



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

### Features

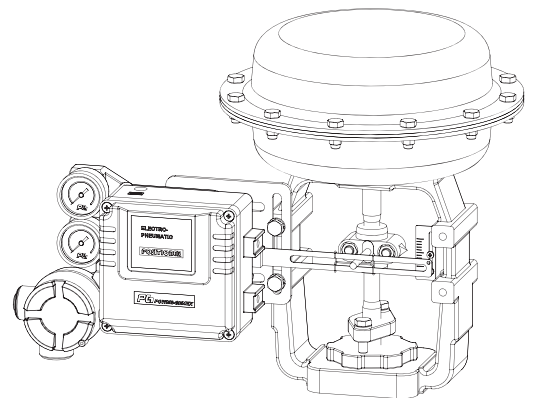
- ▶ Easy maintenance
- ▶ Precise calibration with simple SPAN and ZERO adjustments
- ▶ Simple conversion to direct acting or reverse acting
- ▶ 1/2 split range available
- ▶ Rugged aluminum housing with corrosion-resistant coating
- ▶ Vibration resistant design
- ▶ Stainless steel gauges standard
- ▶ Restricted pilot valve orifice kit for small actuators included
- ▶ KC-certified flameproof Ex dmb IIB+H<sub>2</sub> T6
- ▶ NEPSY-certified flameproof Ex dmb IIB+H<sub>2</sub> 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 ± 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 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) 3.0 kg (without terminal box)	

### Options

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

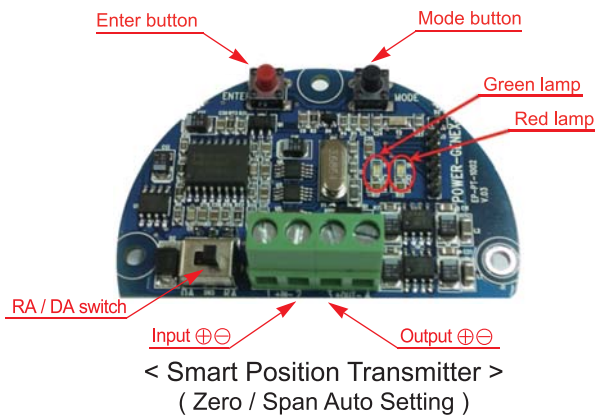
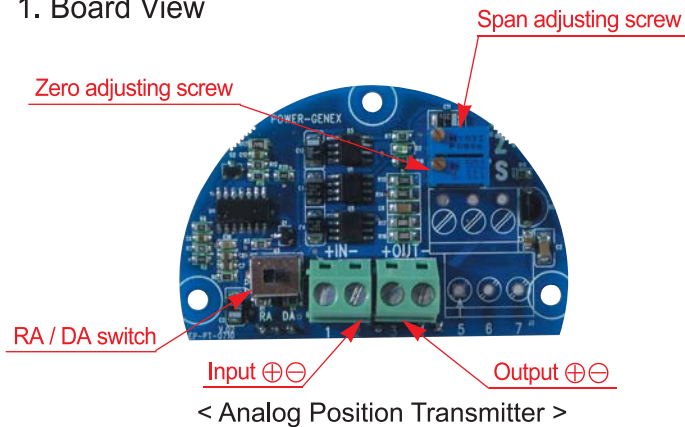


**Note** : 1) 1/2 split range is available for 4~12mA input signal or 12~20mA input signal  
2) Feedback lever can be extended to stroke 80 ~ 150mm

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

## Position Transmitter Options (Built-in Type)

### 1. Board View

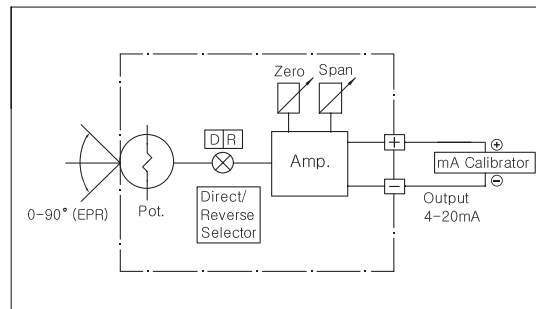


### 2. Position Transmitter (4-20mA output signal)

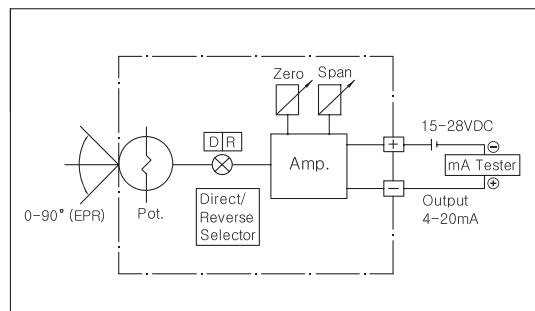
#### a. Specifications

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

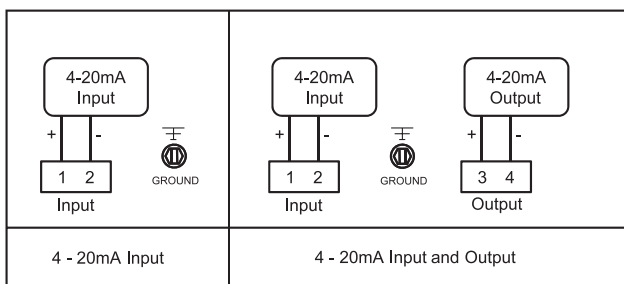
#### b. with mA calibrator



#### c. with multimeter

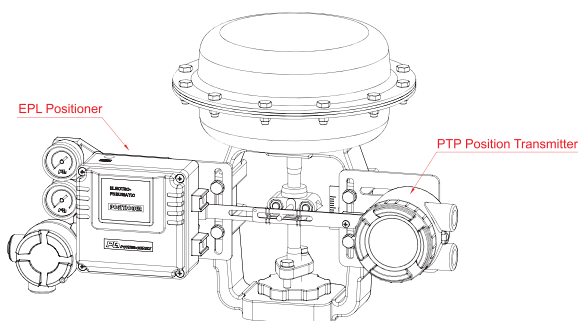


### 3. Wiring Diagram

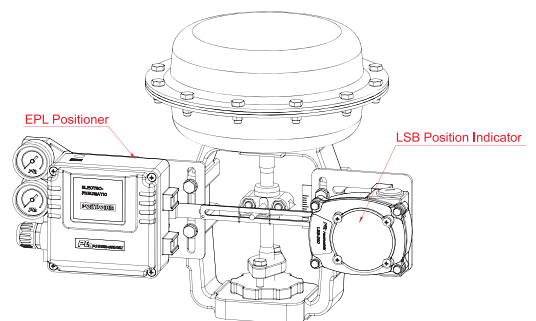


## Application for Limit Switches (External Type)

### 1) With explosion proof PTP-L

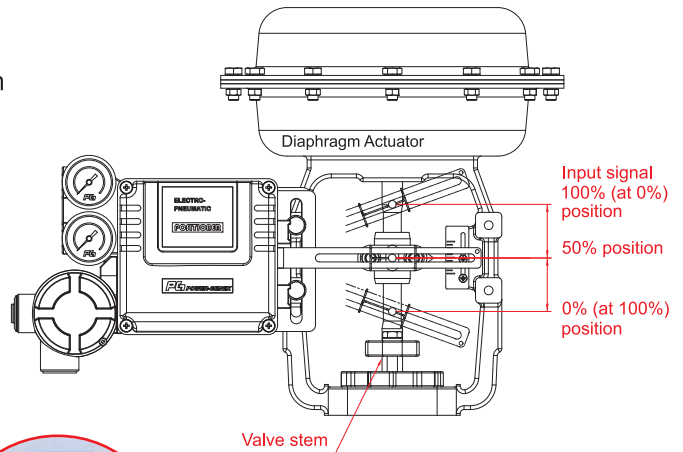


### 2) With non-explosion proof LSB-200

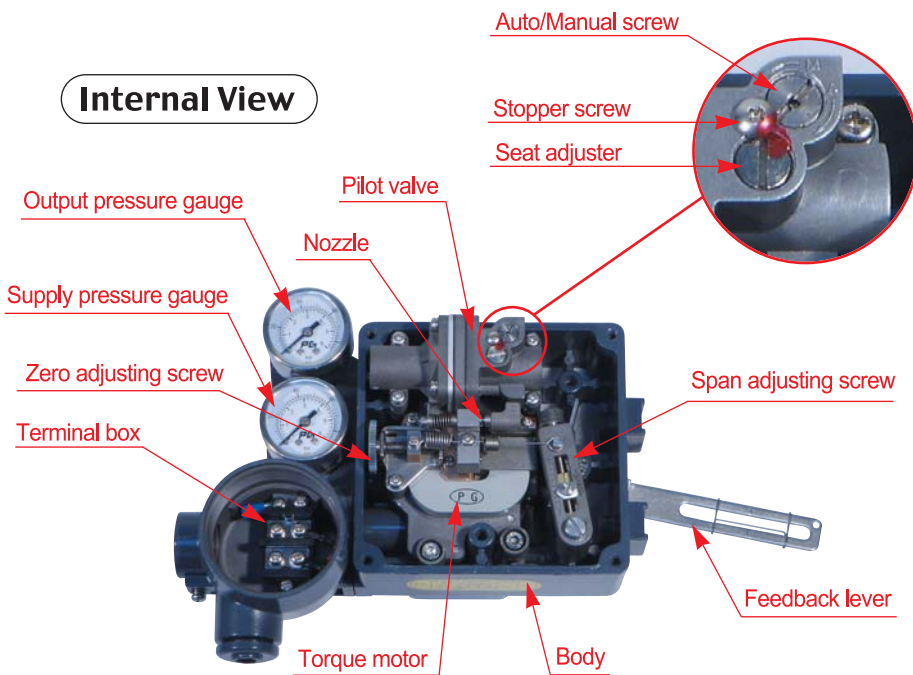


## Mounting

1. Install the EPL positioner so that the angle between the valve stem and the feedback lever can be 90° 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	

## How to Order

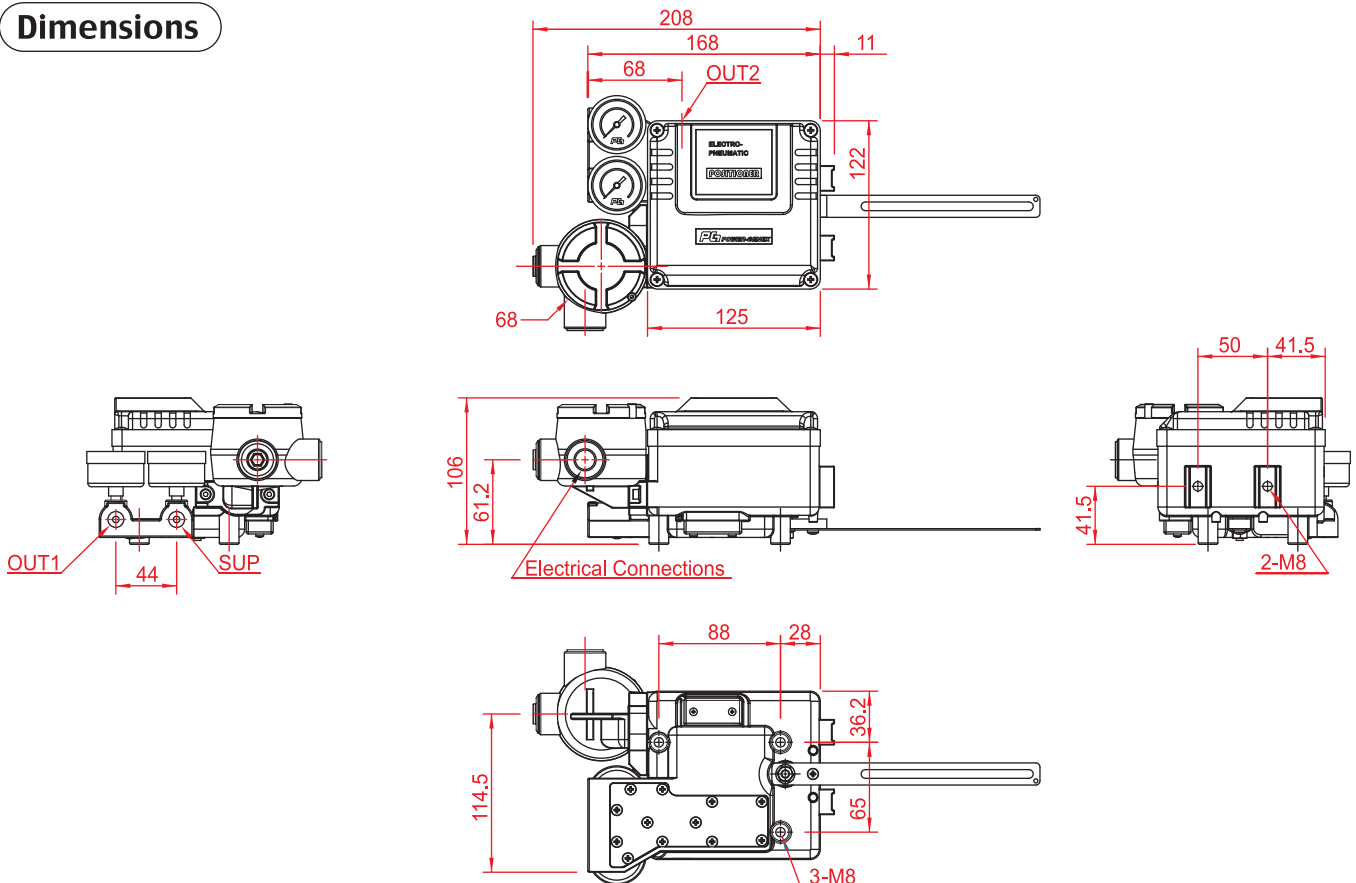
**EPL** —

Protection Class	Feedback Lever	Pressure Gauge (SUP. OUT)	Pilot Valve Orifice	Position Feedback	Connection Threads	Operating Temp.	Mounting Bracket
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Description	Code
<b>Protection Class :</b>	F : KC / NEPSI flameproof Ex dmb IIB+H <sub>2</sub> 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
<b>Feedback Lever :</b>	A : Stroke 10 ~ 40mm B : Stroke 10 ~ 80mm C : Stroke 80 ~ 150mm
<b>Pressure Gauge :</b>	1 : 6 bar (90 psi) 2 : 10 bar (150 psi)
<b>Pilot Valve Orifice :</b>	S : Standard (Actuator volume over 180cm <sup>3</sup> ) M : Small orifice (φ1.0 or φ0.7) (Actuator volume over 90 ~ 180cm <sup>3</sup> )

Description	Code
<b>Position Feedback :</b> (only for weatherproof type)	N : None (standard) O : Analog position transmitter (4 ~ 20mA output signal) S : Smart position transmitter (4 ~ 20mA output signal)
<b>Connection Threads :</b> (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
<b>Operating Temperature :</b> (only for weatherproof type)	T : 70°C (standard) H : 120°C (without position feedback option) 85°C (with position feedback option) L : -40°C (without position feedback option)
<b>Mounting Bracket :</b>	N : None L : IEC 60534-6-1

## Dimensions





**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
- ▶ NEPSY-certified flameproof Ex dmb IIB+H<sub>2</sub> T6
- ▶ IECEX / KC-certified flameproof Ex dmb IIC T6/T5
- ▶ ATEX / TR-CU-certified flameproof Ex dmb IIC T6/T5
- ▶ IECEX / KC-certified intrinsically safe Ex ia IIC T6
- ▶ ATEX / TR-CU-certified flameproof Ex ia IIC T6

### Options

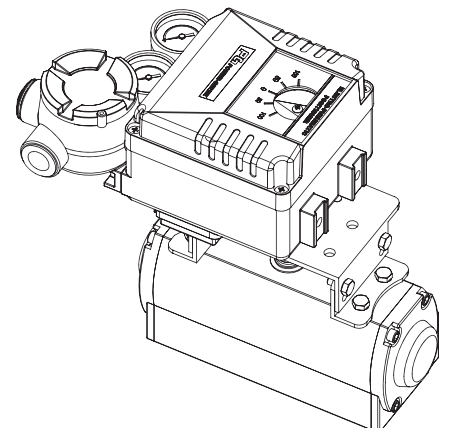
- ▶ Position transmitter (4...20 mA output signal)
- ▶ 2 x SPDT limit switch
- ▶ 2 x P&F proximity sensor NJ2-V3-N
- ▶ Visual dome indicator
  - ▶ High temperature (+120°C)
  - ▶ Low temperature (-40°C)

### Specifications

	EPR	
	Rotary Type (Cam 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	
Operating Angle	60 ~ 100° (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 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 ± 0.5 % 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	3.5 kg (with terminal box) 3.2 kg (without terminal box)	



**With Dome Indicator**

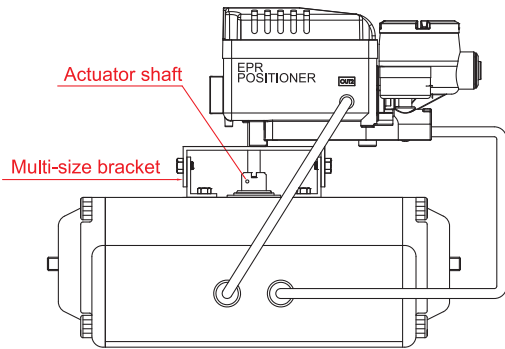


up to +120°C without feedback options  
 up to +85°C with feedback options  
 up to -40°C without feedback options

**Note** : 1) 1/2 split range is available for 4~12mA input signal or 12~20mA input signal  
 2) Operating angle can be adjusted to 0~60° or 0~100°

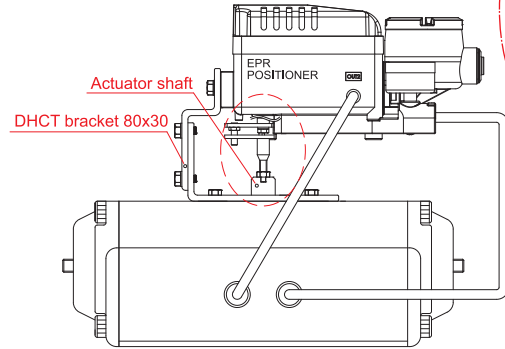
3) Temperature option : up to +85°C with feedback options

## Mounting

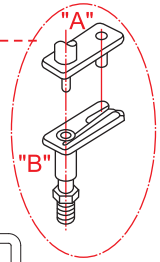


NAMUR Type Mounting

Note that feedback lever shaft "A" should be placed in the orifice of fork lever "B" and they should be in perfect alignment with a rotary actuator output shaft

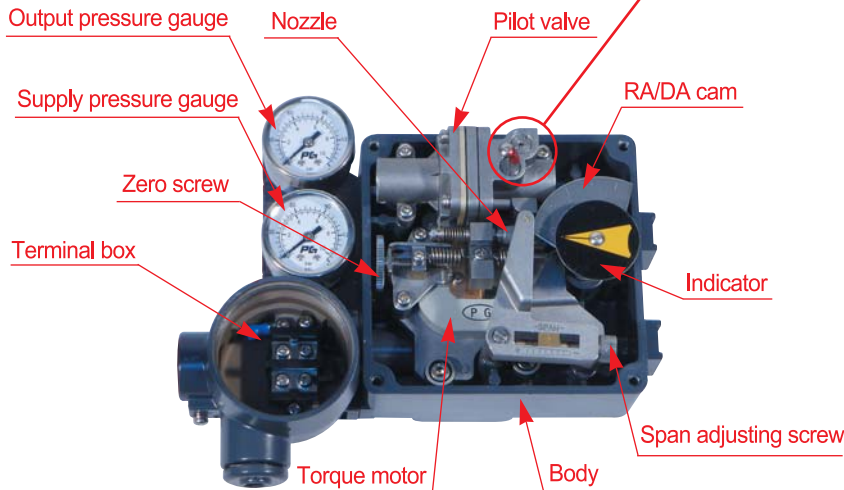
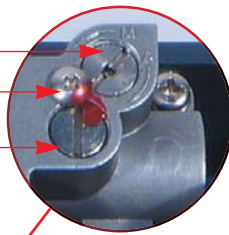


Fork Lever Type Mounting



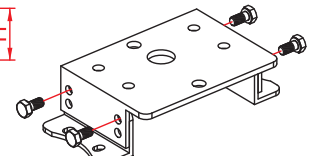
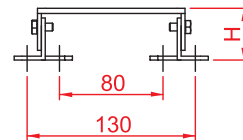
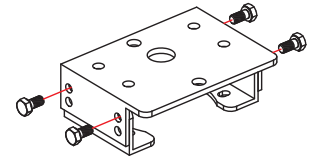
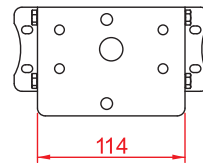
## Internal View

Auto/Manual screw  
Stopper screw  
Seat adjuster



## Multi-size Bracket

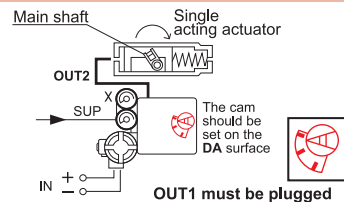
TYPE	H
80 x 30 x 20H	41
80 x 30 x 30H	51
130 x 30 x 20H	41
130 x 30 x 30H	51
130 x 30 x 50H	71



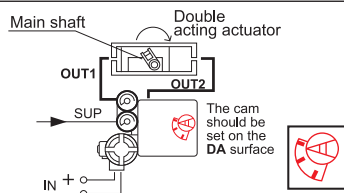
## Air Connections

### Direct Acting (DA)

As the input signal increases, Actuator stem rotates clockwise.

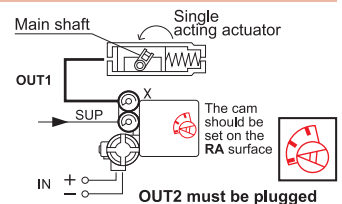


As the input signal increases, Actuator stem rotates clockwise.

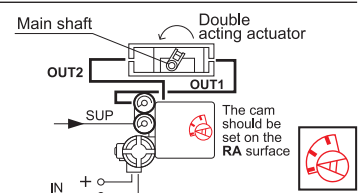


### Reverse Acting (RA)

As the input signal increases, Actuator stem rotates counter clockwise.

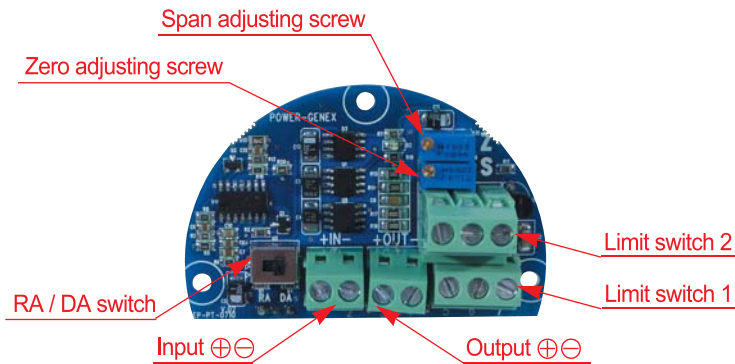


As the input signal increases, Actuator stem rotates counter clockwise.

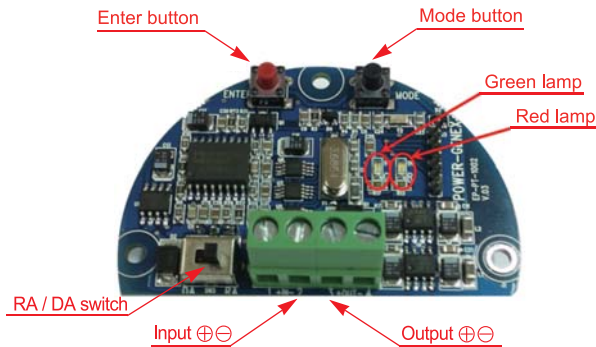


## Position Transmitter Options (Built-in Type)

### 1. Board View

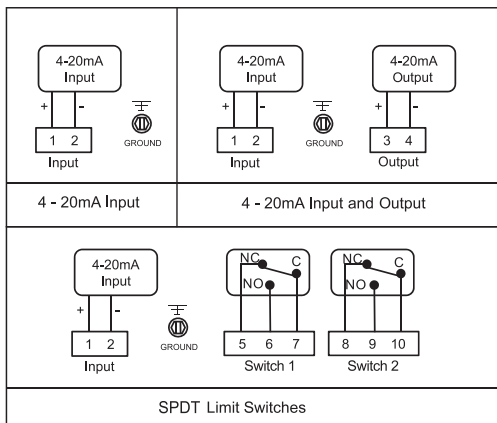


< Analog Position Transmitter & Limit Switches >



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

### 3. Wiring Diagram



### 4. SPDT Limit Switches

#### a. Specifications

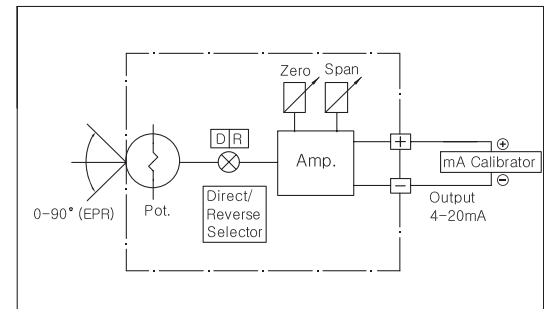
Contacts	SPDT Form C
AC Rating	16 A 1/2 HP 125/250 VAC
DC Rating	0.6 A 125 VDC / 0.3 A 250 VDC
Adjustment	Cams with set screws (L-wrench included for setting)

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

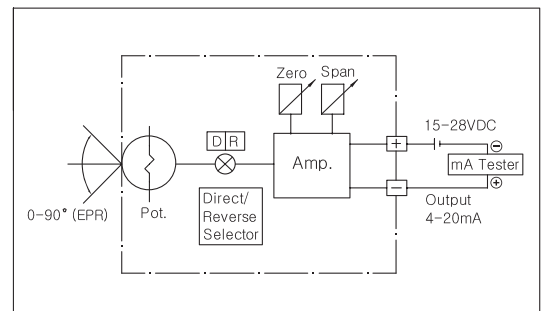
#### a. Specifications

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

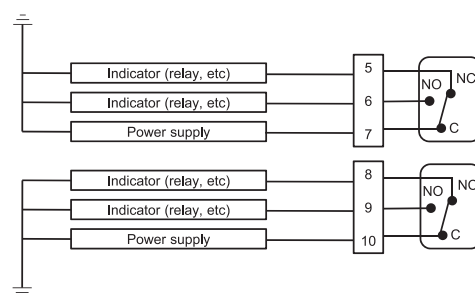
#### b. with mA calibrator



#### c. with multimeter



#### b. Wiring and Application

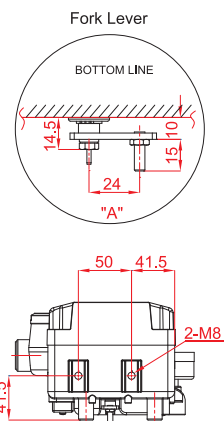
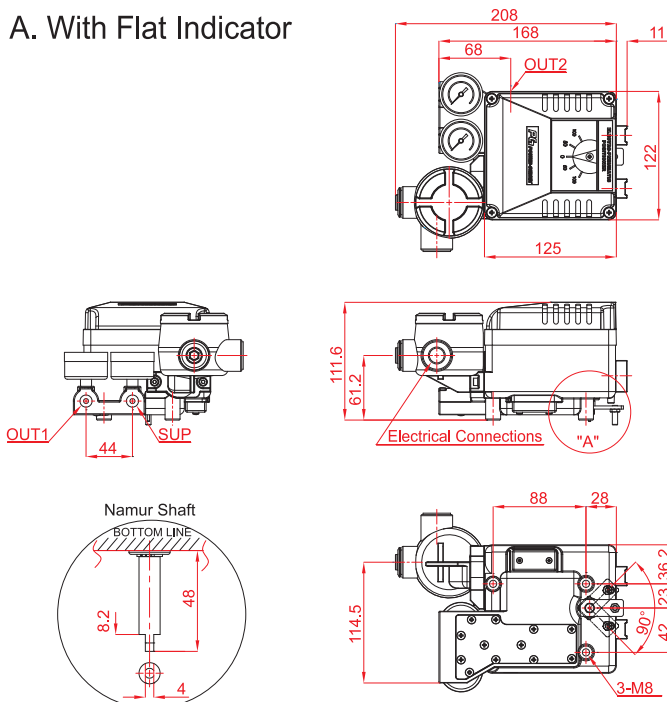


## How to Order

EPR		Protection Class	Feedback Shaft	Pressure Gauge (SUP. OUT)	Pilot Valve Orifice	Position Feedback	Connection Threads	Dome Indicator	Operating Temp.	Mounting Bracket
<b>Description</b>	<b>Code</b>									
<b>Protection Class :</b>	F : KC / NEPSI flameproof Ex dmb IIB+H <sub>2</sub> 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									
<b>Feedback Shaft :</b>	N : NAMUR shaft (direct mounting) A : Fork lever M6 x 40L B : Fork lever other size on request									
<b>Pressure Gauge :</b>	1 : 6 bar (90 psi) 2 : 10 bar (150 psi)									
<b>Pilot Valve Orifice :</b>	S : Standard (Actuator volume over 180cm <sup>3</sup> ) M : Small orifice (φ1.0 or φ0.7) (Actuator volume over 90 ~ 180cm <sup>3</sup> )									
<b>Position Feedback : (only for weatherproof type)</b>	N : None (standard) O : Analog position transmitter (4 ~ 20mA output signal) S : Smart position transmitter (4 ~ 20mA output signal) L : 2 x SPDT limit switch P : 2 x proximity sensor P&F NJ2-V3-N M : O + L Q : O + P									
<b>Description</b>	<b>Code</b>									
<b>Connection Threads :</b> (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									
<b>Dome Indicator :</b>	N : Flat indicator (standard) D : Dome indicator									
<b>Operating Temperature :</b> (only for weatherproof type)	T : 70°C (standard) H : 120°C (without position feedback option) 85°C (with position feedback option) L : -40°C (without position feedback option)									
<b>Mounting Bracket :</b>	N : None R : Multi-size NAMUR bracket for IEC 60534-6-2 / VDI/VE 3845 (130x30x50 bracket on request) F : PG bracket 80x30 for fork lever type E : Multi-size NAMUR bracket for fork lever type (130x30x50 bracket on request)									

## Dimensions

### A. With Flat Indicator



### B. With Dome Indicator

