

High-precision electro pneumatic regulator EVR Series



HIGH PRECISION ELECTRO PNEUMATIC REGULATOR EVR SERIES



Continuous evolution!

High precision pressure control

Industry-leading performance

The new control method using microcomputer realizes high precision pressure control.

Hysteresis : **0.3** % (F.S.)

Resolution : **0.1** % (F.S.)

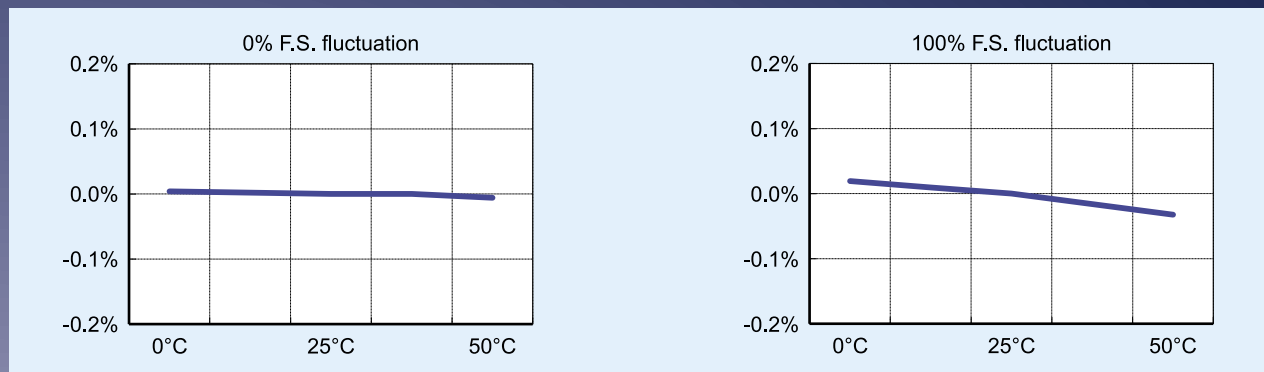
Linearity : \pm **0.5** % (F.S.)

Repeatability : **0.2** % (F.S.)

Temperature stability

Better stability

Built-in temperature compensation reduces the impact of the ambient temperature. Pressure adjustment is not required for the rise of the equipment temperature.



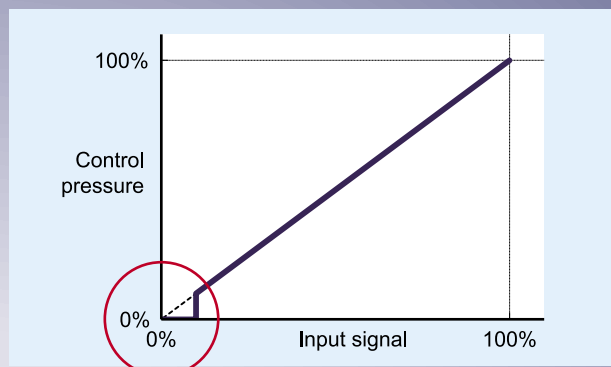
* These are typical values, not guaranteed values.

Pressure stability

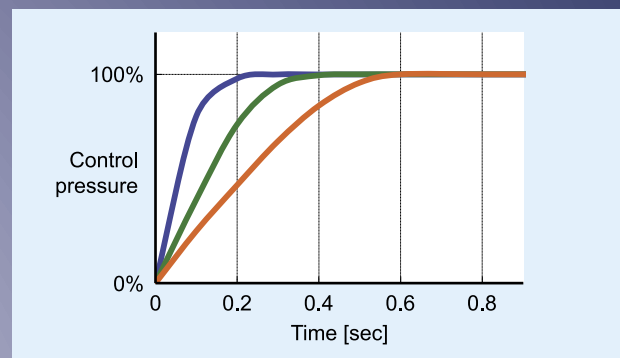
New function

Input signal 0% sets **zero residual pressure**.

Selection of a pressure control pattern is possible with the new function.



* 5kPa or less residual pressure applies for the secondary side close circuit.



* These are typical values, not guaranteed values.

EVR Series

High-precision electro-pneumatic regulator

Surprisingly high precision and stability!

Easy operation

Visualization of operation status

Two switches control the settings.

Zero point adjustment

Pressure adjustment at 0% input signal

Span point adjustment

Pressure adjustment at 100% input signal

Selection of pressure control patterns

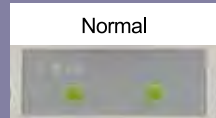
Three patterns are available.

Operation indicator

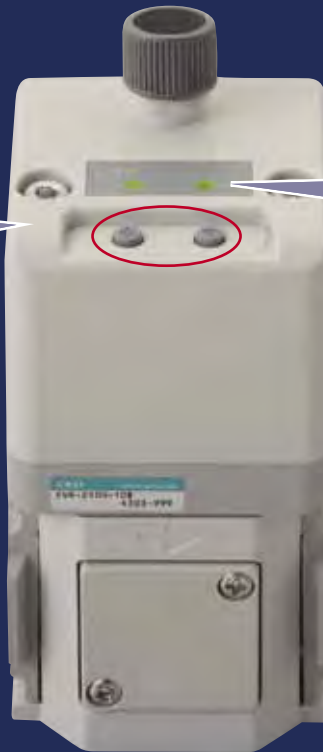
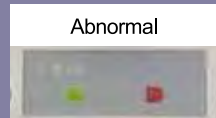
"Green" for control pressure

"Red" for adjustment range violation

Normal



Abnormal



Compatibility and installability

Easy installation

Compatible with conventional products (EV2500).

Two types of connector are available.

Can be used in the manifold configuration.

Axial type



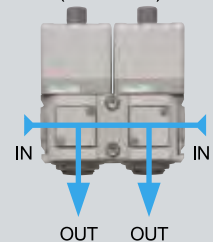
Radial type



Normal piping (EVR-2*00)

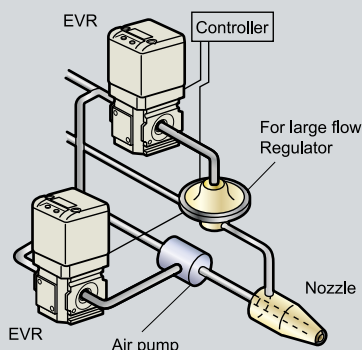


Manifold piping (EVR-2*09)

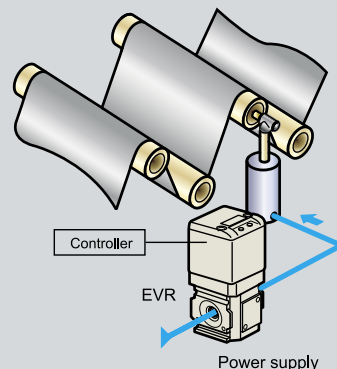


System use examples

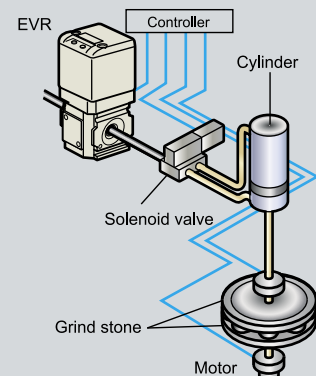
Control of various flow pressures

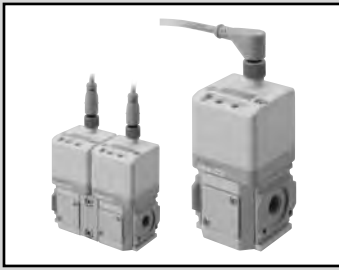


Balancer tension control



Grinding power control

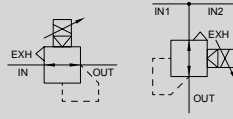




Precise electro pneumatic regulator

EVR Series

JIS symbol



Specifications

Model no.	EVR-2200 (2209)		EVR-2500 (2509)		EVR-2900 (2909)	
Descriptions						
Working fluid	Clean compressed air (JIS B8392-1:2012 (ISO 8573-1:2010) [1.3.2])					
Working pressure	"Set pressure +0.05 MPa" to 0.4 MPa		"Set pressure +0.05 MPa" to 0.7 MPa		"Set pressure +0.05 MPa" to 1.0 MPa	
Proof pressure	Inlet	0.6 MPa	1.05 MPa		1.5 MPa	
	Output	0.3 MPa	0.75 kPa		1.35 MPa	
Pressure control (Note 1)	0.005 to 0.2 MPa		0.005 to 0.5 MPa		0.010 to 0.9 MPa	
Power supply voltage	24 VDC \pm 10% (Stable power supply of ripple factor 1% or less)					
Current consumption	0.1 A or less					
Input signal (input impedance)	0-10 VDC (6 k Ω)					
	0-5 VDC (10 k Ω)					
	4-20 mA or 1-5 VDC (250 Ω)					
Analog output (load impedance)	1-5 VDC (10 k Ω or higher)					
Feature Note 2 (for setting 1)	Hysteresis	0.3%F.S. or less			0.34%F.S. or less	
	Linearity	\pm 0.5%F.S. or less			\pm 0.56%F.S. or less	
	Resolution	0.1%F.S. or less				
	Repeatability	0.2%F.S. or less				
Temperature characteristics (for setting 1)	Zero drift	\pm 0.06%F.S./ $^{\circ}$ C with reference temperature of 25 $^{\circ}$ C			\pm 0.07%F.S./ $^{\circ}$ C with reference temperature of 25 $^{\circ}$ C	
	Span drift	\pm 0.06%F.S./ $^{\circ}$ C with reference temperature of 25 $^{\circ}$ C			\pm 0.07%F.S./ $^{\circ}$ C with reference temperature of 25 $^{\circ}$ C	
Max. flow rate (ANR)	400 ℓ /min		800 ℓ /min		1000 ℓ /min	
Step response (for setting 1)	No load (Note 3)	0.2sec or less				
Ambient temperature	5 to 50 $^{\circ}$ C					
Mounting orientation	Free					
Degree of protection	Equivalent to IP64 (body), IP67 (cable connector) Note 4					
Weight	300g (320g)					

Note 1: Control is stopped when the input signal becomes 1% F.S. or lower.

Note 2: The above characters apply for a control pressure 10 to 100% when power supply voltage 24 \pm 0.1 VDC, ambient temperature 25 \pm 3 $^{\circ}$ C, no load, working pressure range: "the highest control pressure +0.05 MPa" to the highest working pressure.

Also, they are limited to a closed circuit on the secondary side. The pressure may vary if used as an air blow or in a similar way.

Note 3: Working pressure: max. working pressure. Step rate:

50% F.S. -> 100% F.S.
50% F.S. -> 60% F.S.
50% F.S. -> 40% F.S.

Note 4: Body protection structure IP64 is valid only for the vertical installation with the cable connector facing upward.

How to order

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

A Pressure control

B Body type

C Input signal

D Port size

E Option

⚠ Note on model no. selection

Note 1 : The port sizes are those of the IN port and the OUT port. Exhaust option "E2" will be supplied when "8G" or "8N" is selected.

Note 2 : B (B type bracket) cannot be selected when body type 9 (manifold) is selected.

● Model no. of options (cable, exhaust, bracket)

EVR- **S1**

E Option

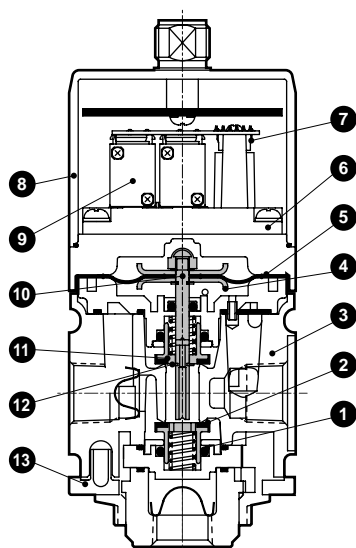
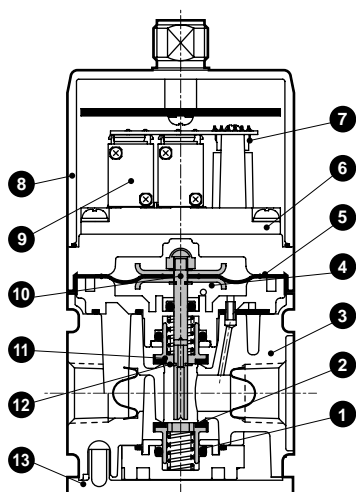
(Note) Exhaust option model no.: EVR-E for Rc1/4

Symbol	Descriptions	
A Pressure control		
20	0.005 to 0.200 MPa	
50	0.005 to 0.500 MPa	
90	0.010 to 0.900 MPa	
B Body type		
0	Discrete	
9	Manifold	
C Input signal		
0	0-10 VDC	
1	0-5 VDC	
2	4-20 mA DC or 1-5 VDC	
D Port size		
8	Rc1/4	
8G	G1/4	(Note 1)
8N	NPT1/4	(Note 1)
E Option		
Exhaust option		
Blank	Rc1/4 port	
E2	With silencer	
Cable option		
Blank	None	
S1	Axial type	1-m cable attached
S3		3-m cable attached
L1	Radial type	1-m cable attached
L3		3-m cable attached
Bracket option		
Blank	None	
C	C type bracket attached	
B	B type bracket attached (Note 2)	

Internal structure and parts list

● EVR-2*00

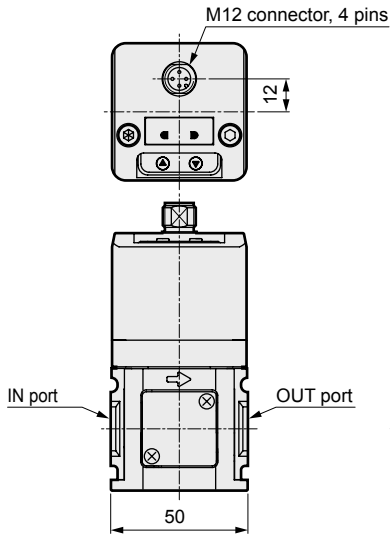
● EVR-2*09



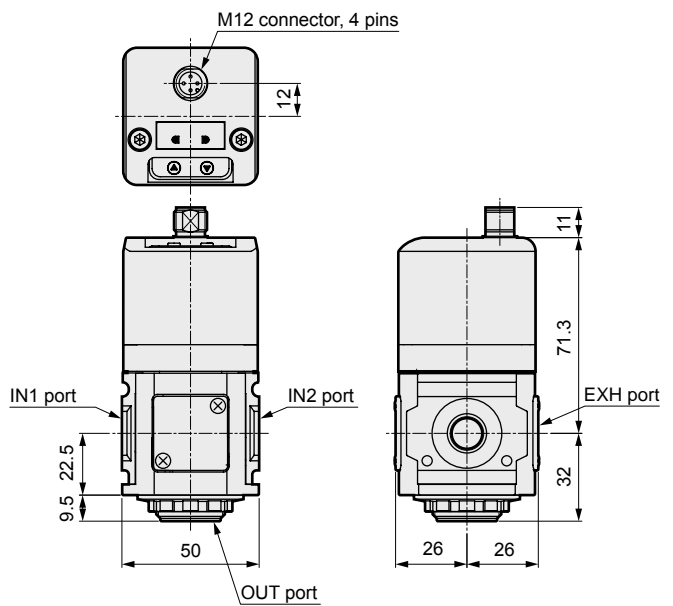
No.	Parts name	Material
1	O ring	Fluoro rubber
2	Bottom valve	Brass, special nitrile rubber
3	Body	Aluminum alloy die-casting
4	Disc	Aluminum alloy
5	Diaphragm	Special nitrile rubber
6	Valve base	Polyphenylene sulfide resin
7	Pressure sensor	(mass-market semiconductor)
8	Housing	ABS resin
9	2 way valve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

Dimensions

● EVR-2*00

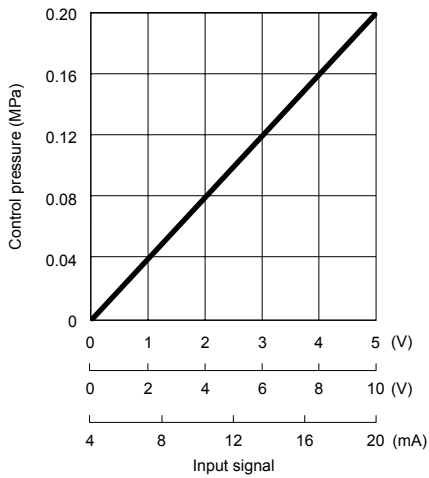


● EVR-2*09

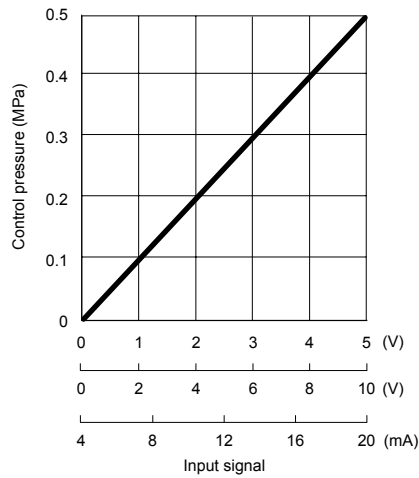


In put Out put characteristics

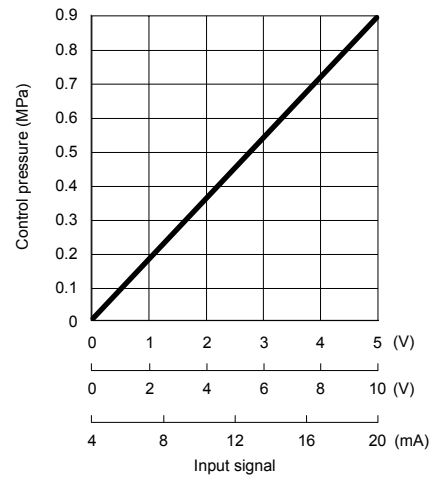
● EVR-220*



● EVR-250*

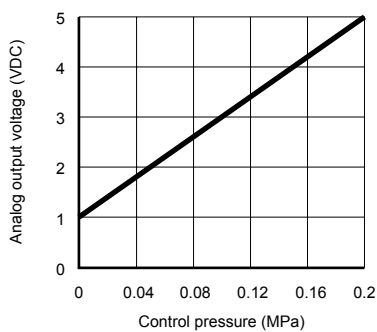


● EVR-290*

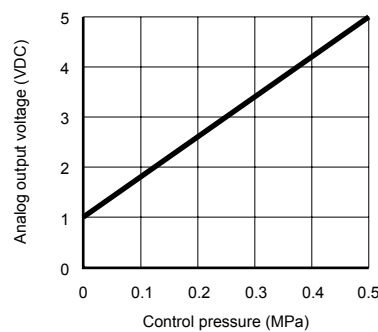


Analog output

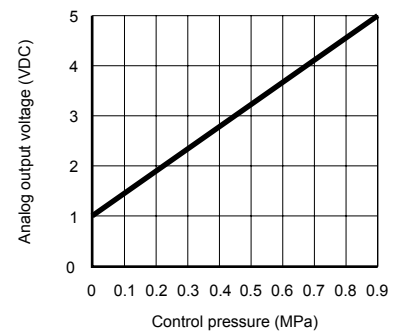
● EVR-2200/EVR-2209



● EVR-2500/EVR-2509

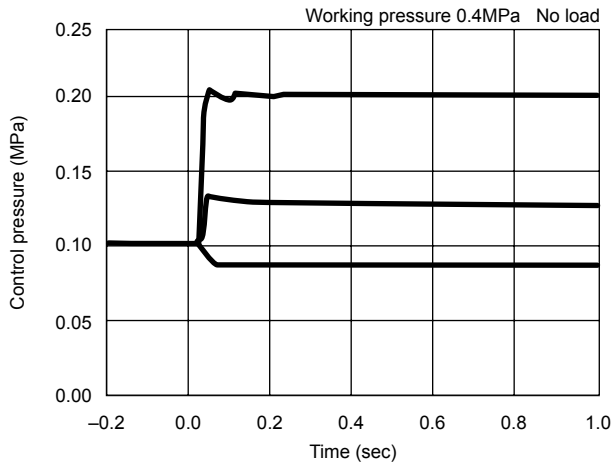


● EVR-2900/EVR-2909

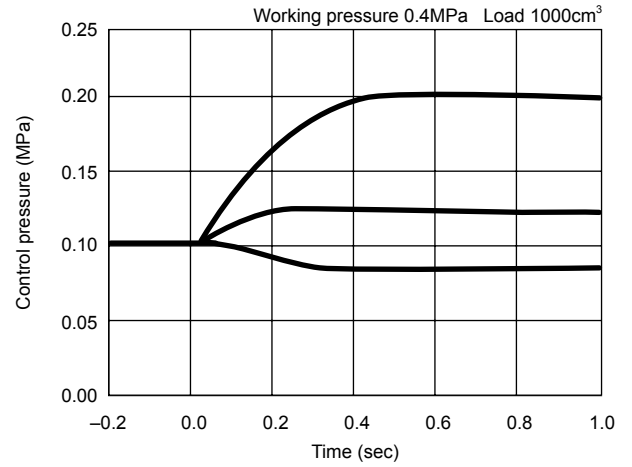


Step response characteristics (setting 1)

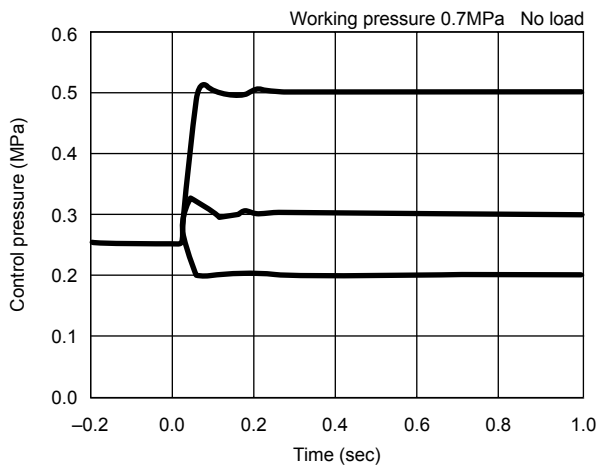
● EVR-2200



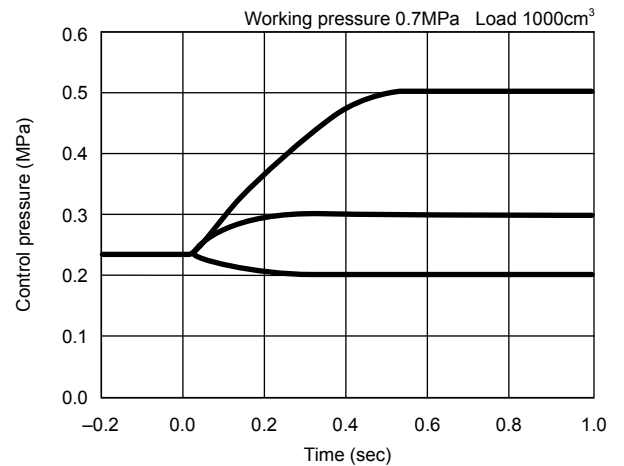
● EVR-2209



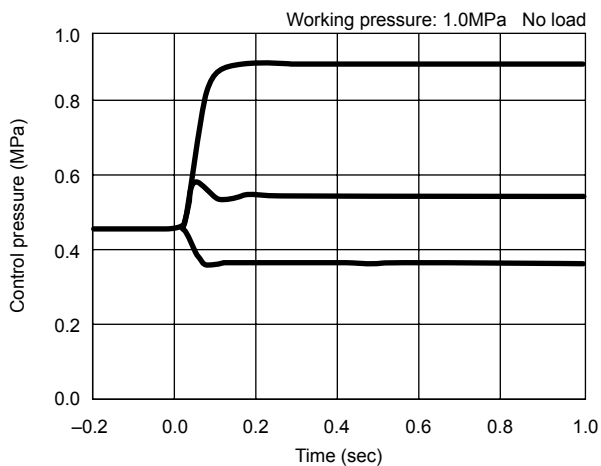
● EVR-2500



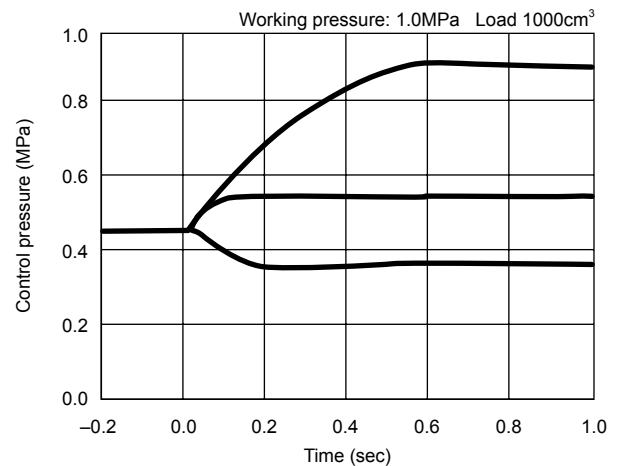
● EVR-2509



● EVR-2900



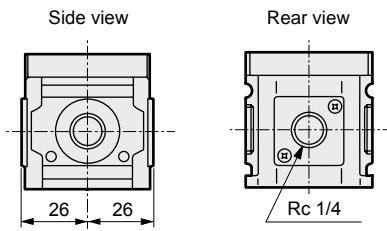
● EVR-2909



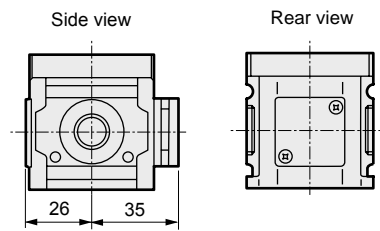
Option dimensions

Embedded type option

- Standard: Blank (-E)



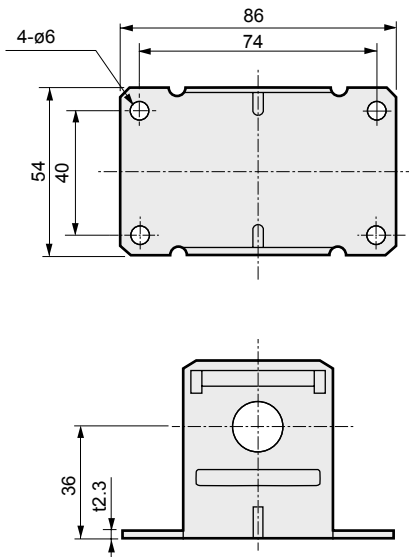
- Specialized silencer: -E2



Weight: 10 g

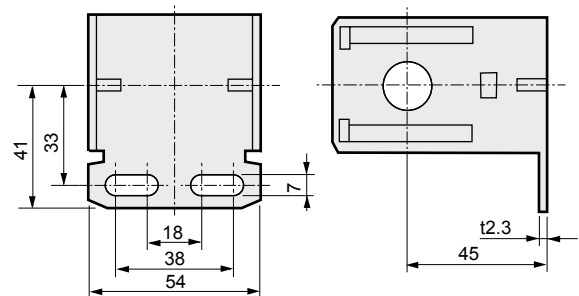
Bracket option

- B-type bracket (floor fixing type): -B



Weight: 165g

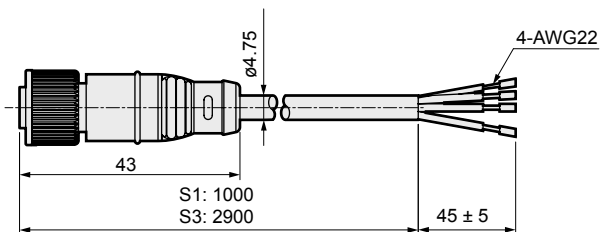
- C-type bracket (wall fixing type): -C



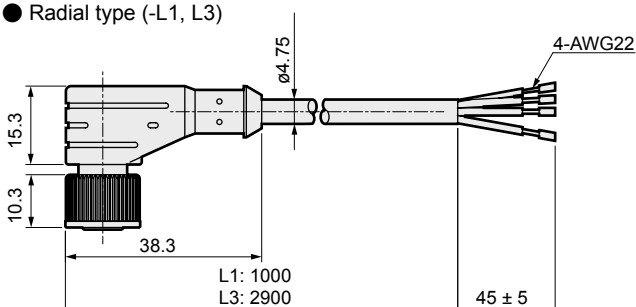
Weight: 148g

Cable option

- Axial type (-S1, -S3)



- Radial type (-L1, L3)



* Cable, connector

* Pin No.	Insulator color	Applications	Input signal types			Weight g
			0-10V	0-5V	4-20mA 1-5V	
1	Brown	Power source⊕	24V			S1: 50 S3: 135 L1: 55 L3: 140
2	Black	-	Analog output 1-5V			
3	Blue	Common	0V			
4	White	Input signal	0-10V	0-5V	4-20mA 1-5V	

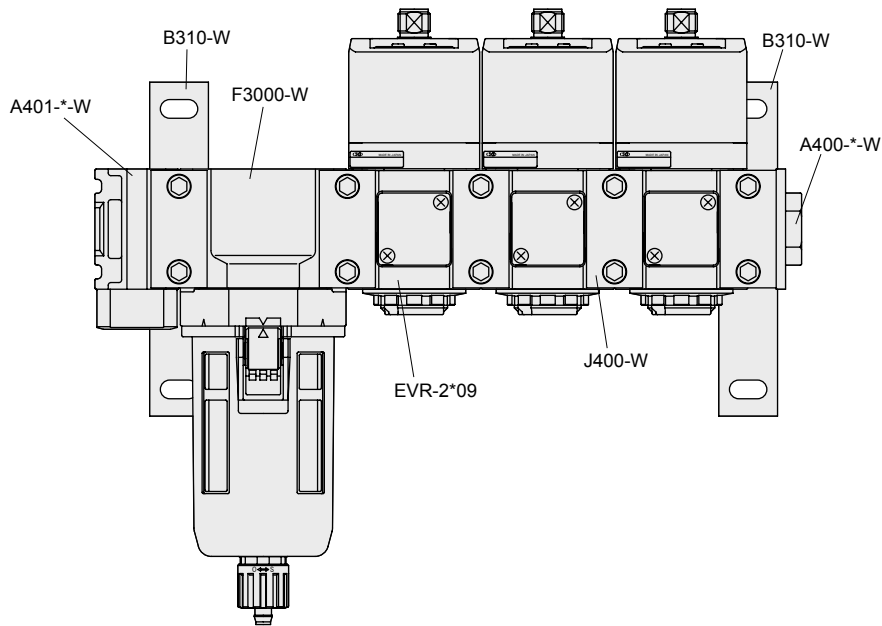
If a cable connector is not used, the following recommended cable sockets can be used:

Screw stopper type ELW1KA4012 Correns (Hirschmann)
 Axial type (solder) type XS2C-D421 Omron
 Radial type (solder) type XS2C-D422 Omron

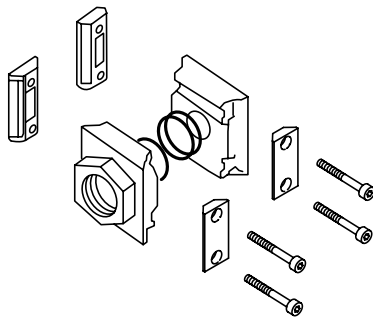
Option dimensions

Other peripherals

● System composition example

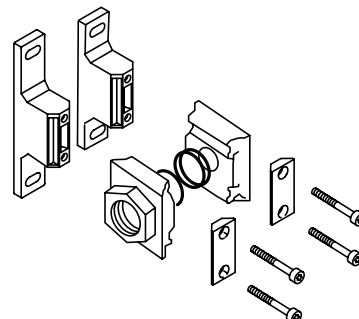


● Adapter set for piping of A400-8/10/15-W



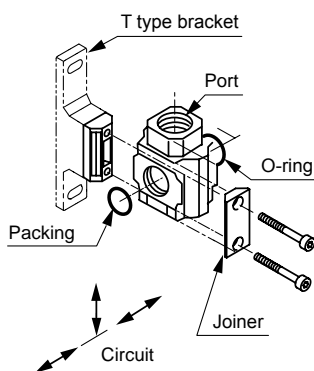
Weight: 160g

● Adapter set for piping of A400-8-W/10-W/5-W-B31W



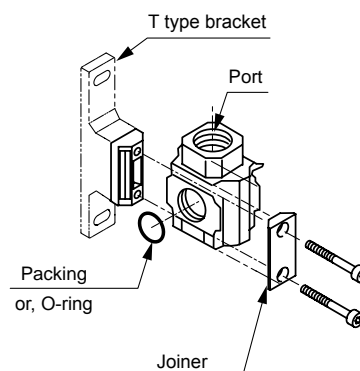
Weight: 270g

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



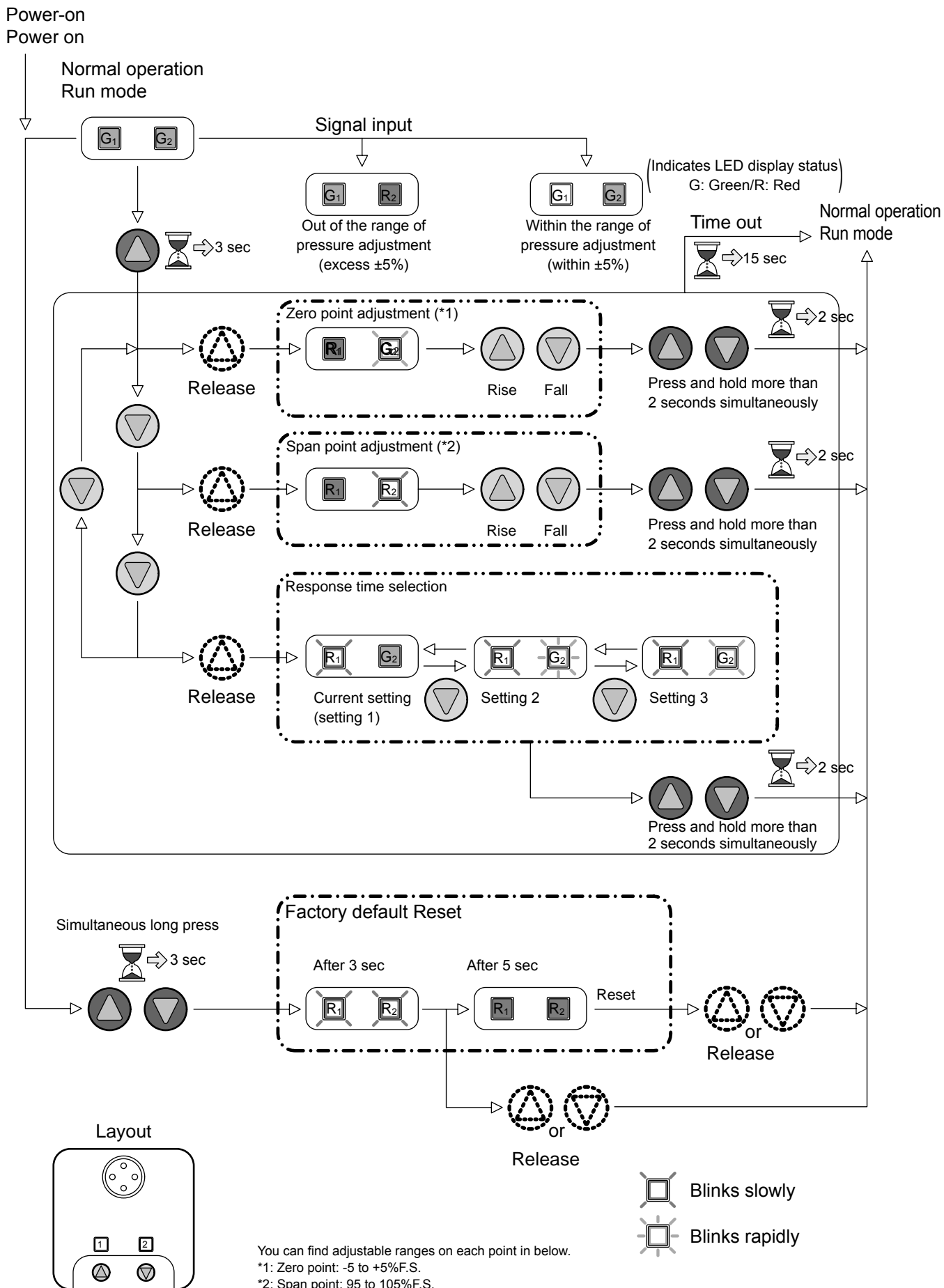
Weight: 161g
216g (B31W)

● A401-8/10/15-W-(B31W) L type piping adapter



Weight: 161g
216g (B31W)

Operation



Terms

Proof pressure

The value of the max. pressure that the vacuum regulator instantaneously endures. Separate guaranteed values are indicated for the inlet and the output because the pressure limitation of the pressure sensor is installed on the secondary side.

Pressure control

The range of the controllable pressures. Control is stopped when the input signal becomes 1% F.S. or lower.

Note. This is different from the accuracy guarantee range. See the item of hysteresis and linearity below.

Hysteresis (measurement circuit 1)

Hysteresis is the max. difference (D1) between the rising curve and the falling curve when the input signal is varied from 0% to 100% and 100% to 0% is indicated by the percentage relative to the full scale (FS).

$$\text{Hysteresis} = ((\text{Maximum of } D1) / (\text{FS control pressure})) \times 100 [\%]$$

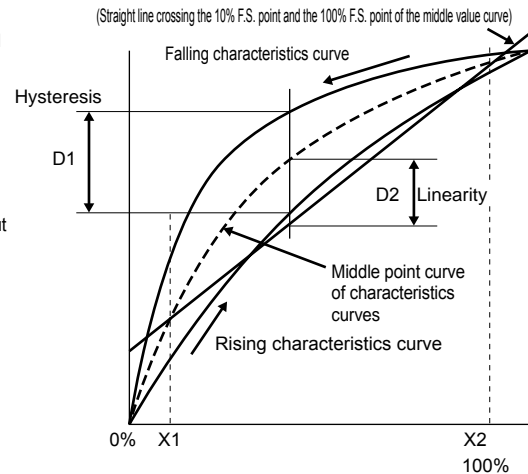
Note. The guaranteed range is 10% to 100% F.S.

Linearity (Measurement circuit 1)

The curve of the middle points of the rising curve and the falling curve is "curve C" when the input signal is varied from 0% to 100% and 100% to 0%. The reference line is the straight line defined by two points on curve C on input signal (X1) % F.S and (X2) % F.S. The linearity is the percentage of the max. difference of curve C and the reference line relative to the full scale (FS).

$$(\text{Linearity}) = ((\text{Max. of } D2) / (\text{FS control pressure})) \times 100 [\%]$$

Note. X1 = 10%F.S. and X2 = 100%F.S.



Resolution (measurement circuit 1)

Resolution is the min. value of the input signal that changes the control pressure, indicated by the percentage relative to the full scale (FS). The input signal is raised from 0% F.S to 15% F.S and this level is retained for at least 10 seconds. Then the input signal is slowly raised again, and the min. additional pressure that changes the control pressure is the resolution. The same is done between an input signal range of 50% F.S to 85% F.S.

Repeatability (Measurement circuit 1)

Repeatability is the maximum variance of the control pressure levels, represented by the percentage relative to the full scale (FS), when the same setting value is repeatedly applied.

The repeatability is calculated by the variance (D3) values of the control pressure when input signals 0% F.S and 50% F.S are repeatedly applied.

$$(\text{Repeatability}) = (D3 / (\text{FS control pressure})) \times 100[\%]$$

Temperature characteristics

The difference of the control pressure level made by 1°C difference of the ambient temperature (with reference temperature 25°C) is converted by calculation.

Temperature characteristics of the zero point and the span variation are indicated.

Max. flow rate (measurement circuit 2)

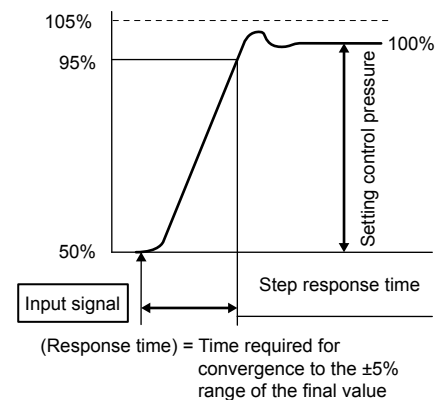
The flow rate at 100% F.S. control pressure is indicated.

Step response (Measurement circuit 1)

The time required for the control pressure to reach the set pressure with step-wise input signals is indicated.

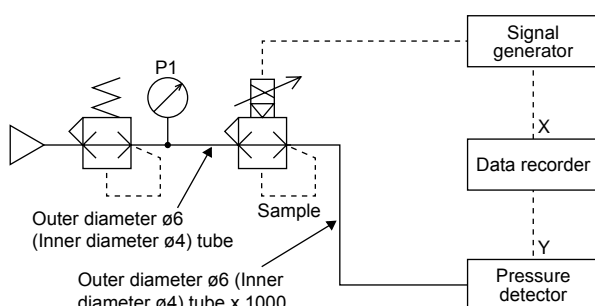
The time from start of the input signal until when the control pressure reaches the ±5% range of the setting value is measured.

- Steps:
- 50% F.S. -> 100% F.S.
 - 50% F.S. -> 60% F.S.
 - 50% F.S. -> 40% F.S.

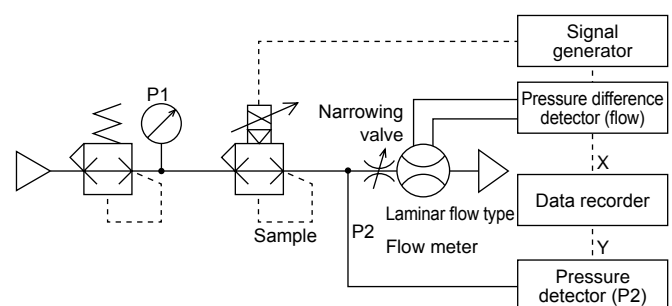


CKD measurement circuit

(measurement circuit 1)



(measurement circuit 2)





Safety information

Always read before use

When designing and manufacturing a device using CKD products, the manufacturer is obligated to check that device safety mechanism, pneumatic control circuit, or water control circuit and the system operated by electrical control that controls the devices is secured.

It is important to select, use, handle, and maintain the product appropriately to ensure that the CKD product is used safely. Observe warnings and precautions to ensure device safety.

Check that device safety is ensured, and manufacture a safe device.

WARNING

1 This product was designed and manufactured for use as equipment and parts for general industrial machinery. It must be handled by an operator having sufficient knowledge and experience in handling.

2 Please use only in accordance with product specifications.

This product must be used within its stated specifications. Do not attempt to modify or additionally machine the product. This product is intended for use as a general-purpose industrial device or part. It is not intended for use outdoors or for use under the following conditions or environment.

(Note that this product can be used when CKD is consulted prior to use and the customer consents to CKD product specifications. The customer must provide safety measures to avoid risks in the event of problems.)

① Use for special applications requiring safety including nuclear energy, railroad, aviation, ship, vehicle, medical equipment, equipment or applications coming into contact with beverage or food, amusement equipment, emergency shutoff circuits, press machine, brake circuits, or for safeguard.

② Use for applications where life or assets could be adversely affected, and special safety measures are required.

3 Observe corporate standards and regulations, etc., related to the safety of device design and control, etc.

ISO 4414, JIS B 8370 (pneumatic system rules)

JFPS 2008 (Principles for pneumatic cylinder selection and use)

Including High Pressure Gas Maintenance Law, Occupational Safety and Sanitation Laws, other safety rules, body standards and regulations, etc.

4 Do not handle, pipe, or remove devices before confirming safety.

① Inspect and service the machine and devices after confirming safety of the entire system related to this product.


② Note that there may be hot or charged sections even after operation is stopped.


③ When inspecting or servicing the device, turn off the energy source (air supply or water supply), and turn off power to the facility. Discharge any compressed air from the system, and pay attention to possible water leakage and leakage of electricity.


④ When starting or restarting a machine or device that incorporates pneumatic components, make sure that the system safety, such as pop-out prevention measures, is secured.

5 Observe warnings and cautions on the pages below to prevent accidents.

■ The safety cautions are ranked as “DANGER”, “WARNING” and “CAUTION” in this section.

 **DANGER:** When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries, or when there is a high degree of emergency to a warning.

 **WARNING:** When a dangerous situation may occur if handling is mistaken leading to fatal or serious injuries.

 **CAUTION:** When a dangerous situation may occur if handling is mistaken leading to minor injuries or physical damage.

Note that some items described as “CAUTION” may lead to serious results depending on the situation. Important details are listed for each; please make sure to follow them.

Disclaimer

1 Warranty period

“Warranty Period” is one (1) year from the first delivery to the customer.

2 Scope of warranty

In case any defect attributable to CKD is found during the Warranty Period, CKD shall, at its own discretion, repair the defect or replace the relevant product in whole or in part, according to its own judgement.

Note that the following faults are excluded from the warranty term:

(1) Product abuse/misuse contrary to conditions/environment recommended in its catalogs/specifications

(2) Failure caused by other than the delivered product

(3) Use other than original design purposes.

(4) Third-party repair/modification

(5) Faults caused by reason that is unforeseeable with technology put into practical use at the time of delivery.

(6) Failure attributable to force majeure.

In no event shall CKD be liable for business interruptions, loss of profits, personal injury, costs of delay or for any other special, indirect, incidental or consequential losses, costs or damages.

3 Compatibility confirmation

In no event shall CKD be liable for merchantability or fitness for a particular purpose, notwithstanding any disclosure to CKD of the use to which the product is to be put.



Pneumatic component (electro-pneumatic regulator)

Safety information

Be sure to read the instructions before use.

Refer to “⚠ Usage precautions” of “Pneumatic, vacuum and auxiliary components No.CB-024S” for the general pneumatic components.

Design & Selection

⚠ WARNING

- Understand compressed air features before designing a pneumatic circuit.
 - The same functions as mechanical, hydraulic, and electrical methods cannot be anticipated if instantaneous service interruption and holding are required during an emergency stop.
 - Pop-out, air discharge, or leakage due to air compression and expansion could occur.
- Confirm that the product will withstand the working environment.
 - This product cannot be used in an environment containing corrosive gas, chemical liquids, solvents, water or steam. If water drip, oil or metal chips (spatter or cutting chips, etc.) could come in contact with the product, provide appropriate protection.
 - This product incorporates a gauge-pressure-type pressure sensor, so provide the atmosphere pressure when protecting the product.
 - This product cannot be used in an explosive atmosphere.
- Care must be taken to the electrical circuit during emergency stop and cylinder operation, etc., during a service interruption.
- Install a “pressure switch” and “shut-off valve” on the device's compressed air inlet.
 - If the set pressure of pressure switch is not reached, operation must be disabled. The shut-off valve will exhaust compressed air in the pneumatic pressure circuit, and will prevent accidents caused by operation of pneumatic components by residual pressure.
- If the product is left with the supply pressure applied when power is not on, secondary pressure could rise to the primary pressure. Set the primary regulator to 0 or use a valve on the primary side to shut off the supply source when not using the regulator.

⚠ CAUTION

- Indicate the maintenance conditions in the device's instruction manual.
 - The product's function can drop markedly depending on working status, working environment, and maintenance, and can prevent safety from being attained. With correct maintenance, the product works effectively.
- Use a power source of a constant voltage.

- Check leakage current to prevent other fluid control components from malfunctioning due to leakage current.
 - When using a programmable controller, etc., leakage current could cause the electro-pneumatic regulator to malfunction.

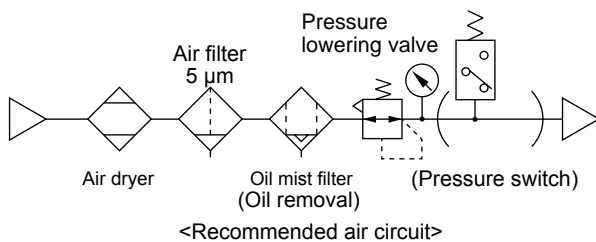
When 24 VDC	1.8mA or less
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- Due to wiring, the current input power ground and signal common are the same.
 - When operating several electro-pneumatic regulator units with one PLC and D/A, depending on the D/A unit circuit, wiring could prevent the correct signal from being input. Consult with the PLC maker.
- The current input type can be used with input signal 1 to 5V, but as opposed to other voltage input types, input impedance is small (250Ω). Use an appropriate voltage generator.
- Responsiveness is adversely affected depending on working pressure and volume of loads. Variation of the working pressure affects the control pressure on the secondary side. If stable reproducibility is required, stabilize the working pressure by, for example, installing a regulator in the upstream.
- Take the following countermeasures to prevent malfunction caused by noise.
 - Provide a line filter in AC power line.
 - Use a surge suppressor, such as CR or diode on the inductive load (solenoid valve, relay, etc.), and remove noise on the source side.
 - Keep distance between devices and strong magnetic field.
- When the secondary side control pressure is released to atmosphere as air blow, pressure may fluctuate depending on piping and blow conditions. Please test in the real usage condition, or contact CKD.
- When selecting dryer, air filter, oil mist filter or regulator, select a device with a higher flow rate.
- This product has movable sections in the operation structure, so that the characteristics will change over time. Conduct a system test before use. Depending on the frequency of operation, use it as an item subject to regular maintenance.
- Due to the structure, a small amount of air is consumed from the EXH port when secondary pressure is generated.

- Use condition for CE conformance
Electro pneumatic regulator EVR Series are CE marked products complying with EMC directive. EN61000-6-2; regulation matched to immunity applies to this product. Conditions below are necessary to comply with these standards.

Condition

- This product is evaluated as a signal line, using a cable that contains a power supply line and a signal line.
 - This product does not have surge immunity, so take an appropriate measure on the equipment side.
- Poor air quality will worsen the characteristics and adversely affect the durability.
- Use clean dry air of grade 1.3.2 of ISO 8573-1 or grade 1.3.2 of JIS B 8392-1.
 - For the pneumatics source, always supply clean air, from which solids, moisture and oil have been sufficiently removed with a dryer, air filter and oil mist filter. Do not use lubricated air as it will adversely affect the characteristics.



- When the secondary pressure is lowered with an input signal, etc., the secondary air passes through the product and is discharged from the exhaust port (EXH port). Contamination on the secondary piping and the inside of the load will have an adverse effect on the characteristics, etc. Thus, keep the inside of the piping as clean as possible.

- If power is turned OFF under pressure, secondary pressure is held.
 - To discharge pressure, lower set pressure with an input signal and then turn OFF, or use a shut-off valve, etc. This holding state is not guaranteed for a long time.
- Make sure that the working pressure range is always "Set pressure +0.05MPa" or higher.
 - If primary pressure is not supplied for a long time when secondary pressure is set in the range from 0MPa to 12%F.S., product life could be shortened.
- Do not leave the product nonpressurized with power and input signals applied. Product life and properties could be reduced.
- Applying an input signal exceeding the specified range causes the solenoid valve to function excessively and reduces product life and properties. Use only within the specified range.
- EVR-2*09 Series has two supply ports (IN1 and IN2) on the right and left sides of the body. Make sure that an unused port is blocked.
- Drip-proof environment
Check the product specification for the protection structure of this product. If it is not appropriate to the use environment, do not use the product.

Installation & Adjustment

⚠ CAUTION

- Do not use the product where the product is exposed to direct-sunlight or may come in contact with water or oil.
- Sufficiently flush air pipes before connecting to proportional pressure controls.
Prevent pipe from catching tips of sealing tape when piping.
- Install the product in a installing attitude in accordance with the individual precautions.
- When connecting pipes, wrap sealing tape in the opposite direction from threads starting 2 mm inside from the end of piping threads.



- If sealing tape protrudes from pipe threads, it could be cut by screwing-in. This could cause the tape to enter the pneumatic components and lead to faults.
- Correct pressure control is not possible if the exhaust port is plugged. Release this port to the atmosphere.
- Apply adequate torque when connecting pipes.
 - To prevent air leak and to protect thread.
 - Tighten by hand at first, then use a tool, so that the screw thread is not damaged.

[Recommended tightening torque]

Port Thread	Tightening torque N · m
Rc1/4	6 to 8



- When supplying compressed air for the first time after connecting piping, confirm that no air is leaking from any pipe connections.

- Apply a leakage detection agent on pipe connections with a brush, and check for air leaks.

- When using the M12 connector of a CKD cable option, tighten screws with a proper torque.
Recommended tightening torque: 0.4 to 0.49 N·m

During Use & Maintenance

⚠ WARNING

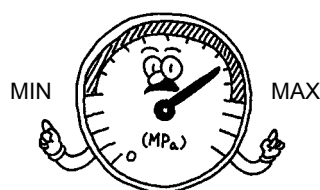
- Supply only compressed air.
- Use clean compressed air that does not contain corrosive gases.
- Use oil-free clean dry air of grade 1.3.2 of ISO 8573-1 or grade 1.3.2 of JIS B 8392-1.
- Be sure to turn power off, stop supplied compressed air, and check that there is no residual pressure before starting maintenance.
 - This is required to ensure safety.

⚠ CAUTION

- Disassembling the regulator could result in problems. Normal operation is not guaranteed after disassembling the product.
- Do not remove the housing.
 - There are electronic substrates inside, so that use of the product without the housing can cause an accident or a fault.
- Conduct daily inspections and regular inspections to ensure that maintenance control is done correctly.
 - If maintenance is not correctly controlled, the product's functions could drop markedly and lead to a shortened life, damage, malfunctions, faults, and accidents.

1. Control of supplied compressed air pressure

- Is the set pressure supplied? Does the pressure gauge indicate the set pressure during operation of the device?



2. Control of pneumatics filter

- Is the oil rate correctly adjusted?
Is the end absorber required even when using the SKH shock absorbing valve?

3. Control of compressed air leaks from piping connections

- Is the state of the connection, especially at movable sections, normal?
Leak in the piping may cause malfunction.

4. Control of operation

- Are any operations delayed? Is exhaust normal?

5. Control of pneumatic actuator operation

- Does it operate smoothly? Is end stop normal?
Is coupling with the load normal?

- If abnormal operation occurs, turn power and air pressure sources off immediately and stop use.

- Use this product within the working pressure range.

- This product does not start pressure control for about two seconds after power is turned on to complete self-diagnostics. Provide a control circuit and program that ignore signals for two seconds after power is turned on.

- When changing the setting value by the switch, control system devices could operate unintentionally. Stop devices before changing settings.

- Inspect the product voluntarily at least once a year to confirm that it is operating correctly.

- This product uses a small solenoid valve as an actuator. The lifetime varies depending on the frequency of pressure changes and use conditions.

- This case is made of resin. Do not use solvent, alcohol or detergent in cleaning to remove contamination, etc. This may damage the resin. Wipe off dirt with a rag soaked in a diluted neutral detergent solution and wrung out well.

Related products

Electro-pneumatic regulator EVS2 Series

- Compact and lightweight**
 Compact electro-pneumatic regulator with size: W30 x D50 x H39 and weight: 90 g. Helps downsizing and weight saving of the equipment.
- Longer lifetime**
 Three times longer than before (of CKD products)
- High precision and high responsiveness**
 Fluid pressure is controlled at high accuracy and high speed response using electrical signals.
 This series realizes a repetition accuracy of 0.3% F.S, a resolution of 0.1% F.S, and a response time of 0.1 sec (without load).
- Operation status display with two colors**
 The 2-color operation indicator indicates the green zone when pressure is at set pressure and the red zone when pressure is not within the setting or when an error has occurred.
- Easy piping and wiring**
 The one-touch cartridge joint and the M12 connector provide better operability.

Catalog No.CC-993A



Digital electro-pneumatic regulator EVD Series

- Outstanding user-friendliness and installation performance**
 - Mounted digital display, which allows us to see control status at a glance
 - Provided parallel input type as a standard
 - Compact design
 - Enabled two connection directions with D-sub connector method
 - Enabled module connection
- High-function with microcomputer incorporated**
 - Error display function
 - Zero/span adjustment function
 - Direct memory function
 - Switch output function
- Enabled highly accurate and quick response pressure control**
- Eco-friendly design**
 - Lead free and PVC free
 - Materials are indicated
 - Energy-saving with auto power off function

Catalog No.CB-024SA



Digital pressure sensor PPX Series

- Better visibility**
- The high-functional type comes with analog current output.**
- Additional reduction of power consumption**
- Direct setting with 2-screen display**
- Copying function that helps to save work steps and errors**

Catalog No.CB-024SA



If the goods and their replicas, or the technology and software in this catalog are to be exported, laws require the exporter. To make sure they will never be used for the development or the manufacture of weapons for mass destruction.

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