

Digital electropneumatic Positioner SideControl



Type 8635 can be combined with...



Globe valve
acc. to NAMUR/IEC



Rotary actuator
acc. to NAMUR/IEC



**Type 27xx
Control valve**
Direct mounting



**Type 23xx
Control valve**
Remote mounting

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

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 (Zone¹) according to ATEX. Because of its compact and robust design, the housing is suitable for use in chemical and process engineering.

Technical data	
Body material	Aluminium, hard anodized and plastic coated
Other external parts	Stainless steel V4 A
Seal material	NBR, Neoprene
Control medium	neutral gases, air, quality class acc. to ISO 8573-1
Dust content	Class 7 (< 40 µm particle size)
Particle density	Class 5 (< 10 mg/m ³)
Pressure dew point	Class 3 (< -20 °C)
Oil concentration	Class X (< 25 mg/ m ³)
Control air temperature	-25 ... +60 °C ¹⁾
Ambient temperature	-25 ... +60 °C ¹⁾
Supply pressure	1.4 ... 6 bar ³⁾
Air flow capacity²⁾	55 l/min at 1.4 bar ³⁾
Control valve	170 l/min at 6 bar ³⁾ for pressurizing and venting
Intrinsic air consumption	0 l/min
Positioning range	
Linear actuator	3 ... 130 mm
Part-turn actuator	0 ... 120°
Position sensor system	High-resolution, conductive plastic, rotary potentiometer
Operation	Operating keys and plain-text display
Electrical connection	2 x M20 x 1.5 bushing Clamping range 6 ... 12 mm Screw terminals for 0.14 ... 1.5 mm ² Pre-assembled cable for position measuring system for control valves Type 27xx: Length 0.3 m Pre-assembled cable for remote position sensor for control valves Type 23xx: Length 2.5 m

¹⁾ Up to +65 °C temperature class T4/T5 or without EEx ia approval.

²⁾ May be adapted to actuator size with throttle screw.

³⁾ Pressure data in bar; overpressure to ambient.

Technische Daten (Fortsetzung)

Technical data	
Electrical data	
Type 8635	
Current supply for electronics	via setpoint signal 4 ... 20 mA
Burden voltage	< 10.2 V DC
Setpoint setting	4 ... 20 mA
Control air sockets	
	G ¼ NPT ¼; RC ¼ on request

Technical data	
Mounting kits for linear actuator for part-turn actuator	Namur recommendation acc. to DIN IEC 534 T6 acc. to VDI/VDE 3845
Weight	ca. 1.5 kg
Protection class	IP65 acc. to EN 60529
Type of ignition protection	II 2 (1) G Ex ia IIC T6 Gb acc. to EN 60079-0:2012 und EN 60079-11:2012
Certification	PTB 04 ATEX 2027 / IECEX PTB 04.0016
Conformity	EMC 2004/108/EC

Other electrical data

	Function value		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 value input (only for version with process controller)	Burden Burden 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

Recommendations for isolation transformers / DC transformers input 4 - 20 mA / output 4 - 20 mA

Company	Model	Burden	Ex	Active/passive
Pepperl+Fuchs	KFD2-CD-Ex 1.32	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
Steel	9318/16-22-10	700 Ω	x	A
Steel	M318/12-11-00	1000 Ω	x	A
PhoenixContact	PI/EX-ID-I/I	800 Ω	x	A

- Data given without guarantee of accuracy.
- For dimensioning and operation of intrinsically safe circuits, the user/owner is responsible.

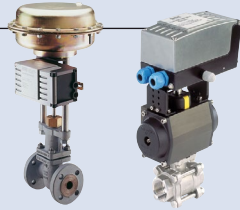
Examples for mounting variants Positioner SideControl

Positioner SideControl Type 8635

Positioner 8635



Type 8635 NAMUR



Linear actuators
IEC 60534-6-1

Rotary actuators
VDI/VDE 3845
(IEC 60534-6-2)
Type 8805
+
Type 8635

8635 Direct mounting
on Type 27xx control
valves



Control valve system
CLASSIC

Type 27xx
(actuator size Ø 175/225 mm)
+
Position sensor system
CLASSIC
+
Type 8635

8635 Remote mounting
in combination with
Type 23xx control valves

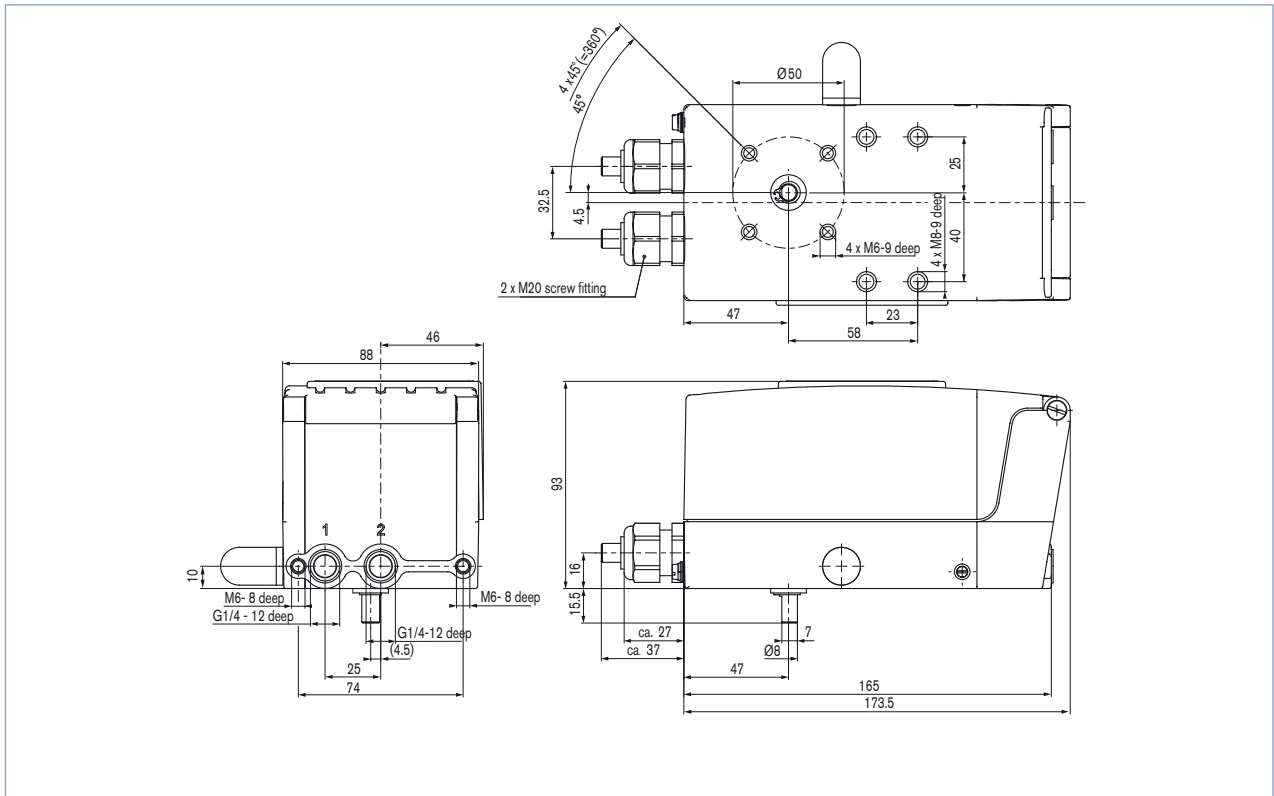


Control valve system
ELEMENT

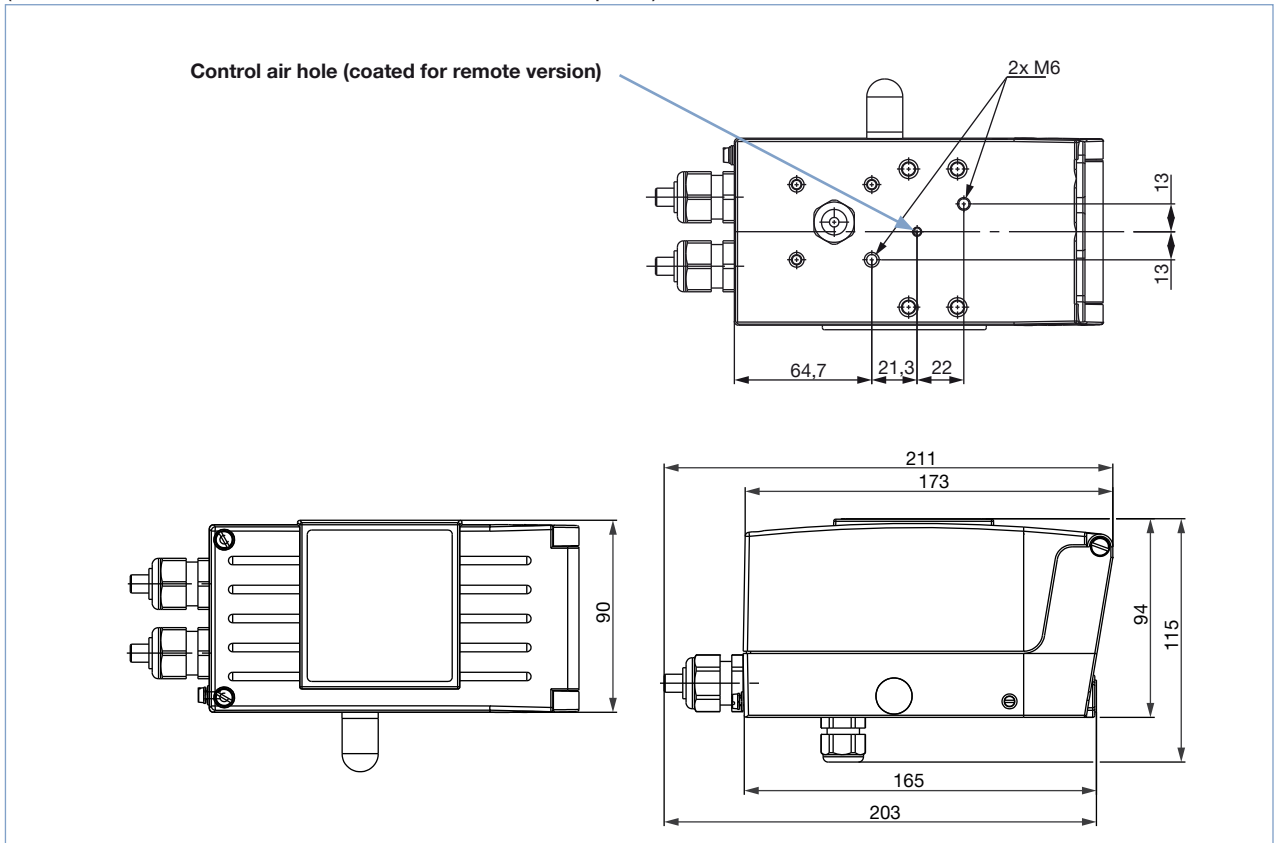
Type 23xx
(actuator size Ø 70/90/130 mm)
+
Remote position sensor
ELEMENT
+
Type 8635 remote version

Dimensions [mm]

NAMUR version



Remote and direct mounting on control valves Type 23xx version
(Presentation without cable and without attachment parts)

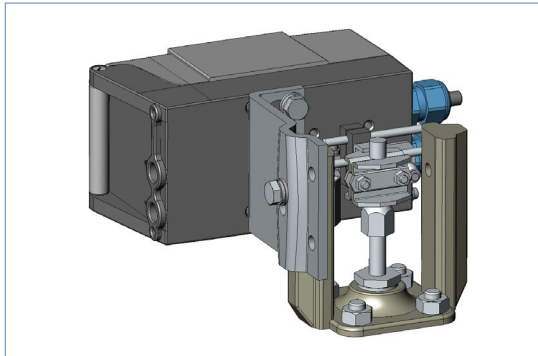


Assembly options

NAMUR version

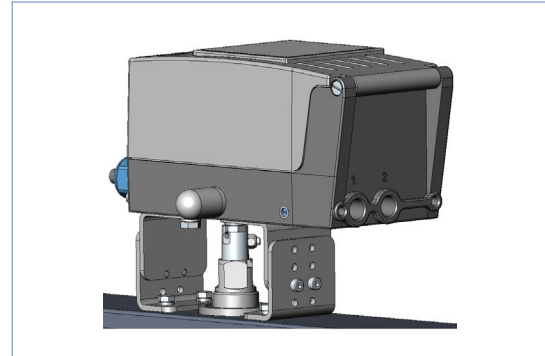
(Positioner with integrated position sensor, assembly acc. to NAMUR/IEC 60534-6-1 and VDI/VDE 3845 (IEC 60534-6-2))

Assembly on linear actuator



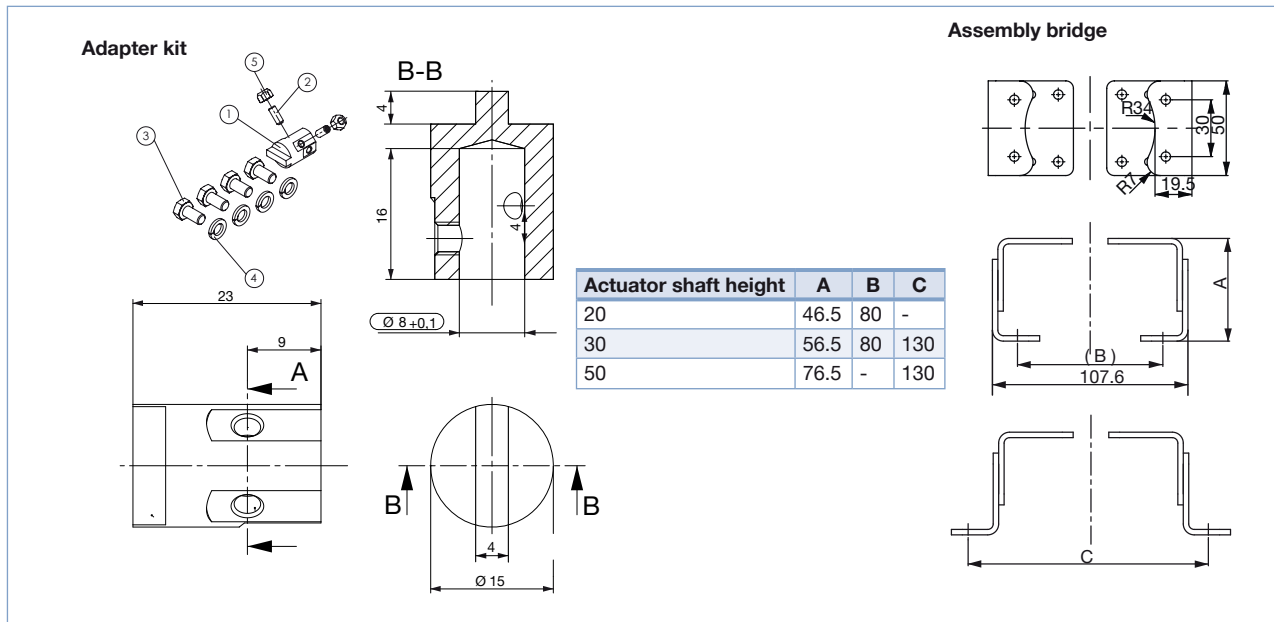
Description	Article no.
Adapter kit	787215

Assembly on rotary actuator



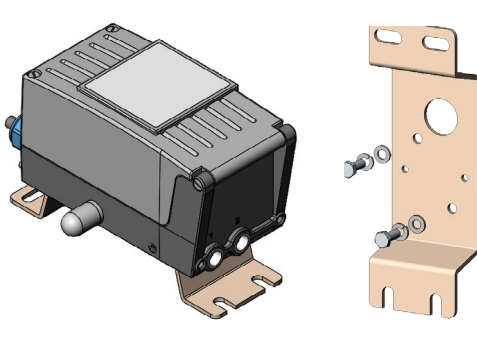
Description	Article no.
Adapter kit	787338
Assembly bridge	770294

Dimensions [mm]




Assembly options

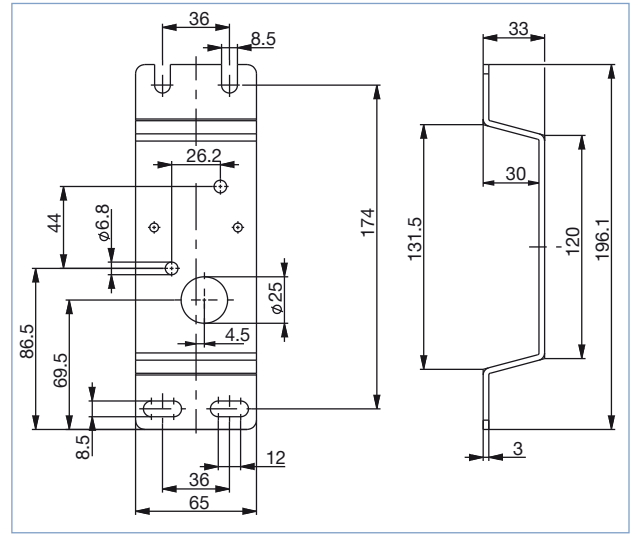
Assembly with mounting bracket



Note: Mounting bracket for wall mounting is pre-assembled from factory

Description	Article no.
Mounting bracket	675715 

Dimensions [mm]



Assembly options remote position sensor

Remote version and direct mounting on control valves Type 27xx

Remote position sensor for displaced positioner
Positioner/Process controller Type 8635 Remote

Position measuring system for Type 8635 with direct
attachment to Type 27xx control valves

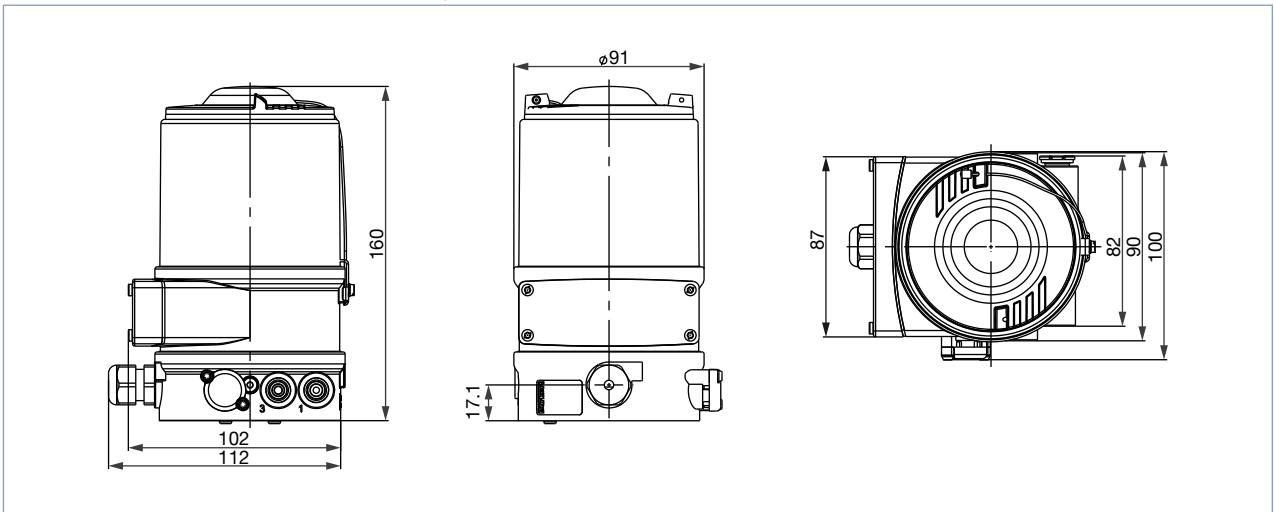


Description	Article no.
Remote Position Sensor Mounting on Type 23xx control valves Actuator size Ø 70/90/130 mm	689162

Description	Article no.
Position measuring system Mounting on Type 27xx control valves Actuator size Ø 175/225 mm	655535

Dimensions [mm]

Remote position sensor for mounting on Type 23xx control valves



Ordering Chart (further version on request)

Positioner / Process controller SideControl Type 8635 NAMUR

Pneumatic control system single-acting

Assembly variations	Electrical connection	Analogue feedback with 2 binary outputs	ATEX Approvals EEx ia II C T6	Article no.
Positioner SideControl 8635				
NAMUR IEC 60534-6-1 VDI/VDE 3845 (IEC 60534-6-2)	Cable gland	no	yes	147263
	Cable gland	no	yes	*
	Cable gland	yes	yes	155371
	Cable gland	yes	no	*
	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

Positioner / Process controller SideControl Type 8635 for remote and direct mounting on control valves

Pneumatic control system single-acting

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

Remote position sensor for SideControl Type 8635 remote resp. position sensor system for 8635 version with direct mounting on 27xx control valves









Assembly variations	Actuator size	Electrical connection	ATEX Approvals EEx ia II C T6	Article no.
Type 23xx control valves	Ø 70/90/130 mm	Cable gland	yes	689162
Type 27xx control valves	Ø 175/225 mm	Cable gland	yes	655535

* on request

Further options:

- Universal integrated attachment (air duct without piping)

Ordering chart for accessories

Description	Article no.
Accessories for SideControl NAMUR	
Assembly bridge VDI/VDE 3845 VA, bracket for attachment to pneumatic actuator of ball valve Type 8805	770294 
Adapter kit acc. to VDI/VDE 3845 VA, without bracket	787338 
Adapter kit linear actuators acc. to IEC 534-6 VA	787215 
Accessories for SideControl remote / direct mounting	
Bracket for wall mounting, stainless steel (replacement part)	675715 
Adapter kit remote position sensor for Type 23xx control valves, actuator sizes 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 
Standard accessories	
Silencer G ¼" (replacement part)	780780 

Ordering 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.

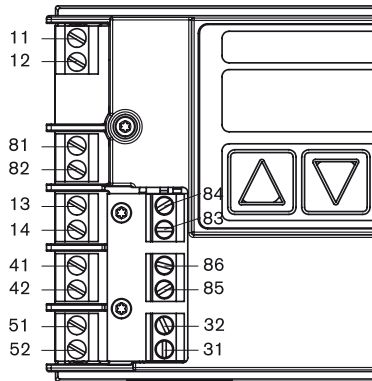
For ordering a complete control valve, specify the following article numbers:

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

Bürkert supplies a fully assembled and tested control valve.

Electrical connection

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



Terminal designation	Allocation	External connection
11 + 12 -	Setpoint + Setpoint -	4 ... 20 mA signal GND
13 + 14 -	Process value + (option) Process value + (option)	4 ... 20 mA signal GND
31 32	Actual value output + (option) Actual value output + (option)	
41 + 42 -	not allocated not allocated	
51+ 52 -	not allocated not allocated	
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)	

Warning: When connecting the intrinsically safe circuits, always observe the information in the enclosed certificate of conformity!

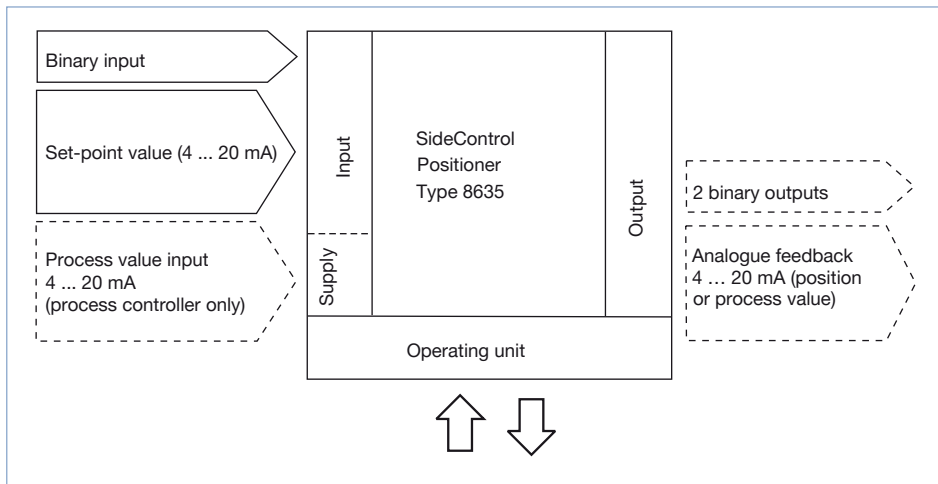
NOTE: Connection of a potential equalization conductor (PE) to the electronics is unnecessary.

Software functions (depending on the device configuration chosen)

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 analog input
- Configuration of the binary input and binary outputs

Interfaces



Note: The optional inputs and outputs are shown by dotted lines.

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www.burkert.com

If case of special conditions
please consult for advice.

Subject to alterations.
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