



# Valve Positioners

## Product Guide



- Valve positioner
- I/P converter
- Position transmitter
- Volume amplifier
- Valve monitor
- Damper actuator
- Mounting bracket and adaptation



ISO 9001:2008  
FS 573686



Sense has recently aggregated to its product portfolio the pneumatic, electropneumatic positioners, voltage converters for pressure (I/P) and position transmitters line.

Originally developed by DMTECH company, from Ribeirão Preto, these products will be manufactured in Sense's plant in Santa Rita do Sapucaí and traded by our sales chain. The products can be accessed through the website [www.dmtech.com.br](http://www.dmtech.com.br) and the technical and commercial negotiations, as well as all the assistance for the products' selection and use can be directly required in our application engineering PA, process automation.

### PFLEX - Valve Positioner

The PFLEX positioner receives an input signal from the controller and modulates the supply pressure to the actuator control valve, providing a precise positioning of the valve stem proportional to the input signal.

The versatile design combined with quality construction allows PFLEX be used in various types of pneumatic actuators. It has a construction for mounting in harsh industrial environments with no loss of accuracy.

- Supply pressure: 30-150 psi
- Pneumatic Fittings: 1/4 "NPT (manôm. 1/8" NPT)
- Flow capacity: 11 scfm @ 60 psi
- Temperature: -40 ° C to 85 ° C
- Independent Linearity:  $\pm 1.0\%$  FS (Full Scale)
- Hysteresis: 1.0% FS (Full Scale)
- Repeatability: 0.5% FS (Full Scale)

#### Pneumático

- Input Signal: 3 to 15 psi
- Air consumption: 0.25 scfm @ 60 psi

##### Rotative



##### Lineal



#### Eletro-Pneumático

- Input Signal: 4 to 20 mA
- Air consumption: 0.31 scfm @ 60 psi
- Electrical connection: 1/2 "NPT
- Load mesh: 9 volts  
(450 ohms @ 20 mA)
- Approval: Explosion-Proof  
Ex IIB + H2 T6 Gb  
IP 66

##### Rotative

###### General Use



###### Explosion-proof



###### Digital - HART



##### Lineal

###### General Use



###### Explosion-proof



OCP 0034

### Optional

- Monitor with 2 mechanical switches
- Monitor with 2 proximity switches
- Monitor with position transmitter
- Casing special material
- Construction for high flow
- Remote I/P converter mounting
- High temperature construction

Mounting with Monitor



Special material



### Mounting Brackets

Fisher



Masoneilan



Metso



Valtek



Hiter



Rotativa



Samson



### Special mounting

- Damper actuator
- Retrofitting
- Special mounting

Damper actuator



Retrofitting



Special mounting



### EDGE - Signal Converter - I/P

The I/P signal converter receives a DC current signal and provides pneumatic output signal proportional to the input signal.

The electronic module has a pressure sensor for output pressure feedback.

The construction uses the coil principle together with the spool / pallet, combining high resistance to vibration and low consumption.

- Input signal: 4 to 20 mA
- Output signal: 3 to 15 psi
- Electrical Connection: ½ "NPT
- Supply Pressure: 30-150 psi
- Air consumption: 0:10 scfm @ 60 psi
- Flow capacity:
  - No Amplifier scfm @ 60 psi 12:10
  - amplifier with 2:50 scfm @ 60 psi
- Temperature: -40 ° C to 85 ° C
- Accuracy: ± 0.5% FS (Full Scale)

### Application

Network load:  
9 volts (450 ohms @ 20 mA)

Explosion-proof -  
Ex IIB + H2 T6 Gb



Explosion-proof



General use



### Mounting options

Direct mounting in  
the positioner



Mounting with  
connection block



Mounting with  
volume amplifier





### THP - Position transmitter by Hall effect

The THP position transmitter uses the Hall effect position sensor, without physical contact, which makes it immune to mechanical vibrations.

This magnetic sensor can be used in applications with lineal or rotative movements.

The THP can be used to monitor the control valves shaft position. This information can be used to optimise the control loop. Another application is the roller displacement monitoring, e.g., in the mill upper roller displacement measurement system in sugar and ethanol plant.

- Power supply: 24 Vdc (2 wires)
- Output signal: 4-20 mA (maximum impedance 500 ohms)
- Electrical connection: ½ "NPT
- Temperature: -40 ° C to 85 ° C



### Types of magnets

- Course:

- lineal up to 100 mm
- rotative up to 180°

Rotative



Lineal



### Valve monitor

Valve monitors were developed to automate rotative valves of several types. They can be mounted over any rotative valve or pneumatic actuator, providing a local visual indication and remote electric signalling of the open or closed valve position, and position return with signal of 4 to 20mA.

- Mounting: Namur actuator  
Directly on positioner
- Electrical connection: ½ "NPT
- Options sensors: two mechanical switches  
2 proximity switches  
4 to 20 mA transmitter



### Volume Amplifier

Volume amplifier (Booster) has the function of reproducing pneumatic signals with flow capacity increase. It is used when the tubing between the instrument and the pneumatic actuator is large or when it is necessary to increase valve response speed.

- Ratio: 1:1 - 1:2 - 1:3 - 1:6  
(input and output pressure)
- Mounting bracket: for 2" tube



### Monitors for Rotatives:

#### M32 series



M32 - Standard The monitors are used in standard rotative actuators (NAMUR) with 30x80mm or 30x130mm fixation, with terminals for the connection of the solenoid. Conventional models or for Asi, DeviceNet or Profibus DP networks.

Monitors with aluminum casing



Monitors with stainless steel casing



#### M31 series



Monitors for standardized pneumatic actuators (Napur) mounting with 30x80mm or 30x130mm. Models with pigtail connector for solenoid. Sensors for Asi or DeviceNet network.

- Blue and green position signaller
- Incorporates the metallic/magnetic actuators

#### SVA series



SVA Double Protection series EX ZONA 0\*, 1 and 2. Agressive Environments. Robust Casing. Local Visual Signaller. Remote signalling.

- Great visibility signaller
- Incorporates the metallic/magnetic actuators
- No axis inside monitor box.
- Allows detection angle setting.

### SV series



SV monitors allow control and monitoring of rotary valves with wrappers for general use and increased safety (Ex e).

- Great visibility signaller
- Incorporates the metallic/magnetic actuators
- No axis inside the monitor box.
- Allows detection angle setting.

### Monitors for Lineals:

### I-VUE series



The I-VUE is an accurate non-contact detection system and with advanced electronics magnetic switches, activated and configured through three magnetic switches.

With additional features such as bright LEDs, local visual indicator, Low Power Solenoid, you can specify the most compact and complete intelligent system monitoring for diaphragm valves.

- The local signalling is performed by a mechanical indicator operated by a spring.
- In addition to mechanical indicator, highly visible LEDs are used to indicate the valve position locally, where green light and red open position to the closed position of the valve.

### XNNN series



The XNNN valve monitor is a reed switch hermetically sealed used as limit switch in linear displacing valves. Totally machined in stainless steel and encapsulated with resin, completely sealing it, allowing its installation in aggressive environments in the presence of liquids, powders, chemicals etc.

- Connection by sealed cable or pressure terminals
- Certified as explosion-proof
- NA + NF contacts capable of switching loads up to 3A/ 110Vac or 2A/ 24Vdc

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