

# Type 200 Precision Air Relay

*With positive and negative bias adjustment*

The Type 200 Precision Air Relay is a pilot-operated, multistage 1:1 relay with a positive and negative bias adjustment capability. It accurately reproduces a signal pressure plus or minus the bias setting with consistent repeatability. Output control and stability are maintained through a high-gain-servo balanced control mechanism activated by a highly sensitive stainless steel measuring capsule.

## FEATURES

### • Highly Accurate

Controls output pressure to within 0.1%

### • Positive and Negative Bias Capability

When adjusted for positive bias, output is directly proportional to the input signal plus the bias setting. Output pressure can never go below the value of the bias setting regardless of signal pressure. When set for negative bias, the output pressure will remain at minimum until the signal pressure is some value greater than the negative bias

### • Internal Bias Adjustment

The standard Type 200 is provided with an internal bias adjustment screw, which prevents casual tampering with the bias setting

### • External Bias Adjustment

The Type 200EB is available with an optional external bias adjustment screw, which allows easy access to the bias setting

### • High Relief Capacity

The Type 200HR provides an increased exhaust capacity. Its highflow relief valve ensures quick “blow down” for release of downstream pressure

### • Stable Output

Highly stable under variable operating conditions

## Models

**Type 200** The standard relay is offered with 1/4" or 3/8" NPT porting and internal bias adjustment

**Type 200EB** External bias adjustment screw provides quick and easy access of bias setting

**Type 200HR** High relief capacity allows for quick “blow down” capability for rapid exhaust of output pressure

**Type 200EB/HR** Combines external bias adjustment with high relief capacity



## Applications

Operation of multiple devices from one controlled source over a range of pressures

Control of pressures in remote locations

Volume boosting

Gas mixing

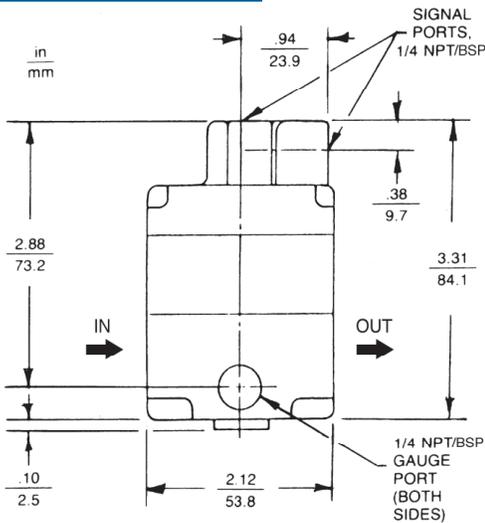
## Materials of Construction

**Body** Diecast Zinc Alloy, Baked Enamel Paint

**Capsule and Adjusting Screw** Stainless Steel Trim, Brass, Plated Steel

**Diaphragms** Buna-N Elastomer, Polyester Fabric

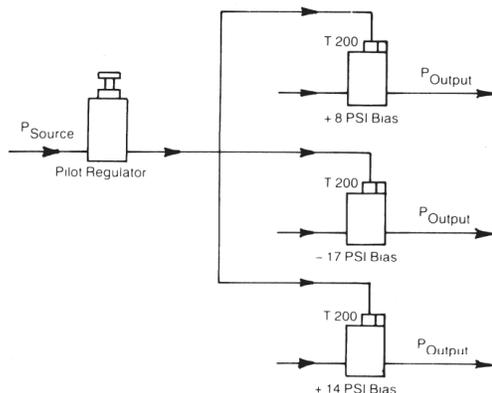
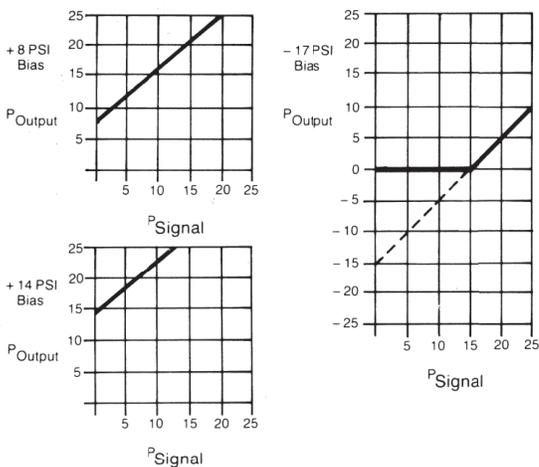
# Type 200 Dimensions



# Type 200 Specifications

<b>Flow Capacity</b>	14 scfm (396 NI/min) (100 psig (7 bar) supply; 20 psig (1.4 bar) signal)
<b>Exhaust Capacity</b>	<b>Type 200</b> 2 scfm (57 NI/min) <b>Type 200HR</b> 10 scfm (283 NI/min) (Output pressure 5 psig (0.34 bar) above signal pressure, no bias)
<b>Sensitivity</b>	1/8" (3.2 mm) water
<b>Effect of Supply Pressure Variation on Output</b>	Less than .005 psig (0.0003 bar) for 25 psig (1.7 bar) change
<b>Bias Range</b>	-30 psig (-2 bar) to +100 psig (6.7 bar) Max. output 120 psig (8 bar)
<b>Supply Pressure</b>	150 psig (10 bar) Maximum
<b>Signal Pressure</b>	120 psig (8 bar) Maximum
<b>Weight</b>	1.4 lb (635 g)
<b>Mounting</b>	In-line (Pipe)
<b>Bleed Rate</b>	Less than 0.08 scfm (2.3 NI/min)
<b>Operating Temperature</b>	-20° to 160°F (-29° to 71°C)
<b>Port Sizes</b>	1/4", 3/8" NPT/BSP

# Type 200 Biasing Characteristics



## Important Note

A minimum output pressure of 2 psi (0.14 bar) is needed to provide bleed air to the pilot pressure chamber. Therefore the relay does not regulate below 2 psi (0.14 bar). A start up spring maintains a minimum 2 psi (0.14 bar) output pressure even without any signal pressure.

## Ordering Information

Type	Model Number	Port Size (NPT)	Output Range (psi) (bar)	
200	200-BC	1/4"	2-120	0.14-8
200	200-CC	3/8"	2-120	0.14-8
200HR	210-BC	1/4"	2-120	0.14-8
200HR	210-CC	3/8"	2-120	0.14-8
200EB	220-BC	1/4"	2-120	0.14-8
200EB	220-CC	3/8"	2-120	0.14-8
200EB/HR	230-BC	1/4"	2-120	0.14-8
200EB/HR	230-CC	3/8"	2-120	0.14-8

## Options/Accessories

Add proper letter at end of model number.

- E** Tapped Exhaust - 10-32 tapped exhaust vent and barbed bleed screw
- U** BSP Porting - 1/4", 3/8" BSP Porting
- Oxygen Compatible - Consult factory for ordering information

Gauges	Range psi (bar)	Part Number
	0-15 (0-1)	446-725-003
	0-30 (0-2)	446-725-004
	0-60 (0-4)	446-725-001
	0-160 (0-11)	446-725-002

## Warranty

ControlAir, Inc. products are warranted to be free from defects in materials and workmanship for a period of eighteen months from the date of sale, provided said products are used according to ControlAir, Inc. recommended usages. ControlAir, Inc.'s liability is limited to the repair, purchase price refund, or replacement in kind, at ControlAir, Inc.'s sole option, of any products proved defective. ControlAir, Inc. reserves the right to discontinue manufacture of any products or change products materials, designs or specifications without notice. Note: ControlAir does not assume responsibility for the selection, use, or maintenance of any product. Responsibility for the proper selection, use, and maintenance of any ControlAir product remains solely with the purchaser and end user



8 Columbia Drive / Amherst, NH 03031 USA

Website: [www.controlair.com](http://www.controlair.com)

Email: [sales@controlair.com](mailto:sales@controlair.com)

603-886-9400 FAX 603-889-1844



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