



*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

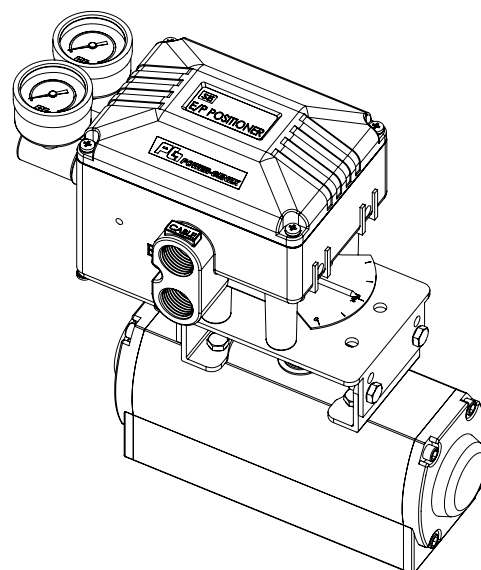
## Options

- ▶ Position transmitter (4...20mA output signal)
- ▶ 2 x alarm limits (open, close)
- ▶ Explosion proof type (Exd IIB T6, Exia IIC T6)

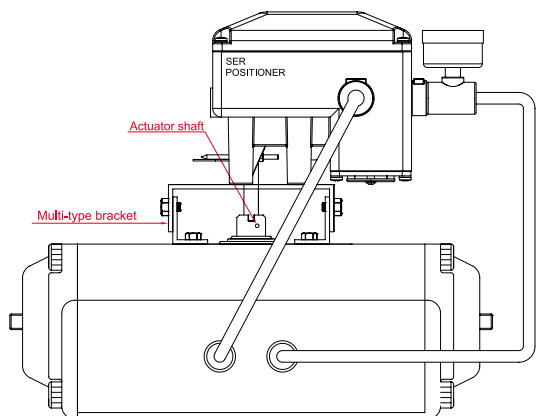
## Specifications

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
Operating Angle	40° - 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 LPM @ supply air of 1.4 bar (20psi)
Air Consumption	1.3 LPM $\approx$ 0.08 m <sup>3</sup> /h @ supply air of 1.5 bar (22psi)
Output Pressure Range	0 - 100% of supply air pressure
Linearity	Within $\pm$ 0.5 %
Hysteresis	Within 0.2 %
Sensitivity	Within $\pm$ 0.2 %
Operating Temperature	-20 - +80 °C
Pneumatic Connections	Rc 1/4 or 1/4 NPT
Electrical Connections	G 1/2 or 1/2 NPT
Protection Class	IP66, intrinsic safety (Exia) or flameproof (Exd)
Body Material	Aluminum die-cast
Weight	2.5 kg

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

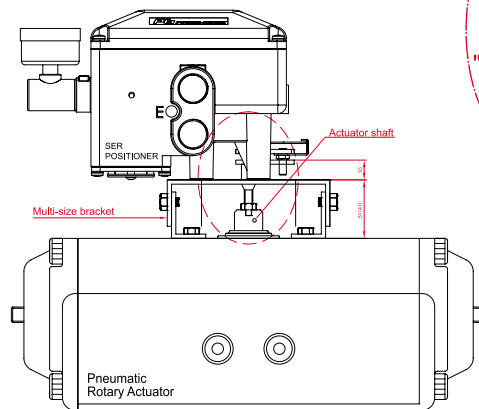


## Mounting

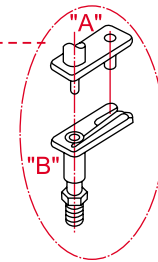


NAMUR Type

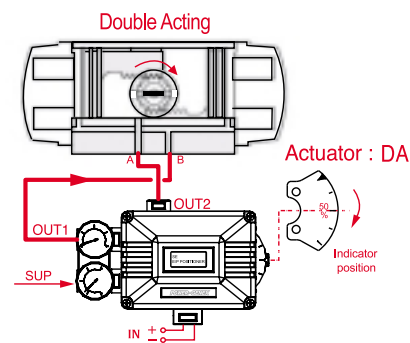
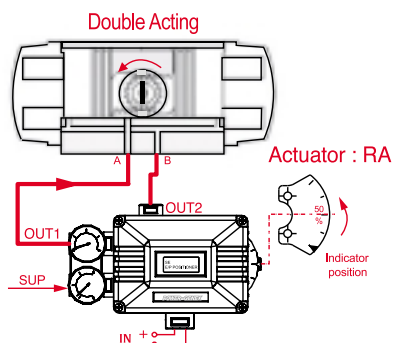
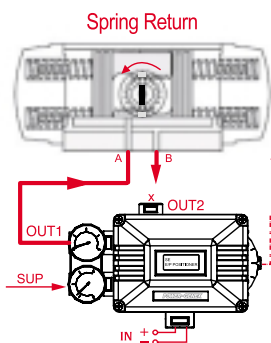
Note that feedback lever shaft "A" should be placed in the orifice of fork lever "B" and they should be in perfect alignment with a rotary actuator output shaft



Fork Lever Type

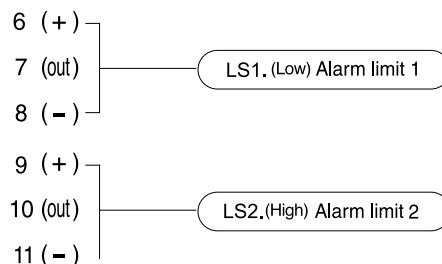
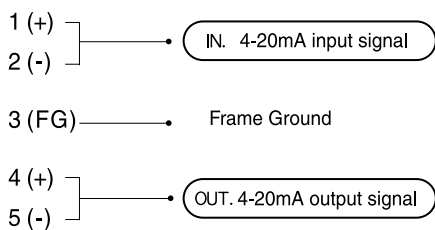


## Air Connections

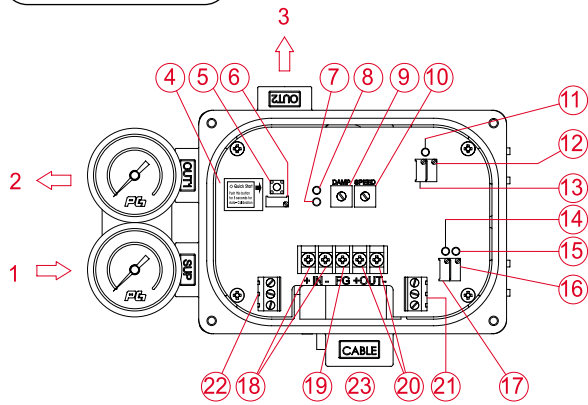


	Spring Return	Double Acting
Reverse Acting	Out 1 : piped, Out 2 : plugged	Out 1 : piped to Actuator port A, Out 2 : piped to Actuator port B
Direct Acting	Out 1 : plugged, Out 2 : piped	Out 1 : piped to Actuator port B, Out 2 : piped to Actuator port A

## Electrical Connections



## 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	

## Auto-Calibration

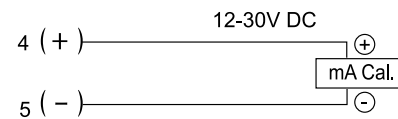
Push Auto-Setting button ⑤ for 5 seconds for auto-calibration. Generally it will take 2 - 3 minutes until the process is finished but it can take more time according to the actuator volume.

## Measuring 4-20mA Output Signal

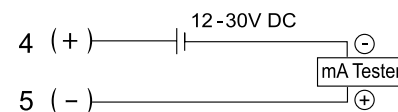
### 1) Specifications

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 - 430 Ω
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°)

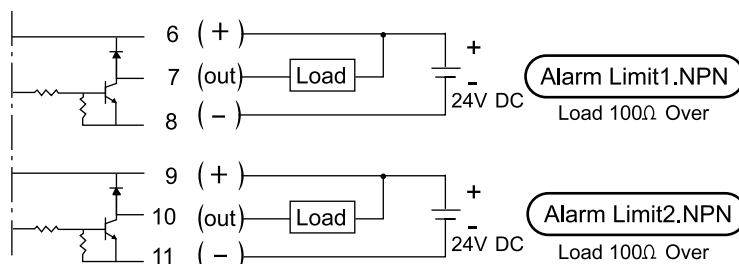
### 2) With mA Loop Calibrator



### 3) With Multi-Meter



## Setting Alarm Limits



## How to Order

**SER** —

Protection Class

Feedback Shaft

Pressure Gauge (SUP. OUT)

Position Feedback

Connection Threads

Mounting Bracket

Description	Code
<b>Protection Class :</b>	F : Flameproof (Exd IIB T6) I : Intrinsic safety (Ex ia IIC T6) W : Weatherproof to IP66
<b>Feedback Shaft :</b>	F : Fork lever N : NAMUR shaft (direct mounting)
<b>Pressure Gauge :</b>	1 : 6 bar (90 psi) 2 : 10 bar (150 psi)

Description	Code
<b>Position Feedback :</b>	N : None (standard) O : Position transmitter (4-20mA output signal) L : 2 x alarm limit M : O + L
<b>Connection Threads: (pneumatic - electrical)</b>	3 : Rc 1/4 - G 1/2 (standard) 4 : NPT 1/4 - NPT 1/2 5 : Rc 1/4 - M20 x 1.5
<b>Mounting Bracket :</b>	N : None R : Multi-size bracket for DIN VDI/VE 3845 (130 x 30 x 50 bracket on request)

Ex) SER-WN2OR (weatherproof, NAMUR shaft, 10 bar pressure gauges, position transmitter, multi-size bracket)

## Dimensions

