



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, for 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 200EHR** Extra High Relief allows quick "blow down" for up to 15 scfm (450 NI/min) exhaust capacity
- **Type 200EB/HR** Combines external bias adjustment with high relief capacity



Applications

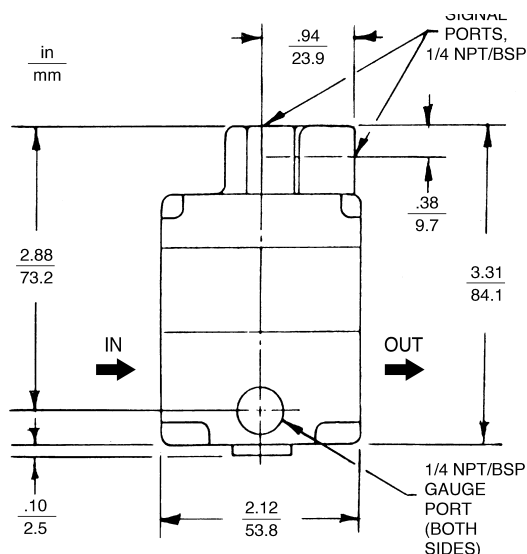
- Operation of multiple devices from one controlled source over a range of pressures
- Control of pressures in remote locations
- Volume boosting
- Gas mixing

Materials

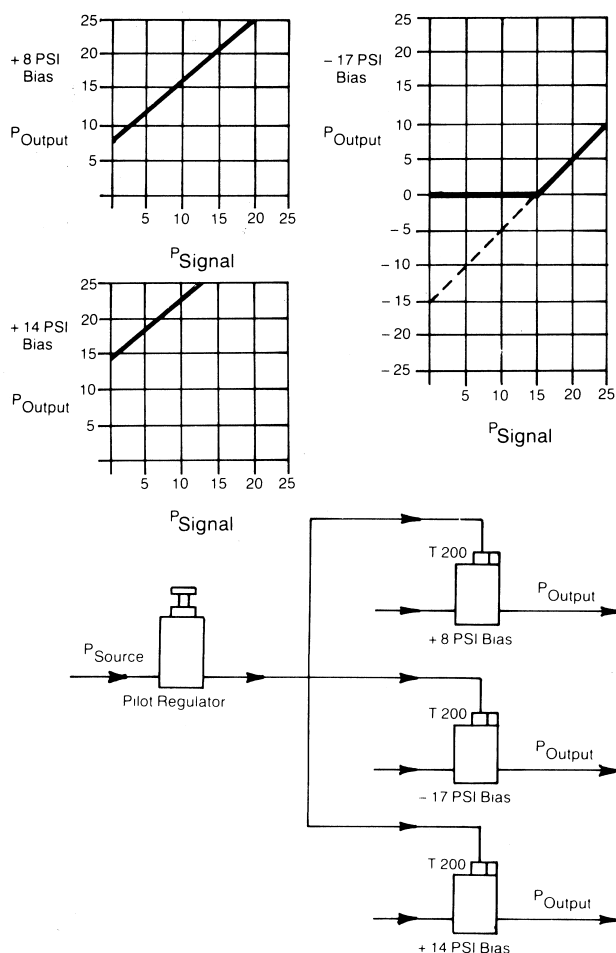
Body	Diecast Zinc Alloy, Baked Enamel Paint
Capsule and Adjusting Screw	Stainless Steel Trim, Brass, Plated Steel
Diaphragms	Buna-N Elastomer, Polyester Fabric

Type 200 Precision Air Relay

Dimensions



Biasing Characteristics



Specifications

Flow Capacity	14 scfm (396 NL/min) (100 psig (7 bar) supply; 20 psig (1.4 bar) signal)
Exhaust Capacity	5 psig (0.34 bar) above signal pressure, no bias 3 scfm (85 NL/min)
Type 200	11 scfm (311 NL/min)
Type 200HR	15 scfm (425 NL/min)
Sensitivity	1/8" (3.2 mm) water
Effect of Supply Pressure Variation on Output	Less than .005 psig (0.0003 bar) for 25 psig (1.7 bar) change
Bias Range	-30 psig(-2 bar) to +100 psig (6.7 bar) Max. output 120 psig (8 bar)
Supply Pressure	150 psig (10 bar) Maximum
Signal Pressure	120 psig (8 bar) Maximum
Weight	1.4 lb (635 g)
Mounting	In-line (Pipe)
Bleed Rate	Less than 0.08 scfm (2.3 NL/min)
Operating Temperature	-20° to 160° F (-29° to 71° C)
Port Sizes	1/4", 3/8" NPT/BSP

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

Type	Model Number	Port Size (NPT)	Output Range (psi)	Output Range (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
200EHR	211-BC	1/4"	2-120	0.14-8
200EHR	211-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

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