

"aira" Electro-Pneumatic Positioner (4-20 mA DC, linear and rotary type) are advanced control devices which provide unparalleled stability in difficult environment.

**Description**

The "aira" AEP-1000-R/L series Electro-pneumatic are used as final controlling element for operation of pneumatic Rotary/linear valve actuators in correspondence with an input Signal of 4-20mA DC or split ranges.

The Positioners are based on a force balance design for control application that requires a high degree of reliability and repeatability at an economical cost.

The Positioners can handle the supply pressure up to 100 psig for higher pressure industrial pneumatic and process control system requirements.

**Principle Of Operation**

The operation of "aira" AEP-1000-R/L series positioners is based on a force balanced system. Tension on the feedback spring provides feedback to the positioner which will vary as the actuator shaft rotates with cam. The spring Loading force is applied through the cam shaft & cam to the positioner's instrument signal capsule through the balance beam.

Input of 4-20mA DC is applied to the instrument and corresponding output is applied to the control capsule serving as force balance membrane and matching the actuator shaft position to the instrument signal.

**Mounting**

The "aira" AEP-1000-R/L series positioners may be mounted on Linear Actuator/Rotary Actuator as per installation and operational manual.

**Field Reversible**

To change from direct acting to reverse acting simply reverse the cam and fix it on cam shaft and make sure of the signal SPAN which is printed on the cam and recalibrate for Actuator fully open or close position in case of Pneumatic to Pneumatic. For Electro-Pneumatic change current signal input leads from positive to negative and change current signal from 4-20 to 20-4 over and above cam reverse and recalibrate the Positioner.

**Technical Specifications**

TYPE	AEP-1000-R/L	
	Linear / Rotary Type	
ITEM	Single	Double
Input Signal	4-20 mA DC (NOTE 1)	
Input Resistance	235±15	
Supply Air Pressure	20-100psi (7.0 kg/cm <sup>2</sup> )	
Standard Stroke	10-80mm (NOTE 2)	
Air Piping Connection	¼ NPT (F)	
Conduit Connection	½ NPT (F)	
Explosion-proof Classification	Exia II BT6, Exdm II BT6, Exdm II CT6	
Degree of Protection	IP66	
Ambient Temperature	-20°C to 70°C	
Pressure Gauge	Stainless Steel 0-2 kg/cm <sup>2</sup>	
	0-4 kg/cm <sup>2</sup>	
	0-10 kg/cm <sup>2</sup>	
Output Characteristics	Linear / Rotary	
Linearity	Within ± 1.0% F.S.	
Sensitivity	Within 0.2% F.S.	
Hysteresis	Within 0.75% F.S.	
Repeatability	Within ± 0.5% F.S.	
Air Consumption	5.0 LPM (1.4 kg/cm <sup>2</sup> ) Supply	
Flow Capacity	80 LPM (1.4 kg/cm <sup>2</sup> ) Supply	
Material	Alluminium Diecast Body	
Weight	2.8 Kg. With a terminal box	

**Integrated Characteristics**

- Suitable for Rotary / Linear Actuators.
- Low Air consumption.
- No resonance at 5-200Hz.
- Prevents hunting by using Orifice for small size actuator.
- Simple Converting to Direct Acting or reverse Acting.
- Precise Calibration with simple SPAN and Zero Adjustments.
- Suitable for Single/Double acting Actuators.
- Can control 1/2 split range with simple operation without replacing any parts.
- Extremely Vibration Resistance Design.
- Easy Maintenance.
- Corrosion-Resistance Aluminium Diecast Body.

**Features**

- Designed as block build structure for maintenance and repair
- Precise calibration with simple SPAN and ZERO adjustments
- Simple conversion to Direct Acting or Reverse Acting
- Split range control available by simple adjustments without changing parts
- Simple structure for feedback connection
- Corrosion-resistant aluminium die cast body
- Sensitive response for high performance
- Vibration resistant design
- Stainless Steel Gauge Standard
- A restricted pilot valve orifice kit for small actuators included
- Optional built-in limit switched or 4-20 mA position transmitter for feedback
- Optional directly-mountable positioner
- Proved the reliability through over 5,00,000 times of repeat test & Vibration test.

**Options Available :**

- Position Transmitter (4-20mA DC.)
- Two limit Switches.

- Valve, Valve-Actuators
- Damper and Louver Actuators
- Air-Cylinders
- Relays
- Clutches
- Web Tensioners and Brakes

**Application**

The "aira" AEP - 1000 R/E Positioners converts pneumatic/electrical signal to a pneumatic output which can be used to operate the following:

**Used In :**

Petrochemical Processing Systems, Energy Management, HVAC Systems, textile Processing Systems. Pharmaceutical Processing System, Paper & Pulp Handling Controls.

**NOTE :** 1. 1/2 split range can be adjusted  
2. Feedback lever for stroke 80-150mm is available (PPL)



Model : AEP-1000-R/L