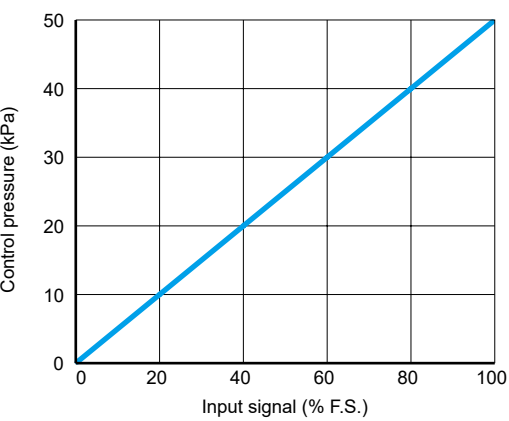
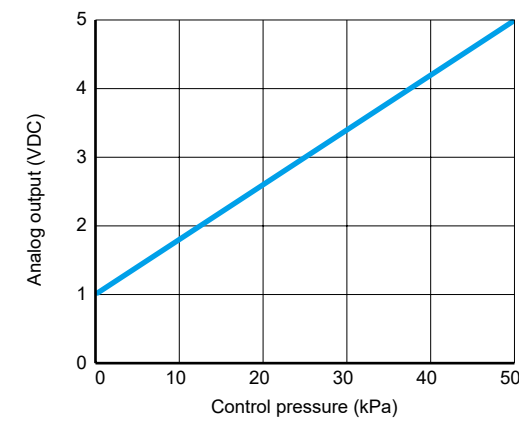


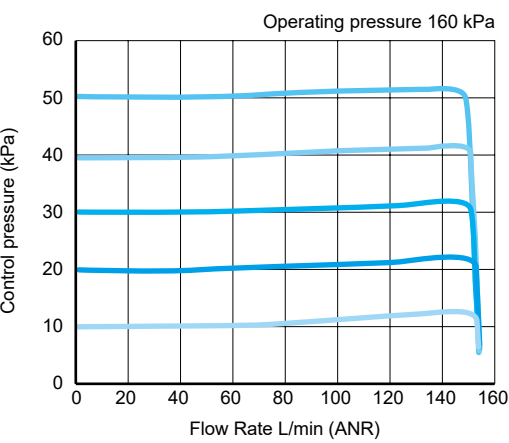
Input/Output characteristics



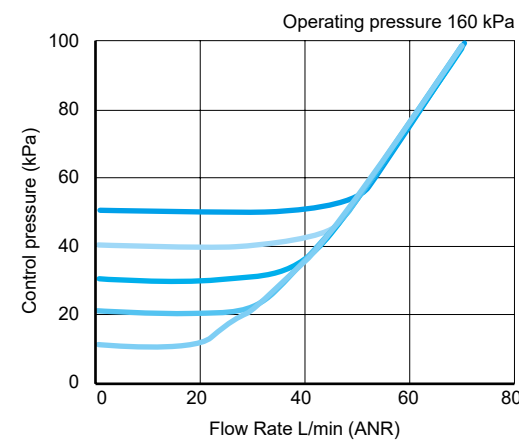
Analog output



Flow characteristics



Relief characteristics



Pneumatic Components (Electro-Pneumatic Regulator)
To Use This Product Safely

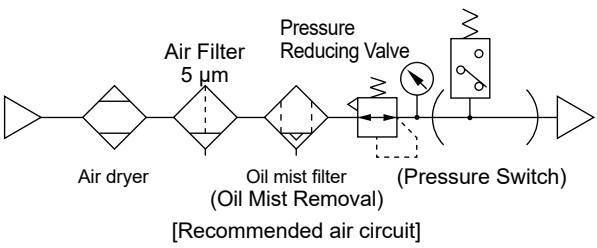
Be sure to read this before use.
Refer to Intro 27 for general precautions.

Individual Precautions : Low pressure electro-pneumatic regulator EVL Series

Design / Selection

CAUTION

- Poor quality air will deteriorate characteristics and adversely affect durability.
- Use clean dry air of ISO 8573-1 Class 1.3.2 or equivalent.
 - For the pneumatic source, always supply clean air, from which solids, moisture and oils have been sufficiently removed with a dryer, Air Filters and oil mist filter. Do not use lubricated air as it will adversely affect the characteristics.



- When secondary pressure is lowered with an input signal, etc., secondary air passes through the EV and is discharged from the exhaust port (EXH port). Contamination on the secondary piping and on 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.

- Responsiveness is affected by the Operating pressure and load volume. Also, if the Operating pressure fluctuates, the secondary control pressure will be affected. If stable reproducibility is required, stabilize the Operating pressure by installing a regulator in the preceding stage.

- Take the following measures to avoid malfunction due to noise.
 - Install a line filter in the AC power supply line.
 - Use a surge suppressor such as a CR or diode on the inductive load (solenoid valve, relay, etc.) and remove noise from the source.
 - Keep wiring to components separate from strong magnetic fields.
 - Connect wiring to proportional pressure controls with a shield wire.
 - Ground the shield wire on the power supply side. Note that the shielding wire for the serial transmission communication cable must be treated based on communication system specifications.

- When using by opening the secondary control pressure to the atmosphere like air blowing, pressure fluctuation may occur depending on piping conditions and blowing conditions. Please test under actual usage conditions or contact us.

- When selecting a dryer, air filter, oil mist filter, or regulator, select one with a flow rate higher than the flow rate to be used.

- This product has moving parts in its operation structure, and characteristics such as accuracy will change over time. Before use, evaluate as a system, and depending on operation frequency, take measures such as using it as a regular maintenance part.

- The exhaust port (EXH) should be open to the atmosphere to discharge air.

- This product adopts a constant bleed system. Do not plug the bleed port during use.

- If centralized exhaust is required, select exhaust option "-E1". Also, exhaust not only the EXH port but also the bleed port and pilot exhaust port (R) at the same time. Note that bracket "-B1" cannot be selected in that case.

- For high precision use, use supply pressure between 140 kPa and 160 kPa.

- Avoiding leaving the power and input signal applied without pressurization, as it leads to deterioration of life and characteristics.

- If an input signal outside the specification range shown in the table below is applied, the solenoid valve will operate excessively, causing deterioration of life and characteristics, so use within the specification range.

0-10 V type	0 to 5 V-type	4-20 mA
Less than 0 V Over 10 V	Less than 0 V Over 10 V	Less than 4 mA Over 20 mA

- The current input type can be used with an input signal of 1-5 VDC. However, because input impedance is small (250 Ω) when compared to other voltage inputs, prepare an appropriate voltage source.

- For this product, the warranty period is 1 year or 3 million repetitive operations, whichever comes first, so please use this as a guide for inspection.
* The conditions for 3 million operations defined in the warranty period are as follows. When repeatedly applying a step input signal where the control pressure goes from zero to the maximum control pressure. The Operating air quality in this case shall be clean compressed air from the recommended air circuit. The secondary side payload shall be 300 cm³.
- When attaching a fitting to the bleed port or pilot exhaust port in wall installation (body facing front), use "GWJL3-M3".

- When using in wall installation (body sideways), use "GWL4-8" or "GWL6-8" for the wall side fitting. Also, set the piping direction upward.
- In applications where particle generation is a problem, install a filter (FCS1000 series etc.) on the secondary side of EVL.
- Conditions for CE compliance
This product is a CE compliant product adapted to the EMC Directive. The harmonized standard regarding immunity applied to this product is EN61000-6-2, but the following conditions are mandatory for compliance with this standard.
Condition
 - The evaluation of this product is performed by using a cable that has a power supply line and a signal line paired to assess the product's performance.
 - This product is not equipped with surge protection. Implement surge protection measures on the system side.

MEMO

For precautions regarding mounting, installation, adjustment, operation, and maintenance, please refer to the CKD Components Product Site (<https://www.ckd.co.jp/kiki/en/>) → 'model No.' → Instruction Manual.

F.R.L.

Filter
Regulator

Filter

Regulator

Lubricator

Drain
Separator

Mechanical
Pressure SW

Residual
Pressure
Exhaust Valve

Slow Start
Valve

Antibacterial/
Bacteria
Removing Filter

Ozone
FR

Siloxane/
OzoneRemover

Flame
Resistant FR

Oil-free
Regulator

Medium
Pressure FR

No copper/
PTFEV
Specification

Air Unit
Equipment

Adapter
Joiner

Pressure
Gauge

Compact
F.R.L.

Large
F.R.L.

Precision
Regulator

Clean
FR

Electro-
Pneumatic
Regulator

Air
Booster

Ending