Electro-Pneumatic Positioner

EPL

Robust valve control device giving a confidence in reliable performance and outstanding durability under harsh working environments

Features

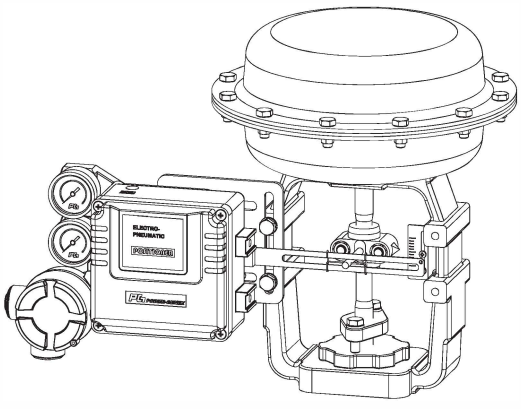
- Easy maintenance
- Precise calibration with simple SPAN and ZERO adjustments
- Simple conversion to direct acting or reverse acting
- 1/2 split range available
- Rugged aluminum housing with corrosion-resistant coating
- Vibration resistant design
- Stainless steel gauges standard
- Restricted pilot valve orifice kit for small actuators included
- KC-certified flameproof Ex dmb IIB+H_2 T6
- NEPSI-certified flameproof Ex dmb IIB+H_2 T6
- IECEx-certified flameproof Ex dmb IIC T6/T5
- ATEX / TR-CU-certified flameproof Ex dmb IIC T6/T5
- KC-certified flameproof Ex dmb IIC T6/T5
- IECEx-certified intrinsically safe Ex ia IIC T6
- ATEX / TR-CU-certified flameproof Ex ia IIC T6
- KC-certified intrinsically safe Ex ia IIC T6

Specifications

	EPL	
	Linear Type (Lever Feedback)	
	Single	Double
Input Signal	4~20 mA DC (Note. 1)	
Input Resistance	235±15Ω	
Air Supply	Max. 7.0 bar (100 psi) free of oil, water, and moisture	
Standard Stroke	10~80mm (Note. 2)	
Pneumatic Connections	PT(Rc) 1/4 or NPT 1/4	
Electrical Connections	PF(G) 1/2 or NPT 1/2	
Protection Class	Ex dmb IIB+H_2 T6 / Ex dmb IIC T6/T5 Ex ia IIC T6 / IP66	
Ambient Temperature	-20 ~ +70℃ (Note. 3)	
Pressure Gauge	Stainless steel	
Output Characteristics	Linear	
Linearity	Within ±1.0 % F.S	Within ±1.5 % F.S
Sensitivity	Within ±0.2 % F.S	Within ±0.5 % F.S
Hysteresis	Within 1.0 % F.S	
Repeatability	Within ±0.5 % F.S	
Air Consumption	5 LPM (Sup. 1.4 kgf/㎠)	
Flow Capacity	80 LPM (Sup. 1.4 kgf/㎠)	
Material	Aluminum die-cast	
Weight	3.3 kg (with terminal box) 3.0 kg (without terminal box)	

Options

- Position transmitter (4...20 mA ouput signal)
- High temperature (+120℃)
- Low temperature (-40℃)



Note : 1) 1/2 spilt range is available for 4~12mA input signal or 12~20mA input signal
2) Feedback lever can be extended to stroke 80 ~ 150mm

3) Temperature option : up to +120℃ without feedback options
up to +85℃ with feedback options
up to -40℃ without feedback options

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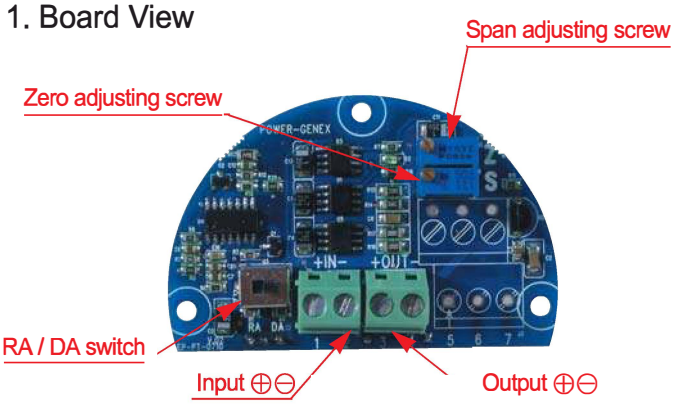
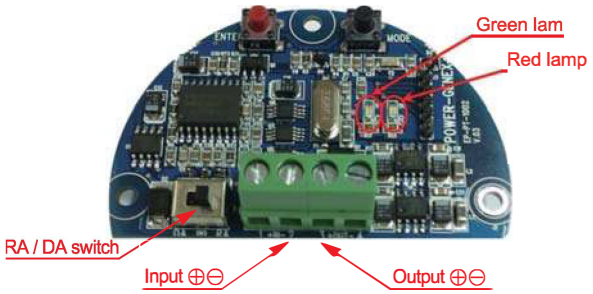
Position Transmitter Options (Built-in Type)

1. Board View

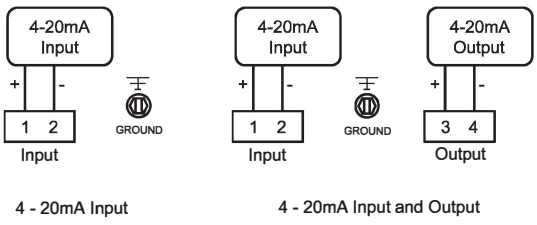


< Analog Position Transmitter >



< Smart Position Transmitter >
(Zero / Span Auto Setting)

3. Wiring Diagram



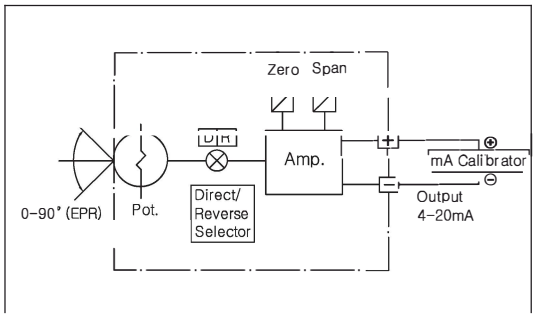
4 - 20mA Input　　4 - 20mA Input and Output

2. Position Transmitter (4-20mA output signal)

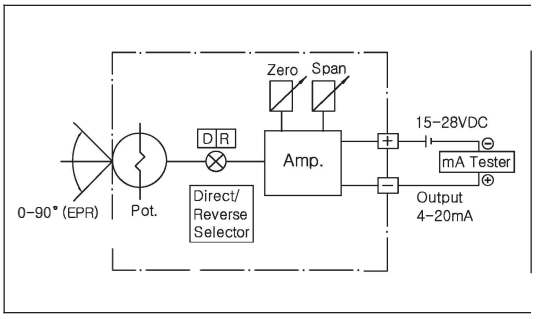
a. Specifications

Power Supply Rating	5.5 - 30 VDC loop power
Recommended Power Supply	24 VDC
Output Signal	4 - 20 mA, 2-wire
Operating Temperature	-20℃ ~ +85℃
Load Impedance	0 ~ 600 ohms
Max. Output	30 mA DC
Linearity	±1.0 %
Hysteresis	1.0 % of full scale
Repeatability	±0.5 % of full scale
Adjustment	Zero and Span in terminal box

b. with mA calibrator

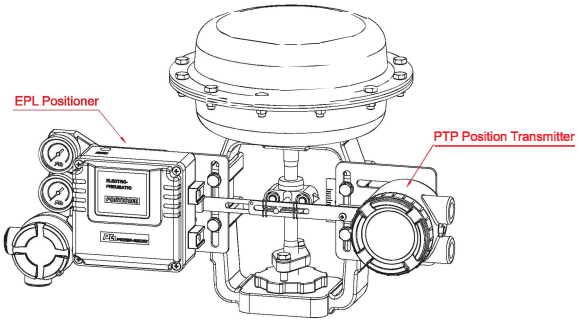


c. with multimeter

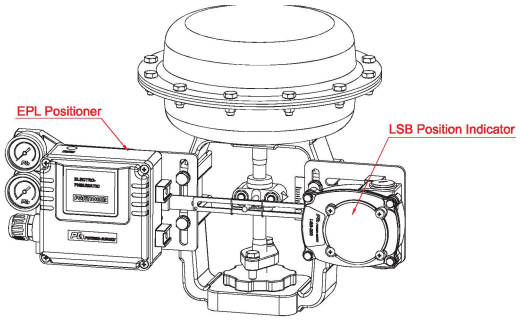


Application for Limit Switches (External Type)

1) With explosion proof PTP-L



2) With non-explosion proof LSB-200



EPL

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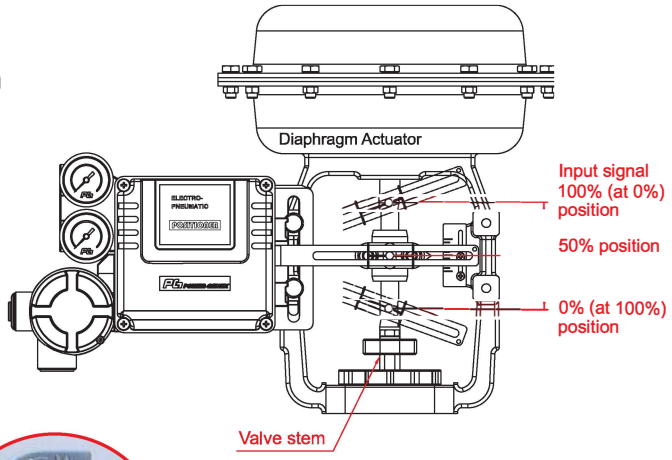
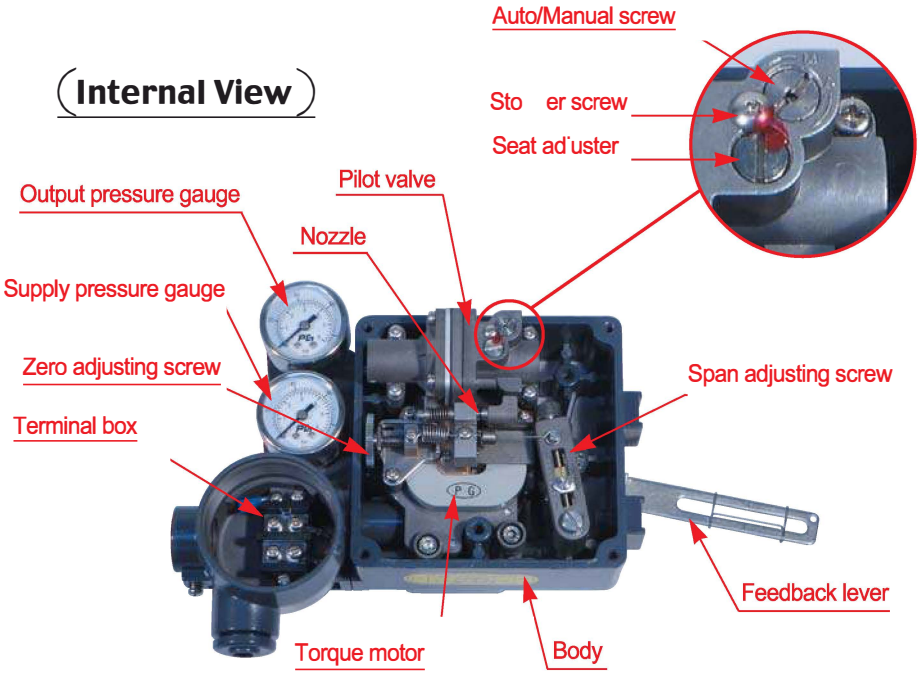
Mounting

1. Install the EPL positioner so that the angle between the valve stem and the feedback lever can be 90° at 12mA input signal (50%) as shown to the right.
2. The operating angle of the EPL feedback lever is minimum 10° to maximum 30°.



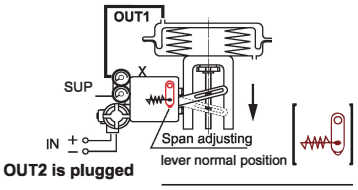
Internal View



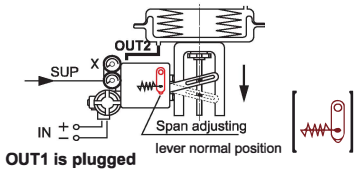
Air Connections

Direct Acting (DA)

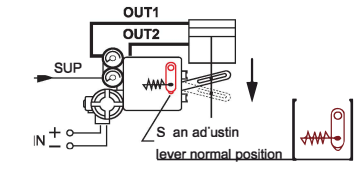
As the input signal increases,
Valve stem moves downwards
Actuator : **DA**
Connection : out 1



As the input signal increases,
Valve stem moves downwards
Actuator : **DA**
Connection : out 2

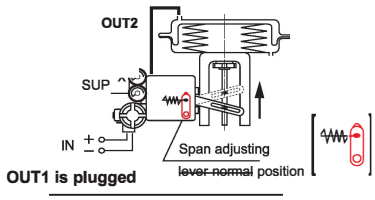


As the input signal increases,
Valve stem moves downwards

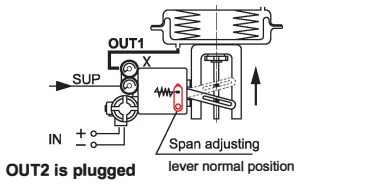


Reverse Acting (RA)

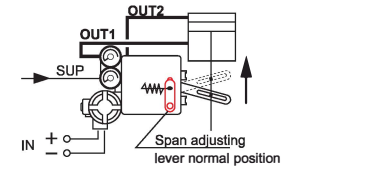
As the input signal increases,
Valve stem moves upwards
Actuator : **RA**
Connection : out 2



As the input signal increases,
Valve stem moves upwards
Actuator : **RA**
Connection : out 1



As the input signal increases,
Valve stem moves upwards



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How to Order

EPL – | Protection Class | Feedback Lever | Pressure Gauge (SUP. OUT) | Pilot Valve Orifice | Position Feedback | Connection Threads | Operating Temp. | Mounting Bracket |

Description	Code
Protection Class :	F : KC / NEPSI flameproof Ex dmb IIB+H_2 T6 A : KC flameproof Ex dmb IIC T6/T5 D : IECEx / ATEX / TR-CU flameproof Ex dmb IIC T6/T5 I : IECEx / ATEX / TR-CU / KC intrinsically safe Ex ia IIC T6 W : Weatherproof to IP66
Feedback Lever :	A : Stroke 10 ~ 40mm B : Stroke 10 ~ 80mm C : Stroke 80 ~ 150mm
Presure Gauge :	1 : 6 bar (90 psi) 2 : 10 bar (150 psi)
Pilot Valve Orifice :	S : Standard(Actuator volume over 180㎤) M : Small orifice (ϕ1.0 or ϕ0.7) (Actuator volume over 90 ~180㎤)

Description	Code
Position Feedback : (only for weatherproof type)	N : None (standard) O : Analog position transmitter (4 ~ 20mA output signal) S : Smart position transmitter (4 ~ 20mA output signal)
Connection Threads : (pneumatic - electrical)	3 : PT(Rc) 1/4 - PF(G) 1/2 (standard) 4 : NPT 1/4 - NPT 1/2 5 : PT(Rc) 1/4 - M20 x 1.5
Operating Temperature : (only for weatherproof type)	T : 70℃(standard) H : 120℃(without position feedback option) 85℃(with position feedback option) L : - 40℃(without position feedback option)
Mounting Bracket :	N : None L : IEC 60534-6-1

Dimensions