

# ELECTRO-PNEUMATIC POSITIONERS (Rotary/Linear)

**MIEPL**



## Description

The MIEPL EP series Electro-pneumatic Positioners are used as final controlling element for operation of pneumatic Rotary/Linear valve actuators in correspondence with an input signal of 4~20 mA 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 MIEPL EP series E/P Positioners are 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 MIEPL EP 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 original SPAN which is printed on the cam and re-calibrate for Actuator fully open or close position incase 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 can reverse and re-calibrate the Positioner.



## Position Transmitter

Provided with MIEPL E/P positioner against order. With zero span Potentiometer. With RA & DA Selectable switch.

## Integrated Characteristics

- Suitable for Rotary / Linear Actuators.
- Low Air Consumption.
- No resonance at 5~200 Hz.
- Prevents hunting by using Orifice for small size actuator.
- Simple Conversion to Direct Acting or Reverse Acting.
- Precise Calibration with simple SPAN and Zero Adjustments.
- Suitable for Single? Double acting Actuators.
- Can control ½ split range with simple operation without replacing any parts.
- Extremely Vibration Resistance Design
- Easy Maintenance
- Corrosion-Resistance Aluminium Die-cast Body.
- **Options available:**

Position Transmitter (4~20mA DC)

Two Limit Switches

## Applications

The MIEPL EP series Positioner converts pneumatic/electrical signal to a pneumatic output which can be used to operate the following:

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

Used in :

- Petrochemical Processing Systems, energy management, HVAC Systems, Textile Processing System, Pharmaceutical Processing Systems, Paper & Pulp Handling Controls.



## Specifications

### Rotary Single/Double acting

Item -Type	Single   Double
Input Signal	4~20 mA DC
Impedance	250 ± 15 Ω
Supply Pressure	1.4-7 kgf / cm <sup>3</sup> (20~100 psi)
Stroke	0-90 °
Air Connection	PT (NPT) 1/4"
Gauge Connection	PT (NPT) 1/8"
Conduit	PF ½ (G ½)
Explosion Proof	Ex dm IIB (C) T6 Ex ia IIB T6
Protection	IP66/IP65
Ambient Temp.	-20°C ~ 70°C
Linearity	±1% F.S.   ±2% F.S.
Hysteresis	1% F.S.
Sensitivity	±0.2% F.S.   ±0.5% F.S.
Repeatability	±0.5% F.S.
Air Consumption	3LPM (Sup+1.4kgf /cm <sup>3</sup> 20 psi)
Flow Capacity	80LPM (Sup+1.4kgf /cm <sup>3</sup> 20psi )
Material	Aluminium Die-casting
Weight	2.9kg (6.4 lb)

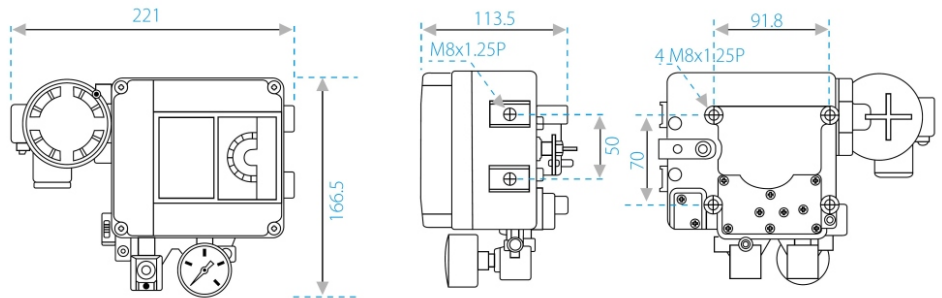
### Linear Single/Double acting

Item -Type	Single   Double
Input Signal	4~20 mA DC
Impedance	250 ± 15 Ω
Supply Pressure	1.4-7 kgf / cm <sup>3</sup> (20~100 psi)
Stroke	10-150mm
Air Connection	PT (NPT) 1/4"
Gauge Connection	PT (NPT) 1/8"
Conduit	PF ½ (G ½)
Explosion Proof	Ex dm IIB (C) T6 Ex ia IIB T6
Protection	IP66/IP65
Ambient Temp.	-20°C ~ 70°C
Linearity	±1% F.S.   ±2% F.S.
Hysteresis	1% F.S.
Sensitivity	±0.2% F.S.   ±0.5% F.S.
Repeatability	±0.5% F.S.
Air Consumption	3LPM (Sup+1.4kgf /cm <sup>3</sup> 20 psi)
Flow Capacity	80LPM (Sup+1.4kgf /cm <sup>3</sup> 20psi )
Material	Aluminium Die-casting
Weight	2.7kg (6.1 lb)

## Ordering Information E/P Positioners (Rotary)

Model EPR ■ ■ ■ ■

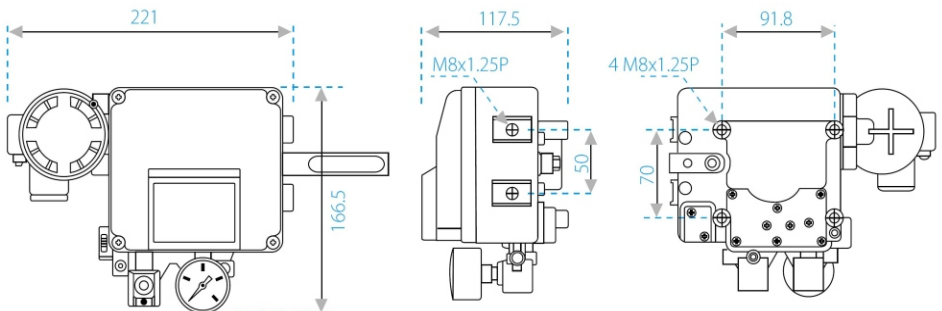
Acting Type	<span style="color: pink;">S</span> Single	<span style="color: pink;">D</span> Double
Explosion Proof	<span style="color: cyan;">y</span> Explosion Proof	<span style="color: cyan;">n</span> Non-Explosion
Orifice Type	<span style="color: yellow;">1</span> Below 90 cm <sup>3</sup> <span style="color: yellow;">3</span> Over 180 cm <sup>3</sup>	<span style="color: yellow;">2</span> 90~180 cm <sup>3</sup>
Option	<span style="color: grey;">0</span> None	<span style="color: grey;">1</span> + PTM (Internal)



## Ordering Information E/P Positioners (Linear)

Model EPL ■ ■ ■ ■ ■

Acting Type	<span style="color: pink;">S</span> Single	<span style="color: pink;">D</span> Double
Explosion Proof	<span style="color: cyan;">y</span> Explosion Proof	<span style="color: cyan;">n</span> Non-Explosion
Lever Type	<span style="color: grey;">1</span> Below 40mm <span style="color: grey;">3</span> 70~100mm <span style="color: grey;">5</span> 130~150mm	<span style="color: grey;">2</span> 40~70 mm <span style="color: grey;">4</span> 100~130mm
Orifice Type	<span style="color: yellow;">1</span> Below 90 cm <sup>3</sup> <span style="color: yellow;">3</span> Over 180 cm <sup>3</sup>	<span style="color: yellow;">2</span> 90~180 cm <sup>3</sup>
Option	<span style="color: green;">1</span> None	<span style="color: green;">2</span> + PTM (Internal)



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