



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

### Features

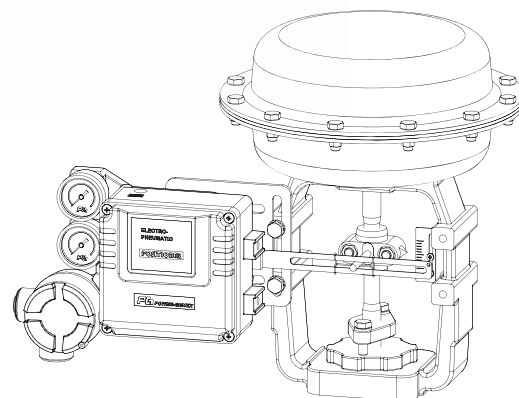
- ▶ Easy maintenance
- ▶ Precise calibration with simple SPAN and ZERO adjustments
- ▶ Simple conversion to direct acting or reverse acting
- ▶ 1/2 split range available
- ▶ Rugged aluminum housing with corrosion-resistant coating
- ▶ Vibration resistant design
- ▶ Stainless steel gauges standard
- ▶ Restricted pilot valve orifice kit for small actuators included
- ▶ KC-certified flameproof Ex dmb IIB+H<sub>2</sub> T6
- ▶ NEPSI-certified flameproof Ex dmb IIB+H<sub>2</sub> T6
- ▶ IECEx-certified flameproof Ex dmb IIC T6/T5
- ▶ EAC 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
- ▶ EAC 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 ± 15 Ω                                                             |                    |
| 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 <sub>2</sub> T6 / Ex dmb IIC T6/T5<br>Ex ia IIC T6 / IP66 |                    |
| Ambient Temperature    | -20 ~ +70°C (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/cm <sup>2</sup> )                                  |                    |
| Flow Capacity          | 80 LPM (Sup. 1.4 kgf/cm <sup>2</sup> )                                 |                    |
| Material               | Aluminum die-cast                                                      |                    |
| Weight                 | 3.3 kg (with terminal box)<br>3.0 kg (without terminal box)            |                    |

### Options

- ▶ Position transmitter (4...20 mA output signal)
- ▶ High temperature (+120 °C)
- ▶ Low temperature (-40 °C)



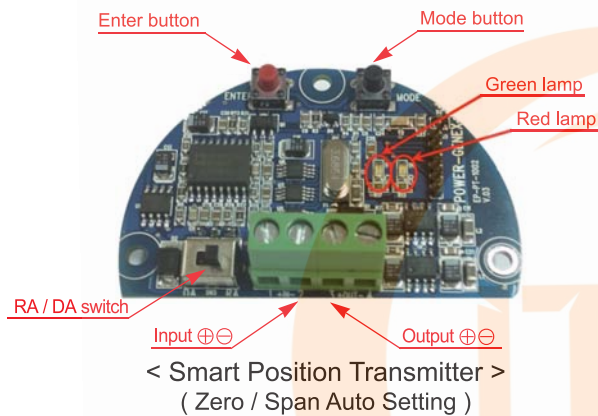
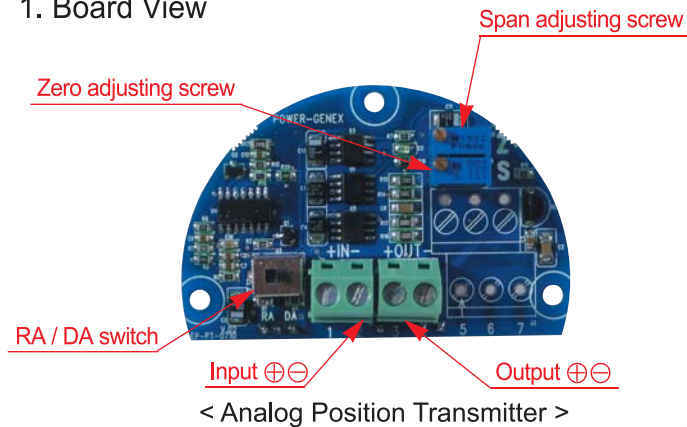
up to +120 °C without feedback options  
up to +85 °C with feedback options  
up to -40 °C without feedback options

**Note** : 1) 1/2 split 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 :

## Position Transmitter Options (Built-in Type)

### 1. Board View

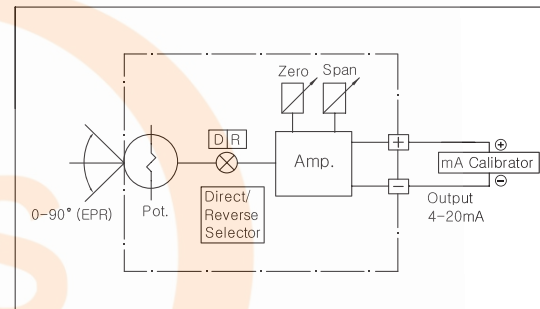


### 2. Position Transmitter (4-20mA output signal)

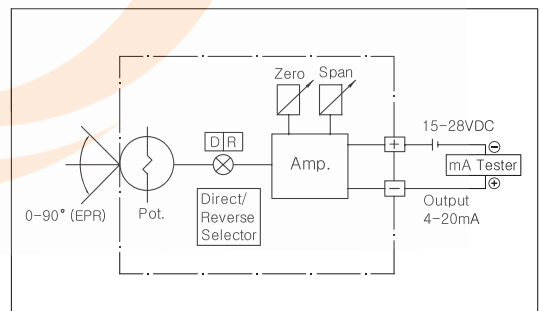
#### a. Specifications

|                          |                               |
|--------------------------|-------------------------------|
| Power Supply Rating      | 5.5 - 30 VDC loop power       |
| Recommended Power Supply | 24 VDC                        |
| Output Signal            | 4 - 20 mA, 2-wire             |
| Operating Temperature    | -20 °C ~ +85 °C               |
| 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 |

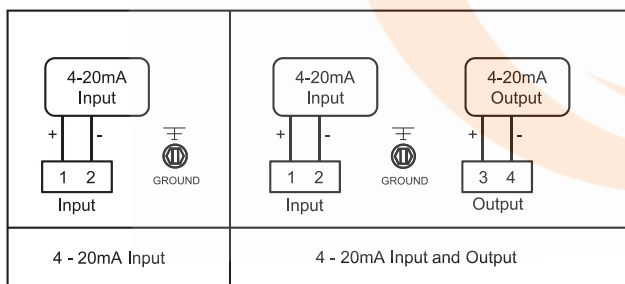
#### b. with mA calibrator



#### c. with multimeter

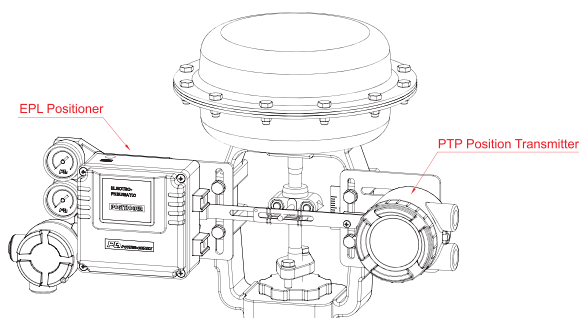


### 3. Wiring Diagram

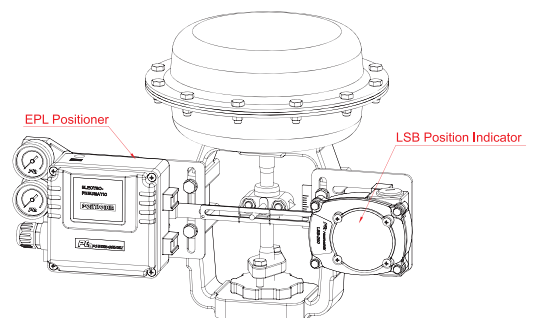


## Application for Limit Switches (External Type)

### 1) With explosion proof PTP-L

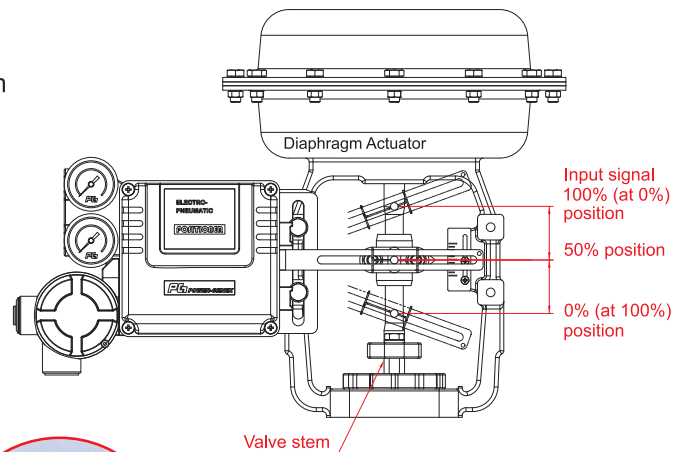


### 2) With non-explosion proof LSB-200

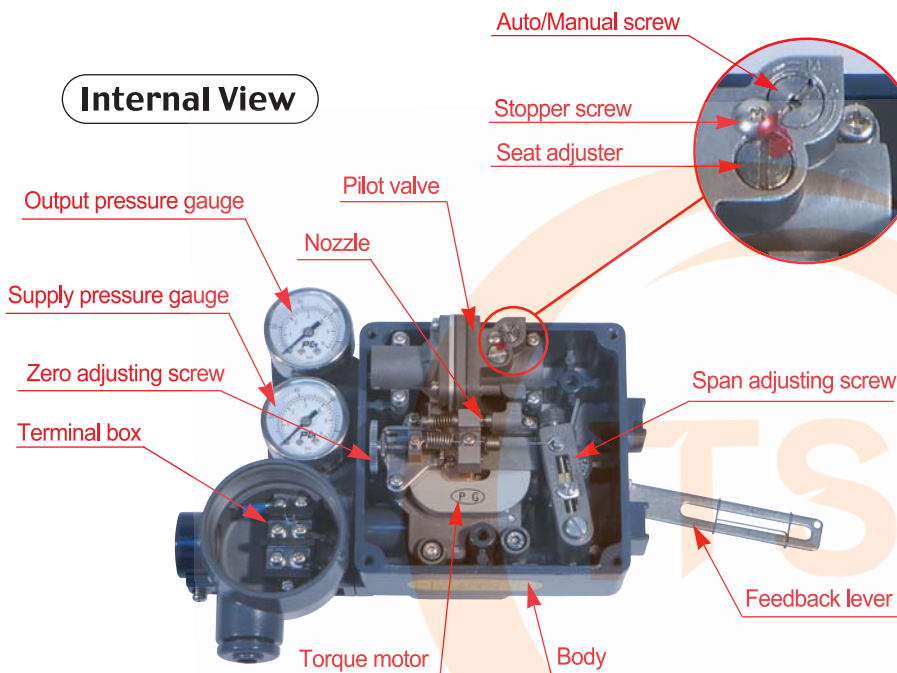


## Mounting

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



## Internal View



## Air Connections

| Direct Acting (DA)                                                                                  |  | Reverse Acting (RA)                                                                               |  |
|-----------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------|--|
| As the input signal increases,<br>Valve stem moves downwards<br>Actuator : DA<br>Connection : out 1 |  | As the input signal increases,<br>Valve stem moves upwards<br>Actuator : RA<br>Connection : out 2 |  |
| As the input signal increases,<br>Valve stem moves downwards<br>Actuator : DA<br>Connection : out 2 |  | As the input signal increases,<br>Valve stem moves upwards<br>Actuator : RA<br>Connection : out 1 |  |
| As the input signal increases,<br>Valve stem moves downwards                                        |  | As the input signal increases,<br>Valve stem moves upwards                                        |  |

## 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                                                                                                                                                                                                                                                       |
|------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Protection Class :</b>    | F : KC / NEPSI<br>flameproof Ex dmb IIB+H <sub>2</sub> T6<br>A : KC flameproof Ex dmb IIC T6/T5<br>D : IECEx / ATEX / TR-CU<br>flameproof Ex dmb IIC T6/T5<br>I : IECEx / ATEX / TR-CU / KC<br>intrinsically safe Ex ia IIC T6<br>W : Weatherproof to IP66 |
| <b>Feedback Lever :</b>      | A : Stroke 10 ~ 40mm<br>B : Stroke 10 ~ 80mm<br>C : Stroke 80 ~ 150mm                                                                                                                                                                                      |
| <b>Pressure Gauge :</b>      | 1 : 6 bar (90 psi)<br>2 : 10 bar (150 psi)                                                                                                                                                                                                                 |
| <b>Pilot Valve Orifice :</b> | S : Standard (Actuator volume over 180cm <sup>3</sup> )<br>M : Small orifice (φ1.0 or φ0.7)<br>(Actuator volume over 90 ~ 180cm <sup>3</sup> )                                                                                                             |

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

## Dimensions

