



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

- Compact stainless steel design
- Graphic display with backlight
- Easy start-up
- Comprehensive range of additional software functions
- Internal control air channel
- Profibus DPV1 or DeviceNet (option)

Type 8692 can be combined with...



**Type 2301**

Globe control valve



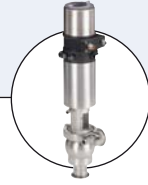
**Type 2300**

Angle-seat control valve



**Type 2103**

Control diaphragm valve



**Customised adaption**

The compact Positioner Type 8692 is optimised 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. Communication interfaces such as Profibus DPV1 or DeviceNet and analogue as well as binary feedback can also be chosen.

Technical data	
<b>Material</b>	Body Cover Sealing
	PPS, stainless steel PC EPDM
<b>Power supply</b>	24 VDC +/- 10%
<b>Ripple</b>	10%, no technical direct current!
<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 k Ω
<b>Control medium</b>	neutral gases, air DIN ISO 8573-1
	Dust concentration Particle density Pressure condensation point Oil concentration
	Class 5 (<40µm particle size) Class 5 (<10mg/m <sup>3</sup> ) Class 3 (<-20°C) Class 5 (<25mg/m <sup>3</sup> )
<b>Ambient temperature</b>	0 to +55°C
<b>Pilot air ports</b>	Push-in connector (external ø 6 mm or 1/4") or threaded ports G1/8
<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>	Low air flow rate: ø Actuator 70 / 90 mm High air flow rate: ø Actuator 130 mm
<b>Position detection module</b>	Contact-free, wear-free
<b>Stroke range valve spindle</b>	3 to 28 mm (3 to 45 mm on request)
<b>Installation</b>	as required, preferably with actuator in upright position
<b>Protection class</b>	IP 65/67 according to EN 60529 (NEMA4x in preparation)
<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 mm <sup>2</sup> )
<b>Bus communication</b>	Profibus DPV1, DeviceNet
<b>Protection class</b>	3 according to VDE 0580
<b>Type of protection</b>	II 3 G nA II B T4 II 3 D tD A22 T135°
<b>Conformity</b>	EMV2004/108/EG
<b>Approval</b>	CSA (in preparation)

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**



2301  
Globe Control  
Valve



2300  
Angle-Seat  
Control Valve



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**

Ordering chart Type 8692 (other versions on request)

Valve function	Communi- cation	Electrical connection	Analogue feedback	Analogue feedback+ 2 binary out- puts	Initiator	Binary input	Pilot air ports	Item no.
<b>Actuator size ø 70 / 90 mm</b>								
single- acting	No	Cable gland	No	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	176 621
			4 - 20 mA	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	179 026
			No	No	No	Yes	Threaded ports G1/8	185 139
	No	Multipole	No	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	176 622
			4 - 20 mA	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 164
			No	Yes	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 165
	Profibus	Multipole	No	No	No	No	Push-in connector external ø 6 mm or 1/4"	179 025
			No	No	No	No	Push-in connector external ø 6 mm or 1/4"	179 027
			No	No	No	No	Push-in connector external ø 6 mm or 1/4"	185 163
<b>Actuator size ø 130 mm</b>								
Single- acting	No	Cable gland	No	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 166
			4 - 20 mA	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 169
			No	No	No	Yes	Threaded ports G1/8	185 167
		Multipole	No	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 168
			4 - 20 mA	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 170
			No	Yes	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 171
	Profibus	Multipole	No	No	No	No	Push-in connector external ø 6 mm or 1/4"	185 172
			No	No	Yes	Yes	Push-in connector external ø 6 mm or 1/4"	185 173
			No	No	No	No	Push-in connector external ø 6 mm or 1/4"	185 174
<b>Actuator size ø 70 / 90 mm</b>								
Double- acting	No	Cable gland	No	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 175
			4 - 20 mA	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 178
			No	No	No	Yes	Threaded ports G1/8	185 176
		Multipole	No	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 177
			4 - 20 mA	No	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 179
			No	No	Yes	Yes	Push-in connector external ø 6 mm or 1/4"	185 180
	Profibus	Multipole	No	No	No	No	Push-in connector external ø 6 mm or 1/4"	185 181
			No	No	No	No	Push-in connector external ø 6 mm or 1/4"	185 182
			No	No	No	No	Push-in connector external ø 6 mm or 1/4"	185 182

**i Further versions on request**

 Approvals  
CSA

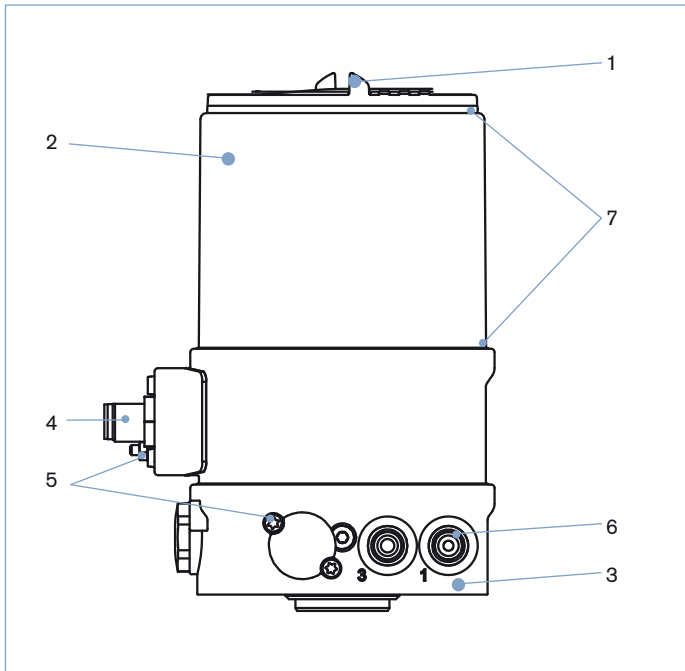
Ordering chart adapter kit (has to be ordered separately)

Descrip- tion	Actuator size	Control function	Item no.
Adapter set for Type 23xx / 2103	ø 70 / 90 mm	NC / NO / springless (A / B / I)	665 721

Ordering chart accessories

Descrip- tion	Item no.
M12 socket, 8-pins, 2 m assembled cable	919 061
M12 socket, 4-pins, 5 m assembled cable	918 038
Silencer G1/8	780 779
Silencer, push-in connector	902 662

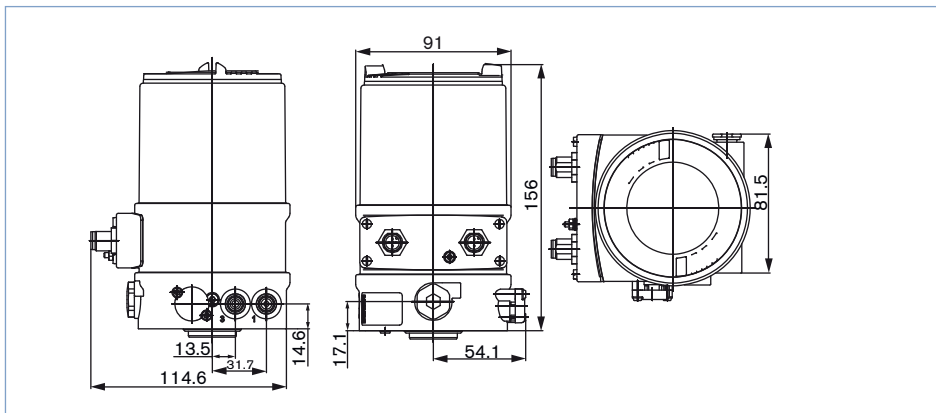
Materials



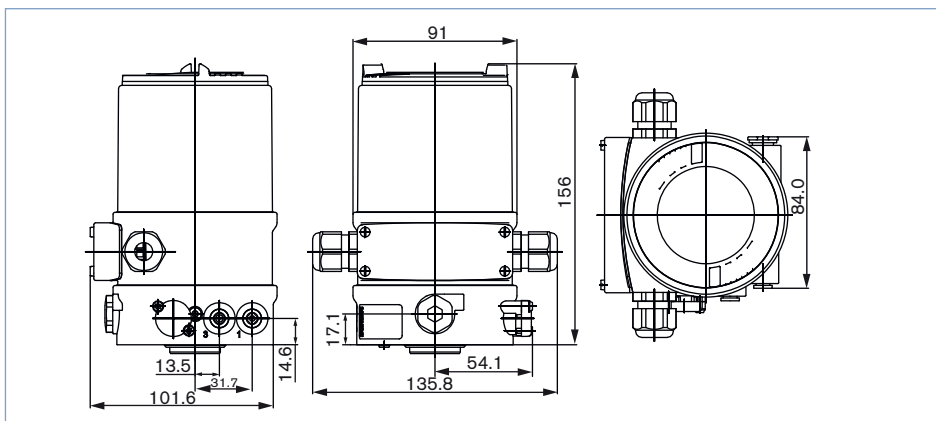
<b>1 Cover</b>	PC
<b>2 Body casing</b>	Stainless steel
<b>3 Basic body</b>	PPS
<b>4 Plug M12</b>	Stainless steel
<b>5 Screws</b>	Stainless steel
<b>6 Push-in connector</b>	POM/stainless steel
<b>Threaded ports G1/8</b>	Stainless steel
<b>7 Sealing</b>	EPDM

Dimensions [mm]

Version connection Multipole



Version connection cable glands



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

**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

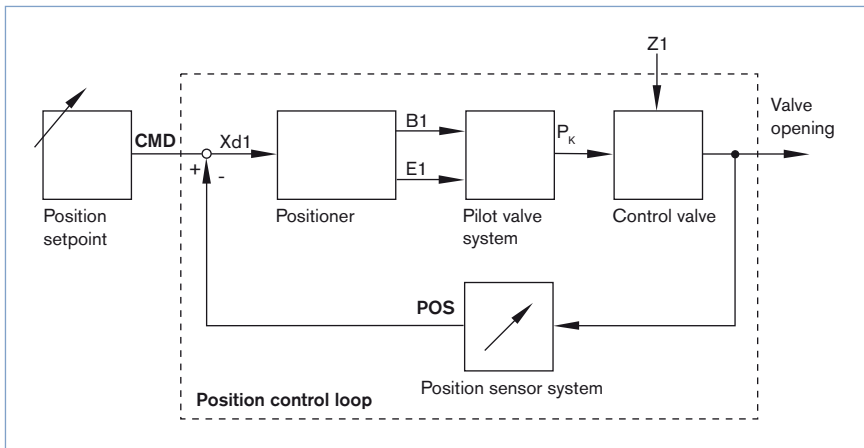
**Terminal screws**

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

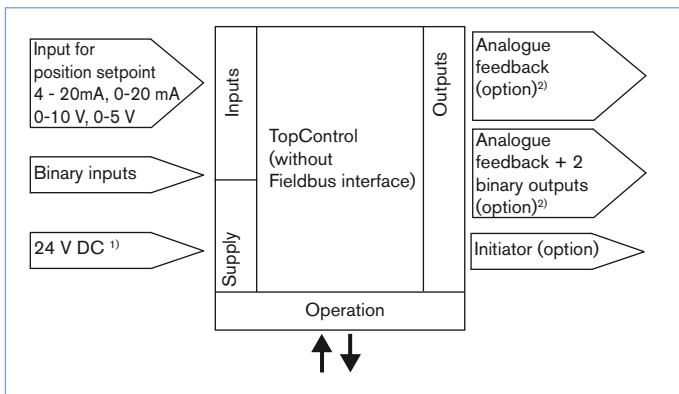


### Additional software functions of the TopControl Type 8692

- 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 double binary outputs
- Signal fault detection
- Safety position
- Code protection
- Contrast inversion of the display
- Language selection
- Diagnostic functions

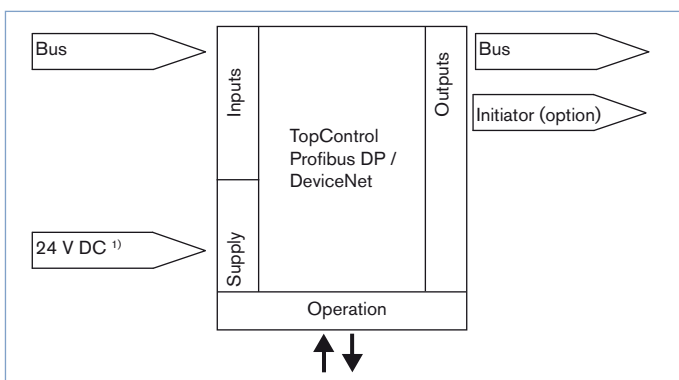
## Schematic diagram of the TopControl Type 8692

### Without fieldbus interface



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

### With Profibus DP / DeviceNet



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

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

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