



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



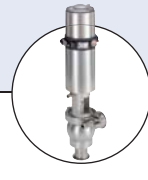
Type 2300

Angle-seat control valve



Type 2103

Diaphragm control valve



Hygienic process 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 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	neutral gases, air, quality classes acc. to ISO 8573-1 Dust concentration: Class 7 (<40µm particle size) Particle density: Class 5 (<10mg/m ³) Pressure condensation point: Class 3 (<-20°C) Oil concentration: Class X (<25mg/m ³)
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 Low air flow rate: Ø Actuator 70 / 90 mm High air flow rate: Ø Actuator 130 mm Actuator series CLASSIC 27XX 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: M12, 8-pins or 4-pins Cable gland: 2xM16x1,5 (cable-Ø10mm) 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 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)

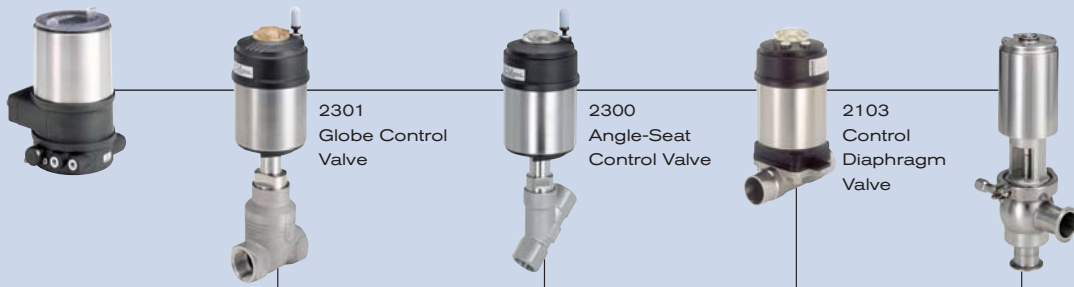
You order two components and receive a complete assembled and certified valve.

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



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***

*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)

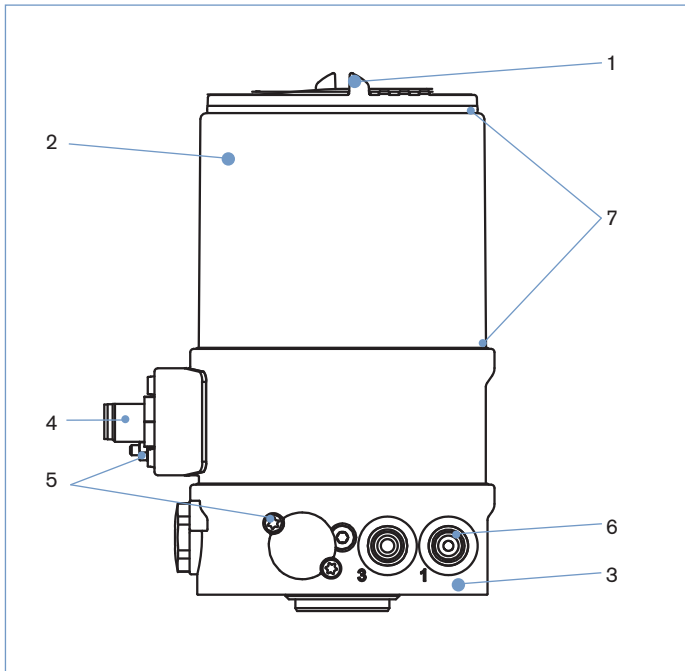
Description	Actuator size	Control function	Item no.
Adapter kit ELEMENT Types 23XX	Ø70 / 90 / 130 mm	universal	679 917
Adapter kit CLASSIC Types 27XX	Ø80 mm	universal	679 931
	Ø100 mm	universal	679 932
	Ø125 mm	A (NO), B (NC)	679 934
	Ø175/225 mm	A (NO), B (NC)	679 935

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

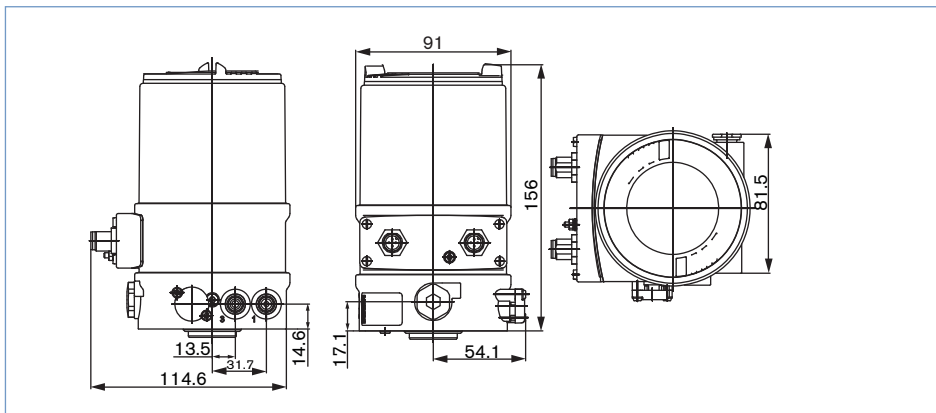
Materials



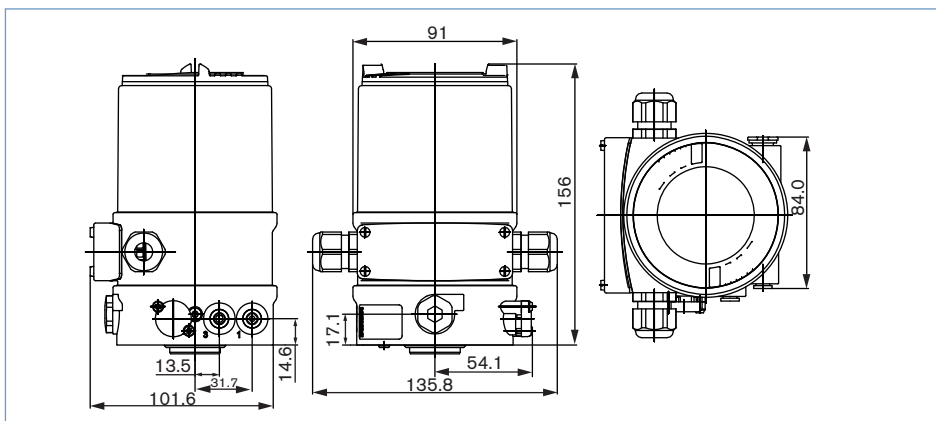
1 Cover	PC
2 Body casing	Stainless steel
3 Basic body	PPS
4 Plug M12	Stainless steel
5 Screws	Stainless steel
6 Push-in connector	POM/stainless steel
Threaded ports G1/8	Stainless steel
7 Sealing	EPDM

Dimensions [mm]

Version connection Multipole

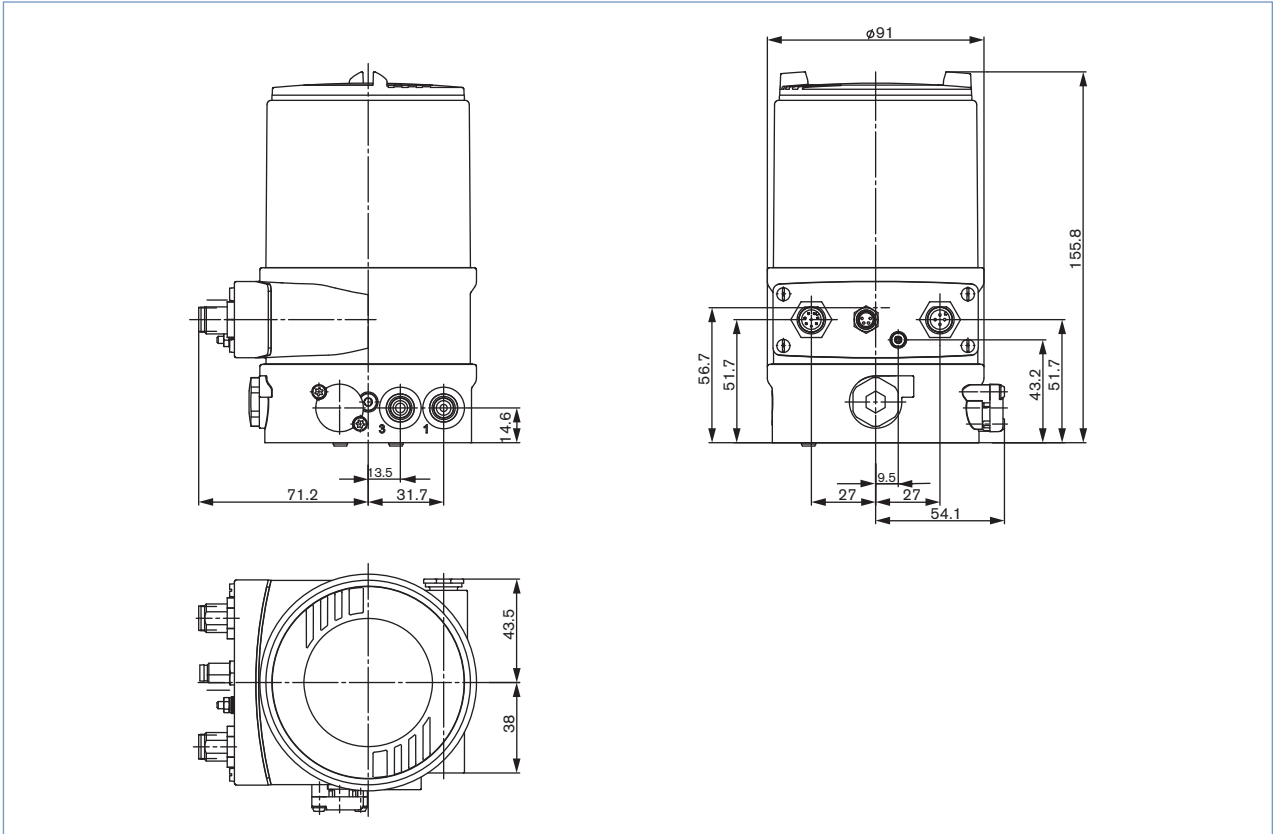


Version connection cable glands

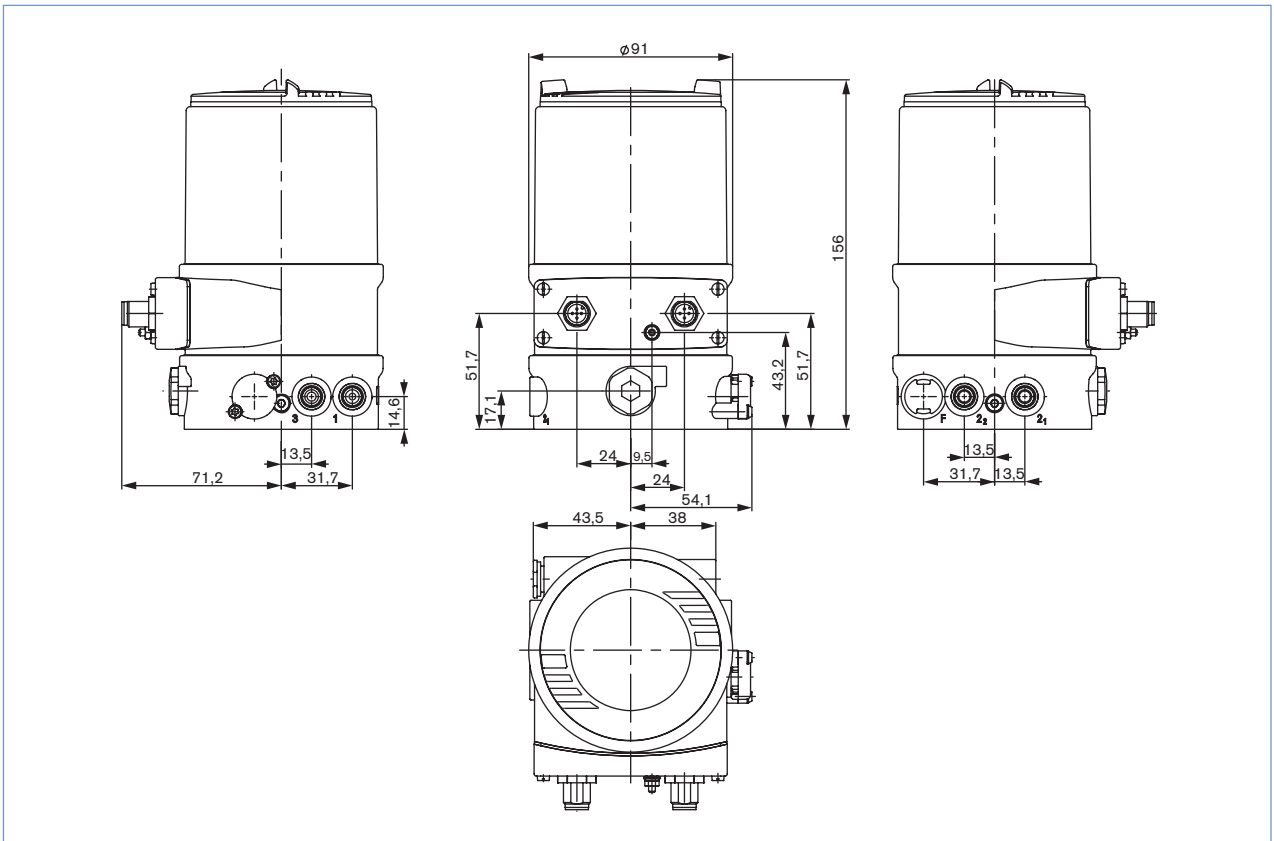


Dimensions [mm]

Mounting on process valve ELEMENT Types 23XX



Mounting on process valve CLASSIC Types 27XX



Mounting on third party hygienic process valves



**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)

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 VDC
3	Operating voltage GND

* with the option analogue feedback or binary output

Connection cable glands

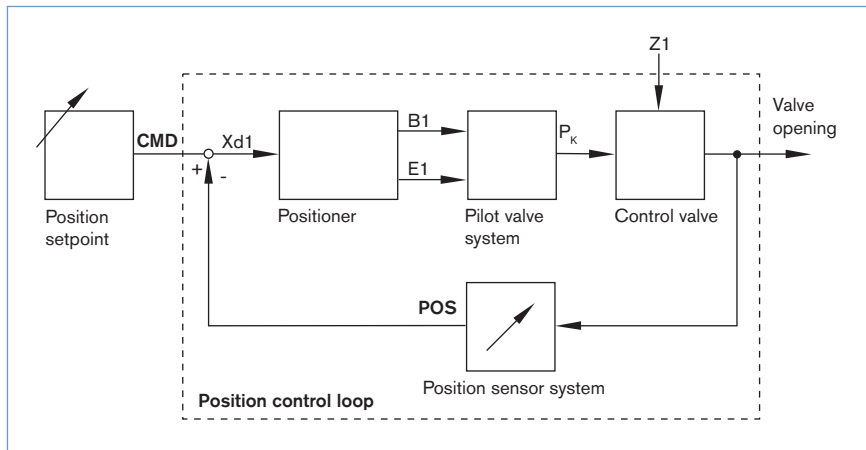
Terminal screws

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



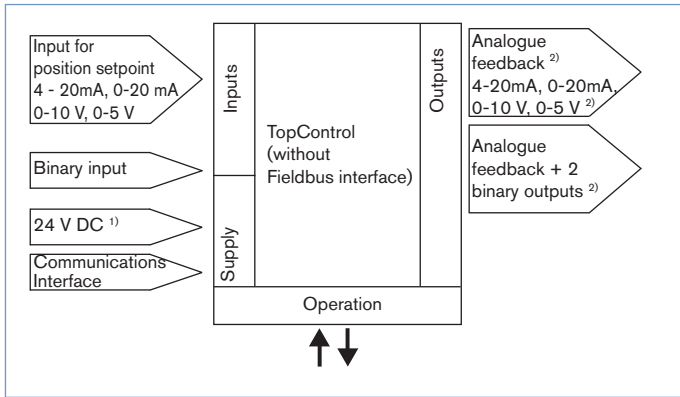
Additional software functions of the TopControl Type 8692 (extract)

- 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

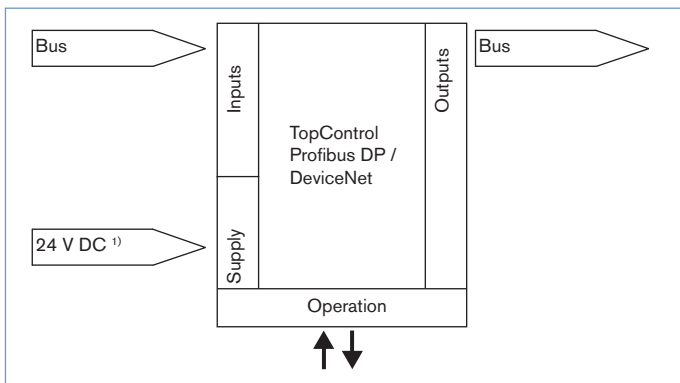
* You will find a more detailed description for every diagnostic function in the operating manual of Type 8792, page 148 - 167

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