

Type 72 & 72HR

Positive Bias Booster Relays

Features

- Four adjustable positive bias ranges, from 0-10 PSI (0-0.7 BAR) to 2-150 PSI (0.1-10.3 BAR)
- Flow capacity up to 50 SCFM
- Quick response to minute changes in downstream pressure
- Dampening action of aspirator tube maintains stable output pressure
- Output virtually unaffected by changes in supply pressure
- Internal rolling diaphragm designed for millions of cycles
- Honking and buzzing eliminated by action of integral baffle and aspirator tube
- Can be disassembled and serviced without removing from line
- Also available in a high relieving version (72HR)

Description

The Type 72 Relay features an adjustable bias pressure which enables users to obtain an output pressure which is the sum of a controlled input signal pressure plus the bias. The relay offers an exceptionally high flow capacity (up to 50 SCFM/1400 LPM) with minimal pressure drop.

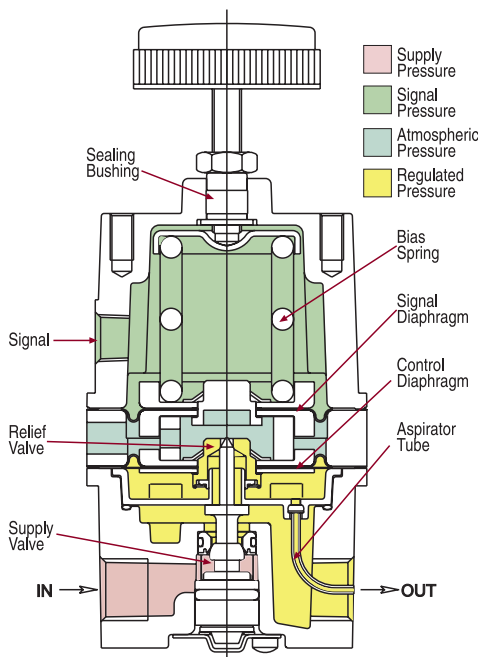
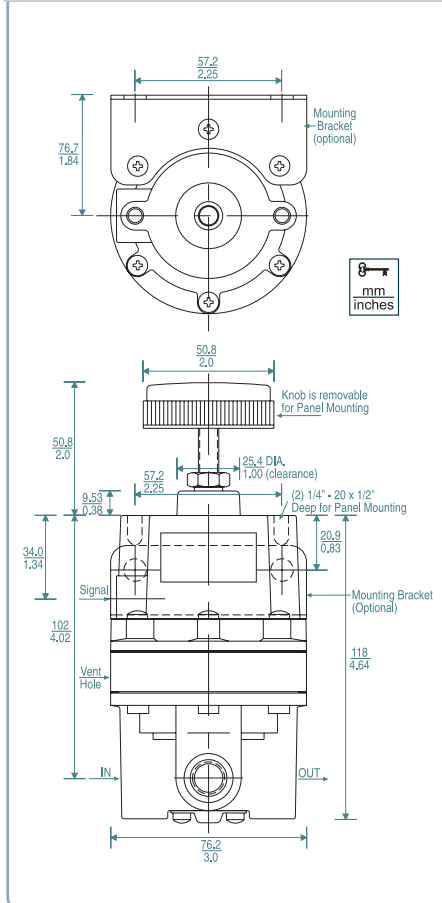
Output pressure is accurately maintained under varying flow conditions by means of an aspirator tube, which adjusts the air supply valve opening in proportion to flow velocity. A balanced supply valve utilizing a rolling diaphragm makes the relay virtually immune to changes in supply pressure. Simple design makes maintenance easy, and the relay can be serviced without removing it from the line. The standard signal-to-output ratio is 1:1, but 1:2, 1:4 and 1:6 ratios are available on special request.

Applications

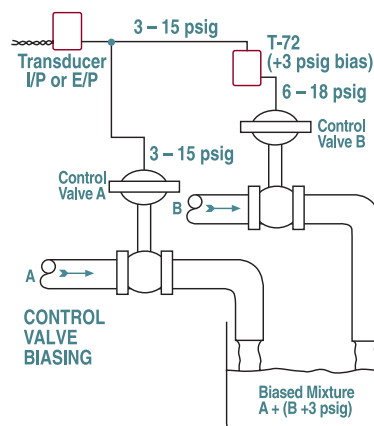
The Type 72 Relay is used when high flow capacity is required in conjunction with a positive output pressure bias. Typical applications include:

- Gas Flow Control
- Tensioning Control
- Clutch and Brake Controls
- Volume Boosting
- Dancer Roll Loading
- Calendar Roll Loading

Type 72 Dimensional Drawing

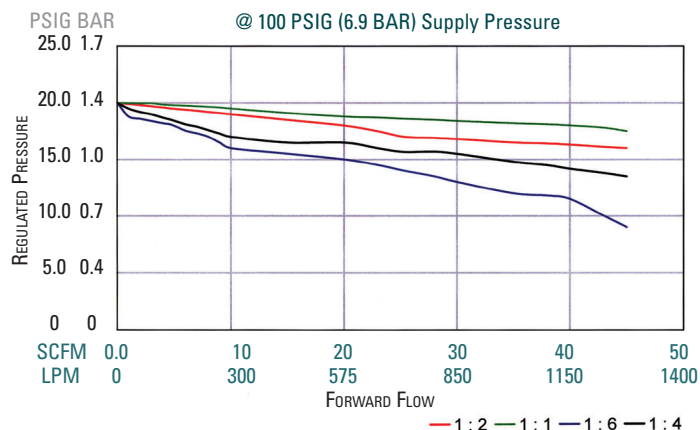


Type 72 Application Diagrams



	Type 72	Type 72 HR	Type 75	Type 75 HR	Type 79/79V	Type 79HR
Maximum Supply Pressure	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)	250 PSIG (17.2 BAR)	400 PSIG (27.6 BAR)	400 PSIG (27.6 BAR)
Sensitivity	1/4" H ₂ O (6.4mm)	1/4" H ₂ O (6.4mm)	1/4" H ₂ O (6.4mm)	1/4" H ₂ O (6.4mm)	1" H ₂ O (25mm)	1" H ₂ O (25mm)
Supply Pressure Sensitivity	< 0.6 PSIG (0.01 BAR) per 50 PSIG (1.4 BAR) change in supply pressure	< 0.6 PSIG (0.01 BAR) per 50 PSIG (1.4 BAR) change in supply pressure	< 0.6 PSIG (0.04 BAR) per 50 PSIG (6.9 BAR) change in supply pressure	< 0.6 PSIG (0.04 BAR) per 50 PSIG (3.5 BAR) change in supply pressure	< 0.35 PSIG (0.02 BAR) per 100 PSIG (3.5 BAR) change in supply pressure	< 0.35 PSIG (0.02 BAR) per 100 PSIG (3.5 BAR) change in supply pressure
Flow Capacity	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	40 SCFM (1150 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	>125 SCFM (3500 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply	>125 SCFM (3500 LPM) @ 20 PSIG (1.4 BAR) signal and 100 PSIG (6.9 BAR) supply
Exhaust Capacity	6 SCFM (170 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	15 SCFM (425 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	6 SCFM (170 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	15 SCFM (425 LPM) @ 10 PSIG (0.69 BAR) above a 20 PSIG (1.4 BAR) setpoint	31 SCFM (875 LPM) @ 5 PSIG (0.35 BAR) above a 20 PSIG (1.4 BAR) setpoint	39 SCFM (3500 LPM) @ 5 PSIG (0.35 BAR) above a 20 PSIG (1.4 BAR) setpoint
Temperature Limits	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)	-40 to 200°F (-40 to 93°C)
Air Consumption	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)	<12 SCFH (5.7 LPM)
Port Size	1/4", 3/8", 1/2" NPT, BSPP, BSPT	1/4", 3/8", 1/2" NPT, BSPP, BSPT	1/4", 3/8" NPT, BSPP, BSPT	1/4", 3/8", 1/2" NPT, BSPP, BSPT	3/8", 1/2", 3/4", 1" NPT, BSPP, BSPT	3/8", 1/2", 3/4", 1" NPT, BSPP, BSPT
Output Pressure Range	0-150 PSIG (0-10.3 BAR)	0-150 PSIG (0-10.3 BAR)	0-150 PSIG (0-10.3 BAR)	0-150 PSIG (0-10.3 BAR)	0-200 PSIG (0-13.8 BAR)	0-200 PSIG (0-13.8 BAR)
Maximum Signal	150 PSIG (10.3 BAR)	150 PSIG (10.3 BAR)	150 PSIG (10.3 BAR) for 1:1 ratio	150 PSIG (10.3 BAR) for 1:1 ratio	200 PSIG (13.8 BAR)	200 PSIG (13.8 BAR)
Weight	1.75 lb. (0.8 kg.)	1.75 lb. (0.8 kg.)	1.3 lb. (0.6 kg.)	1.3 lb. (0.6 kg.)	4.5 lb. (2.0 kg.)	4.5 lb. (2.0 kg.)
Ratio of Accuracy for a 12 psig span	< 2%	< 2%	< 2% (1:1)	< 2% (1:1)	< 1.5%	< 1.5%

Type 75: Regulated Pressure VS. Flow



Type 79 and 79 HR: Regulated Pressure VS. Flow

