



Electro-Pneumatic Positioner 5700 Series

- Simple zero and span adjustment
- Easy 1/2 split range setting
- Auto / Manual switch
- IP66 Weather proof



Electro-Pneumatic Positioner 5700 Series



Introduction

Jflow Controls is a professional brand of control valve accessories. We are trying to provide excellent quality of product through long-term field experience and manufacturing background of experience.

5700 Series is state-of-the-art electro-pneumatic positioner. It is designed for user-friendly and built-in type for convenience features and durability.

Product Description

5700 Series Electro-pneumatic positioner control valve stroke in response to input signal of 4-20mA from control panel, DCS, or calibrator.

Product Features

- Applied to various control valve system.
- Fast response time, durability, and excellent stability.
- Simple zero and span adjustment.
- IP 66 enclosure.
- Easy maintenance with replaceable modules.
- Resistant to vibrations and No resonance between 5 - 200 Hz.
- By-pass valve (A/M switch) installed.



Electro-Pneumatic Positioner 5700 Series



Product Specification

Item.Type	5700L		5700R	
	Single	Double	Single	Double
Input Signal	4~20mA DC			
Impedance	250			
Supply Pressure	20 to 102 PSI			
Stroke	10~150mm		0~90°	
Air Connection	1/4" NPT			
Gauge Connection	1/4" NPT			
Conduit	1/2" NPT			
Explosion Proof	Non-Explosion Ex dmb IIB T5/T6 Ex dmb IIC T5/T6 Ex ia IIC T5/T6			
Enclosure	IP66			
Ambient Temp.	Operating Temp.		-20°C~70°C (Standard) -40°C~70°C(Low Temp), -20°C~120°C (High Temp)	
	Explosion Temp.		-40~60°C(T5) / -40~40°C(T6)	
Linearity	±1.0% F.S	±2.0% F.S	±1.0% F.S	±2.0% F.S
Sensitivity	±0.2% F.S	±0.5% F.S	±0.2% F.S	±0.5% F.S
Hysteresis	±1.0% F.S			
Repeatability	±0.5% F.S			
Air Consumption	Blow 0.09 CFM (Sup=20 PSI)			
Flow Capacity	Over 2.9 CFM (Sup=20 PSI)			
Material	Aluminum Diecasting			
Weight	6.2 lbs			

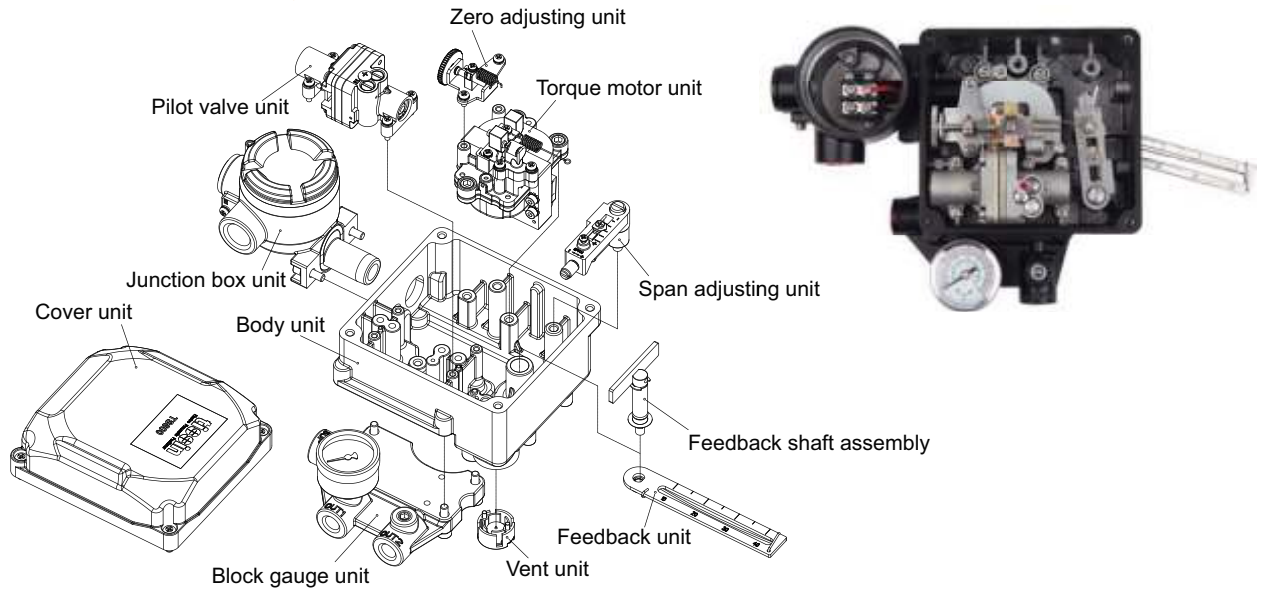
- Tested under ambient temperature of 20°C, absolute pressure of 760mmHg, and humidity of 65%.
- Please contact Jflow Controls for detailed testing specification.



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Parts and Assembly



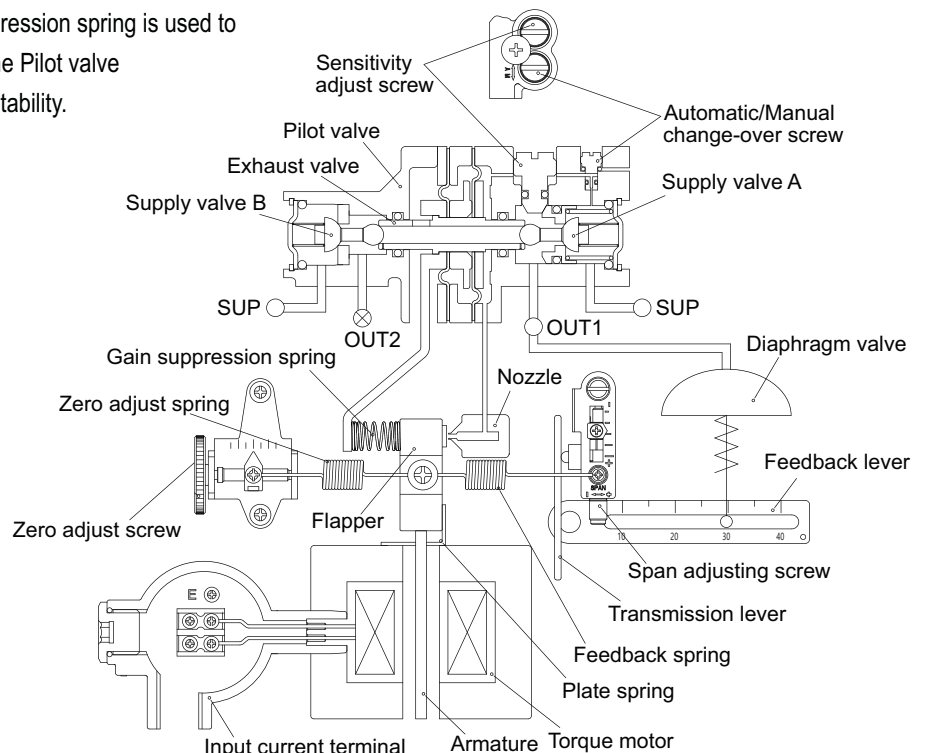
Operation Logic

When the input current (4-20mA) increases, Armature receives counter-clockwise rotating torque as a magnetic field strength of Torque motor and Flapper moves to left as the center of Plate Spring. When the space between Flapper and Nozzle opens, the Nozzle back pressure* decreases. As a result, Exhaust valve of Pilot valve moves to right. At the same time, Supply valve A of OUT1 moves to right and opens Supply valve. Air supply through OUT1 increases air pressure of diaphragm and diaphragm valve moves downward. The movement of diaphragm valves acts on Feedback spring through Feedback lever and Flapper increases torque to the left pull. The diaphragm valve is balanced at the position between the above spring torque and magnetic field strength generated by the input current. Gain suppression spring is used to immediately feedback the movement of the Pilot valve to the Flapper and it increases the loop* stability.

* The above are explained by based on 5700L linear type and Diaphragm valve of RA(Reverse Action) type. 5700R rotary type is same as Operation logic of 5700L linear type except feedback structure.

* Nozzle back pressure
Internal pressure of Nozzle depending on the control the Nozzle by the Flapper.

* Loop
Positioner and Control valve consist of closed-circuit through Feedback lever.

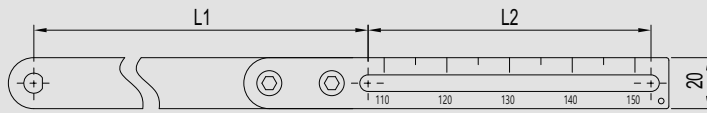
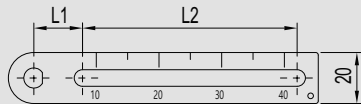


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Lever & Bracket

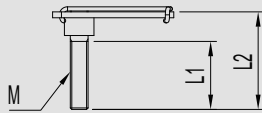
5700L Lever Dimension



Unit: mm

Lever Type	Stroke	L1	L2
1	10 ~ 40	19.1	84.2
2	40 ~ 70	92	86.4
3	70 ~ 100	165.8	86.4
4	100 ~ 150	264.2	111

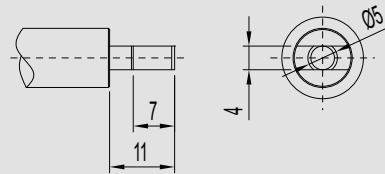
5700R Lever Dimension



Unit: mm

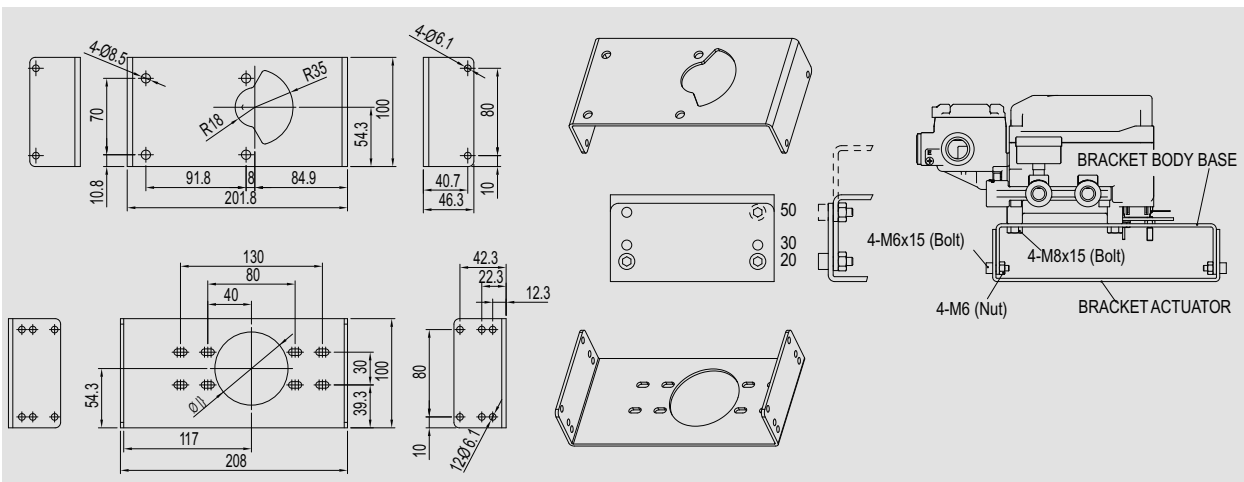
Lever Type	L1	L2	M
1	23	34	M6

Fork Lever Type



NAMUR Type

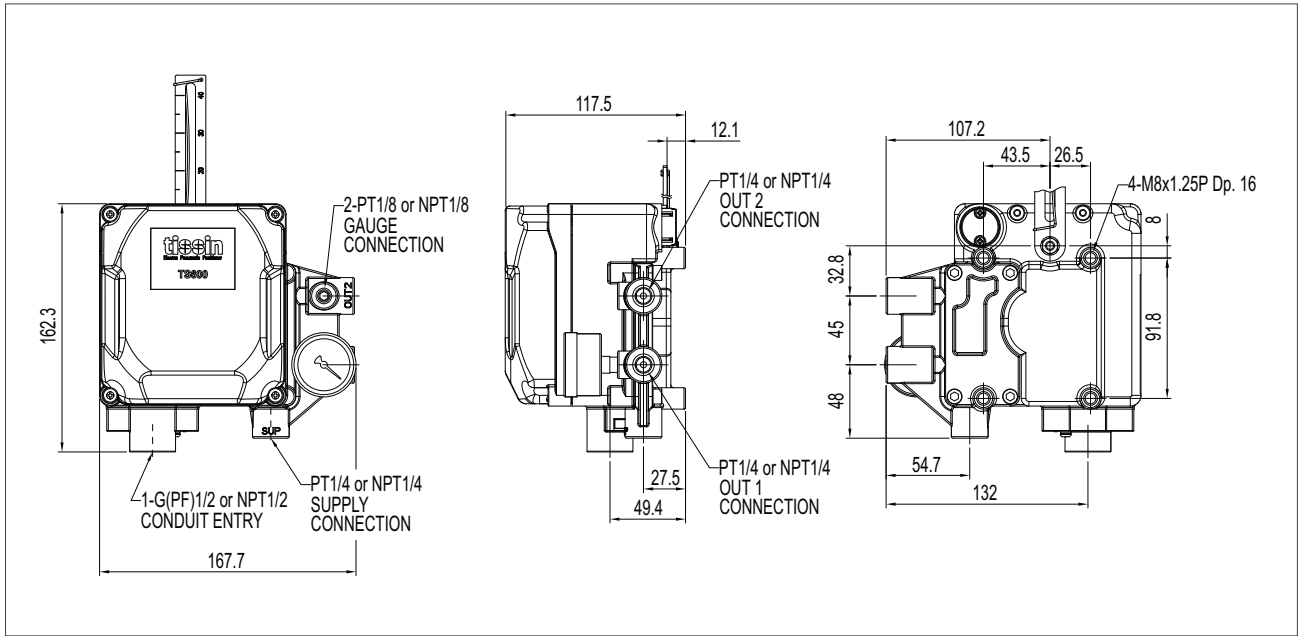
5700R Bracket Dimensions



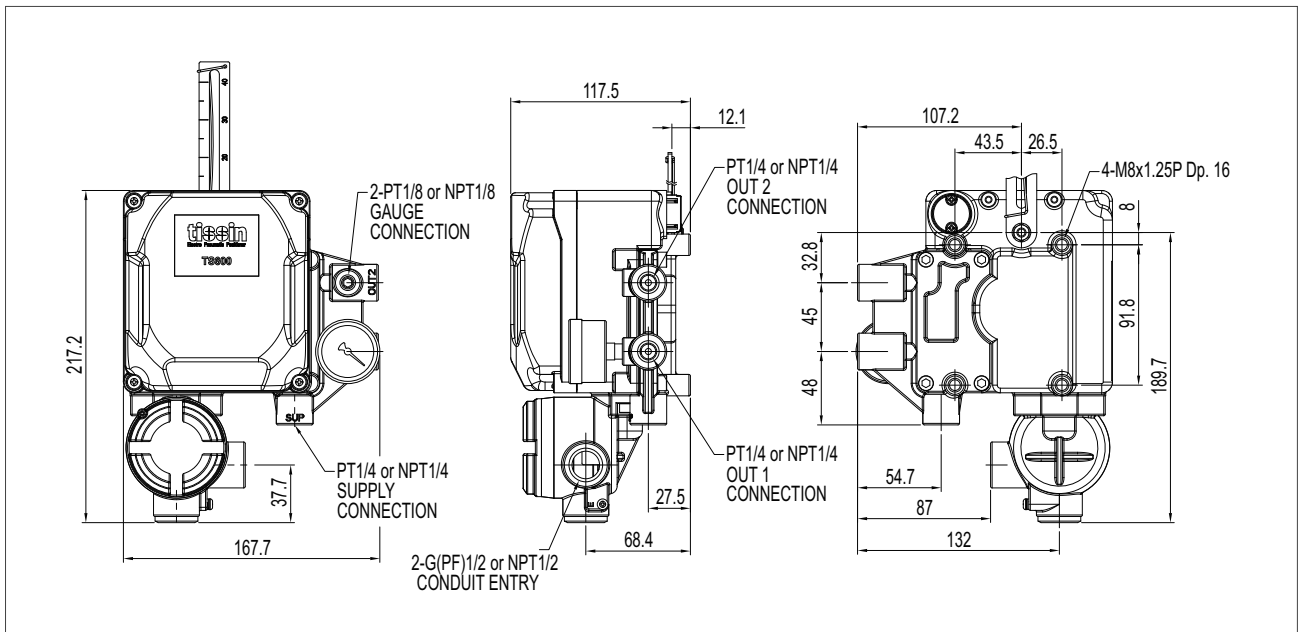
Electro-Pneumatic Positioner 5700 Series



5700L Dimension



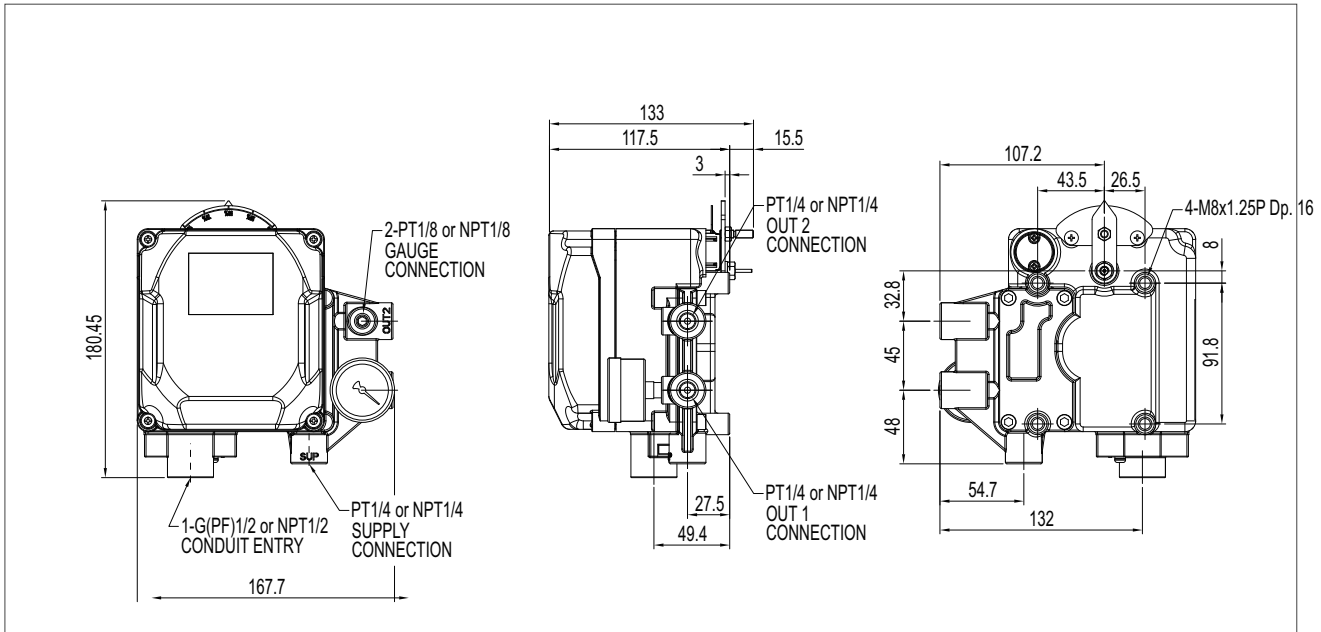
<5700L Intrinsically Safe Type & Non-Explosion Type Dimension>



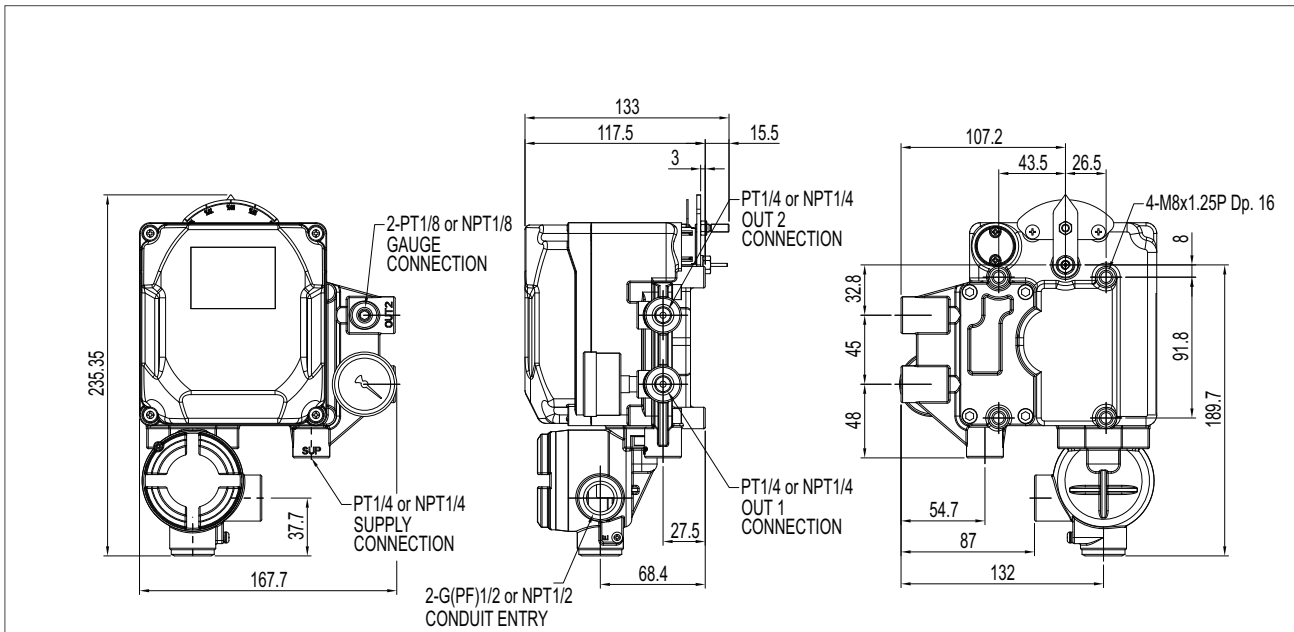
<5700L Flame Proof Type Dimension>

Electro-Pneumatic Positioner 5700 Series

5700R Dimension



<5700R Intrinsically Safe Type & Non-Explosion Type Dimension>



<5700R Flame Proof Type Dimension>

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5700 Series

Product Number

Model	5700						
Motion Type	Linear type	L					
	Rotary type	R					
Explosion Proof Type	Non-Explosion Type	N					
	Ex dmb IIB T5/T6	B					
	Ex dmb IIC T5/T6	C					
	Ex ia IIC T5/T6	A					
Connection	<u>Conduit Entry</u>	<u>Air Connection</u>					
	G(PF)1/2	PT1/4			1		
	G(PF)1/2	NPT1/4			2		
	NPT1/2	NPT1/4			3		
Linear Lever Type	10 ~ 40mm					1	
	40 ~ 70mm					2	
	70~100mm					3	
	100~150mm					4	
Rotary Lever Type	M6 x 34L					1	
	NAMUR Type					5	
Ambient Temp	-20°C~70°C						S
	-20°C~120°C*						H
	-40°C~70°C						L
Option	None						0
	4~20mA Feedback signal						1
	Limit Switch Included (2xSPDT)						2
	4~20mA Feedback Signal with Limit Switch (2xSPDT)						

* Note. With high temp positioner must be Non-Explosion type.

* Option is available for rotary type ONLY.



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