



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 DP-V1, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP or bÜS (Bürkert System Bus)

Type 8692 can be combined with...



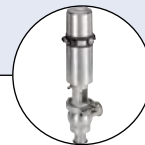
Type 2301
Globe
control valve



Type 2300
Angle-seat
control valve



Type 2103
Diaphragm
control valve



Hygienic
process valve

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 COMMUNICATOR.



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 Cover Sealing
	PPS, stainless steel PC EPDM
Power supply	24 V DC \pm 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 Particle density Pressure condensation point Oil concentration
	Class 7 (< 40 μ m particle size) Class 5 (< 10 mg/m ³) Class 3 (< -20 °C) Class X (< 25 mg/m ³)
Ambient temperature	- 10 to + 55 °C
Pilot air ports	Threaded ports G 1/8 stainless steel or
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 Type 23xx Low air flow rate : \varnothing Actuator 70/90 mm High air flow rate: \varnothing Actuator 130 mm High air flow rate: \varnothing Actuator 175/225 mm
	Actuator series Type 27xx High air flow rate: \varnothing Actuator 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/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 Cable gland
	M12, 8-pins or 4-pins 2xM16 x 1.5 (cable- \varnothing 5-10 mm) with connection terminals for cable cross-sections 0.14- 1.5 mm ²
Bus communication	PROFIBUS DP-V1, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP, bÜS - Bürkert System Bus (based on CANopen)

Technical data, continued

Approvals	 II 3D Ex tc IIIC T135 °C Dc /  II 3G Ex ec IIC T4 Gc certificate; BVS 14 ATEX E 008 X Ex tc IIIC T135 °C Dc / Ex ec IIC T4 Gc certificate; IECEX BVS 14.0009 X cULus certificate; E238179
ATEX	
IECEX	
Ignition protection	II 3D Ex tc IIIC T135 °C Dc II 3G Ex nA IIC T4 Gc
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:

- **Article no.** of the desired TopControl positioner **Type 8692** (see ordering chart on p. 3)
- **Article no.** of the selected control valve **Type 23xx/2103** (see separate datasheets, Type 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
Type KK01 adapter kits for hygienic 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 ¹⁾	Binary inputs	Pilot air ports threaded ports	Article no.		
Actuator series Type 23xx, size Ø 70/90 mm								Standard	ATEX II Kat. 3G/D, IECEx	
Low air capacity single-acting	without fieldbus communication	cable gland				yes	G 1/8	306913	306982	
				yes	yes	yes	G 1/8	307005	306983	
		M12 multipole connector					yes	G 1/8	307012	307095
			yes	yes	yes	yes	G 1/8	307123	307096	
	PROFIBUS DP-V1 DeviceNet EtherNet/IP PROFINET Modbus TCP bÜS - Bürkert System Bus	via Bus					G 1/8	233348	265019	
		via Bus					G 1/8	265168	265017	
		via Bus		yes			G 1/8	306849	306847	
		via Bus		yes			G 1/8	306854	306851	
Low air capacity double-acting	without fieldbus communication	cable gland				yes	G 1/8	306905	306977	
				yes	yes	yes	G 1/8	307006	306978	
		M12 multipole connector					yes	G 1/8	307124	307091
			yes	yes	yes	yes	G 1/8	307125	307092	
	PROFIBUS DP-V1 DeviceNet	via Bus					G 1/8	265172	265004	
		via Bus					G 1/8	265173	265002	
		Actuator series Type 23xx, size Ø 130 mm								
		High air capacity single-acting	without fieldbus communication	Cable gland				yes	G 1/8	306922
	yes				yes	yes	G 1/8	307007	306987	
M12 multipole connector							yes	G 1/8	307084	307099
	yes			yes	yes	yes	G 1/8	307126	307100	
PROFIBUS DP-V1 DeviceNet EtherNet/IP PROFINET Modbus TCP bÜS - Bürkert System Bus	via Bus						G 1/8	233349	265033	
	via Bus						G 1/8	265176	265031	
	via Bus			yes			G 1/8	306850	306848	
	via Bus			yes			G 1/8	306855	306853	
High air capacity single-acting	without fieldbus communication	Cable gland				yes	G 1/8	306925	306988	
				yes	yes	yes	G 1/8	306927	306989	
		M12 multipole connector					yes	G 1/8	307041	307101
			yes	yes	yes	yes	G 1/8	307043	307102	
	PROFIBUS DP-V1 DeviceNet EtherNet/IP PROFINET Modbus TCP bÜS - Bürkert System Bus	via Bus					G 1/8	233350	265041	
		via Bus					G 1/8	239114	265039	
		via Bus		yes			G 1/8	313266	313265	
		via Bus		yes			G 1/8	313269	313268	
via Bus		yes			G 1/8	313271	313270			
via Bus		yes			G 1/8	313274	313272			



¹⁾ see additional software functions parametrisable diagnostic functions / binary outputs on page 11

Note: Standard versions are UL approved

i Further versions on request











> **Additional**
EtherNet/IP, PROFINET, Modbus TCP and bÜS (Bürkert System Bus): double-acting versions with low air capacity

Ordering chart adapter kit (has to be ordered separately)

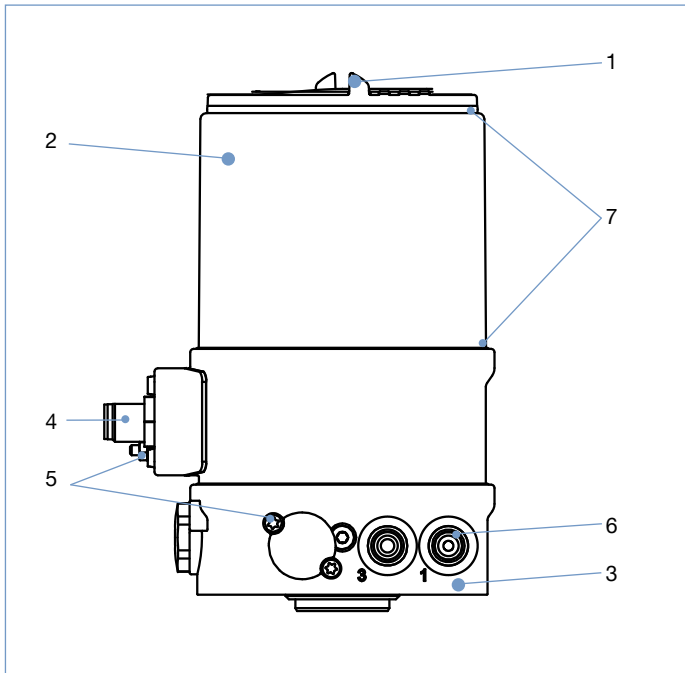
Description	Actuator size	Control function	Article no.
Adapter kit actuator series Type 23xx/2103	Ø 70 / 90 / 130 mm	universal	679917 
Adapter kit actuator series Type 27xx	Ø 175 / 225 mm	A (NO), B (NC)	679935 

For installation kits to 3rd party process valves please see datasheet [Type KK01](#) adapter kits for hygienic process valves or contact your sales office for related drawings or individual engineering support

Ordering chart accessories

Description	Article no.
M12 socket 8 pin with 5 m cable input/output signals	919267 
M12 socket 4 pin with 5 m cable for power supply	918038 
USB büS-Interface Set (büS Stick + connecting cable with M12 connector + connecting cable M12 to micro USB for büS service interface) for connecting to the PC tool Bürkert Communicator (only for device versions with EtherNet/IP, PROFINET, Modbus TCP and büS - Bürkert System Bus)	772551 
büS cable extension M12, length 1 m	772404 
büS cable extension M12, length 3 m	772405 
büS cable extension M12, length 5 m	772406 
büS cable extension M12, length 10 m	772407 
Silencer G 1/8	780779 
Sensor puck (spare part)	682240 
USB interface for serial communication (only for device versions with PROFIBUS / DeviceNet or with fluid flow controller Type 8750)	227093 
Bürkert Communicator Software	http://www.buerkert.de/de/type/8920

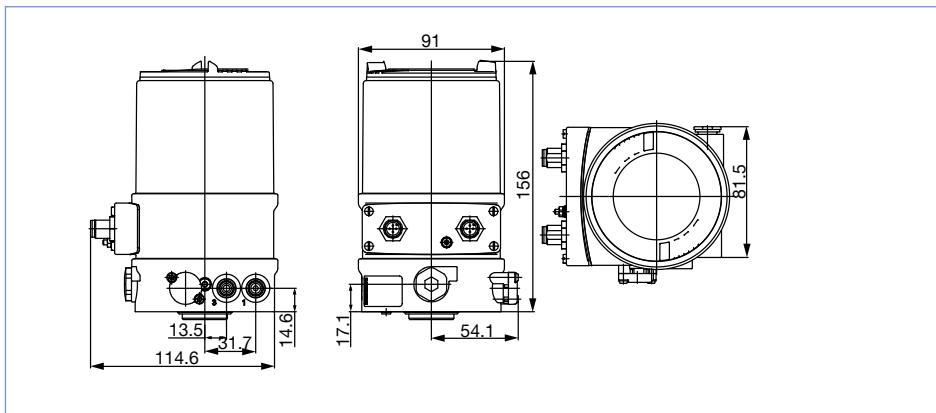
Materials



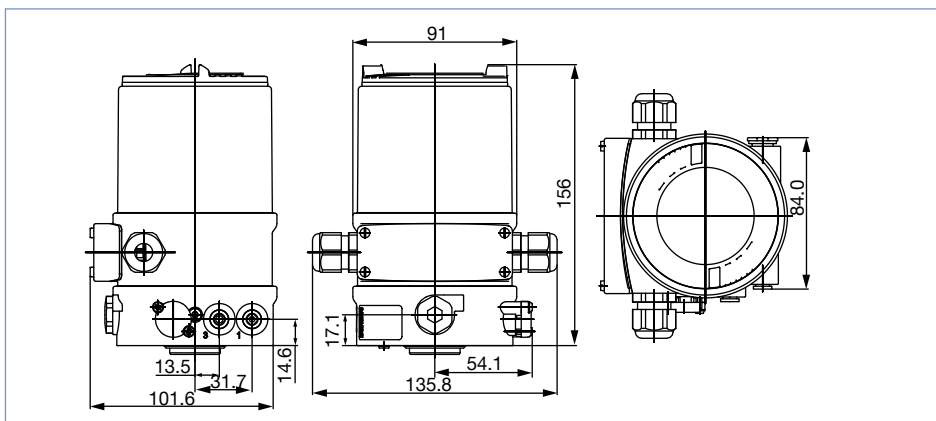
- | | | |
|---|-----------------------------|---------------------|
| 1 | Cover | PC |
| 2 | Body casing | Stainless steel |
| 3 | BASIC body | PPS |
| 4 | Plug M12 | Stainless steel |
| 5 | Screws | Stainless steel |
| 6 | Push-in connector | POM/stainless steel |
| | Threaded ports G 1/8 | Stainless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

Dimensions [mm]

Version connection Multipole

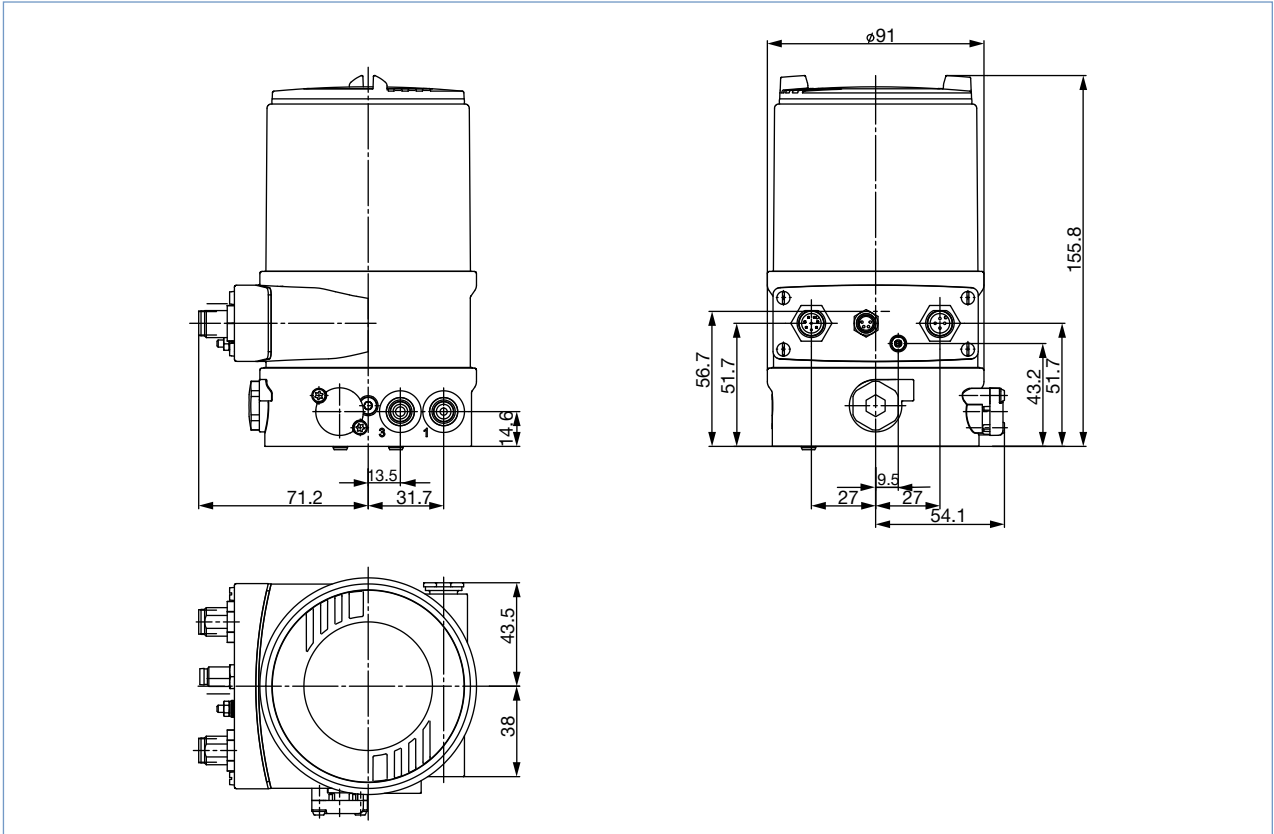


Version connection cable glands

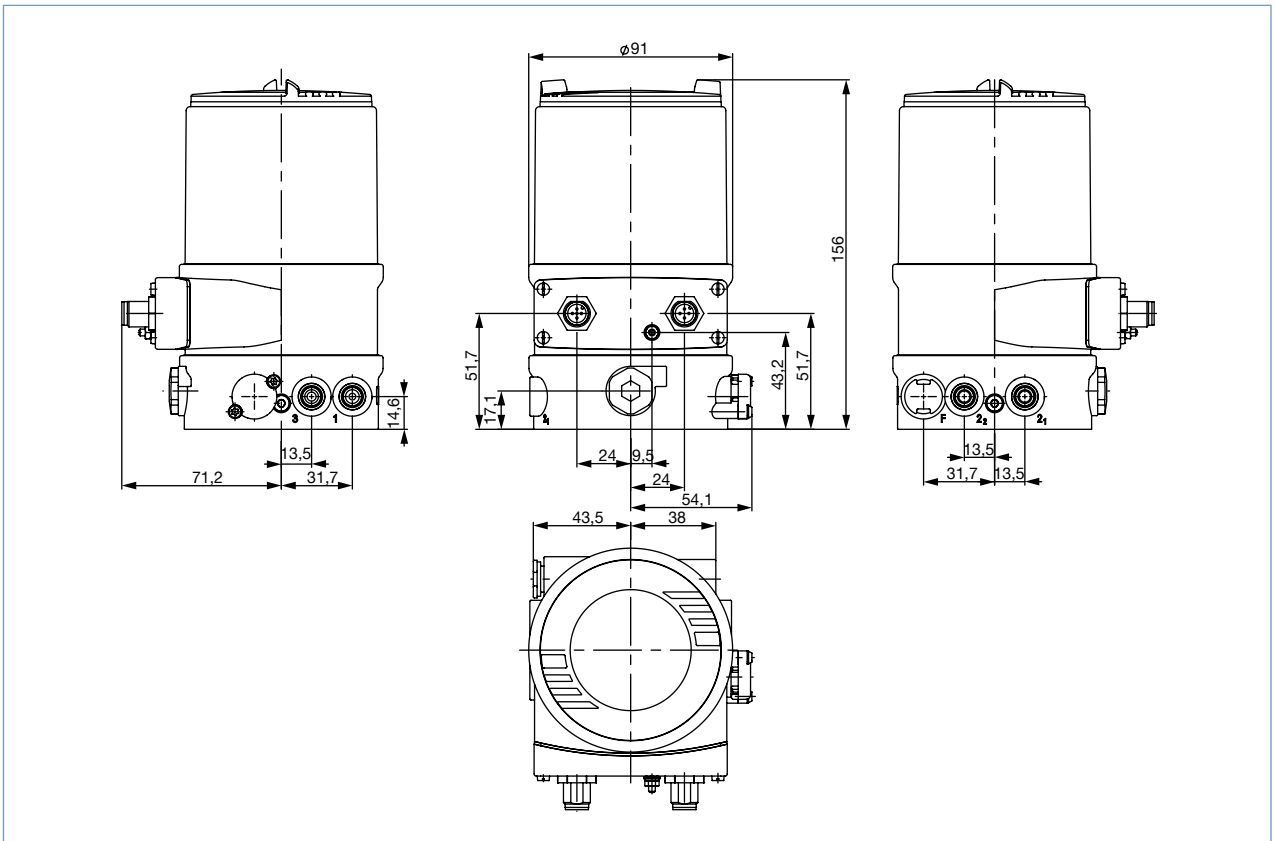


Dimensions [mm]

Mounting on control valves of actuator series Type 23xx, actuator size 70/90/130 mm



Mounting on control valves of actuator series Type 27xx , actuator size 175/225 mm



Mounting on third party hygienic process valves



More
info.

Customised attachment to 3rd party actuators*

*: please see datasheet Type KK01
Adapter kits for hygienic process
valves or contact your sales office
for related drawings or individual
engineering support]

Connection options

Multipole connection

Circular connector M12 8-pin (setpoint)

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

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

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

Circular connector M12 4-pin (operating voltage)

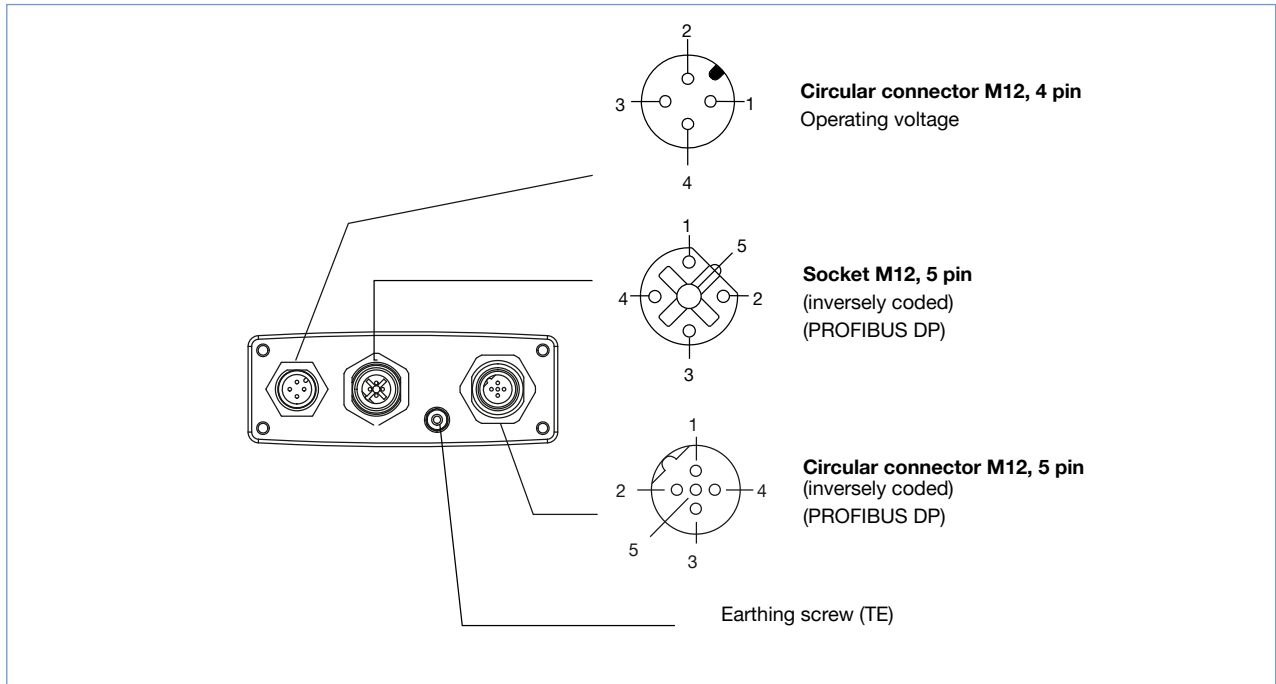
Pin	Configuration
1	Operating voltages + 24 V DC
3	Operating voltage GND

* with the option analogue feedback or binary output

Cable glands connection

Clamp	Configuration
1	Analogue position feedback GND
2	Analogue position feedback +
3	Digital output GND
4	Digital output 2
5	Digital output 1
6	Digital input +
7	Setpoint GND
8	Setpoint +
9	not allocated
10	not allocated
11	not allocated
12	not allocated
13	not allocated
14	Digital input GND
15	Operating voltage GND
16	Operating voltage +24 V

PROFIBUS DP connection



Socket / Circular connector M12, 5 pin - Fieldbus connection

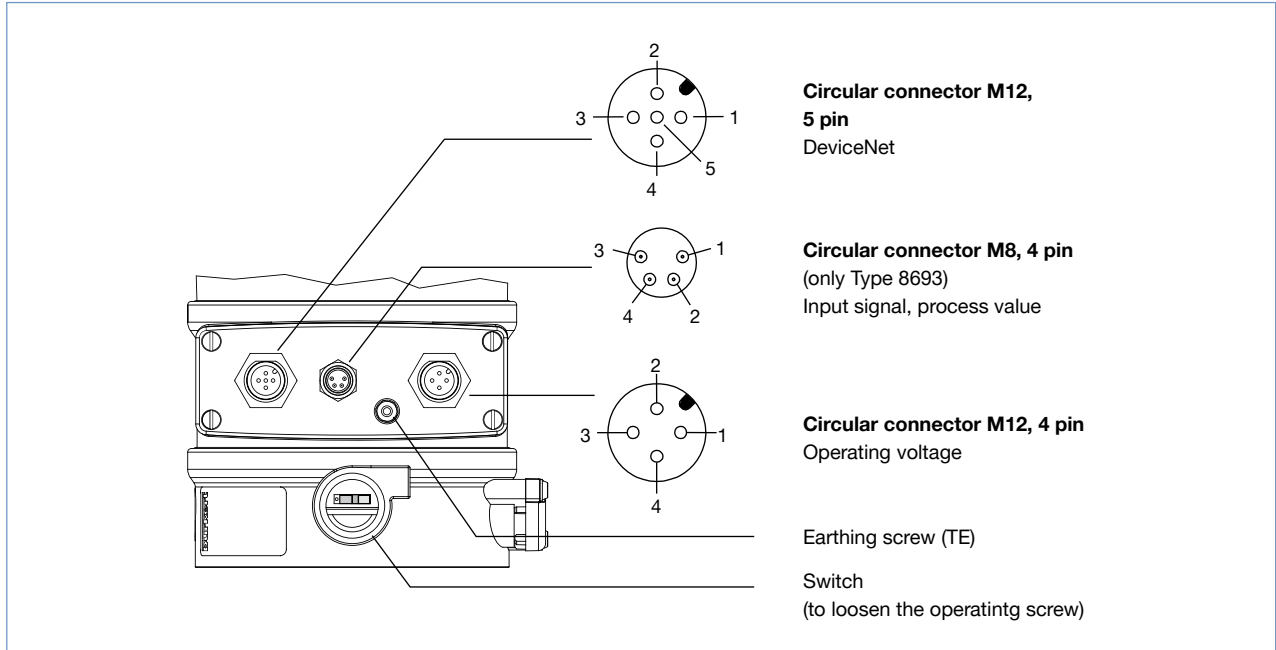
Pin	Configuration
1	VP+5
2	RxD/TxD-N
3	DGND
4	RxD/TxD-P
5	not used
Thread	Shielding / Earthing

Circular connector M12, 4 pin - Operating voltage

Pin	Wire colour*	Configuration
1	brown	+24 V
3	blue	GND

* The indicated wire colors refer to the optional connector cable with ID no. 918 038.

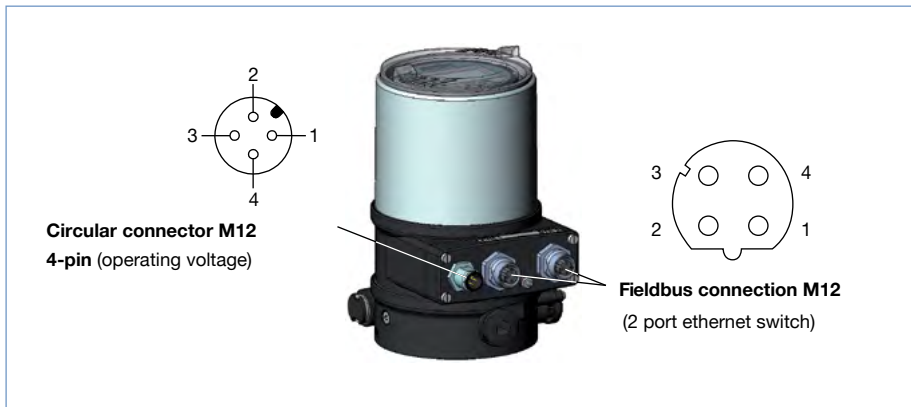
DeviceNet connection



Circular connector M12, 5 pin - Fieldbus connection

Pin	Configuration	Colour	Connector diagram
1	Shield	not used	
2	V+	not used	
3	V-	not used	
4	CAN H	white	
5	CAN L	blue	

EtherNet/IP, PROFINET, Modbus TCP connection



Fieldbus connection M12 D-codied

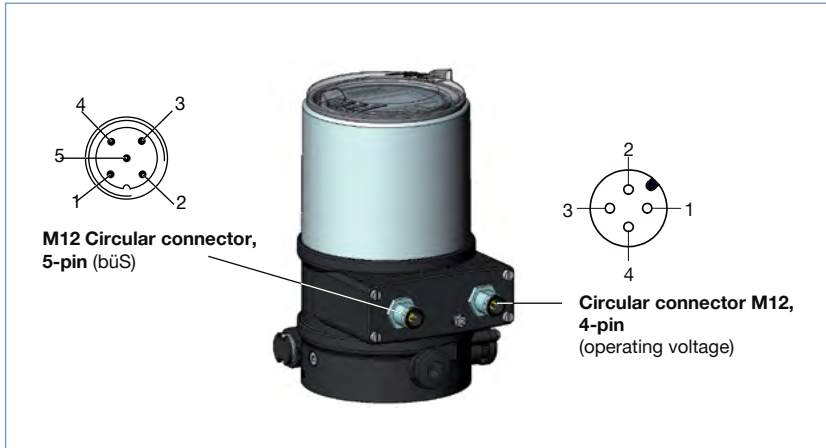
Pin	Configuration	Connector diagram
1	Transmit +	
2	Receive +	
3	Transmit -	
4	Receive -	

Circular connector M12, 4 pin - operating voltage

Pin	Wire colour*	Configuration
1	brown	Operating voltage +24 V DC
3	blue	Operating voltage GND

* The indicated colors refer to the accessory connector cable (918 038)

būS - Bürkert System Bus connection



Circular connector M12 x 1, 5 pin - būS connection

Pin	Wire colour	Configuration
1	CAN-Label /Shielding	CAN-Label /Shielding
2	not used	
3	black	GND / CAN_GND
4	white	CAN_H
5	blue	CAN_L

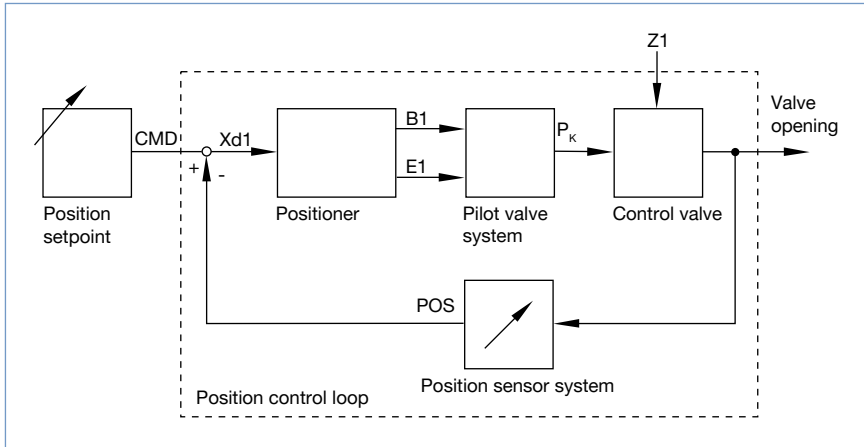
Circular connector M12, 4 pin - Operating voltage

Pin	Wire colour*	Configuration
1	brown	Operating voltage +24 V DC
2	not used	
3	blue	Operating voltage GND

* The indicated colors refer to the accessory connector cable (918 038)

Signal flow diagram

Position control loop



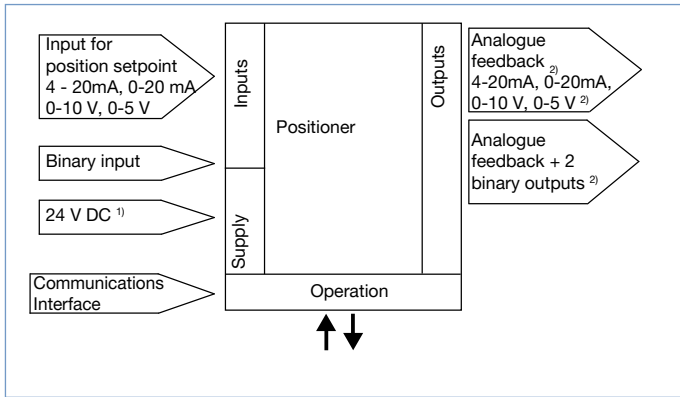
Additional software functions of the TopControl Type 8692 (extract)

- 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

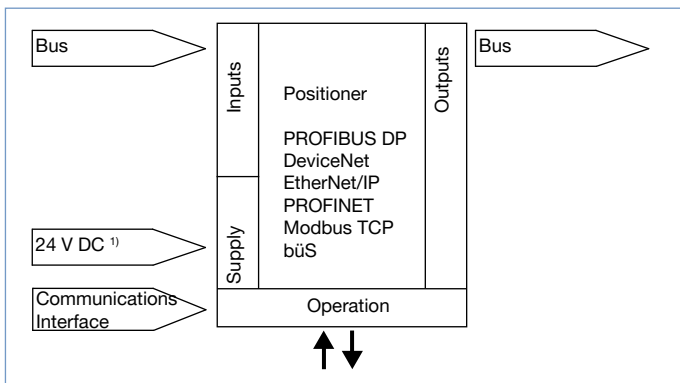
* You will find a more detailed description for every diagnostic function in the operating manual.

Schematic diagram of the TopControl Type 8692

Without fieldbus interface



With PROFIBUS DP, DeviceNet, EtherNet/IP, PROFINET, Modbus TCP and büS - Bürkert System Bus



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