



Digital electropneumatic Positioner for the integrated mounting on process control valves

- Compact stainless steel design
- Integrated valve position registration
- Easy start-up
- Binary input
- Analogue feedback (option)
- Internal control air channel

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

Control diaphragm
valve, actuator
ø 50 mm



**Customised
adaption**

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%
Ripple	10%, no technical direct current!
Setpoint setting	4 to 20 mA
Output resistance	180 Ω
Control medium	neutral gases, air DIN ISO 8573-1 Dust concentration Class 5 (<40µm particle size) Particle density Class 5 (<10mg/m ³) Pressure condensation point Class 3 (<-20°C) Oil concentration Class 5 (<25mg/m ³)
Ambient temperature	0 to +55°C
Pilot air ports	Push-in connector (external ø 6 mm or 1/4") or threaded ports G1/8
Supply pressure	0 to 7 bar ¹⁾
Actuator system	for single-acting actuators ø Actuator 50 mm
Position detection module	Contact-free, wear-free
Stroke range valve spindle	3 to 28 mm (3 to 45 mm on request)
Installation	as required, preferably with actuator in upright position
Protection class	IP 65/67 according to EN 60529 (NEMA4x in preparation)
Power consumption	< 3.5 W
Electrical connection	Multipole connection M12 (8-pins), stainless steel
Protection class	3 according to VDE 0580
Type of protection	II 3 G nA II B T4 II 3 D tD A22 T135°
Conformity	CE acc. to EMV2004/108/EG
Options	Analogue position feedback, 4-20mA
Approval	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 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



2301
Globe Control
Valve
Actuator
 \varnothing 50 mm



2300
Angle-Seat
Control Valve
Actuator
 \varnothing 50 mm



2103
Control
Diaphragm
Valve
Actuator
 \varnothing 50 mm

**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**



**Valve system
Continuous ELEMENT
Type 8802-DF-N
2103 + 8696**

Ordering chart Type 8696 (other versions on request)

Valve function	Electrical connection	Analogue feedback	Binary input	Pilot air ports	Item no.
Actuator size ø 50 mm					
single-acting	Multipole	No	Yes	Push-in connector external ø 6 mm or 1/4"	185 118
		4 - 20 mA	Yes	Push-in connector external ø 6 mm or 1/4"	185 119
		No	Yes	Threaded ports G1/8	185 120
		4 - 20 mA	Yes	Threaded ports G1/9	185 121

i Further versions on request

 **Approvals**
CSA

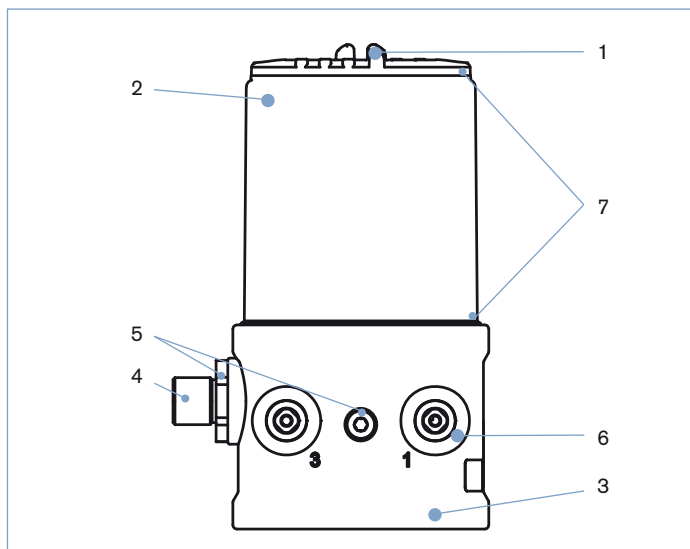
Ordering chart adapter kit (has to be ordered separately)

Description	Actuator size	Control function	Item no.
Adapter kit for Type 23xx / 2103	ø 50 mm	NC / NO (A / B)	673 765

Ordering chart accessories

Description	Item no.
M12 socket, 8-pins, 2 m assembled cable	919 061
Silencer G1/8	780 779
Silencer, push-in connector	902 662

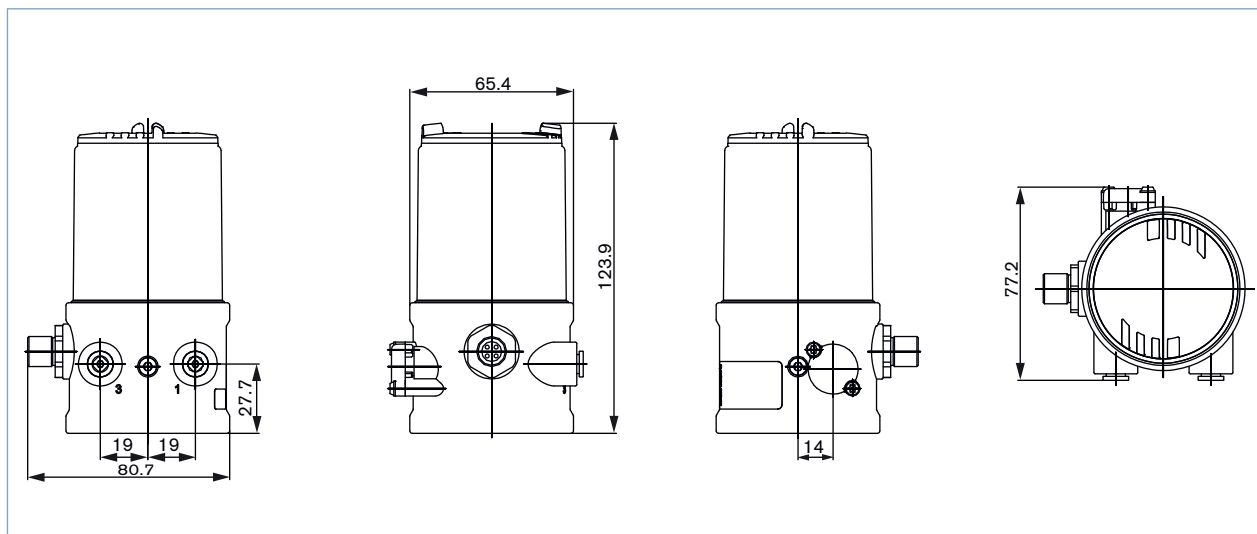
Materials



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

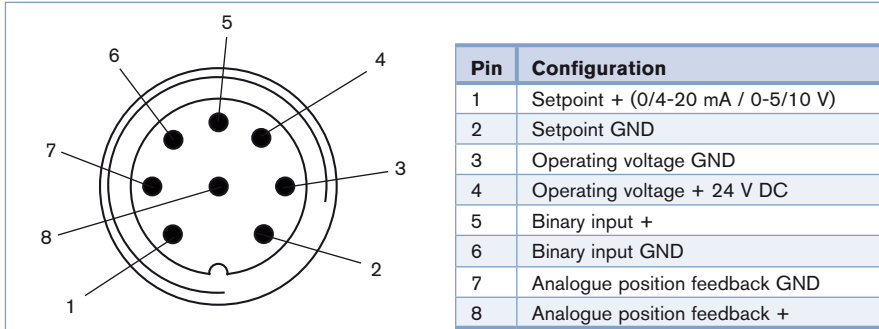
Dimensions [mm]

Mounting on process valve Type 23xx / 2103



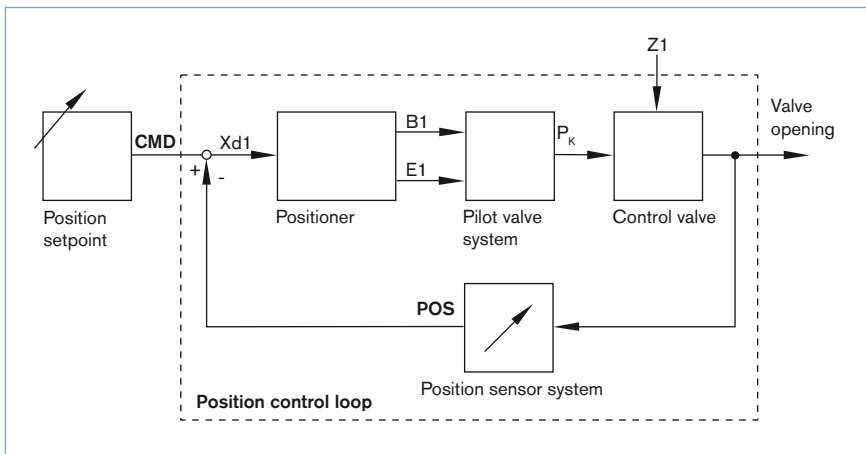
Connection Multipole

Circular connector M12 - 8-pins



Signal flow diagram

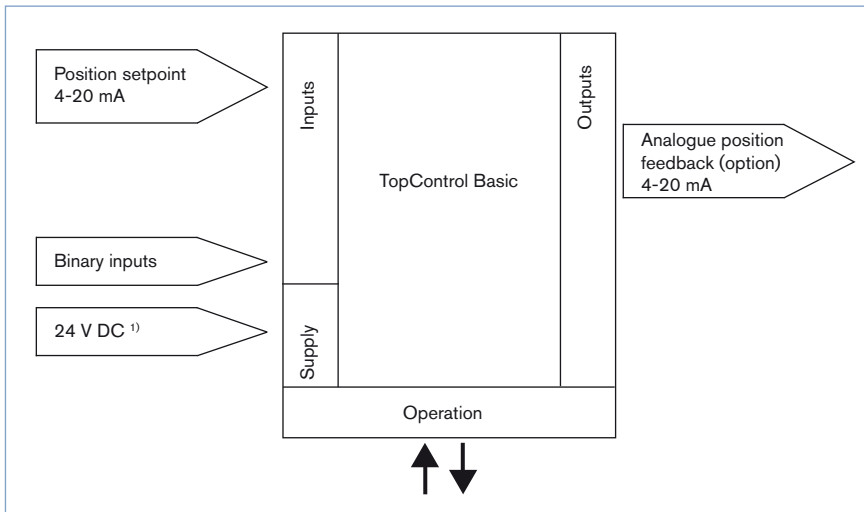
Position control loop



TopControl Basic functions

- Automatic start of the control system
- Linear or progressive characteristic curves selection (DIP-switch); free programmable over Software interface
- Close tight function
- Reversal of effective direction of the setpoint signal
- Switching manual / automatic operation
- Binary input (controller enable)

Schematic diagram of the TopControl Basic



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

To find your nearest Bürkert facility, click on the orange box → www.burkert.com