



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 8694 can be combined with...



Type 2301
Globe control valve

Type 2300
Angle-seat control valve

Type 2103
Control diaphragm valve

Type 2702
Angle-seat control valve

Customised adaption

Compact positioner for integrated mounting on pneumatically operated process valves. Remote setpoint adjustment via a 4-20 mA signal or through AS-Interface.

A contact-free analog position 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

Additional parametrisation options are possible through DTM devices.

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	PPS, stainless steel
Body	PC
Cover	EPDM
Sealing	
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/m³)
Pressure condensation point	Class 3 (<-20°C)
Oil concentration	Class 5 (<25mg/m³)
Ambient temperature	0 to +60°C
Pilot air ports	Push-in connector (external Ø 6 mm or 1/4") or threaded ports G1/8
Supply pressure	Low air flow rate 0 to 7 bar ¹⁾ High air flow rate 3 to 7 bar (in preparation)
Air input filter	Exchangeable (mesh aperture~0.1mm)
Actuator system	
Actuator series 23XX	Low air flow rate: Ø Actuator 70 / 90 mm
Actuator series 27XX	Low air flow rate: Ø Actuator 80 / 100 mm High air flow rate: Ø Actuator 125 mm (in preparation)
Position detection module	Contact-free, wear-free
Stroke range valve spindle	3 to 28 mm (47 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
Cable gland (in preparation)	1xM16x1.5 (cable-Ø5-10mm), terminal screws (1.5 mm²)
Protection class	3 according to VDE 0580
Conformity	CE acc. to EMV2004/108/EG
Options	Analogue position feedback, 4-20mA
Communication	AS-Interface (option, 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 8694** and a process valve **Type 23XX or 27XX**. The following information is necessary for the selection of a complete control valve:

- **Item no.** of the Positioner TopControl Basic **Type 8694** without process valve, see ordering chart on p. 3
- **Item no.** of the desired process valve **Type 23XX or 27XX** (see separate datasheets, e.g. 2300, 2301 or 2702, 2712, 2730)
- **Note:** TopControl-Control valve system

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

8694 Positioner TopControl Basic

Required process valve, example



More info.

2301
Globe control
valve



More info.

2300
Angle-seat
control valve



More info.

2702
Angle-seat
control valve

**Complete control valve
with required body and
port connection**



**Valve system
Continuous ELEMENT
Type 8802-GD-L
2301 + 8694**



**Valve system
Continuous ELEMENT
Type 8802-YG-L
2300 + 8694**



**Valve system
Continuous Classic
Type 8802-YC-L
2702 + 8694**

Ordering chart Type 8694 (other versions on request)

Valve function	Supply voltage	Electrical connection	Analogue feedback	Pilot air ports	Item no.
Actuator series 23XX					
Actuator size Ø 70 and 90 mm					
Low air flow rate	24 V DC	Multipole M12	No	Push-in connector external Ø 6 mm or 1/4"	201 709
			4 - 20 mA	Push-in connector external Ø 6 mm or 1/4"	201 711
			No	Threaded ports G1/8	201 713
			4 - 20 mA	Threaded ports G1/8	201 715
Actuator series 27XX					
Actuator size Ø 80 and 100 mm					
Low air flow rate	24 V DC	Multipole M12	No	Push-in connector external Ø 6 mm or 1/4"	185 130
			4 - 20 mA	Push-in connector external Ø 6 mm or 1/4"	185 132
			No	Threaded ports G1/8	185 134
			4 - 20 mA	Threaded ports G1/8	185 137
Actuator size Ø 125 mm					
High air flow rate	24 V DC	Multipole M12	No	Push-in connector external Ø 6 mm or 1/4"	■
			4 - 20 mA	Push-in connector external Ø 6 mm or 1/4"	■
			No	Threaded ports G1/8	■
			4 - 20 mA	Threaded ports G1/8	■

■ in preparation

i Further versions on request

Approvals
CSA

Ordering chart adapter kit (has to be ordered separately)

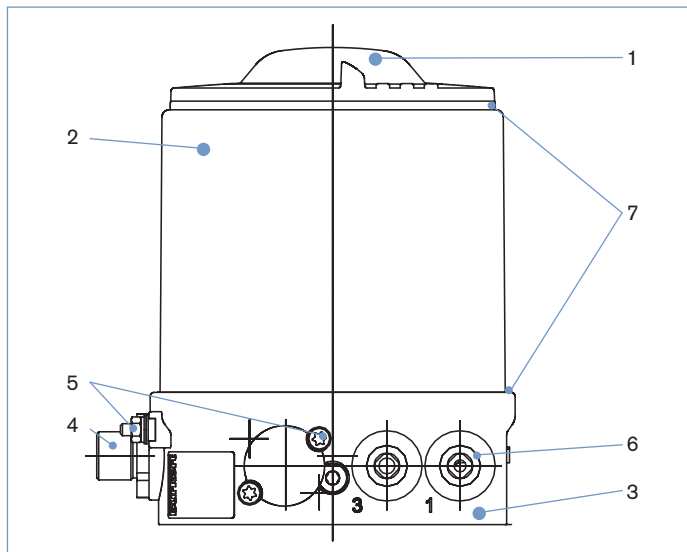
Description	Actuator size	Control function	Item no.
Adapter kit for Type 23xx	Ø 70 / 90 mm	Universal	665 721
Adapter kit for Type 27xx	Ø 80 mm	Universal	675 703
	Ø 100 mm	Universal	675 705
	Ø 125 mm	Universal	■

■ in preparation

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
Interface for serial communication	659 467

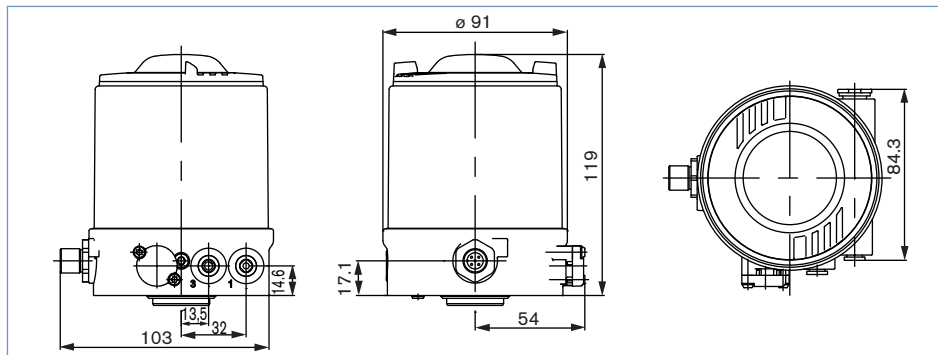
Materials



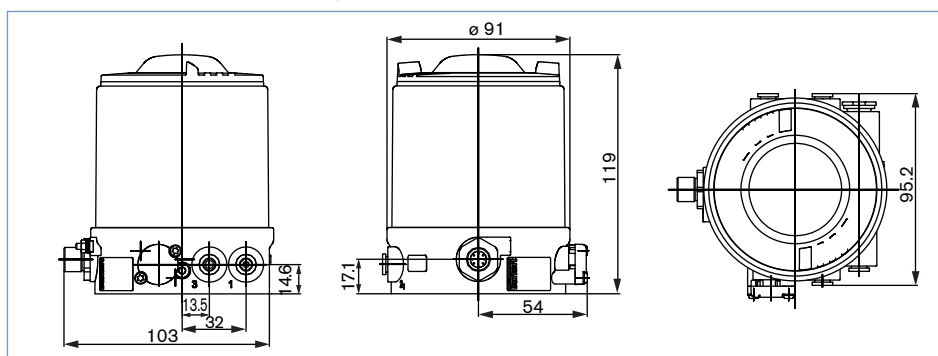
1 Cover	PC
2 Body casing	Stainless steel
3 Basic body	PPS
4 Plug M12	Stainless steel
5 Screws	Stainless steel
6 Push-in connector	POM/stainless steel
Threaded ports G1/8	Stainless steel
7 Sealing	EPDM

Dimensions [mm]

Mounting on process valve Type 23xx



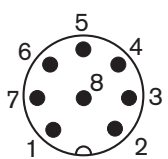
Mounting on process valve Type 27xx



Connection options

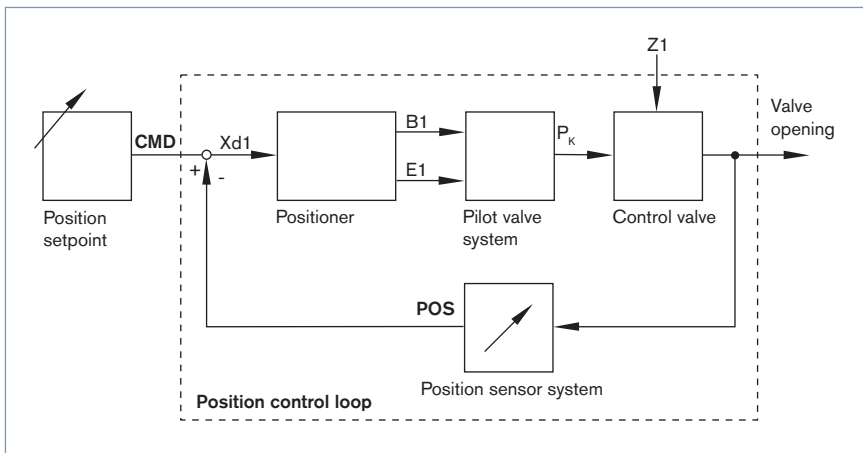
Connection Multipole

Pin	Configuration
1	Setpoint + (0/4-20 mA / 0-5/10 V)
2	Setpoint GND
8	Analogue position feedback +
7	Analogue position feedback GND
5	Binary input +
4	Operating voltage + 24 V DC
3	Operating voltage GND



Signal flow diagram

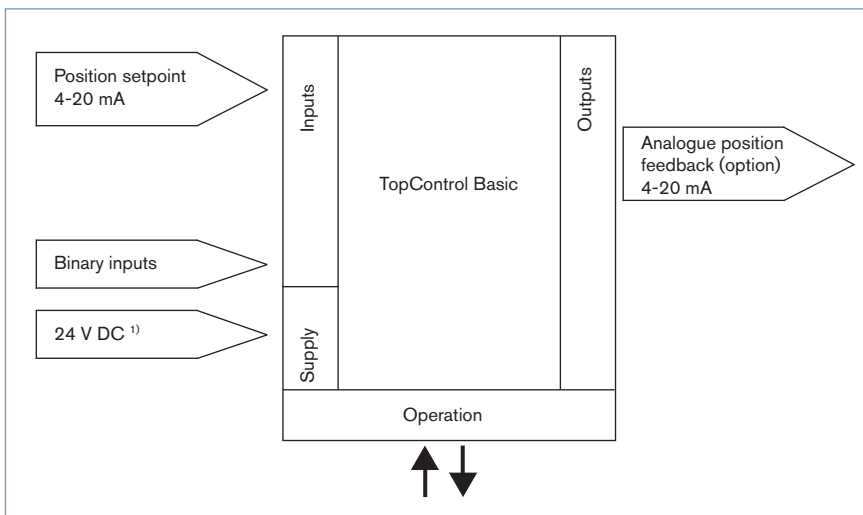
Position control loop



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)
- Parametrisation of the device through DTM

Schematic diagram of the TopControl Basic



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

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