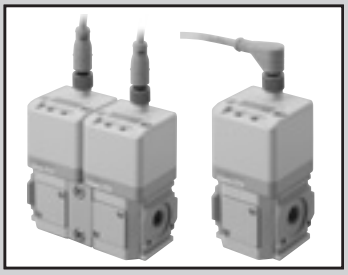
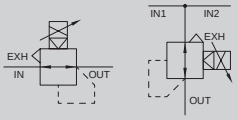


High precision electro pneumatic regulator

EVR Series

JIS symbol



Specifications

Model No. / Item		EVR-2100(2109)	EVR-2200(2209)	EVR-2300 (2309)	EVR-2400 (2409)
Working fluid		Clean compressed air (JIS B8392-1:2012 (ISO 8573-1:2010) [1:3:2])			
Max. working pressure		200 kPa	400 kPa	450 kPa	600 kPa
Min. working pressure		Set pressureForce+50 kPa			
Proof pressure	Inlet	300 kPa	600 kPa	650 kPa	900 kPa
	Output side	150 kPa	300 kPa	450 kPa	600 kPa
Pressure control range *1		5to100 kPa	5to200 kPa	5to300 kPa	5to400 kPa
Power supply voltage		24 VDC±10% (stabilized power supply with ripple rate 1% or less)			
Current consumption		0.1A or less			
Input signal (input impedance)		0 to 10 VDC (6 kΩ) 0 to 5 VDC (10 kΩ) 4 to 20 mADC or 1 to 5 VDC (250 Ω)			
Analog output (load impedance)		1to5VDC (10kΩor more)			
Performance *2 (Response setting 1))	Hysteresis	0.3 kPa or less	0.6 kPa or less	1.5 kPa or less	
	Linearity	Within ±0.5 kPa	Within ±1.0 kPa	Within ±2.5 kPa	
	Resolution	0.1 kPa or less	0.2 kPa or less	0.5 kPa or less	
	Repeatability	0.2 kPa or less	0.4 kPa or less	1.0 kPa or less	
Temperature characteristics (Setting 1) Reference temperature 25°C	Zero point fluctuation	±0.06 kPa/°C	±0.12 kPa/°C	±0.30 kPa/°C	
	Span fluctuation	±0.06 kPa/°C	±0.12 kPa/°C	±0.30 kPa/°C	
Max. flow rate (ℓ/min(ANR))		250	400	480	600
Step response (Response setting 1)	With no load *3	0.2 sec. or less			
Ambient temperature		5 to 50°C			
Mounting orientation		Free			
Degree of protection		IP64 or equivalent (body), IP67 (cable connector) *4			
Weight		300 g (320 g)			

Model No. / Item		EVR-2500 (2509)	EVR-2600 (2609)	EVR-2700 (2709)	EVR-2800 (2809)	EVR-2900 (2909)
Working fluid		Clean compressed air (JIS B8392-1:2012 (ISO 8573-1:2010) [1.3.2])				
Max. working pressure		700 kPa	750 kPa	850 kPa	950 kPa	1,000 kPa
Min. working pressure		Set pressure +50kPa				
Proof pressure	Inlet	1,050 kPa	1,120 kPa	1,200 kPa	1,400 kPa	1,500 kPa
	Output side	750 kPa	900 kPa	1,050 kPa	1,200 kPa	1,350 kPa
Pressure control range *1		5 to 500 kPa	10 to 600 kPa	10 to 700 kPa	10 to 800 kPa	10 to 900 kPa
Power supply voltage		24 VDC±10% (stabilized power supply with ripple rate 1% or less)				
Current consumption		0.1A or less				
Input signal (input impedance)		0 to 10 VDC (6 kΩ) 0 to 5 VDC (10 kΩ) 4 to 20 mADC or 1 to 5 VDC (250 Ω)				
Analog output (load impedance)		1 to 5 VDC (10 kΩ and over)				
Performance *2 (Response setting 1))	Hysteresis	1.5 kPa or less	3.0 kPa or less			
	Linearity	Within ±2.5 kPa	Within ±5.0 kPa			
	Resolution	0.5 kPa or less	0.9 kPa or less			
	Repeatability	1.0 kPa or less	1.8 kPa or less			
Temperature characteristics (Setting 1) Reference temperature 25°C	Zero point fluctuation	±0.30 kPa/°C	±0.60 kPa/°C			
	Span fluctuation	±0.30 kPa/°C	±0.60 kPa/°C			
Max. flow rate (ℓ/min(ANR))		800	850	900	950	1,000
Step response (Response setting 1)	With no load *3	0.2 sec. or less				
Ambient temperature		5 to 50°C				
Mounting orientation		Free				
Degree of protection		IP64 or equivalent (body), IP67 (cable connector) *4				
Weight		300 g (320 g)				

*1: 1% F.S. or less input signal stops control.

*2: The conditions for the values above are: 24±0.1V DC power supply voltage, 25±3°C ambient temperature, no load, working pressure from +0.05 MPa max. control pressure to the max. working pressure, and 10 to 100% control pressure.
In addition, when the secondary side is a closed circuit, pressure fluctuations will occur if the product is used for blowing or for similar applications.

*3: 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.

*4: The degree of protection of body IP64 is applied only when installed with facing connector upward.

How to order

EVR-2 50 0 - 0 8 - E2 - S1 C

- 50 → Ⓐ Pressure control range
- 0 → Ⓑ Body
- 0 → Ⓒ Input signal
- 8 → Ⓓ Port size
- E2, S1, C → Ⓔ Option

Code	Description	
Ⓐ Pressure control range		
10	5 to 100 kPa	
20	5 to 200 kPa	
30	5 to 300 kPa	
40	5 to 400 kPa	
50	5 to 500 kPa	
60	10 to 600 kPa	
70	10 to 700 kPa	
80	10 to 800 kPa	
90	10 to 900 kPa	
Ⓑ Body		
0	Single unit	
9	Manifold	
Ⓒ Input signal		
0	0 to 10 VDC	
1	0 to 5 VDC	
2	4 to 20 mADC or 1 to 5 VDC	
Ⓓ Port size		
8	Rc1/4	
8G	G1/4	(*1)
8N	NPT1/4	(*1)
Ⓔ Option		
Exhaust option		
Blank	Rc1/4 port	
E2	With silencer	
Cable option		
Blank	None	
S1	Straight	1 m attached
S3		3 m attached
L1	L type	1 m attached
L3		3 m attached
Bracket option		
Blank	None	
C	C-bracket attached	
B	B-bracket attached	(*2)

⚠ Precautions for model No. selection

*1: Port size: Port size of IN port and OUT port. E2 exhaust option will be supplied with “8G” and “8N”.
*2: 9 (manifold) body and B (B-bracket) cannot be selected at the same time together.

● Discrete option (cable, exhaust, bracket) model No.

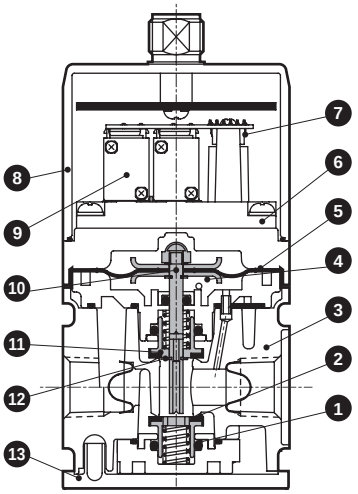
EVR- S1

Ⓔ Option

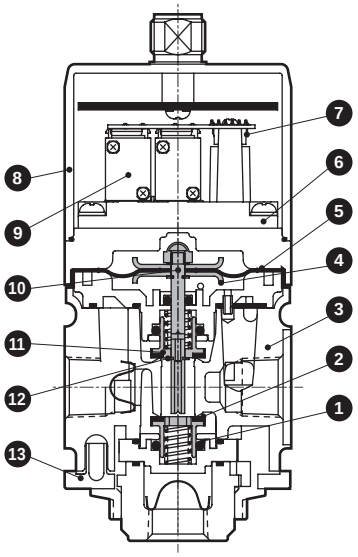
(Note) Discrete exhaust option model No. for Rc1/4 is EVR-E.

Internal structure and parts list

● EVR-2□00



● EVR-2□09

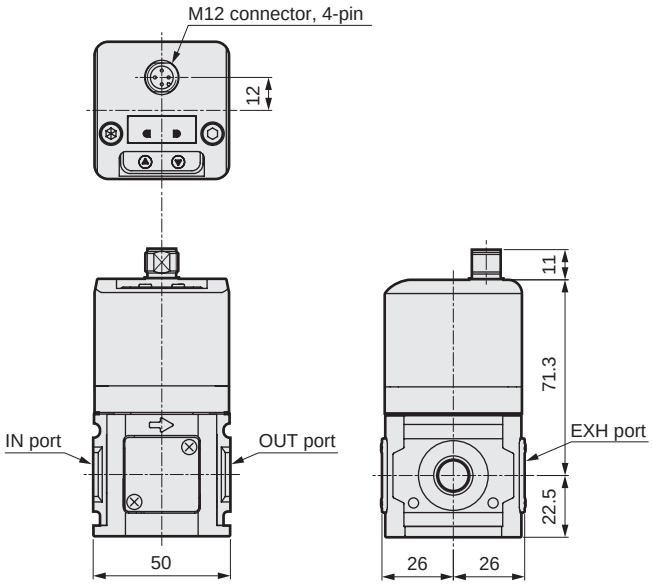


No.	Part name	Material
1	O-ring	Fluoro rubber
2	Bottom valve	Copper alloy, special nitrile rubber
3	Body	Aluminum alloy die-casting
4	Disc	Aluminum alloy
5	Diaphragm	Special nitrile rubber
6	Valve base	Polyphenylene sulfide resin
7	Pressure sensor	(Diffused semiconductor)
8	Housing	ABS resin
9	2-way valve	-
10	Rod	Stainless steel
11	Top valve	Copper alloy, special nitrile rubber
12	E-type snap ring	Steel
13	Plate cover	ABS resin

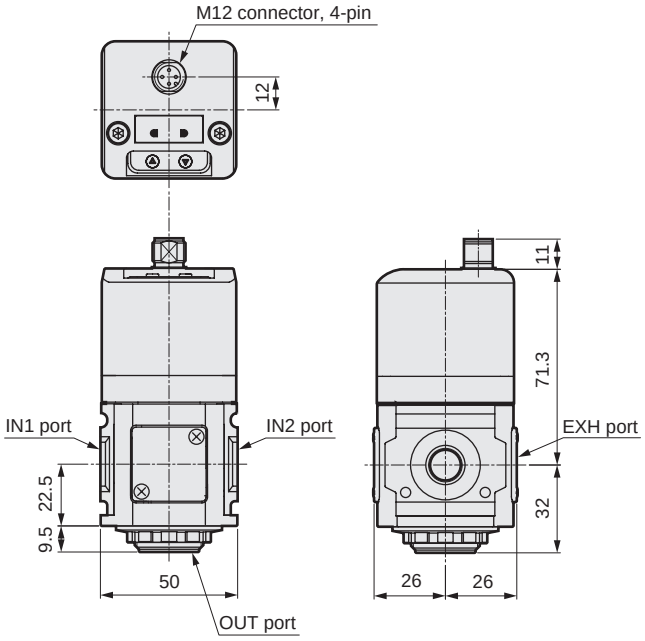
Cannot be disassembled

Dimensions

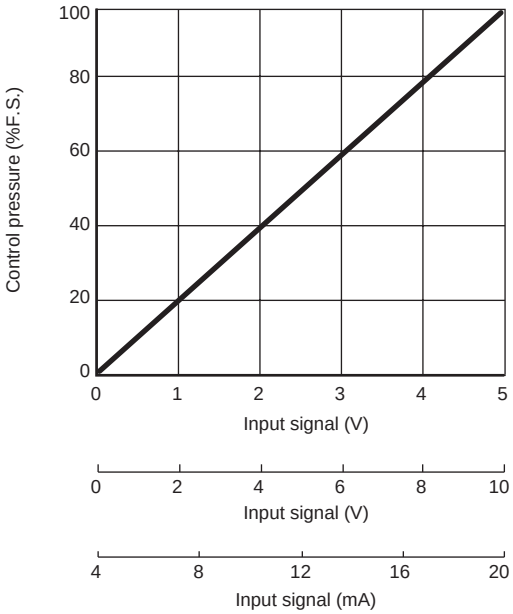
● EVR-2□00



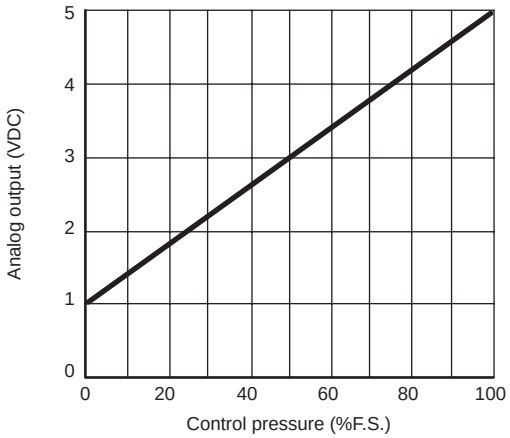
● EVR-2□09



I/O characteristics

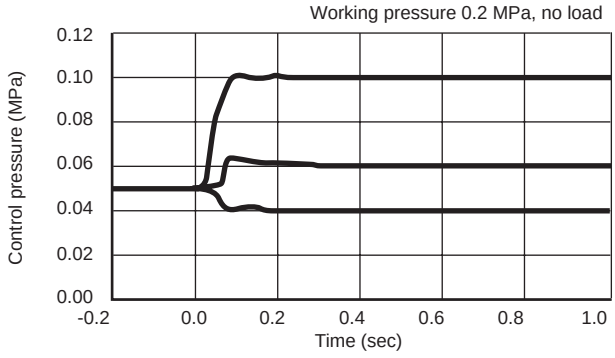


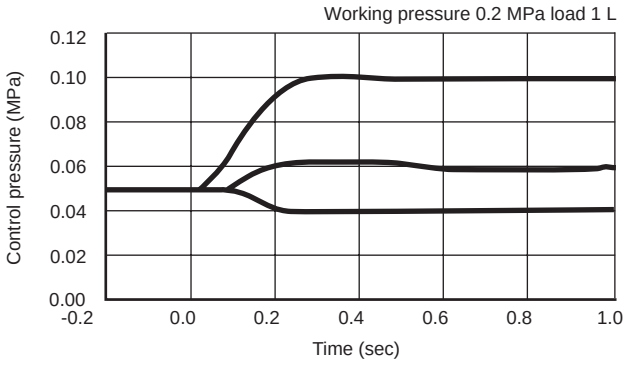
Analog output



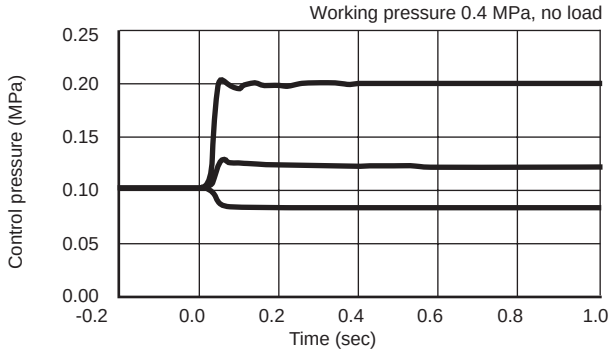
Step response characteristics (response setting 1)

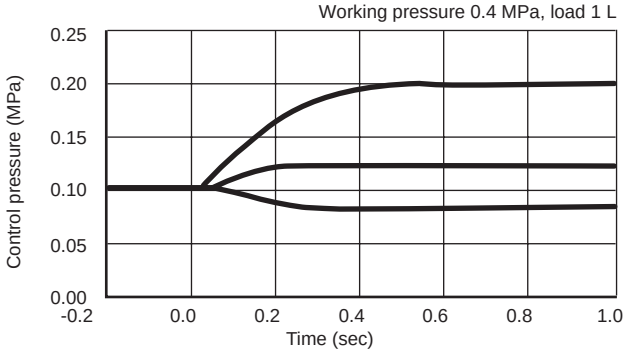
● EVR-2100





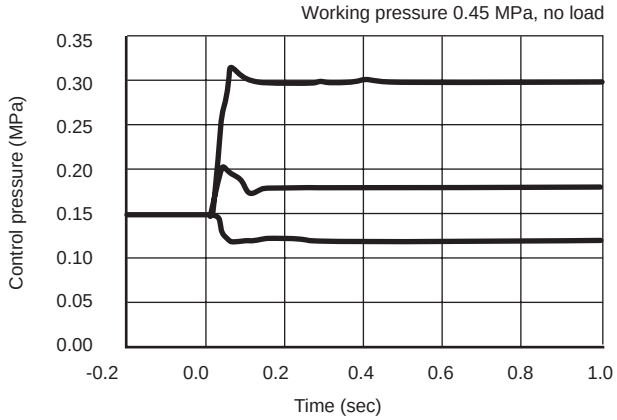
● EVR-2200

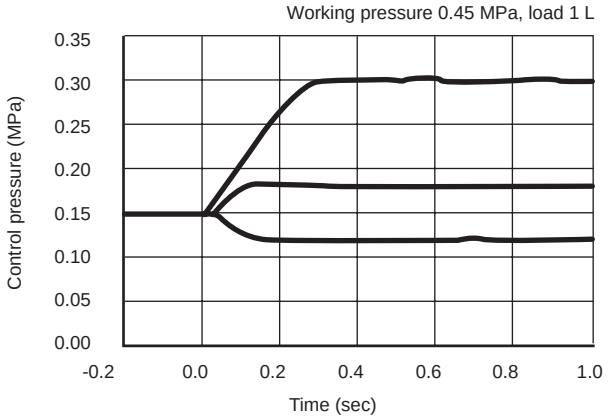




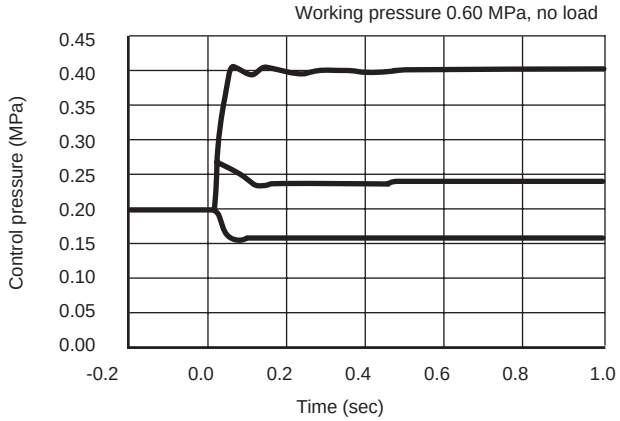
Step response characteristics (response setting 1)

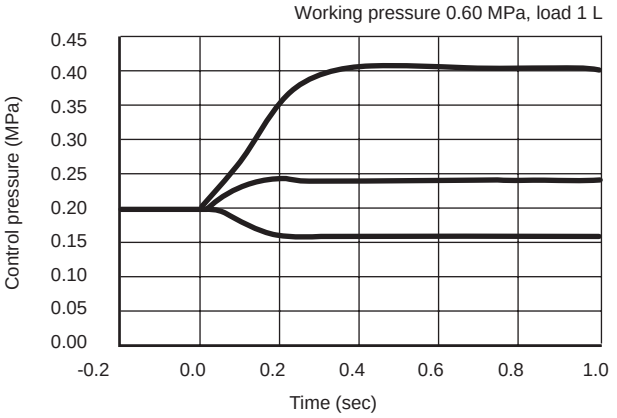
● EVR-2300



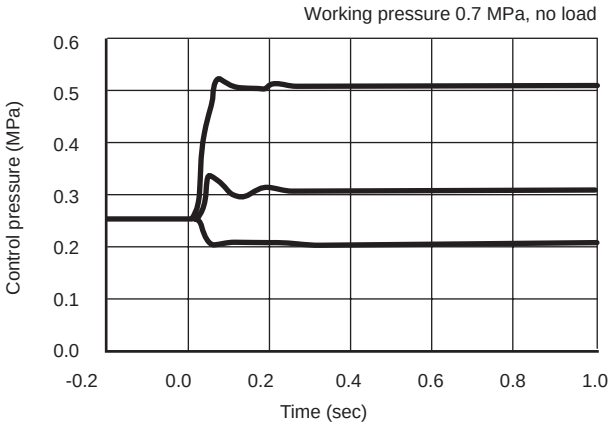


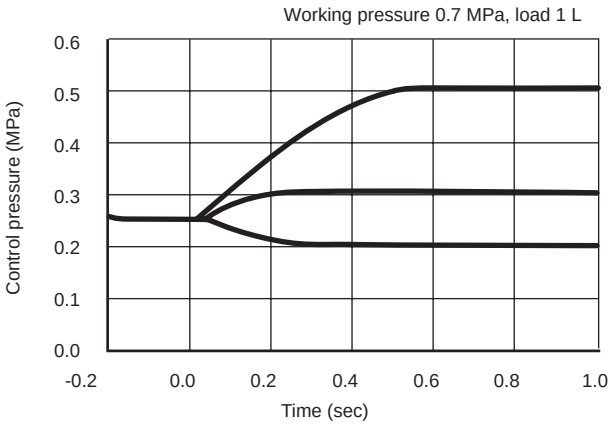
● EVR-2400



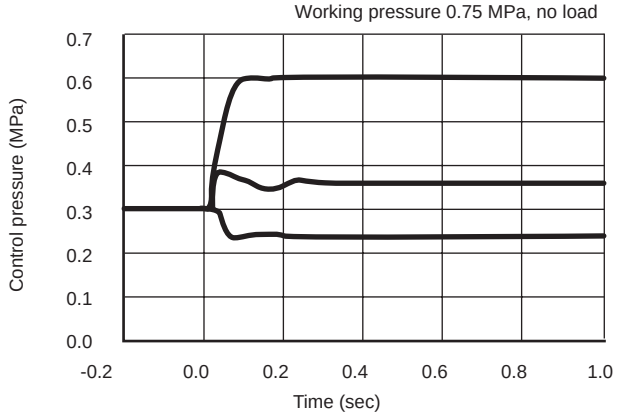


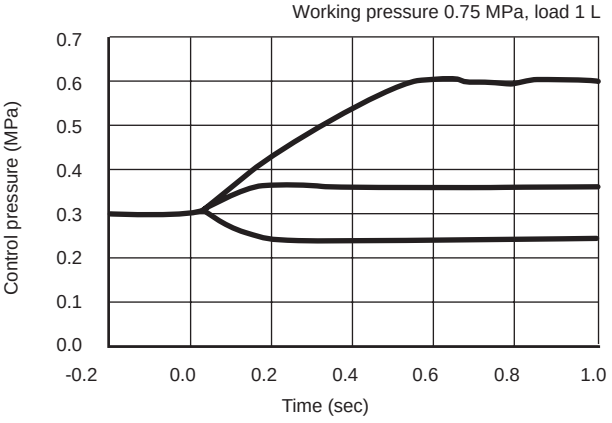
● EVR-2500





● EVR-2600

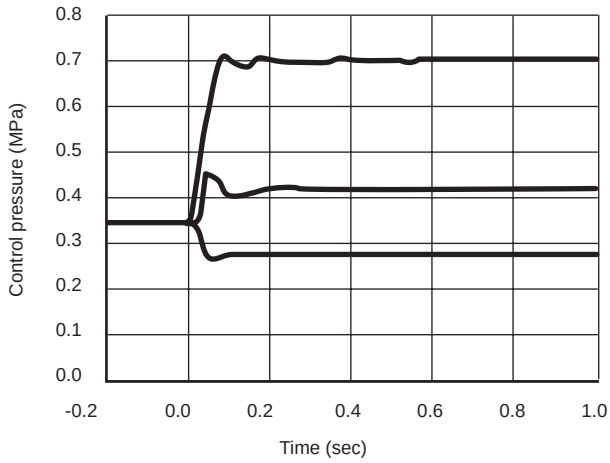




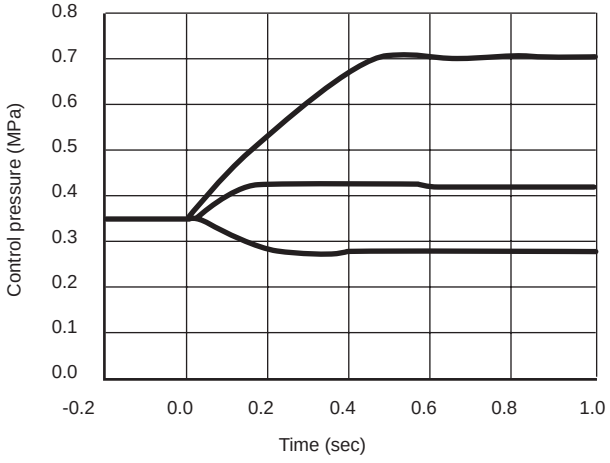
Step response characteristics (response setting 1)

● EVR-2700

Working pressure 0.85 MPa, no load

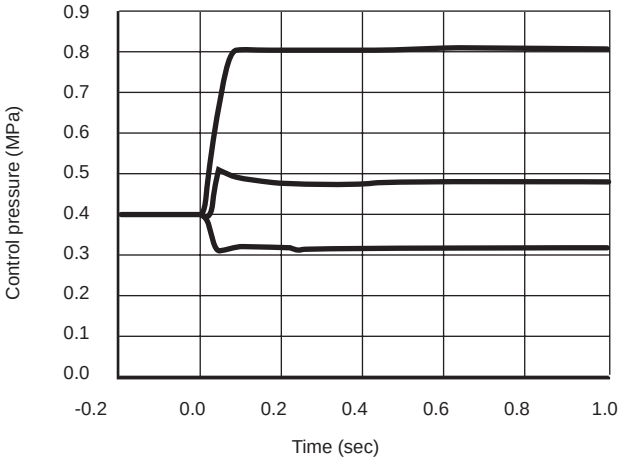


Working pressure 0.85 MPa, load 1 L

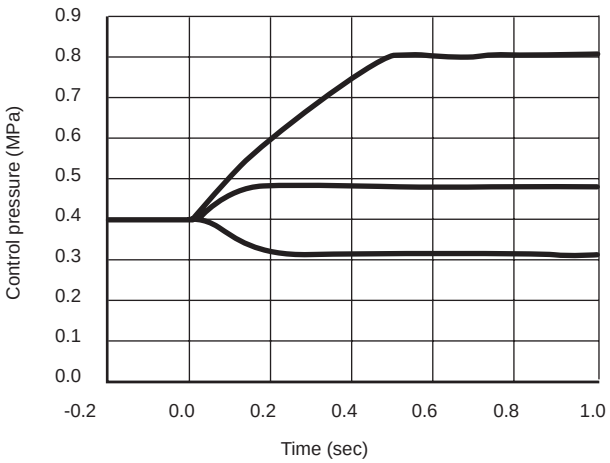


● EVR-2800

Working pressure 0.95 MPa, no load

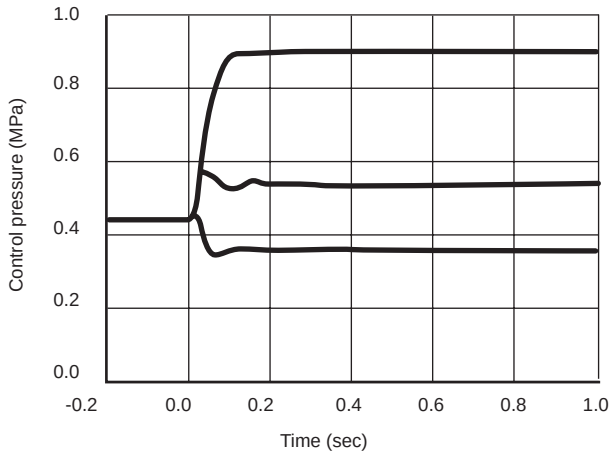


Working pressure 0.95 MPa, load 1 L

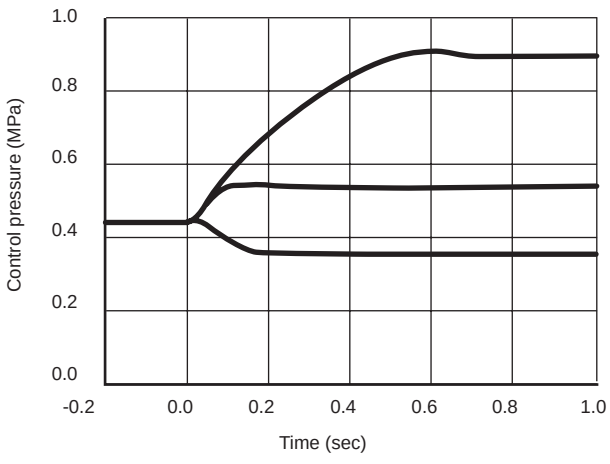


● EVR-2900

Working pressure 1.0 MPa, no load



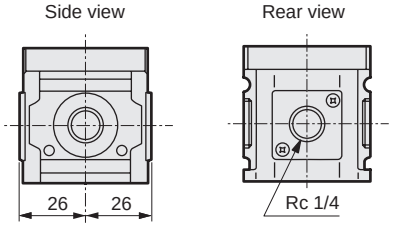
Working pressure 1.0 MPa, load 1 L



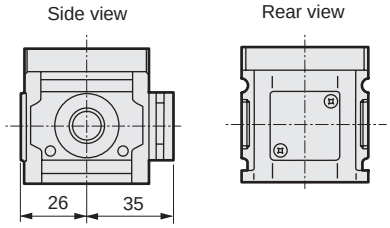
Optional dimensions

Embedded type option

● Standard: Blank (-E)



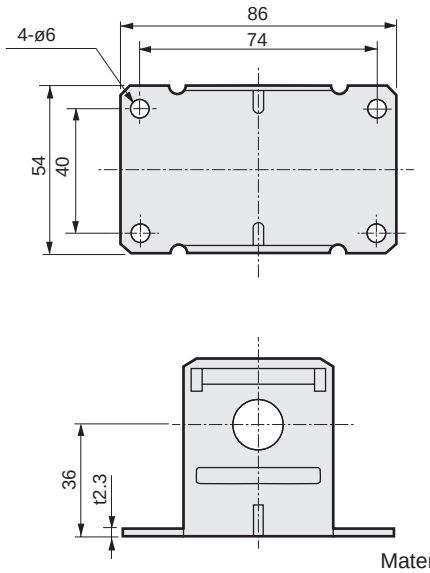
● Dedicated silencer: -E2



Weight: 10g

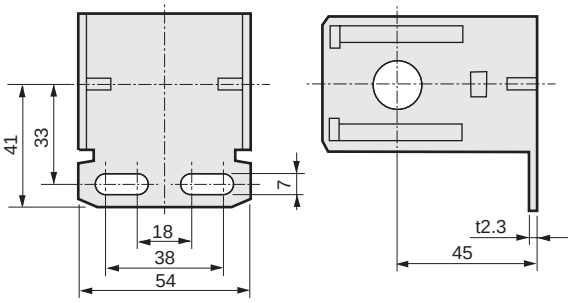
Bracket option

● B-bracket (Floor mounted): -B



Material : SPCC
Treatment: Zinc plated
Weight : 165g

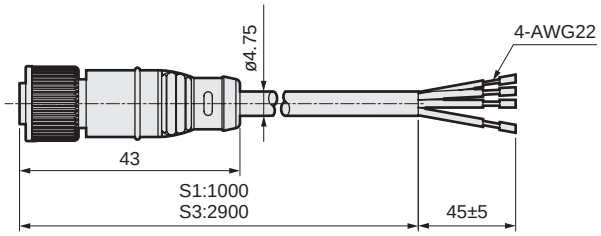
● C-bracket (Wall mounted): -C



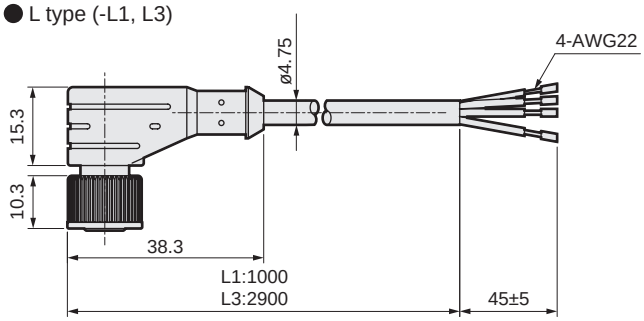
Material : SPCC
Treatment: Zinc plated
Weight : 148g

Cable option

● Straight (-S1, -S3)



● L type (-L1, L3)



* Cable/connector

* Pin No.	Insulator color	Applications	Type of input signal			Weight g
			0 to 10 V	0 to 5 V	4 to 20 mA 1 to 5 V	
1	Brown	Power supply+⊕	24 V			S1:50 S3:135 L1:55 L3:140
2	Black	——	Analog 1 to 5 V			
3	Blue	Common	0 V			
4	White	Input signal	0 to 10 V	0 to 5 V	4 to 20 mA 1 to 5 V	

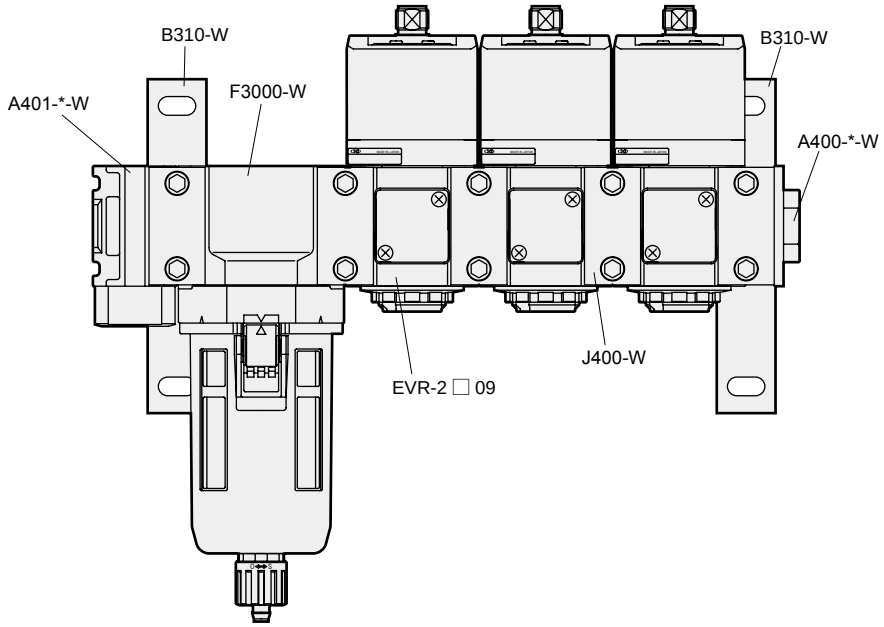
If a cable connector is not used, the following recommended cable sockets can be used.

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

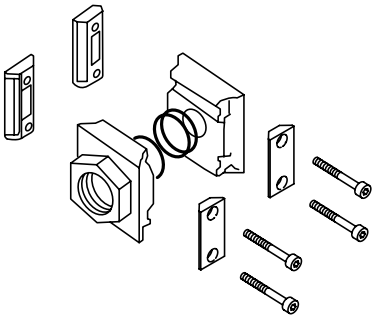
Optional dimensions

Other peripheral devices

● Example of system upgrading

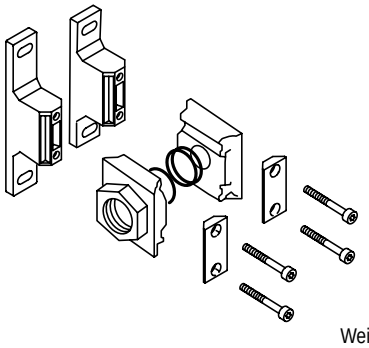


● A400-8/10/15-W
Pipe adaptor set



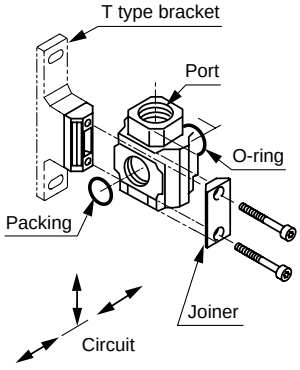
Weight: 160g
Material: Aluminum alloy die-casting
Painting

● A400-8-W/10-W/15-W-B31W
Pipe adaptor set



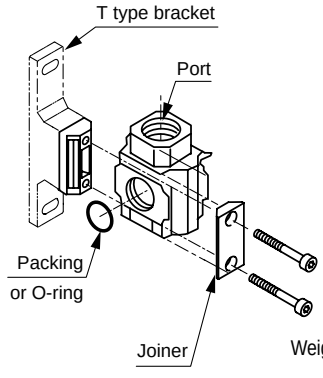
Weight: 270g
Material: Aluminum alloy die-casting
Painting

● D401-00-8/10/15-W-(B31W)
Distributor



Weight: 161g
216 g(B31W)
Material: Aluminum alloy die-casting
Painting

● A401-8/10/15-W-(B31W)
L type pipe adaptor



Weight: 161g
216 g(B31W)
Material: Aluminum alloy die-casting
Painting