

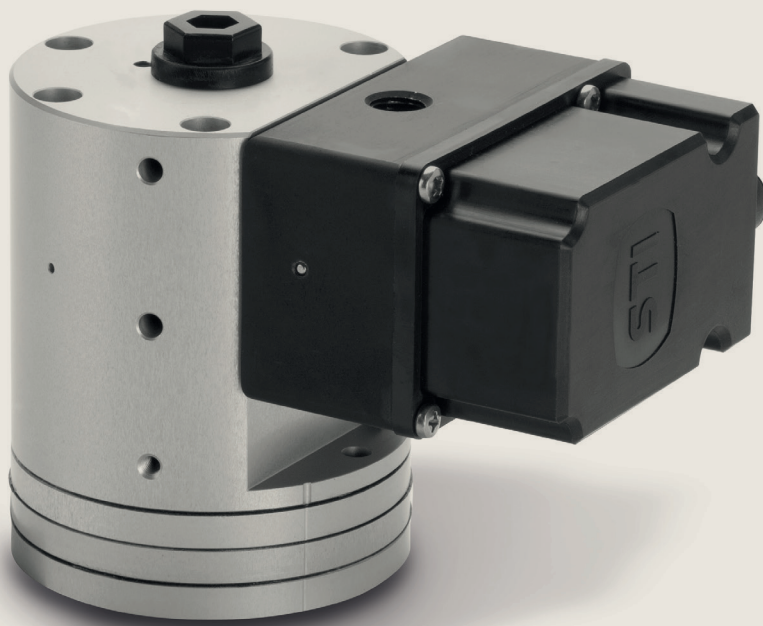
Process Automation

IMI STI

SA

Analog Positioner





SA

Analog Positioner

The SA-1 is an analogic positioner available in a pneumatic and electro-pneumatic version. The positioner has a heavy duty design making it suitable for use in very harsh conditions. It is used as the control part of the pneumatic valve set in oil and gas, refining, chemical, power, metal production and other fields with automated systems. The pneumatic version accepts a 3-15 psi (0.2-1 bar) signal and the electro-pneumatic version a 4-20 mA signal.

When using the electro-pneumatic version an I/P converter is installed on the pneumatic positioner which allows an electric signal to pilot the positioner. It is based on the balanced-forces principle; air distribution to actuator chambers is done by a spool.

It can be fitted on single or double acting actuators and the operational stroke is between 3-100mm for reverse action with the spring extended.

The standard operational stroke length is 2-65mm for both direct and reverse action with a compressed cylinder spring with a maximum diameter of 200mm. The positioner works on a force balance type operating principle with linear characteristics. The feed-back element consists of a spring with a linear characteristic, actuated by the piston movement: no external elements for movement intake are required. The SA-1 positioner is very compact and can be fully installed on the servo-control system (It is especially suited for pump use).

This positioner is a double acting positioner but it can be used as a single acting one.

Product features and benefits

Compact design.

Metallic case.

Heavy duty design.

High reliability.

Intuitive mechanical and pneumatic construction.

Split range signal.

Special characterisation/ range.

Available full stainless steel spool valve.

No external feedback system.

Suitable for:

Standard, sandstorm, copper free ambient conditions.

Single and double acting actuators.

Low and high ambient temperature.

Technical specifications

Housing materials
Aluminum

Operating pressure
P min = 2.5 bar
P max = 7 bar
Design pressure = 10 bar

Static air consumption
1.02 Nm³/h (0.6 SCFM) at 400 kPa (60 psi)

Feeding connection
ND 1/4"

Output connection
ND 1/4"

Pilot signal connection
1/4" NPTF

Electrical connection (I/P converter)
ND 1/2" NPTF

Enclosure degree of protection
IP65

CV max
ND 1/4" Inlet = 0.34
ND 1/4" Outlet = 0.34

Operating temperature
-20°C / +70°C
-40°C / +85°C available on request

Signal
3-15 psi
4-20 mA

Sensitivity
0.2% of signal range

Linearity
1% of the stroke (direct action)

Hysteresis
0.5% of the full stroke

Weight
SA-1ND 1/4" = 1.9 kg
SA-1-EP ND 1/4" = 2.5 kg

Optional Accessories

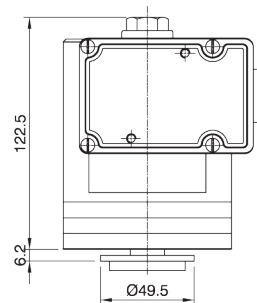
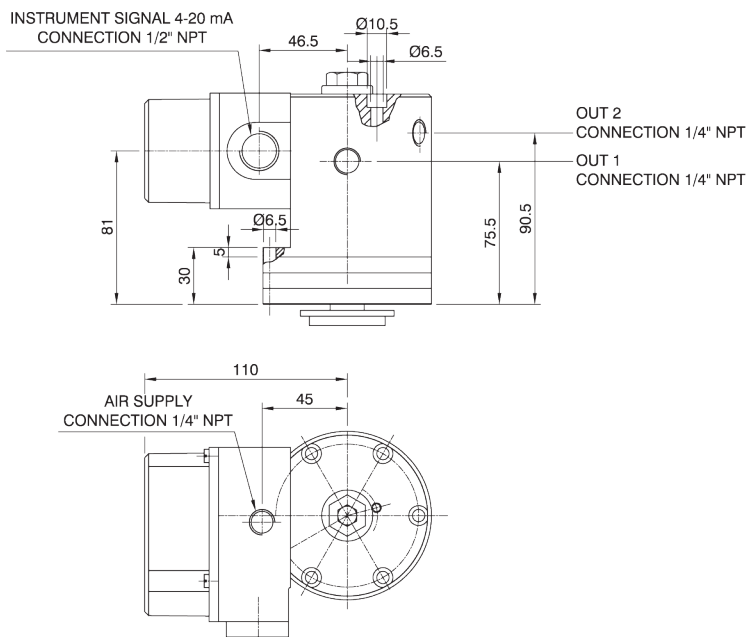
Electro-pneumatic version
intrinsically safe and explosion
proof.

Pressure gauges.

SA-1 pneumatic
version.



Dimensional drawing



Process Automation

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