

Electropneumatic positioner APIS

- ✓ Simple installation and automatic commissioning
- ✓ Connection 4 to 20 mA and HART protocol
- ✓ ATEX certificate  II 2G Ex ia IIC T5/T6 Gb
- ✓ Diagnostic functions
- ✓ Electronic limit switches NEW
- ✓ Position transmitter 4 to 20 mA
- ✓ Local manual operation
- ✓ Resistance to short-term power outages
- ✓ Compatible with all types of pneumatic actuators
- ✓ Tight closing function
- ✓ Low air consumption



Technical data

Input signal (control)	4÷20 mA + HART protocol
Input load voltage at 20mA	9,5 V (corresponds to 475 Ω)
Output signal (position transmitter)	4÷20 mA
- reverse output signal	20÷4 mA (function enabled programmatically by the user)
Supply of position transmitter	10÷36 V DC (Ex 10÷30 V DC)
Supply pressure	140÷800 kPa (1,4÷8 bar; 20,3÷116 psi)
Pneumatic input signal (control actuator)	0÷100% of supply pressure
Own air consumption	≤ 0,035 kg/h at 140 kPa (1,4 bar; 20,3 psi) supply pressure
	≤ 0,015 kg/h at 600 kPa (6 bar; 87 psi) supply pressure
Air mass stream on positioner output	≥ 3,25 kg/h at 140 kPa (1,4 bar; 20,3 psi) supply pressure
	≥ 13kg/h at 800 kPa (8 bar; 116 psi) supply pressure
Travel range	10÷100 mm (for single-acting linear actuators)
	80÷900 mm (for double-acting linear actuators)
	0÷180° (for rotational actuators)
Actuator operation characteristics	linear
Positioner operation mode	normal or reversible
Positioner transducer mode	normal or reversible
Hysteresis	< 0,4%
Sensitivity (dead band)	< 0,1%
Degree of protection	IP 65
Operation position	any
Weight	1,8 kg
Working medium	compressed air free from dust, oil, aggressive contaminants or solid particles, corresponding to class 3 acc.to ISO 8573-1, with a recommended filtration of 1.5 µm.

To ensure adequate air quality, we recommend using a Filter Regulator R110, which protects the positioner components from contamination in the supply air by filtering particles larger than 1.5 µm.

Filter Regulator R110

R110-A005-L0	Casing in aluminium with standard gauge
R110-A005-L0/Ex	Casing in aluminium with standard gauge, Ex version
R110-A016-L0	Casing and gauge in stainless steel
R110-A016-L0/Ex	Casing and gauge in stainless steel, Ex version

Connection for in and output air 1/4"NPT
Ex version ATEX  II 2G c IIC T6



Ambient temperature	-40÷85°C
- Ex version	for T5 -25÷60°C; for T6 -25÷45°C (with standard gauges)
	for T5 -40÷80°C; for T6 -40÷45°C (with Stainless Steel gauges)
Ambient humidity	< 95%
Allowable vibrations	acc. to PN-EN 60654-3:2000; class VH6
- 10...60Hz	amplitude < 0,35 mm
- 60...500Hz	acceleration ≤ 5g

Ordering procedure

	APIS	XXX	DXX	RXX	IXX	TXX	PX	MX	WX	SX
Intend use:										
- for single-operating actuator	1									
- for double-operating actuator	2									
- for installation on actuator.....	0									
- for installation outside actuator with:										
- external position transmitter (potentiometer) – IP54 ¹⁾	1									
- external position transmitter (potentiometer) – IP67 ¹⁾	2									
- external position transmitter (magnetic) – IP67 ^{1) 2)}	3									
- external position transmitter (potentiometer) – IP65 ³⁾	4									
Distance of positioner from actuator:										
- in meters (00÷15)	XX									
Execution:										
- standard	St									
- intrinsically safe  II 2G Exia IIC T6/T5 Gb	Ex									
Input signal, version:										
- 4÷20 mA with HART protocol	HE									
- 4÷20 mA with HART protocol and diagnostic	HS									
Analog position transmitter:										
- without position transmitter	00									
- with output signal 4÷20 mA	20									
Pneumatic connectors:										
- without connectors (thread Rp1/8")	0									
- connectors to brass pipes 6 mm	1									
- connectors to stainless steel pipes 6 mm	2									
- connectors to polyethylene pipes 6 mm	3									
- connectors to brass pipes 8 mm	4									
- connectors to stainless steel pipes 8 mm	5									
- connectors to polyethylene pipes 8 mm	6									
- others	8									
Pressure gauges:										
- with standard gauges	2									
- with stainless steel gauges	3									
Electrical entry:										
- plastic cable gland M16x1,5 (4÷10 mm cable)	1									
- nickel brass cable gland M16x1,5 (6÷10,5 mm cable)	2									
Electronic limit switches (optional): ⁴⁾										
- 2 digital outputs according to NAMUR EN 60947-5-6	2									
- 2 digital open collector outputs	3									

¹⁾ For double-operating linear actuator.

²⁾ Not available with ATEX certification.

³⁾ For single-operating linear diaphragm actuators and single or double-operating rotational actuators.

⁴⁾ Applies to direct-mount versions. Code S is not present if there are no limit switches.

The APIS positioner with diagnostics is equipped with a pressure sensor, so it is also recommended for applications requiring increased regulation quality and parameter stability.

Assembly

Mounting method (type of actuator)	Galvanized steel mounting kit	Stainless steel mounting kit
Mounting on the actuator columns e.g. Polna P/R	APIS-A0000-SO	APIS-A0000-SS
Mounting on the actuator yoke e.g. Polna 37/38	APIS-A0001-SO	APIS-A0001-SS
Mounting on the multi-spring actuator e.g. Polna P1/R1	APIS-A0002-SO	APIS-A0002-SS
Mounting on the actuator acc. to PN-EN 60534-6-1:2001 e.g. Arca Regler	APIS-A0003-SO	APIS-A0003-SS
Mounting on the rotary actuator acc. to EN ISO 5211, DIN 3337, VDI/VDE 38450 Namur e.g. Festo	APIS-A0050-SO	APIS-A0050-SS
Separate mounting for linear actuator with piston rod acc. to ISO 6431 e.g. Prema CNOMO	APIS-Axxxx-SO	APIS-Axxxx-SS