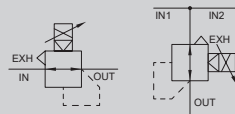


High precision electro pneumatic regulator

EVR Series

JIS symbol



Specifications

Model No.	EVR-2100(2109)	EVR-2200(2209)	EVR-2300 (2309)	EVR-2400 (2409)
Item				
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 pressure Force+50 kPa			
Proof pressure	Inlet	300 kPa	600 kPa	650 kPa
	Output side	150 kPa	300 kPa	450 kPa
Pressure control range *1	5 to 100 kPa	5 to 200 kPa	5 to 300 kPa	5 to 400 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 mA DC or 1 to 5 VDC (250 Ω)			
Analog output (load impedance)	1 to 5 VDC (10 kΩ or 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.	EVR-2500 (2509)	EVR-2600 (2609)	EVR-2700 (2709)	EVR-2800 (2809)	EVR-2900 (2909)	
Item						
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 mA DC 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.

F.R.L.

F.R.

F (Filtr)

R (Reg)

L (Lub)

Drain

Separ

Mech

Press SW

Res press

exh valve

SlowStart

Anti-back/Bac-

remove Filtr

Film

Resist FR

Oil-ProhR

Med

Press FR

No Cu/

PTFE FRL

Outdrs FRL

Adapter

Joiner

Press

Gauge

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

Speed Ctrl

Silncr

CheckV/

other

Fit/Tube

Nozzle

Air Unit

PrecsCompn

Electro

Press SW

ContactSW

AirSens

PresSW

Cool

Air Flo

Sens/Ctrl

WaterR/Sens

TotAirSys

(Total Air)

TotAirSys

(Gamma)

Gas

generator

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg

etc

Ending

How to order

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

A Pressure control range

B Body

C Input signal

D Port size

E Option

Code	Description	
A 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	
B Body		
0	Single unit	
9	Manifold	
C Input signal		
0	0 to 10 VDC	
1	0 to 5 VDC	
2	4 to 20 mADC or 1 to 5 VDC	
D Port size		
8	Rc1/4	
8G	G1/4 (*1)	
8N	NPT1/4 (*1)	
E 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)	

F.R.L.

F.R.

F (Filtr)

R (Reg)

L (Lub)

Drain

Separ

Mech

Press SW

Res press

exh valve

SlowStart

Anti-bac/Bac-

remove Filtr

Film

Resist FR

Oil-ProhR

Med

Press FR

No Cu/

PTFE FRL

Outdrs FRL

Adapter

Joiner

Press

Gauge

CompFRL

LgFRL

PrecsR

VacF/R

Clean FR

ElecPneuR

AirBoost

Speed Ctrl

Silncr

CheckV/

other

Fit/Tube

Nozzle

Air Unit

PressCompn

Electro

Press SW

ContactSW

AirSens

PresSW

Cool

Air Flo

Sens/Ctrl

WaterRSens

TotAirSys

(Total Air)

TotAirSys

(Gamma)

Gas

generator

RefrDry

DesicDry

HiPolymDry

MainFiltr

Dischrg

etc

Ending

⚠ 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

E Option

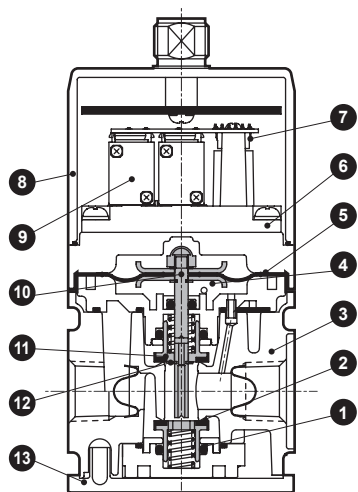
(Note) Discrete exhaust option model No. for Rc1/4 is EVR-E.

EVR Series

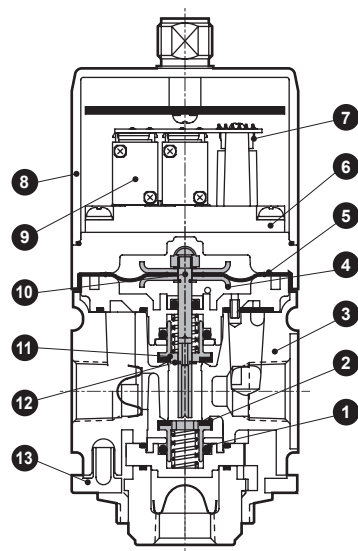
F.R.L. Internal structure and parts list

- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain
- Separ
- Mech
- Press SW
- Res press
- exh valve
- SlowStart
- Anti-bac/Bac-
- remove Filtr
- Film
- Resist FR
- Oil-ProhR
- Med
- Press FR
- No Cu/
- PTFE FRL
- Outdrs FRL
- Adapter
- Joiner
- Press
- Gauge
- CompFRL

● EVR-2□00



● EVR-2□09

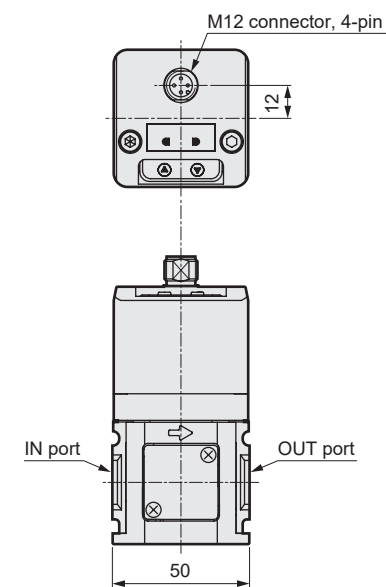


Cannot be disassembled

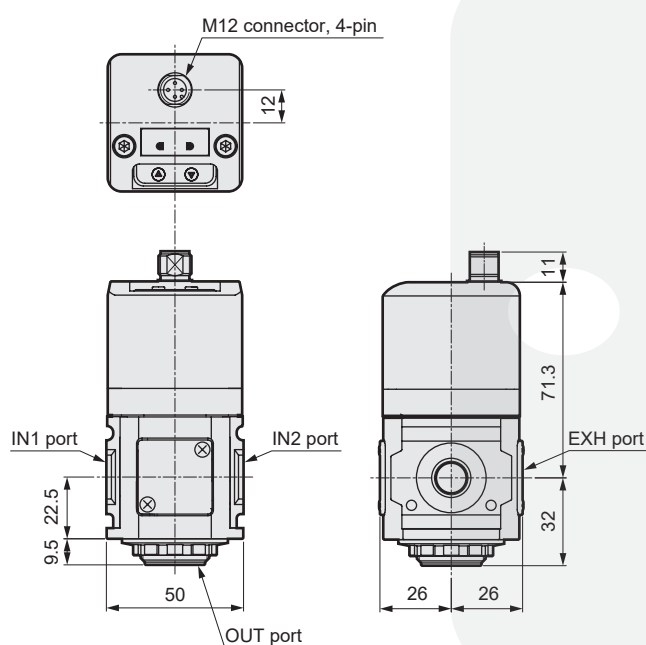
No.	Part name	Material
1	O-ring	Fluoro rubber
2	Bottom valve	Copper alloy, special nitrile rubber
3	Body	Aluminum alloy die-casting
4	Disc	Aluminum alloy
5	Diaphragm	Special nitrile rubber
6	Valve base	Polyphenylene sulfide resin
7	Pressure sensor	(Diffused semiconductor)
8	Housing	ABS resin
9	2-way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

Dimensions

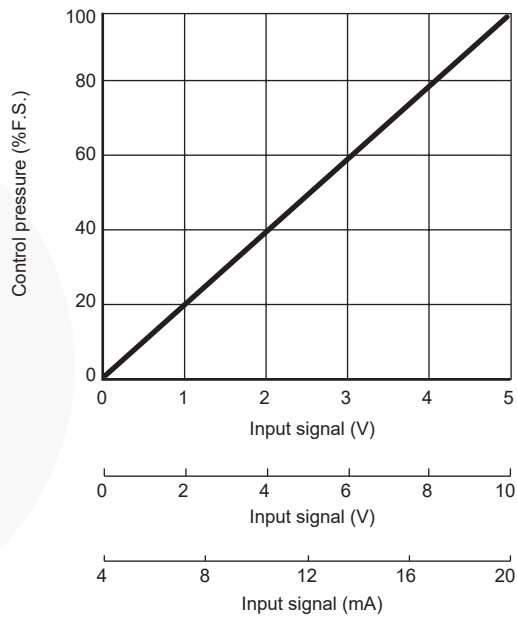
● EVR-2□00



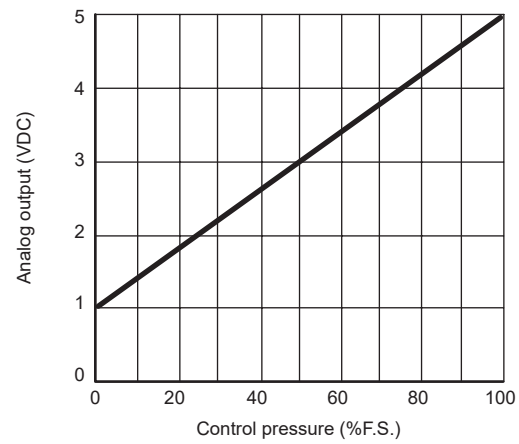
● EVR-2□09



I/O characteristics

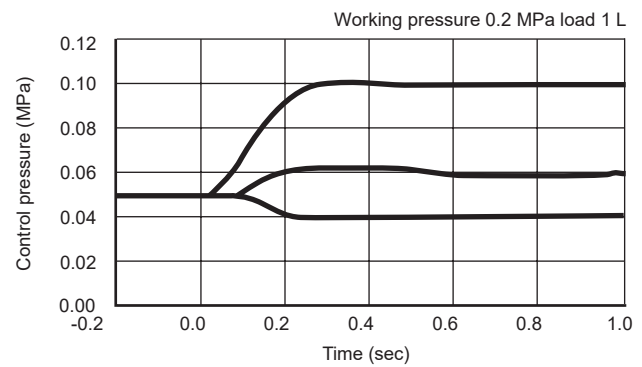
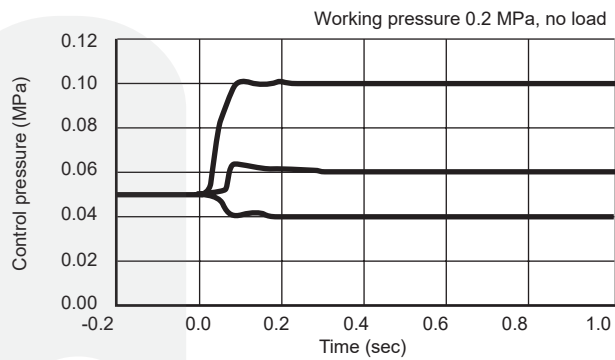


Analog output

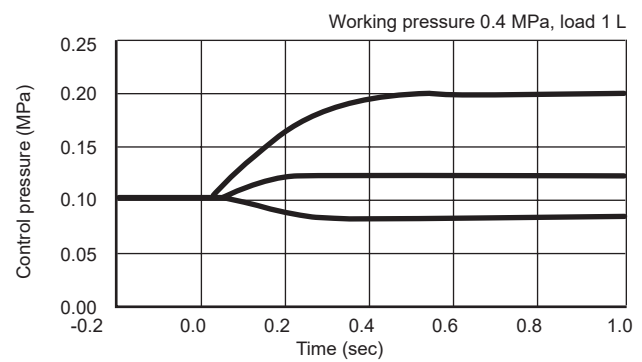
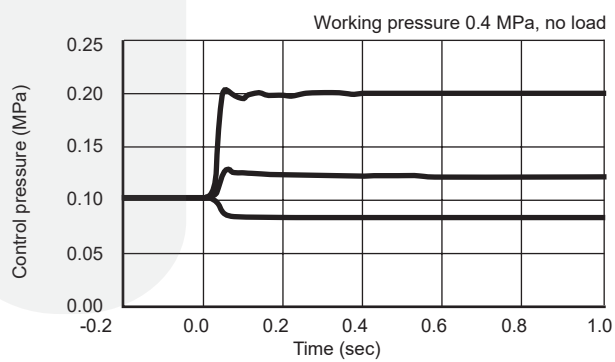


Step response characteristics (response setting 1)

● EVR-2100



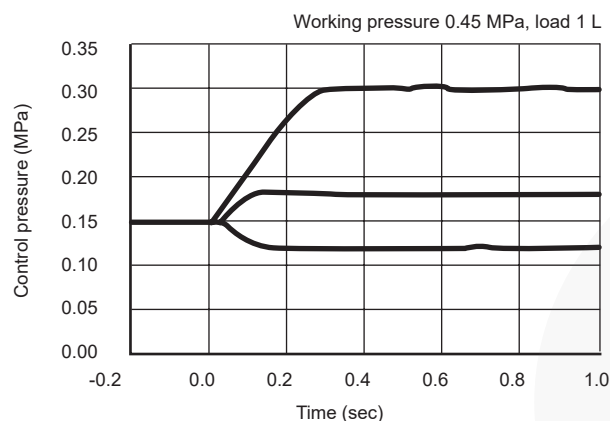
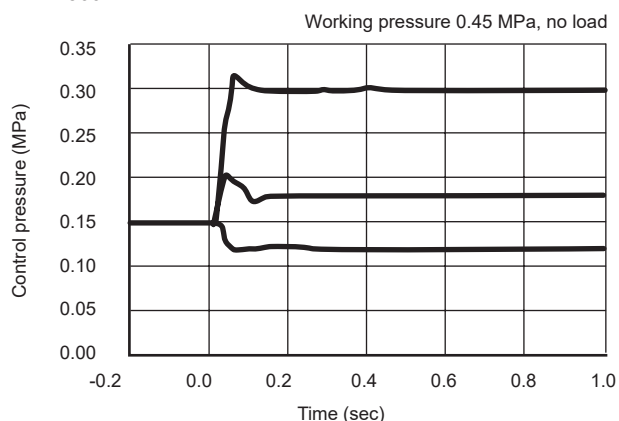
● EVR-2200



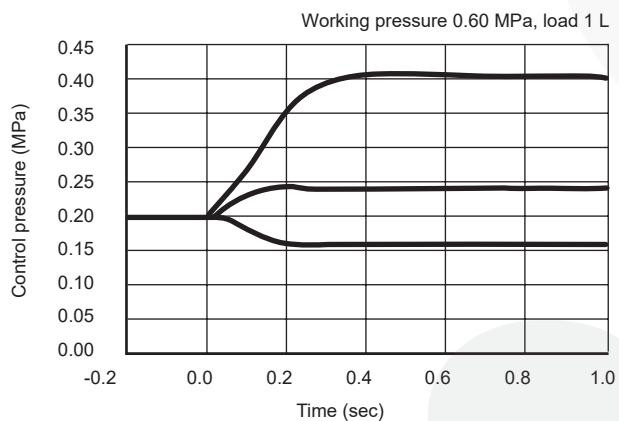
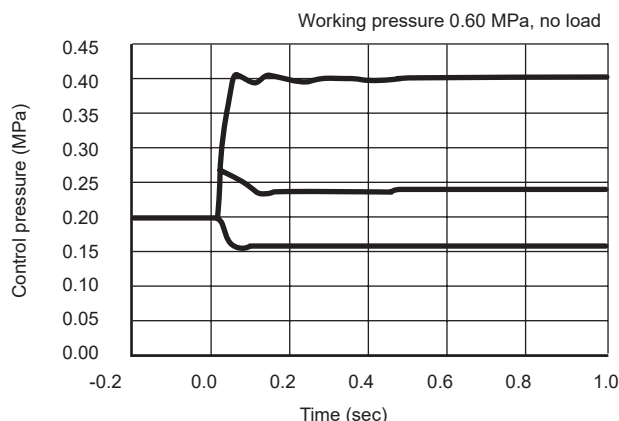
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRiSens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L. Step response characteristics (response setting 1)

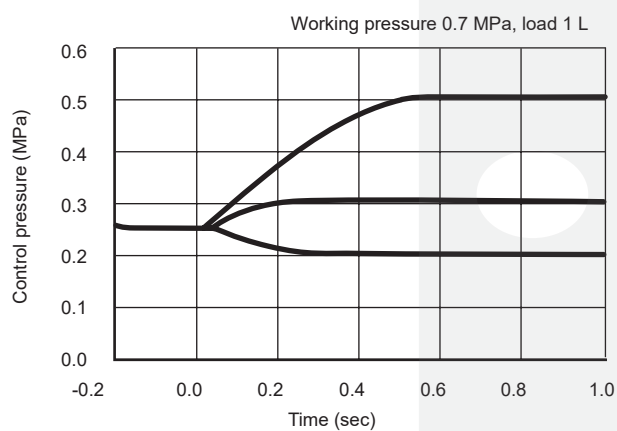
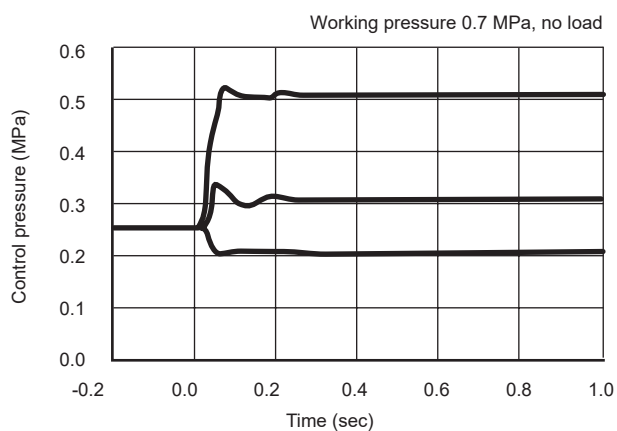
F.R. ● EVR-2300



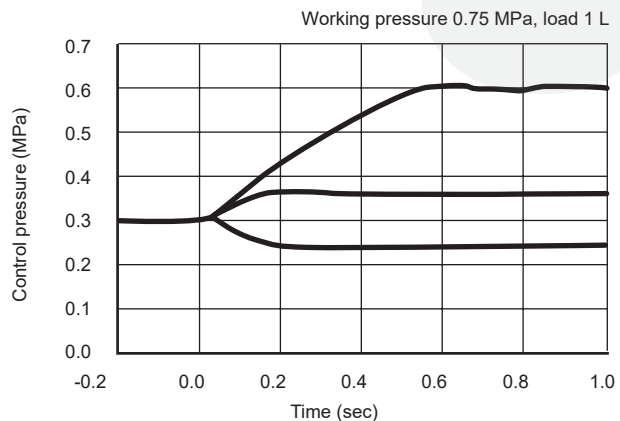
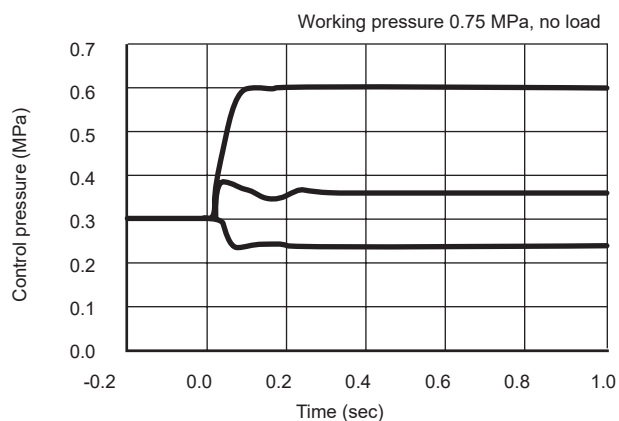
● EVR-2400



● EVR-2500

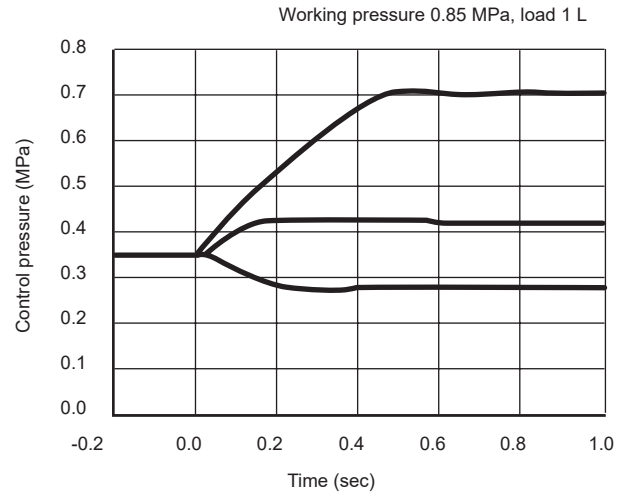
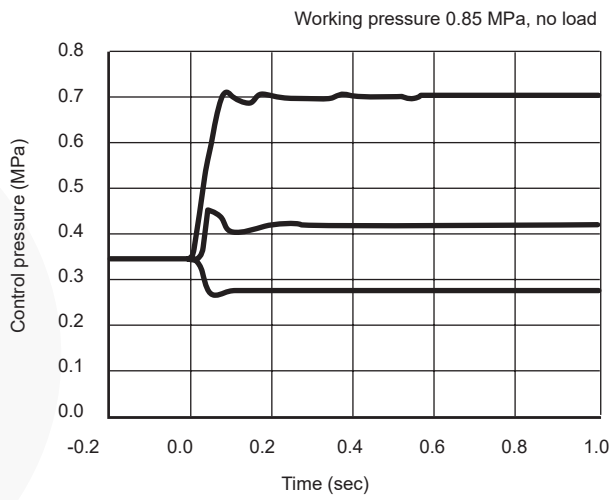


● EVR-2600

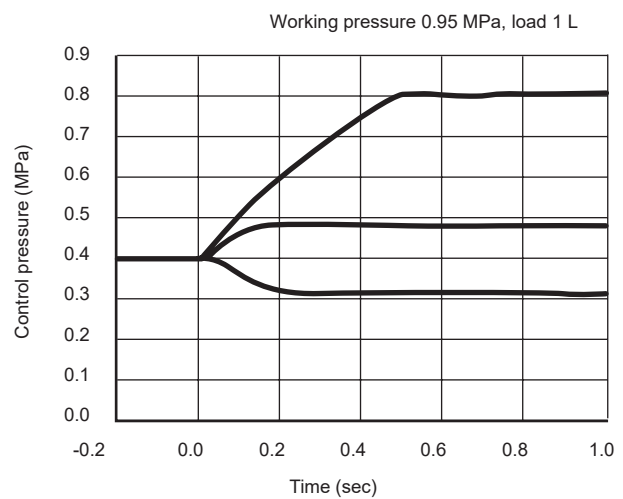
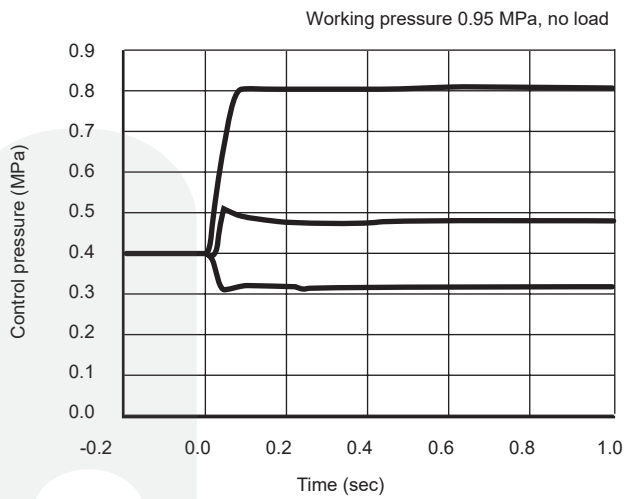


Step response characteristics (response setting 1)

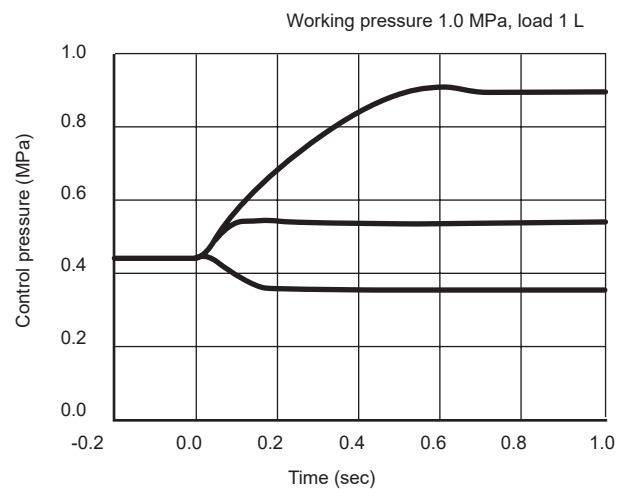
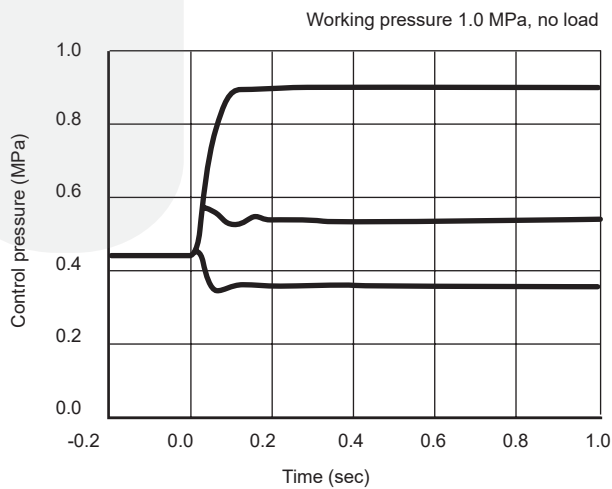
● EVR-2700



● EVR-2800



● EVR-2900



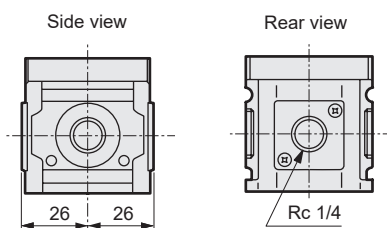
F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/other
Fit/Tube
Nozzle
Air Unit
PresCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending

F.R.L. Optional dimensions

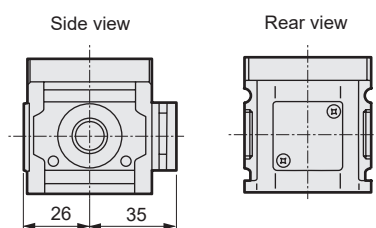
- F.R.
- F (Filtr)
- R (Reg)
- L (Lub)
- Drain Separ
- Mech Press SW
- Res press exh valve
- SlowStart
- Anti-bac/Bac-remove Filtr
- Film Resist FR
- Oil-ProhR
- Med Press FR
- No Cu/PTFE FRL
- Outdrs FRL
- Adapter Joiner
- Press Gauge
- CompFRL
- LgFRL
- PrecsR
- VacF/R
- Clean FR
- ElecPneuR**
- AirBoost
- Speed Ctrl
- Silncr
- CheckV/other
- Fit/Tube
- Nozzle
- Air Unit
- PrecsCompn
- Electro Press SW
- ContactSW
- AirSens
- PresSW Cool
- Air Flo Sens/Ctrl
- WaterRISens
- TotAirSys (Total Air)
- TotAirSys (Gamma)
- Gas generator
- RefrDry
- DesiccDry
- HiPolymDry
- MainFiltr
- Dischrg etc
- Ending

Embedded type option

● Standard: Blank (-E)



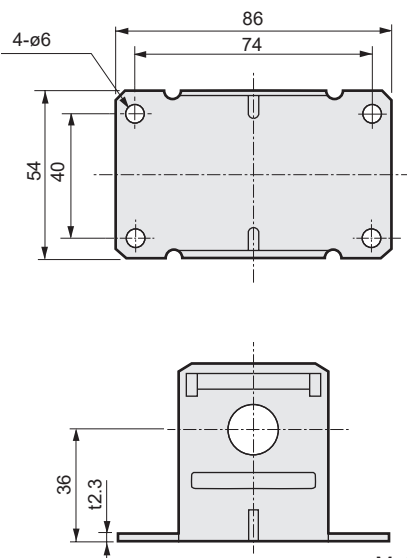
● Dedicated silencer: -E2



Weight: 10g

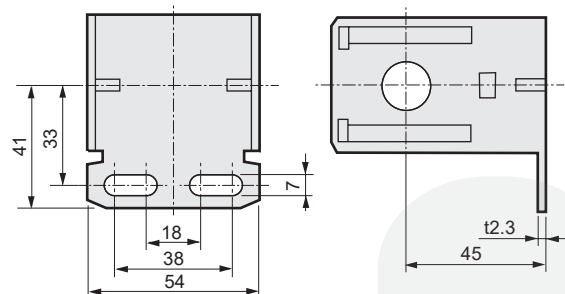
Bracket option

● B-bracket (Floor mounted): -B



Material : SPCC
Treatment : Zinc plated
Weight : 165g

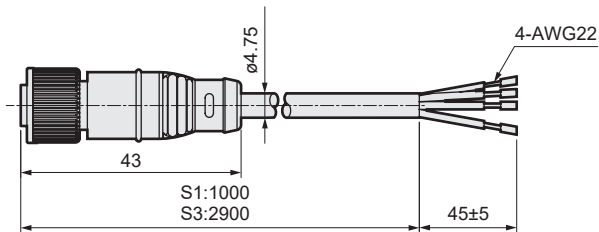
● C-bracket (Wall mounted): -C



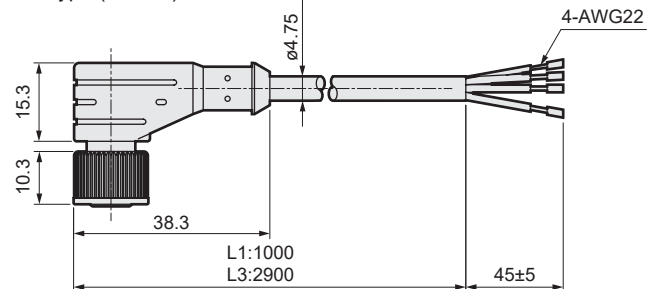
Material : SPCC
Treatment : Zinc plated
Weight : 148g

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	

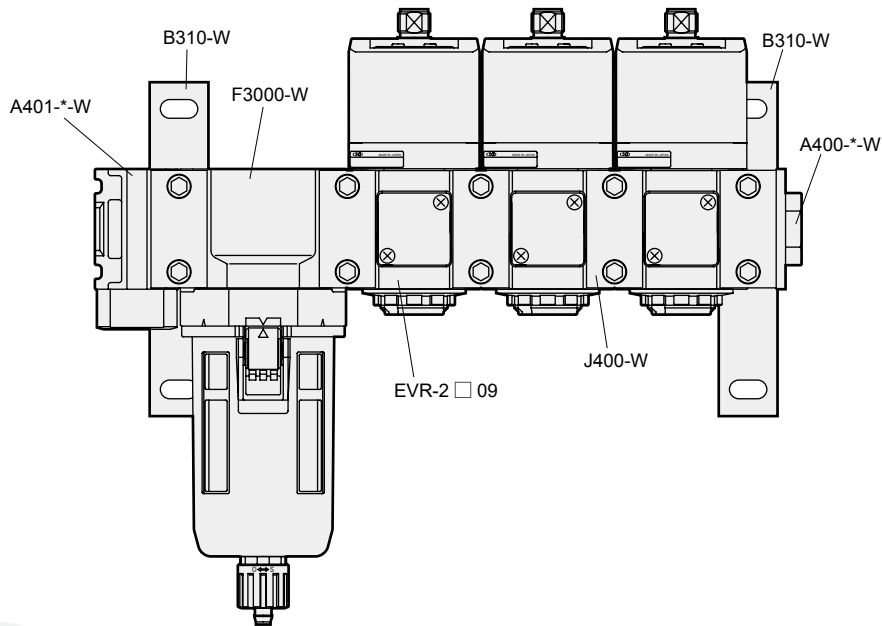
If a cable connector is not used, the following recommended cable sockets can be used.

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

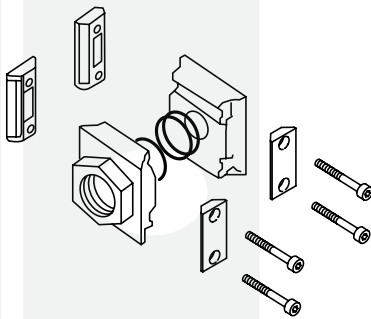
Optional dimensions

Other peripheral devices

● Example of system upgrading

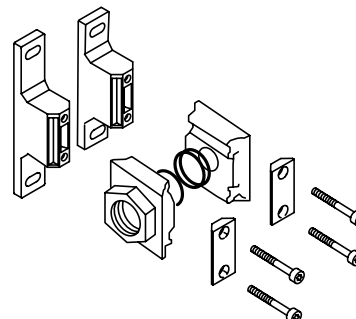


● A400-8/10/15-W
Pipe adaptor set



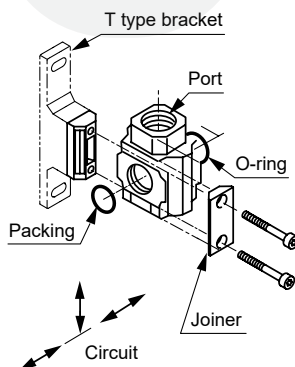
Weight: 160g
Material: Aluminum alloy die-casting
Painting

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



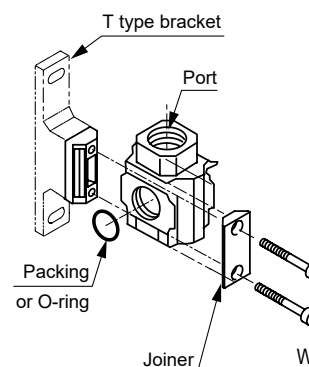
Weight: 270g
Material: Aluminum alloy die-casting
Painting

● 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

F.R.L.
F.R.
F (Filtr)
R (Reg)
L (Lub)
Drain Separ
Mech Press SW
Res press exh valve
SlowStart
Anti-bac/Bac-remove Filtr
Film Resist FR
Oil-ProhR
Med Press FR
No Cu/ PTFE FRL
Outdrs FRL
Adapter Joiner
Press Gauge
CompFRL
LgFRL
PrecsR
VacF/R
Clean FR
ElecPneuR
AirBoost
Speed Ctrl
Silncr
CheckV/ other
Fit/Tube
Nozzle
Air Unit
PrecsCompn
Electro Press SW
ContactSW
AirSens
PresSW Cool
Air Flo Sens/Ctrl
WaterRISens
TotAirSys (Total Air)
TotAirSys (Gamma)
Gas generator
RefrDry
DesicDry
HiPolymDry
MainFiltr
Dischrg etc
Ending