






Digital electropneumatic Positioner SideControl

- Compact and robust design
- Easy to start using Tune function
- Integrated diagnostic functions for valve monitoring
- Dynamic positioning system with no air consumption in controlled state
- EtherNet/IP, PROFINET, Modbus TCP, PROFIBUS DP-V1 or Bürkert system bus (büS)

Product variants described in the data sheet may differ from the product presentation and description.

Can be combined with

	<p>Control valve system Diaphragm linear actuator</p>
	<p>Control valve system Rotary actuator</p>
	<p>Control valve system Rotary actuator with remote positioner</p>
	<p>Control valve system Control valve with remote positioner</p>
	<p>Control valve system Hygienic process control valve with remote positioner</p>

Type description

The robust and compact positioner is designed to standardisation acc. to IEC 60534-6-1 or VDI/VDE 3845 (IEC 60534-6-2) for assembly with linear and rotary actuators. In addition, the remote version with the displacement position sensor can be combined with Bürkert process control valves.

The digital electropneumatic positioner SideControl can be operated with the usual current and voltage standard signals and can also be equipped with the fieldbus interface. The Positioner is equipped with additional diagnostic functions to monitor the state of the valve. Through status signals, valve diagnostic messages are transmitted according to NAMUR NE 107 recommendations and recorded as history. With the diagnosis, the operating conditions of the control valve can be monitored. This allows planned maintenance and optimises plant availability.

Operation occurs via the external operation and display module with a backlit graphical display. The user operation is very simple and clear, identical to the Bürkert positioner or process controller TopControl, Type 8692/8693.

The pilot valve system can be used equally for single and double-acting actuators. It is characterised by a defined safety feature in case of failure of the electrical or pneumatic power supply and possesses an enormous air capacity range with pressure supply up to 7 bar.

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1. General technical data

1.1. Positioner SideControl Type 8792

Product properties	
Dimensions	Detailed information can be found in chapter "2. Dimensions" on page 7.
Material	
Housing	Aluminium plastic-coated
Seals	EPDM, NBR, FKM
Operation	
Display	Graphic display with backlight and intuitive menu navigation
Operating keys	Membrane keypad with 4 keys
Service interface	Connected to PC via USB connection
Configuration tool	Bürkert Communicator PACTware (only for device versions with PROFIBUS)
Commissioning	
Initialization positioner	Automatic by X.TUNE function (automatic adjustment of the positioner)
Status display	
Optical position indicator (mechanical)	Integrated (for NAMUR Version)
Communication	
Fieldbus	EtherNet/IP, PROFINET, Modbus TCP, PROFIBUS DP-V1
Digital	Bürkert system bus (büS) - based on CANopen
Performance data	
Position sensor	
Integrated position sensor (NAMUR)	Conductive plastic rotary potentiometer
External remote position sensor	Linear or rotative
Measuring range for rotary actuator	
PROFIBUS	Rotation angle: 30°...150°
EtherNet/IP, PROFINET, Modbus TCP and büS	Rotation angle: 30°...180°
Stroke range for linear actuator	3...130 mm, depending on the lever of the attachment kit
Electrical data	
Operating voltage	24 V DC ± 10 %
Residual ripple	Max. 10 %
Power consumption	< 5 W
Protection class	III acc. to DIN EN 61140
Input /Output	
Digital input	1 binary input, galvanically isolated, 0...5 V = log "0", 10...30 V = log "1"
Digital output	2 binary output (optional), galvanically isolated
Current limitation pro digital output	100 mA, output will be synchronised when overloaded
Analogue output	1 output (optional) 0/4...20 mA, 0...5/10 V
Input data setpoint and actual value	
Setpoint signal	
Setpoint setting	0/4...20 mA 0...5/10 V
Input resistance	0/4...20 mA: 70 Ω 0...5/10 V: 20 kΩ
Electrical connection	
Multipole version	Screw terminals: M8, M12 acc. to device version (see connection description)
Cable gland version	2x M20 × 1.5 (cable Ø6...12 mm) on screw terminals (0.14...1.5 mm ²)
Remote version	1x M12 × 1.5 (cable Ø3...6.5 mm)

Pneumatic data	
Control medium	Neutral gases, air, quality class acc. to ISO 8573-1
Dust content	Class 7 (< 40 µm particle size)
Particle density	Class 5 (< 10 mg/m ³)
Pressure dew point	Class 3 (< -20 °C)
Oil content	Class X (< 25 mg/ m ³)
Air supply filter	Exchangeable
Mesh size	~0.1 mm
Supply pressure	1.4...7 bar ^{1.) 2.)}
Pilot air port	Threaded port G ¼
Positioning system	
Universal air capacity	
Single and double acting	50 l _N /min (at 1.4 bar ^{2.)}) for aeration and ventilation 150 l _N /min (at 6 bar ^{2.)}) for aeration and ventilation Q _{Nn} = 100 l _N /min
Low air capacity	
Single acting	Q _{Nn} = 7 l _N /min (Q _{Nn} acc. to definition at pressure drop from 7 to 6 bar absolute)
Approvals and certificates	
Conformity	EMV directive 2014/30/EU
UL	CAN/CSA-C22 2 no. 139 UL 429
CSA	Class 3221 82-VALVES - actuator - Cert. acc. to US Standards Class 3221 02-VALVES - actuator
ATEX	II 3G Ex ec ic IIC T4 Gc II 3D Ex tc IIIC T135 °C Dc Certificate: BVS 16 ATEX E 118 X
IECEX	Ex ec ic IIC T4 Gc Ex tc IIIC T135 °C Dc Certificate: IECEX BVS 16.0091 X
CCC (China Compulsory Certificate)	For devices with Ex approval
Environment and installation	
Operating conditions	
Ambient temperature	
With ATEX-/IECEX approval	0...+60 °C
Without Ex approval	-10...+60 °C
Degree of protection	IP65/IP67 acc. to EN 60529, 4X acc. to NEMA 250 Standard
Operating altitude	Up to 2000 m above sea level
Installation and mechanical data	
Mounting variant	NAMUR acc. to IEC 60534-6-1 resp. VDI/VDE 3845 (IEC 60534-6-2), remote
Installation position	As required, display above or sideways
Valve actuator (type, size)	Rotary and linear actuators acc. to NAMUR, ELEMENT Type 2301, 2300 (Actuator size Ø70/90/130 mm) and CLASSIC (Actuator size Ø175/225 mm) in combination with remote version
Adapter kit	Detailed information can be found in chapter “6.4. Ordering chart Accessories” on page 26

1.) The supply pressure has to be 0.5...1 bar above the minimum required pilot pressure for the valve actuator.

2.) Pressure specifications: Overpressure with respect to atmospheric pressure

1.2. Linear remote position sensor (ELEMENT Type 8798)

Note:

When mounting the remote positioner away from the actuator, the length of the pneumatic control lines influences the dynamics and accuracy of the position control loop. The length of the control air lines should therefore be as short as possible.

Product properties	
Actual position signal	Digital (RS485)
Detection range of the sensor	3...45 mm (stroke range of valve spindle)
Electrical data	
Operating voltage	24 V DC \pm 10 %
Protection class	III acc. to DIN EN 61140
Power consumption	<0.3 W
Electrical connection	
Cable gland (cable length)	1x M16x 1.5 (Cable \varnothing 5...10 mm) on screw terminals (0.14...1.5 mm ²)
Connection cable	10 m
Approvals and Certificates	
Degree of protection	IP65 and IP67 acc. to EN 60529, 4X acc. to NEMA 250 Standard
Ignition protection	II 3G Ex ec IIC T4 Gc II 3D Ex tc IIIC T135 °C Dc
Conformity	EMC directive 2014/30/EU
Approvals	cULus certificate no. 238179
CCC (China Compulsory Certificate)	For devices with Ex approval
Environment and installation	
Ambient temperature	-25...+80 °C

1.3. Rotative remote position sensor (NAMUR)

Note:

When mounting the remote positioner away from the actuator, the length of the pneumatic control lines influences the dynamics and accuracy of the position control loop. The length of the control air lines should therefore be as short as possible.

Product properties	
Stroke range when mounted to linear actuator	3...130 mm, depending on the lever of the attachment kit
Actual position signal	Digital (RS485)
Measuring range	Rotation angle 30°...180°
Electrical data	
Operating voltage	10...30 V DC
Protection class	III acc. to DIN EN 61140
Power consumption	<0.8 W
Electrical connection	2 m round cable (shielded)
Approvals and certificates	
Protection class	III acc. to DIN EN 61140
Degree of protection	IP65 acc. to EN 60529
Conformity	EMC directive 2014/30/EU
Approval	UL (cULus) certificate no. E226909
Environment and installation	
Ambient temperature	-25...+80 °C

1.4. Position feedback with proximity switches (accessories for retrofitting)

Note:

The position feedback has two proximity switches which are independently adjustable via switch lugs.

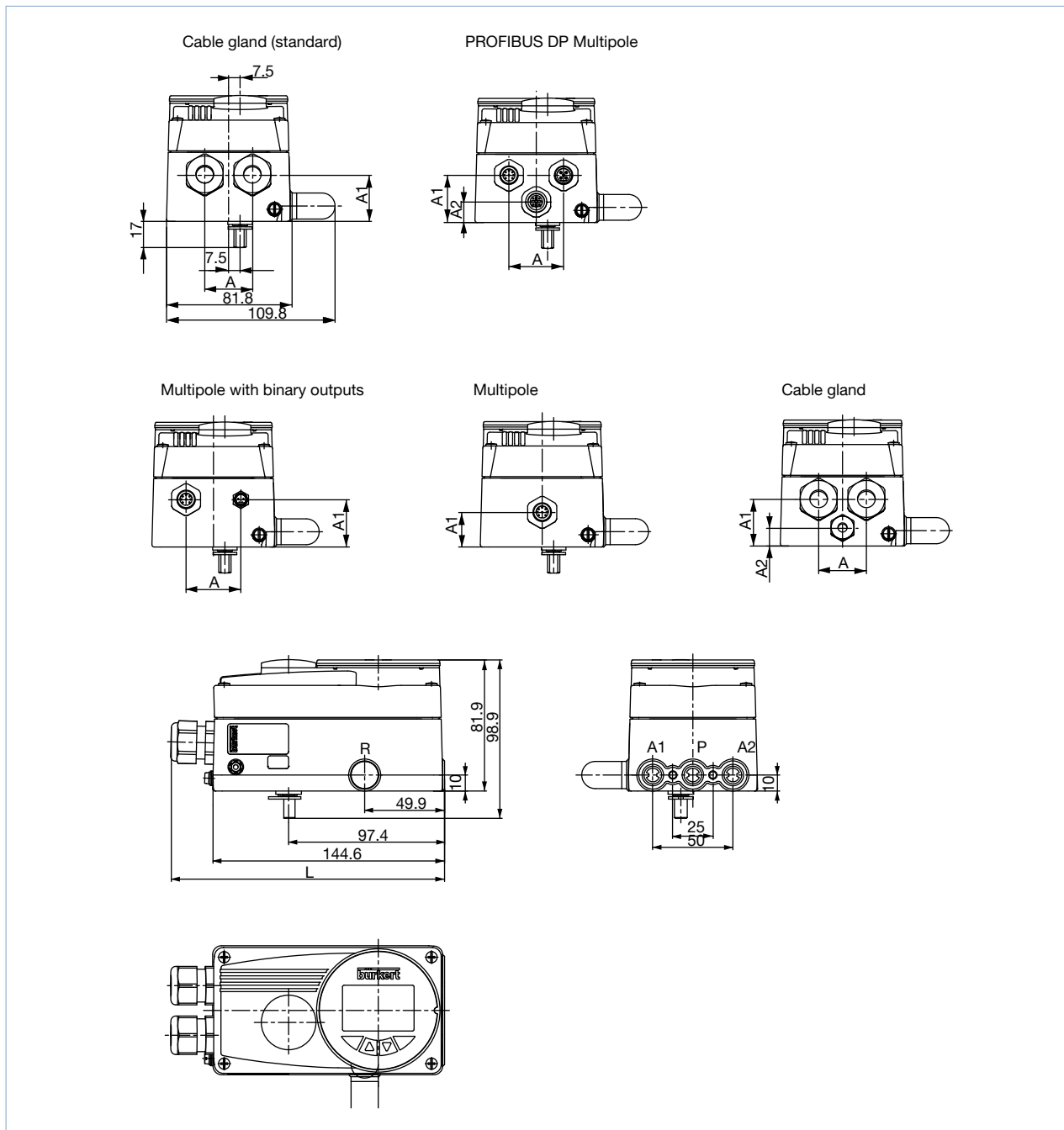
Product properties	
Output function	3-wire, normally open contact, PNP
Electrical data	
Electrical connection	M12, 4 pin
Operating voltage	10...30 V DC
Protection class	III acc. to DIN EN 61140
DC rated current	≤ 100 mA
Residual ripple	≤ 10 % U _{ss}
Approvals and Certificates	
Degree of protection	IP65 and IP67
Protection class	III acc. to DIN EN 61140
Conformity	EMC directive 2014/30/EU

2. Dimensions

2.1. NAMUR version

Note:

Dimensions in mm

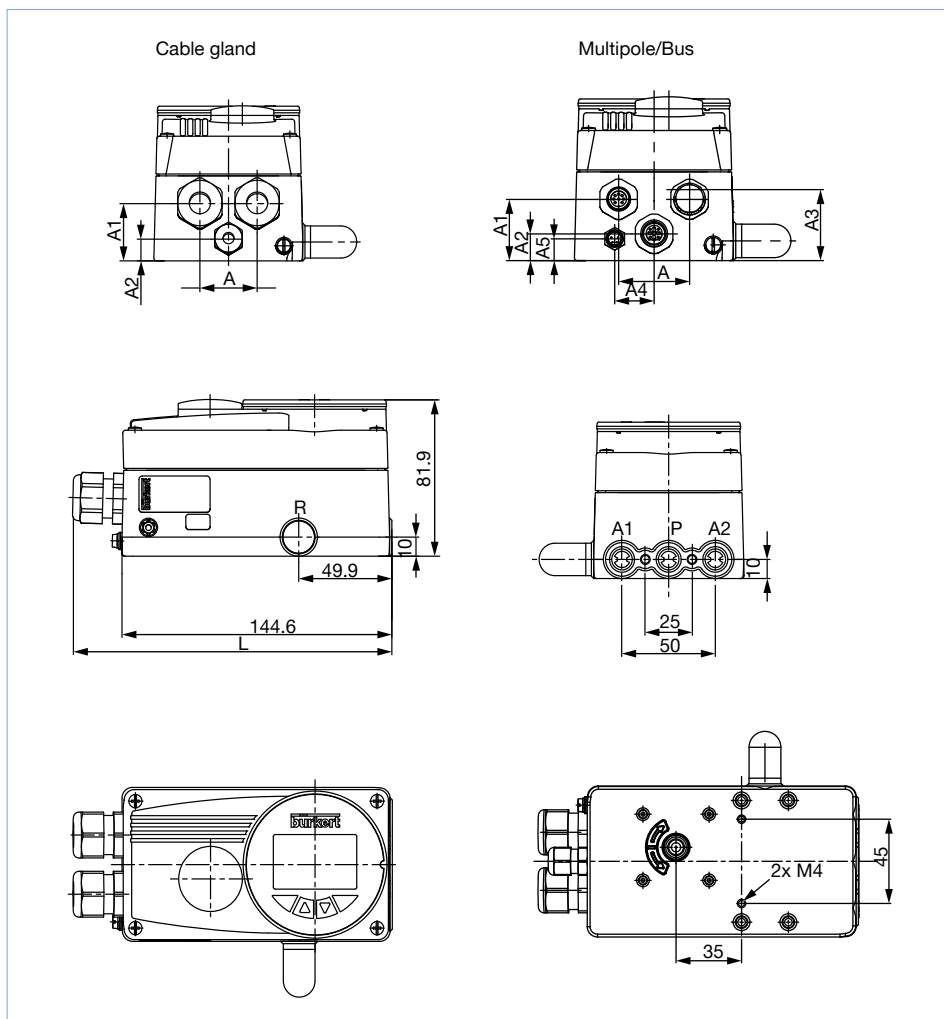


Description	L	A	A1	A2
Standard	171.1	31	30	-
PROFIBUS DP	157.8	36	31	13.5
Multipole binary outputs	157.6	36	31	-
Multipole	157.4	-	22.5	-
Remote	171.1	31	30	11.5

2.2. Remote version

Note:

Dimensions in mm



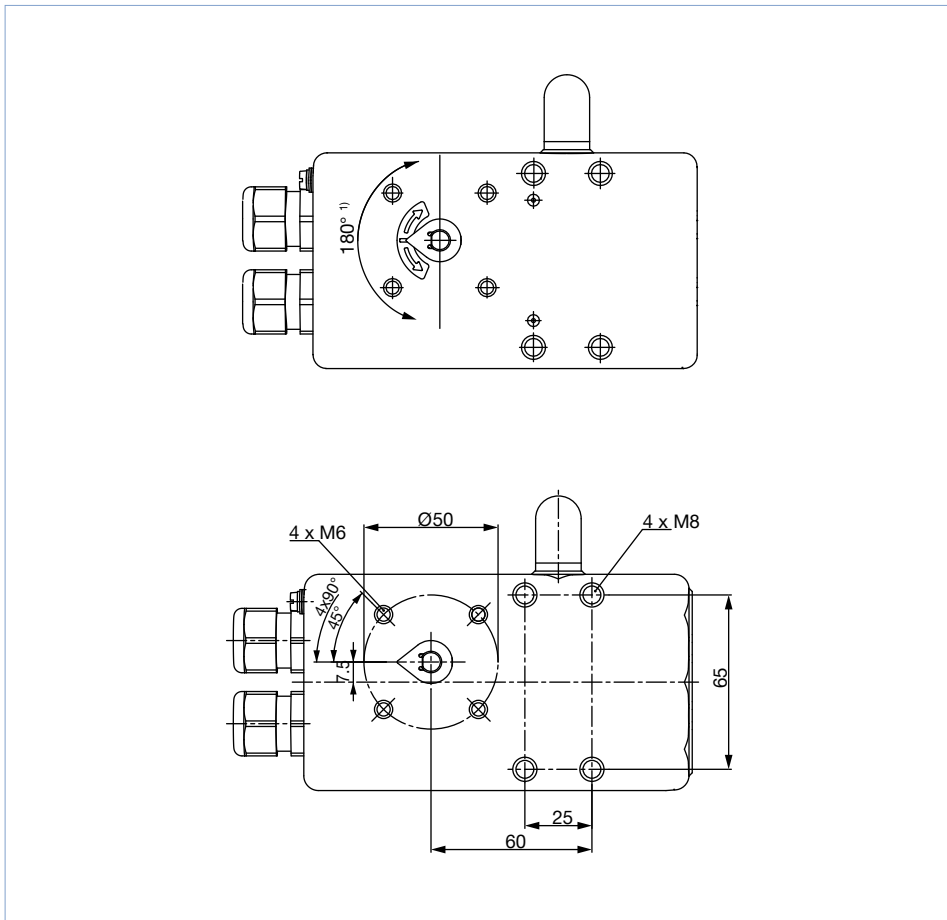
Description	L	A	A1	A2	A3	A4	A5
Remote cable gland	171.1	31	30	11.5	-	-	-
Remote multipole/bus	157.8	36	31	13.5	36	20	11

2.3. Mounting specification of NAMUR/Remote Version

Note:

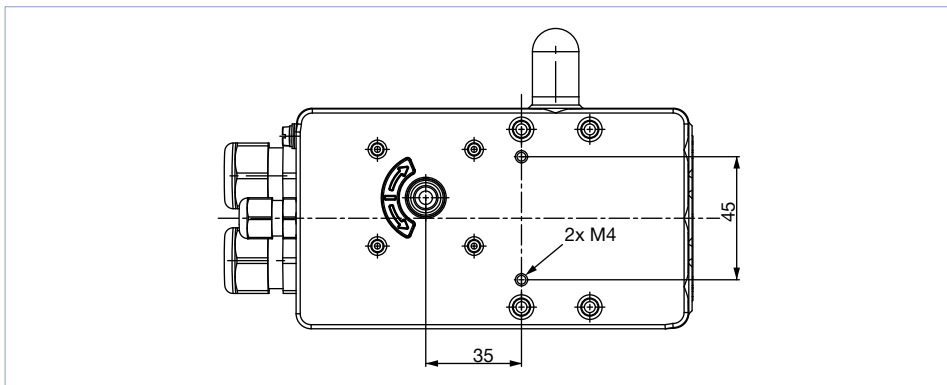
- The rotation angle of the sensor must be within a range of 180°¹⁾.
- With the valve open approx. 50 %, the sensor indicator should be in this position.
- Dimensions in mm

NAMUR version



1.) For the EtherNet/IP, PROFINET, Modbus TCP and büS versions a max. of 180° is possible, for the other versions max. 150°.

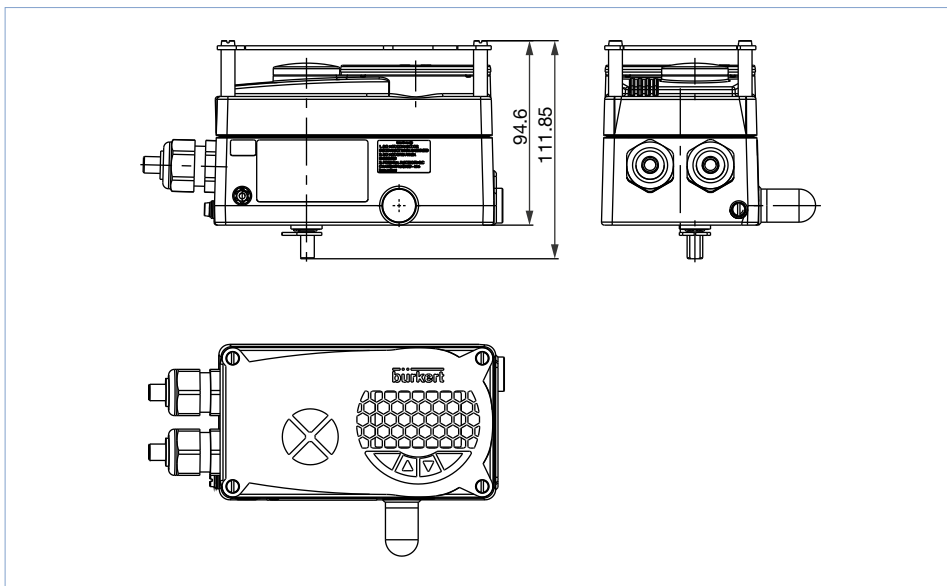
Remote version



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2.4. ATEX/IECEEx version

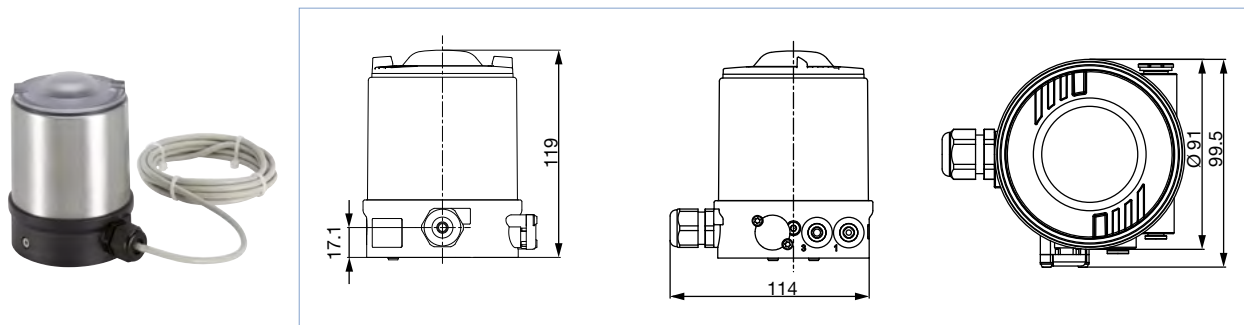
Note:
Dimensions in mm



2.5. Remote position sensor version

Note:
Dimensions in mm

Linear position sensor, Type 8798, for valve position detection of Bürkert ELEMENT and hygienic process valves for the remote SideControl positioner .



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