



- Electropneumatic positioner for pneumatically actuated control valves

Type 8630 can be combined with...



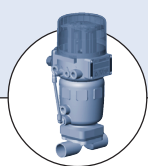
Type 2712

Piston-controlled globe valve



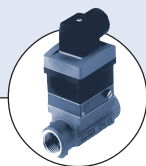
Type 2702

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

¹⁾ 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:

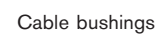
Архангельск +7 (8182) 45-71-35	Калининград +7 (4012) 72-21-36	Новороссийск +7 (8617) 30-82-64	Сочи +7 (862) 279-22-65
Астана +7 (7172) 69-68-15	Калуга +7 (4842) 33-35-03	Новосибирск +7 (383) 235-95-48	Ставрополь +7 (8652) 57-76-63
Астрахань +7 (8512) 99-46-80	Кемерово +7 (3842) 21-56-70	Омск +7 (381) 299-16-70	Сургут +7 (3462) 77-96-35
Барнаул +7 (3852) 37-96-76	Киров +7 (8332) 20-58-70	Орел +7 (4862) 22-23-86	Сызрань +7 (8464) 33-50-64
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Брянск +7 (4832) 32-17-25	Красноярск +7 (391) 989-82-67	Пенза +7 (8412) 23-52-98	Тверь +7 (4822) 39-50-56
Владивосток +7 (4232) 49-26-85	Курск +7 (4712) 23-80-45	Первоуральск +7 (3439) 26-01-18	Томск +7 (3822) 48-95-05
Владимир +7 (4922) 49-51-33	Липецк +7 (4742) 20-01-75	Пермь +7 (342) 233-81-65	Тула +7 (4872) 44-05-30
Волгоград +7 (8442) 45-94-42	Магнитогорск +7 (3519) 51-02-81	Ростов-на-Дону +7 (863) 309-14-65	Тюмень +7 (3452) 56-94-75
Воронеж +7 (4732) 12-26-70	Москва +7 (499) 404-24-72	Рязань +7 (4912) 77-61-95	Ульяновск +7 (8422) 42-51-95
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
Ижевск +7 (3412) 20-90-75	Ниж.Новгород +7 (831) 200-34-65	Саранск +7 (8342) 22-95-16	Чебоксары +7 (8352) 28-50-89
Иркутск +7 (3952) 56-24-09	Нижневартонск +7 (3466) 48-22-23	Саратов +7 (845) 239-86-35	Челябинск +7 (351) 277-89-65
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

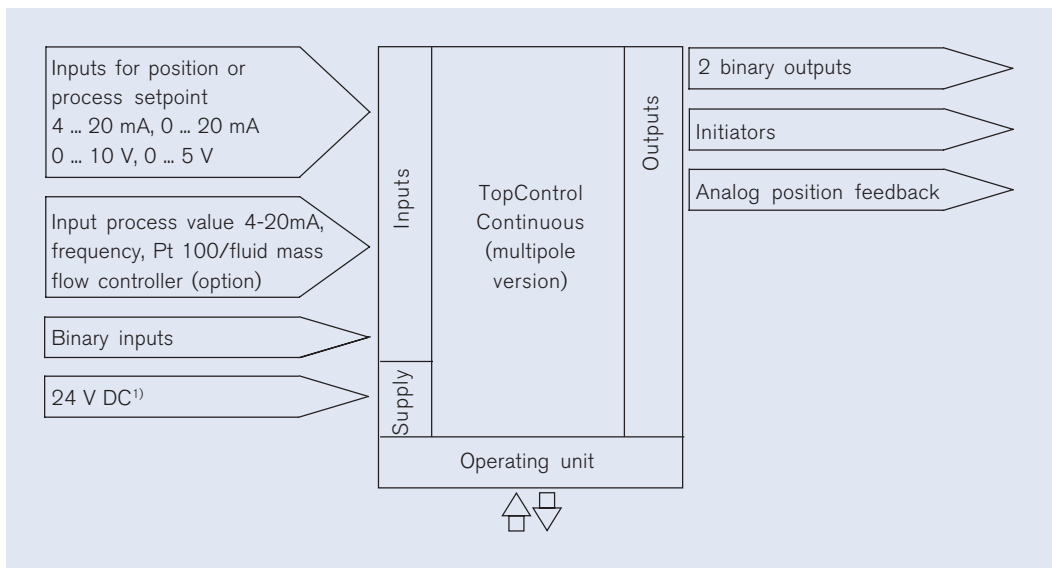
- Flow capacity value for air [l/min]
measured at +20 °C, 6 bar¹⁾
pressure at valve input and 1 bar
pressure difference

Dimensions [mm]



Multipole connector

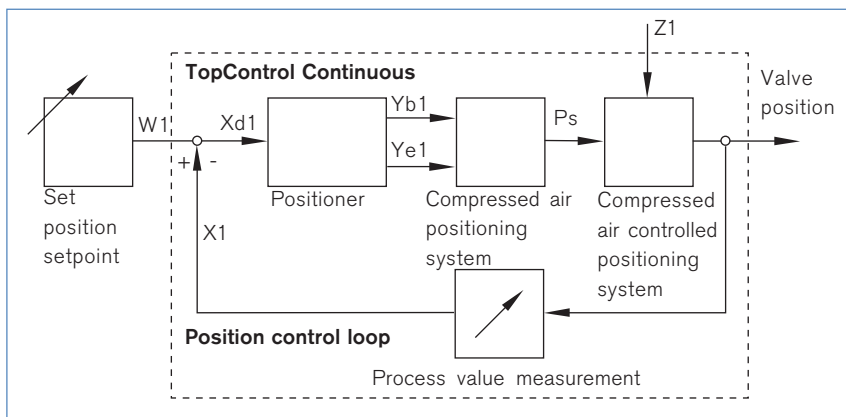
Schematic representation of TopControl Continuous (3-conductor-device)



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

Signal flow plans

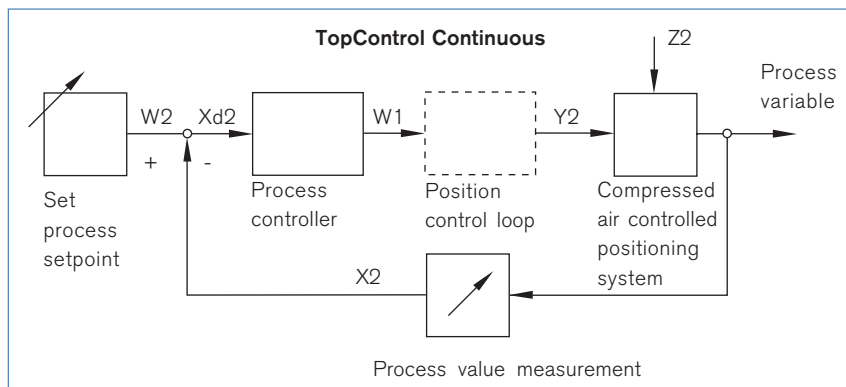
Position control loop



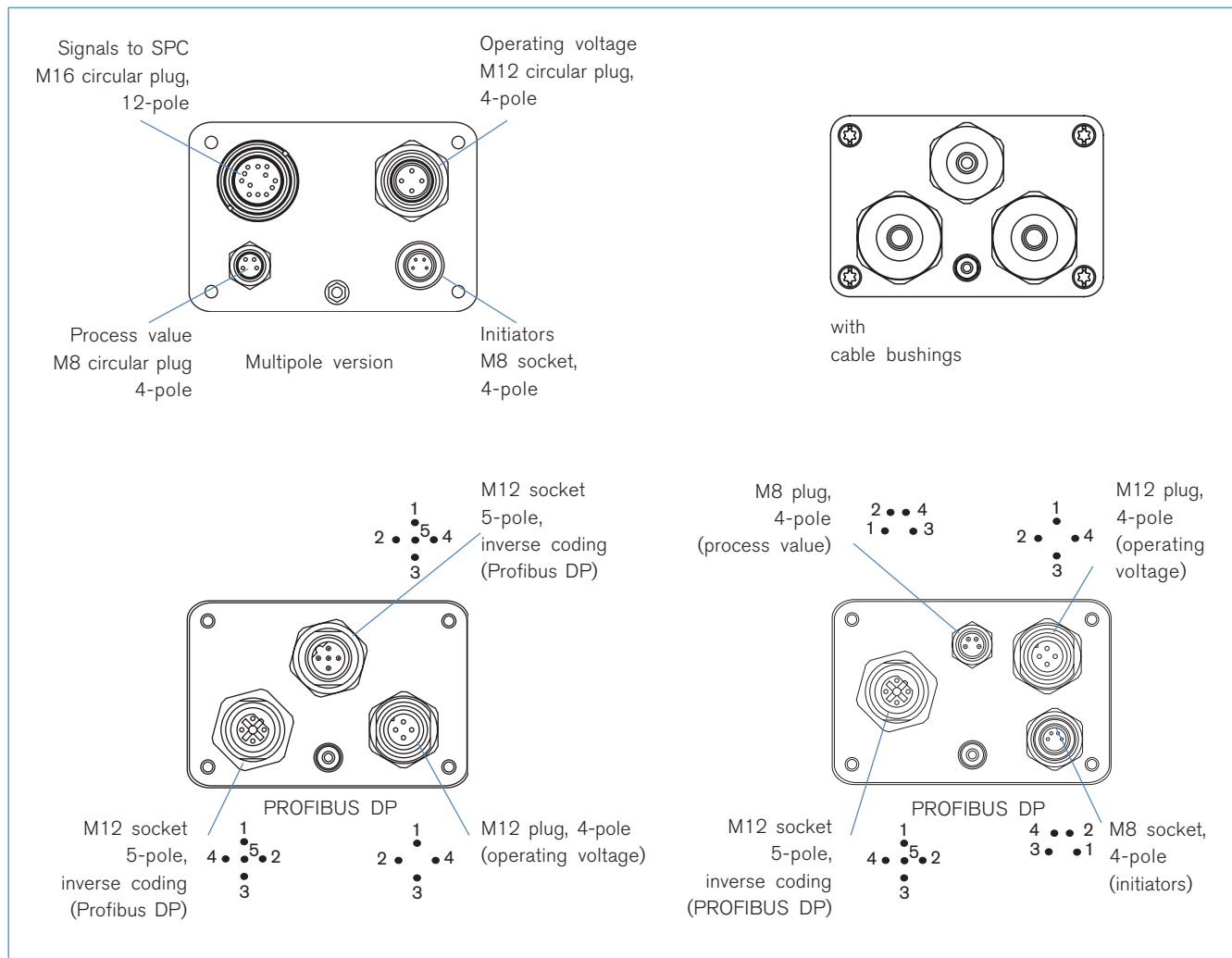
Supplementary software functions in TopControl Continuous

- 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



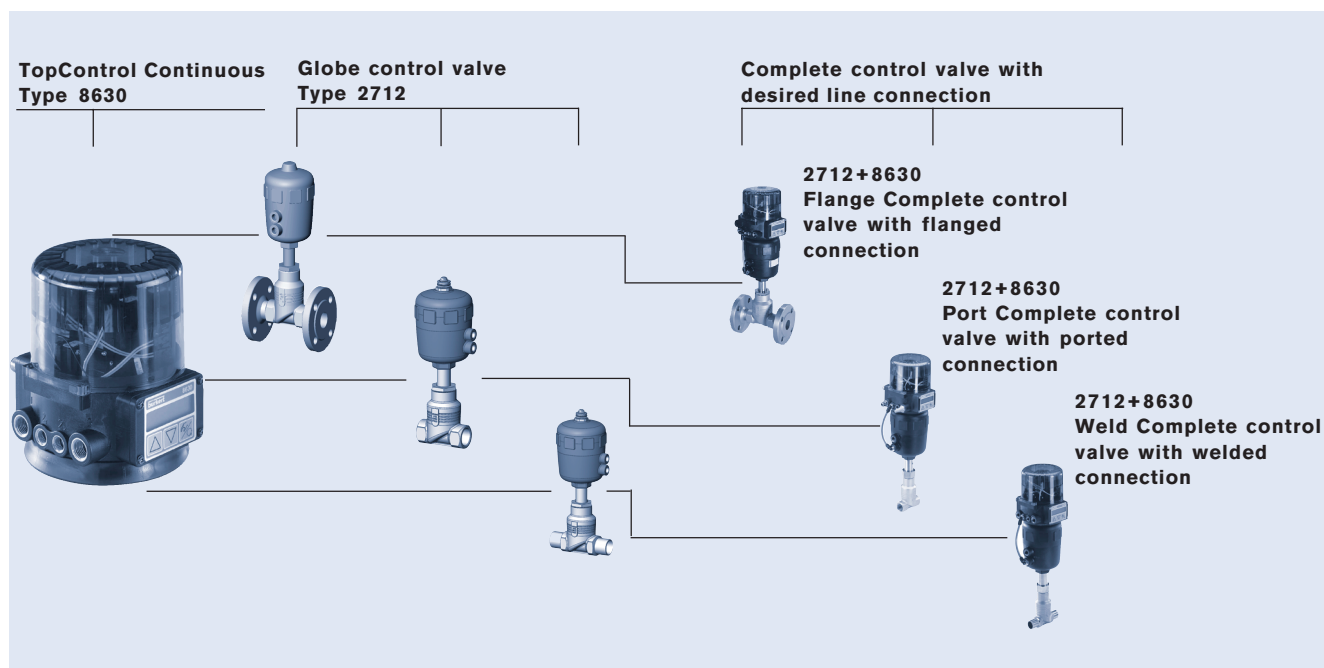
Ordering information for complete control valves

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

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



- Electropneumatic positioner for pneumatically actuated process valves
- ATEX approval II 2 (1) G Ex ia IIC T6 Gb

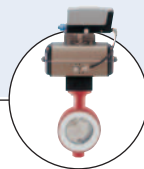
Type 8635 can be combined with...



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 excuted 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	
Body material	Aluminium, hard anodized and plastic coated
Other external parts	Stainless steel V4A
Seal material	NBR, Neoprene
Control medium	neutral gases
Processing	DIN ISO 8573-1
Dust content	Class 5 ($\leq 40 \mu\text{m}$ particle size)
Particle density	Class 5 ($\leq 10 \text{ mg/m}^3$)
Pressure dew point	min. 10° under min. operating conditions
Oil concentration	Class 3 ($\leq 1 \text{ mg/m}^3$)
Control air temperature	$-25 \dots +60 \text{ }^\circ\text{C}^{1)}$
Ambient temperature	$-25 \dots +60 \text{ }^\circ\text{C}^{1)}$
Supply pressure	$1.4 \dots 6 \text{ bar}^{3)}$
Air flow capacity²⁾	55 l/min at $1.4 \text{ bar}^{3)}$
Control valve	170 l/min at $6 \text{ bar}^{3)}$ for pressurizing and venting
Intrinsic air consumption	0 l/min
Positioning range	
Linear actuator	$3 \dots 130 \text{ mm}$
Part-turn actuator	$0 \dots 120^\circ$
Position sensor system	High-resolution, conductive plastic, rotary potentiometer
Operation	Operating keys and plain-text display
Electrical connection	$2 \times \text{M20} \times 1.5\text{-bushing}$ Clamping range $6 \dots 12 \text{ mm}$ Screw terminals for $0.14 \dots 1.5 \text{ mm}^2$

¹⁾ Up to $+65 \text{ }^\circ\text{C}$ temperature class T4/T5 or without EEx i approval.

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

³⁾ Pressure data in bar; overpressure to ambient.

Technical data (continued)

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 1/4 NPT 1/4; RC 1/4 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 values		Permissible maxima as per Certificate of Conformity	
Power Supply	U	10.2 V	Ui	30 V
	I	4 mA	Ii Pi	100 mA 1 W
Process value input (only for version with process controller)	Burden	10 Ω	Ui	30 V
	Burden voltage U	< 200 mV	Ii	100 mA
			Ci	14.3 nF
			Pi	1 W
Binary input	make/break contact (conf.)	-	Co	5.5 μF
			Lo	1000 mH
Analog feedback (Option)	U	12 ... 30 V	Uo	30 V
	I	4 ... 20 mA	Io	100 mA
			Po	1 W
Limit switches (Option) (NAMUR initiators)	U	8 V	Uo	15.5 V
	I uncoated	3 mA	Io	52 mA
	I coated	1 mA	Po	150 mA

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

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
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

Ordering chart (excerpt, other versions on request)

Type 8635

Function ¹⁾	Position sensor system	Communication	Initiator DIN EN 60947-5-6	Analog feedback incl. 2 binary outputs	Mounting on pneumatic linear or part-turn actuator	EEx approval (acc. to ATEX)	Item no.
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

¹⁾ 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 Bürkert facility, click on the orange box →



If case of special conditions
please consult for advice.

Subject to alterations.
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1508/8_EU-en_00891939



Type 8692 can be combined with...



Type 2301

Globe control valve



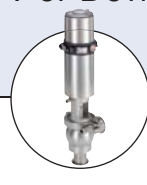
Type 2300

Angle-seat control valve



Type 2103

Diaphragm control valve



Hygienic process valves

The compact Positioner Type 8692 is optimized for integrated mounting on the pneumatic actuators in the process valve series Type 23XX/2103 and is specially designed for the requirements of a hygienic process environment. The control air channel is integrated in the actuator without external tubings. The easy handling and the selection of additional software functions are done either on a big graphic display with backlight and keypad or over a PC interface.

The Positioner registers the valve position without deterioration through a contact-free, analog position sensor. The control of single or double-acting actuators is done without internal air consumption. With integrated diagnostic functions operation conditions of the control valve can be monitored. Through status signals, valve diagnostic messages are transmitted according to NAMUR NE107 and recorded as history entries.

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.

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)

Technical data		
Material	Body Cover Sealing	PPS, stainless steel PC EPDM
Power supply		24 VDC +/- 10% UL: NEC Class 2
Residual ripple		max. 10%
Setpoint setting		0/4 to 20mA and 0 to 5/10 V
Output resistance		0/4 to 20 mA: 180 Ω 0 to 5/10 V: 19 k Ω
Control medium	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)
Ambient temperature		-10 to +55 °C
Pilot air ports		Threaded ports G1/8 stainless steel or Push-in connector (tube Ø 6 mm / 1/4")
Supply pressure		Low air flow rate 0 to 7 bar ¹⁾ High air flow rate 3 to 7 bar
Air input filter		Exchangeable (mesh aperture~0.1mm)
Actuator system	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
Position detection module		Contact-free, wear-free
Stroke range valve spindle		3 to 45 mm
Installation		as required, preferably with actuator in upright position
Protection type		IP65 and IP67 acc. to EN 60529, Type 4X
Power consumption		< 5 W
Electrical connection	Multipole connection Cable gland	M12, 8-pins or 4-pins 2xM16x1,5 (cable-Ø10mm) on terminal screws (1,5 mm²)
Bus communication		Profibus DPV1, DeviceNet
Approvals		ATEX II cat. 3G/D cULus Cert. No. 238179
Ignition protection		II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
Protection class		3 acc. to DIN EN 61140
Conformity		EMC directive 2014/30/EU

¹⁾ 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

8692 Positioner TopControl

Required process valve, example



More info.

2301
Globe Control
Valve



More info.

2300
Angle-Seat
Control Valve



More info.

2103
Control
Diaphragm
Valve



Complete control valve with required body and port connection



Valve system
Continuous ELEMENT
Type 8802-GD-I
2301 + 8692



Valve system
Continuous ELEMENT
Type 8802-YG-I
2300 + 8692



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



**Customised attachment
to third party actuators***

More info.

*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.	
Actuator series ELEMENT Type 23XX, size Ø70/90 mm								Standard	ATEX II cat. 3G/D
Low air capacity single-acting		Cable gland				yes	G1/8	227 290	265 013
				yes	yes	yes	G1/8	265 166	265 014
		M12 multipole				yes	G1/8	226 206	265 015
				yes	yes	yes	G1/8	265 167	265 016
			Profibus DPV1	via Bus			G1/8	233 348	265 019
			DeviceNet	via Bus			G1/8	265 168	265 017
Low air capacity double-acting		Cable gland				yes	G1/8	227 274	264 998
				yes	yes	yes	G1/8	265 169	264 999
		M12 multipole				yes	G1/8	265 170	265 000
				yes	yes	yes	G1/8	265 171	265 001
			Profibus DPV1	via Bus			G1/8	265 172	265 004
			DeviceNet	via Bus			G1/8	265 173	265 002
Actuator series ELEMENT Type 23XX, size Ø130 mm									
High air capacity single-acting		Cable gland				yes	G1/8	227 316	265 027
				yes	yes	yes	G1/8	265 174	265 028
		M12 multipole				yes	G1/8	245 016	265 029
				yes	yes	yes	G1/8	265 175	265 030
			Profibus DPV1	via Bus			G1/8	233 349	265 033
			DeviceNet	via Bus			G1/8	265 176	265 031
Actuator series CLASSIC Type 27XX, size Ø80/100 mm									
Low air capacity single-acting		Cable gland				yes	G1/8	227 299	265 020
				yes	yes	yes	G1/8	227 301	265 021
		M12 multipole				yes	G1/8	227 306	265 022
				yes	yes	yes	G1/8	227 308	265 023
			Profibus DPV1	via Bus			G1/8	261 603	265 026
			DeviceNet	via Bus			G1/8	247 245	265 024
Low air capacity double-acting		Cable gland				yes	G1/8	227 283	265 005
				yes	yes	yes	G1/8	265 177	265 006
		M12 multipole				yes	G1/8	227 286	265 007
				yes	yes	yes	G1/8	259 975	265 008
			Profibus DPV1	via Bus			G1/8	253 190	265 012
			DeviceNet	via Bus			G1/8	265 178	265 010
Actuator series CLASSIC Type 27XX, size Ø125/175/225 mm									
High air capacity single-acting		Cable gland				yes	G1/8	227 324	265 035
				yes	yes	yes	G1/8	227 326	265 036
		M12 multipole				yes	G1/8	227 330	265 037
				yes	yes	yes	G1/8	227 332	265 038
			Profibus DPV1	via Bus			G1/8	233 350	265 041
			DeviceNet	via Bus			G1/8	239 114	265 039

*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


Approvals
FM



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

Ordering chart adapter kit (has to be ordered separately)

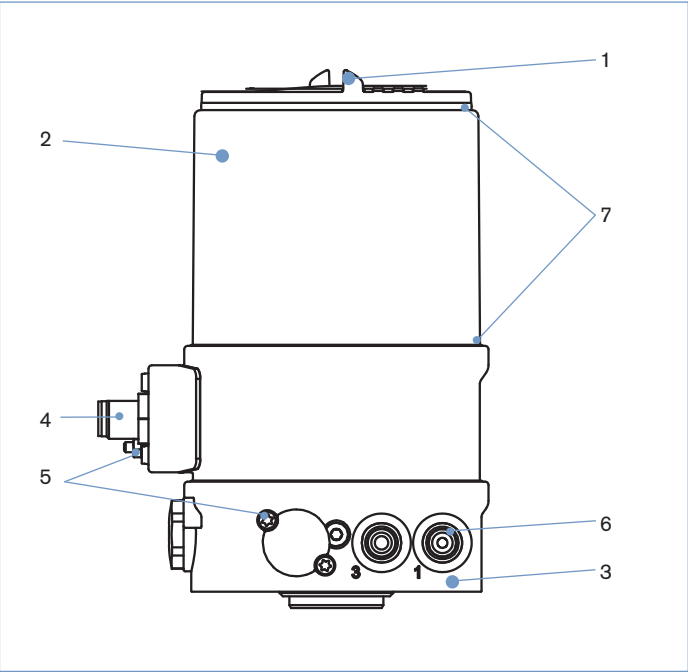
Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT Types 23XX	Ø70 / 90 / 130 mm	universal	679 917
Adapter kit CLASSIC Types 27XX	Ø80 mm	universal	679 931
	Ø100 mm	universal	679 932
	Ø125 mm	A (NO), B (NC)	679 934
	Ø175/225 mm	A (NO), B (NC)	679 935

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

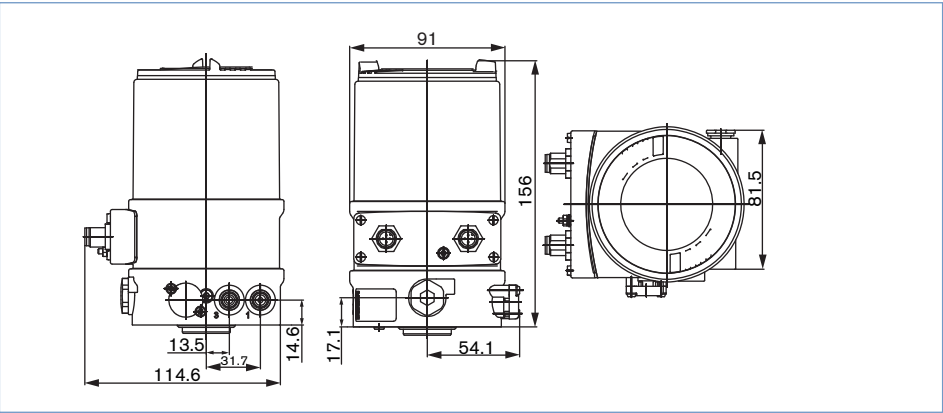
Materials



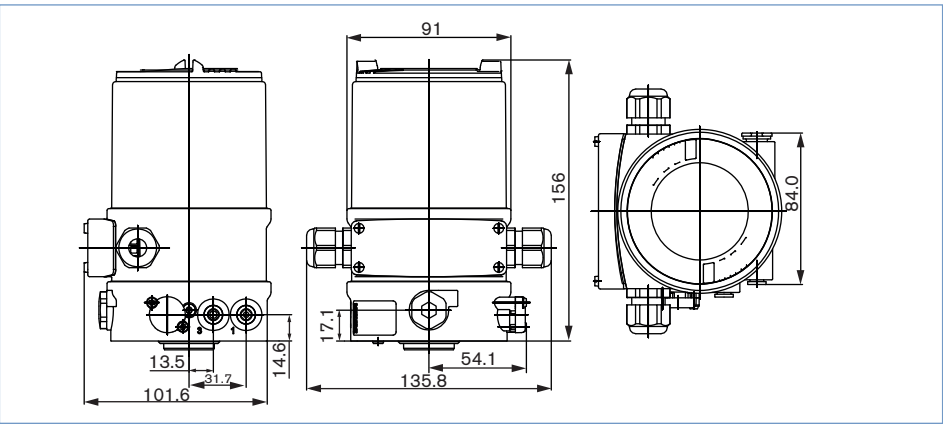
1	Cover	PC
2	Body casing	Stainless steel
3	Basic body	PPS
4	Plug M12	Stainless steel
5	Screws	Stainless steel
6	Push-in connector	POM/stainless steel
	Threaded ports G1/8	Stainless steel
7	Sealing	EPDM

Dimensions [mm]

Version connection Multipole

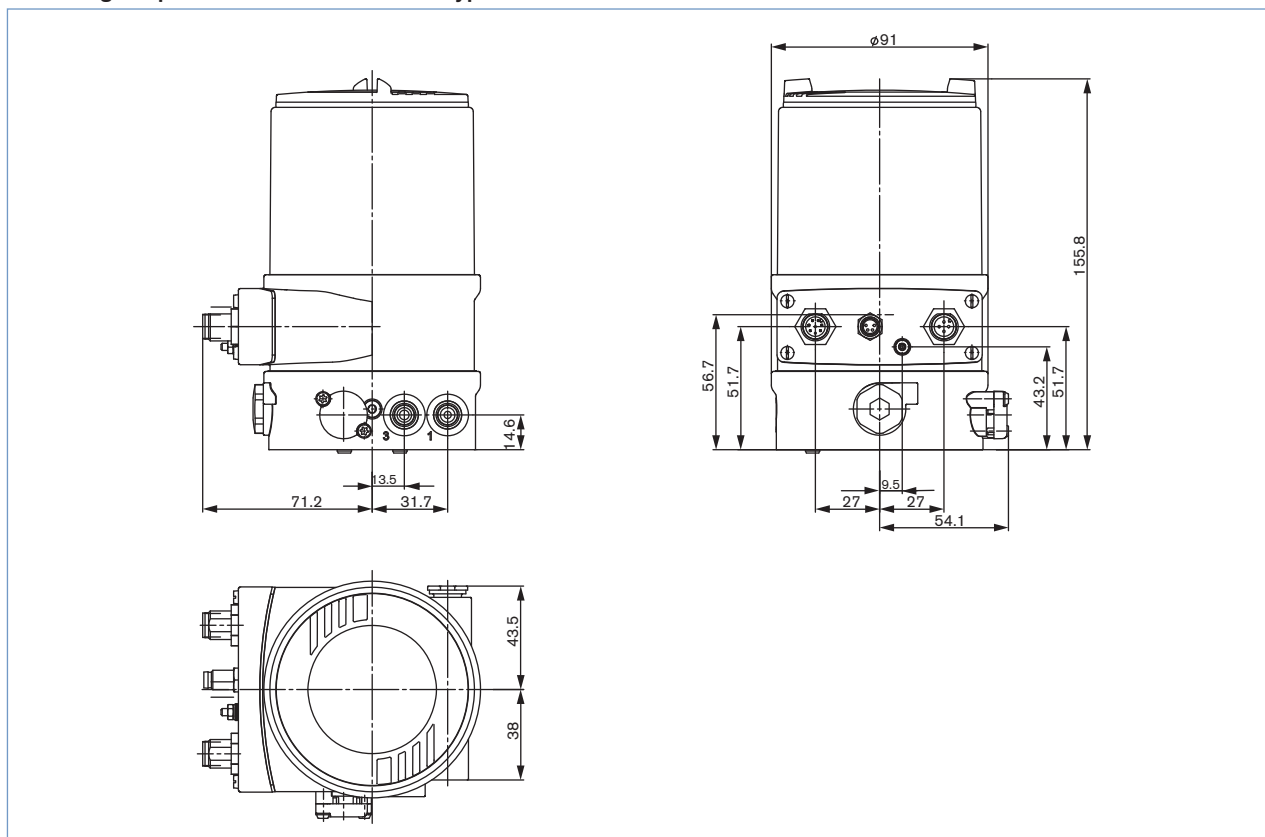


Version connection cable glands

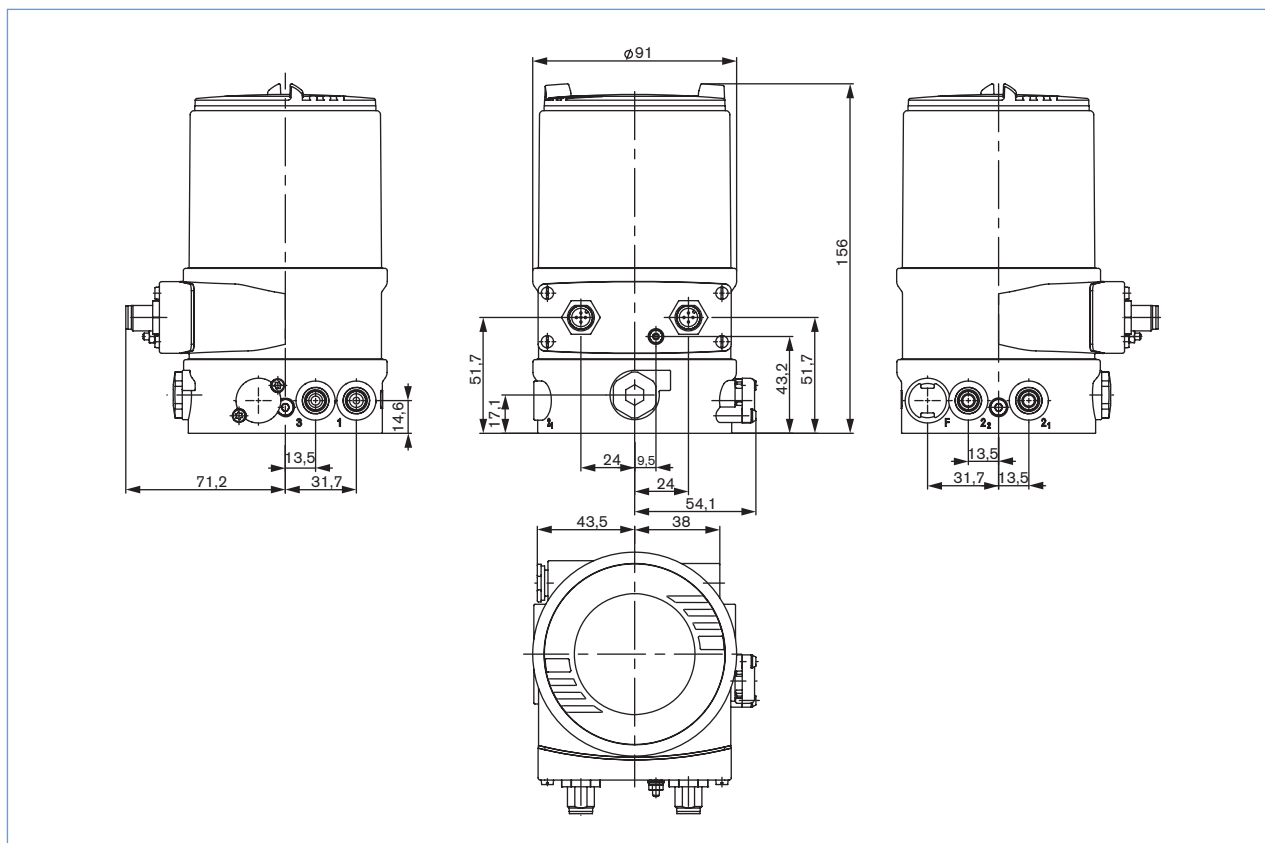


Dimensions [mm]

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 - 4-pins (supply)

Circular connector M12 - 8-pins (in / output signal)*

Pin	Configuration
6	Analogue feedback +
5	Analogue feedback GND
4	Binary output 1
3	Binary output 2
2	Binary output GND
1	Binary input +

Circular connector M12 - 4-pins (supply)

Pin	Configuration
1	Operating voltages + 24 VDC
3	Operating voltage GND

* with the option analogue feedback or binary output

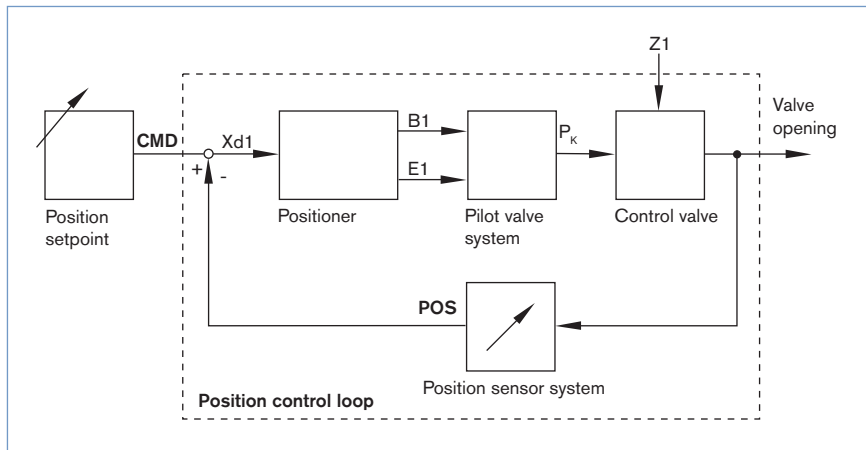
Connection cable glands

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



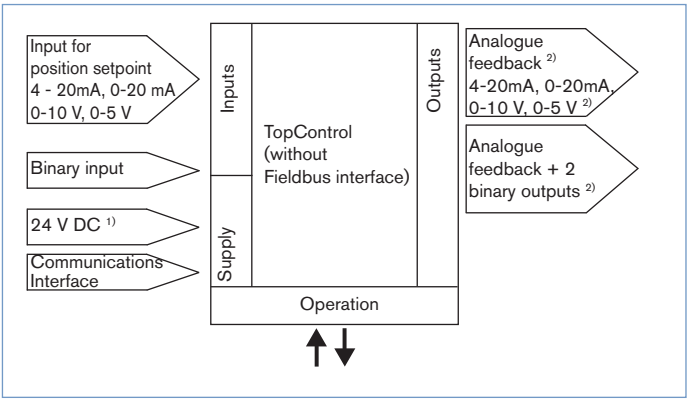
Additional software functions of the TopControl Type 8692 (extract)

- 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
- Parametrisable 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

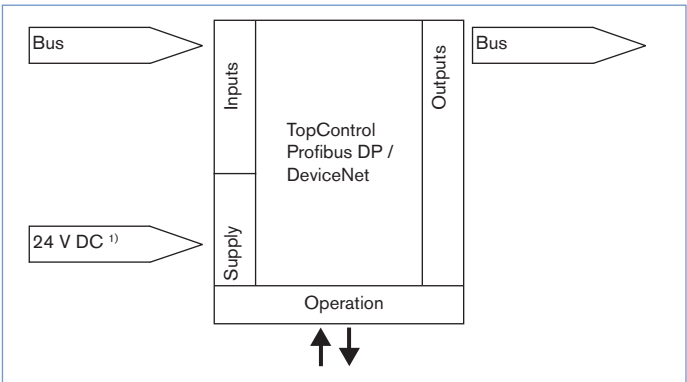
* You will find a more detailed description for every diagnostic function in the operating manual of Type 8792, page 148 - 167

Schematic diagram of the TopControl Type 8692

Without fieldbus interface



With Profibus DP / DeviceNet



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

²⁾ Alternative options

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

In case of special application conditions,
please consult for advice.

Subject to alteration.
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1602/10_EU-en_00895097



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 8696 can be combined with...



Type 2301

Globe control valve,
actuator ø 50 mm



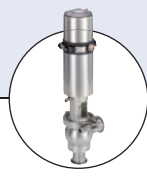
Type 2300

Angle-seat control
valve, actuator
ø 50 mm



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	
Material	
Body	PPS, stainless steel
Cover	PC
Sealing	EPDM
Power supply	24 VDC +/- 10% UL: NEC Class 2
Residual ripple	max. 10%
Setpoint setting	4 - 20mA (default setting) / 0 - 20mA
Output resistance	180 Ω
Control medium	neutral gases, air, quality classes acc. to ISO 8573-1
Dust concentration	Class 7 (<40µm particle size)
Particle density	Class 5 (<10mg/m³)
Pressure condensation point	Class 3 (<-20°C)
Oil concentration	Class X (<25mg/m³)
Ambient temperature	-10 to +55°C
Pilot air ports	Threaded ports G1/8 stainless steel or push-in connector (tube Ø 6mm / 1/4")
Supply pressure	0 to 7 bar ¹⁾
Actuator system	for single-acting actuators
Actuator series 23XX/2103	ø Actuator 50 mm
Position detection module	Contact-free, wear-free
Stroke range valve spindle	3 to 32 mm
Installation	as required, preferably with actuator in upright position
Protection type	IP65 and IP67 acc. to EN 60529, Type 4X
Approvals	ATEX II cat. 3G/D cULus Cert. No. 238179
Ignition protection	II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
Power consumption	< 3.5 W
Electrical connection	
Multipole connection	M12 (8-pins), stainless steel
Protection class	3 acc. to DIN EN 61140
Conformity	EMC directive 2014/30/EU
Options	Analogue position feedback, 4-20mA

¹⁾ 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

8696 Positioner TopControl Basic

Required process valve, example



More
info.

2301
Globe Control
Valve
Actuator
 $\varnothing$ 50 mm



More
info.

2300
Angle-Seat
Control Valve
Actuator
 $\varnothing$ 50 mm



Third party
hygienic
control
valves

Complete control valve with required body and port connection



Valve system
Continuous ELEMENT
Type 8802-GD-N
2301 + 8696



Valve system
Continuous ELEMENT
Type 8802-YG-N
2300 + 8696



Customised attachment
to third party actuators*

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

More
info.

Ordering chart Type 8696 (other versions on request)

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

Note: All non-ATEX versions are UL approved.

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)

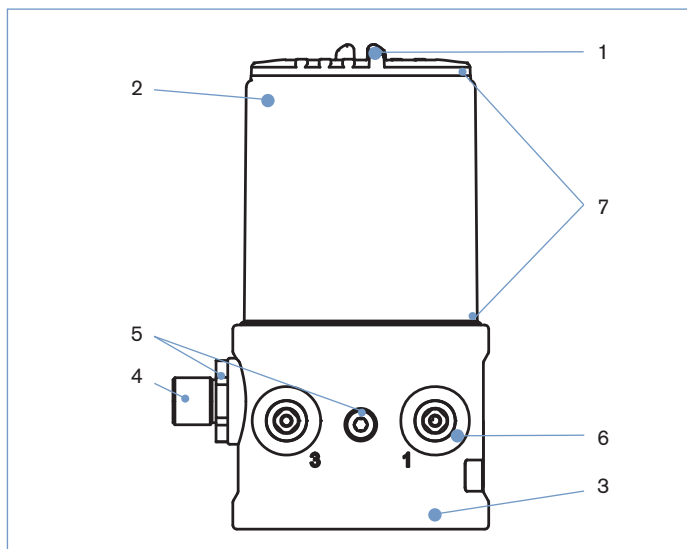
Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT Types 23XX	ø 50 mm	A (NO), B (NC)	679 918

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

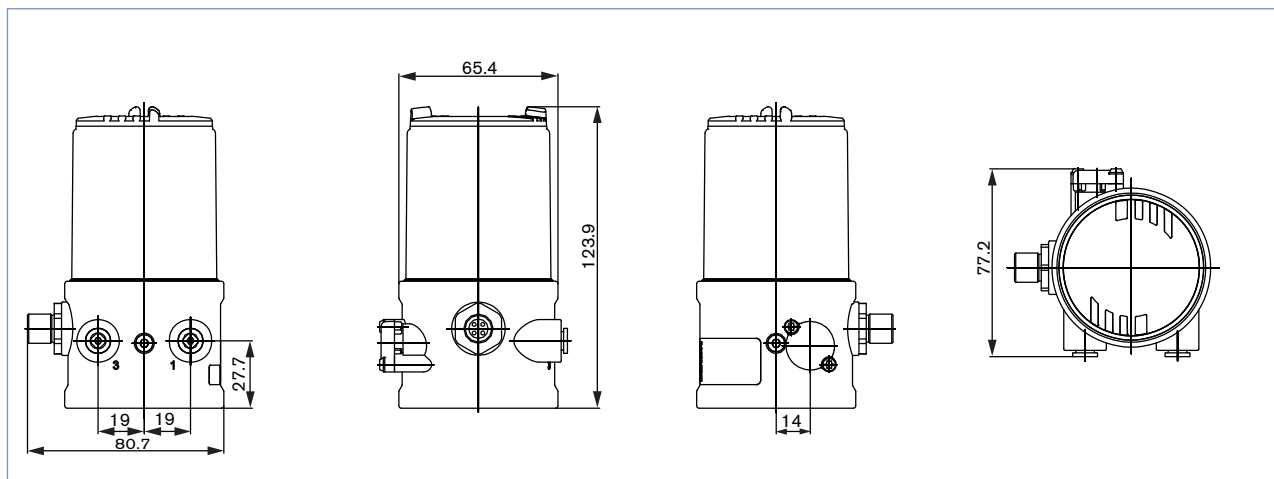
Materials



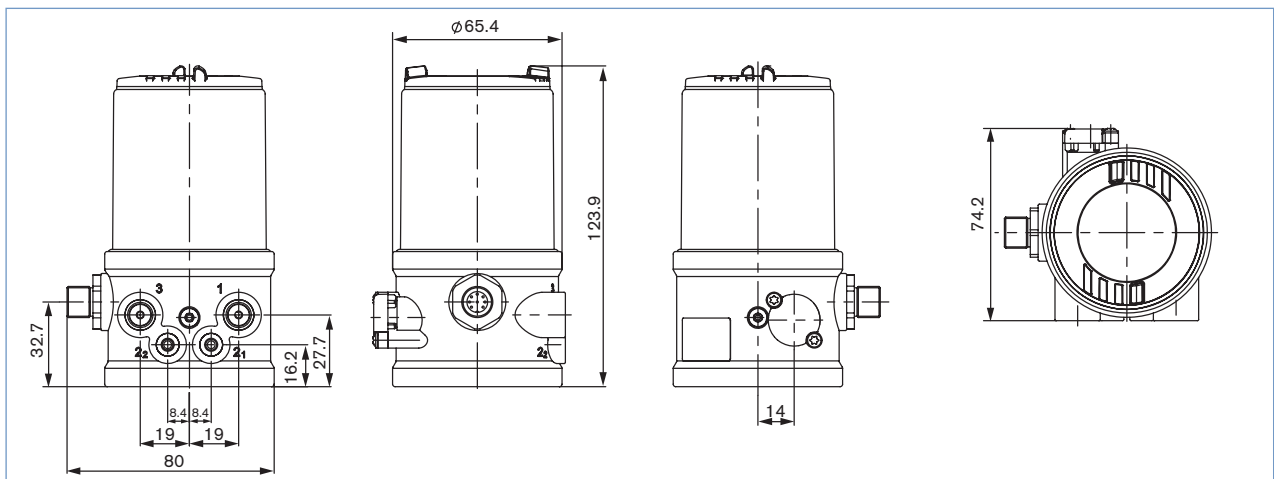
1 Cover	PC
2 Body casing	Stainless steel
3 Basic body	PPS
4 Plug M12	Stainless steel
5 Screws	Stainless steel
6 Push-in connector	POM/stainless steel
Threaded ports G1/8	Stainless steel
7 Sealing	EPDM

Dimensions [mm]

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

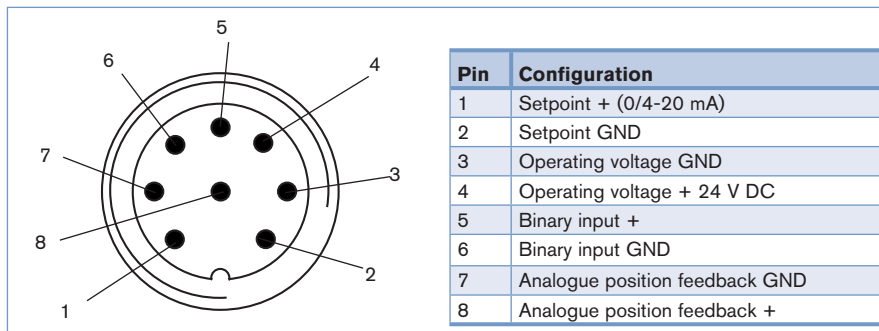


Mounting on hygienic process valves with external air routing



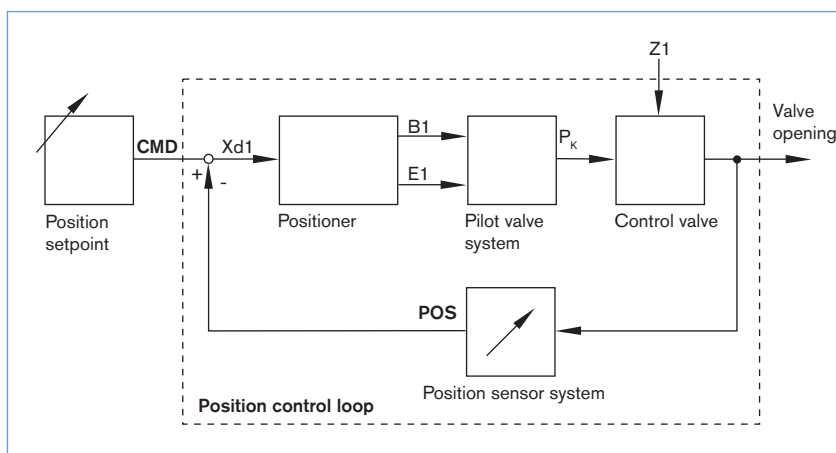
Connection Multipole

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)

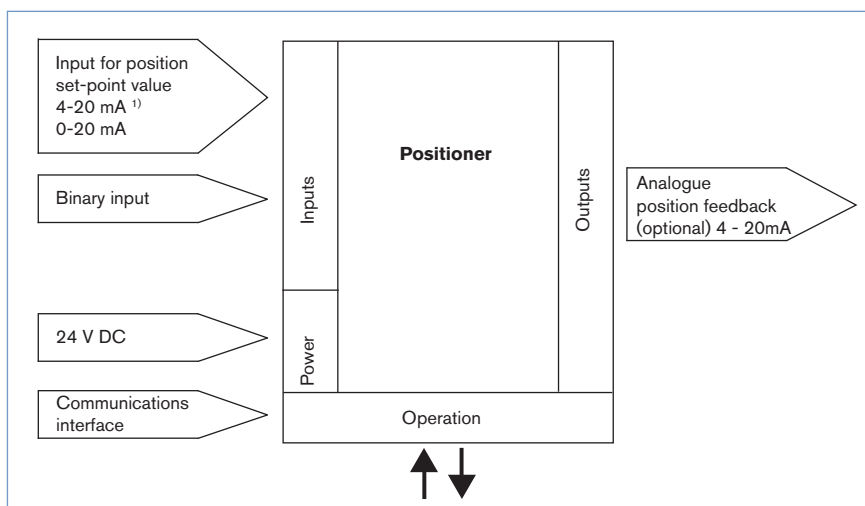
DIP-Switch activated device

- 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



¹⁾ Default setting

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





Type 8791 BASIC can be combined with...



Yoke type actuators



Rotary actuators



Rotary actuators with remote positioner



Process control valve with remote positioner



Hygienic process control valve with remote positioner

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

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

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

²⁾ Pressure values [bar]: Overpressure with respect to atmospheric pressure

continued on next page

Technical data, continued

Technical data	
Electrical connection	
Multipole connection	M12, 8-pin
Cable gland	2xM20x1.5 (cable Ø 10mm) on screw terminals (0.14-1.5 mm ²)
Remote Version	1xM12x1.5 (cable Ø 3 to 6.5 mm)
Protection class	3 acc. to DIN EN 61140
Type of ignition protection	II 3 G nA IIC T4 II 3 D tD A22 T135° C
Conformity	EMC directive 2014/30/EU
CSA approval information	
Product category code	Class 3221 82-VALVES - Actuators - Certified to US standards Class 3221 02-VALVES - Actuators
Considered standards	CAN/CSA-C22 2 No. 139 UL 429
CSA trademark	 c US

Technical data - AS-interface (Option)	
Profile	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
Programmed data	see instruction manual
Operating voltage over Bus connection	29,5 to 31,6 VDC acc. to Specification
Max. current consumption	150 mA
Electrical connection	M12x1,4-pin stainless steel connection assembled with 80cm cable and flat cable clamp

Technical data - Linear Remote Position Sensor (ELEMENT, CLASSIC)	
Electrical connection	
Cable gland	1xM16x1.5 (cable Ø 5-10 mm) on terminal screws (0.14-1.5 mm ²)
Connection cable length	10 m
Operating voltage	24V DC ± 10 %, UL: NEC Class 2
Power consumption	< 0.3 W
Sensor measurement range	3 to 45 mm (Stroke range valve spindle)
Actual position signal	digital (RS485)
Ambient temperature	-25 to +80 °C
Protection class	3 acc. to DIN EN 61140
Type of protection	IP65 and IP67 acc. to EN 60529, Type 4X
Type of Ignition protection	II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
Conformity	EMC directive 2014/30/EU
Approvals	cCSAus, cULus Certificate no. 238179

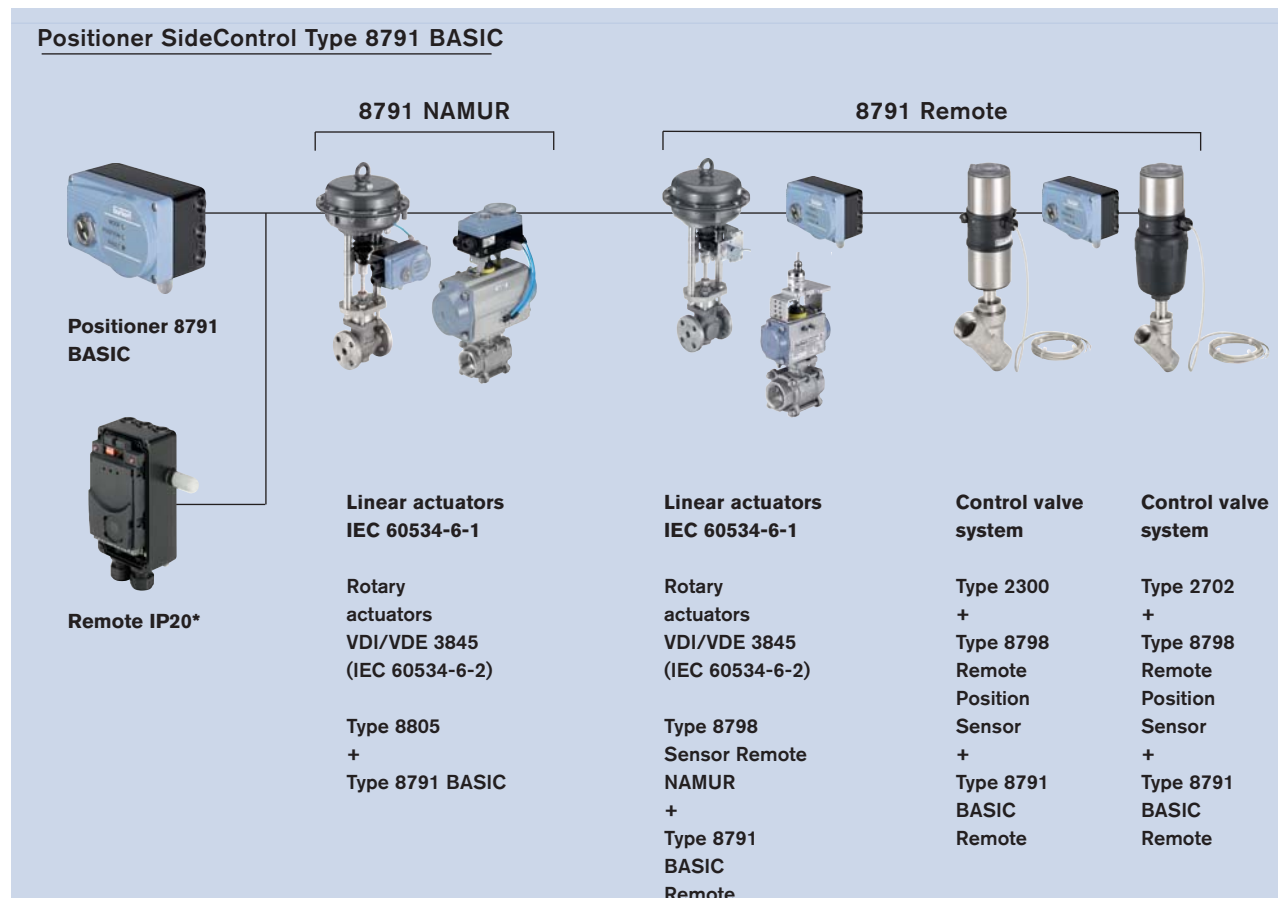
Technical data - rotative Remote Position Sensor (NAMUR)	
Electrical connection	2 m round cable (shielded)
Operating voltage	10 to 30 V DC
Power consumption	< 0.8W
Sensor measurement range	0° to 360°
Actual position signal	digital (RS485)
Ambient temperature	-25 to +80°C
Protection class	3 acc. to DIN EN 61140
Type of protection	IP65 acc.to EN 60529
Conformity	EMC directive 2014/30/EU
Approvals	UL (cULus) Certificate no. E226909

Technical data - Position feedback with proximity switches (Accessory)	
Electrical connection	M12, 4-pin
Output function	3-wire, normally open contact, PNP
Operating voltage	10 to 30 V DC
Residual ripple	≤ 10% U _{ss}
DC rated current	≤ 100 mA
Type of protection	IP65 and IP67
Protection class	3 acc. to DIN EN 61140
Conformity	EMC directive 2014/30/EU
Approvals	cCSAus

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

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.

Example of assembly variations of Positioner SideControl



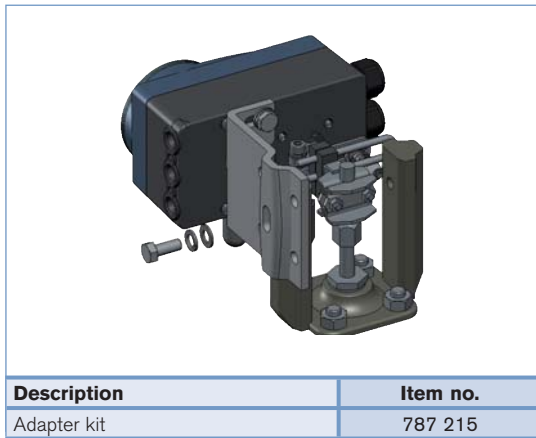
* **Note:** Remote IP20 version exclusively for cabinet mounting

Assembly options

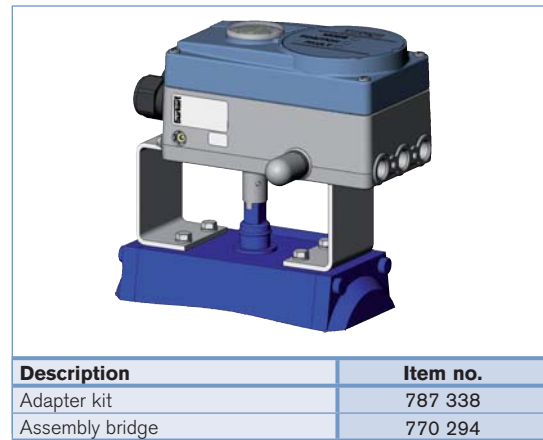
NAMUR Version

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

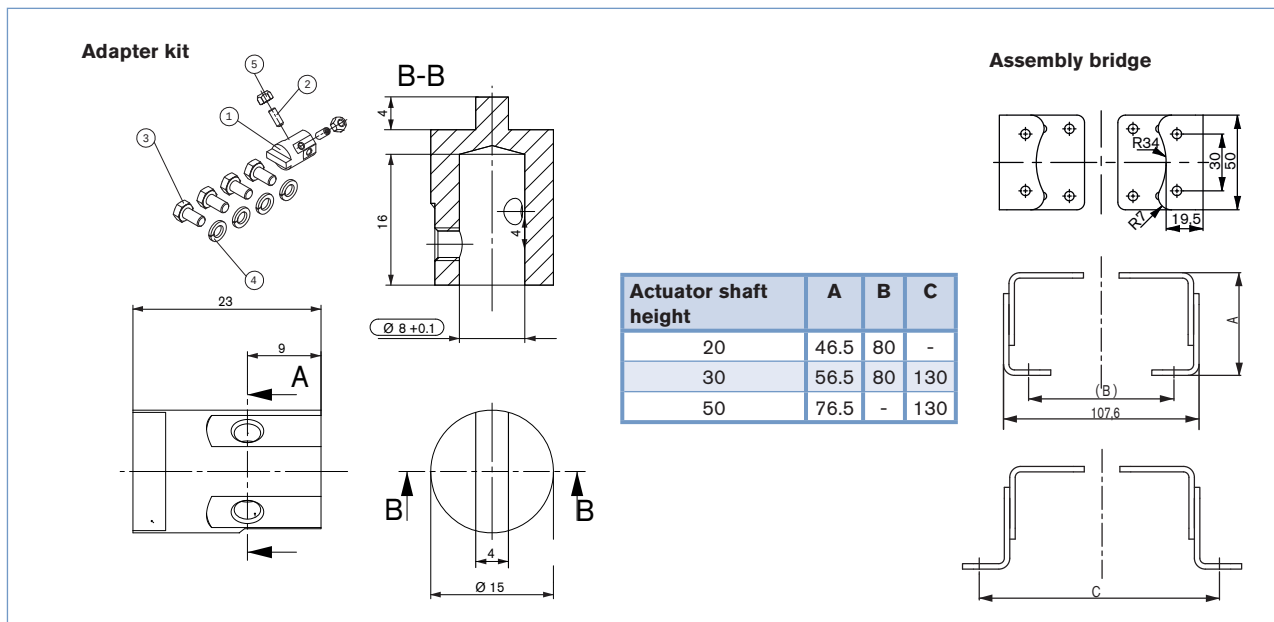
Assembly on linear actuator



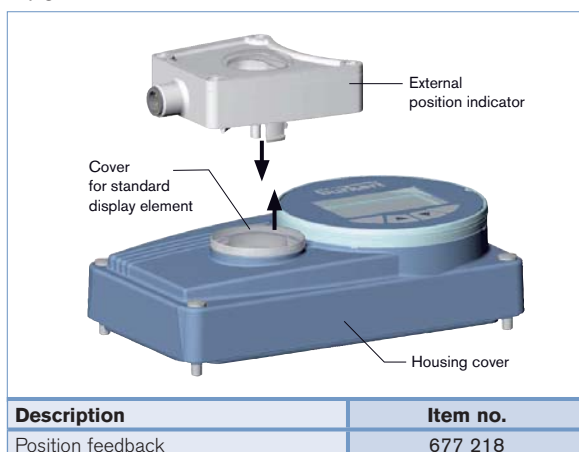
Assembly on rotary actuator



Dimensions [mm]



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

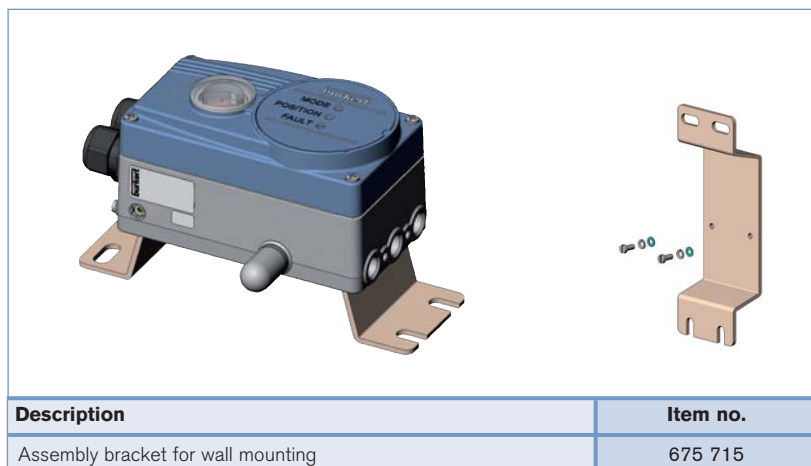


Assembly options *continued*

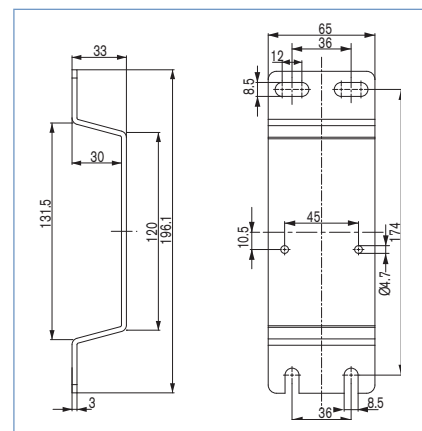
Remote version

(Remote positioner from actuator with displacement position)

Assembly with accessory brackets



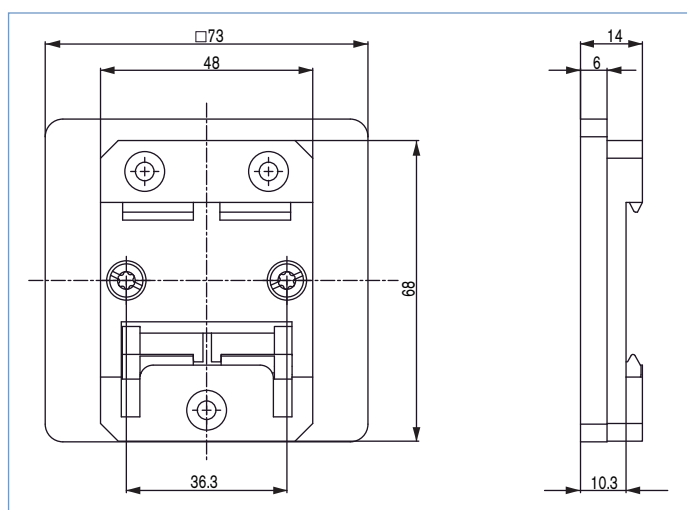
Dimensions [mm]



Assembly on DIN-Rail



Dimensions [mm]



Assembly options *continued*

Remote version

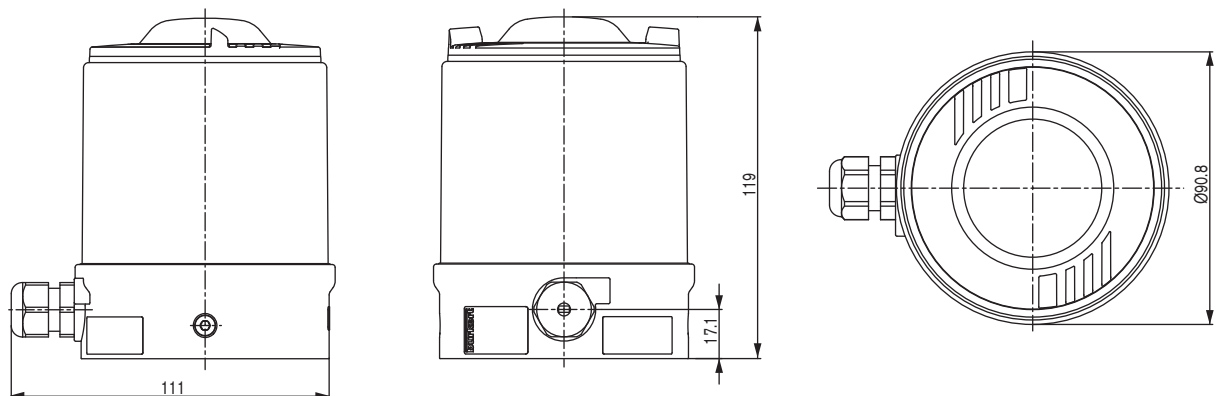
(Remote positioner from actuator with displacement position sensor)

Type 8798

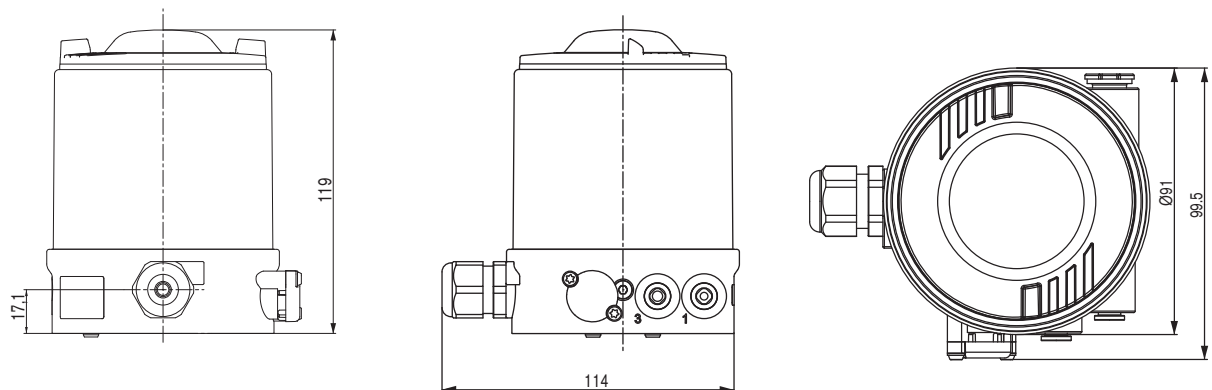


Dimensions

Control valves CLASSIC Types 27xx

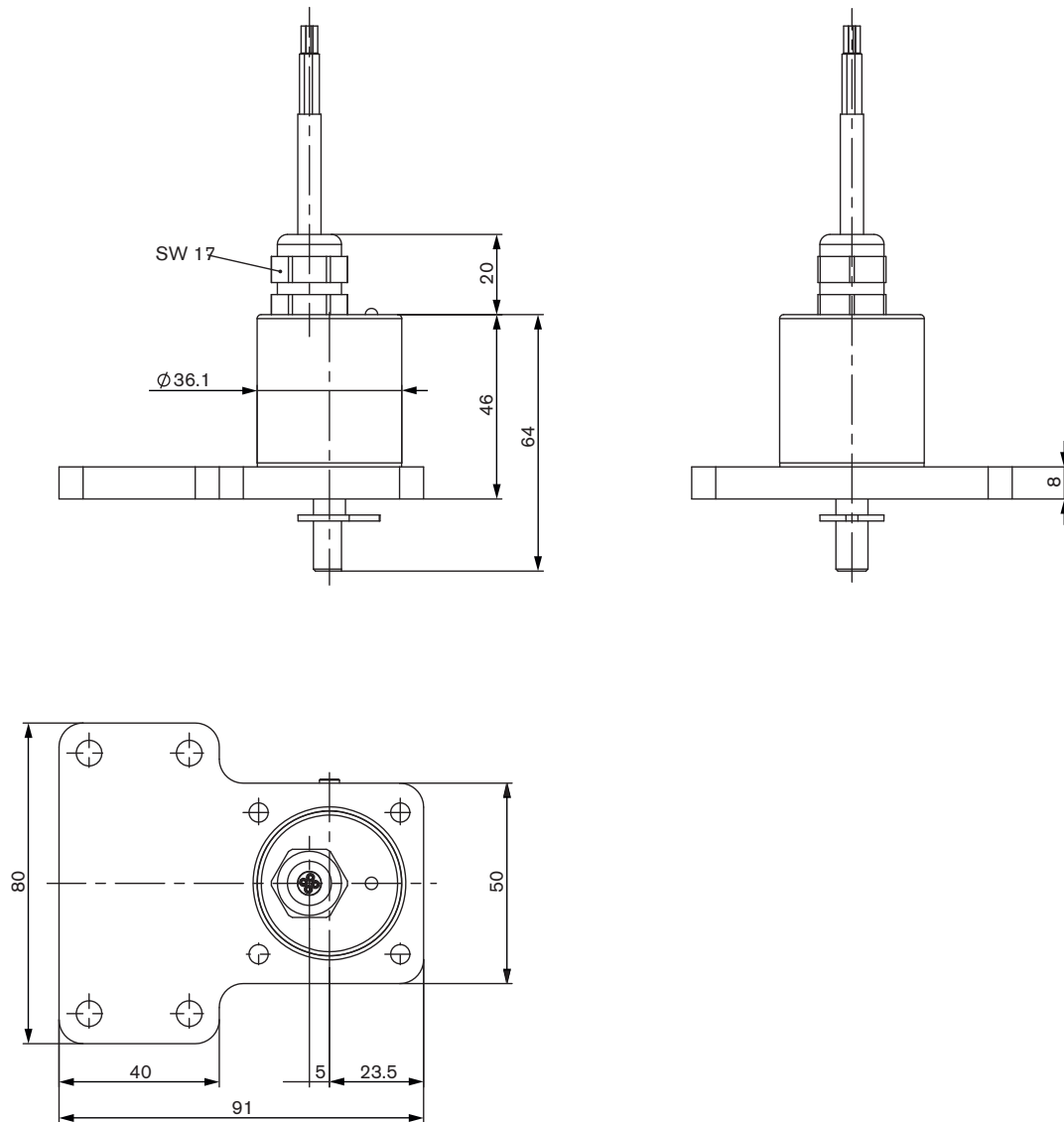


Control valve ELEMENT Types 23xx



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	
				Multipole	yes	no		211 523	
					yes	yes		211 524	
					yes	no	yes	226 836	
					yes	yes	yes	226 837	
			AS-Interface		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
						yes	yes		224 869
	ELEMENT 130 CLASSIC 125-225	single and double-acting	universal			yes	no		211 531
Remote IP20						yes	yes		211 532
	ELEMENT 70/90 CLASSIC 80/100	single-acting	low			yes	no		234 576
						yes	yes		234 578
	ELEMENT 130 CLASSIC 125-225	single and double-acting	universal			yes	no		211 533
						yes	yes		211 534

Assembly variations	Electrical connection	Item No.	
Remote Position Sensor		Standard	ATEX II 3 GD
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

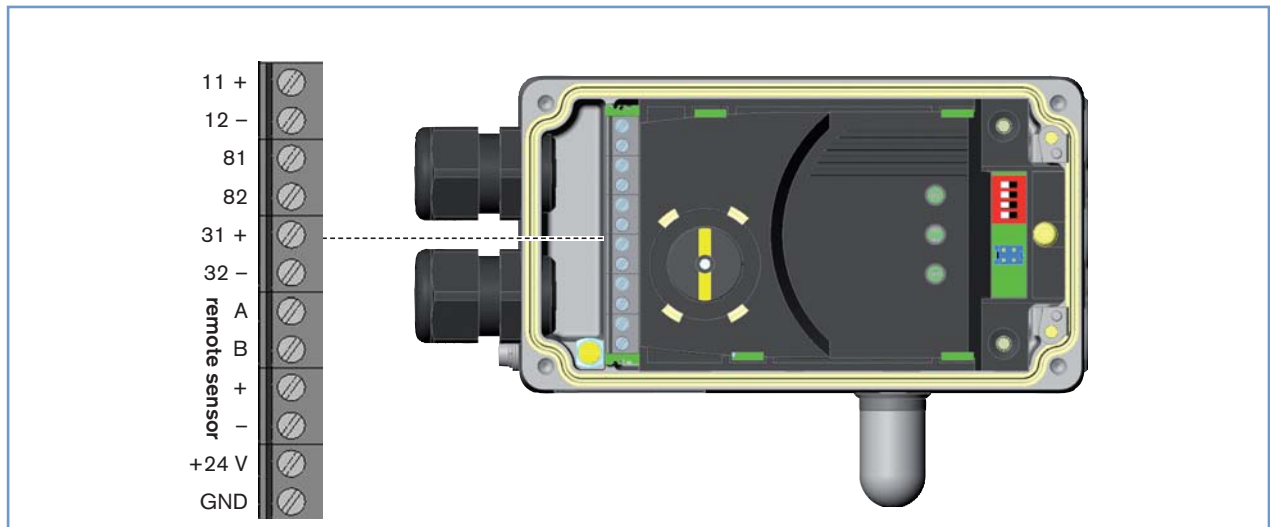
Protection type: NEMA 4x
Remote Sensor ATEX Cat. 3

Ordering chart for accessories

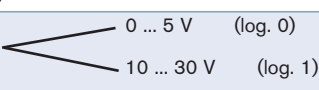
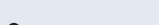
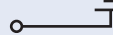
Description	Item no.
Accessories for SideControl BASIC NAMUR	
Assembly bridge VDI/VDE 3845 (IEC 60534-6-2), stainless steel	770 294
Adapter kit VDI/VDE 3845 (IEC 60534-6-2), stainless steel	787 338
Adapter kit linear actuators IEC 60534-6-1, stainless steel	787 215
Position feedback with proximity switches (optional upgrade feature) ³⁾	677 218
Accessories for SideControl BASIC Remote	
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
Standard Accessories	
USB Interface for serial communication	227 093
M12 socket, 8-pin, 2m assembled cable	919 061
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 +  + 
82 -	Binary input -	82 -  GND
+24 V	Operating voltages +	+24 V  24 V DC $\pm 10\%$
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

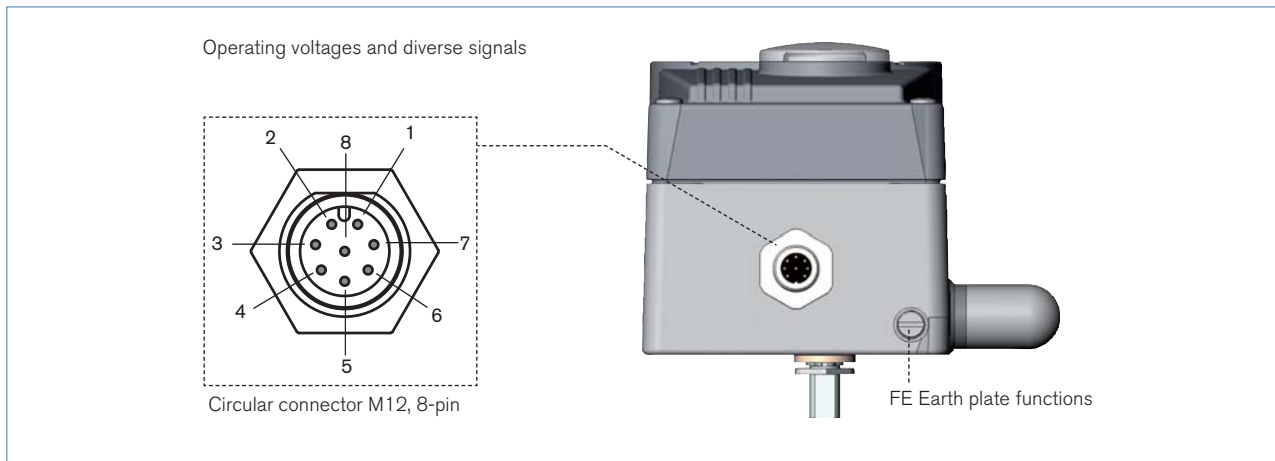
Remote
Sensor
Type 8798

Remote sensor Type 8798

Terminal	Wire colour for cable type		Configuration	External Circuitry
	1	2		
1	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 $\pm$ 10% max. Residual ripple 10%
4	yellow	+ 24 V	4 24 V DC $\pm$ 10% max. Residual ripple 10%

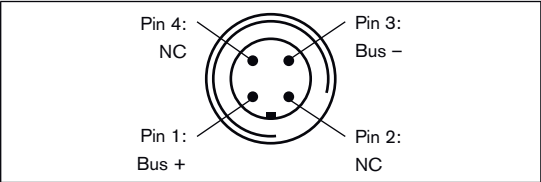
Circular connector M12 - 8-pin (analogue position feedback)

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

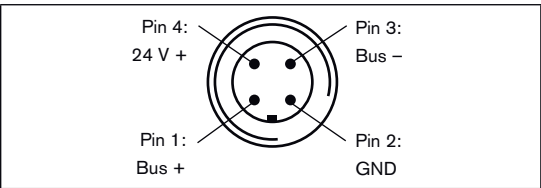
* The indicated wire colours refer to the connection cable, part no. 919061, available as an accessory

Connection options, continued

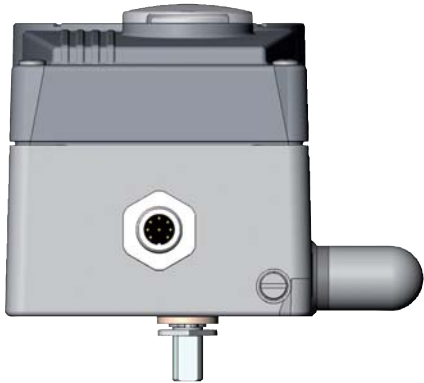
Electrical connection ASI M12 4-pin



Bus connection without external supply voltage



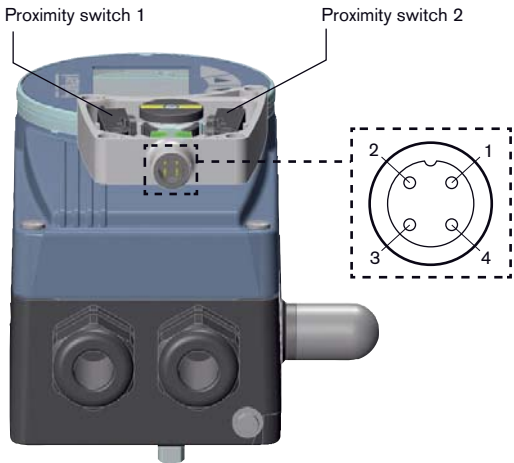
Bus connection with external supply voltage (optional)



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)

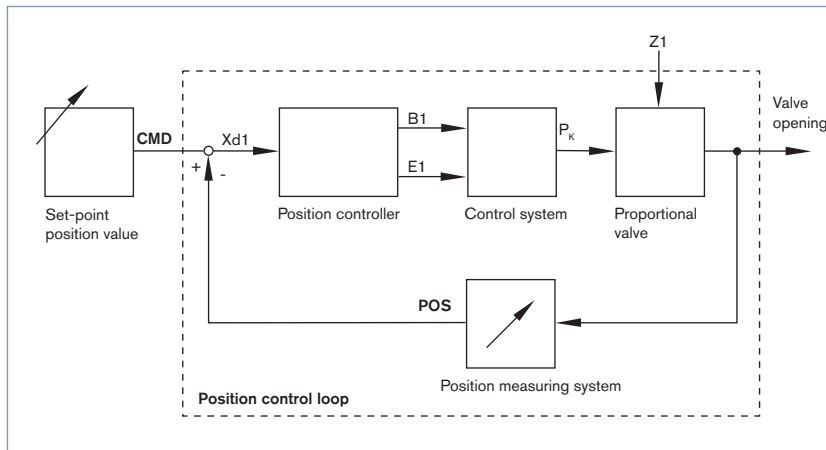
Electrical connection Position feedback with proximity switches (accessory for upgrading)



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

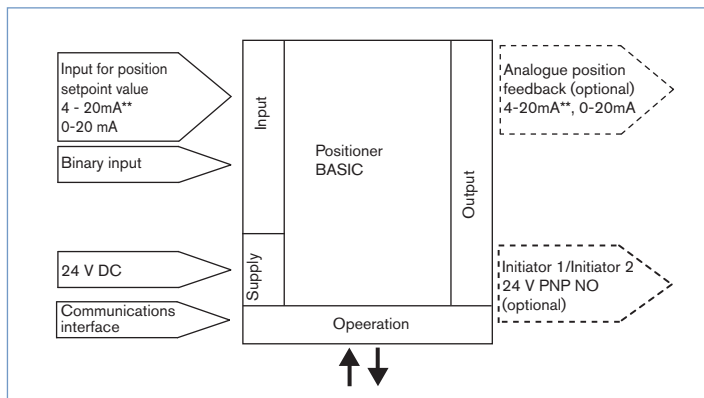
- Close tight function
- Inversion of the operating direction of the setpoint signal
- Linear characteristic curves selection or customised programming (software interface)
- Manual and automatic operation

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

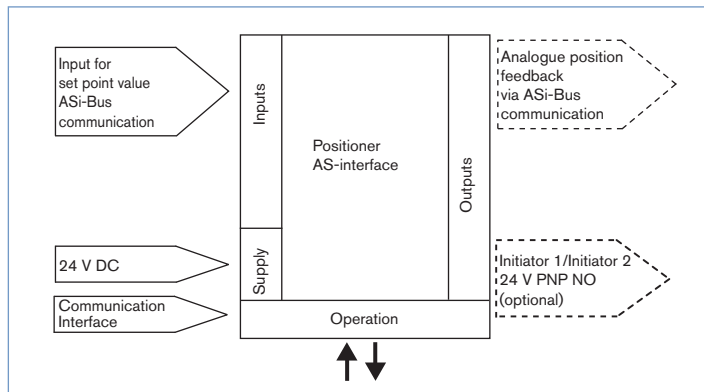
Schematic diagram of SideControl Type 8791 BASIC

without fieldbus interface

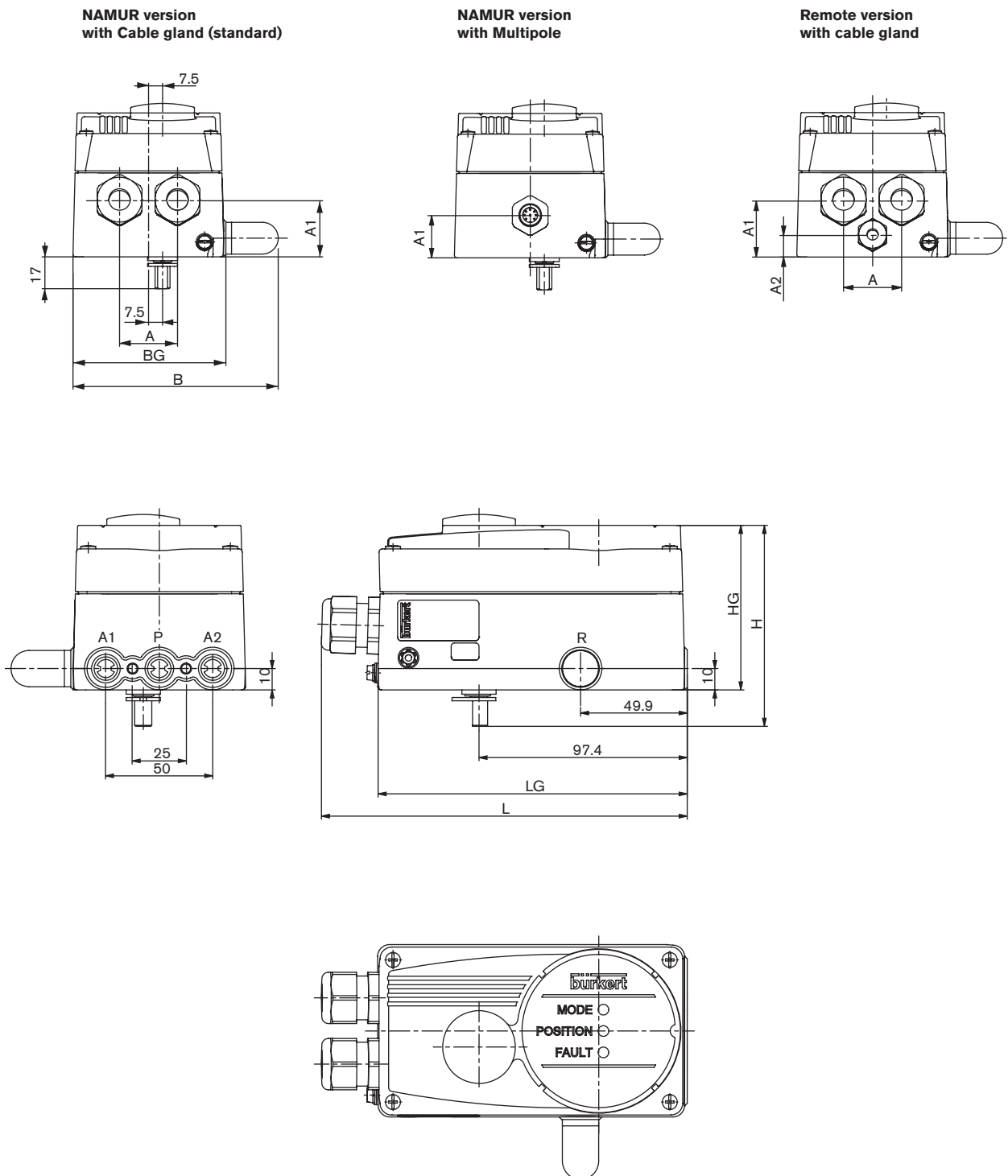


**Default setting

with AS-interface

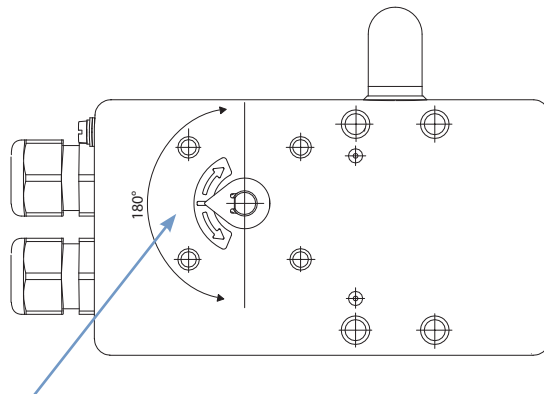


Dimensions [mm]



Description	LG	L	BG	B	HG	H	A	A1	A1
Standard	144.6	171.1	81.8	109.8	77	94.1	31	30	–
Remote	144.6	171.1	81.8	109.8	77	94.1	31	30	11.5
Multipole	144.6	171.1	81.8	109.8	77	94.1	–	22.5	–
Remote IP20	144.6	171.1	81.8	109.8	67	–	31	30	11.5

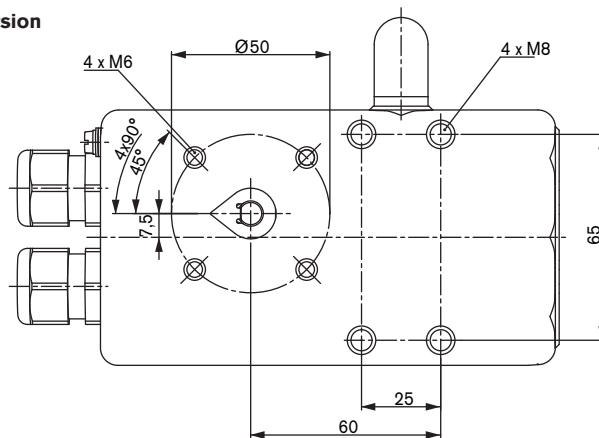
Dimensions [mm], continued



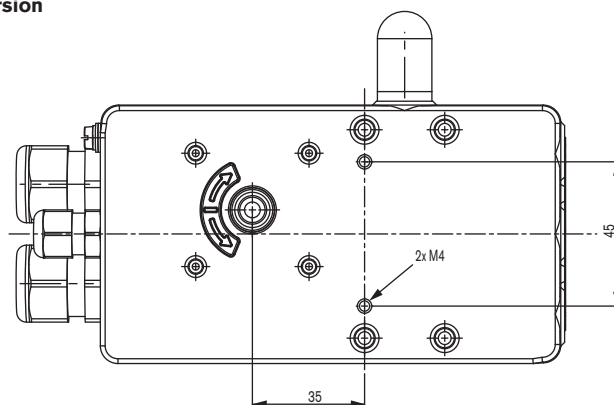
The rotation angle of the sensor must be within a range of 180°

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 →

In case of special application conditions,
please consult for advice

Subject to alterations.
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