**Type 2712**

Piston-controlled globe valve

**Type 2702**

Piston-controlled angle seat valve

**Types 2730/2731/2731K**

Piston-controlled diaphragm valve

**Type 8030**

In-line flow sensor

The TopControl Continuous Type 8630 works as an electropneumatic positioner for pneumatically actuated control valves with piston actuators, e.g. the series 2702, 2712, 2730, 2731 and 2731K, as well as ball and butterfly valves with pneumatic rotary actuators. Together with the pneumatic actuator, it forms an optical and functional unit. With its numerous software functions, TopControl Continuous Type 8630 may also be used as a process controller with PID characteristics. In this case a process control loop is superposed upon the positioner loop in a cascade structure. The process value is fed directly to the TopControl as a standard current signal, frequency or PT-100 signal. The control system may be used for a variety of control tasks in fluid technology.

## Main functional groups:

- Position sensor for continuous measurement of the current position in the pneumatic actuator,
- Microprocessor controlled electronics for signal processing, actual/setpoint comparison, control and valve drive,
- Pneumatic positioning system for single or double acting actuators.

**Technical Data**

<b>Housing material</b>	PPE/PA
<b>Cover material</b>	PSU (transparent)
<b>Seal material</b>	NBR
<b>Control medium</b>	Quality classes to DIN ISO 8573-1
<b>Dust content</b>	Class 5 ( $\leq 40 \mu\text{m}$ particle size)
<b>Particle density</b>	Class 5 ( $\leq 10 \text{ mg/m}^3$ )
<b>Pressure dew point</b>	Class 3 ( $\leq -20^\circ\text{C}$ )
<b>Oil concentration</b>	Class 5 ( $\leq 25 \text{ mg/m}^3$ )
<b>Control air temperature</b>	-10 ... +50 °C
<b>Ambient temperature</b>	-10 ... +50 °C
<b>Positioning system</b>	For pressurizing and/or exhausting the pneumatic piston actuator
<b>single acting actuator</b>	2 solenoid valves
<b>double acting actuator</b>	4 solenoid valves
<b>Control air sockets</b>	G 1/4 NPT 1/4; RC 1/4 on request
<b>Supply pressure</b>	3 ... 7 bar <sup>1)</sup>
<b>Flow capacity Q<sub>Nn</sub> (of control valve)</b>	100 l/min (for pressurizing and exhausting)
<b>Intrinsic air consumption</b>	0 l/min
<b>Position sensing system</b>	High resolution conductive plastic potentiometer, coupled without play to the piston rod of the actuator.
<b>Operating voltage</b>	24 V DC ± 10%
<b>Residual ripple</b>	10 %, Not industrial DC!
<b>Power consumption</b>	< 5 W
<b>Electrical connection</b>	3 bushings (M16x1.5 with screw terminals) circular multipole plug
<b>Setpoint setting</b>	0/4 ... 20 mA, 0 ... 5/10 V
<b>Input resistance for setpoint signal</b>	180 Ω with 0/4 ... 20 mA 19 kΩ with 0 ... 5/10 V
<b>Sensor inputs for process controller</b>	4 ... 20 mA Pt 100, frequency
<b>Input resistance for process value signal</b>	180 Ω with 4 ... 20 mA 17 kΩ with frequency

<sup>1)</sup> The supply pressure applied must be at least 0.5 ... 1 bar above the max. permissible control pressure of the valve actuator.

## **По вопросам продаж и поддержки обращайтесь:**

Архангельск +7 (8182) 45-71-35	Калининград +7 (4012) 72-21-36	Новороссийск +7 (8617) 30-82-64	Сочи +7 (862) 279-22-65
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Екатеринбург +7 (343) 302-14-75	Мурманск +7 (8152) 65-52-70	Самара +7 (846) 219-28-25	Уфа +7 (347) 258-82-65
Иваново +7 (4932) 70-02-95	Наб.Челны +7 (8552) 91-01-32	Санкт-Петербург +7 (812) 660-57-09	Хабаровск +7 (421) 292-95-69
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Йошкар-Ола +7 (8362) 38-66-61	Нижнекамск +7 (8555) 24-47-85	Смоленск +7 (4812) 51-55-32	Череповец +7 (8202) 49-07-18
Казань +7 (843) 207-19-05			Ярославль +7 (4852) 67-02-35

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телефон: 8 800 511 88 70**

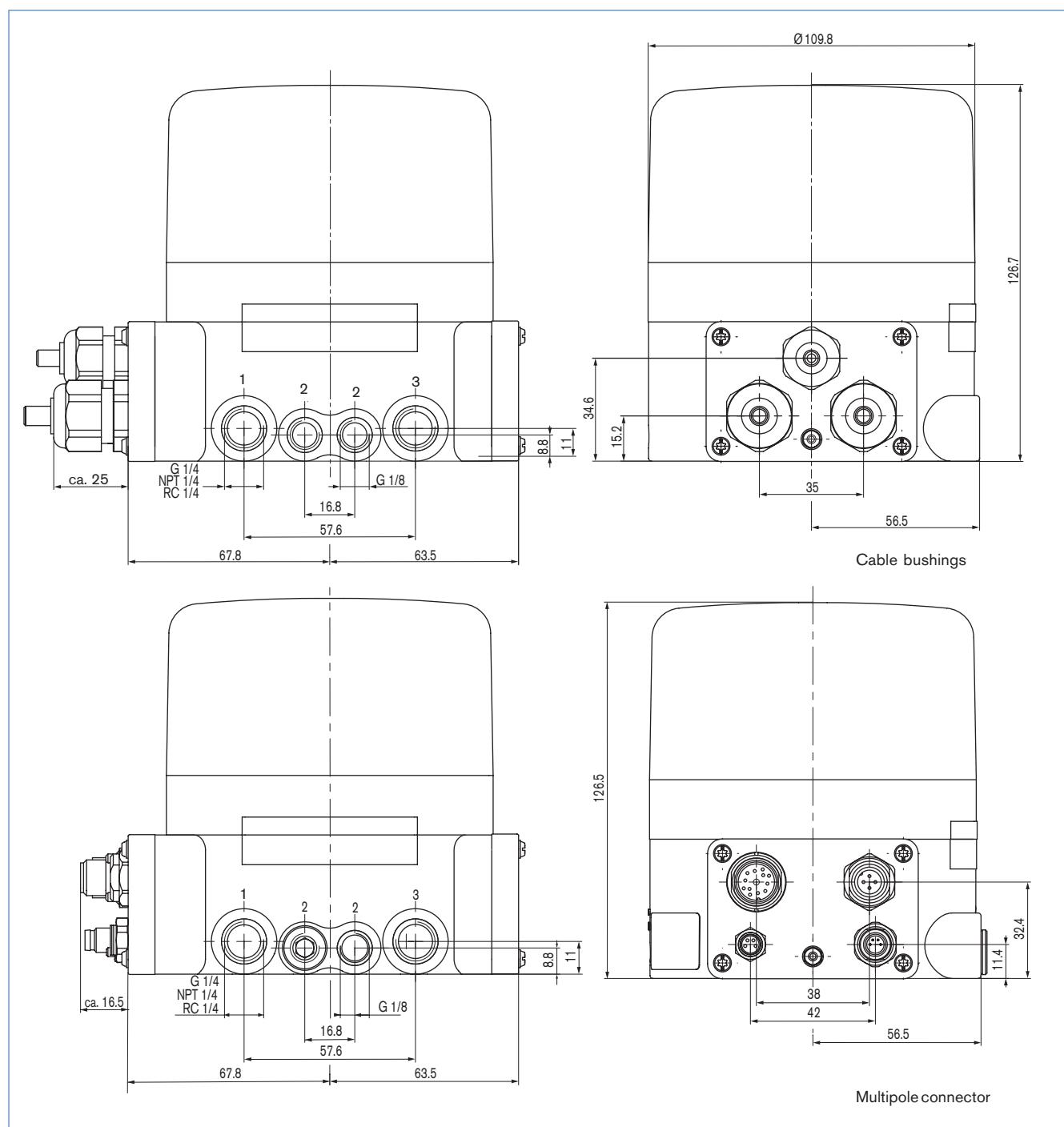
## Technical data (continued)

Technical Data	
<b>Options</b>	2 binary outputs, inductive proximity switches, analog feedback, process controller
<b>Bus communication</b>	PROFIBUS DP or DeviceNet others on request
<b>Operating panel and configuration</b>	Module with 3 keys for parametrization
<b>Display for setpoint and process value</b>	8-digit, 16-segment LC display
<b>Type of protection</b>	IP 65 to EN 60529
<b>Protection class</b>	3 to VDE 0580
<b>Conformity</b>	CE to EMV-9/336/EEC

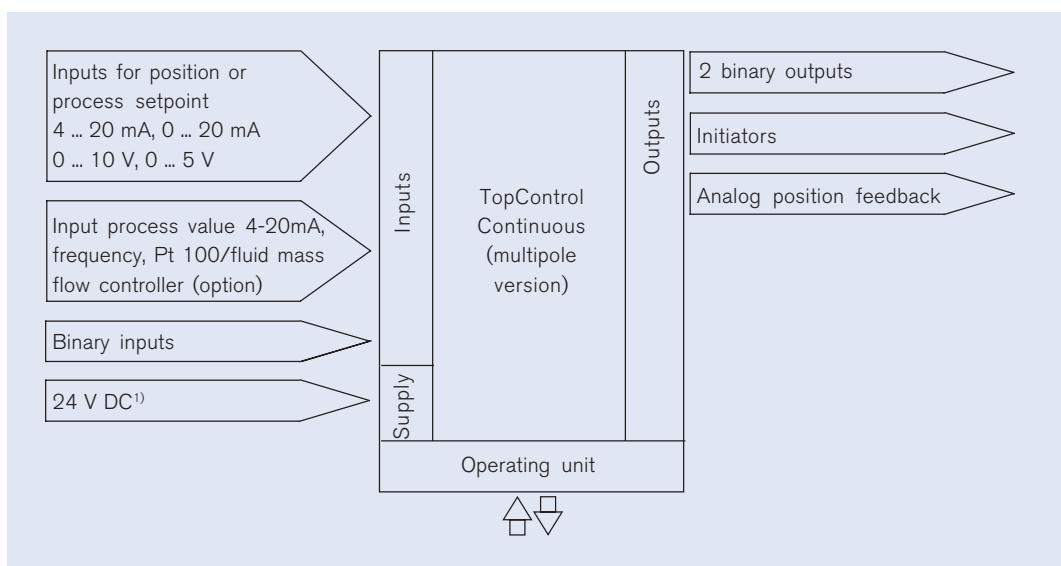
- Flow capacity value for air [l/min] measured at +20 °C, 6 bar<sup>1)</sup> pressure at valve input and 1 bar pressure difference

<sup>1)</sup> Pressure stated in [bar]: are excess to atmospheric

## Dimensions [mm]



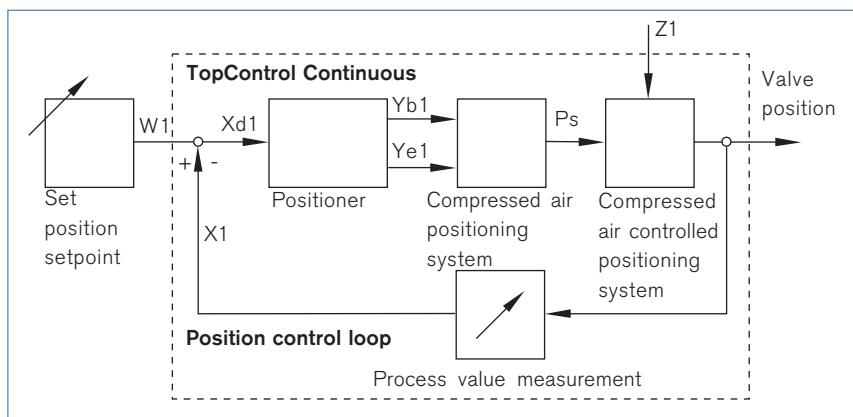
## Schematic representation of TopControl Continuous (3-conductor-device)



<sup>1)</sup> With a 3-conductor device the operating voltage is supplied independent of the setpoint signal.

## Signal flow plans

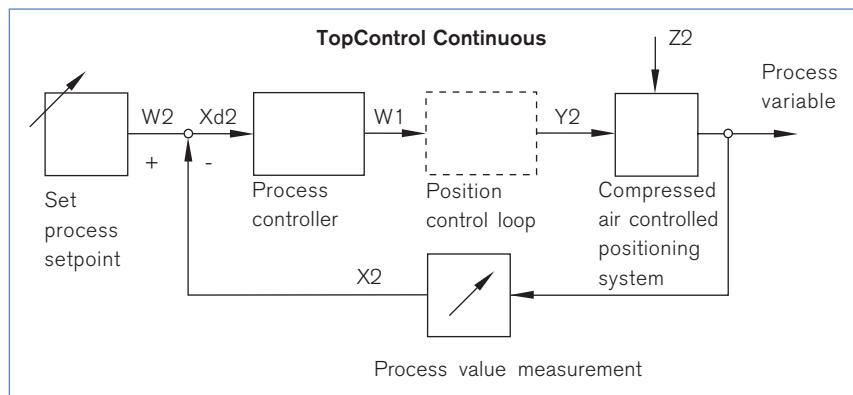
### Position control loop



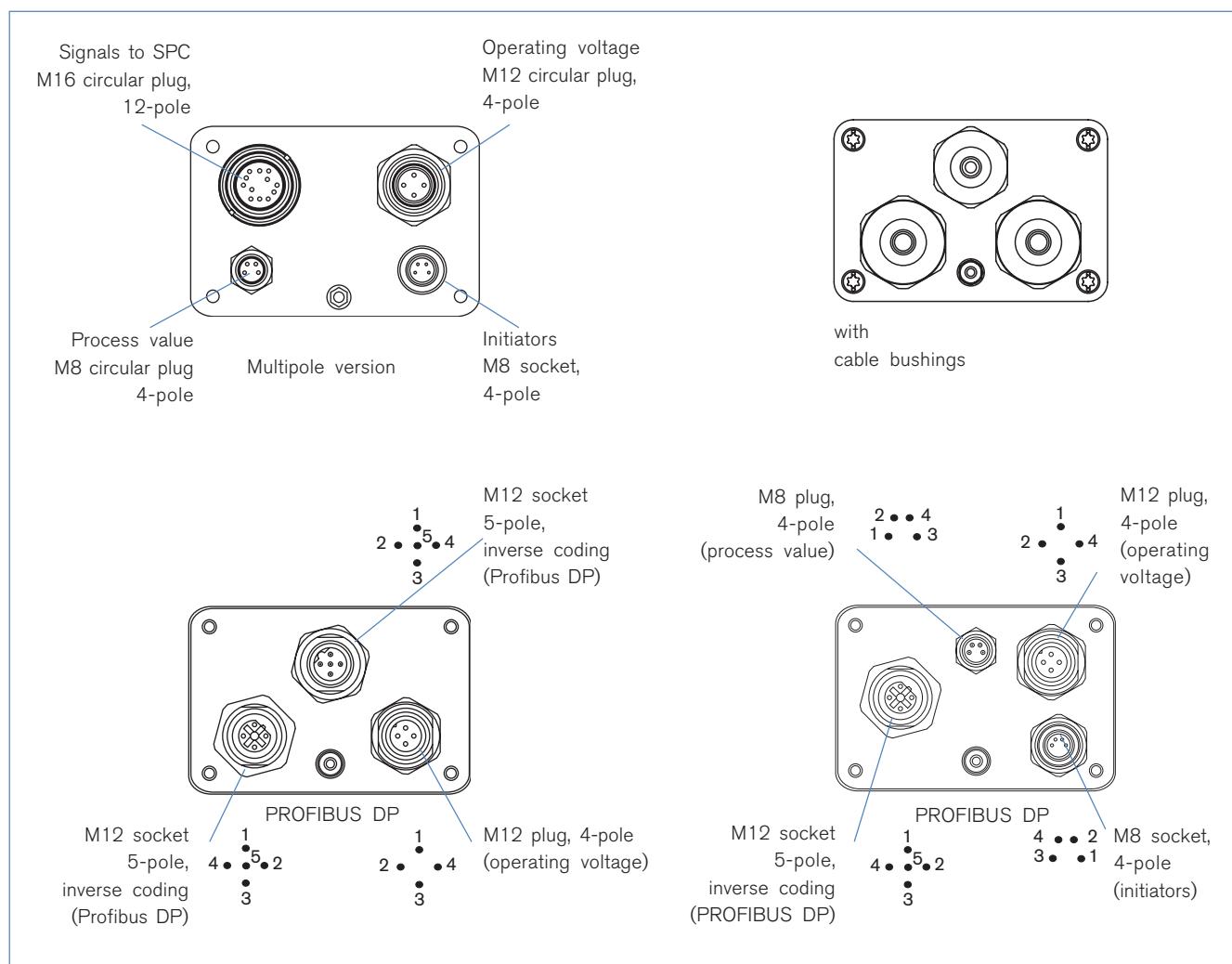
### Supplementary software functions in TopControl Continuous

- Automatic commissioning of the control system
- Automatic parametrization of the optional integral process controller
- Automatic or manual selection of characteristic curve
- Parametrization of the positioner
- Parametrization of the process controller
- Configuration of one binary input
- Configuration of one analog or two binary outputs
- Setting of a setpoint range
- Limitation of stroke range
- Setting of a tight closure or max. stroke threshold
- Setting of direction of motion
- Code protection

### Process control loop



## Connection options



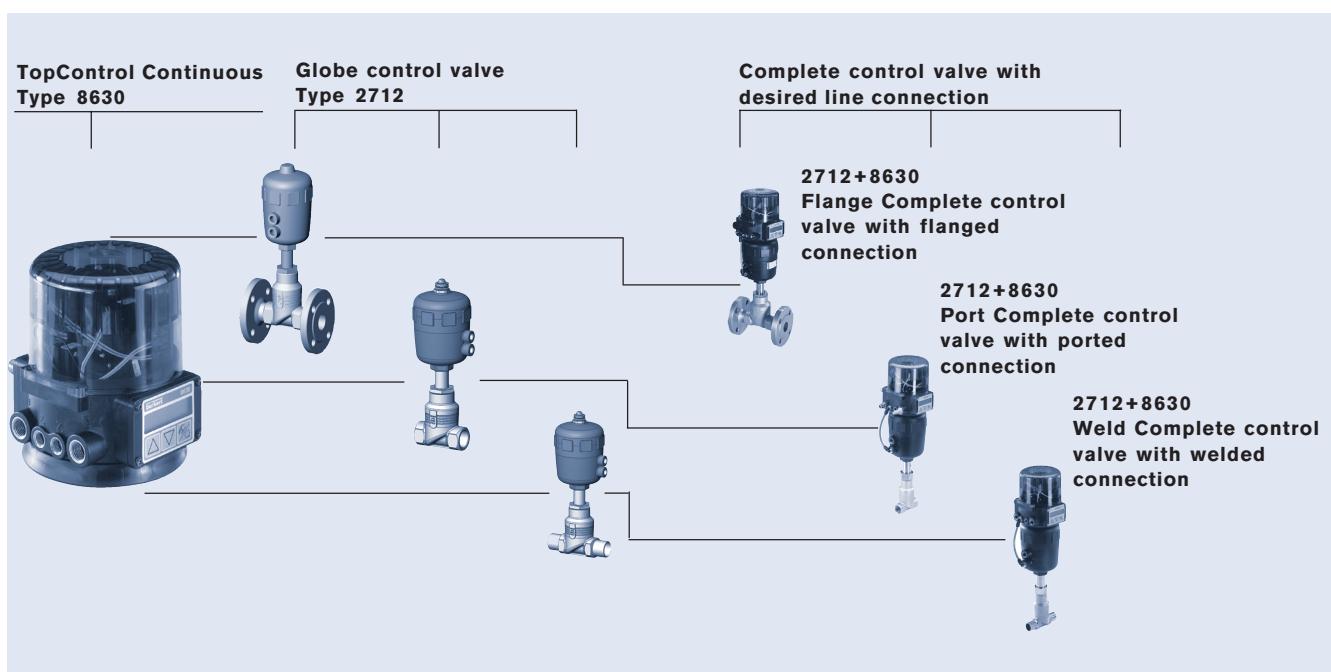
## Ordering information for complete control valves

A **complete control valve** consists of a **TopControl Continuous Type 8630** and a **control valve Type 27xx**.

TopControl Continuous Type 8630 is supplied only with a positioning valve as part of a complete control valve. For the selection of a complete control valve, the following data are required:

- Order no. of the TopControl Continuous (see *Ordering Table for TopControl Continuous Type 8630 without positioning valve*)
- Order no. of the chosen positioning valve Type 27xx (see e. g. *Ordering Tables for Types 2702, 2712, 2731K*)
- The remark: TopControl Control Valve System

## Ordering of complete control valves, using globe valve Type 2712 as an example



### Ordering table for TopControl Continuous Type 8630 without control valve (excerpt, other versions on request)

Function	Inductive proximity switch	Analog feedback	Binary outputs	Binary inputs	Electrical connection (with terminals/strip)	Item no. Actuator Ø 80/100 mm	Item no. Actuator Ø 125 mm
Position control	without	without	without	with	cable bushing	140 600	143 429
Position control	without	with	2	with	cable bushing	140 611	144 158
Position and process control	without	without	without	with	cable bushing	140 616	143 410
Position and process control	without	with	2	with	cable bushing	145 909	144 471
Position control	without	without	without	with	circular MP plug	143 141	145 521
Position and process control	without	without	without	with	circular MP plug	142 780	143 393
Position control	2	without	without	with	circular MP plug	142 208	145 522
Position and process control	2	without	without	with	circular MP plug	142 292	143 426
Position control	without	with	2	with	circular MP plug	140 612	145 523
Position and process control	without	with	2	with	circular MP plug	140 626	144 139
Position control with PROFIBUS DP	without	without	without	without	circular MP plug	157 781	158 769
Position control with DeviceNet	without	without	without	without	circular MP plug	145 526	145 527

**Ordering chart for accessories**

<b>Designa- tion</b>	<b>Item no.</b>	<b>Designa- tion</b>	<b>Item no.</b>
M16 socket, 12-pole, position/process setpoint; binary input and binary outputs	917 675	M8 plug, 4-pole, initiators M12 plug, inverse coding, PROFIBUS DP	917 131 918 198
M12 socket, 4-pole, voltage supply	917 116	M12 socket, 5-pole, DeviceNet	917 116
M8 socket, 4-pole, process value	917 676	M12 socket, inverse coding, PROFIBUS DP	918 447

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If case of special conditions,  
please consult for advice.

We reserve the right to make  
technical changes without notice.

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## SideControl Positioner

**Type 2712**

Globe valve

**Globe valve**

acc. to NAMUR/IEC

**Type 8805**

Rotary actuator

The SideControl Positioner Type 8635 is an electropneumatic positioner for pneumatically actuated process valves with linear or part-turn actuators. It is executed 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) to ATEX. Because of its compact and robust design, the housing is suitable for use in chemical and process engineering.

### Technical data

<b>Body material</b>	Aluminium, hard anodized and plastic coated
<b>Other external parts</b>	Stainless steel V4A
<b>Seal material</b>	NBR, Neoprene
<b>Control medium</b>	neutral gases DIN ISO 8573-1 Class 5 ( $\leq 40 \mu\text{m}$ particle size) Class 5 ( $\leq 10 \text{ mg/m}^3$ ) min. 10° under min. operating conditions Class 3 ( $\leq 1 \text{ mg/m}^3$ )
<b>Control air temperature</b>	-25 ... +60 °C <sup>1)</sup>
<b>Ambient temperature</b>	-25 ... +60 °C <sup>1)</sup>
<b>Supply pressure</b>	1.4 ... 6 bar <sup>3)</sup>
<b>Air flow capacity<sup>2)</sup></b>	55 l/min at 1.4 bar <sup>3)</sup> 170 l/min at 6 bar <sup>3)</sup> for pressurizing and venting
<b>Intrinsic air consumption</b>	0 l/min
<b>Positioning range</b>	Linear actuator Part-turn actuator
Linear actuator	3 ... 130 mm
Part-turn actuator	0 ... 120°
<b>Position sensor system</b>	High-resolution, conductive plastic, rotary potentiometer
<b>Operation</b>	Operating keys and plain-text display
<b>Electrical connection</b>	2 x M20 x 1.5-bushing Clamping range 6 ... 12 mm Screw terminals for 0.14 ... 1.5 mm <sup>2</sup>

<sup>1)</sup> Up to +65 °C temperature class T4/T5 or without EEx i approval.

<sup>2)</sup> May be adapted to actuator size with throttle screw.

<sup>3)</sup> Pressure data in bar; overpressure to ambient.

**Technical data (continued)**

<b>Technical data</b>		<b>Technical data</b>
<b>Electrical data</b>		
<b>Type 8635</b>		
Current supply for electronics	via setpoint signal 4 ... 20 mA	Namur recommendation acc. to DIN IEC 534 T6 acc. to VDI/VDE 3845
Burden voltage	< 10.2 V DC	ca. 1.5 kg
Setpoint setting	4 ... 20 mA	IP65 acc. to EN 60529
<b>Control air sockets</b>	G 1/4 NPT 1/4; RC 1/4 on request	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**

			<b>Permissible maxima as per Certificate of Conformity</b>	
<b>Function values</b>				
Power Supply	U I	10.2 V 4 mA	Ui li 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 li Ci Pi	30 V 100 mA 14.3 nF 1 W
Binary input	make/break contact (conf.)	-	Co Lo	5.5 µF 1000 mH
Analog feedback (Option)	U I	12 ... 30 V 4 ... 20 mA	Uo Io Po	30 V 100 mA 1 W
Limit switches (Option) (NAMUR initiators)	U I uncoated I coated	8 V 3 mA 1 mA	Uo Io Po	15.5 V 52 mA 150 mA

**Recommendations for isolation transformers / DC transformers input 4 ... 20 mA / output 4 ... 20 mA**

<b>Company</b>	<b>Model</b>	<b>Burden</b>	<b>Ex</b>	<b>active/passive</b>
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
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.

**Software functions (depending on the device configuration chosen)****Type 8635**

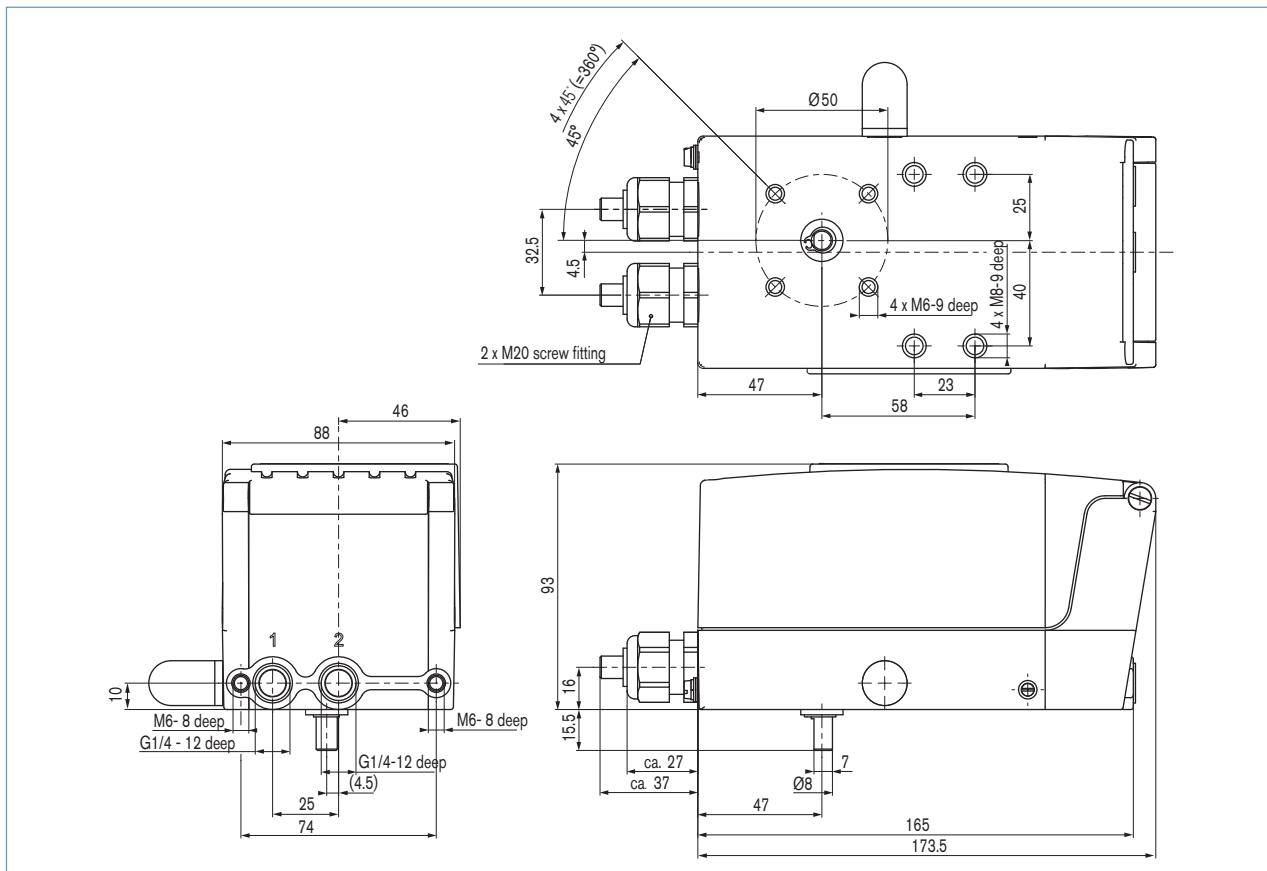
- Automatic commissioning of control system
- Parametrization of the positioner
- Automatic or manual entry of characteristic curve for correction of operating characteristic
- Setting of the tight-closure or maximum stroke threshold
- Stroke limitation
- Limitation of positioning speed
- Dead band
- 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

## Software functions (depending on the device configuration chosen)

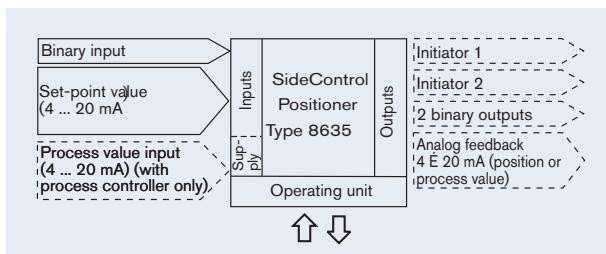
### Other software functions on Type 8635

- 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

### Dimensions [mm]



### Interfaces



#### Note

The optional inputs and outputs are shown by dotted lines.

**Ordering chart (excerpt, other versions on request)**

Type 8635

<b>Function<sup>1)</sup></b>	<b>Position sensor system</b>	<b>Communi-cation</b>	<b>Initiator DIN EN 60947-5-6</b>	<b>Analog feedback incl. 2 binary outputs</b>	<b>Mounting on pneumatic linear or part-turn actuator</b>	<b>EEx approval (acc. to ATEX)</b>	<b>Item no.</b>
Pos	external	none		no	mounting on control valve Type 27XX	EEx ia II C T6	150 347
Pos	external	none		yes	mounting on control valve Type 27XX	EEx ia II C T6	155 369
Pos	internal	none		no	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	EEx ia II C T6	147 263
Pos	internal	none	2 open/close	no	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	EEx ia II C T6	*
Pos	internal	none		yes	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	EEx ia II C T6	155 371
Pos	internal	none	2 open/close	yes	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	none	*
Pos+Pro	external	none		no	mounting on control valve Type 27XX	EEx ia II C T6	151 111
Pos+Pro	external	none		yes	mounting on control valve Type 27XX	EEx ia II C T6	155 373
Pos+Pro	internal	none		no	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	EEx ia II C T6	147 264
Pos+Pro	internal	none		yes	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	EEx ia II C T6	155 375
Pos	internal	none		no	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	none	147 265
Pos	external	none		no	mounting on control valve Type 27XX	none	147 267
Pos+Pro	internal	none		no	NAMUR (DIN IEC 534-6; VDI/VDE 3845)	none	147 266
Pos+Pro	external	none		no	mounting on control valve Type 27XX	none	147 268

<sup>1)</sup> Pos.: positioner; pro: process controller

\* available on request

Type 8635 is designed for attachment to single-acting actuators.

**Other options**

- Universal integrated attachment  
(air channelling without piping)
- Manometer block VA (inlet air and actuator chamber)
- Initiators to NAMUR as limit switches (optional)

## Ordering chart for accessories

Version	Item no.
Mounting kit for linear actuators to DIN IEC 534-6	787 215
Mounting kit for part turn actuators to VDI/VDE 3845, without bracket	787 338
Console VA VDI/VDE3845-ISO5211 FO5 for attachment to a pneumatic actuator from ball valve, Type 8805	672 243
Manometer block with 2 manometers, VA	654 602
Attachment kit for piston actuators Type 27XX, 80 mm	651 771
Attachment kit for piston actuators Type 27XX, 100 mm/125 mm	651 772
Attachment kit for piston actuators Type 27XX, 175 mm/225 mm	655 567
Position sensor system for piston actuators Type 27XX, 80 mm	651 751
Position sensor system for piston actuators Type 27XX, 100 mm/125 mm	653 021
Position sensor system for piston actuators Type 27XX, 175 mm/225 mm	655 535

### Ordering note

When attached to a Burkert control valve, the SideControl positioner Type 8635 will be supplied only as part of a complete control valve (positioner, position sensor system, associated attached parts and control valve).

- To select a suitable control valve, use the data sheets of Types 27XX.

To order a complete control valve, state the following numbers:

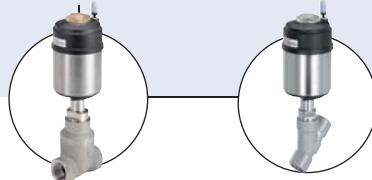
- the order no. of the SideControl positioner Type 8635
- the order no. of the position sensor system,
- the order no. of the selected control valve and
- the order no. of the associated attached parts with the remark  
SideControl positioner Type 8635 control valve.

- Burkert supplies a completely assembled and tested control valve.

To find your nearest Burkert facility, click on the orange box →



Type 8692 can be combined with...



**Type 2301**

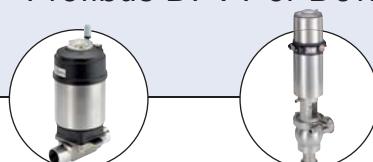
Globe control valve

**Type 2300**

Angle-seat control valve

## Digital electropneumatic Positioner for the integrated mounting on process control valves

- Compact, robust stainless steel design
- Easy start-up by automatic X-Tune function
- Contact-free position sensor
- Integrated control air routing with spring chamber aeration
- Profibus DPV1 or DeviceNet communication (option)



**Type 2103**

Diaphragm control valve

Hygienic process valves

### Technical data

<b>Material</b>	Body Cover Sealing	PPS, stainless steel PC EPDM
<b>Power supply</b>	24 VDC +/- 10% UL: NEC Class 2	
<b>Residual ripple</b>	max. 10%	
<b>Setpoint setting</b>	0/4 to 20mA and 0 to 5/10 V	
<b>Output resistance</b>	0/4 to 20 mA: 180 Ω 0 to 5/10 V: 19 kΩ	
<b>Control medium</b>	Dust concentration Particle density Pressure condensation point Oil concentration	neutral gases, air, quality classes acc. to ISO 8573-1 Class 7 (<40µm particle size) Class 5 (<10mg/m³) Class 3 (<-20°C) Class X (<25mg/m³)
<b>Ambient temperature</b>		-10 to +55 °C
<b>Pilot air ports</b>		Threaded ports G1/8 stainless steel or Push-in connector (tube Ø 6 mm / 1/4")
<b>Supply pressure</b>		Low air flow rate 0 to 7 bar <sup>1)</sup> High air flow rate 3 to 7 bar
<b>Air input filter</b>		Exchangeable (mesh aperture~0.1mm)
<b>Actuator system</b>	Actuator series ELEMENT 23XX  Actuator series CLASSIC 27XX	Low air flow rate : Ø Actuator 70 / 90 mm High air flow rate: Ø Actuator 130 mm Low air flow rate : Ø Actuator 80 / 100 mm High air flow rate: Ø Actuator 125 / 175 / 225 mm
<b>Position detection module</b>		Contact-free, wear-free
<b>Stroke range valve spindle</b>		3 to 45 mm
<b>Installation</b>		as required, preferably with actuator in upright position
<b>Protection type</b>		IP65 and IP67 acc. to EN 60529, Type 4X
<b>Power consumption</b>		< 5 W
<b>Electrical connection</b>	Multipole connection Cable gland	M12, 8-pins or 4-pins 2xM16x1,5 (cable-Ø10mm) on terminal screws (1,5 mm²)
<b>Bus communication</b>		Profibus DPV1, DeviceNet
<b>Approvals</b>		ATEX II cat. 3G/D cULus Cert. No. 238179
<b>Ignition protection</b>		II 3D Ex IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
<b>Protection class</b>		3 acc. to DIN EN 61140
<b>Conformity</b>		EMC directive 2014/30/EU

The housing is easy to clean and features proven IP protection and chemically resistant materials for use in hygienic processing, in food, beverage and pharmaceutical industries. Combined with Bürkert ELEMENT actuators the unique pilot valve system enables a compressed air recycling that avoids actuator chambers contamination from the environment.

The housing is easy to clean and features proven IP protection and chemically resistant materials for use in hygienic processing, in food, beverage and pharmaceutical industries. Combined with Bürkert ELEMENT actuators the unique pilot valve system enables a compressed air recycling that avoids actuator chambers contamination from the environment.

<sup>1)</sup> The supply pressure has to be 0,5 - 1 bar above the minimum required pilot pressure for the valve actuator.

## Ordering information for TopControl-Control valve systems

A complete TopControl-Control valve system consists of a TopControl Type 8692 and a process valve Type 23XX/2103. The following information is necessary for the selection of a complete control valve:

- **Item no.** of the Positioner TopControl **Type 8692** without process valve, see ordering chart on p. 3
- **Item no.** of the selected process valve **Type 23XX/2103** (see separate datasheets, e.g. 2300, 2301 or 2103)

You order two components and receive a complete assembled and certified valve.

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

**Example of variations of control valves**

<b>8692 Positioner TopControl</b>	<b>Required process valve, example</b>
<hr/>	
<b>Complete control valve with required body and port connection</b>	
<b>Valve system Continuous ELEMENT Type 8802-GD-I 2301 + 8692</b>	<b>Valve system Continuous ELEMENT Type 8802-YG-I 2300 + 8692</b>
<b>Valve system Continuous ELEMENT Type 8802-DF-I 2103 + 8692</b>	<b>Customised attachment to third party actuators*</b>

**More info.**

**More info.**

**More info.**

**More info.**

**More info.**

**Valve system  
Continuous ELEMENT  
Type 8802-DF-I  
2103 + 8692**

**Customised attachment  
to third party actuators\***

\*please see datasheet 8681/  
ELEMENT installation kits to  
3rd party process valves or  
contact your sales office for  
related drawings or individual  
engineering support]

**Ordering chart Type 8692 (other versions on request)**

Control function Pilot valve system	Communi- cation	Electrical connection	Analogue feedback 0/4-20 mA	Analogue feedback 0/4-20 mA + 2 binary outputs	Diagnostic function *	Binary inputs	Pilot air ports threaded ports	Item no.
<b>Actuator series ELEMENT Type 23XX, size Ø70/90 mm</b>							<b>Standard</b>	<b>ATEX II cat. 3G/D</b>
Low air capacity single-acting	Profibus DPV1 DeviceNet	Cable gland			yes	G1/8	227 290	265 013
				yes	yes	G1/8	265 166	265 014
		M12 multipole			yes	G1/8	226 206	265 015
				yes	yes	G1/8	265 167	265 016
			via Bus			G1/8	233 348	265 019
	Profibus DPV1 DeviceNet	Cable gland				G1/8	265 168	265 017
				yes	yes	G1/8	227 274	264 998
		M12 multipole			yes	G1/8	265 169	264 999
				yes	yes	G1/8	265 170	265 000
			via Bus		yes	G1/8	265 171	265 001
Low air capacity double-acting	Profibus DPV1 DeviceNet	Cable gland				G1/8	265 172	265 004
				yes	yes	G1/8	265 173	265 002
		M12 multipole			yes	G1/8	227 316	265 027
				yes	yes	G1/8	265 174	265 028
					yes	G1/8	245 016	265 029
	Profibus DPV1 DeviceNet	Cable gland			yes	G1/8	265 175	265 030
				yes	yes	G1/8	233 349	265 033
		M12 multipole				G1/8	265 176	265 031
			via Bus			G1/8		
			via Bus			G1/8		
<b>Actuator series CLASSIC Type 27XX, size Ø80/100 mm</b>								
Low air capacity single-acting	Profibus DPV1 DeviceNet	Cable gland			yes	G1/8	227 299	265 020
				yes	yes	G1/8	227 301	265 021
		M12 multipole			yes	G1/8	227 306	265 022
				yes	yes	G1/8	227 308	265 023
			via Bus			G1/8	261 603	265 026
	Profibus DPV1 DeviceNet	Cable gland				G1/8	247 245	265 024
				yes	yes	G1/8	227 283	265 005
		M12 multipole			yes	G1/8	265 177	265 006
				yes	yes	G1/8	227 286	265 007
			via Bus		yes	G1/8	259 975	265 008
Low air capacity double-acting	Profibus DPV1 DeviceNet	Cable gland			yes	G1/8	253 190	265 012
				yes	yes	G1/8	265 178	265 010
<b>Actuator series CLASSIC Type 27XX, size Ø125/175/225 mm</b>								
High air capacity single-acting	Profibus DPV1 DeviceNet	Cable gland			yes	G1/8	227 324	265 035
				yes	yes	G1/8	227 326	265 036
		M12 multipole			yes	G1/8	227 330	265 037
				yes	yes	G1/8	227 332	265 038
			via Bus			G1/8	233 350	265 041
	Profibus DPV1 DeviceNet	Cable gland				G1/8	239 114	265 039
				yes	yes	G1/8		
		M12 multipole			yes	G1/8		
			via Bus			G1/8		
			via Bus			G1/8		

\*see additional software functions parametrisable diagnostic functions / binary outputs on page 9

**Note:** All non-ATEX versions are UL approved.

**i Further versions on request**



**Additional**  
push-in pilot air ports (tube Ø 6mm / 1/4")

**Ordering chart adapter kit (has to be ordered separately)**

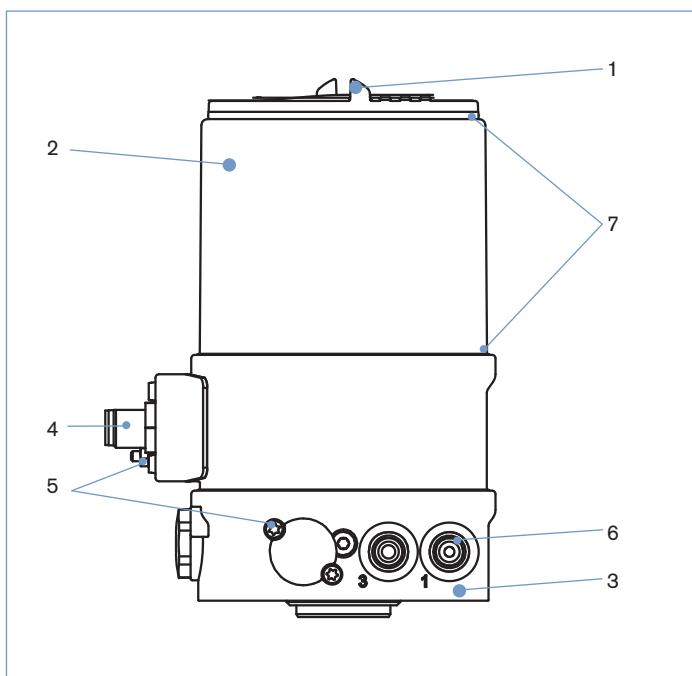
Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT Types 23XX	Ø70 / 90 / 130 mm	universal	679 917
Adapter kit CLASSIC Types 27XX	Ø80 mm	universal	679 931
	Ø100 mm	universal	679 932
	Ø125 mm	A (NO), B (NC)	679 934
	Ø175/225 mm	A (NO), B (NC)	679 935

For installation kits to 3rd party process valves please see datasheet installation kits for hygienic process valves or contact your sales office for related drawings or individual engineering support

**Ordering chart accessories**

Description	Item no.
M12 socket, 8-pins, 5 m assembled cable	919 267
M12 socket, 5-pins, 5 m assembled cable	264 606
M12 socket, 4-pins, 5 m assembled cable	918 038
Silencer G1/8	780 779
Silencer, push-in connector	902 662
Sensor puck (spare part)	682 240
USB interface for serial communication	227 093

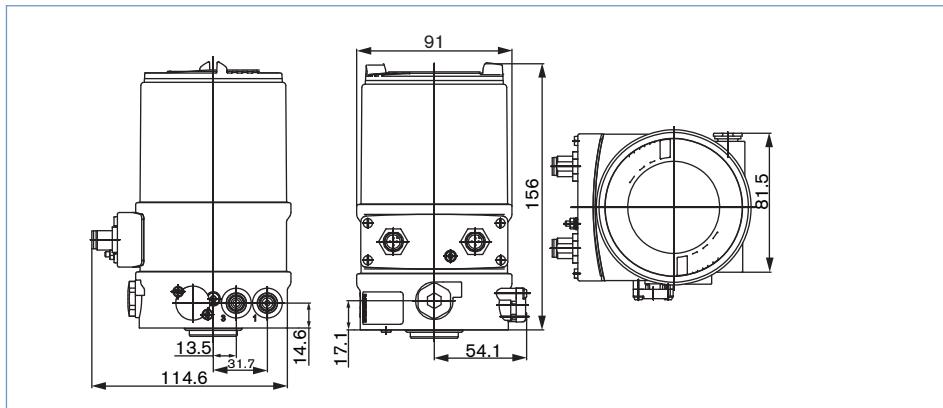
## Materials



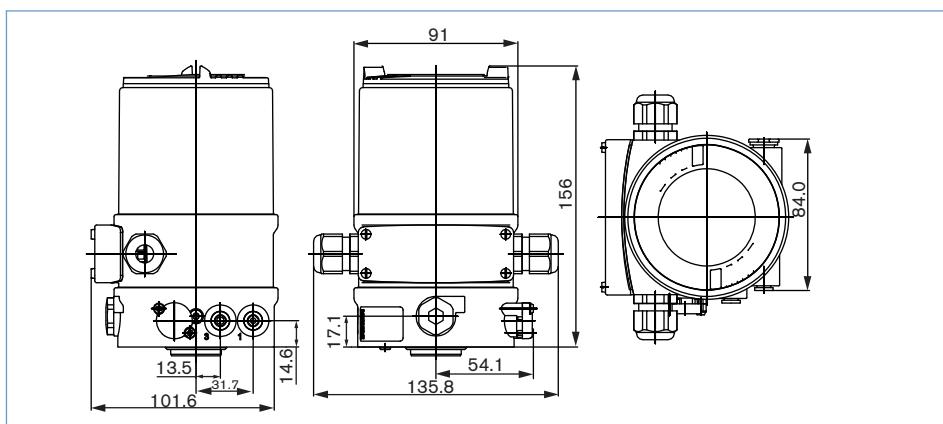
<b>1 Cover</b>	PC
<b>2 Body casing</b>	Stainless steel
<b>3 Basic body</b>	PPS
<b>4 Plug M12</b>	Stainless steel
<b>5 Screws</b>	Stainless steel
<b>6 Push-in connector Threaded ports G1/8</b>	POM/stainless steel
<b>7 Sealing</b>	Stainless steel
	EPDM

## Dimensions [mm]

### Version connection Multipole

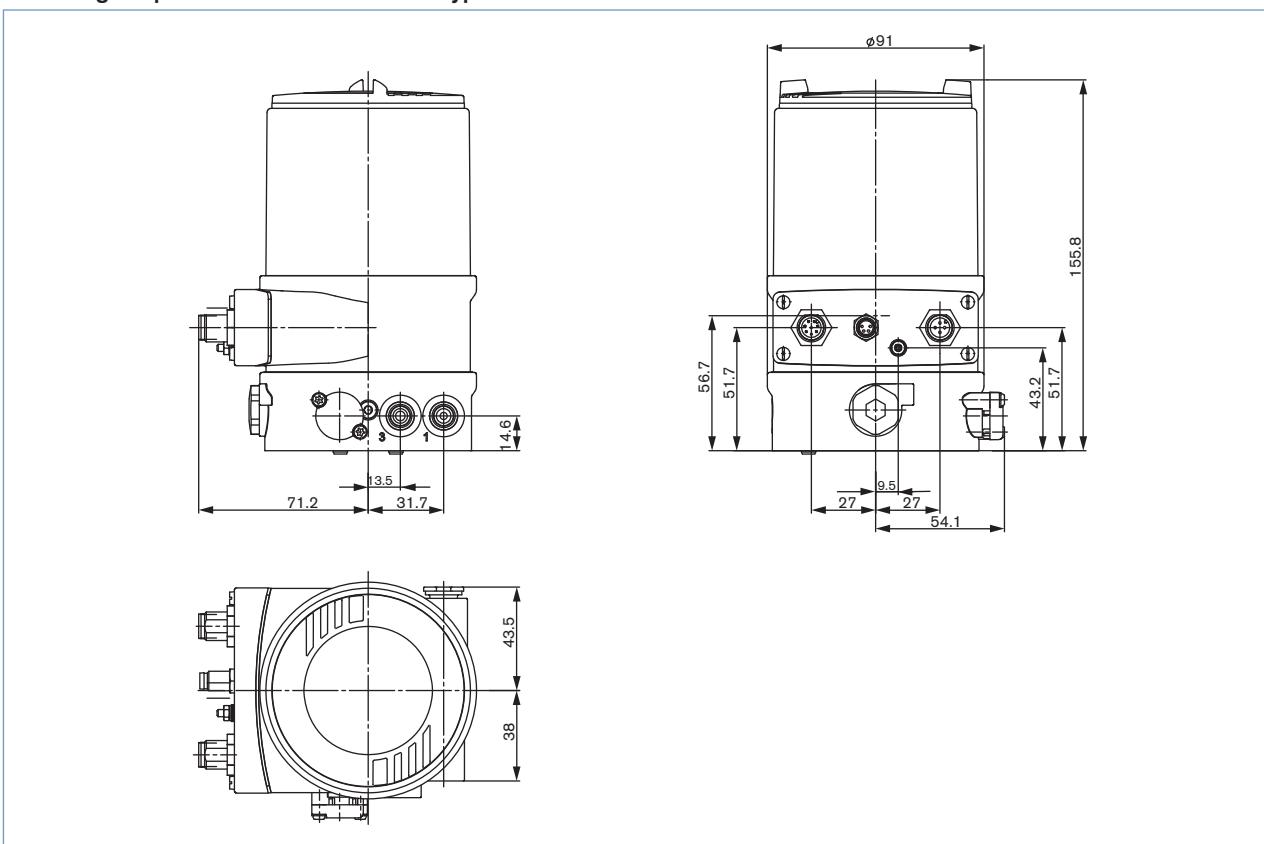


### Version connection cable glands

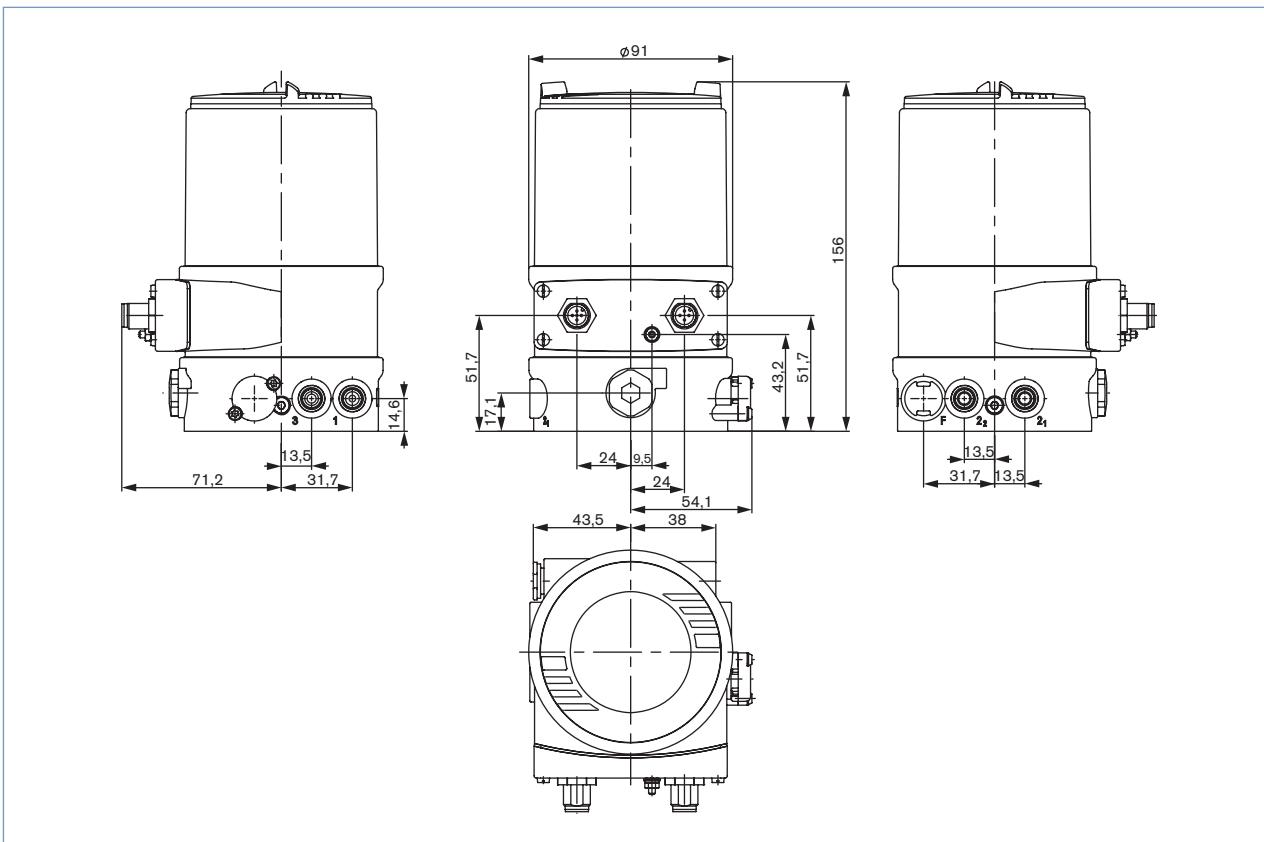


**Dimensions [mm]**

Mounting on process valve ELEMENT Types 23XX



Mounting on process valve CLASSIC Types 27XX



**Mounting on third party hygienic process valves**



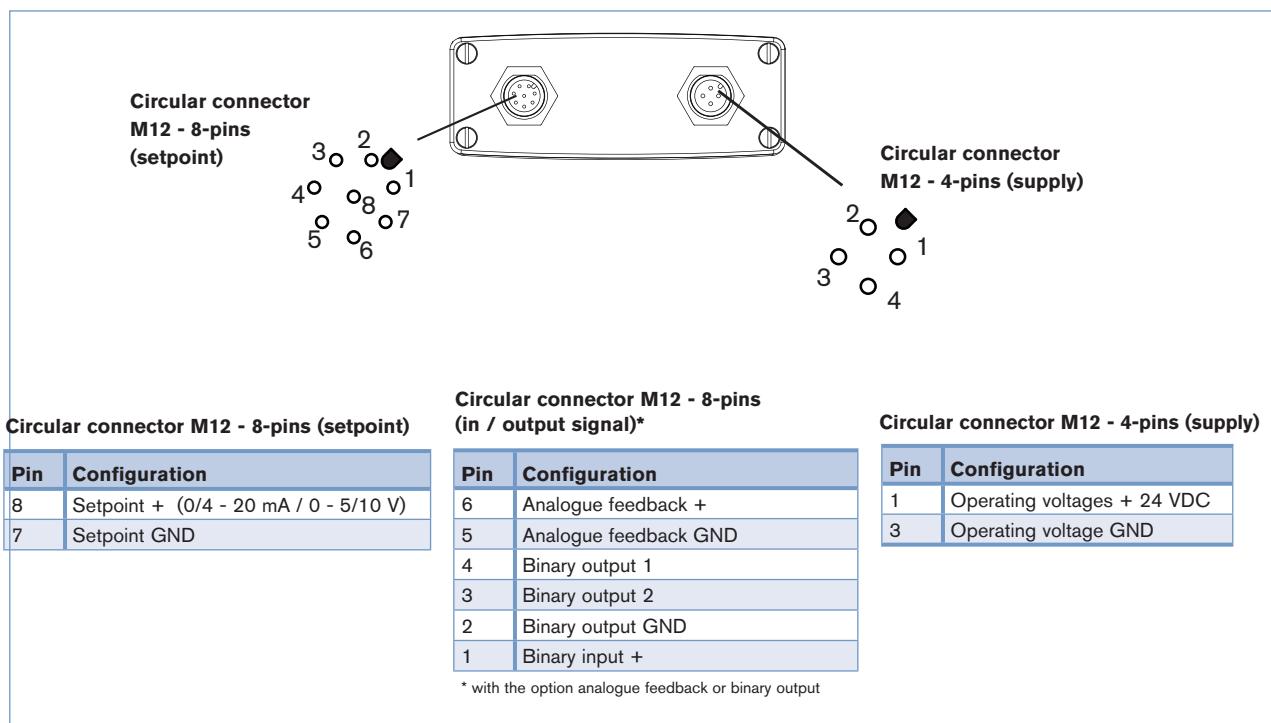
**More info.**

**Customised attachment  
to 3rd party actuators\***

\*: please see datasheet 8681/ELEMENT installation kits to third party process valves or contact your sales office for related drawings or individual engineering support]

## Connection options

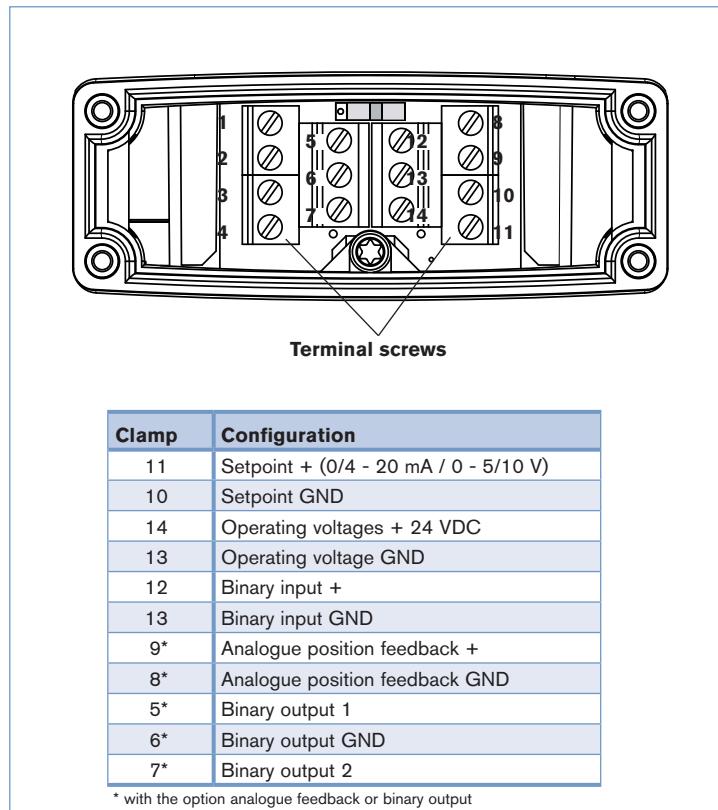
### Connection Multipole



Circular connector M12 - 8-pins (setpoint)		Circular connector M12 - 8-pins (in / output signal)*	Circular connector M12 - 4-pins (supply)
Pin	Configuration	Pin	Configuration
8	Setpoint + (0/4 - 20 mA / 0 - 5/10 V)	6	Analogue feedback +
7	Setpoint GND	5	Analogue feedback GND
		4	Binary output 1
		3	Binary output 2
		2	Binary output GND
		1	Binary input +

\* with the option analogue feedback or binary output

### Connection cable glands

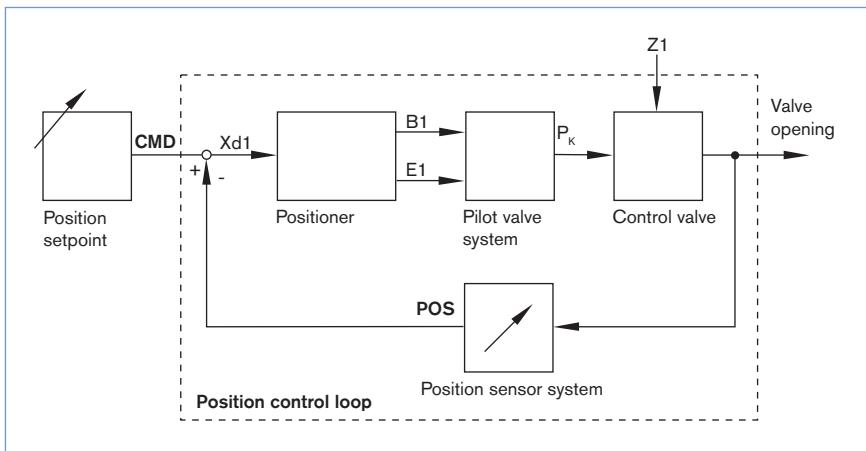


Clamp	Configuration
11	Setpoint + (0/4 - 20 mA / 0 - 5/10 V)
10	Setpoint GND
14	Operating voltages + 24 VDC
13	Operating voltage GND
12	Binary input +
13	Binary input GND
9*	Analogue position feedback +
8*	Analogue position feedback GND
5*	Binary output 1
6*	Binary output GND
7*	Binary output 2

\* with the option analogue feedback or binary output

## Signal flow diagram

### Position control loop



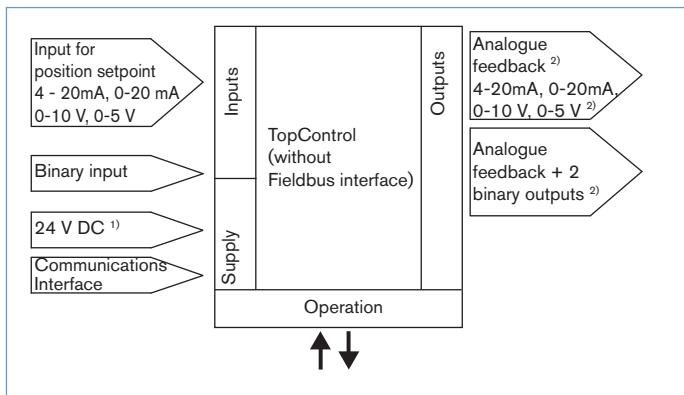
### Additional software functions of the TopControl Type 8692 (extract)

- Automatic start of the control system
- Automatic or manual characteristic curves selection
- Setting of the seal and the maximum stroke threshold respectively
- Parameterization of the Positioner
- Limitation of the stroke range
- Limitation of the manipulating speed
- Setting of the moving direction
- Configuration of the binary input
- Signal range splitting on several controllers
- Configuration of an analogue or 2 binary outputs
- Signal fault detection
- Safety position
- Code protection
- Contrast inversion of the display
- Parametisable diagnostic functions\* / Binary outputs (option)
  - Operating-hours counter
  - Path accumulator
  - Position monitoring
  - Graphical display of the dwell time density and movement range
  - Monitoring of the mechanical end positions in the armature
  - Direction reversal counter
  - Temperature monitoring

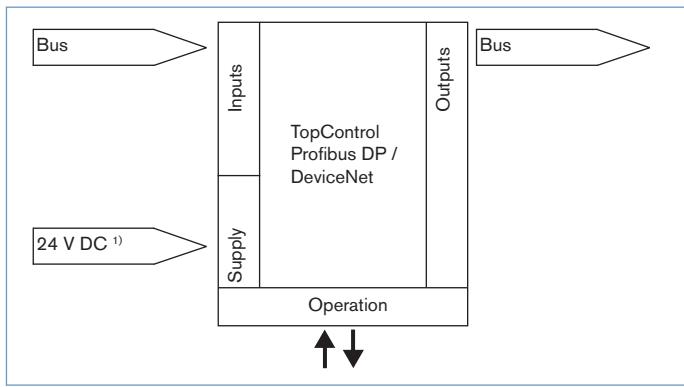
\* You will find a more detailed description for every diagnostic function in the operating manual of Type 8792, page 148 - 167

## Schematic diagram of the TopControl Type 8692

### Without fieldbus interface



### With Profibus DP / DeviceNet



<sup>1)</sup> The operating voltage is supplied with a 3-wire unit independent from the setpoint signal.

<sup>2)</sup> Alternative options

To find your nearest Bürkert facility, click on the orange box →



Type 8696 can be combined with...



**Type 2301**

Globe control valve,  
actuator ø 50 mm

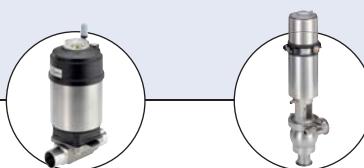


**Type 2300**

Angle-seat control  
valve, actuator  
ø 50 mm

## Digital electropneumatic Positioner for the integrated mounting on process control valves

- Compact, robust stainless steel design
- Start-up by automatic Tune function
- Contact-free position sensor
- Integrated control air routing
- Analogue Feedback (option)



**Type 2103**

Diaphragm control  
valve, actuator  
ø 50 mm



Hygienic process  
valves

Compact positioner for integrated mounting on pneumatically operated process valves. Remote setpoint adjustment via a 4-20 mA signal. A contact-free continuous sensor measures the position of the valve spindle. Simple installation through automatic tune function and setting through DIP-switch:

- Close tight function,
- Characteristic curves selection,
- Reversal of effective direction,
- Switching manual /automatic operation,
- Binary input.

A software interface can be used for, amongst others, linearisation of the operation characteristics by using free programmable fixed points. The valve position indication is shown through LED components. As an option an analogue position feedback can be integrated.

### Technical data

<b>Material</b>	PPS, stainless steel PC EPDM
<b>Power supply</b>	24 VDC +/- 10% UL: NEC Class 2
<b>Residual ripple</b>	max. 10%
<b>Setpoint setting</b>	4 - 20mA (default setting) / 0 - 20mA
<b>Output resistance</b>	180 Ω
<b>Control medium</b>	neutral gases, air, quality classes acc. to ISO 8573-1 Class 7 (<40µm particle size) Class 5 (<10mg/m³) Class 3 (<-20°C) Oil concentration
<b>Ambient temperature</b>	-10 to +55°C
<b>Pilot air ports</b>	Threaded ports G1/8 stainless steel or push-in connector (tube Ø 6mm / 1/4")
<b>Supply pressure</b>	0 to 7 bar <sup>1)</sup>
<b>Actuator system</b>	for single-acting actuators ø Actuator 50 mm
<b>Position detection module</b>	Contact-free, wear-free
<b>Stroke range valve spindle</b>	3 to 32 mm
<b>Installation</b>	as required, preferably with actuator in upright position
<b>Protection type</b>	IP65 and IP67 acc. to EN 60529, Type 4X
<b>Approvals</b>	ATEX II cat. 3G/D cULus Cert. No. 238179
<b>Ignition protection</b>	II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
<b>Power consumption</b>	< 3.5 W
<b>Electrical connection</b>	M12 (8-pins), stainless steel
<b>Protection class</b>	3 acc. to DIN EN 61140
<b>Conformity</b>	EMC directive 2014/30/EU
<b>Options</b>	Analogue position feedback, 4-20mA

<sup>1)</sup> The supply pressure has to be 0,5 - 1 bar above the minimum required pilot pressure for the valve actuator.

## Ordering information for TopControl-Control valve systems

A complete TopControl-Control valve system consists of a TopControl Basic Type 8696 and a process valve Type 23XX or 2103 actuator size  $\varnothing$  50 mm. The following information is necessary for the selection of a complete control valve:

• **Item no.** of the Positioner TopControl Basic **Type 8696** without process valve, see ordering chart on p. 3

• **Item no.** of the selected process valve **Type 23XX/2103 actuator size  $\varnothing$  50 mm** (see separate datasheets, e.g. 2300, 2301, 2103)

You order two components and receive a complete assembled and certified valve.

When you click on the orange box "More info." below, you will come to our website for the resp. product where you can download the datasheet.

**Example of variations of control valves**

<b>8696 Positioner TopControl Basic</b>	<b>Required process valve, example</b>
	<b>More info.</b>
	2301 Globe Control Valve Actuator $\varnothing$ 50 mm
	<b>More info.</b>
	2300 Angle-Seat Control Valve Actuator $\varnothing$ 50 mm
	Third party hygienic control valves

**Complete control valve with required body and port connection**

<b>Valve system Continuous ELEMENT Type 8802-GD-N 2301 + 8696</b>	<b>Valve system Continuous ELEMENT Type 8802-YG-N 2300 + 8696</b>	<b>Customised attachment to third party actuators*</b>
		<b>More info.</b>

\*Please see datasheet 8681/ELEMENT installation kits to 3rd party process valves or contact your sales office for related drawings or individual engineering support]

**Ordering chart Type 8696 (other versions on request)**

Control function	Electrical connection	Analogue feedback	1 Binary input	Pilot air ports threaded ports	Item no.	
<b>Actuator series ELEMENT Type 23XX, size Ø 50mm (internal control air routing)</b>					<b>Standard</b>	<b>ATEX II cat. 3G/D</b>
single-acting	M12 multipole	yes	G1/8	227 448	265 082	
		yes	G1/8	227 449	265 083	
<b>Mounting on 3rd party actuators (external control air routing)</b>						
single-acting	M12 multipole	yes	G1/8	223 897	265 084	
		yes	G1/8	223 898	265 085	

**Note:** All non-ATEX versions are UL approved.

**i Further versions on request**



Approvals  
FM



Additional  
push-in pilot air ports (tube Ø 6mm / 1/4")

**Ordering chart adapter kit (has to be ordered separately)**

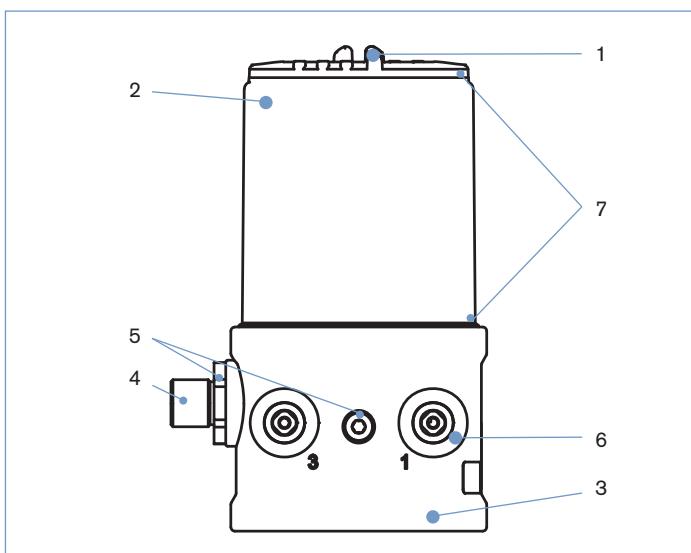
Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT Types 23XX	Ø 50 mm	A (NO), B (NC)	679 918

For installation kits to 3rd party process valves please see datasheet 8681/ELEMENT or contact your sales office for related drawings or individual engineering support

**Ordering chart accessories**

Description	Item no.
M12 socket, 8-pins, 5m assembled cable	919 267
Silencer G1/8	780 779
Silencer, push-in connector	902 662
USB interface for serial communication	227 093

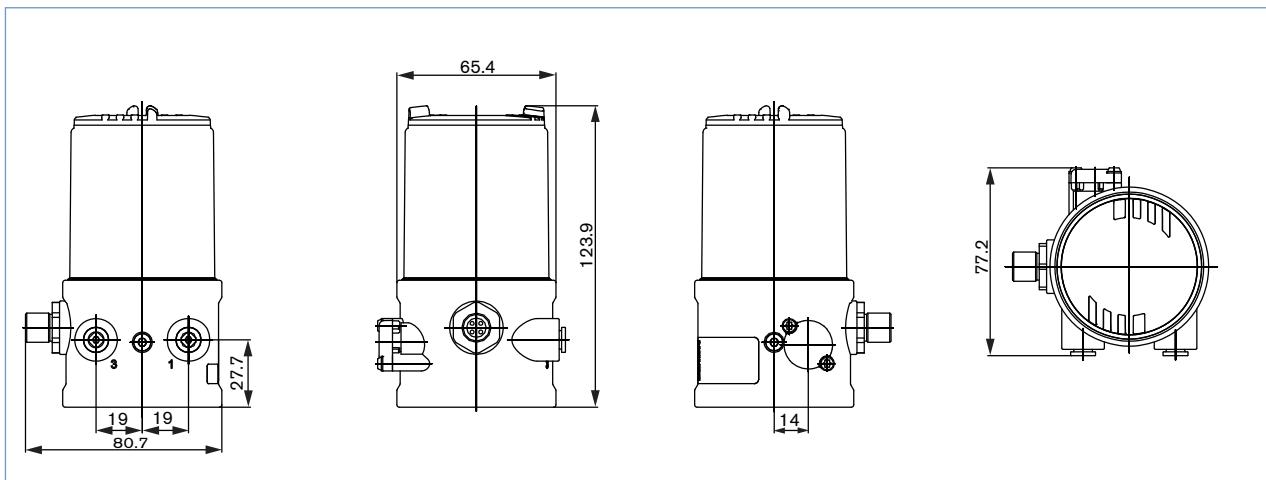
## Materials



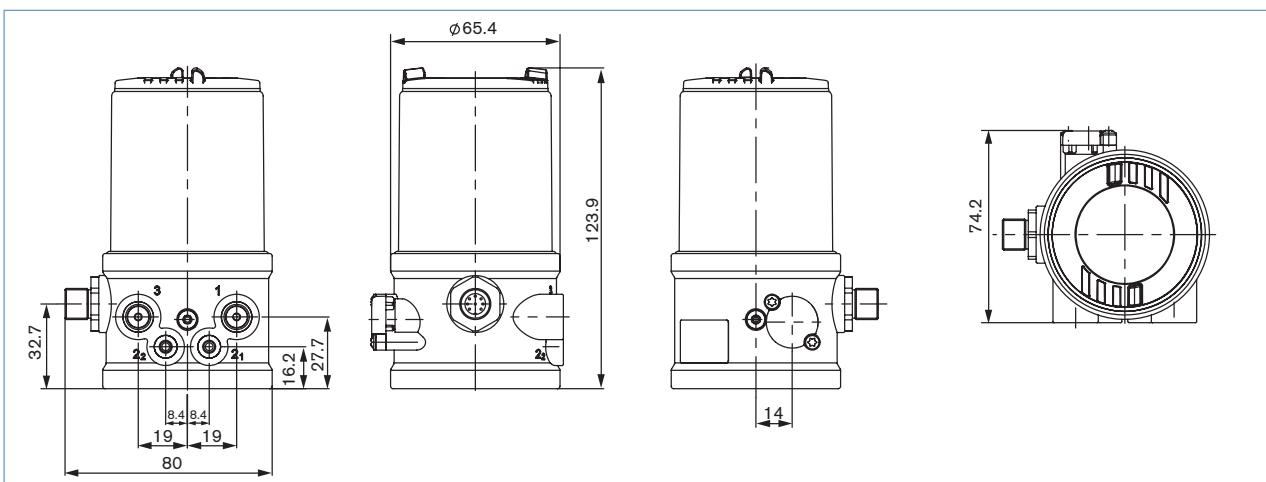
<b>1</b> Cover	PC
<b>2</b> Body casing	Stainless steel
<b>3</b> Basic body	PPS
<b>4</b> Plug M12	Stainless steel
<b>5</b> Screws	Stainless steel
<b>6</b> Push-in connector <b>Threaded ports G1/8</b>	POM/stainless steel
<b>7</b> Sealing	Stainless steel
	EPDM

## Dimensions [mm]

Mounting on ELEMENT process control valves, Type 23XX / 2103 (internal control air routing to actuator)

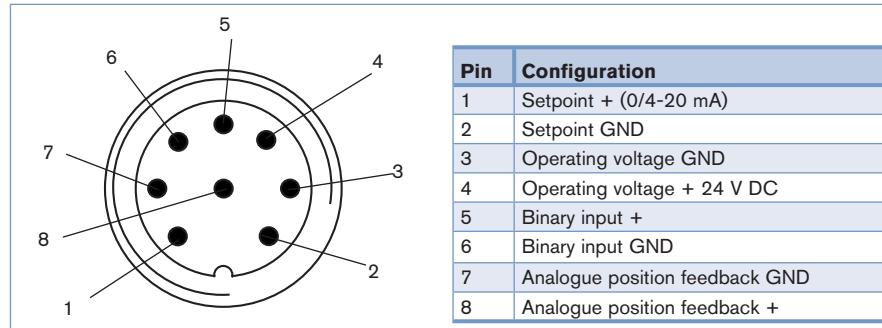


Mounting on hygienic process valves with external air routing



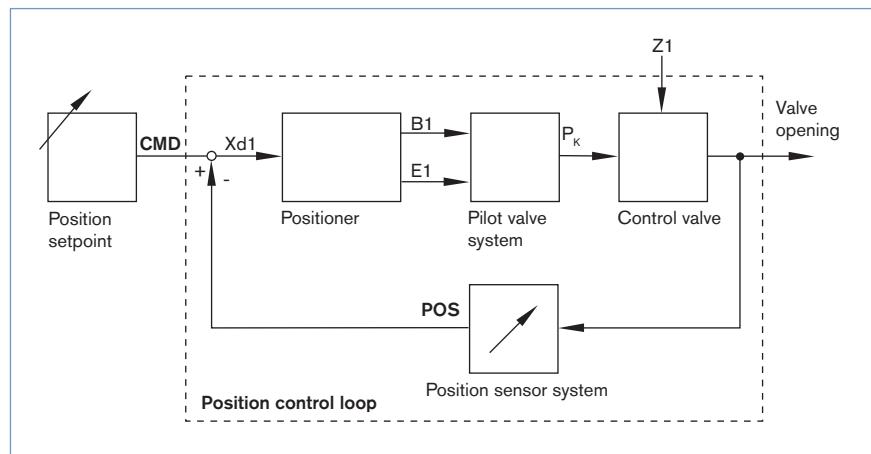
## Connection Multipole

Circular connector M12 - 8-pins



## Signal flow diagram

Position control loop



### TopControl Basic functions

- Automatic start of the control system
- Binary input (safety position)
- Analogue position feedback (optional)

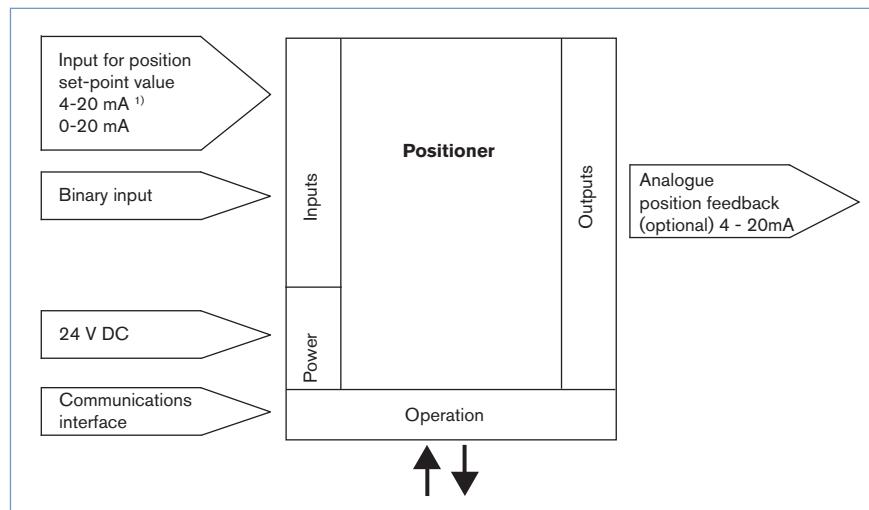
### DIP-Switch activated device

- Close-tight function
- Inversion of the operating direction of the setpoint signal
- Linear characteristic curves selection or customised programming (software interface)
- Manual and automatic operation

### Communications software with activatable and parameter driven functions

- Customised programming transmission characteristics
- Choices of setpoint signal
- Range splitting setpoint signal
- Limitation of the valve stroke
- Limitation of the operation speed.
- Definition of the safety position
- Signal failure detection

## Schematic diagram of the TopControl Basic

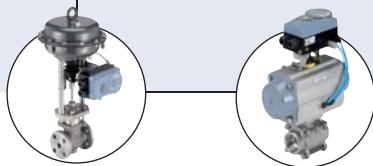


<sup>1)</sup> Default setting

To find your nearest Burkert facility, click on the orange box →



Type 8791 BASIC can be combined with...



**Yoke type actuators**

**Rotary  
actuators**

## Digital electropneumatic Positioner SideControl

- Compact and robust design
- Easy to start using tune function
- Dynamic positioning system with no air consumption in controlled state
- AS-Interface Fieldbus (optional)
- Mounting acc. to IEC 60534-6-1 / VDI VDE 3845 or Remote



**Rotary  
actuators with  
remote positioner**

**Process control  
valve with remote  
positioner**

**Hygienic process  
control valve with  
remote positioner**

The robust and compact positioner is designed to a standardisation acc. to IEC 534-6 or VDI/VDE 3845 for assembly with linear and rotary actuators. In addition, the remote version with the displacement position sensor can be combined with Bürkert process control valves. The setpoint setting for the electro-pneumatic digital Positioner SideControl BASIC occurs using a standard signal 4...20mA or with AS-Interface as an option. In addition there is a binary input and an optional analogue feedback available. The valve opening is signalled by a mechanical indicator element and the device status is shown on three coloured LEDs. All the operational elements are found in the housing. The start-up happens automatically, and directly at the device the following functions can be activated through DIP switches:

- Close tight function
- Inversion of the operating direction of the setpoint signal
- Characteristic curves selection
- Switching - manual and automatic operation

Additional possibilities on configuration and parameter setting, for example, linearisation of the operation characteristics by using communications software which allows customised programming. The pilot valve system can be used equally for single and double-acting drives. It is characterised by a defined safety feature in case of failure of the electrical or pneumatic power supply and possesses an enormous air capacity range with pressure supply up to 7 bar.

### Technical data

<b>Material</b>	Aluminium plastic-coated EPDM, NBR, FKM
<b>Operating voltages</b>	24 V DC +/- 10%
<b>Residual ripple</b>	max. 10%
<b>Setpoint setting</b>	4-20mA (0-20mA adjustable using configurations software)
<b>Input resistance</b>	0/4 to 20 mA: 180 Ω
<b>Analogue feedback</b>	(0-20mA adjustable using configurations software) (max. Burden 560Ω)
<b>Binary input</b>	0-5 V = log "0", 10-30 V = log "1"
<b>Control medium</b>	neutral gases, air, quality classes acc. to ISO 8573-1 Class 7 (<40µm particle size) Class 5 (<10mg/m³) Class 3 (<-20°C) Oil concentration Class X (<25mg/m³)
<b>Ambient temperature</b>	0 to +60°C
<b>Pilot air ports</b>	Threaded ports G 1/4
<b>Supply pressure</b>	1.4 bis 7 bar <sup>1) 2)</sup>
<b>Air supply filter</b>	Exchangeable (mesh aperture ~0.1mm)
<b>Actuator system</b>	Single and double-acting up to 150 l <sub>N</sub> /min. 50 l <sub>N</sub> /min (with 1.4 bar <sup>2)</sup> ) for aeration and ventilation 150 l <sub>N</sub> /min (with 6 bar <sup>2)</sup> ) for aeration and ventilation (Q <sub>Nn</sub> = 100 l <sub>N</sub> /min (acc. to the definition with decrease in pressure from 7 to bar absolute))
<b>Position detection module</b>	Potentiometer max. angle 180°
<b>Stroke range valve spindle</b>	Min. 30° on the rotary shaft, depending on lever
<b>Installation</b>	As required, display above or sideways
<b>Type of protection</b>	IP65 and IP67 acc. to EN 60529 (NEMA4x in preparation)
<b>Power consumption</b>	< 3.5 W

<sup>1)</sup> The supply pressure has to be 0.5-1 bar above the minimum required pilot pressure for the valve actuator

<sup>2)</sup> Pressure values [bar]: Overpressure with respect to atmospheric pressure

*continued on next page*

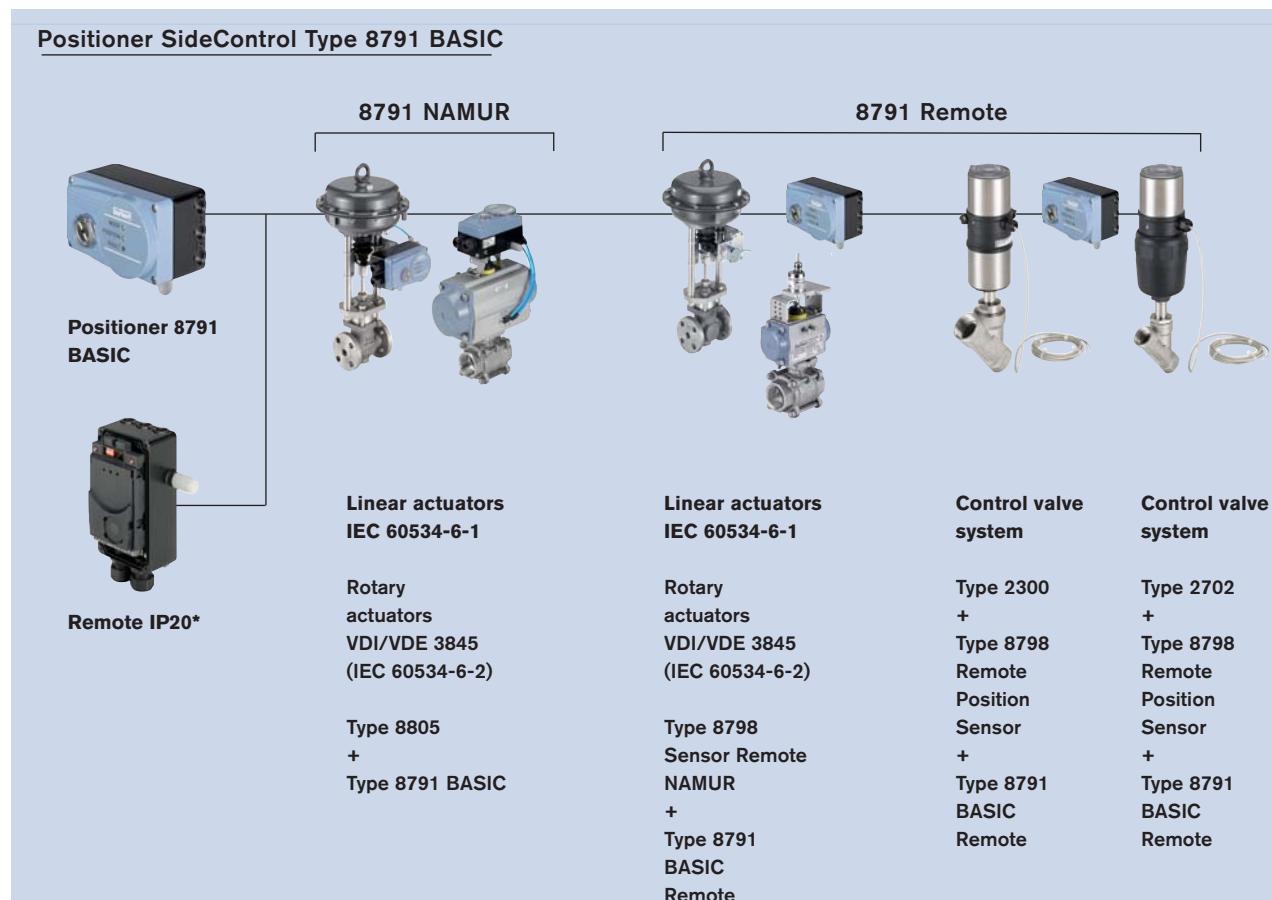
**Technical data, continued**

<b>Technical data</b>	
<b>Electrical connection</b>	M12, 8-pin Multipole connection Cable gland  Remote Version
	2xM20x1.5 (cable Ø 10mm) on screw terminals (0.14-1.5 mm <sup>2</sup> ) 1xM12x1.5 (cable Ø 3 to 6.5 mm)
<b>Protection class</b>	3 acc. to DIN EN 61140
<b>Type of ignition protection</b>	II 3 G nA IIC T4 II 3 D tD A22 T135° C
<b>Conformity</b>	EMC directive 2014/30/EU
<b>CSA approval information</b>	Class 3221 82-VALVES - Actuators - Certified to US standards Class 3221 02-VALVES - Actuators
<b>Considered standards</b>	CAN/CSA-C22.2 No. 139 UL 429
<b>CSA trademark</b>	 c US
<b>Technical data - AS-interface (Option)</b>	
<b>Profile</b>	S-7.3.4 Output: 16 Bit Set point/Certificate No. 87301 acc. to Version 3.0 S-7.A.5 Output: 16 Bit set point; Input: 16 Bit feedback/certificate No. 95401 acc. to Version 3.0
<b>Programmed data</b>	see instruction manual
<b>Operating voltage</b> over Bus connection	29,5 to 31,6 VDC acc. to Specification
<b>Max. current consumption</b>	150 mA
<b>Electrical connection</b>	M12x1,4-pin stainless steel connection assembled with 80cm cable and flat cable clamp
<b>Technical data - Linear Remote Position Sensor (ELEMENT, CLASSIC)</b>	
<b>Electrical connection</b>	Cable gland Connection cable length
	1xM16x1.5 (cable Ø 5-10 mm) on terminal screws (0.14-1.5 mm <sup>2</sup> ) 10 m
<b>Operating voltage</b>	24V DC ± 10 %, UL: NEC Class 2
<b>Power consumption</b>	< 0.3 W
<b>Sensor measurement range</b>	3 to 45 mm (Stroke range valve spindle)
<b>Actual position signal</b>	digital (RS485)
<b>Ambient temperature</b>	-25 to +80 °C
<b>Protection class</b>	3 acc. to DIN EN 61140
<b>Type of protection</b>	IP65 and IP67 acc. to EN 60529, Type 4X
<b>Type of Ignition protection</b>	II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
<b>Conformity</b>	EMC directive 2014/30/EU
<b>Approvals</b>	cCSAus, cULus Certificate no. 238179
<b>Technical data - rotative Remote Position Sensor (NAMUR)</b>	
<b>Electrical connection</b>	2 m round cable (shielded)
<b>Operating voltage</b>	10 to 30 V DC
<b>Power consumption</b>	< 0.8W
<b>Sensor measurement range</b>	0° to 360°
<b>Actual position signal</b>	digital (RS485)
<b>Ambient temperature</b>	-25 to +80°C
<b>Protection class</b>	3 acc. to DIN EN 61140
<b>Type of protection</b>	IP65 acc.to EN 60529
<b>Conformity</b>	EMC directive 2014/30/EU
<b>Approvals</b>	UL (cULus) Certificate no. E226909
<b>Technical data - Position feedback with proximity switches (Accessory)</b>	
<b>Electrical connection</b>	M12, 4-pin
<b>Output function</b>	3-wire, normally open contact, PNP
<b>Operating voltage</b>	10 to 30 V DC
<b>Residual ripple</b>	≤ 10% U <sub>ss</sub>
<b>DC rated current</b>	≤ 100 mA
<b>Type of protection</b>	IP65 and IP67
<b>Protection class</b>	3 acc. to DIN EN 61140
<b>Conformity</b>	EMC directive 2014/30/EU
<b>Approvals</b>	cCSAus

Using a remote positioner the length of the control air pipes influences the dynamics and attainable accuracy of the position control loop. The length of the control air pipes therefore should be as short as possible.

**Note:** The position feedback has two proximity switches which are independently adjustable via switch lugs.

**Example of assembly variations of Positioner SideControl**



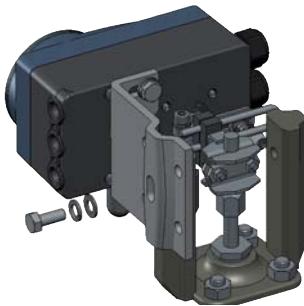
\* Note: Remote IP20 version exclusively for cabinet mounting

## 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	Item no.
Adapter kit	787 215

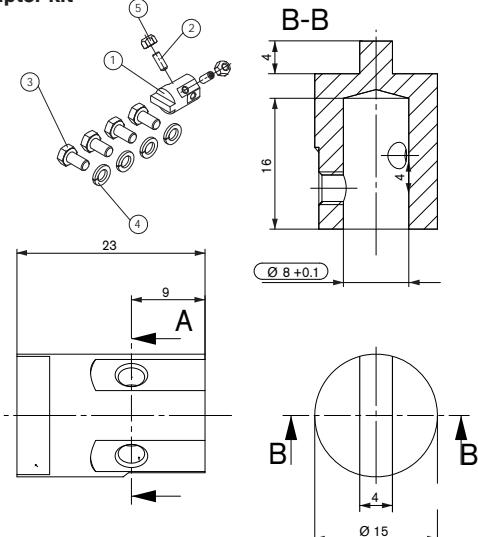
#### Assembly on rotary actuator



Description	Item no.
Adapter kit	787 338
Assembly bridge	770 294

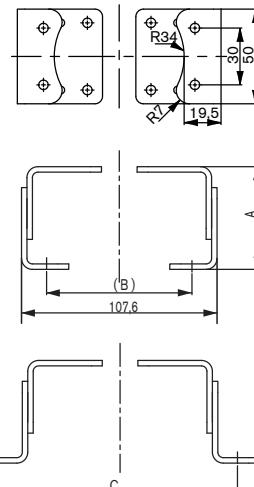
### Dimensions [mm]

**Adapter kit**

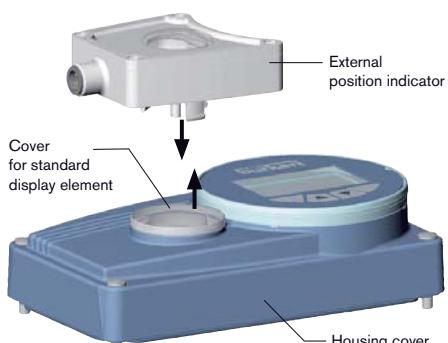


Actuator shaft height	A	B	C
20	46.5	80	-
30	56.5	80	130
50	76.5	-	130

**Assembly bridge**



### Position feedback with proximity switches (upgrade feature for SideControl BASIC)



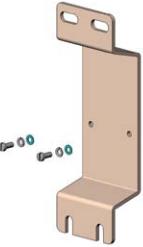
Description	Item no.
Position feedback	677 218

**Assembly options *continued***

**Remote version**

(Remote positioner from actuator with displacement position)

**Assembly with accessory brackets**

Dimensions [mm]	
33	65
131.5	12
30	36
120	8.5
196	10.5
3	45
	04.7
	74
	36
	8.5

Description	Item no.
Assembly bracket for wall mounting	675 715

**Assembly on DIN-Rail**



The adapter can be turned every 90° on the DIN-Rail

Dimensions [mm]	
□73	14
48	6
68	10.3
36.3	

Description	Item no.
DIN rail assembly kit	675 702

**Assembly options continued**

**Remote version**

(Remote positioner from actuator with displacement position sensor)

**Type 8798**



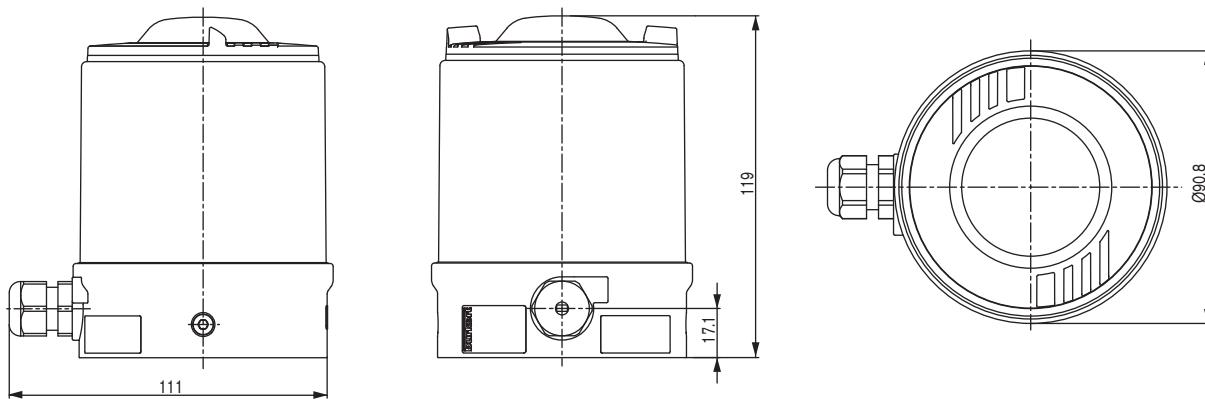
Description	Item no.	
	Standard	ATEX II 3 GD
<b>Remote Position Sensor</b>		
Control valves CLASSIC Types 27xx	211 535	226 859
Control valves ELEMENT Types 23xx	212 360	226 860



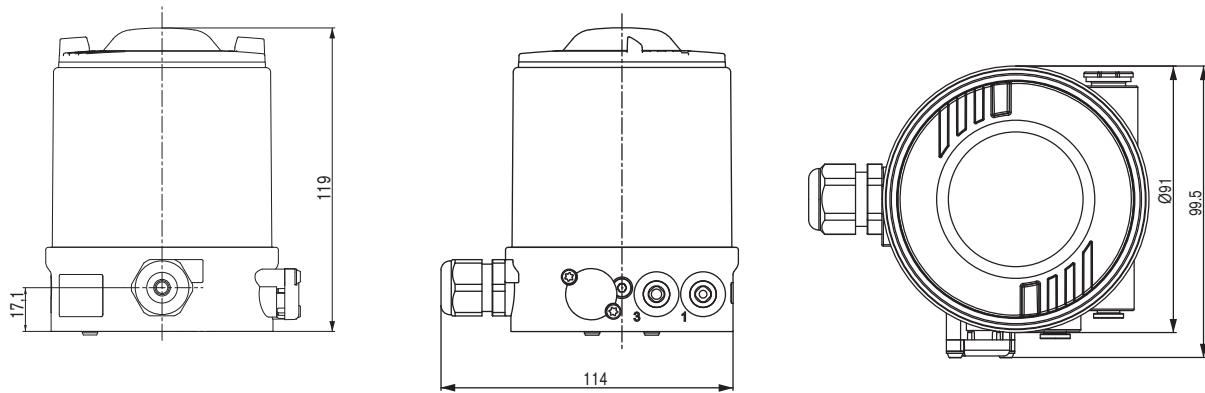
Description	Item no.
<b>Remote Position Sensor NAMUR</b>	211 536

**Dimensions**

**Control valves CLASSIC Types 27xx**

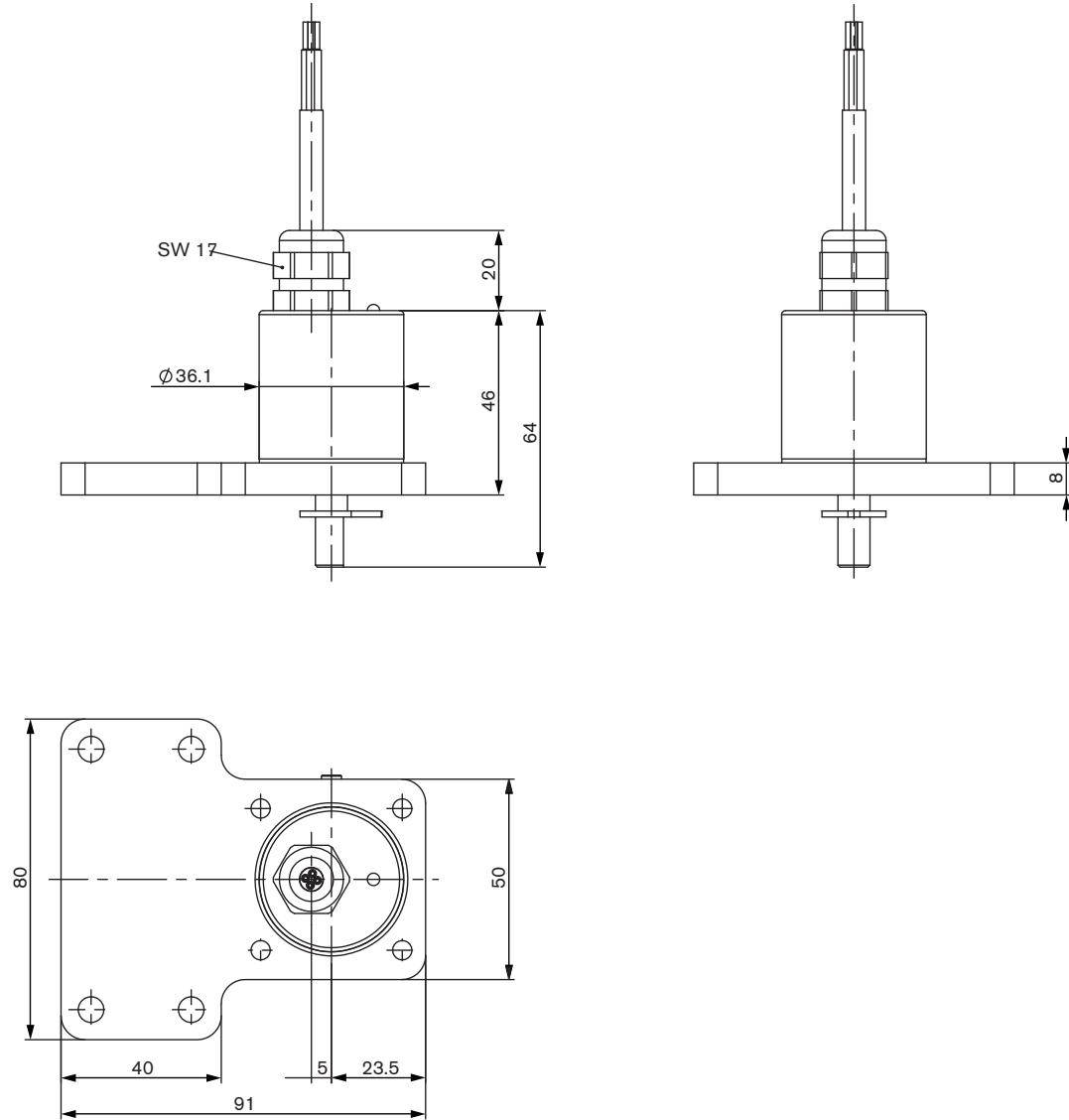


**Control valve ELEMENT Types 23xx**



## Dimensions

Mounting on control valves according to NAMUR (IEC 60534-6-1 / VDI/VDE 3845 (IEC 60534-6-2))



**Ordering Chart (further version on request)**

**Positioner SideControl Basic Type 8791**

Assembly variations	Control function	Pilot valve system / Air capacity	Communication	Electrical connection	Binary input	Analogue feedback	ATEX II 3 GD	Item No.
NAMUR IEC 60534-6-1 VDI/VDE 3845 (IEC 60534-6-2)	single and double-acting	universal	no	Cable gland	yes	no		211 521
					yes	yes		211 522
					yes	no	yes	226 834
					yes	yes	yes	226 835
					yes	no		211 523
			AS-Interface	Multipole	yes	yes		211 524
					yes	no	yes	226 836
					yes	yes	yes	226 837
					no	yes/16 bit		239 617
					no	yes/16 bit	yes	239 618

Assembly variations	Actuator size	Control function	Pilot valve system / Air capacity	Communication	Electrical connection	Binary input	Analogue feedback	ATEX II 3 GD	Item No.
Remote	ELEMENT 70/90 CLASSIC 80/100	single-acting	low	no	Cable gland	yes	no		224 868
	ELEMENT 130 CLASSIC 125-225	single and double-acting	universal			yes	yes		224 869
Remote IP20	ELEMENT 70/90 CLASSIC 80/100	single-acting	low			yes	no		211 531
	ELEMENT 130 CLASSIC 125-225	single and double-acting	universal			yes	yes		211 532
						yes	no		234 576
						yes	yes		234 578
						yes	no		211 533
						yes	yes		211 534

Assembly variations	Electrical connection	Item No.
<b>Remote Position Sensor</b>		
CLASSIC Type 27xx	Cable gland - 10 m round cable	211 535      226 859
ELEMENT Type 23xx	Cable gland - 10 m round cable	212 360      226 860
NAMUR (rotative)	Cable gland - 2 m round cable (max. extension 10 m )	211 536

**i Further versions on request**

Positioner BASIC Remote IP20 with actual value for potentiometer signal



**Approvals**

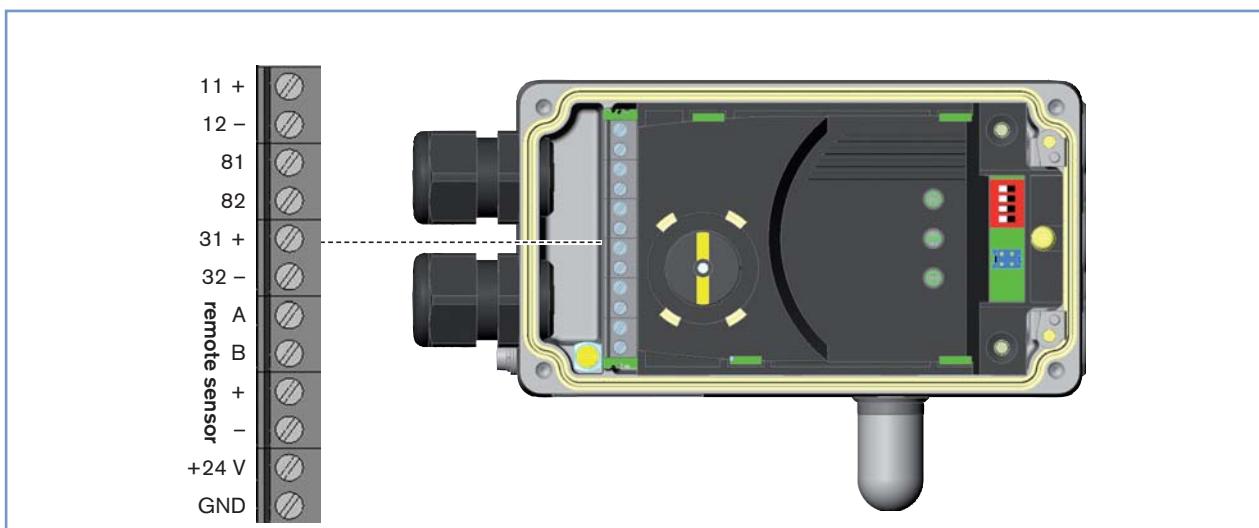
Protection type: NEMA 4x  
Remote Sensor ATEX Cat. 3

**Ordering chart for accessories**

Description	Item no.
<b>Accessories for SideControl BASIC NAMUR</b>	
Assembly bridge VDI/VDE 3845 (IEC 60534-6-2), stainless steel	770 294
Adapter kit VDI/VDE 3845 (IEC 60534-6-2), stainless steel	787 338
Adapter kit linear actuators IEC 60534-6-1, stainless steel	787 215
Position feedback with proximity switches (optional upgrade feature) <sup>3)</sup>	677 218
<b>Accessories for SideControl BASIC Remote</b>	
Bracket for wall mounting, stainless steel	675 715
DIN rail assembly kit, Aluminium/stainless steel	675 702
Adapter kit - remote sensor, ELEMENT Type 23xx control valves Actuator size Ø 70/90/130 mm	679 917
Adapter kit - remote sensor, CLASSIC Type 27xx control valves Actuator size Ø 80 mm	679 943
Actuator size Ø 100/125 mm	679 944
Actuator size Ø 175/225 mm	679 945
Sensor Puck (replacement part)	682 240
<b>Standard Accessories</b>	
USB Interface for serial communication	227 093
M12 socket, 8-pin, 2m assembled cable	919 081
M12 socket, 8-pin, 5m assembled cable	919 267
Silencer G 1/4" (spare part)	780 780

## Connection options

### Cable gland connection



### Input signal

Terminal	Configuration	External Circuitry / signal level		
11 +	Setpoint +	11 +	○ —————	+ (0/4 ... 20 mA) not galvanically isolated
12 -	Setpoint GND	12 -	○ —————	GND
81 +	Binary input +	81 +	○ —————	+ 0 ... 5 V (log. 0)
82 -	Binary input -	82 -	○ —————	10 ... 30 V (log. 1)
+24 V	Operating voltages +	+24 V	○ —————	24 V DC ± 10 %
GND	Operating voltages GND	GND	○ —————	max. residual ripple 10 %

### Output signal with optional analogue position feedback

Terminal	Configuration	External Circuitry / signal level		
31 +	Analogue feedback +	31 +	○ —————→	+ (0/4 ... 20 mA) not galvanically isolated
32 -	Analogue feedback GND	32 -	○ —————→	GND

### Optional remote version in connection with remote positioner sensor Type 8798

Terminal	Configuration	External Circuitry / signal level		
S +	Supply sensor +	S +	○ —————	+
S -	Supply sensor -	S -	○ —————	-
A	Serial Interface, A cable	A	○ —————	A line
B	Serial Interface, B cable	B	○ —————	B line

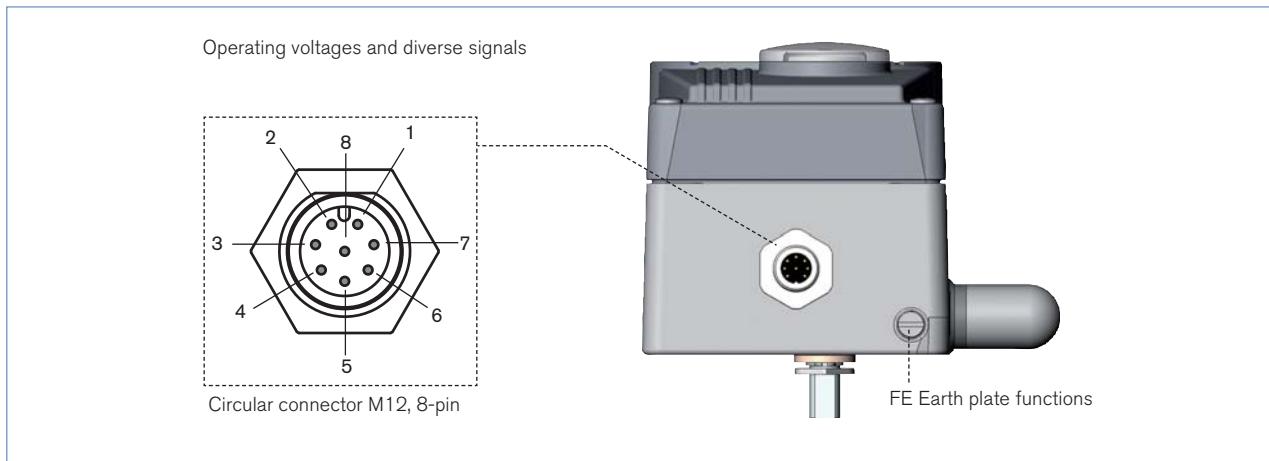
Remote Sensor Type 8798

### Remote sensor Type 8798

Terminal	Wire colour for cable type		Configuration	External Circuitry	
	1	2		1	2
1	white	black	Supply Sensor -	1 ○ —————	8791 or
2	brown		Supply Sensor +	2 ○ —————	8792 / 8793
3	yellow	orange	Serial Interface, B line	3 ○ —————→	8791 or
4	green	red	Serial Interface, A line	4 ○ —————→	8792 / 8793

## Connection options, continued

### Multi-pin connection



#### Circular connector M12 - 8-pin (Input signal)

Pin	Wire colours*	Configuration	External Circuitry / signal level
1	white	Setpoint + (0/4-20 mA)	1     + (0/4 -20 mA) not galvanically isolated
2	brown	Setpoint GND	2     GND
5	grey	Binary Output	5     +  0-5 V (log. 0) 10-30 V (log. 1) obtained on Pin 3 (GND)
3	green	GND	3     24 V DC ± 10% max. Residual ripple 10%
4	yellow	+ 24 V	4

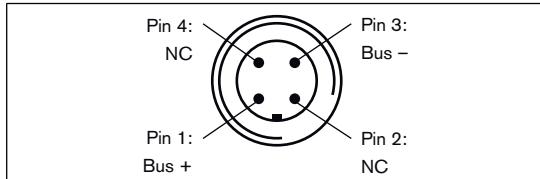
#### Circular connector M12 - 8-pin (analogue position feedback)

8	red	Analogue feedback +	8     + (0/4 -20 mA) not galvanically isolated
7	blue	Analogue feedback GND	7     GND

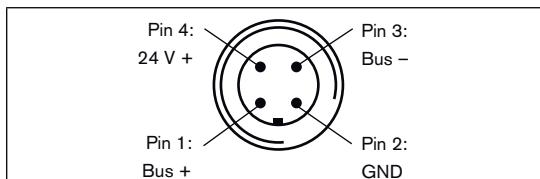
\* The indicated wire colours refer to the connection cable, part no. 919061, available as an accessory

**Connection options, continued**

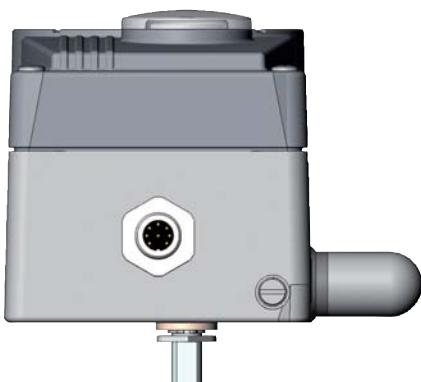
**Electrical connection ASI M12 4-pin**



Bus connection without external supply voltage



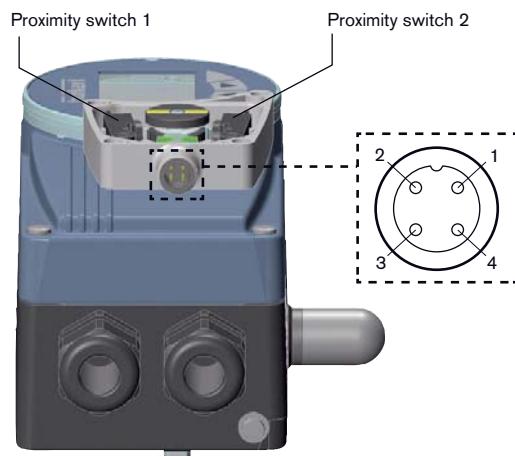
Bus connection with external supply voltage (optional)



Bus connection without external / with external supply voltage

Pin	Designation	Configuration
1	Bus +	AS Interface bus line +
2	NC or GND (optional)	not used or external supply voltage - (optional)
3	Bus -	AS Interface bus line -
4	NC or 24 V + (optional)	not used or external supply voltage + (optional)

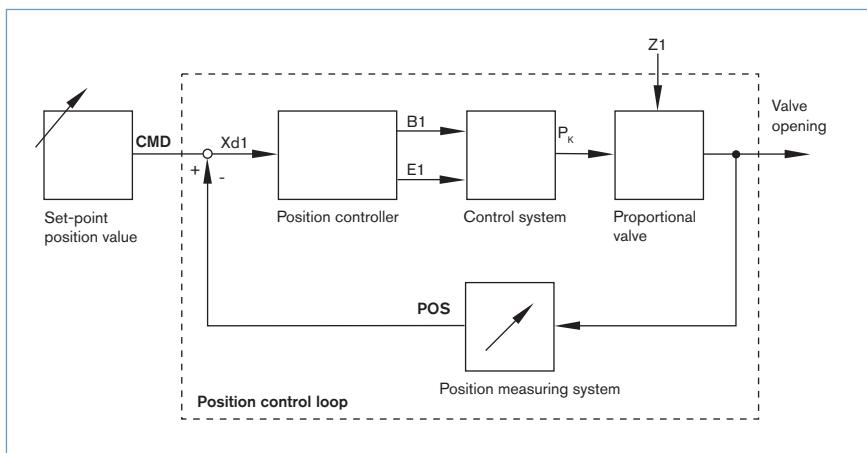
**Electrical connection Position feedback with proximity switches (accessory for upgrading)**



Pin	Config.	External circuit /signal level
1	Supply 10 ... 30 V	+10 V ... +30 V —————• 1 10 ... 30 V
2	Switching output (NO) Proximity switch 1	+10 V ... +30 V ——————• 2 Open / 10 ... 30 V
3	GND	GND —————• 3 GND
4	Switching output (NO) Proximity switch 2	+10 V ... +30 V ——————• 4 Open / 10 ... 30 V

## Signal flow plan

### Position control loop



### SideControl BASIC functions

- Automatic start of the control system
- Binary input (safety position)
- Analogue position feedback (optional)

### DIP-Switch activated device

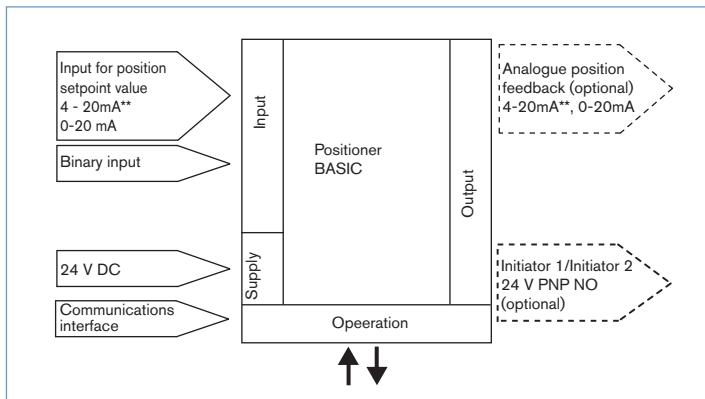
- Close tight function
- Inversion of the operating direction of the setpoint signal
- Linear characteristic curves selection or customised programming (software interface)
- Manual and automatic operation

### Communications software with activatable and parameter driven functions

- Customised programming transmission characteristics
- Choices of setpoint signal
- Range splitting setpoint signal
- Limitation of valve stroke
- Limitation of operation speed
- Definition of the safety position
- Signal failure detection

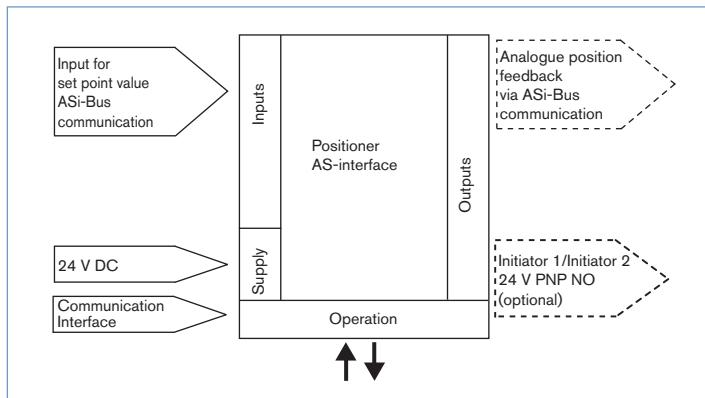
## Schematic diagram of SideControl Type 8791 BASIC

### without fieldbus interface

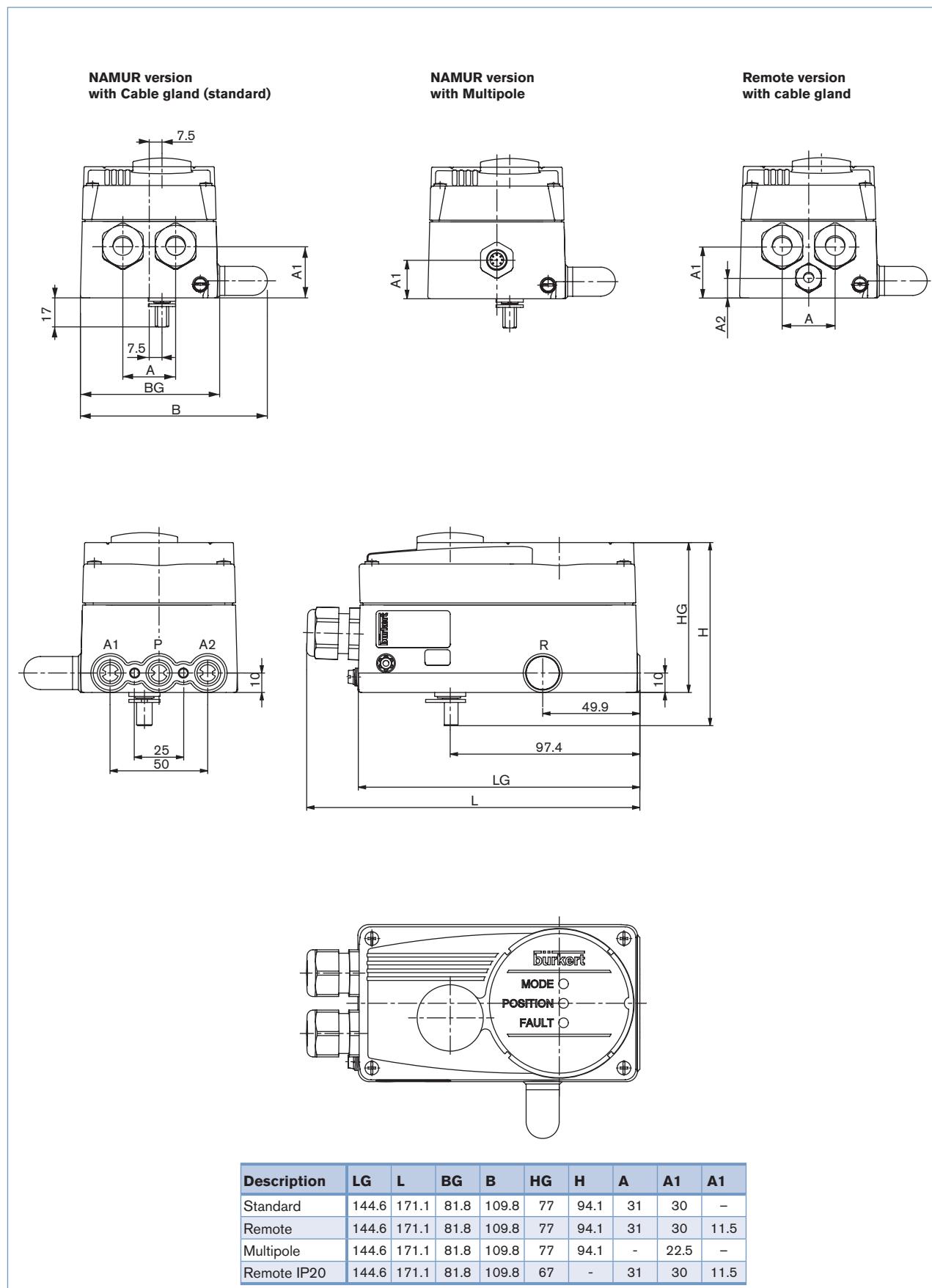


\*\*Default setting

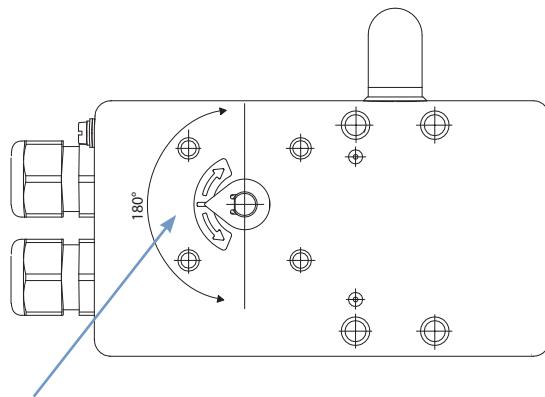
### with AS-interface



**Dimensions [mm]**



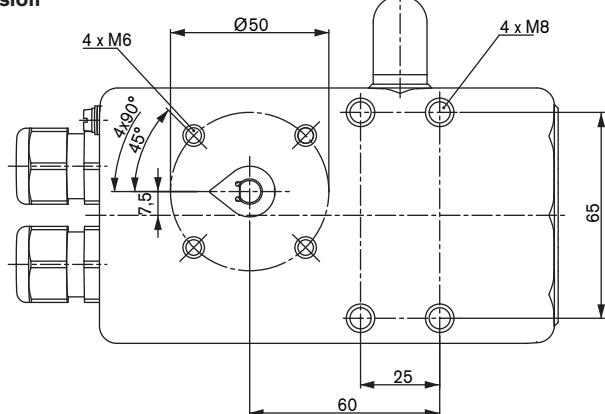
**Dimensions [mm], continued**



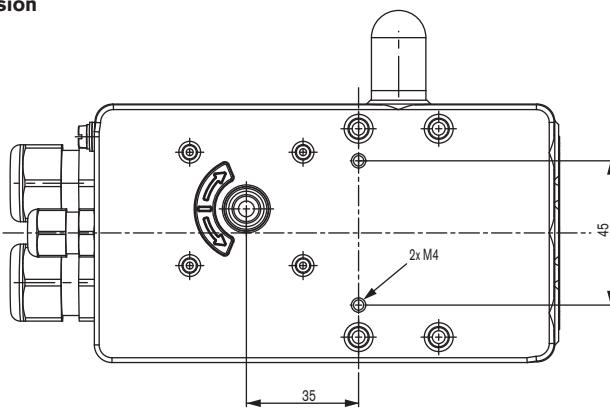
The rotation angle of the sensor must be within a range of 180°

With the valve open approx.  
50%, the sensor indicator  
should be in this position.

**NAMUR Version**



**Remote version**



To find your nearest Bürkert facility, click on the orange box →

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