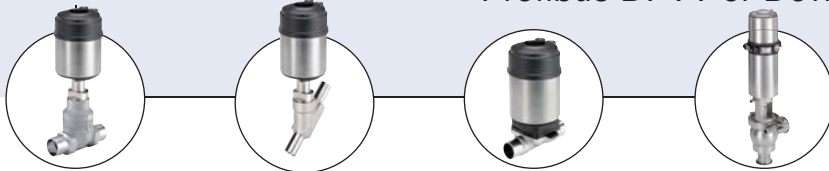


Digital electropneumatic positioner for the integrated mounting on process control valves



- 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 8692 can be combined with...



Type 2301

Globe control valve

Type 2300

Angle-seat control valve

Type 2103

Diaphragm control valve

Hygienic process control 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.

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

Technical data	
Material	Body: PPS, stainless steel Cover: PC Sealing: EPDM
Power supply	24 V DC +/- 10% UL: NEC Class 2
Residual ripple	max. 10%
Setpoint setting	0/4 to 20 mA 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	neutral gases, air, quality classes acc. to ISO 8573-1 Dust concentration: Class 7 (<40 µm particle size) Particle density: Class 5 (<10 mg/m ³) Pressure condensation point: Class 3 (<-20 °C) Oil concentration: Class X (<25 mg/m ³)
Ambient temperature	-10 to +55 °C
Pilot air ports	Threaded ports G 1/8 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 ~0.1 mm)
Actuator system	Actuator series ELEMENT 23xx Low air flow rate: Ø Actuator 70 / 90 mm High air flow rate: Ø Actuator 130 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/IP67 acc. to EN 60529, Type 4X acc. to NEMA 250 standard
Protection class	3 acc. to DIN EN 61140
Power consumption	< 5 W
Electrical connection	Multipole connection: M12, 8-pins or 4-pins Cable gland: 2xM16x1,5 (cable-Ø 10 mm) on terminal screws (1,5 mm ²)
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

Ordering information for ELEMENT TopControl control valve systems

A TopControl control valve system consists of a **positioner Type 8692** and an **ELEMENT control valve Type 23xx/2103**.

The following information is necessary for the selection of a complete system:

- **Item no.** of the desired TopControl positioner **Type 8692** (see ordering chart on p. 3)
- **Item no.** of the selected control valve **Type 23xx/2103** (see separate datasheets, Typ 2300, 2301, 2103)

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

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 valve systems

Positioner Type 8692



Pneumatic process control valves

More info.



Globe control valve
Type 2301

More info.



Angle-seat control valve
Type 2300

More info.



Diaphragm control valve
Type 2103



Third party
hygienic
process
valves

Control valve system



**Control valve system
ELEMENT
Type 8802-GD-I**
2301 + 8692



**Control valve system
ELEMENT
Type 8802-YG-I**
2300 + 8692



**Control valve system
ELEMENT
Type 8802-DF-I**
2103 + 8692



More info.

**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	Communication	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 Ø 70/90 mm								Standard	ATEX II cat. 3G/D
Low air capacity single-acting		Cable gland				yes	G 1/8	227 290	265 013
				yes	yes	yes	G 1/8	265 166	265 014
		M12 multipole					yes	G 1/8	226 206
			yes	yes	yes	G 1/8	265 167	265 016	
	Profibus DPV1		via Bus			G 1/8	233 348	265 019	
	DeviceNet	via Bus			G 1/8	265 168	265 017		
Low air capacity double-acting		Cable gland				yes	G 1/8	227 274	264 998
				yes	yes	yes	G 1/8	265 169	264 999
		M12 multipole					yes	G 1/8	265 170
			yes	yes	yes	G 1/8	265 171	265 001	
	Profibus DPV1		via Bus			G 1/8	265 172	265 004	
	DeviceNet	via Bus			G 1/8	265 173	265 002		
Actuator series ELEMENT Type 23xx, size Ø 130 mm									
High air capacity single-acting		Cable gland				yes	G 1/8	227 316	265 027
				yes	yes	yes	G 1/8	265 174	265 028
		M12 multipole					yes	G 1/8	245 016
			yes	yes	yes	G 1/8	265 175	265 030	
	Profibus DPV1		via Bus			G 1/8	233 349	265 033	
	DeviceNet	via Bus			G 1/8	265 176	265 031		

*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 6 mm / 1/4")

Ordering chart adapter kit (has to be ordered separately)

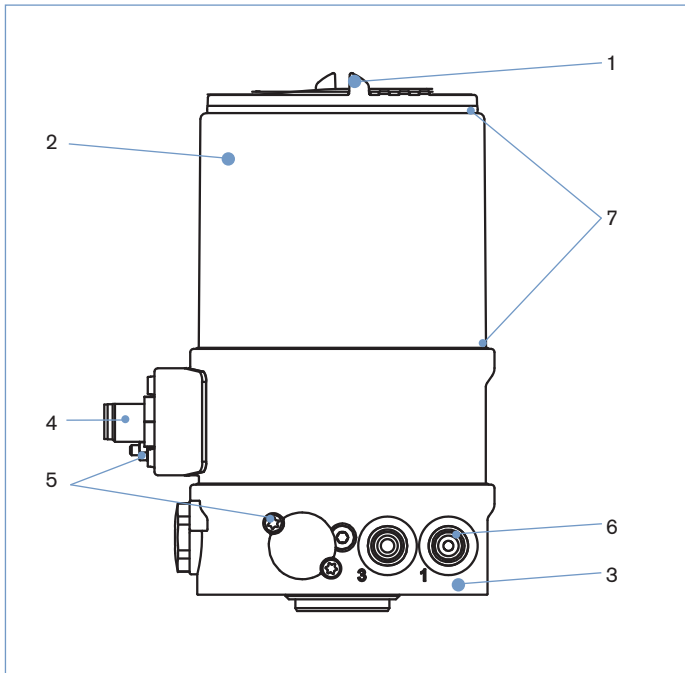
Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT Types 23xx/2103	Ø 70 / 90 / 130 mm	universal	679 917

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-pin with 5 m cable input/output signals	919 267
M12 socket 4-pin with 5 m cable for power supply	918 038
Silencer G 1/8	780 779
Silencer, push-in connector	902 662
Sensor puck (spare part)	682 240
USB interface for serial communication	227 093

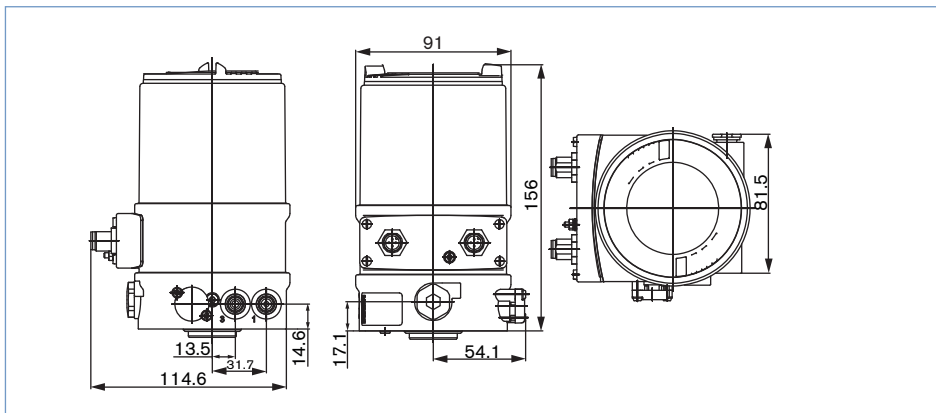
Materials



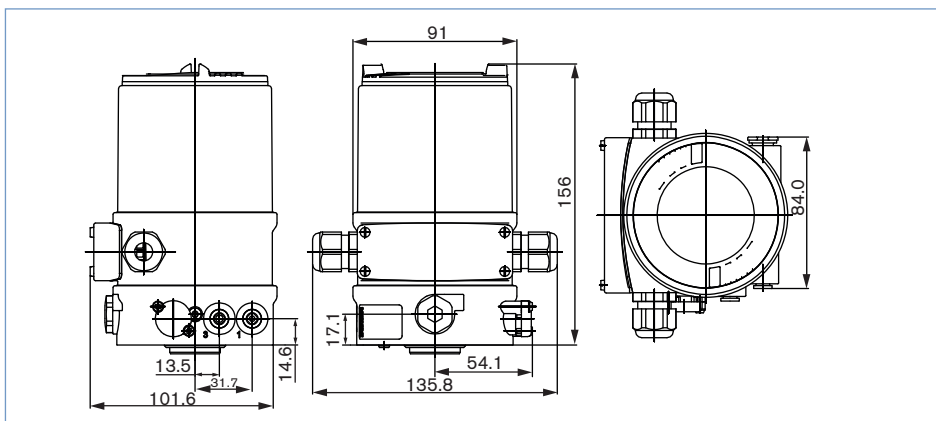
1 Cover	PC
2 Body casing	Stainless steel
3 BASIC body	PPS
4 Plug M12	Stainless steel
5 Screws	Stainless steel
6 Push-in connector	POM/stainless steel
Threaded ports G 1/8	Stainless steel
7 Sealing	EPDM

Dimensions [mm]

Version connection Multipole

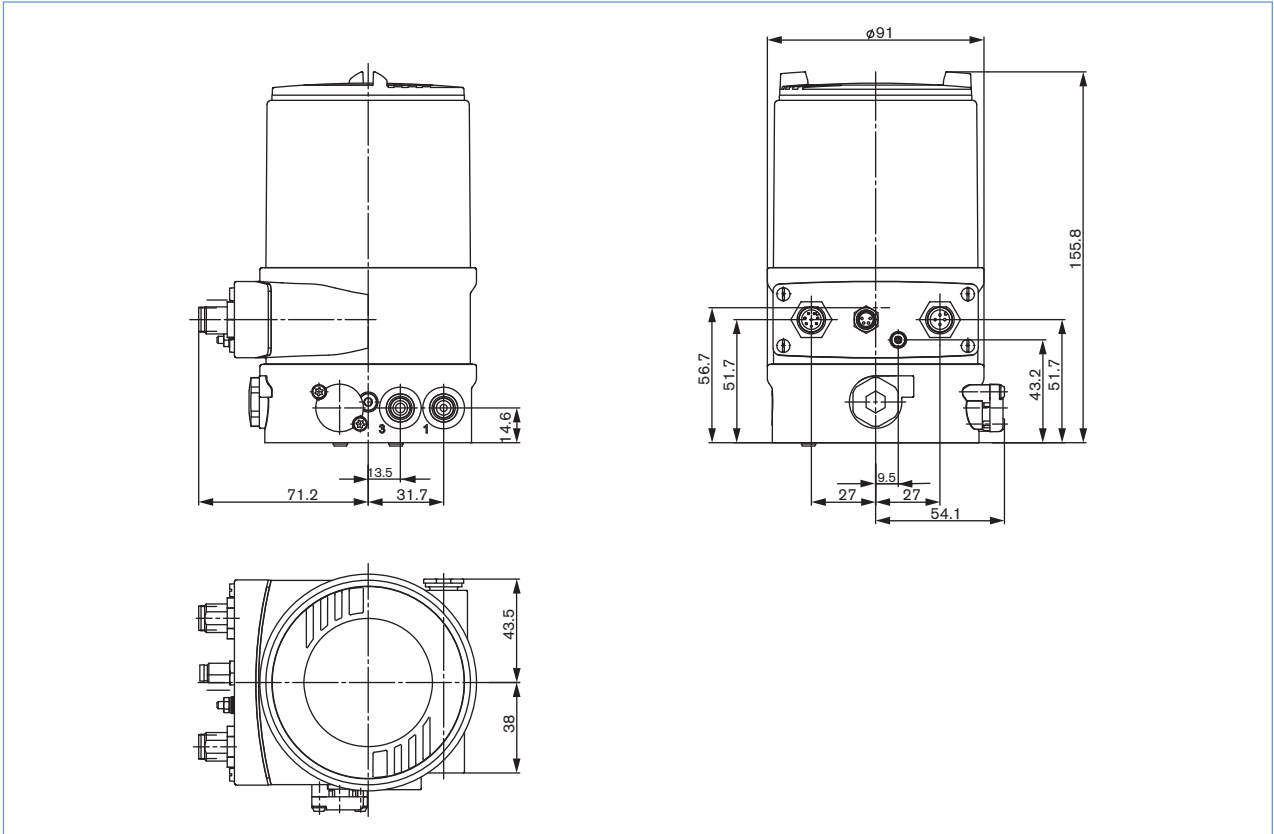


Version connection cable glands



Dimensions [mm]

Mounting on process valve ELEMENT Types 23xx



Mounting on third party hygienic process valves



Connection options

Connection Multipole

Circular connector M12 - 8-pins (setpoint)

Circular connector M12 - 4-pins (supply)

Pin	Configuration
8	Setpoint + (0/4 - 20 mA / 0 - 5/10 V)
7	Setpoint GND

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

Pin	Configuration
1	Operating voltages + 24 V DC
3	Operating voltage GND

* with the option analogue feedback or binary output

Connection cable glands

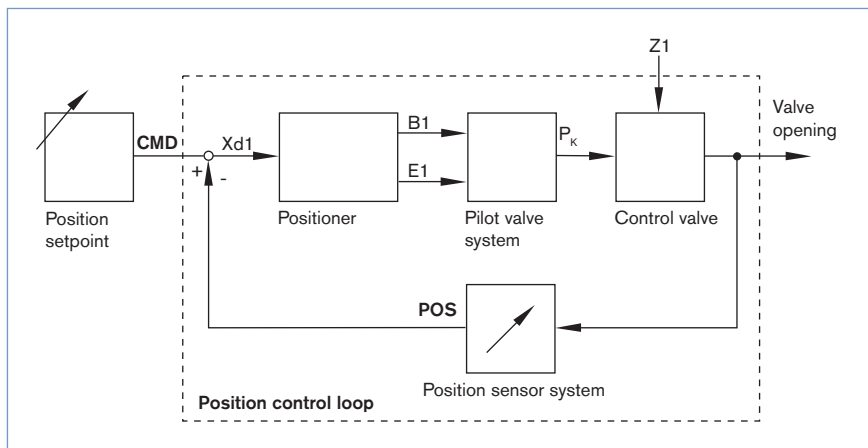
Terminal screws

Clamp	Configuration
11	Setpoint + (0/4 - 20 mA / 0 - 5/10 V)
10	Setpoint GND
14	Operating voltages + 24 V DC
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



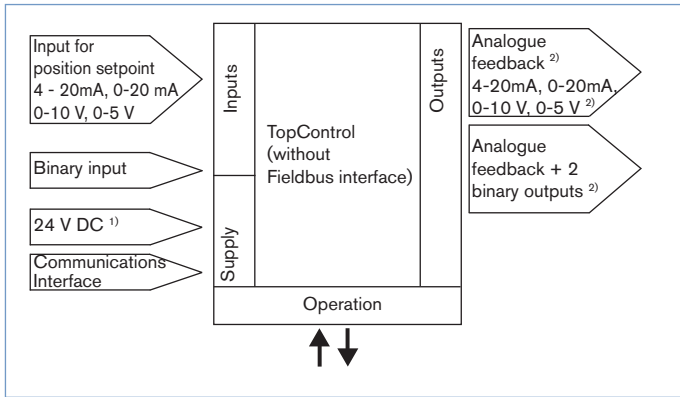
Additional software functions of the TopControl Type 8692 (extract)

- 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

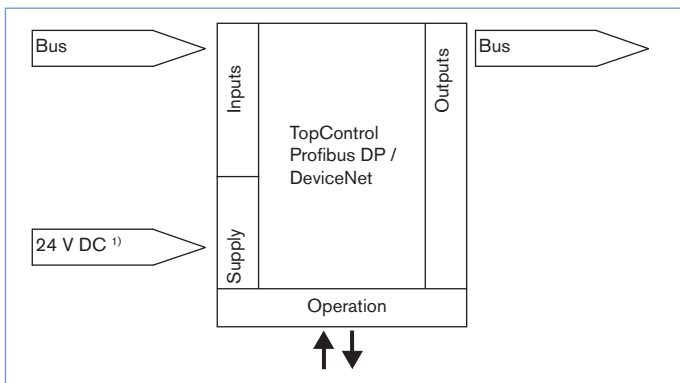
* You will find a more detailed description for every diagnostic function in the operating manual of Type 8792, page 148 - 167

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 → www.burkert.com