Electro-Pneumatic Positioner

EPL

ATEX-approved (flameproof)

Intrinsically safe
/ Non-explosion proof

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
- Certified for ATEX Eex md ⅡB T5 (05 ATEX 1076X) by NEMKO in conformance with EN 50014:1997, EN 50018:2000 and EN 50028:1987
- Certified for EMC (K1046 / E04) in conformance with EN 61000-6-2:2001 and EN 61000-6-4:2001 by RWTUV
- Certified for Ex md ⅡB T6 (99-1075-Q1), Ex md ⅡC T6 (2000-1057-Q1), and Ex ia ⅡB T6 (2000-1056-Q1) by KOSHA

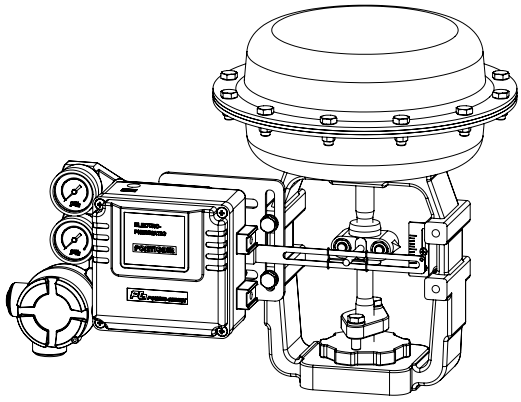
Options

- Position transmitter (4...20 mA output signal)
- High temperature

Specifications

	EPL	
	Linear Type (Lever Feedback)	
	Single	Double
Input Signal	4~20 mA DC (Note. 1)	
Input Resistance	235±15 Ω	
Air Supply	Max. 7.0 bar (100 psi) free of oil, water, and moisture	
Standard Stroke	10~80mm (Note. 2)	
Pneumatic Connections	Rc 1/4 or NPT 1/4	
Electrical Connections	G 1/2 or NPT 1/2	
Protection Class	Ex md ⅡB T6, Ex md ⅡC(H_2) T6, IP66, Ex ia ⅡB T6 Eex md ⅡB T5 for ATEX	
Ambient Temperature	-20 ~ +70℃	
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)	

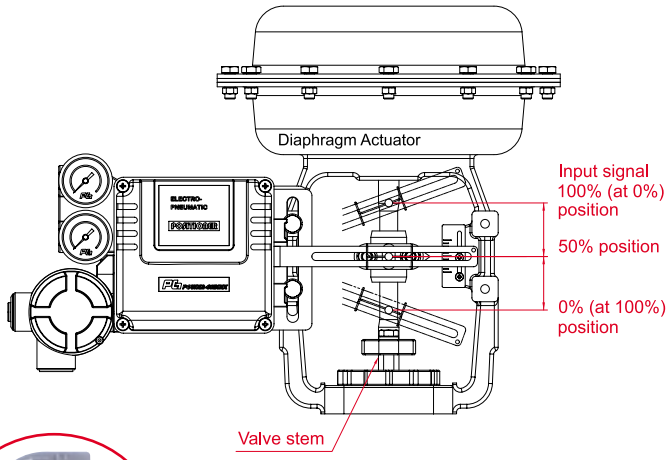
Note : 1) 1/2 spilt range is available for 4-12mA input signal or 12-20mA input signal
2) Feedback lever can be extended to stroke 80 - 150mm



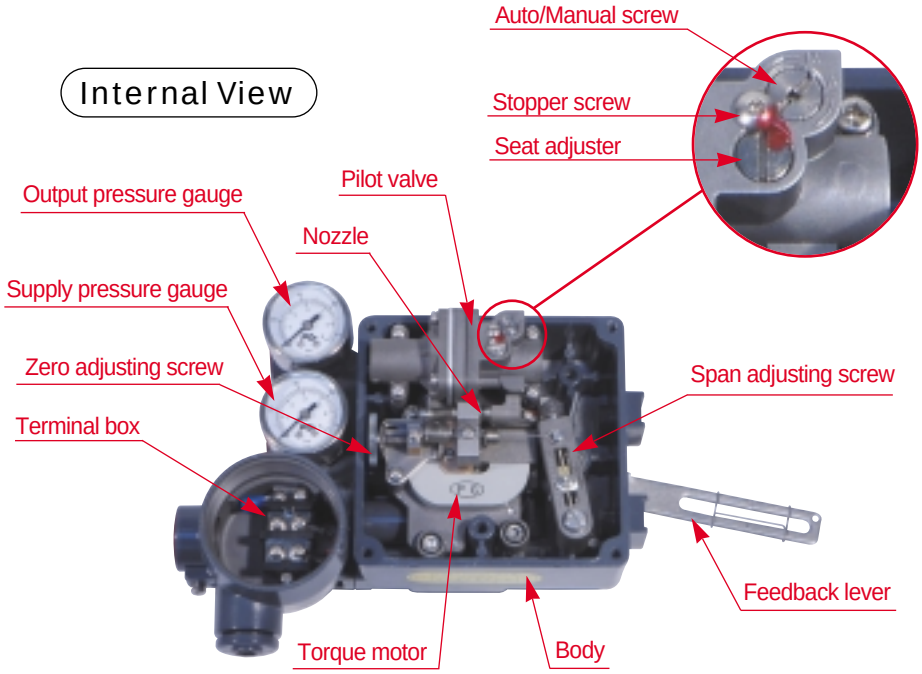
Mounting

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°.

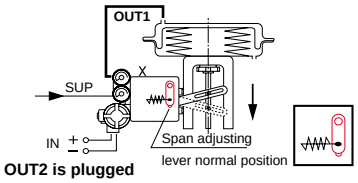
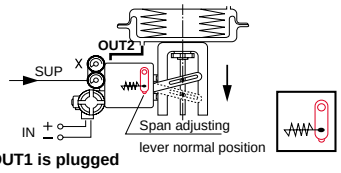
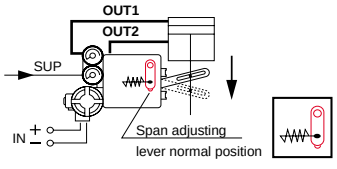


Internal View

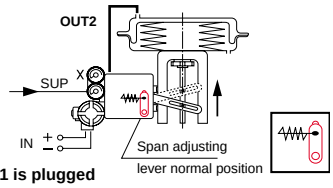
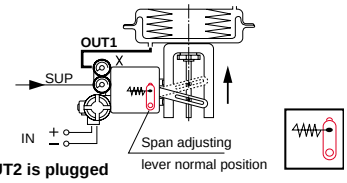
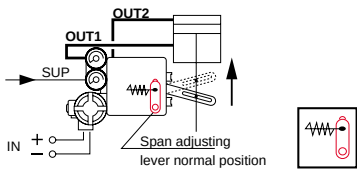


Air Connections

Direct Acting (DA)

As the input signal increases, Valve stem moves downwards Actuator : **DA** Connection : out 1	 **OUT2 is plugged**
As the input signal increases, Valve stem moves downwards Actuator : **DA** Connection : out 2	 **OUT1 is plugged**
As the input signal increases, Valve stem moves downwards	

Reverse Acting (RA)

As the input signal increases, Valve stem moves downwards Actuator : **RA** Connection : out 2	 **OUT1 is plugged**
As the input signal increases, Valve stem moves downwards Actuator : **RA** Connection : out 1	 **OUT2 is plugged**
As the input signal increases, Valve stem moves downwards	

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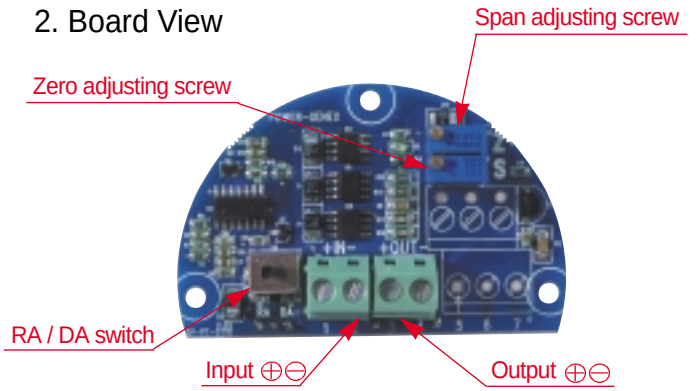
Position Transmitter Options (Built-in Type)

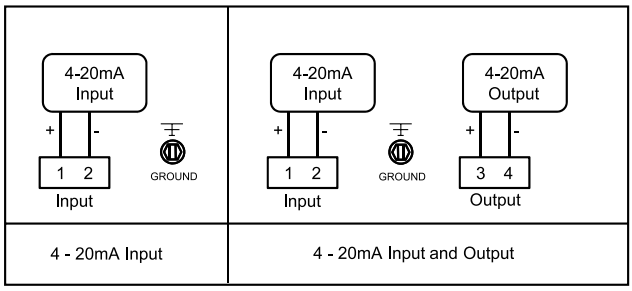
1. Specifications

Power Supply Rating	5.5 - 30 VDC loop power
Recommended Power Supply	24 VDC
Output Signal	4 - 20 mA, 2-wire
Operating Temperature	-20° - 70℃
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

2. Board View

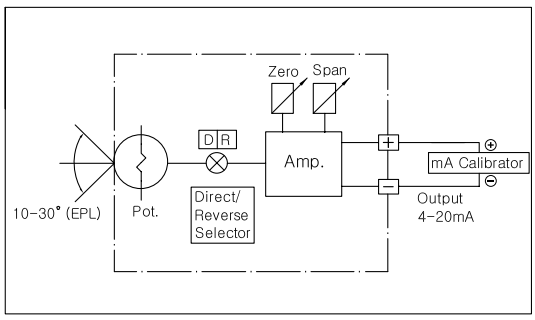


3. Wiring Diagram

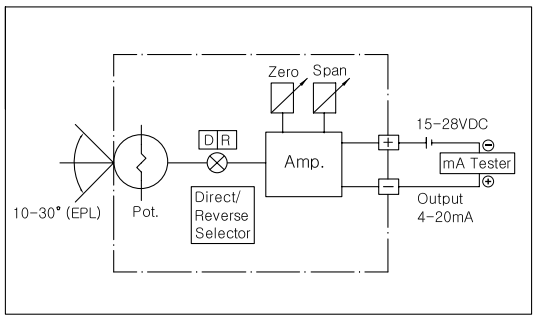


4. Measuring 4 -20mA Output Signal

1) With mA calibrator

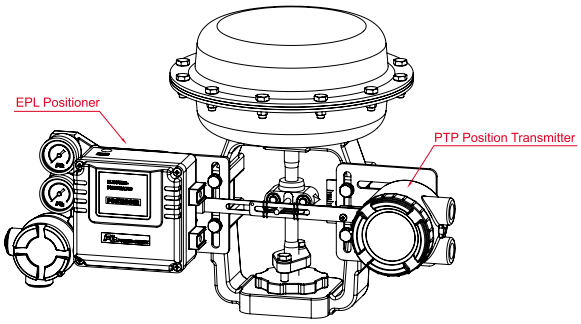


2) With multimeter

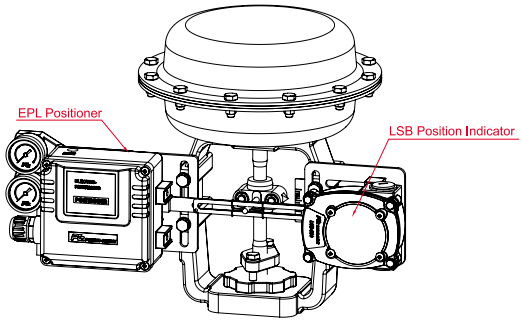


Application for Limit Switches (External Type)

1) With explosion proof PTP-L



2) With non-explosion proof LSB-200



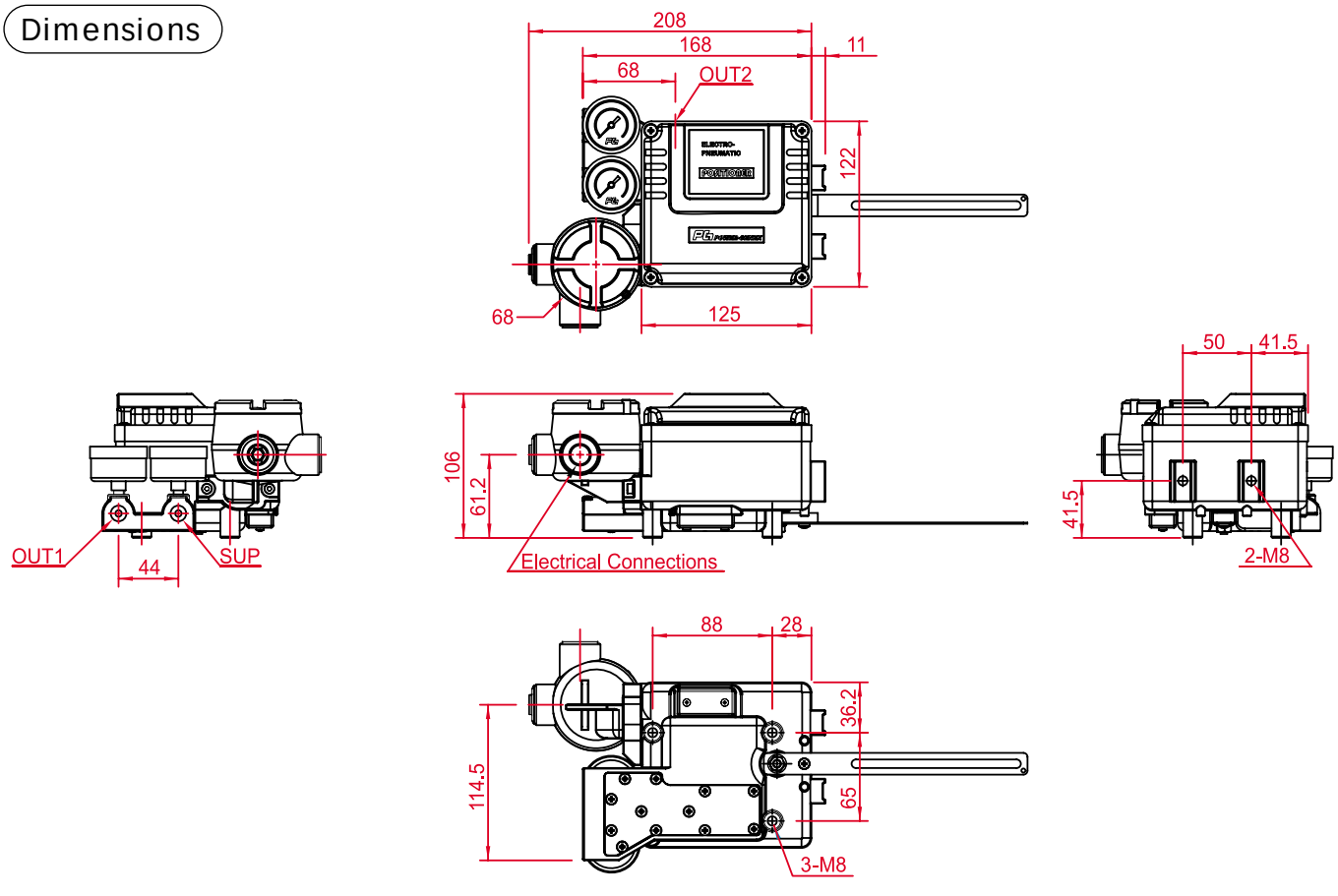
How to Order

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

Description	Code
Protection Class:	F : Flameproof Ex md ⅡB T6 D : Flameproof Ex md ⅡC T6 A : Flameproof Eex md ⅡB T5 ATEX Ⓔx I : Intrinsic safety (Ex ia ⅡB T6) W : Weatherproof to IP66
Feedback Lever:	A : Stroke 10 ~ 40 mm B : Stroke 10 ~ 80 mm C : Stroke 80 ~ 150 mm
Pressure Gauge:	1 : 6 bar (90 psi) 2 : 10 bar (150 psi)
Pilot Valve Orifice:	S : Standard (Actuator volume over 180 cm^3) M : Small orifice (ϕ1.0 or ϕ0.7) (Actuator volume 90~180 cm^3)

Description	Code
Position Feedback: (Only for weatherproof type)	N : None (standard) O : Position transmitter (4~20 mA output signal)
Connection Threads: (pneumatic - electrical)	3 : Rc 1/4 - G 1/2 (standard) 4 : NPT 1/4 - NPT 1/2 5 : Rc 1/4 - M20 x 1.5
High Temperature: (only for weatherproof type)	T : 70℃ (standard) H : 120℃ (without position feedback option) 85℃ (with position feedback option)
Mounting Bracket:	N : None L : DIN / IEC 534

Dimensions



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