

FINE CONTROLS (UK) LTD



Fine Controls have been supplying process controls & instrumentation equipment since 1994, & now serves an ever expanding customer base, both in the UK & globally.

We offer a full range of valve & instrumentation products & services, with our product range representing leading technologies & brands:

Flow: Flow Meters & Transmitters, Flow Switches, Flow Control Valves & Batch Control Systems

Temperature: Temperature Probes & Thermowells, Temperature transmitters, Temperature Regulators & Temperature Displays

Level: Level Transmitters & Switches

Pressure: Pressure Gauges & Transmitters, Precision & High Pressure Regulators & I-P Converters, Volume boosters.

Precision Pneumatics: Pressure Regulators, I-P Converters, Volume Boosters, Vacuum Regulators

Valves: Solenoid & Pneumatic Valves, Control Valves & Positioners, Actuated Ball, Globe or Diaphragm Valves & Isolation Valves

Services: Repair, Calibration, Panel Build, System Design & Commissioning

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Features

- Near Zero Throttling and Pilot Staging result in true snap-action.
- 14 SCFM Flow rate meets requirements for high forward and exhaust capacity applications.
- Pneumatic and mechanical set point allows operation from a remote location.
- Available with Normally Open or Normally Closed Valve Options to meet requirements.

Operating Principles

The Model 24 Snap Acting Relay is a highly accurate differential relay with snap-acting switching. The output of the unit will go to supply pressure when the signal is equal to or greater than the setpoint. The signal pressure must fall below the set point to return the output to zero.

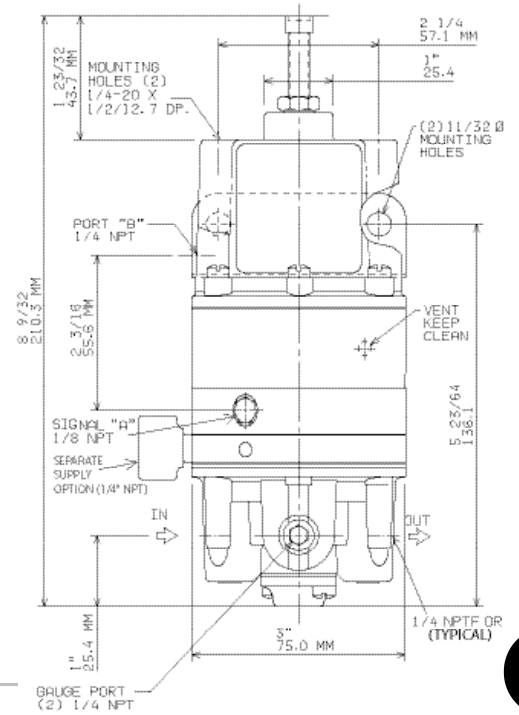


Chart 1

RA□□E			C□A□□E □ S□□□A□ TO OPERATE		
psig	BAR□	(kPa)	psig	BAR□	(kPa)
2" W.C. - 10	[2" W.C. - 0.7]	(2" W.C. - 70)	0.2" W. C.		
0.5-30	[.03-2.0]	(3-200)	0.1	[.007]	(.7)
1.0-60	[0.1-4.0]	(10-400)	0.2	[.014]	(1.4)
2.0-120	[.15-8.0]	(15-800)	0.5	[.03]	(3)

D
Model 24

Figure 1

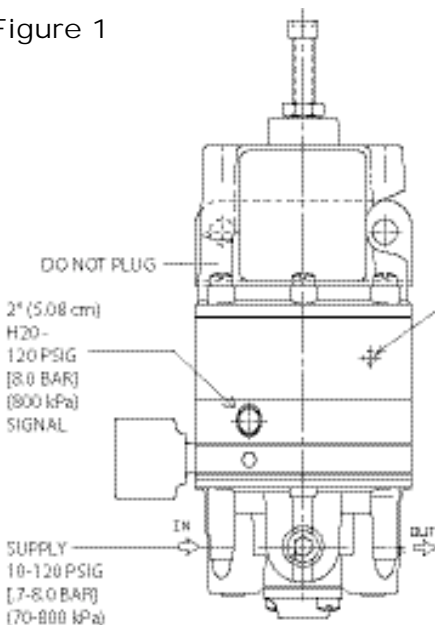


Figure 2

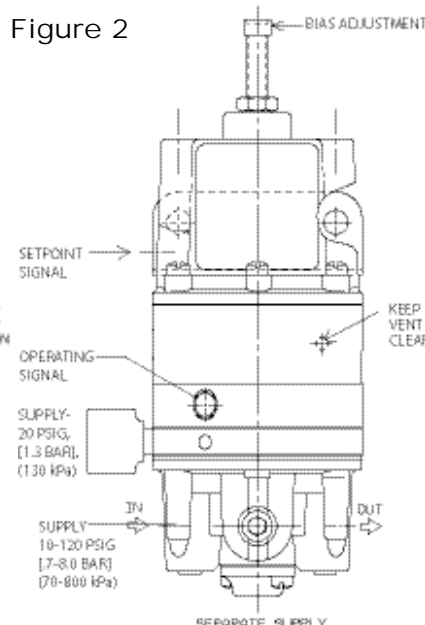
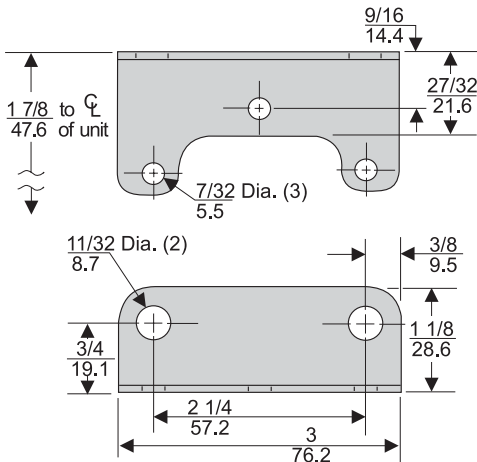
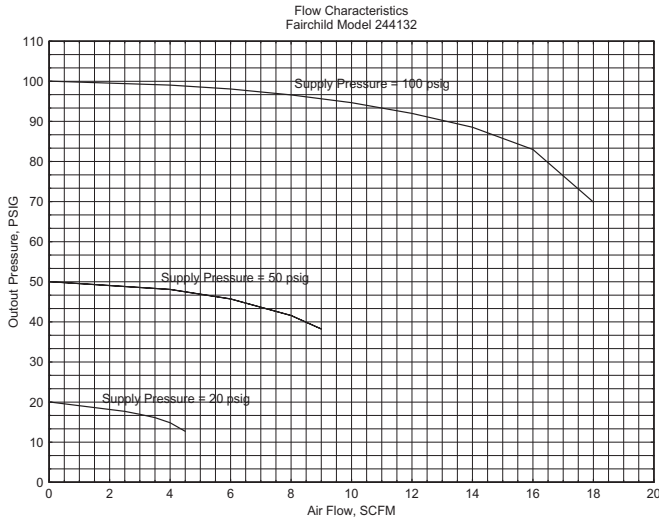


Figure 1 illustrates a configuration which uses a pneumatic signal for set point which may or may not be biased by the adjusting screw. In this case, the adjustment adds to the pneumatic signal. Should the set point and the operating signal be switched, the bias adjustment would subtract from the set point signal. To determine whether a Normally Open or Normally Closed valve is required, not that when "B" plus spring bias is greater than signal at "A" port, a Normally Open unit has an output, while a Normally Closed unit does not.

In Figure 2 the unit is shown with a separate supply option (SS) to indicate use of the unit when the supply is a control signal such as 3-15 psig or any pressure less than 10 psig.

Model 24 Snap Acting Relay

Technical Information



Mounting Bracket: 09921

Model 24 Relay Kits & Accessories

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

Catalog Information

Catalog Number 2 4 4

Switch Position

Normally Open 1

Normally Closed 2

Pressure Range

psig	[BAR]	(kPa)	
2" W.C. -10	[0.006-0.7]	(0.63-70)	2
0.5-30	[0.03-2]	(3-200)	3
1-60	[0.1-4]	(10-400)	4
2-120	[0.15-8]	(15-800)	6

Pipe Size

1/4" NPT 2

3/8" NPT 3

1/2" NPT 4

Options

Tapped Exhaust E

Fluorocarbon Elastomers J

Knob Adjustment K

Tamper Proof T

BSPT (Tapered) U

Separate Supply to Pilot SS

Specifications

- Maximum Supply Pressure**
120 psig, [8.0 BAR], (800 kPa)
- Minimum Supply Pressure**
10 psig, [0.7 BAR], (70 kPa) (use separate supply option if inlet pressure is less than 10 psig, [0.7 BAR], (70 kPa))
- Flow Capacity (SCFM)**
14 SCFM (23.8 m³/HR) @ 100 psig, [7.0 BAR], (700 kPa) supply
- Exhaust Capacity (SCFM)**
14 SCFM (23.8 m³/HR) @ 100 psig, [7.0 BAR], (700 kPa) drop
- Signal Range**
2" (5 cm) W.C. to 120 psig, [8.0 BAR], (800 kPa)
- Change in Signal to Operate**
See Chart 1.
- Repeatability**
0.2" (.5 cm) Water Column
- CV Rating**
0.23
- Mounting**
Pipe or Panel
- Air Consumption**
Less than 0.015 SCFM (.03 m³/HR) for 100 psig, [7.0 BAR], (700 kPa) inlet

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

Materials of Construction

Body and Housing Aluminum Casting

Trim Stainless Steel, Zinc Plated Steel

Diaphragms Buna N and Dacron