

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

**B**

**Model T5200**



## Features

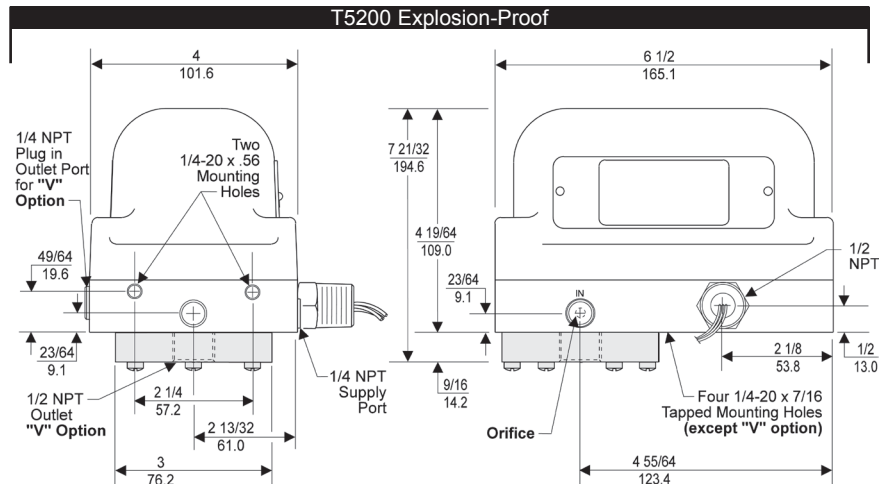
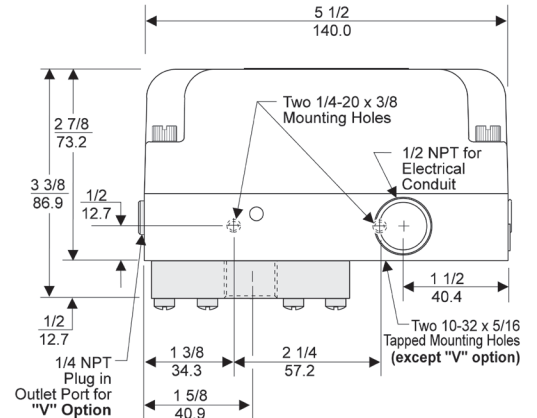
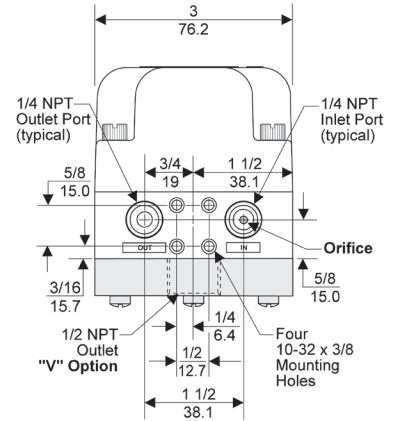
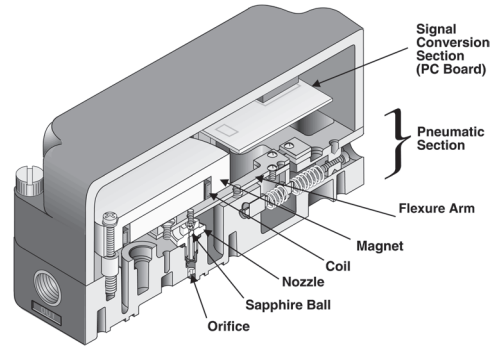
- Fast Response to Input Signal changes results in faster loop control and savings in process materials.
- Minimal Air Consumption allows use in systems where operating gas is expensive.
- Five Input Signal Ranges meet most process and machine requirements.
- Temperature Compensation provides stable 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										
<b>Factory Mutual (FM) Approvals</b>	<b>TFXPD5200</b> Class I, Division 1, Groups B, C and D; Class II, Division 1, Groups E, F, and G; Maximum Ambient 65° C.	<b>TFI5200</b> 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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<b>TFN5200</b> NEMA 4X Enclosure.												

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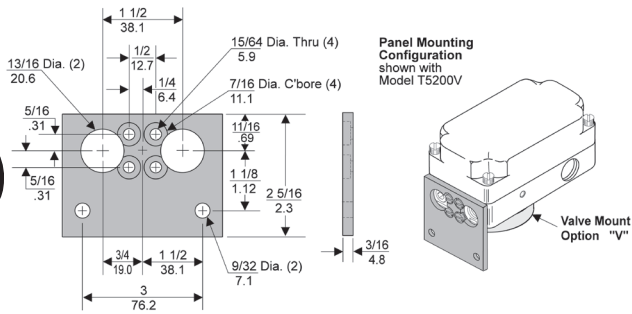
  
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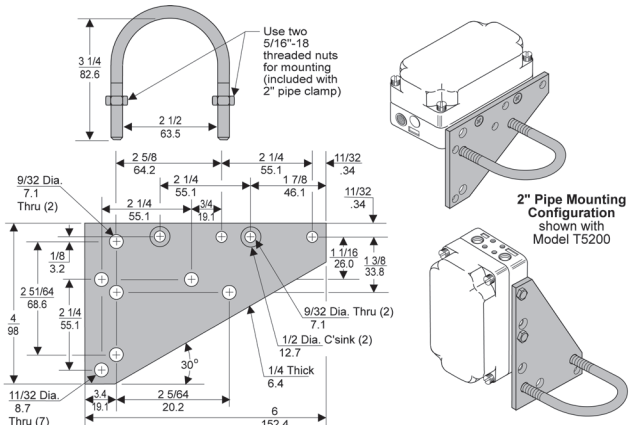
## Mounting Kits

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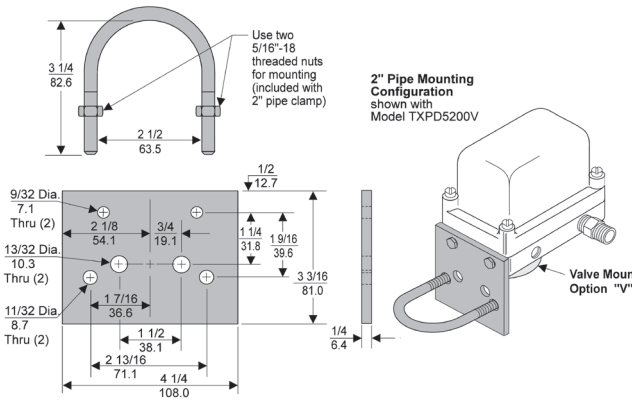
**Model  
T5200**



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)

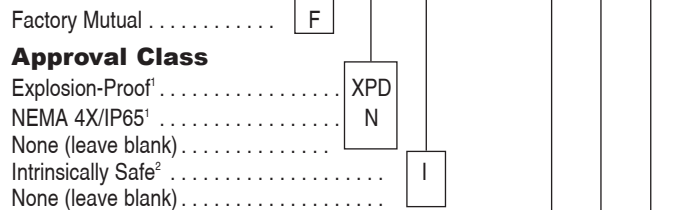
## Installation

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



### Input

4-20 mA .....	4
10-50 mA <sup>3</sup> .....	5
1-5 VDC .....	9
1-9 VDC .....	

### Output Pressure Units

psig .....	0
[BAR] .....	1
(kPa) .....	2

### Options

Valve Mount ..... V

<sup>1</sup> Factory Mutual Approval Only.  
<sup>2</sup> Intrinsically Safe Units cannot be set for Reverse Acting Mode in field.  
<sup>3</sup> Units shipped calibrated 4-20 mA; 10-50 mA units must be calibrated in field.

## Specifications

<b>Supply Pressure</b>		
20 + 2 psig, [1.5 + 0.15 BAR], (150 + 15 kPa)		
<b>Output Capacity (SCFM)</b>		
0.15 (0.26 m <sup>3</sup> /HR) Maximum		
<b>Air Consumption (SCFM)</b>		
0.16 (0.27 m <sup>3</sup> /HR) Maximum		
<b>Output Range</b>		
3-15 psig, [0.2-1.0 BAR], (20-100 kPa)		
<b>Supply Pressure Effect</b>		
+ 0.3% of Span for a 1 psig, [0.1 BAR], (10 kPa) supply change		
<b>Impedance / Input Signal</b>	<b>Range</b>	<b>OHMS</b>
	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