



**Reliable valve control device guaranteeing optimum span and zero settings by smart auto-calibration function**

### Features

- ▶ Auto-Calibration for optimum zero and span setting
- ▶ Simple and easy to set
- ▶ Precise control performance and high dynamic response
- ▶ Pressure regulator built in to eliminate variations in supply air pressure
- ▶ Low air consumption due to piezo electric microvalve
- ▶ Input / output signal isolated
- ▶ Automatic detection for DA(direct acting) or RA(reverse acting)
- ▶ Single and double acting available
- ▶ No hunting on the small actuators
- ▶ 1/2 split range available
- ▶ High resistance against shock and vibration

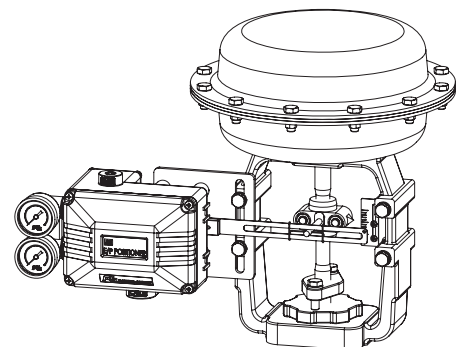
### Options

- ▶ Position transmitter (4...20mA output signal)
- ▶ 2 x alarm limit (open, close)
- ▶ Explosion proof type (KC Ex d IIB+H<sub>2</sub> T6 IP66)

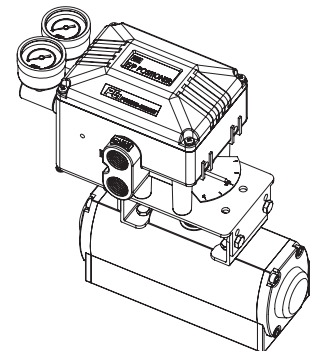
### Specifications

Input Signal	4 - 20 mA DC
Voltage Supply Min. /Max.	8.5V DC / 30V DC (425 ohm)
Power Consumption	30.8 mW @ 4 mA / 170 mW @ 20 mA
Characteristic	Linear (Note)
Stroke / Angle	5 - 65 mm (max. up to 150 mm) / 0° - 90°
Air Supply Pressure	1.5 - 7.0 bar (20 - 100 psi) Pressurized air or allowed gas, free of water, oil, and dust
Air Capacity	80 l/min = 4.8 N <sup>m</sup> /h = 2.8 scfm (Sup = 1.4 bar)
Air Consumption	1.3 l/min = 0.08 N <sup>m</sup> /h = 0.05 scfm (Sup = 1.4 ~ 6 bar)
Output Pressure Range	0 - 100% of supply air pressure
Linearity	Within ± 0.5 %
Hysteresis	Within 0.2 %
Sensitivity	Within ± 0.2 %
Operating Temperature	- 30 ~ +80°C
Pneumatic Connections	NPT 1/4
Electrical Connections	NPT 1/2
Protection Class	IP66
Body Material	Aluminum die-cast
Weight	2.5 kg

**Note** : Equal percentage or Quick-open option is available.  
Please contact for more details

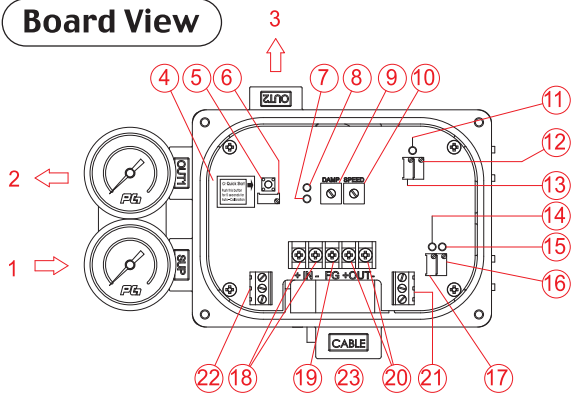


**- SEL (Linear Type)**



**- SER (Rotary Type)**

### Board View



① Supply air	⑬ Feedback zero
② OUT 1	⑭ Limit switch lamp 2
③ OUT 2	⑮ Limit switch lamp 2
④ Board cover	⑯ Limit switch 2 adjusting screw
⑤ Auto-setting button	⑰ Limit switch 1 adjusting screw
⑥ Span adjusting screw	⑱ Input signal +, -
⑦ DA lamp	⑲ Frame ground
⑧ RA lamp	⑳ Output signal +, -
⑨ Damping screw	㉑ Limit switch 2 terminal
⑩ Speed adjusting screw	㉒ Limit switch 1 terminal
⑪ Feedback lamp	㉓ Electrical connections
⑫ Feedback span	

### Air Connections

#### - SEL (Linear Type)

Direct Acting(DA)		Reverse Acting(RA)	
As the input signal increases, Valve stem moves downwards Actuator : DA Switch position : DA		As the input signal increases, Valve stem moves upwards Actuator : RA Switch position : RA	
	OUT2 must be plugged		OUT2 must be plugged
As the input signal increases, Valve stem moves downwards Actuator : DA Switch position : DA		As the input signal increases, Valve stem moves upwards Actuator : RA Switch position : RA	
	OUT1 must be plugged		OUT1 must be plugged
As the input signal increases, Valve stem moves downwards Switch position : DA		As the input signal increases, Valve stem moves upwards Switch position : RA	

#### - SER (Rotary Type)

Spring Return	Double Acting	Double Acting
As the input signal increases, Actuator shaft rotates counter-clockwise	As the input signal increases, Actuator shaft rotates counter-clockwise	As the input signal increases, Actuator shaft rotates clockwise

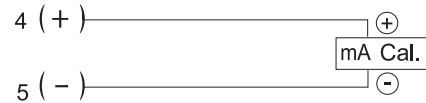
	Spring Return	Double Acting
Reverse Acting	Out 1 : piped, Out2 : plugged	Out 1 : piped to Actuator port A, Out2 : piped to Actuator port B
Direct Acting	Out 1 : plugged, Out2 : piped	Out 1 : piped to Actuator port B, Out2 : piped to Actuator port A

## Measuring 4-20mA Output Signal

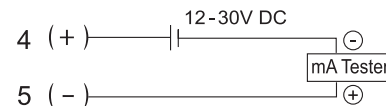
### 1) Specifications

Output Signal	4 - 20 mA, 2 - wire
Power Supply Rating	15 - 30V DC
Recommended Power Supply	24V DC
Operating Temperature	-20 - +70°C
Input Impedance	0 - 430Ω
Characteristic	Linear
Linearity	± 1.0 % F.S.
Hysteresis	0.5 % F.S.
Repeatability	± 0.5 % F.S.
Adjustment	Zero and span
Rotary Angle	50...90° (max. 100°)

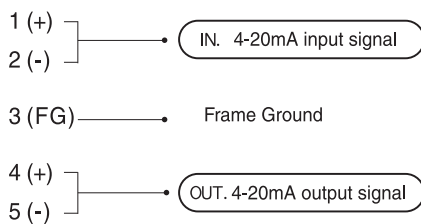
### 2) With mA Loop Calibrator



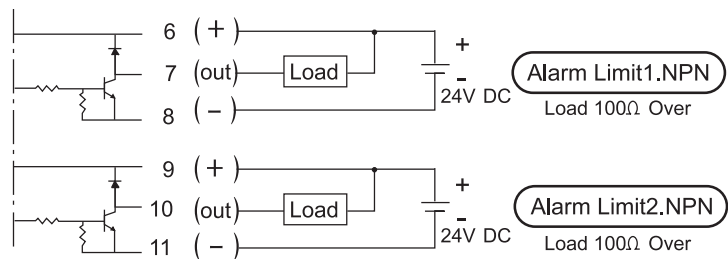
### 3) With Multi-Meter



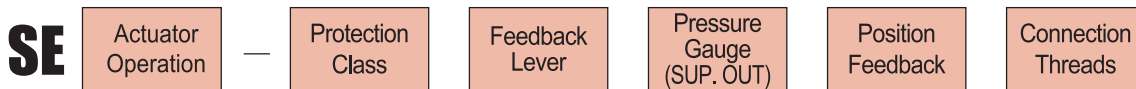
## Electrical Connections



## Setting Alarm Limits



## How to Order



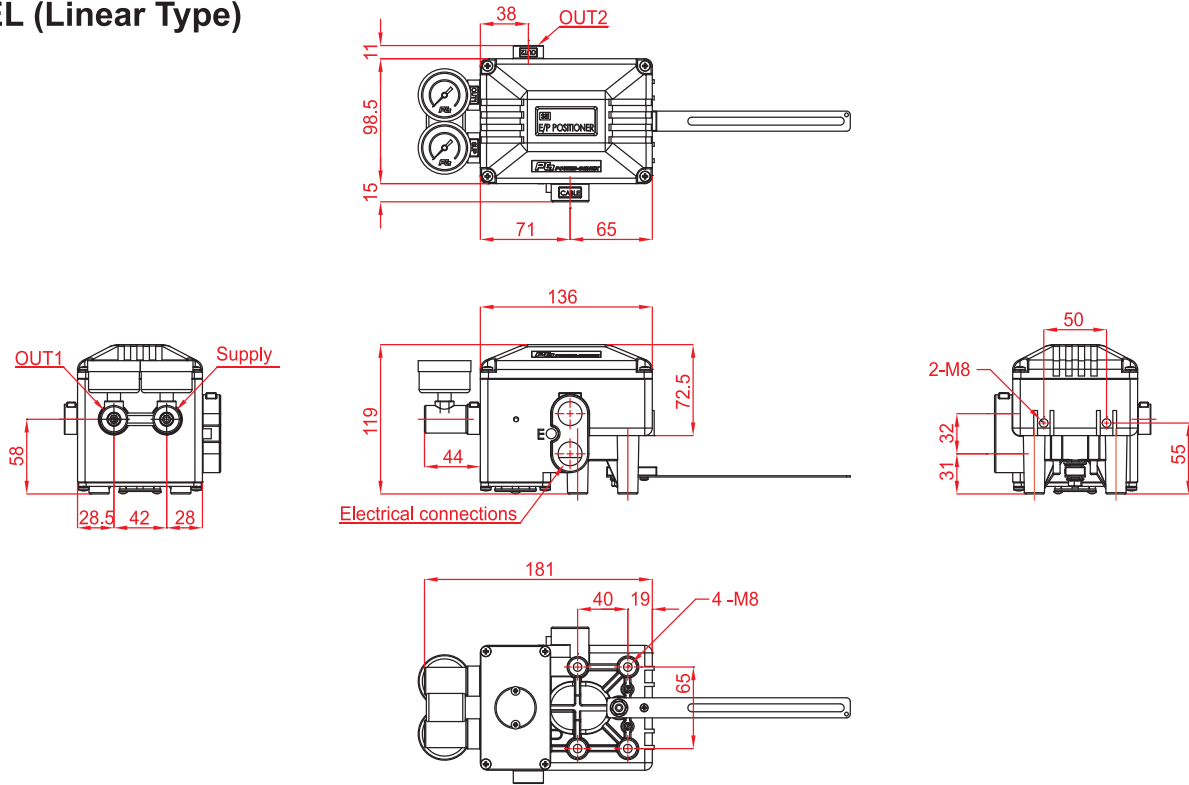
Description	Code
<b>Actuator Operation :</b>	L : Linear type R : Rotary type
<b>Protection Class :</b>	1 : Weatherproof to IP66
<b>Feedback Lever :</b>	A : Stroke (5~40mm) B : Stroke (5~80mm) C : Stroke (up to 150mm) F : Fork lever O : NAMUR shaft(direct mounting)
<b>Pressure Gauge :</b>	O : 10 bar (150 psi)

Description	Code
<b>Position Feedback :</b>	N : None O : Position transmitter (4~20mA output signal) L : 2 x alarm limit M : O + L
<b>Connection Threads :</b> (pneumatic - electrical)	NPT 1/4 - NPT 1/2

Example: SER-1000 (Rotary Type, Weather Proof, NAMUR shaft, 150 PSI pressure gauges, Position transmitter, 1/4" NPT Air Port- 1/2" NPT conduit)

## Dimensions

### - SEL (Linear Type)



### - SER (Rotary Type)

