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Model 15

The Model 15 Positive Bias Relay is designed for applications that require an output pressure that is the sum of a controlled input signal plus a fixed bias.

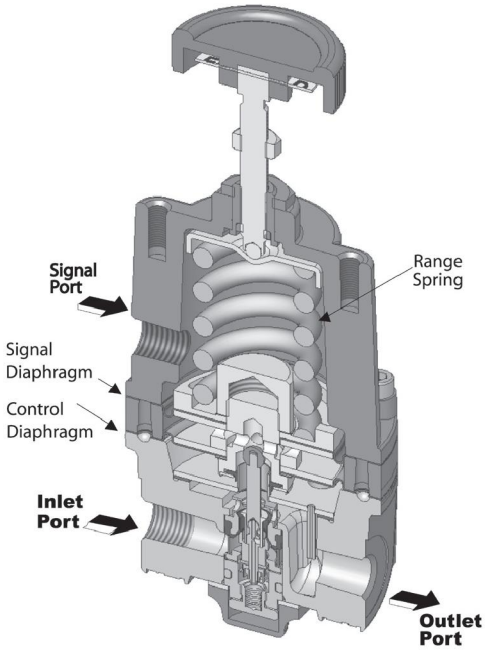
Features

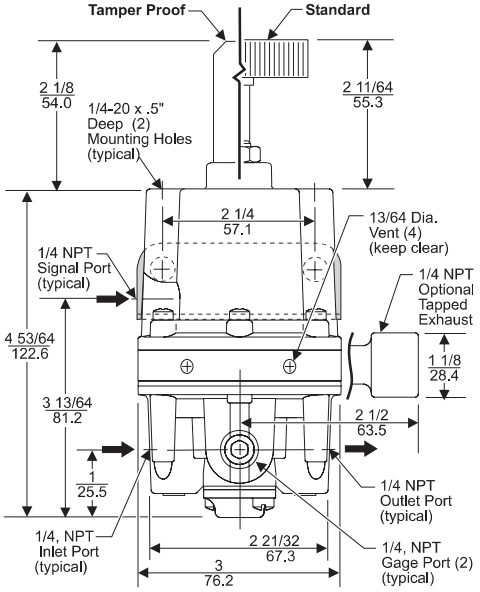
- The Model 15 is sensitive to 1/4" Water Column variation which permits use in precision applications.
- A Balanced Supply Valve minimizes the effects of supply pressure variation.
- Aspirator Tube minimizes downstream pressure droop under flow conditions.
- Flow of up to 40 SCFM with 100 psig Supply at 20 psig Setpoint allows use in applications requiring high flow capacity.
- A Separate Control Chamber isolates the diaphragm from the main flow, eliminating hunting and buzzing.
- Mounting Bracket available
- Canadian Registration Number (CRN) Certification for all territories and provinces

Operating Principles

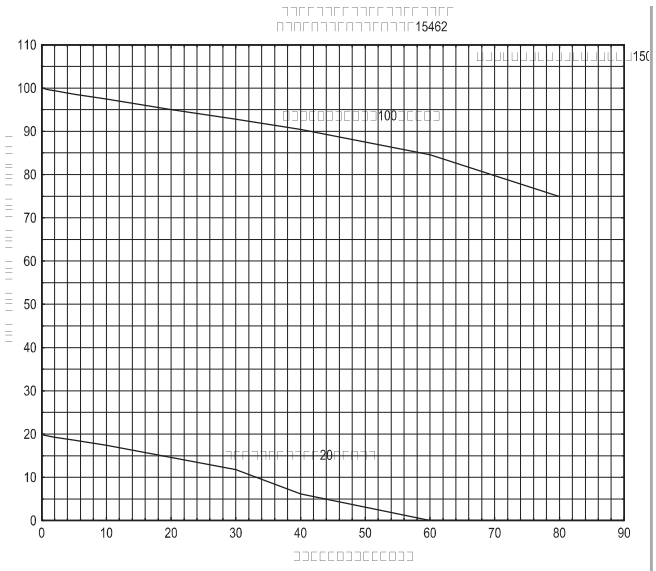
The Model 15 Positive Bias Relay provides an output pressure that represents the input signal pressure plus a preset bias. Mathematically Po = Ps + K where Po is output pressure, Ps is signal pressure and K is the spring constant. This unit, available in several bias range configurations to meet a variety of output requirements, offers excellent sensitivity and high flow capacity in a small volume.

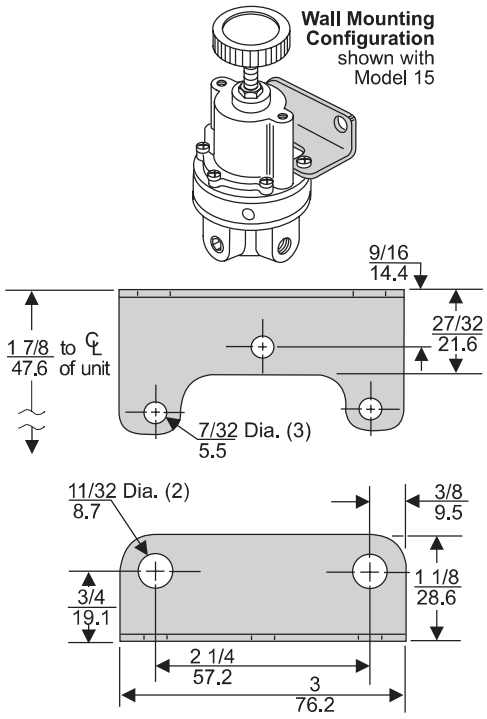
The unit is well suited to a variety of control applications, including range shifting, and tension control, and pressure control from a remote location.





Technical Information





Mounting Bracket: 09921

Model 15 Relay Kits & Accessories

Mounting Bracket Kit ..... 09921 (sold separately).....

Service Kit

A Service Kit is available for the Model 15, refer to the corresponding *Fairchild Model 15 Positive Bias Relay, Instruction, Operation and Maintenance Instructions,* IS-300000015.

Catalog Information

Catalog Number 1 5 4 ☐ ☐ ☐

Pressure Range

psig	[BAR]	(kPa)	
0-10	[0-0.7]	(0-70).....	2
0.5-30	[0.03-2]	(3-200).....	3
1-60	[0.1-4]	(10-400).....	4
2-150	[0.15-10]	(15-1000).....	6

Pipe Size

1/4" NPT.....	2
3/8" NPT.....	3
1/2" NPT.....	4

Options

Silicone Elastomers [1]	A
Tapped Exhaust	E
Viton (Fluorocarbon) Elastomers	J
BSPP (Parallel) [2]	H
Tamper Proof	T
BSPT (Tapered)	U

[1] Maximum Supply Pressure -75 psig, [5.0 BAR], (500 kPa)

[2] BSPP Threads in Inlet & Outlet Ports Only. Others BSPT.

Specifications

Supply Pressure
250 psig, [17.0 BAR], (1700 kPa) Maximum

Flow Capacity (SCFM)
40 SCFM (68 m^3/HR) @ 100 psig, [7.0 BAR], (700 kPa) supply and 20 psig, [1.5 BAR], (150 kPa) setpoint

Exhaust Capacity (SCFM)
5-1/2 SCFM (9.4 m^3/HR) where downstream pressure is 5 psig, [.35 BAR], (35 kPa) above 20 psig, [1.5 BAR], (150 kPa) setpoint

Signal or Output Pressure
150 psig, [10.0 BAR], (1000 kPa) Maximum

Supply Pressure Effect
Less than 0.1 psig, [.007 BAR], (.7 kPa) for 100 psig, [7.0 BAR], (700 kPa) change in supply pressure

Sensitivity
Less than 1/4" (.64 cm) Water Column

Mounting
Pipe or Panel

Ambient Temperature
-40°F to +200°F, (-40°C to 93.3°C)

Hazardous Locations
Acceptable for use in Zones 1 and 2 for gas atmosphere; Groups IIA and IIB and Zones 21 and 22 for dust atmospheres

Materials of Construction
Body and Housing.....Aluminum Alloy
Trim .....Stainless Steel, Brass, Zinc Plated Steel
Diaphragms ..... Buna A and Dacron