

# SP520 E-P POSITIONER



**Precision and reliable valve control with  
Shinhwa Engineering.**



**SP740**



**SP760**



**SP520**

## SP520 Electro-Pneumatic Positioner



### FEATURES

- Compact design, rugged construction
- Quick and Precise response operation
  - Highly precise zero adjustment
  - Ease setting and calibration
  - Wide range of zero setting
- Easy and precise calibration with zero and Span adjustment
- Enclosure IP66
- Global approvals for explosion protection
  - Ex db mb IIB/IIC T6/T5 Gb,
  - Ex tb IIIC T80°C/T100°C Db IP66
  - Ex ia IIC T6/T5 Gb, Ex ia IIIC T80°C/T100°C Db ( IECEx, ATEX, KCs, CCC )
- Vibration and impact resistance

Model	SP520S		SP520D	
Acting Type	Single		Double	
Motion Type	Linear	Rotary	Linear	Rotary
Input Signal	4~20mA DC			
Impedance	250 ± 15 Ω			
Air Connection	Rc(PT) 1/4, NPT 1/4			
Pres. Gauge Connection	Rc(PT) 1/8, NPT 1/8			
Conduit Entry	PF(G)1/2, NPT1/2, M20x1.5			
Stroke	10~150 mm	0~90°	10~150 mm	0~90°
Supply Pressure	0.14~0.7 MPa (1.4~7 bar)			
Explosion Proof Grade	Ex db mb IIB/IIC T5/T6 Gb Ex ia IIC T6/T5 Gb, Ex ia IIIC T80°C/T90°C Db Ex tb IIIC T80°C/T90°C Db IP66 (IECEx), (ATEX), (KCs), (CCC)			
Enclosure	IP66			
Ambient Temperature	-20~70 °C (-4°F~158°F)			
Linearity	±1% F.S.		±2% F.S.	
Hysteresis	±1% F.S.			
Sensitivity	±0.2% F.S		±0.5% F.S	
Repeatability	±0.5% F.S.			
Flow Capacity	70 LPM (Sup.=0.14 MPa)			
Air Consumption	2 LPM (sup.=0.14MPa), 3 LPM (sup.=0.7MPa)			
Humidity	5~95% RH at 40 °C			
Feedback Signal (Option)	4~20mA (DC 10~30V )			
Material	Aluminum Diecasting			
Weight	3 kg (6.6 lb)			
Painting	Epoxy Polyestere Powder Coating			
Color	Black			

### MODEL SELECTION (LINEAR TYPE)

Model	SP520	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Acting Type</b>	Single Double	S D							
<b>Motion Type</b>	Linear 10~40mm 40~90mm 90~150mm		L1 L2 L3						
<b>Feedback</b>	None Position transmitter(4 ~ 20 mA DC)			0 1					
<b>Explosion Protection</b>	None (IP66) Ex db mb IIB/IIC T6/T5 Gb Ex ia IIC T6/T5 Gb, Ex ia IIIC T80°C/T100°C Db Ex tb IIIC T80°C/T100°C Db IP66				N D A T				
<b>Explosion proof specification</b>	None (IP66) KCs IECEX ATEX CCC					0 1 2 3 4			
<b>Connection</b>	Air – Rc(PT)1/4, Conduit – G(PF)1/2 Air – NPT1/4, Conduit – NPT1/2 Air – NPT1/4, Conduit – M20x1.5						G N M		
<b>Position L/S</b>	None							0	
<b>Orifice</b>	None Ø1 Ø2								0 1 2
<b>※ Optionable items</b> 1. Non-Explosion Proof : Feedback option 2. Ex db mb : Option not applicable. 3. Ex ia : Feedback option									



LINEAR TYPE



ROTARY TYPE

### MODEL SELECTION (ROTARY TYPE)

Model	SP520	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
<b>Acting Type</b>	Single Double	S D							
<b>Motion Type</b>	Rotary Fork Lever Namur		R1 R2						
<b>Feedback</b>	None Position transmitter(4 ~ 20 mA DC)			0 1					
<b>Explosion Protection</b>	None (IP66) Ex db mb IIB/IIC T6/T5 Gb Ex ia IIC T6/T5 Gb, Ex ia IIIC T80°C/T100°C Db Ex tb IIIC T80°C/T100°C Db IP66				N D A T				
<b>Explosion proof specification</b>	None (IP66) KCs IECEX ATEX CCC					0 1 2 3 4			
<b>Connection</b>	Air – Rc(PT)1/4, Conduit – G(PF)1/2 Air – NPT1/4, Conduit – NPT1/2 Air – NPT1/4, Conduit – M20x1.5						G N M		
<b>Position L/S</b>	None 2×SPDT External Limit Switch							0 1 2	
<b>Orifice</b>	None Ø1 Ø2								0 1 2
<b>※ Optionable items</b> 1. Non-Explosion Proof : Feedback, L/S, Feedback + L/S, External L/S, External (L/S + Feedback) 2. Ex db mb : External L/S, External (L/S + Feedback) 3. Ex ia : Feedback, L/S, Feedback + L/S 4. Ex tb: External L/S, External L/S + Feedback (External equipment can be used by third-party products)									

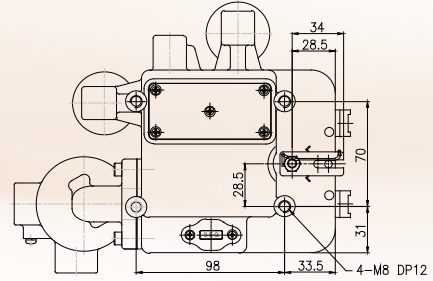
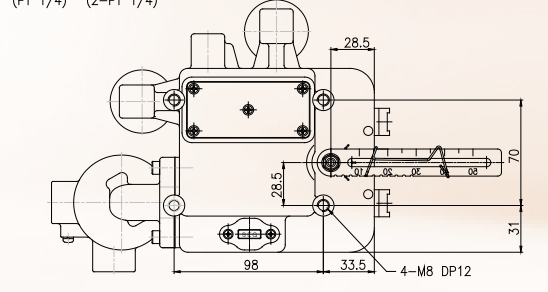
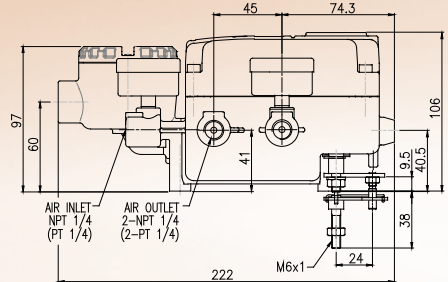
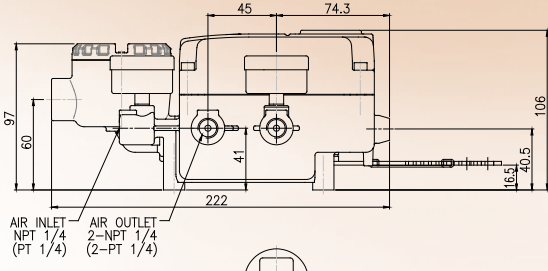
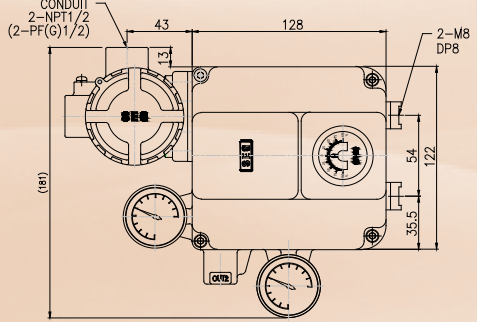
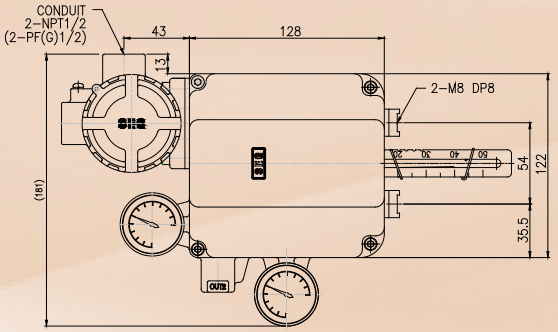


ROTARY TYPE  
(Internal Limit switch)



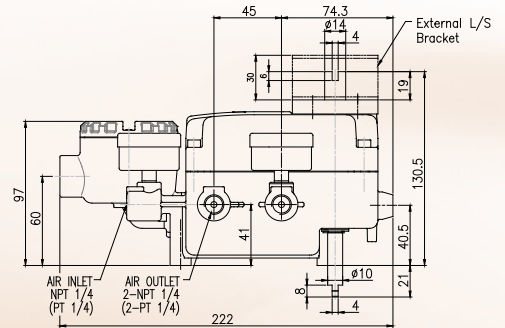
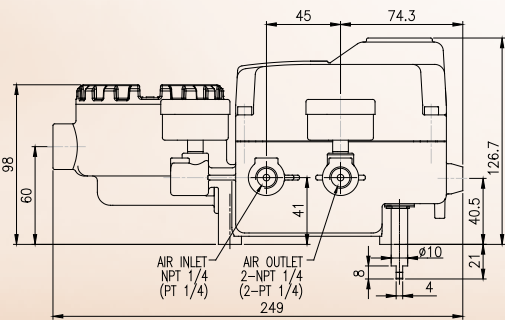
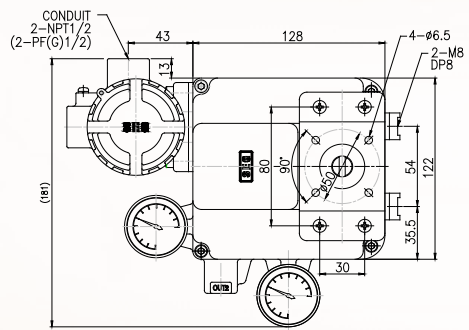
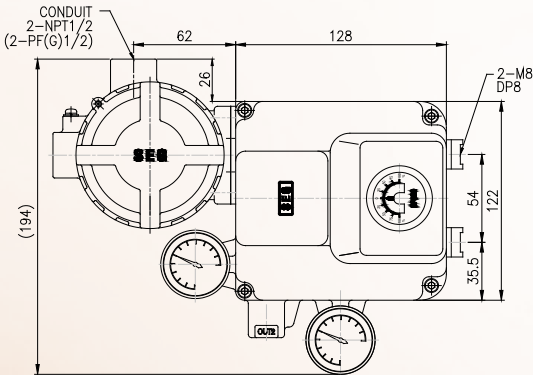
ROTARY TYPE  
(External Limit switch)

# DIMENSIONS



## LINEAR TYPE

## ROTARY TYPE



ROTARY TYPE  
(Internal Limit switch)

ROTARY TYPE  
(External Limit switch)

## **Production item**

- ◆ **Motor Cylinder**
- ◆ **Electrical Actuator**
- ◆ **Pneumatic Actuator**
- ◆ **Smart Positioner**



**SHINHWA ENG. CO., LTD.**

242, CHEONGNEUNG-DAERO, NANDONG-GU,  
INCHEON-CITY KOREA  
TEL +82-32-817-8030  
FAX +82-32-815-8036  
Web <http://www.seg.co.kr>  
E-mail [8030@seg.co.kr](mailto:8030@seg.co.kr)

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