

Model T5200 Electro-Pneumatic I/P, E/P Transducer

B

Model T5200



Features

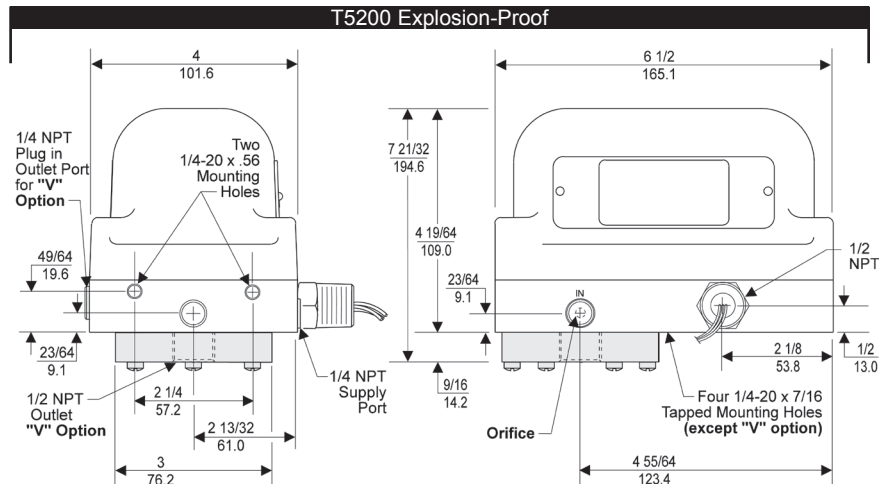
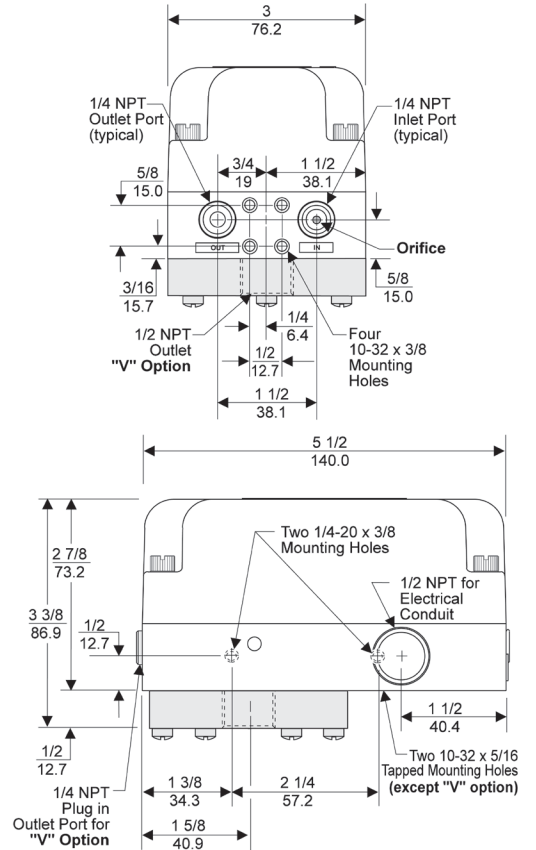
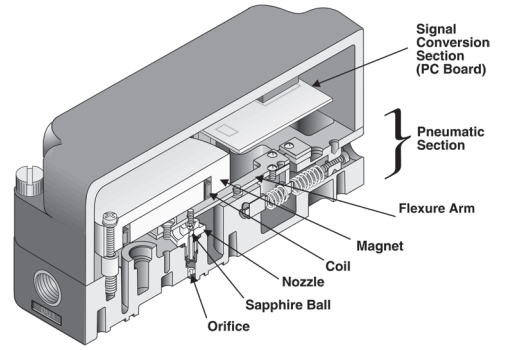
- Fast Response to Input Signal changes results in faster loop control and savings in process materials.
- Minimal Air Consumption allows use in systems where operating gas is expensive.
- Five Input Signal Ranges meet most process and machine requirements.
- Temperature Compensation provides stable operation over wide temperature Range.
- Compact Size permits use in space restricted areas.
- Vibration Resistance maintains set points under adverse vibration conditions.
- Various Mounting Configurations allow installation flexibility for most applications.
- NEMA 3R Enclosure available for outdoor and indoor installations.

Operating Principles

The T5200 Transducer is an electro-pneumatic device that is controlled by a 4-20 mA current in a control loop. This device is made up of two sections, the Signal Conversion Section and the Pneumatic Section.

The Signal Conversion Section (PC Board) accepts a 4-20 mA current from the control loop. This signal current is applied to a coil which creates a magnetic force that moves a Flexure Arm.

The Pneumatic Section operates as a force balance system. A Sapphire Ball floats inside a Nozzle and controls the output pressure by exhausting air supplied through an Orifice. This Sapphire Ball acts as a piston exerting a force which is balanced against the force of the Flexure Arm.



Hazardous Area Specifications

	Explosion-Proof	Intrinsically Safe										
Factory Mutual (FM) Approvals	TFXPD5200 Class I, Division 1, Groups B, C and D; Class II, Division 1, Groups E, F, and G; Maximum Ambient 65° C.	TFI5200 Class I, Division 1, Groups A, B, C, and D; Class II, Division 1, Groups E, F, and G; Class III, Division 1, Fibers; NEMA 3R Enclosure. <i>(Upright Position ONLY)</i>										
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TFN5200 NEMA 4X Enclosure.												

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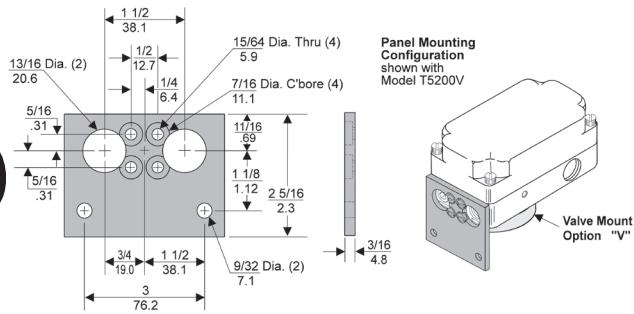


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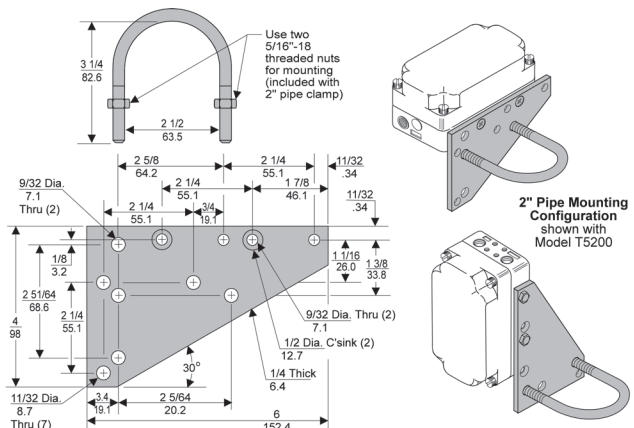
Mounting Kits

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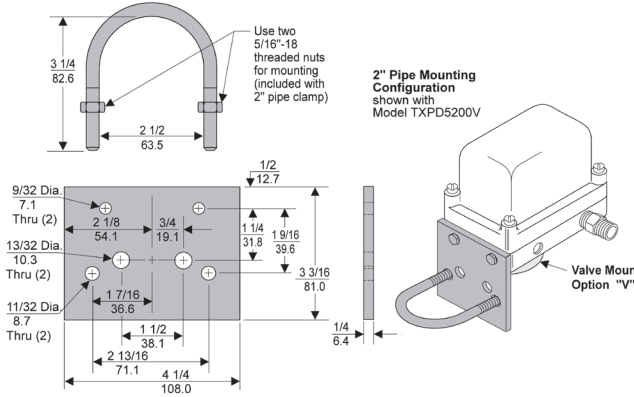
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Mounting Bracket: 15268



Mounting Bracket: 14596



Mounting Bracket: 14140

Model T5200 Transducer Kits & Accessories

- Mounting Bracket Kits 15268 (sold separately)
- 14596 (sold separately)
- 14140 (sold separately)

Installation

For Installation Instructions, refer to the *Fairchild T5200 Series Electro-Pneumatic Transducer Installation, Operation and Maintenance, IS-500T5200.*

Catalog Information

Catalog Number T **5200**

Underwriting Group

Factory Mutual F

Approval Class

Explosion-Proof¹ XPD N

NEMA 4X/IP65¹ N

None (leave blank) I

Intrinsically Safe² I

None (leave blank) I

Input

4-20 mA 4

10-50 mA³ 5

1-5 VDC 9

1-9 VDC 9

Output Pressure Units

psig 0

[BAR] 1

(kPa) 2

Options

Valve Mount V

¹ Factory Mutual Approval Only.

² Intrinsically Safe Units cannot be set for Reverse Acting Mode in field.

³ Units shipped calibrated 4-20 mA; 10-50 mA units must be calibrated in field.

Specifications

- Supply Pressure**
20 + 2 psig, [1.5 + 0.15 BAR], (150 + 15 kPa)
 - Output Capacity (SCFM)**
0.15 (0.26 m³/HR) Maximum
 - Air Consumption (SCFM)**
0.16 (0.27 m³/HR) Maximum
 - Output Range**
3-15 psig, [0.2-1.0 BAR], (20-100 kPa)
 - Supply Pressure Effect**
+ 0.3% of Span for a 1 psig, [0.1 BAR], (10 kPa) supply change
 - Impedance / Input Signal**
- | Range | OHMS |
|----------|------|
| 4-20 mA | 120 |
| 10-50 mA | 50 |
| 1-9 VDC | 2550 |
| 1-5 VDC | 375 |

- Shock & Vibration Effect**
Negligible up to 2 g's between 5 Hz and 200 Hz
- Terminal Based Linearity**
+ 0.50% Full Scale
- Independent Linearity**
+ 0.25% Full Scale

- Temperature Coefficient**
Less than 1% of Span / 50° F (10° C)
- Hysteresis**
Within 0.1% Full Scale
- Frequency Response**
-3 db @ 20 Hz (unloaded)
- Ambient Temperature**
-40° F to +150° F, (-40° C to +65.5° C)

- Materials of Construction**
- Body and Housing Aluminum
- Ball and Orifice Sapphire, Brass
- Nozzle Stainless Steel