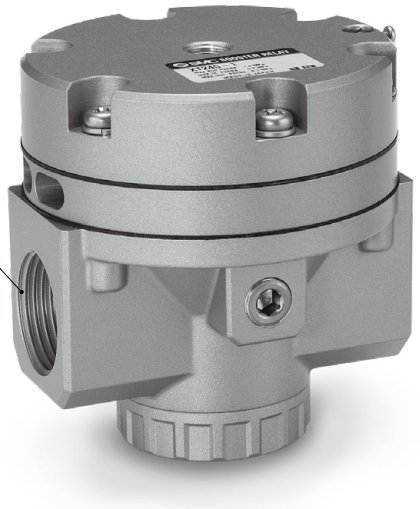
Large Size Booster Relay

RoHS

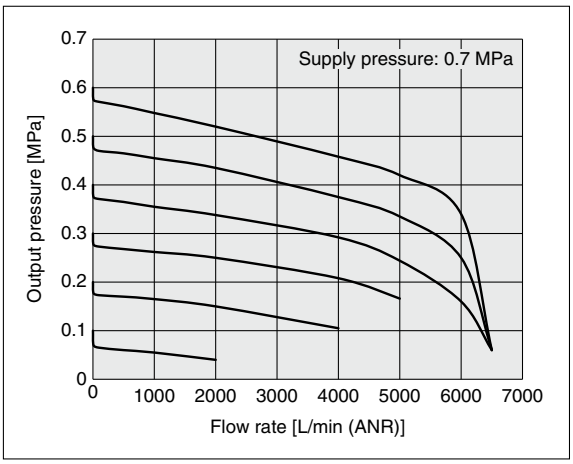
● Maximum flow rate: Approx. 6000 L/min (ANR)



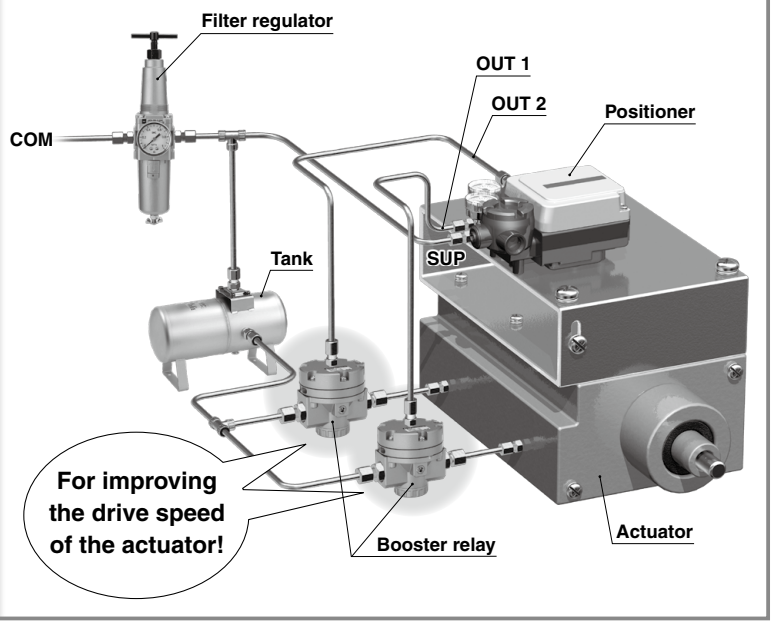
● Fluid temperature

Specification	Temperature range [°C]
General	–30 to 100 (–5 to 60)
High temperature	–5 to 100
Low temperature	–30 to 60

● Flow-rate characteristics



Application Example

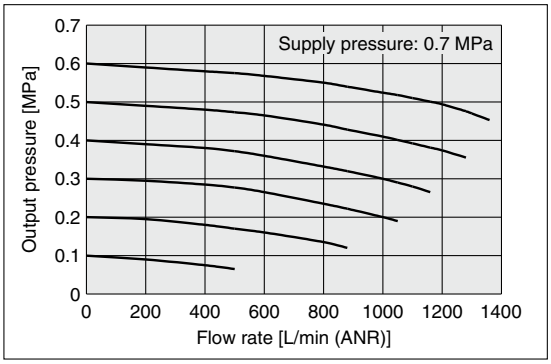


Related Equipment

∗ For details, refer to the **WEB catalog**.

Booster Relay
Series IL100

Flow-rate Characteristics



Specifications

Supply pressure	Max. 1.0 MPa
Input pressure	Max. 0.7 MPa
Output pressure	Max. 0.7 MPa
Pressure ratio	1:1
Air consumption	3 L/min (ANR) or less (OUT = 0.5 MPa)
Linearity	Within ±1%
Hysteresis	Within 1%
Ambient and fluid temperature	–5 to 60°C
Port size	1/4, 3/8
Weight	0.56 kg

Series XT240

SMC

Series XT240

How to Order

XT240 – 1 – [ ]

Fluid temperature*

	Temperature specification
1	For general environments (–5 to 60°C)
2	For high temperature environments (–5 to 100°C)
3	For low temperature environments (–30 to 60°C)

Thread type

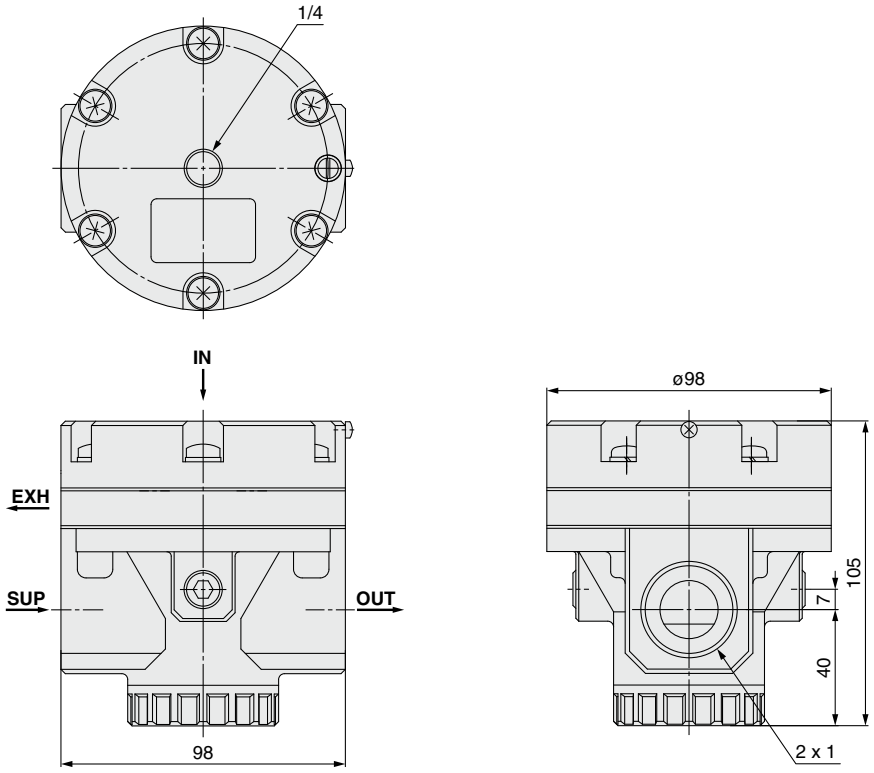
Nil	Rc
NX	NPT

* Please consult with SMC for –40°C specification.

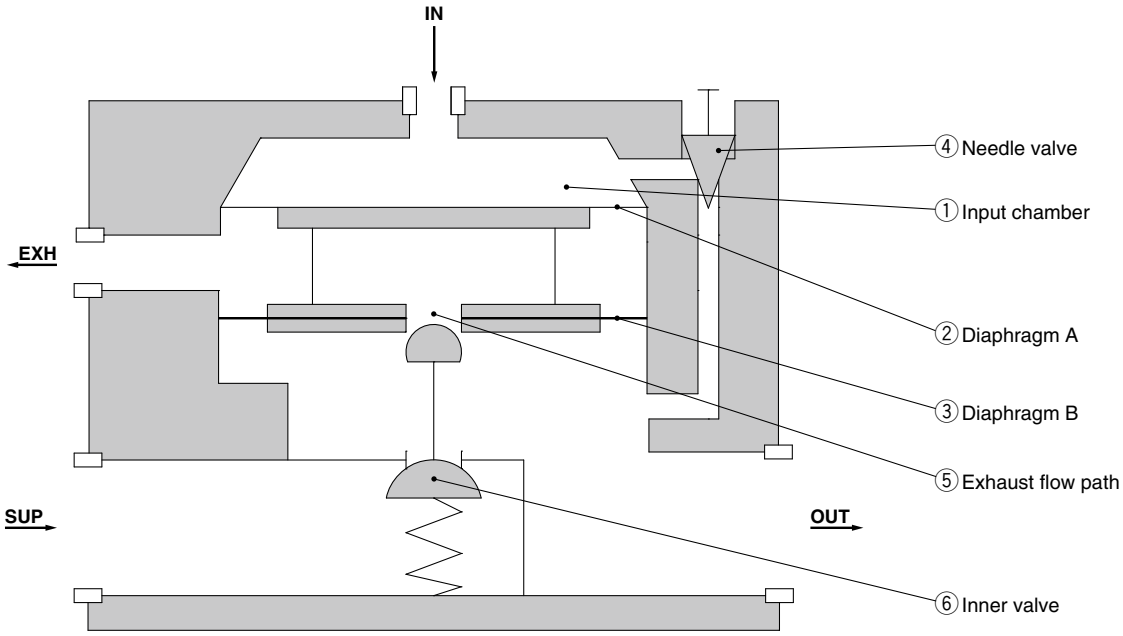
Specifications

Supply pressure	Max. 1.0 MPa	
Input/Output pressure	Max. 0.7 MPa	
Air consumption	10 L/min (ANR) or less (OUT = 0.7 MPa)	
Linearity	Within ±5%	
Hysteresis	Within 2%	
Ambient and fluid temperature	For general environments	–5 to 60°C
	For high temperature environments	–5 to 100°C
	For low temperature environments	–30 to 60°C
Port size	1/4 (IN), 1 (SUP, OUT)	
Weight	1.2 kg	

Dimensions

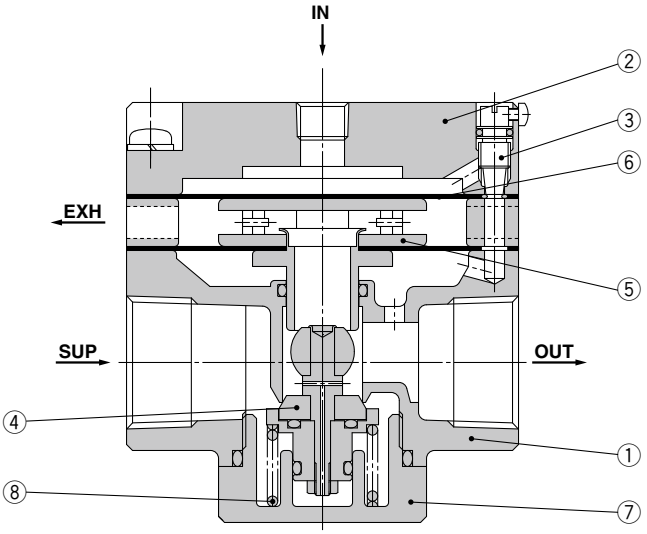


Principle of Operation



Signal pressure enters the input chamber ① and diaphragm A ② exerts a downward force on diaphragm B ③. When the force of the input chamber ① exceeds the force of diaphragm B ③, inner valve ⑥ is depressed allowing air flow out the secondary supply port. On signal pressure exhaust, the supply valve closes and exhaust flow path ⑤ is opened to allow exhaust of the secondary air supply to atmosphere. Input and output ports are connected by the needle valve ④. Adjustment ensures that exact equalization occurs between the signal and output supply. The above function allows a low volume signal to provide high volume output with pressure ratio remaining (1:1) for signal to output.

Construction



Component Parts

No.	Description	Material	Note
1	**Body**	Aluminum alloy	Platinum silver
2	**Input pressure part cover**	Aluminum alloy	Platinum silver
3	**Restrictor**	Stainless steel	
4	**Valve assembly**	Brass/Stainless steel/ Fluororesin/NBR	XT240-1
		Brass/Stainless steel/ Fluororesin/FKM	XT240-2
		Brass/Stainless steel/Fluororesin/ Low-temperature NBR	XT240-3
5	**Diaphragm assembly**	Aluminum alloy/ Stainless steel/NBR	Chromated/XT240-1
		Aluminum alloy/ Stainless steel/FKM	Chromated/XT240-2
		Aluminum alloy/Stainless steel/ Low-temperature NBR	Chromated/XT240-3
6	**Diaphragm**	NBR	XT240-1
		FKM	XT240-2
		Low-temperature NBR	XT240-3
7	**Valve guide**	Aluminum alloy	Platinum silver
8	**Valve spring**	Stainless steel	

⚠ **Safety Instructions**	Be sure to read the “Handling Precautions for SMC Products” (M-E03-3) and “Operation Manual” before use.