

# Electro-Pneumatic Positioners *series 700FC*

(Rotary / Linear)



## ► 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 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 Diecast Body.
- **Options available :**  
*Position Transmitter ( 4-20mA DC).*  
*Two limit Switches.*

## ► Application

The Flucon 700FC Positioners 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 Systems, Pharmaceutical Processing System, Paper & Pulp Handling Controls.

## ► Description

The FLUCON 703/704 FC 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 FLUCON 700 FC 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 FLUCON 700 FC 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 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 cam reverse and recalibrate the Positioner.

## Position Transmitter

Provided with Flucon 703 & 704 E/P positioner against order.  
 With zero and span Potentiometer.  
 With RA & DA Selectable switch.



► Specifications

**Rotary Single/Double acting**

Item - Type	Single	Double
Input Signal	4 - 20mA DC	
Impedance	250 ± 15 Ω	
Supply Pressure	1.4~7kgf/cm <sup>3</sup> (20~100 psi)	
Stroke	0~90°	
Air Connection	PT (NPT) ¼	
Gauge Connection	PT (NPT) ⅙	
Conduit	PF ½ (G½)	
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> 20psi)	
Flow Capacity	80LPM (Sup+1.4kgf / cm <sup>3</sup> 20psi)	
Material	Aluminum Diecasting	
Weight	2.9kg (6.4 lb)	

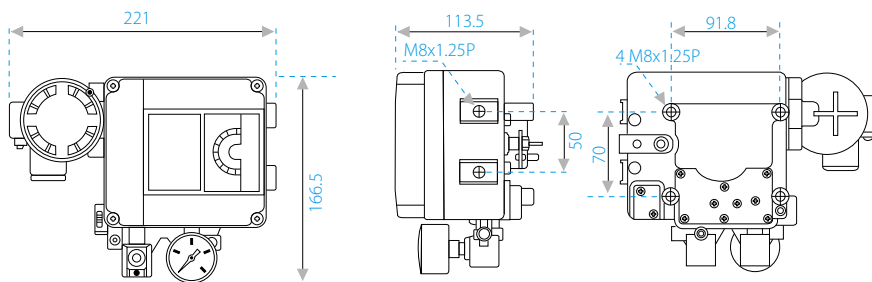
**Linear**

Item - Type	Single	Double
Input Signal	4 - 20mA DC	
Impedance	250 ± 15 Ω	
Supply Pressure	1.4~7kgf/cm <sup>3</sup> (20~100 psi)	
Stroke	10~150mm	
Air Connection	PT (NPT) ¼	
Gauge Connection	PT (NPT) ⅙	
Conduit	PF 1/2 (G1/2)	
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> 20psi)	
Flow Capacity	80LPM (Sup+1.4kgf / cm <sup>3</sup> 20psi)	
Material	Aluminum Diecasting	
Weight	2.7kg (6.1 lb)	

► Ordering Information E/P Positioners (Rotary)

**Model 703 FC** ■ ■ ■ ■

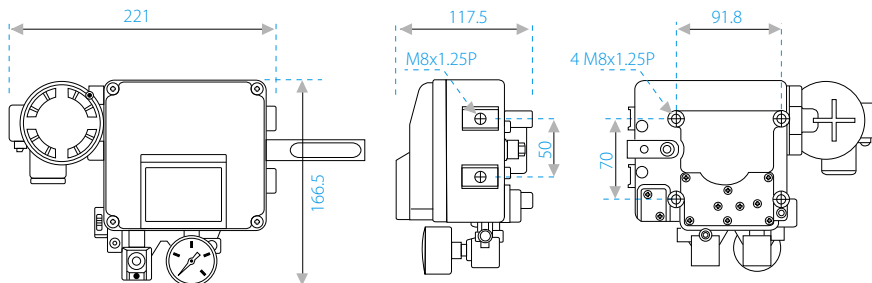
- Acting Type S Single D Double
- Explosion Proof y Ex. Proof n Non-Explosion
- Orifice Type 1 Below 90 cm<sup>3</sup> 2 90 ~ 180 cm<sup>3</sup>  
3 Over 180 cm<sup>3</sup>
- Option 0 None 1 + PTM (Internal)



► Ordering Information E/P Positioners (Linear)

**Model 704 FC** ■ ■ ■ ■ ■

- Acting Type S Single D Double
- Explosion Proof y Ex. Proof n Non-Explosion
- Lever Type 1 Below 40 mm 2 40 ~ 70mm  
3 70 ~ 100mm 4 100 ~ 130mm  
5 130 ~ 150mm
- Orifice Type 1 Below 90 cm<sup>3</sup> 2 90 ~ 180 cm<sup>3</sup>  
3 Over 180 cm<sup>3</sup>
- Option 1 None 2 + PTM (Internal)



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