

SA-1

The SA-1 is an analogue 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.



High reliability

Key features and benefits

- > Compact design
- > Metallic case
- > Heavy duty design
- > High reliability
- > Intuitive mechanical and pneumatic construction
- > Split range signal
- > Special characterisation/range
- > Available as full stainless steel spool valve
- > No external feedback system
- > Suitable for:
 - Standard, offshore, sandstorm, copper free ambient conditions
 - Single and double acting actuators
 - Low and high ambient temperature



SA-1 pneumatic version

Accessories

- > Electro-pneumatic version available - intrinsically safe and explosion proof for ATEX execution
- > Pressure gauges

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)

Static air consumption (I/P converter)

+0.09 Nm³/h (0.06 SCFM)

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

Dimensional drawing

