



Keeping the World Flowing
for Future Generations



The Fairchild 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 and Benefits

- 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

Operating Principles

The Model 15 Positive Bias Relay provides an output pressure that represents the input signal pressure plus a preset bias. Mathematically $P_o = P_s + K$ where P_o is output pressure, P_s 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.

Model 15 Positive Relay

Specifications

Supply Pressure

- 250 psig, [17.0 BAR], (1700 kPa) maximum

Flow Capacity (SCFM)

- 40 SCFM (68 m³/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 m³/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 to +200 °F, (-40 to 93.3 °C)

Hazardous Locations

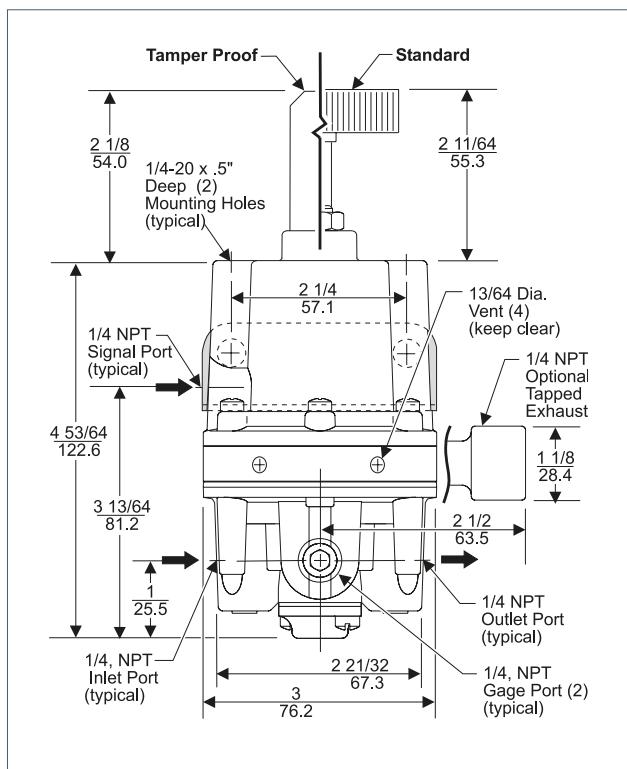
- Acceptable for use in Zones 1 and 2 for gas atmosphere; Groups IIA and IIB and Zones 21 and 22 for dust atmospheres

Materials of Construction

- Body and Housing: Aluminum Alloy
Trim: Stainless Steel, Brass, Zinc Plated Steel
Diaphragms: Buna A and Dacron

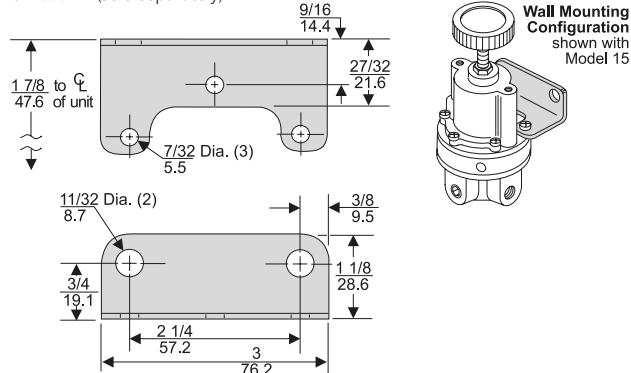


Dimensions



Mounting Bracket Kit

P/N 09921 (sold separately)



Product Code

154 2 2 A

Pressure Range

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

Pipe Size

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

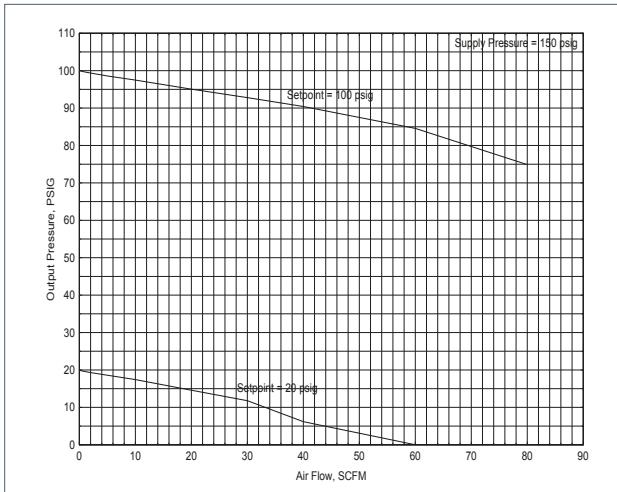
Options

A	= Silicone Elastomers ¹
B	= Low Bleed
E	= Tapped Exhaust
J	= Viton (Fluorocarbon) Elastomers
H	= BSPP (Parallel) ²
T	= Tamper Proof
U	= BSPT (Tapered)

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

² BSPP Threads in Inlet & Outlet Ports only. Others BSPT.

Flow Characteristics (Model 15462)



Service Kit

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

A full listing of the Rotork sales and service network is available on our website.

www.rotork.com

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