# rotork®

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 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.



## 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



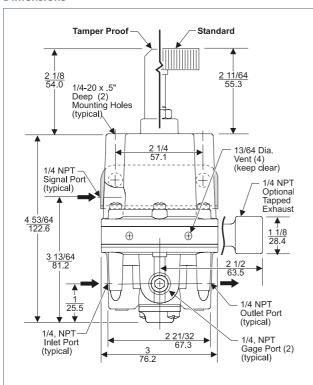


## Model 15

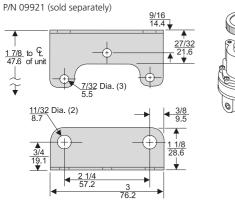
#### **Positive Relay**

154 2 2 A

#### **Dimensions**



#### **Mounting Bracket Kit**





## **Product Code**

Pressure Range			
	psiq	[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

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

#### Options

= Silicone Elastomers<sup>1</sup> = Low Bleed

= Tapped Exhaust

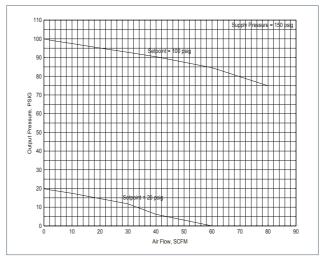
Viton (Fluorocarbon) Elastomers

= BSPP (Parallel)<sup>2</sup>

= Tamper Proof

U = BSPT (Tapered)

#### Flow Characteristics (Model 15462)



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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As part of a process of on-going product development, Rotork reserves the right to amend and change specifications without prior notice. Published data may be subject to change. For the very latest version release, visit our website at www.rotork.com

<sup>&</sup>lt;sup>1</sup> Maximum Supply Pressure -75 psig, [5.0 BAR], (500 kPa). <sup>2</sup> BSPP Threads in Inlet & Outlet Ports only. Others BSPT.