Electropneumatic positioner APIS

- ✓ **HART protocol**
- ✓ **ATEX certificate II 2G Exia IIC T5/T6 Gb**
- ✓ **Simple in installation and programming**
- ✓ **Diagnostic functions**
- ✓ **Possibility of remote assembling of positioner**
- ✓ **Low air consumption**
- ✓ **Programmable speed of movement of the actuator's piston rod**
- ✓ **Position transmitter**
- ✓ **Possibility of manual controlling of position of actuator's piston rod**

one device for linear and rotational actuators

Technical data

Input signal (control)	4…20mA + Hart
Output signal (position transmitter)	4…20mA
Supply of position transmitter	10÷36 VDC (Ex 10÷30 VDC)
Supply pressure	140÷800 kPa
Pneumatic input signal (control actuator)	0…100% of supply pressure
Own air consumption	≤ 0,035 kg/h for supply pressure 140 kPa ≤ 0,015 kg/h for supply pressure 600 kPa
Air mass stream on positioner output	≥ 3,25 kg/h at supply pressure 140 kPa ≥ 13kg/h at supply pressure 800 kPa
Actuator piston rod displacement 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
Additional errors	< 0,05% / 100kPa
- from supply pressure changes	0,15% / 10°C – for temperature range -30°C÷+60°C
- from ambient temperature changes	0,25% / 10°C – for temperature range -40°C÷-30°C and +60°C÷+85°C
- from vibration in range: 10...60Hz, amplitude < 0,35 mm 60....500Hz, acceleration 5g	0,25%
Hysteresis	< 0,4%
Insensibility threshold	< 0,1%
Protection degree of positioner enclosure	IP 65 according to PN-EN 60529:2003
Operation position	any
Weight	1,8 kg

Operating conditions

Working medium	air free of dust, oil, aggressive pollutants, solid particles bigger than 1.5 µm, such relative humidity not lower that dew point's temperature should not be lower than 10°C with respect to ambient temperature (acc. to PN-EN 60654-2:1999).
Ambient temperature (Ex version)	-40÷85°C for T5 -25÷60°C; for T6 -25÷45°C (with standard manometers) for T5 -40÷80°C; for T6 -40÷45°C (with stainless steel manometers)
Executions with manometers in stainless steel	
Humidity of ambient air	< 95%
Allowable vibrations 10...60Hz, 60...500Hz	acc. to PN-EN 60654-3: 1997; class VH6 amplitude < 0,35 mm acceleration ≤ 5g

Ordering procedure

APIS - X X X – DXX – RXX – IXX – TXX – PX – MX – WX – AX

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:
- … m (0 ÷ 15 m)..... **XX**

Execution:
- standard..... **St**
- intrinsically safe Ex 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 [4]..... **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**
- other..... **8**

Manometers:
- with manometers ∅40 mm, standard version..... **2**
- with manometers ∅40 mm, stainless steel version..... **3**

Electrical entry:
- plastic packing gland (∅4 ÷ 10 mm cable)..... **1**
- nickeled brass packing gland (∅6 ÷ 10,5 mm cable)..... **2**

Mounting kit:
- without mounting kit..... **0**
- with mounting kit (code according to below table)..... **1**

[1] For double-operating linear actuator.
[2] Not available with ATEX
[3] For single-operating linear diaphragm actuators and single and double-operating rotational actuators
[4] The positioner can set reverse of analogue output signal (20…4 mA). The reverse function of the output signal is switched on programmatically by the user.

Mounting kit		Type of actuator
APIS-A000	For APIS-100-…	Type P or R, Polna S.A. (mounted on the columns)
APIS-A001		Type 37 or 38, Polna S.A. (yoke)
APIS-A002		Type P1 or R1, Polna S.A. (diaphragm multi-spring)
APIS-A003		Actuator acc.PN-EN 60534-6-1:2001 (Samson, Arca Regler)
APIS-A050	For APIS-X00-…	Actuator acc. EN ISO 5211, DIN 3337, VDI/VDE 38450 Namur, (Air Torque, Ebro-Armaturen, El-O-Matic)
APIS-AXXX	For APIS-201-…	Actuator acc. ISO 6431 (CNOMO Prema Kielce)
	-SS	Material: stainless steel
	-SO	Material: zinced steel