

Digital electro-pneumatic position controller

ARI-STEVI-POS®**Figur 94.P20****Position controller for single-acting
pneumatic linear actuators**Page 2

Features

- automatic valve travel adaption
- wear-free, contactless position sensing
- Low (own) air consumption
- Simple, clear parameterization via handy switches
- Operation: 4 - 20 mA
- Manometer set optional
- Feedback signal optional: 4 - 20 mA

Technical data

Type	ARI-STEVI-POS®
Stroke range (linear actuator)	10 up to 120 mm
Pneumatics	single-acting
Auxiliary energy	Supply air: 1,4 up to 7 bar (20 up to 105 psi)
Air connection	G1/4 or 1/4-18 NPT (with NPT adaptor)
Manometer connection	G1/8 or 1/8-27 NPT (with NPT adaptor)
Operation	4...20 mA max. Load voltage 9,5 V (475 Ω)
Behavior in the event of control signal failure	Valve is vented
Max. cable cross section	Operation: 2,5 mm ²
Cable diameter for cable glands	M20 x 1,5: Klemmbereich 8 - 13 mm
Linearity	±1.5 % F.S. ¹⁾
Hysteresis	1.4 % F.S. ¹⁾
Resolution	0.5 % F.S. ¹⁾
max. permissible ambient temperature	-20 °C ...+80 °C (-4 °F ...+176 °F)
max. storage temperature	-25 °C ...+80 °C (-13 °F...+176 °F)
Material Body	PA
Bonnet material	PC
Protection class EN 60529	IP66
Corrosion class	C3 acc. to EN ISO 12944-2
Pneumatic operating medium <ul style="list-style-type: none"> • Oil content • Solid impurities • Pressure dew point 	Compressed air according to ISO 8573-1 <ul style="list-style-type: none"> • Class 4 • Class 4 permanent • Class 4 (min. 10 K below permissible ambient temperature)
Ventilate drive <ul style="list-style-type: none"> • Supply air pressure 2 bar (29 psi) • Supply air pressure 4 bar (58 psi) • Supply air pressure 6 bar (87 psi) 	6,36 m ³ /h (28 USgpm) 11,76 m ³ /h (51,8 USgpm) 15,72 m ³ /h (69,2 USgpm)
Vent actoures <ul style="list-style-type: none"> • Signal pressure 2 bar (29 psi) • Signal pressure 4 bar (58 psi) • Signal pressure 6 bar (87 psi) 	7,68 m ³ /h (33,8 USgpm) 14,76 m ³ /h (65,0 USgpm) 15,72 m ³ /h (69,2 USgpm)
Air consumption in controlled condition	≤ 0,024 m ³ /h (≤ 0,11 USqpm) (to 25°C)
Mounting position	Any, restriction: air connections and silencers not upwards
Weight	0,7 kg

¹⁾ F.S.: full scale (20 mA)

Accessories

Analog output card	4...20 mA passive for current loop 9...32 V galvanically isolated max. conductor cross-section for connection termina: 2,5 mm ²
Manometer	2 pieces: 0 - 10 bar / 0 - 140 psi for supply air and working pressure

Functional description

The ARI-STEVI-POS® electropneumatic position controller is attached to single-acting pneumatic control valves to convert an electrical 4 to 20 mA setpoint signal into a valve position. The actual position of the control valve is detected via a wear-free, contactless magnetic Hall sensor and compared with the setpoint. The position controller uses a pneumatic module to regulate the pressure in the pneumatic actuator so that the actual position lies within a defined deadband range around the setpoint. The most important settings, such as inversion, deadband and tight-closing function, can be conveniently adjusted via handy switches.

The LCD display allows the user to monitor the status of the position controller.

When the hood is open, it is possible in manual operating mode to move the valve via the position controller using the pushbutton.

In addition to an automatically adjusting deadband, various fixed deadbands of 0.5 %, 1 % and 3 % can also be set.

With the tight-closing function, the pneumatic actuator is completely vented as soon as the setpoint falls below or exceeds the adjusted limits in order to build up the max. force for closing. The function can be switched on or off as required for each direction via a switch.

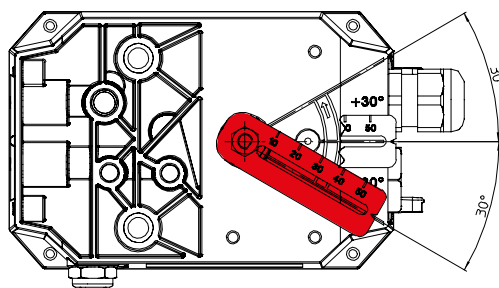
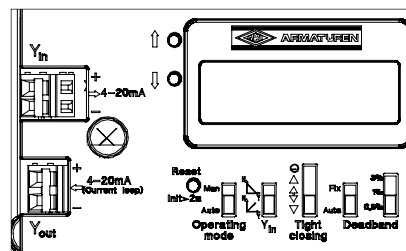

Type code

 Exempel type number: **94P20-01G-0000-Z0**

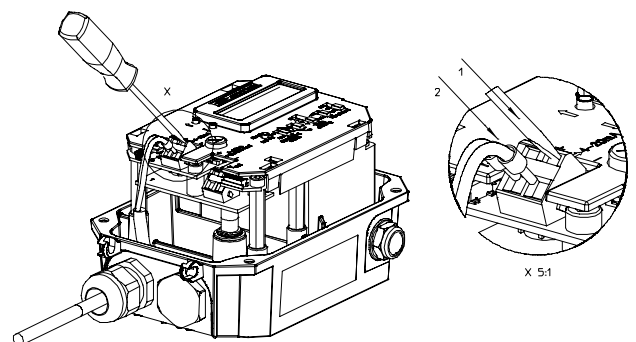
			9	4	P20	-	01	G	-	0	0	0	0	-	Z0
Actuators & Accessories	-	9													
Position controller, position indicator	-	4													
Series	STEVI-POS® (single-acting; plastic)	P20													
Communication	2-wire 4-20 mA	00													
	2-wire 4-20 mA + Feedback	01													
Connection electric / pneumatic	M20x1.5 & G1/4	G													
	1/2" NPT & 1/4" NPT (Adapter)	N													
	-	-													
Options	without Manometer	0													
	Manometer plastic, block aluminum	1													
	Silencer - nickel-plated brass	0													
	Silencer - stainless steel	3													
	no selection	0													
	-	-													
Approvals / Certificates		Z0													

Features

- simple commissioning
- setting of the important operating parameters via handy slide switches
- automatic stroke adjustment
- Further settings and additional functions can be set via the display
- diagnostic data



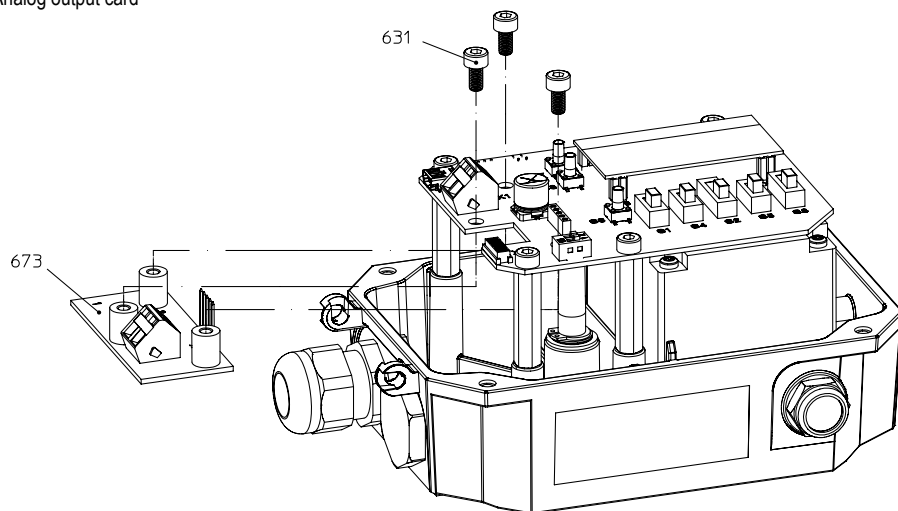
Fast and precise mounting of the position controller on linear valves due to the due to the printed permissible angle of rotation range.



Cable connection via spring-loaded terminals.

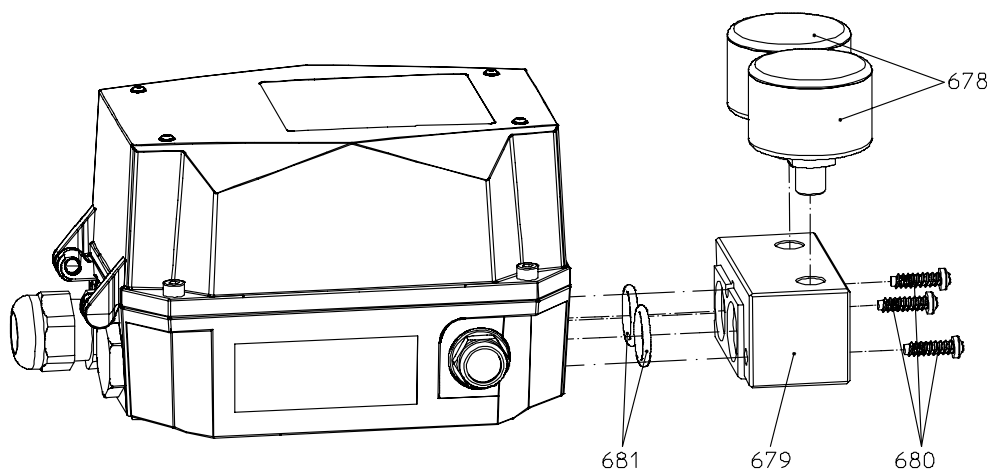
Additional options

Analog output card



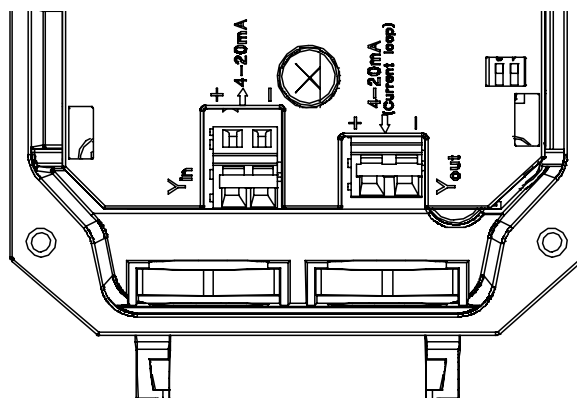
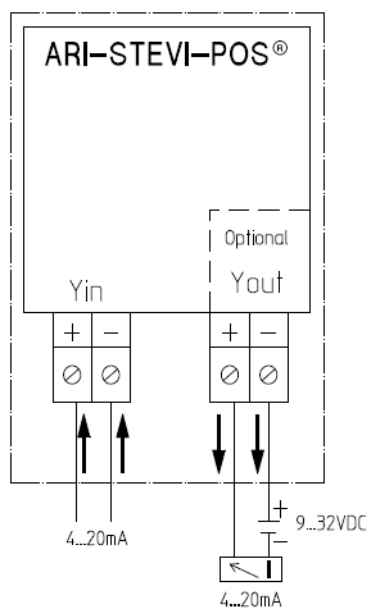
Pos.	Description
631	Cylinder screw M4 x 8 ISO 14579
673	Analog output card

Manometer

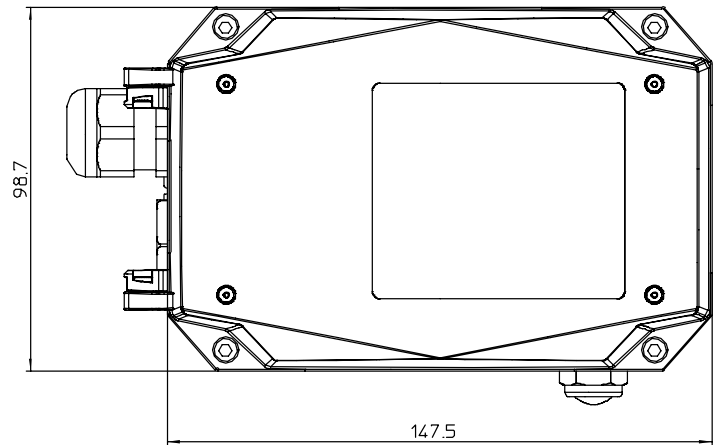
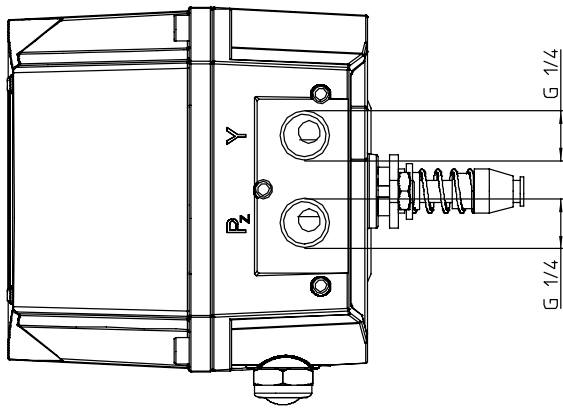


Pos.	Description
678	Manometer G1/8
679	Pressure gauge block STEVI- POS®
680	PT screw 5 x 16 -T20
681	O-ring 15x2,5-N

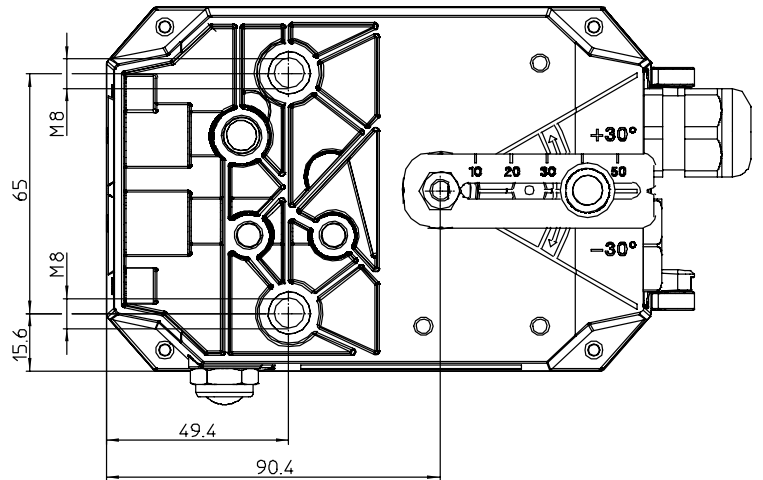
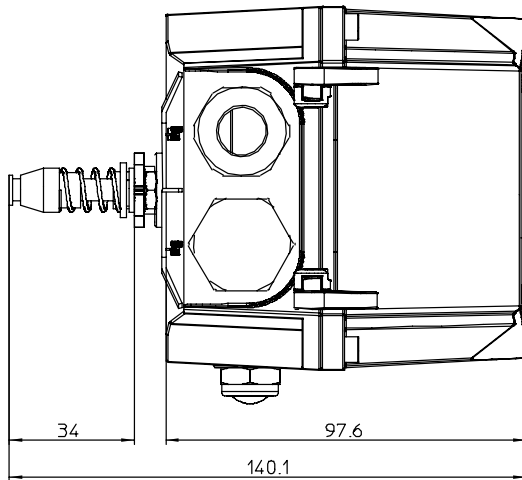
Wiring diagram



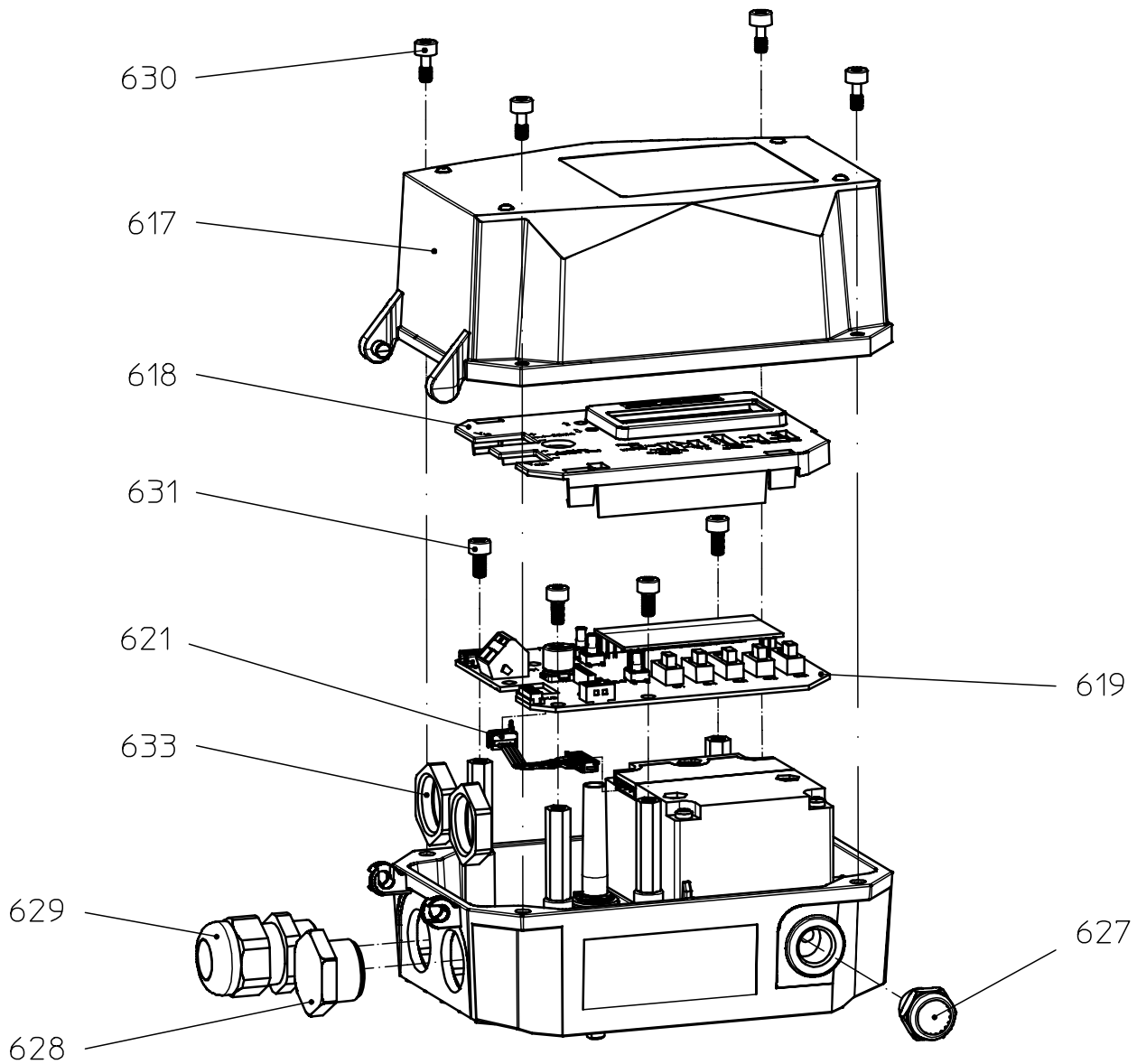
Dimensions



Backside



Digital electro-pneumatic position controller



Pos.	Description
617	Hood STEVI- POS®
618	Protective cover STEVI- POS®
619	Board STEVI- POS®
621	Wiring harness
627	Silencer

Pos.	Description
628	Screw plug with seal
629	Cable gland
630	Cylinder screw M4 x 10 DIN 7964
631	Cylinder screw M4 x 8 ISO 14579
633	Hexagon nut M20 x 1,5