

# 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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SOLENOID VALVES

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Fine Controls (UK) LTD, Bassendale Road, Croft Business Park,  
Bromborough, Wirral, CH62 3QL UK  
Tel: 0151 343 9966  
Email: sales@finecontrols.com



The Model 25 Reversing Relay provides an output which will decrease in direct proportion to an increase in input pressure.

### Features

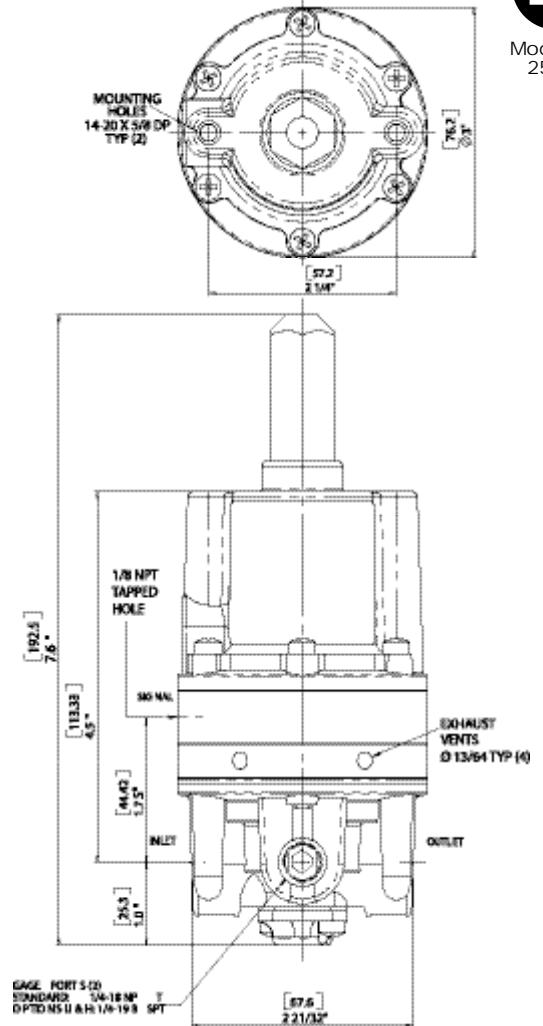
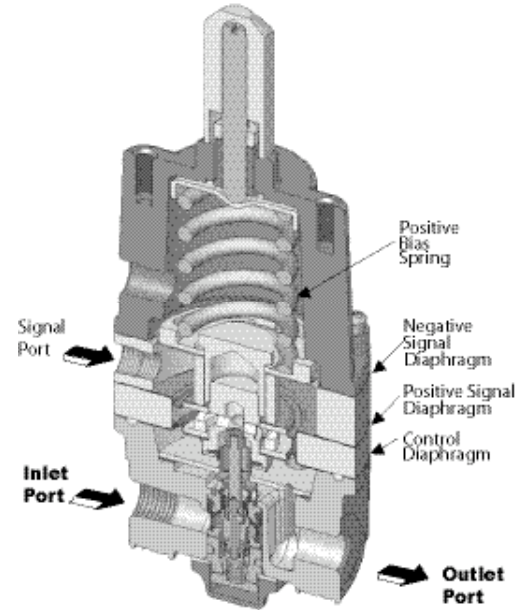
- High strength, deep convolution compensating diaphragm.
- Bottom pressure balancing chamber with a diaphragm.
- Floating seal ring.
- Balances undesirable relief seat forces.
- Ensures balanced supply seat forces.
- Protects stabilizing chamber from effect of high relief flows.

### Operating Principles

The Model 25 Reversing Relay is designed for applications requiring an output that equals a manually preset spring load minus a variable signal pressure. This high quality unit combines excellent sensitivity with unusually high flow capacity.

The Model 25 is ideally suited for a variety of precision control applications, including converting direct acting valves to reverse action, controlling opposite acting valves from a single transmitter, and cushioning cylinder loads.

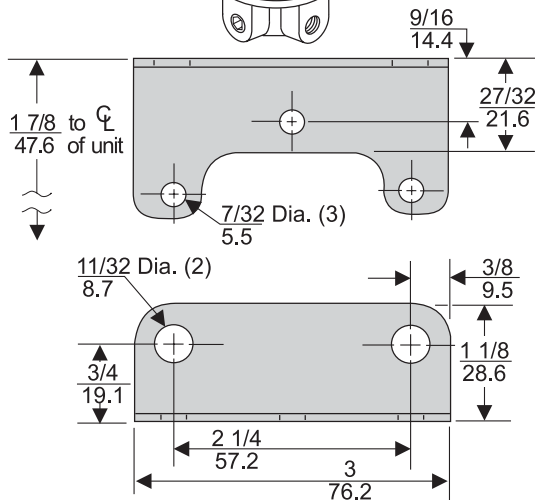
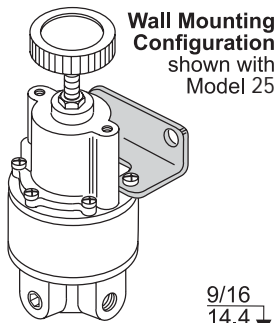
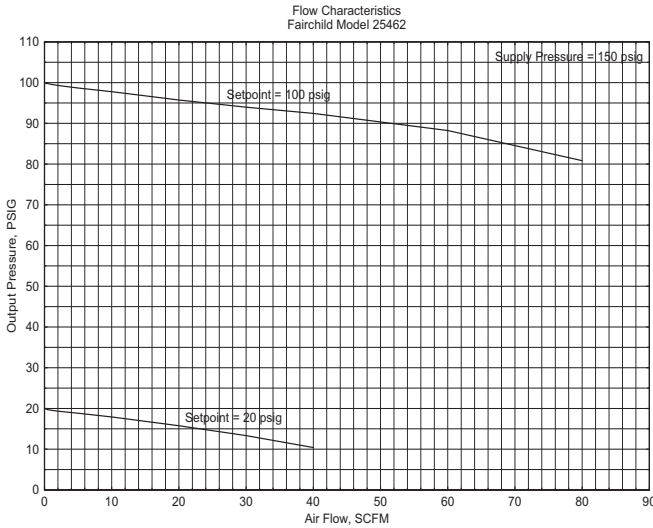
The basic mathematical expression for the Model 25 is  $PO = K - PS$  where PO is output pressure, PS is signal pressure and K is the spring constant.



Model 25

# Model 25 Reversing Relay

## Technical Information



Mounting Bracket: 09921

## Model 25 Relay Kits & Accessories

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

## Catalog Information

Catalog Number 2 5

### Pressure Range

| psig   | [BAR]     | (kPa)     |    |
|--------|-----------|-----------|----|
| 0-10   | [0-0.7]   | (0-70)    | 42 |
| 0.5-30 | [0.03-2]  | (3-200)   | 43 |
| 1-60   | [0.1-4]   | (10-400)  | 44 |
| 2-150  | [0.15-10] | (15-1000) | 46 |

### Pipe Size

|          |   |
|----------|---|
| 1/4" NPT | 2 |
| 3/8" NPT | 3 |
| 1/2" NPT | 4 |

### Options

|                              |   |
|------------------------------|---|
| Tapped Exhaust               | E |
| BSPP (Parallel) <sup>1</sup> | H |
| Fluorocarbon Elastomers      | J |
| BSPT (Tapered)               | U |

<sup>1</sup> BSPP Threads in Inlet & Outlet Ports Only. Others BSPT.

### Service Kit

A Service Kit is available for the Model 25 Reversing Relay, refer to the *Fairchild Installation, Operation and Maintenance Instructions*, IS-30000025.

### Specifications

#### Maximum Supply Pressure

250 psig, [17.5 BAR], (1750 kPa)

#### Flow Capacity

40 SCFM (68 m<sup>3</sup>/HR) @ 100 psig, [7.0 BAR], (700 kPa) supply, 20 psig, [1.5 BAR], (150 kPa) setpoint

#### Exhaust Capacity

11 SCFM (18.7 m<sup>3</sup>/HR) where downstream pressure is 5 psig, [.35 BAR], (35 kPa) above setpoint

#### Signal or Output Pressure

150 psig, [10 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 1/8" (.32 cm) Water Column

#### Mounting

Pipe or Panel

#### Ambient Temperature Limits

-40°F to +200°F, (-40°C to 93.3°C)

#### Materials of Construction

Body .....Aluminum  
Trim .....Aluminum, Stainless Steel, Brass  
Diaphragms .....Buna N and Dacron