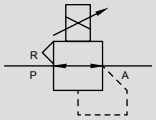
Compact electro pneumatic regulator (solenoid valve)

EVS2 Series

JIS symbol



Overview

Compact, lightweight and high performance electro pneumatic regulator.
Ideal for controlling pilot regulators, pressure and fine speed cylinders in the semiconductor and precision assembling fields.

Features

(1) Compact/lightweight
20% smaller and 35% lighter than the conventional model. Downsize and lighten your equipment with this model.
(2) Longer service life
Three times that of our previous model.
(3) High precision/high responsiveness
High precision and high-speed response control of fluid pressure using electric signals. Provides 0.3% F.S. repeatability, 0.1% F.S. resolution, 0.1 sec. response time (without load).
(4) 2-color display of the operational status
On the 2-color operation indicator, green means the pressure is within the set value and red means the pressure is outside the set value or an error status.
(5) Easy to pipe/wire
Push-in cartridge fitting and M12 connector have improved work efficiency.

Specifications

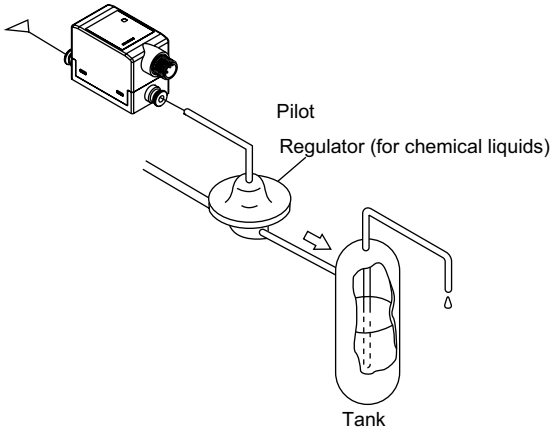
1 MPa = 10 bar

Descriptions			EVS2-100	EVS2-500
Working fluid			Clean compressed air (JIS B 83921-1: 2012 (ISO 8573-1: 2010) [1:3:2] or equivalent)	
Max. working pressure			200 kPa (≈29 psi, 2 bar)	0.7 MPa (≈100 psi, 7 bar)
Min. working pressure			Set pressure + max. control pressure x 0.1	
Proof pressure	Inlet		300 kPa (≈44 psi, 3 bar)	1.05 MPa (≈150 psi, 10.5 bar)
	Output side		150 kPa (≈22 psi, 1.5 bar)	0.75 MPa (≈110 psi, 7.5 bar)
Pressure control range (*1)			1 (≈0.2 psi) to 100 kPa (≈15 psi)	0.005 (≈0.73 psi) to 0.5 MPa (≈73 psi)
Power supply voltage			24 VDC ± 10% (stabilized power supply with ripple rate of 1% or less)	
Current consumption			0.1 A or less (0.6 A rush current when power is ON)	
Input signal (input impedance)		0	0 to 10 VDC(6.7 kΩ)	
		1	0 to 5 VDC(10 kΩ)	
		2	4 to 20 mADC(250 Ω)	
		3	0 to 20 mADC(250 Ω)	
Analog output (connecting load impedance)		AV	1 to 5 VDC (50 kΩ)	
		AA	4-20 mADC (300 Ω or less)	
Accuracy (*2)	Hysteresis		0.4% F.S. or less	
	Linearity		±0.5% F.S. or less	
	Resolution		0.1% F.S. or less	
	Repeatability		0.3% F.S. or less	
Temperature characteristics	Zero point fluctuation		0.12% F.S./°C or less	
	Span fluctuation		0.07% F.S./°C or less	
Max. flow rate (*3)			2 ℓ/min(ANR)	8 ℓ/min(ANR)
Step response (*4)	No load		0.1 s or less	
	15 cm^3 Load		0.5 s or less	
Operating ambient temperature, fluid temperature			0 (32°F) to 50 (122°F)°C	
Storage ambient temperature			-20 (-4°F) to 60 (140°F)°C	
Operating ambient humidity			45 to 90% RH (no condensation)	
Storage ambient humidity			96% RH or less	
Mounting orientation			Free	
Boundary dimension			W30×D50×H39	
Port size		H4	φ4 Push-in fitting	
		H6	φ6 Push-in fitting	
Weight			90 g	

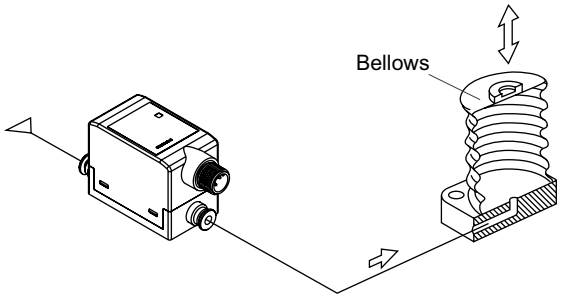
*1: 1% F.S. or less input signal cannot be controlled.
*2: The characteristics are: 24.0±0.1 VDC power supply voltage, 25±3°C ambient temperature, within the working pressure. and 10% to 100% of set pressure range.
*3: Working pressure: Maximum working pressure, Control pressure: Maximum control pressure.
*4: Working pressure: Max. working pressure, step amount: 50% F.S. → 100% F.S. / 50% F.S. → 60% F.S. / 50% F.S. → 40% F.S.
*5: The specification values above are obtained in a static state only. The control pressure may differ if air is consumed on the output side.

Example of applications

● Chemical liquid discharge control



● Micro position control



How to order

EVS2 - 100 - 1 H4 AV - C11 - 3

Model No.

Ⓐ Pressure control range

Ⓑ Input signal

Ⓒ Port size

Ⓓ Analog output

Ⓔ Cable option

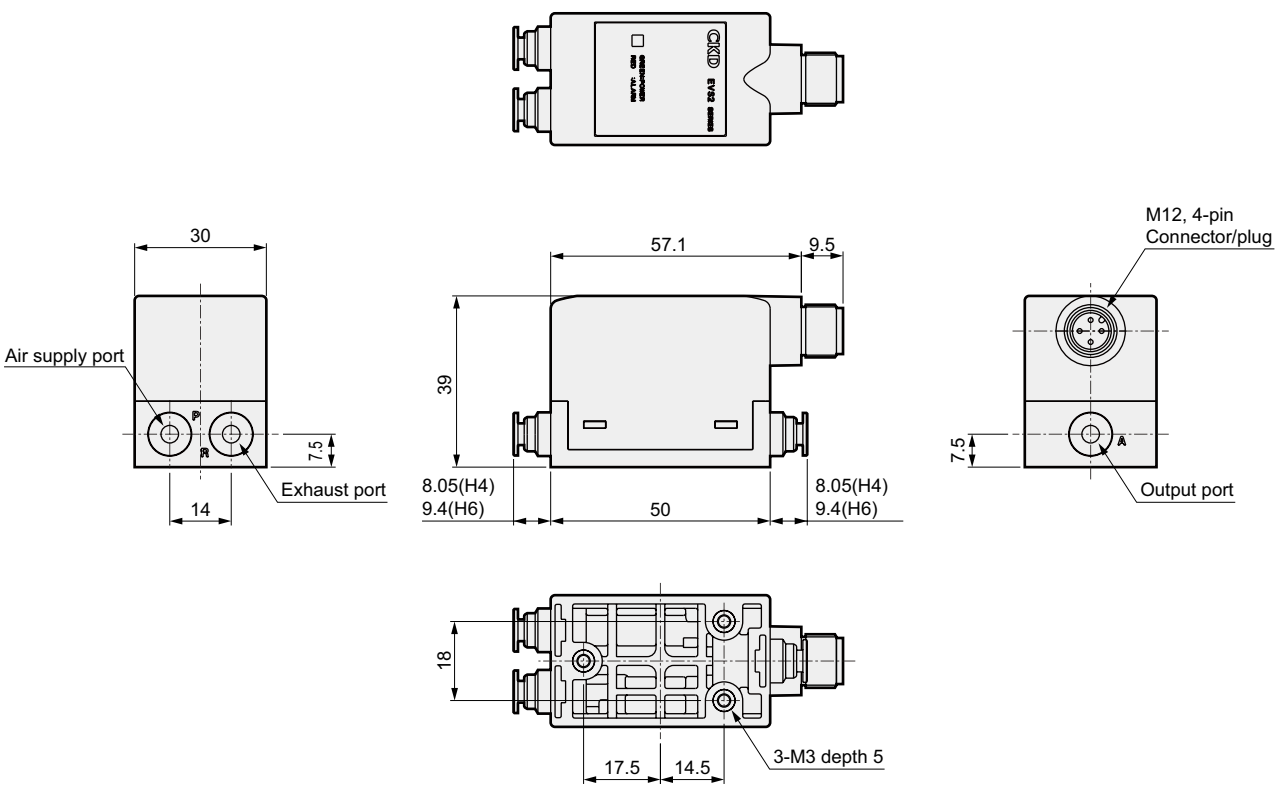
Code	Content
Ⓐ Pressure control range	
100	1 to 100 kPa
500	0.005 to 0.5 MPa
Ⓑ Input signal	
0	0 to 10 VDC
1	0 to 5 VDC
2	4 to 20 mADC
3	0 to 20 mADC
Ⓒ Port size	
H4	Push-in fitting φ4
H6	Push-in fitting φ6
Ⓓ Analog output	
AV	1 to 5 V
AA	4 to 20 mA
Ⓔ Cable option	
Blank	None
C11	1 m (straight connector)
C13	3 m (straight connector)

Precautions for model No. selection

Note: How to order an option only:

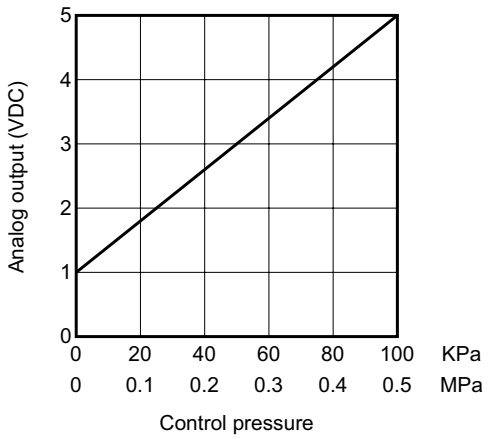
EV2000 - Cable option code

Dimensions

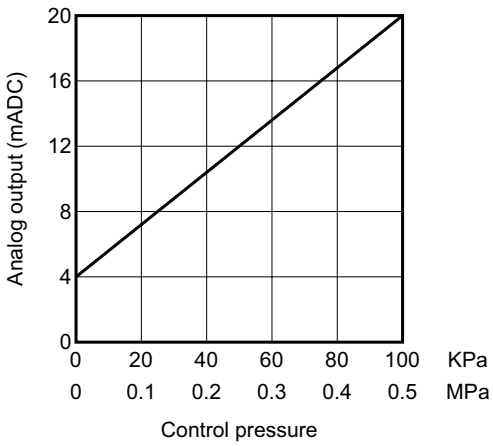


Analog output

● When selecting voltage output (AV)

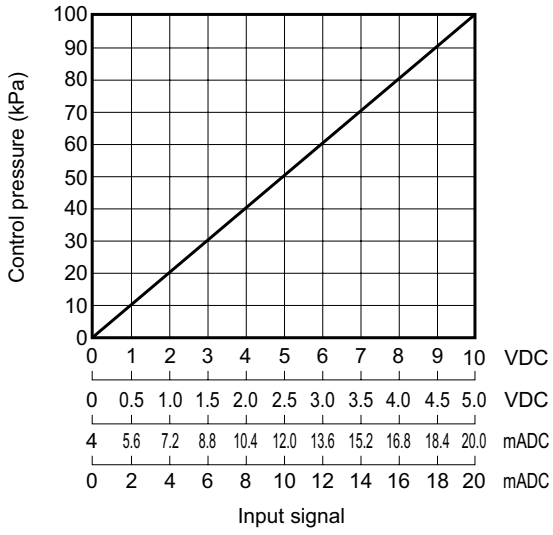


● When selecting current output (AA)

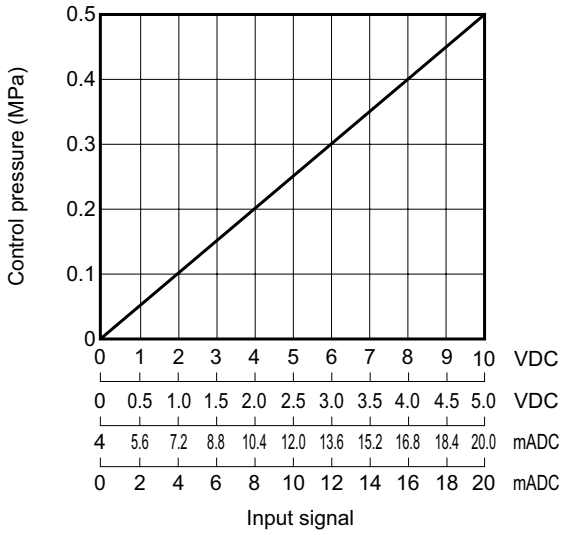


I/O characteristics

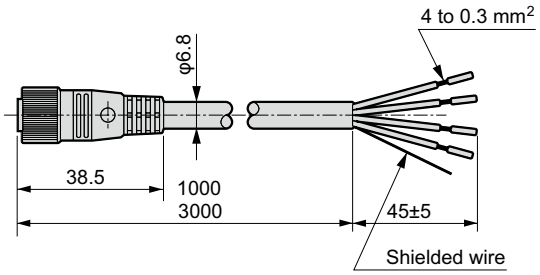
● EVS2-100



● EVS2-500



Cable option



-C1* Shielded cable connector

* Pin No.	Insulator color	Applications	Type of input signal				Weight
			0 to 10 V	0 to 5 V	4 to 20 mA	0 to 20 mA	
1	Red	Power supply ⊕	24 V				C11:79 C13:212
2	Green	-	Analog output				
3	Black	Common	0 V				
4	White	Input signal	0 to 10 V	0 to 5 V	4 to 20 mA	0 to 20 mA	

If a cable option is not used, the following recommended cable sockets can be used. Use a shielded wire cable.

Screw fixing type	ELW1KA4012 Correns (Hirschmann)
Straight (solder)	XS2C-D421 OMRON
L type (solder)	XS2C-D422 OMRON