

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 ⁵⁾	2									
- 2 digital open collector outputs ²⁾	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.

⁵⁾ For the ATEX certified version, this option will be available in the second half of 2026.

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)

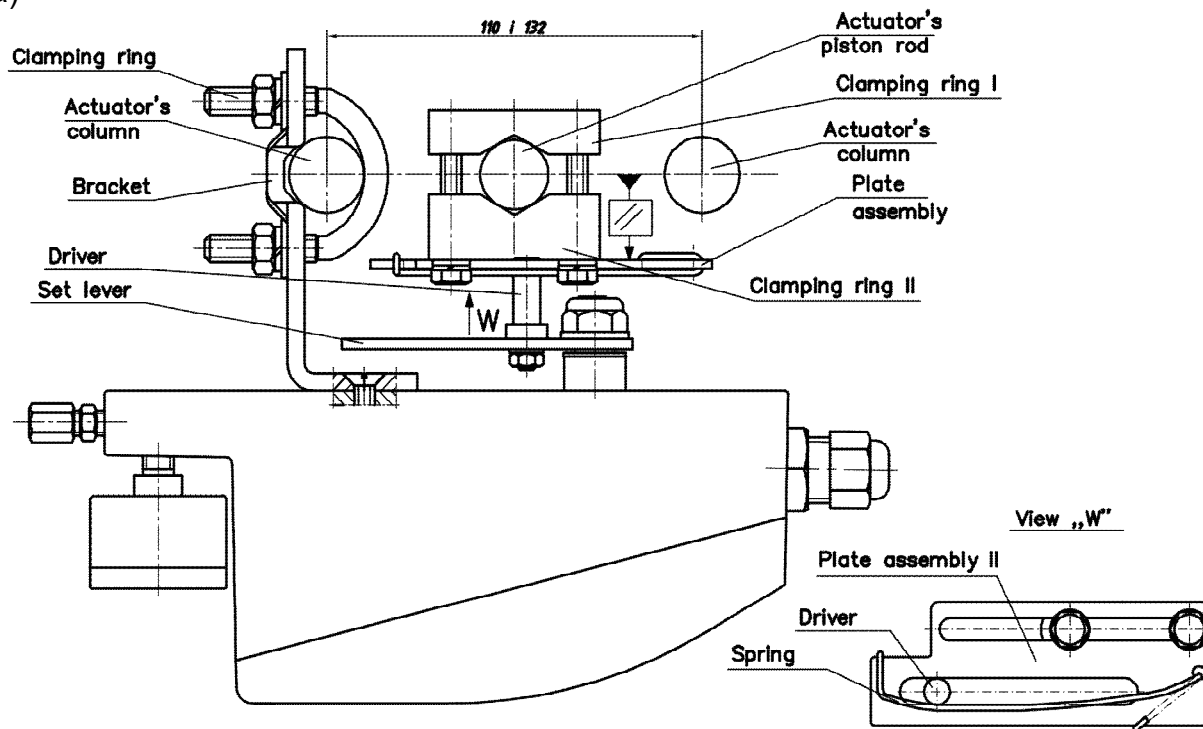
Galvanized steel mounting kit

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

Mounting set for electropneumtical positioner type APIS

a)



b)

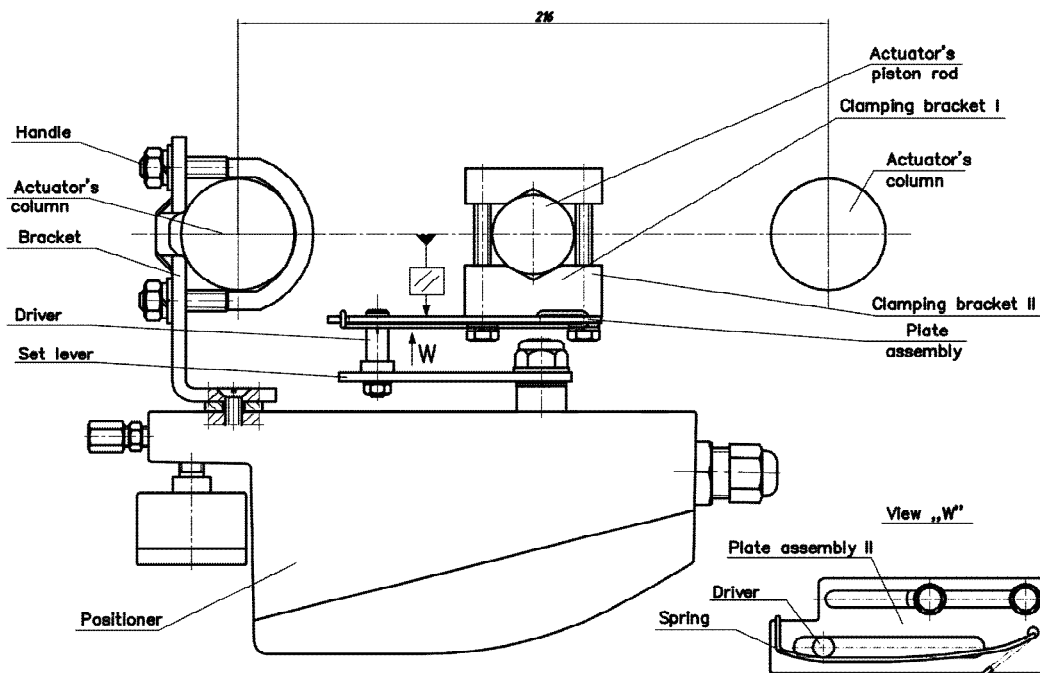


Fig.1. Positioner type APIS-1X0-... with mounting kit APIS-A0000-SS(SO) (positioner mounted on column type actuator P or R by Polna Ltd company).

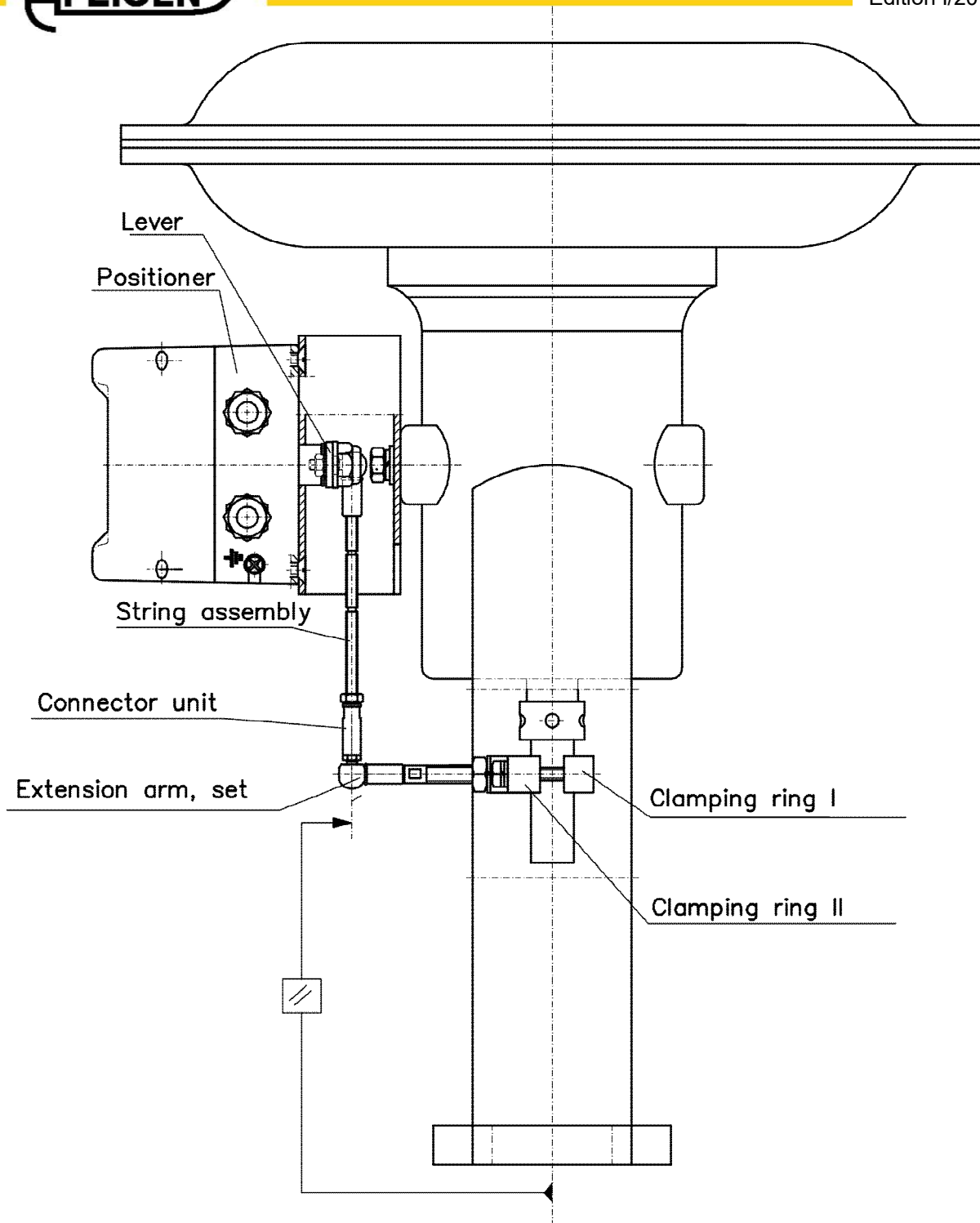


Fig.2. Positioner type APIS-1X0-... with mounting kit APIS-A0001-SS(SO) (positioner mounted on actuator type 37 or 38 Polna Ltd company)

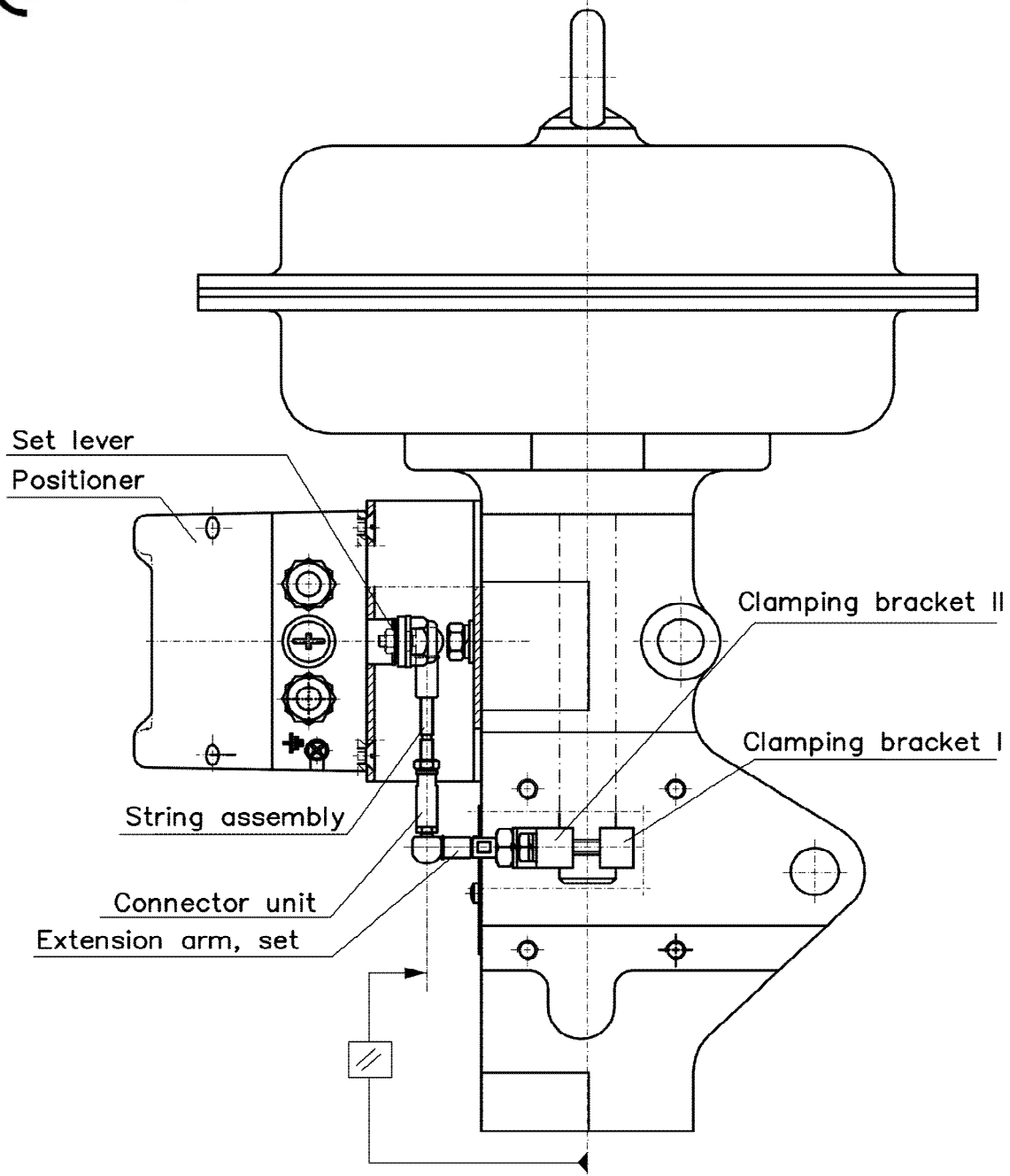


Fig.3. Positioner type APIS-1X0-... with mounting kit APIS-A0002-SS(SO) (positioner mounted on actuator type P1 or R1 Polna S.A. Ltd company)

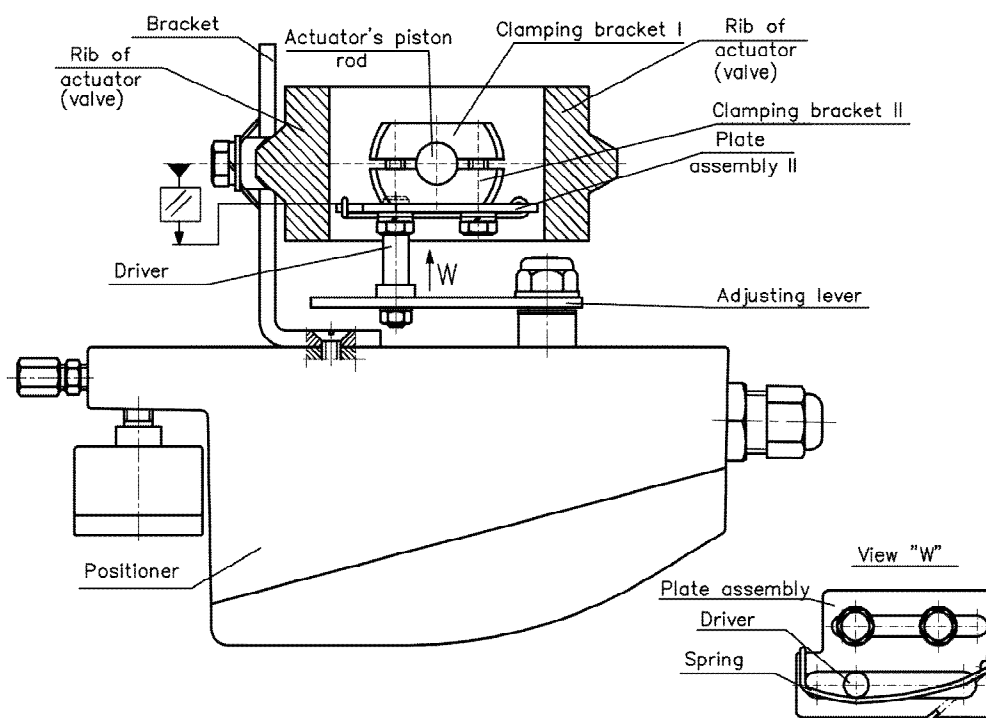


Fig.4. Positioner type APIS-1X0-... with mounting kit APIS-A0003-SS(SO) (positioner mounted on actuator with control valve – in accordance with PN-EN 60534-6-1:2001 e.g. on actuator from Samson or Arca Regler company)

Positioner type APIS mounted on single or double acting actuators.

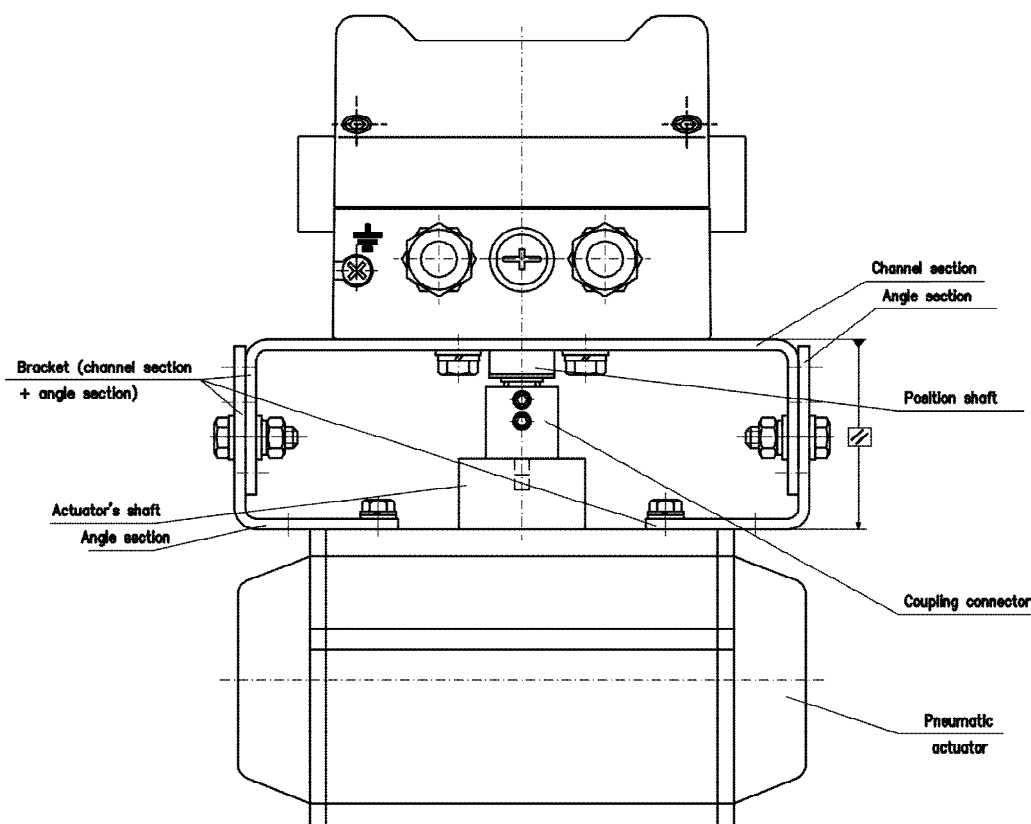


Fig.5. Positioner type APIS-1X0-... i APIS-2X0-... with mounting kit APIS-A0050-SS(SO) (positioner mounted on actuator with accordance to EN ISO 5211, DIN 3337, VDI/VDE 38450 Namur e.g.: on Air Torque, Ebro-Armaturen, El-O-Matic actuator)

Positioner type APIS mounted outside of the double action piston actuator.

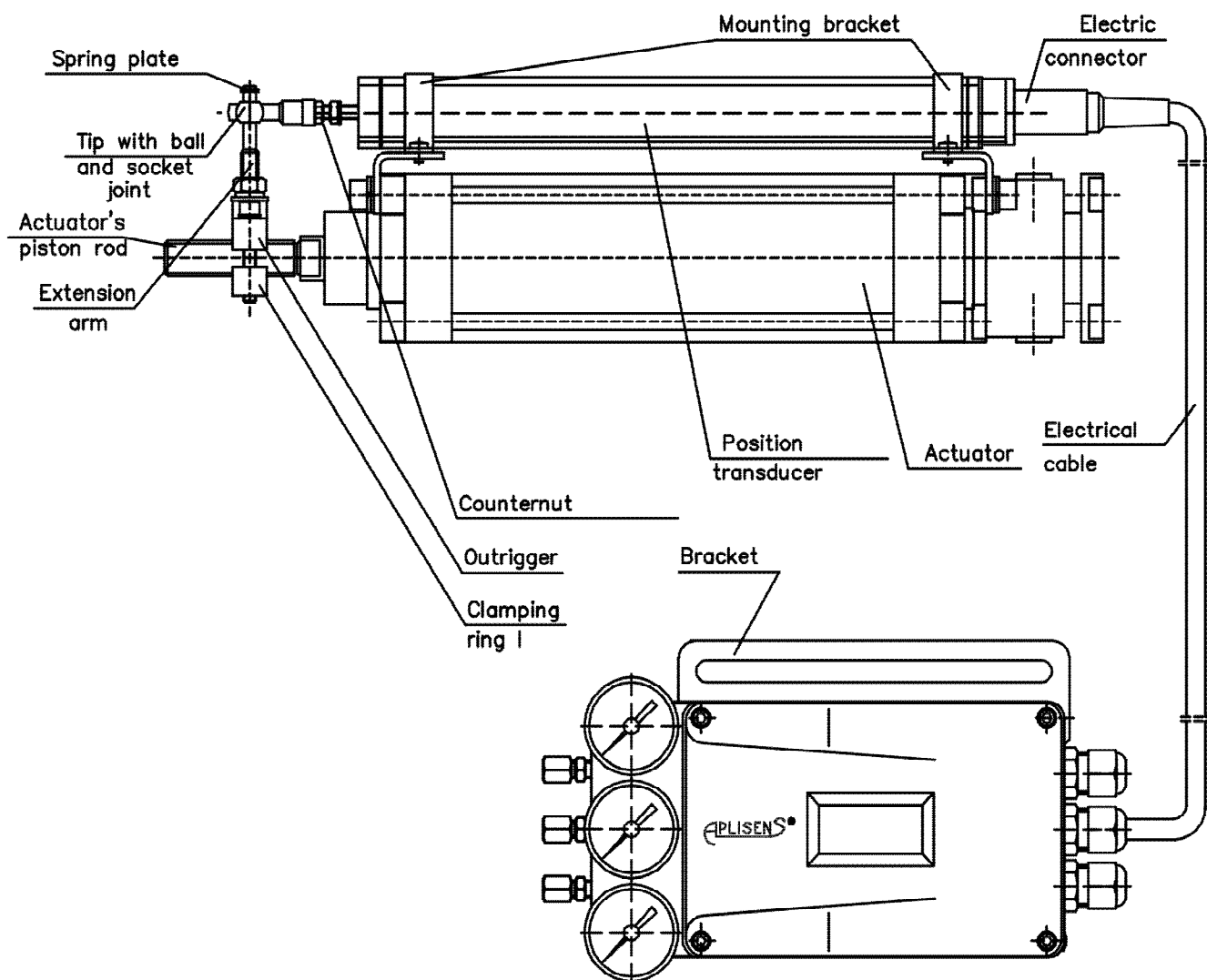


Fig.6. Positioner type APIS-2X1-... with mounting kit APIS-XXXXX-SS(SO)
 (positioner mounted outside of the double action linear actuator
 e.g.: CNOMO series actuator of PREMA Kielce company or in
 accordance to ISO 6431 (PREMA Kielce or FESTO company actuators))

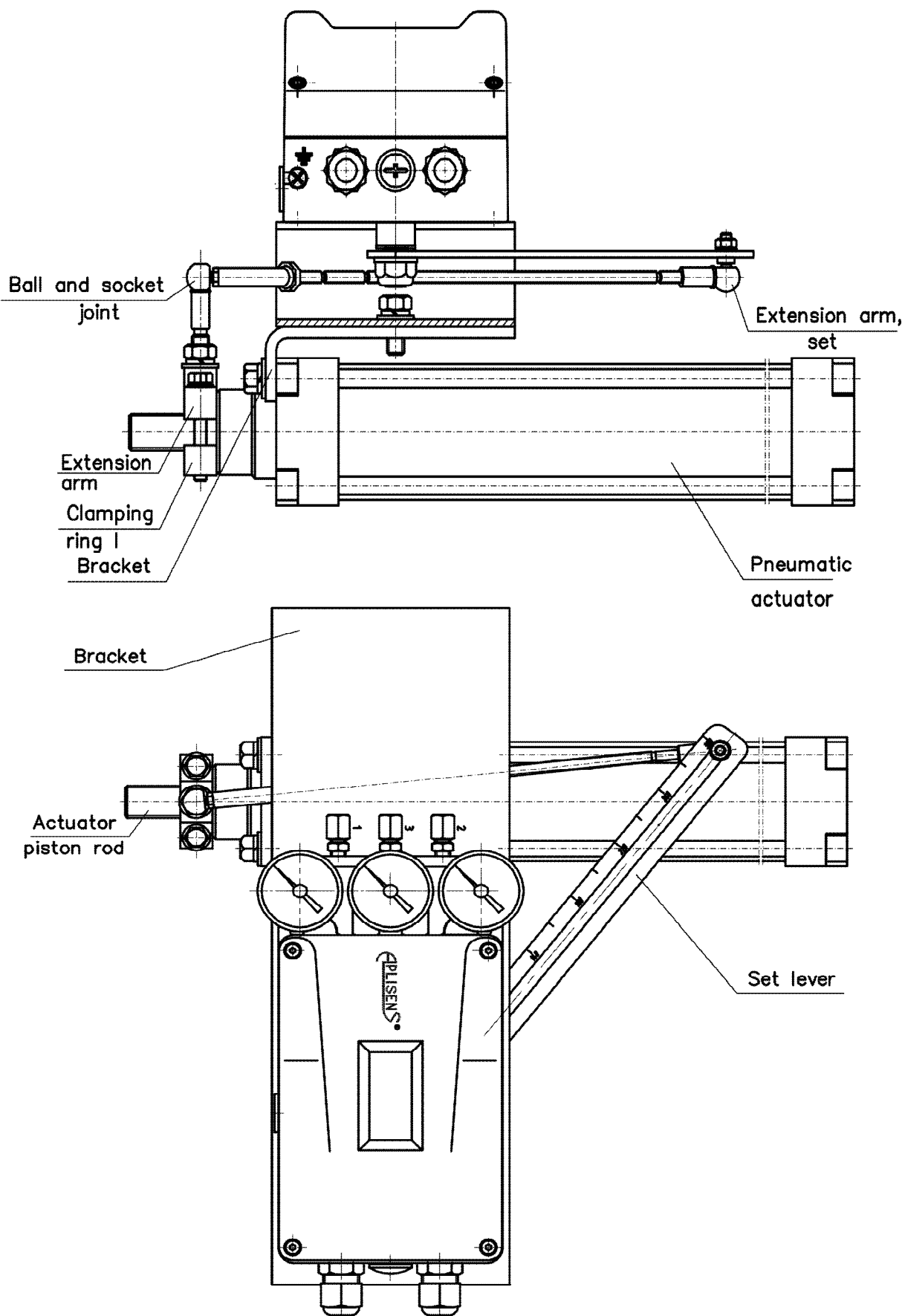


Fig. 7 Positioner type APIS-2X0-...with mounting kit APIS-XXXXX-SS(SO)
 (positioner mounted on linear double action actuator
 e.g.: CNOMO series actuators from PREMA Kielce company or with accordance
 with ISO 6431 (PREMA Kielce or FESTO actuators))

Ordering information

APIS-A00XX-SX

POSITIONER TYPE	SPECIFICATION AND THE TYPE OF THE PNEUMATIC ACTUATOR		
	ACTUATOR TYPE	ACTUATOR SPECIFICATION	
APIS-1X0-...	Linear diaphragm single acting actuator	Actuator mounted on the columns type P or R Polna S.A. company or type 5700 5333 Spirax Sarco company - for APIS-1X0 -... see fig. 1. - for APIS-1X4 -... see fig. 8 (TBD)	00
APIS-1X4-...			10
APIS-1X0-...		Yoke type actuator type 37 or 38 Polna Ltd. company - for APIS-1X0 -... see fig. 2. - for APIS-1X1 -... see fig .9 (TBD)	01
APIS-1X4-...			11
APIS-1X0-...		Multispring type actuator type P1 or R1 Polna Ltd. company - for APIS-1X0-... see fig. 3. - for APIS-1X1-... see fig. 10 (TBD)	02
APIS-1X4-...			12
APIS-1X0-...		According to PN- EN 60534-6-1:2001, With actuator with regulation valve from: Samson company: - for APIS-1X0-... see fig. 4. - for APIS-1X1-... see fig. 11 (TBD)	03
APIS-1X4-...			13
APIS-1X0-...			40
APIS-1X4-...			41
APIS-1X0-... APIS-2X0-...		According to EN ISO 5211, DIN 3337, VDI/VDE 38450 Namur e.g.: actuators from Air Torque, EL-O-Matic Ebro Armaturen companies - for APIS-1X0-... and APIS-2X0-...see fig. 5 - for APIS-1X4-... and APIS-2X4-...see fig. 12 (TBD)	50
APIS-1X4-... APIS-2X4-...		TBD	51
APIS-1X0-... APIS-2X0-...		According to customer specification	52
APIS-1X4-... APIS-2X4-...		According to customer specification	53
Material assembly kit			
Stainless steel			S
Galvanized carbon steel			O

Ordering example:

Mounting set for positioner type APIS-1X0-... intended to use with linear diaphragm single acting actuator type P1 Polna Ltd, Company, made from galvanized carbon steel .
Mounting set APIS-A0002-SO.

Ordering information c.d.
APIS-X XX XX-SX

POSITIONER TYPE	SPECIFICATION AND THE TYPE OF THE PNEUMATIC ACTUATOR			
	ACTUATOR TYPE	ACTUATOR SPECIFICATION		
APIS-2X1-... APIS-2X2-...	Linear double action actuator	According to ISO 6431: E.g.: PREMA Kielce(Poland), Camozi, Festo company -for APIS-2X1-...and APIS-2X2-... see fig. 6 -for APIS-2X0-... see fig. 7		A
		CNOMO series. PREMA KIELCE(Poland) company for - -- APIS-2X1-... - APIS-2X2-... see fig. 6 - for APIS-2X0-... see fig. 7		C
		Accordingly to customer specification		S
		Ø actuator piston (mm): Thread on the end of the piston rod: control pressure connection holes		
		Ø32 ISO 6431:M10x1,25: G1/8" CNOMO: M10: G1/8"	01	
		Ø40 ISO6431:M12x1,25: G1/4" CNOMO:M16x1,5: G1/4"	02	
		Ø50 ISO6431 i CNOMO M16x1,5: G1/4"	03	
		Ø63 ISO 6431:M16x1,5: G3/8" CNOMO:M20x1,5: G3/8"	04	
		Ø80 ISO6431 i CNOMO M20x1,5: G3/8"	05	
		Ø100 ISO 6431:M20x1,5: G1/2" CNOMO:M27x2:G1/2"	06	
		Ø125 ISO 6431 i CNOMO M27x2: G1/2"	07	
		Ø160 ISO 6431 i CNOMO M36x2: G3/4"	08	
		Ø200 ISO 6431 i CNOMO M36x2: G3/4"	09	
		Ø250 ISO 6431 i CNOMO M42x2: G1"	10	
		Ø320 ISO 6431: M48x2: G1"	11	
APIS-2X0-...	Linear double action actuator	Ø63 ISO 6431:M16x1,5: G3/8" CNOMO: M20x1,5: G3/8"	12	
		Ø80 ISO 6431:M16x1,5: G3/8" CNOMO:M29x1,5: G3/8"	13	
		Ø100 ISO 6431: M20x1,5: G1/2" CNOMO: M27x2: G1/2"	14	
		Ø125 ISO 6431 i CNOMO M27x2: G1/2"	15	
		Ø160 ISO 6431 i CNOMO M36x2: G3/4"	16	
		Ø200 ISO 6431 i CNOMO M36x2: G3/4"	17	

APIS-2X1-...				Accordingly to customer specification	60
APIS-2X2-...					
APIS-2X0-...					61
APIS-2X0-... APIS-2X1-... APIS-2X2-...				Actuator stroke (mm)	
				80	20
				100	21
				125	22
				150	23
				160	24
				200	25
				250	26
APIS-2X1-... APIS-2X2-...				300	27
				320	28
				400	29
				500	30
APIS-2X1-... APIS-2X2-...				600	31
APIS-2X0-...				Accordingly to customer specification	70
					71
Material assembly kit					
Stainless steel					S
Galvanized carbon steel					O

Ordering specification example:

Mounting set for positioner type APIS-2X1-...intended for use with linear double acting piston actuator which comply to ISO 6431 standard (cylinder diameter 100mm, thread M20x1,5, attachment holes of the control pressure G1/2", actuator stroke 125mm), mounting set material: galvanized carbon steel.

Mounting kit APIS-A0622-SO