

spirax/sarco®

Pneumatic Linear Actuator PN4431

The PN4431 pneumatic actuator enables the following Spirax Sarco valves to be operated by a pneumatic signal on a two-position basis.

2 port	Normally Open	BX, BM, SB, KA, KB, KC, NS
	Normally Closed	BXRA, BMRA, SBRA, KX, KY, NSRA
3 port		TW (excluding 3")

See relevant valve TIS for limiting differential pressures and temperatures. The latter is the value shown if the Spirax Sarco Spacer were to be used.

The actuator forms a packless gland arrangement when used with the valve.

CONSTRUCTION MATERIALS

No.	Part	Material	Material Spec.
1	Case	Stainless Steel	BS 3505 321 S18
2	Base	Brass	BS 2872 CZ 122

OPERATION

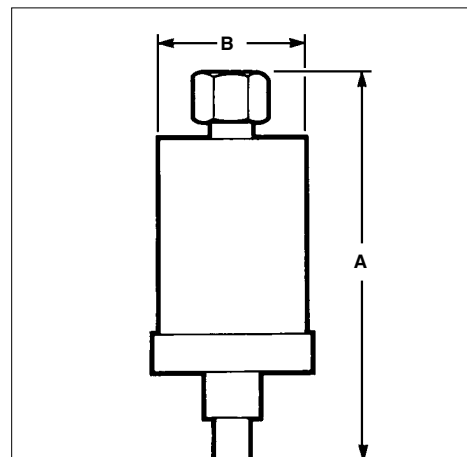
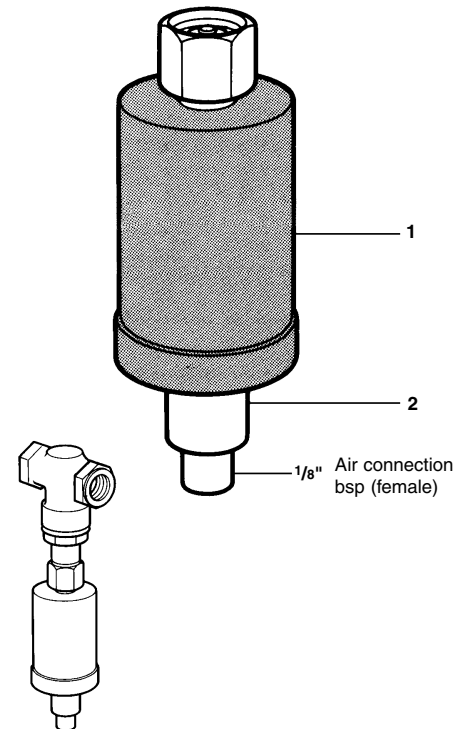
With air on, the actuator will close normally open, and open normally closed valves, and vice versa. In the case of TW valves, ports O & Z are connected with air on, and ports O & X are connected with air off. The operating force is transmitted to the valve spindle by the stainless steel bellows, which does not form part of the packless gland assembly. This means that the fluid in the valve is double isolated from the operating medium.

TECHNICAL DATA

Maximum Travel	3/8"
Air Pressure Required	80 psig* 5.5 barg
Free air consumption (per stroke at 15°C)	0.017 ft ³ 0.475 l
Operating Time	(typically) less than 1 second
* Maximum air pressure	145 psig 10 barg

INSTALLATION

The preferred arrangement is shown with the actuator beneath the valve, however, other arrangements are acceptable.



Dimensions (nominal) in inches and millimeters

A	B	Weight
4.5 114	2.2 55	1.2 lb 0.55 kg

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ACCESSORY

A three port solenoid valve is available for use with the PN4431 pneumatic actuator. When the solenoid is connected to the PN4431 in the recommended manner, application of the rated voltage to the coil will slow compressed air into the actuator.

When de-energized the solenoid will vent the compressed air in the actuator to atmosphere (see Fig 1).

CONSTRUCTION MATERIALS

Part	Material
Body	Brass
Internals	Stainless Steel
Seal Material	Nitrile Rubber

TECHNICAL DATA

Enclosure rating	NEMA 3 & 4 Waterproof and NEMA 7(C&D)
	and NEMA 9 (E, F, & G) Explosion Proof
Maximum ambient temperature	131°F
Power consumption	AC 21VA (in rush), 12 VA/8W HOLD
(warm condition)	DC.8 W
Voltages available	24 V dc
	24, 110, 220, 240 Vac at 60 Hz
Fluid duty	Compressed air
Maximum operating pressure	145 psig
Connections	1/8" NPT

HOW TO SPECIFY

1 – Three port solenoid valve with 120 Vac 60 Hz coil, for use with PN4431 actuator.

INSTALLATION

It is envisaged the solenoid valve will be remotely mounted from the PN4431 actuator.

DIMENSIONS

(NOMINAL) IN INCHES AND MILLIMETERS

A	B	C	D	E	F
.95	2.6	2.5	2.9	0.3	1.26
24	65	63.5	73.5	8	32

