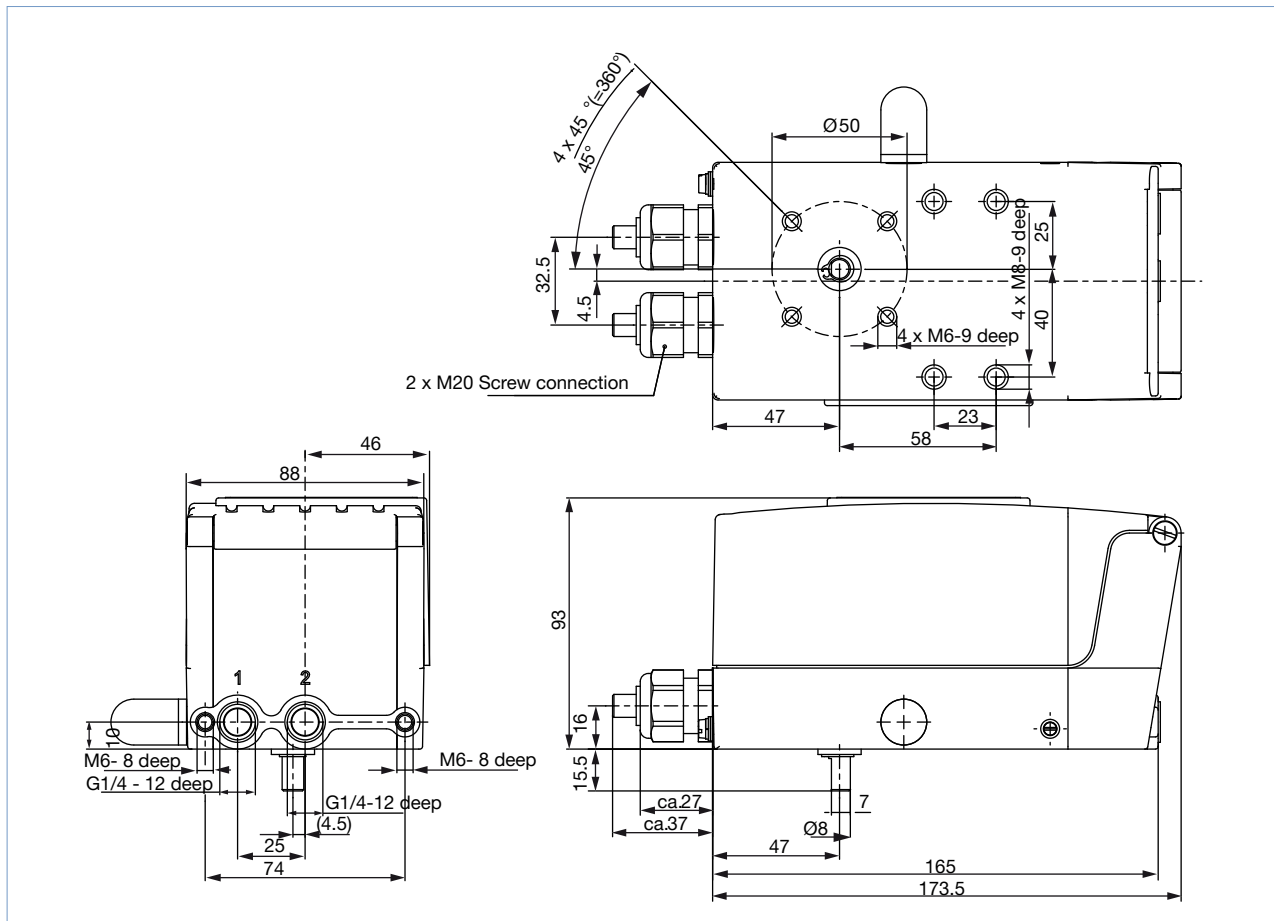
Company	Model	Burden	Ex	Active/passive
Pepperl+Fuchs	KFD2-CD-Ex1.32	850 Ω	x	A
Foxboro Eckardt	TV228-S-EGX	700 Ω	x	A
Foxboro Eckardt	MT228-S-EGX	750 Ω	x	A
Foxboro Eckardt	II949-S1 ZZZ	750 Ω	–	A
Stahl	9318/16-22-10	700 Ω	x	A
Stahl	M318/12-11-00	1000 Ω	x	A
PhoenixContact	PI/EX-ID-I/I	800 Ω	x	A

2. Dimensions

2.1. NAMUR version

Note:

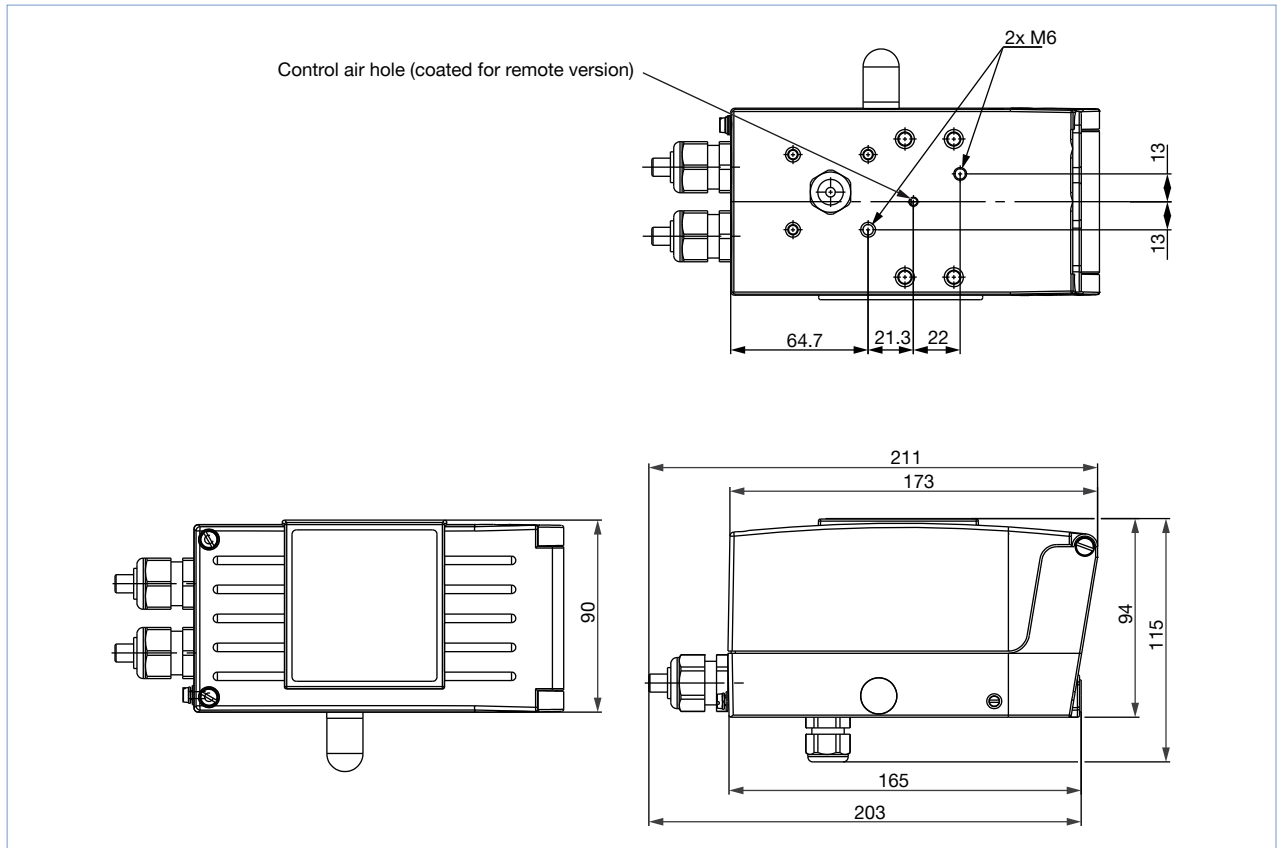
Dimensions in mm



2.2. Remote version

Note:

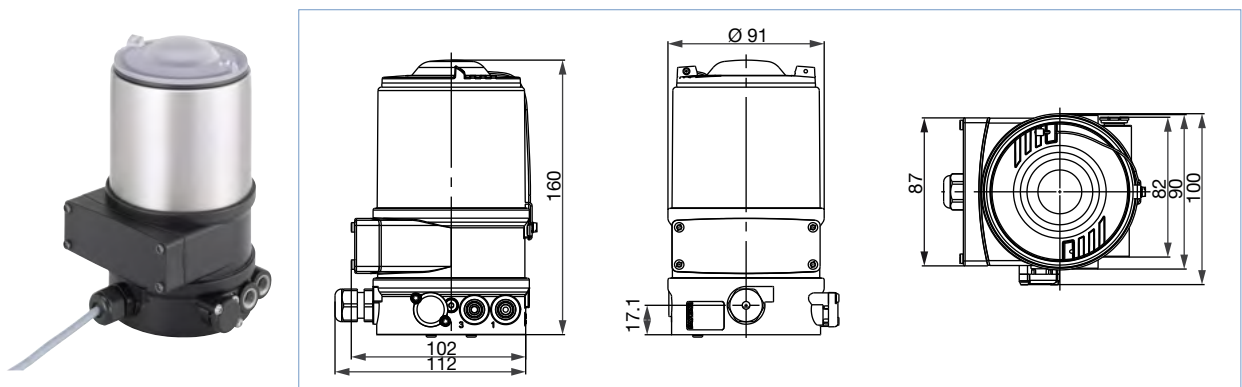
- Dimensions in mm
- Presentation without cable and without attachment parts



2.3. Remote position sensor version

Note:

- Dimensions in mm
- Remote position sensor for mounting on control valves Type 23xx



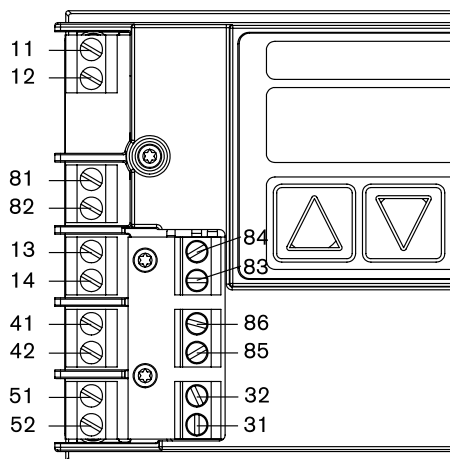
3. Device/Process connections

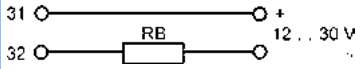
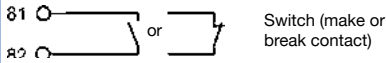
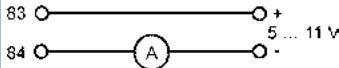
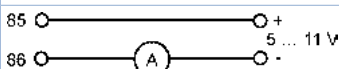
3.1. Electrical connections

Note:

- When connecting the intrinsically safe circuits, always observe the information in the enclosed certificate of conformity!
- Connection of a potential equalization conductor (PE) to the electronics is unnecessary.

For electrical connection of the SIDEControl, open the housing cover by loosening the 2 screws..



Terminal description	Assignment	External circuitry
11 + 12 -	Setpoint + Setpoint -	4...20 mA signal GND
13 + 14 -	Process actual value + (Option) Process actual value - (Option)	4...20 mA signal GND
31 32	Actual value output + (Option) Actual value output - (Option)	
41 + 42 -	Not assigned Not assigned	-
51 + 52 -	Not assigned Not assigned	-
81 82	Binary input + Binary input -	
83 84	Binary output 1+ (Option) Binary output 1- (Option)	
85 86	Binary output 2+ (Option) Binary output 2- (Option)	

4. Performance specifications

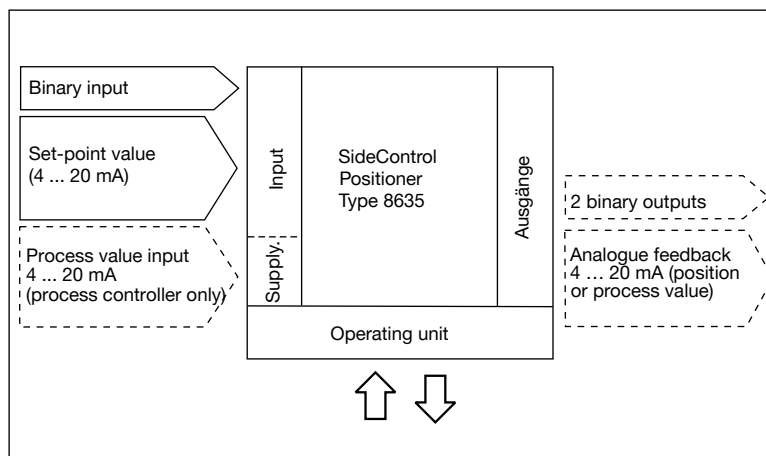
4.1. Additional software functions of the process controller SideControl Type 8635

- Automatic commissioning of control system
- Parametrization of the positioner
- Automatic or manual entry of characteristic curve for correction of operating characteristic
- Setting of the tight-closure or maximum stroke threshold
- Stroke limitation
- Limitation of positioning speed
- Dead band
- Direction of action of the controller setpoint
- Signal range splitting (split range up to 4 times)
- Setting of direction of movement
- Definition of a safety position
- Calibration of input and display
- Configuration of binary input
- Code protection for settings/operation
- RESET of factory settings
- Optional built-in process controller (PID)
- Automatic parametrization of the process controller
- Setting of the parameters of the process controller
- Calibration of the setpoint input and display
- Configuration of the analogue input
- Configuration of the binary input and binary outputs

4.2. Interface diagram

Note:

The optional inputs and outputs are shown by dotted lines.



NAMUR version

Positioner with integrated position sensor, assembly acc. to NAMUR/IEC 60534-6-1 and VDI/VDE 3845 (IEC 60534-6-2)

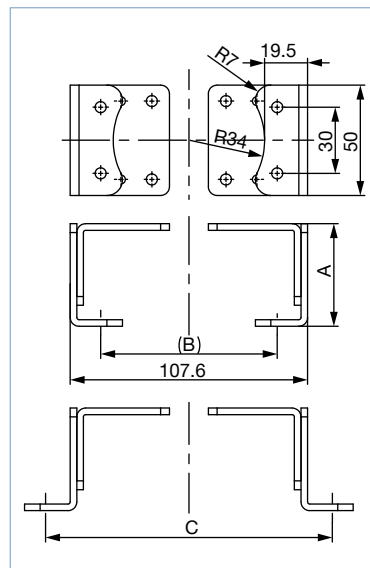
Rotary actuators

See operating manual ►



Description	Article no.
Adapter kit	787338 
Mounting bridge	770294 

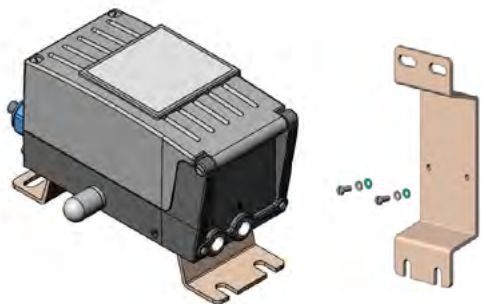
Mounting bridge for rotary actuators



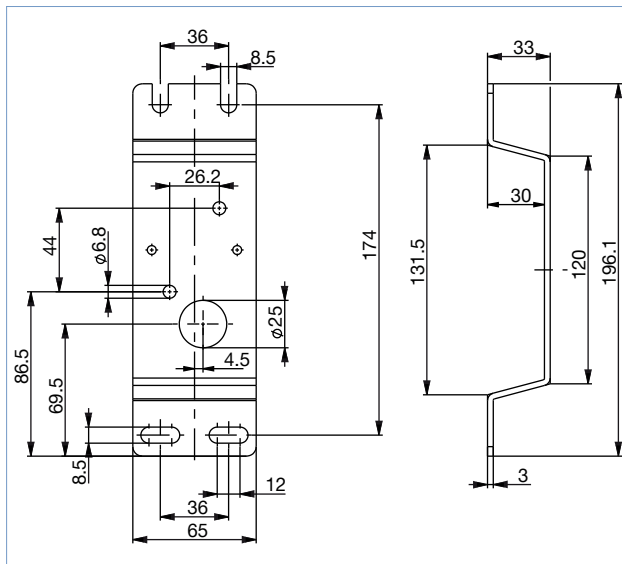
Description	Article no.
Adapter kit for rotary actuators	787338 

Remote-Version**Note:**

- Dimensions in mm
- Mounting bracket for wall mounting is pre-assembled from factory.

Wall mounting with accessory bracket

Description	Article no.
Mounting bracket	675715

**5.2. Combination options with pneumatic process valves**

Positioner SideControl Type 8635	8635 NAMUR Linear actuators IEC 60534-6-1 Rotary actuators VDI/VDE 3845 (IEC 60534-6-2) Type 8805 ▶ Ball valve / butterfly valve with pneumatic rotary actuator + Type 8635	8635 Direct mounting on control valves Type 27xx Control valve system CLASSIC Remote positioner system CLASSIC Type 27xx Pneumatically operated 2-way control valve + Type 8635	8635 remote mounting in combination with control valves Type 23xx Control valve system ELEMENT Remote position sensor ELEMENT Type 23xx Pneumatically operated 2-way angle seat valve ELEMENT + Type 8635 remote version
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6. Ordering information

6.1. Bürkert eShop – Easy ordering and quick delivery



Bürkert eShop – Easy ordering and fast delivery

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6.3. Ordering chart

Positioner/Process controller SideControl Type 8635 NAMUR version

Note:

- Further versions on request
- Pneumatic actuating system single-acting

Assembly variations	Electrical connection	Analogue feedback with 2 binary outputs	ATEX Approval EEx ia II C T6 CCC ^{1.)}	Article no.
Positioner SideControl 8635				
NAMUR IEC 60534 - 6 - 1 VDI/VDE 3845 (IEC 60534 - 6 - 2)	Cable gland	No	Yes	147263
	Cable gland	Yes	Yes	155371
	Cable gland	Yes	No	On request
	Cable gland	No	No	147265
Process controller SideControl 8635				
NAMUR IEC 60534 - 6 - 1 VDI/VDE 3845 (IEC 60534 - 6 - 2)	Cable gland	No	Yes	147264
	Cable gland	Yes	Yes	155375
	Cable gland	No	No	147266

1.) CCC (China Compulsory Certificate) for device versions with Ex approval.

Positioner SideControl Type 8635 remote version**Note:**

Pneumatic actuating system single-acting

Assembly variations	Electrical connection	Analogue feedback with 2 binary outputs	ATEX Approval EEx ia II C T6 CCC ^{1.)}	Article no.
Positioner SideControl 8635				
Remote mounting in combination with control valve Type 23xx (Actuator size Ø 70/90/130 mm)	Cable gland	Yes	Yes	322841 𐀀
	Cable gland	Yes	No	322847 𐀀
	Cable gland	No	No	322845 𐀀
	Cable gland	No	Yes	322840 𐀀
Direct mounting on control valve Type 27xx (Actuator size Ø 175/225 mm)	Cable gland	No	Yes	150347 𐀀
	Cable gland	Yes	Yes	155369 𐀀
	Cable gland	No	No	147267 𐀀
Process controller SideControl 8635				
Remote mounting in combination with control valve Type 23xx (Actuator size Ø 70/90/130 mm)	Cable gland	Yes	Yes	322839 𐀀
	Cable gland	Yes	No	322844 𐀀
	Cable gland	No	No	322842 𐀀
	Cable gland	No	Yes	322837 𐀀

1.) CCC (China Compulsory Certificate) for device versions with Ex approval.

Remote position sensor system for SideControl Type 8635 with direct mounting on control valve Type 27xx**Note:**

Universal integrated attachment (air duct without piping)

Assembly variations	Actuator size	Electrical connection	ATEX Approval EEx ia II C T6 CCC ^{1.)}	Article no.
Mounting on control valve Type 23xx				
Remote Position sensor 	Ø 70/90/130 mm	Cable gland	Yes	689162 𐀀
Mounting on control valve Type 27xx				
Remote position sensor system 	Ø 175/225 mm	Cable gland	Yes	655535 𐀀

1.) CCC (China Compulsory Certificate) for device versions with Ex approval.

6.4. Ordering chart accessories

Note:

When mounted on a Bürkert control valve, the SideControl positioner Type 8635 is only supplied as part of a complete control valve (positioner, position measuring system, associated add-on parts and control valve).

Use the data sheets of Types 23xx and 27xx to select a suitable control valve.

For ordering a complete control valve, specify the following article numbers:

- The Article no. of the SideControl positioner Type 8635
- The Article no. of the position measuring system
- The Article no. of the selected control valve
- The Article no. of the corresponding attachment parts with the SideControl positioner reference

Bürkert supplies a fully assembled and tested control valve.

Description	Article no.
Standard Accessories	
Silencer G ¼" (spare part)	780780 
Accessories for SideControl NAMUR	
Mounting bridge VDI/VDE 3845 (IEC 60534 - 6 - 2), Stainless steel	770294 
Adapter kit for rotary actuators acc. to VDI/VDE 3845 (IEC 60534 - 6 - 2), Stainless steel	787338 
Adapter kit for linear actuators acc. to IEC 60534 - 6 - 1	787215 
Accessories for SideControl remote/direct mounting	
Bracket for wall mounting, stainless steel (spare part)	675715 
Adapter kit for remote position sensor, control valve Type 23xx Actuator size Ø 70/90/130 mm	584363 
Adapter kit for piston actuators Type 27xx, Ø 175/225 mm	655567 
Position measuring system for piston drives Type 27xx, Ø 175/225 mm	655535 

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