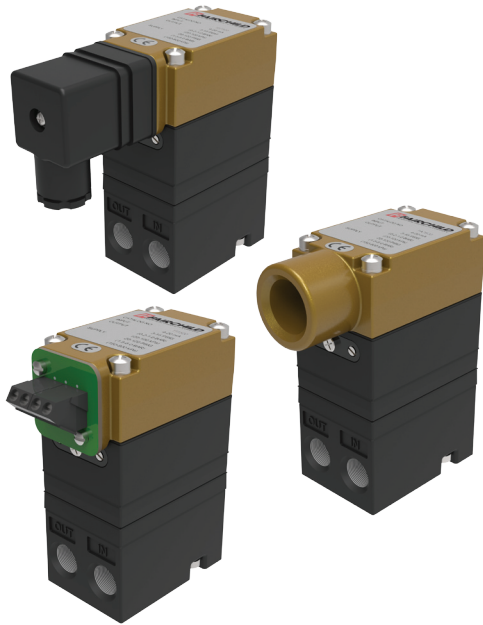


Model T7500 I/P or E/P Low Pressure Transducer



Features

- The T7500 Series Transducers provide maximum versatility for precision low pressure applications.
- Field Reversible Feature provides output that is inversely proportional to input signal.
- RFI/EMI Protection eliminates susceptibility to electromagnetic and radio interference.
- Internal Electronic Feedback and solid state controlled Piezoelectric Actuator provides precise control of output pressure regardless of vibration or position.
- Damping Adjustment for optimum tuning response.
- Unaffected by vibration or mounting orientation.
- Compact size for use in restricted spaces.
- Various mounting configurations allow installation flexibility for most applications.
- NEMA 4X, Type 4 Enclosure and IP65 rated for indoor and outdoor installations.
- All T7500 products are ROHS compliant.

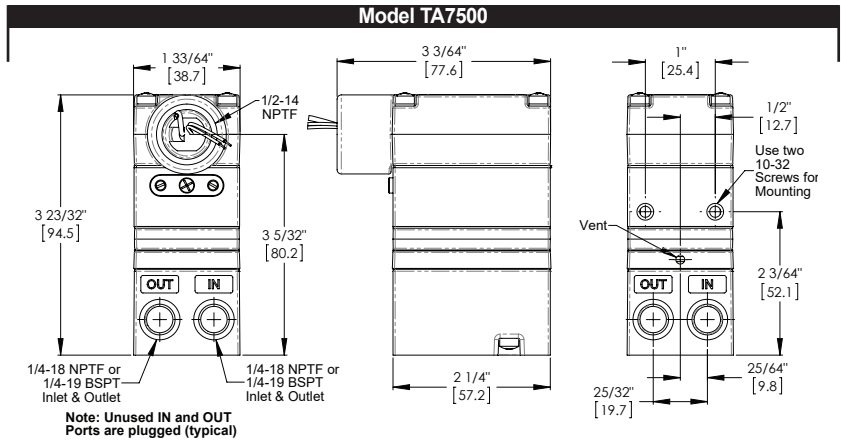
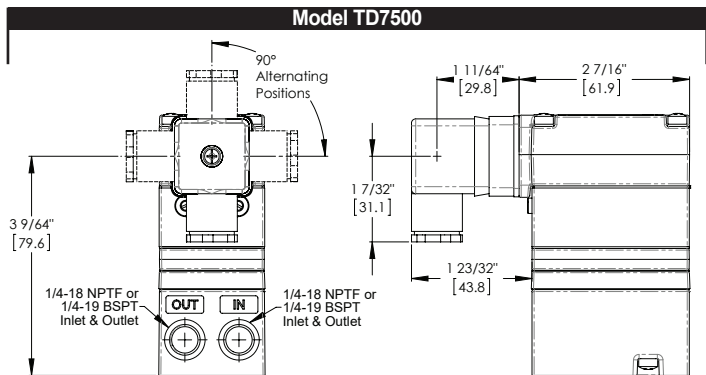
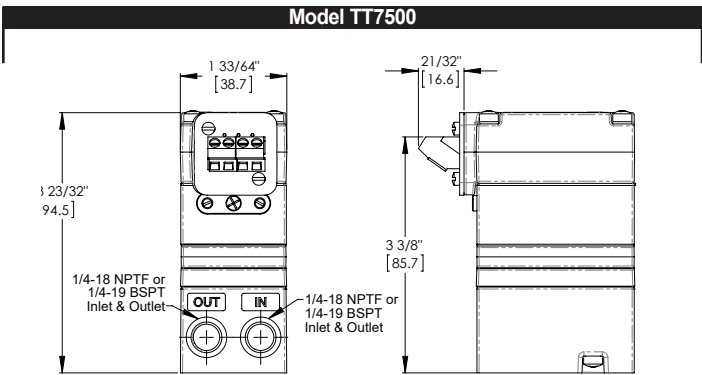
Ordering Information

Catalog Number	T	75				
Electrical Connection:						
1/2" NPT Conduit w/pigtail	A					
EN 175301-803.....	D					
Terminal Block	T					
Main Valve:						
3 scfm valve.....			01			
7 scfm valve.....			02			
Input:						
0-10 VDC				0		
4-20 mA				4		
0-5 VDC.....				7		
Output:						
0-2.5 PSIG					01	
0-5 PSIG					02	
0-7.5 PSIG					03	
0-15 PSIG					04	
0-0.17 Bar.....					11	
0-0.35 Bar					12	
0-0.5 Bar					13	
0-1 Bar.....					14	
0-17 kPa					21	
0-35 kPa					22	
0-50 kPa					23	
0-100 kPa.....					24	
Port Thread:						
NPTF						N
BSPT						U

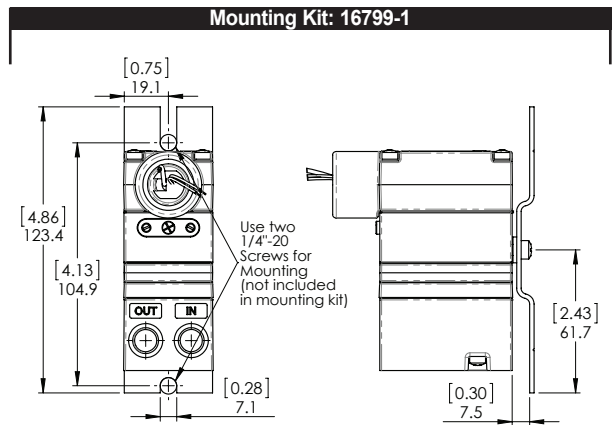
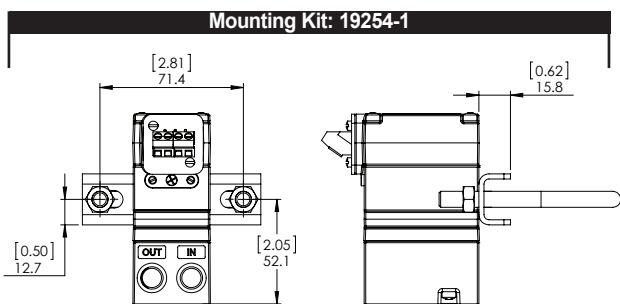
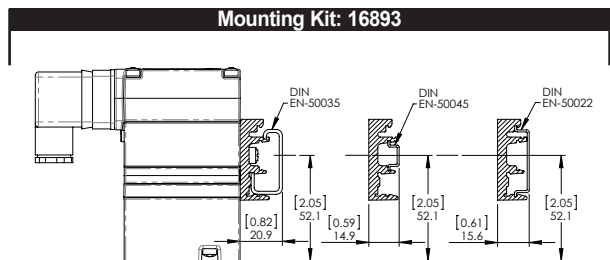
Operating Principles

The T7500 series low pressure transducer converts DC electronic input signal to a proportional low pressure pneumatic output. The transducer employs electronic closed loop feedback in conjunction with a piezo-ceramic actuator flapper nozzle system in the pilot stage to control the signal pressure of an integral pneumatic volume booster. The volume booster employs a highly sensitive control diaphragm and main valve to accurately control the flow of air to the downstream system in response to the pressure received from the pilot stage. The electronic closed loop feedback senses the output pressure of the volume booster directly to affect the ultimate in accurate pressure control.

Model T7500 I/P or E/P Low Pressure Transducer



Mounting Kits



Common Specifications

Control Signal	4-20 mA DC, 0-10 VDC, 0-5 VDC
Supply Pressure	
psig	20-30
[BAR]	[1.4-2.0]
(kPa)	(140-200)
Required Operating Voltages	Two Wire Current Input 8.2VDC @ 20 mA (4-20 mA signal)
Supply Voltages	Three Wire Voltage Input 7.2 -30VDC, less than 3 mA
Signal Input Impedance	Three Wire Voltage Input 10 KOHMS
Accuracy (ISA S51.1)	0.25% Full Scale Guaranteed 0.15% Full Scale Typical
Hysteresis (ISA S51.1)	0.1% Full Scale
Repeatability (ISA S51.1)	0.1% Full Scale
Deadband	0.02% Full Scale
Position Effect	No Measurable Effect
Vibration Effect	Less than +1% of Span under the following conditions: 5-15 Hz @ 0.8 inches constant displacement, 15-500 Hz @ 10 Gs
Reverse Polarity Protection	No damage occurs from reversal of normal supply current (4-20 mA) or from misapplication of up to 60 mA
RFI/EMI Effect	Less than 0.5% of span EMC Directive 2004/108/EC per European norms EN 61326-2006 for industrial locations
Supply Pressure Effect	No Measurable Effect
Temperature Effect	[+0.5% +0.04% / °F Temperature Change] of Span typical
Materials of Construction	Body and Housing Chromate Treated Aluminum Orifice Nickel Plated Brass & Sapphire Trim Stainless Steel, Brass, & Zinc Plated Steel Elastomers Nitrile Finish Epoxy Powder Coating
Temperature Range	
Operating	-40°F to + 160°F (-40°C to + 71.2°C)
Storage	-40°F to + 160°F (-40°C to + 71.2°C)

Valve Dependent Specifications

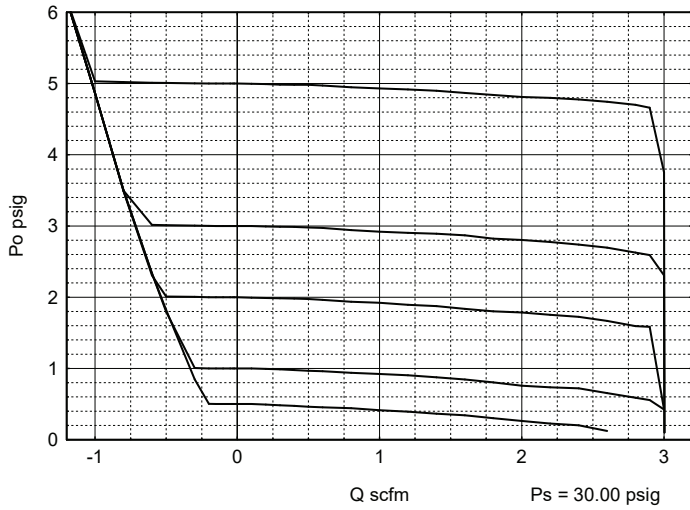
Valve Model	T7501	T7502
Forward Flow Capacity (SCFM)	3.0 (5.1 m ³ /HR) @ 30 psig, [2 BAR], (200 kPa) supply & 5 psig, [350 mBAR], (35 kPa) Output	7.0 (11.9 m ³ /HR) @ 30 psig, [2 BAR], (200 kPa) supply & 5 psig, [1 BAR], (35 kPa) Output
Exhaust Flow Capacity	-1.8 scfm @ Po = 15 psig	-1.8 scfm @ Po = 15 psig

Pressure Dependent Specifications

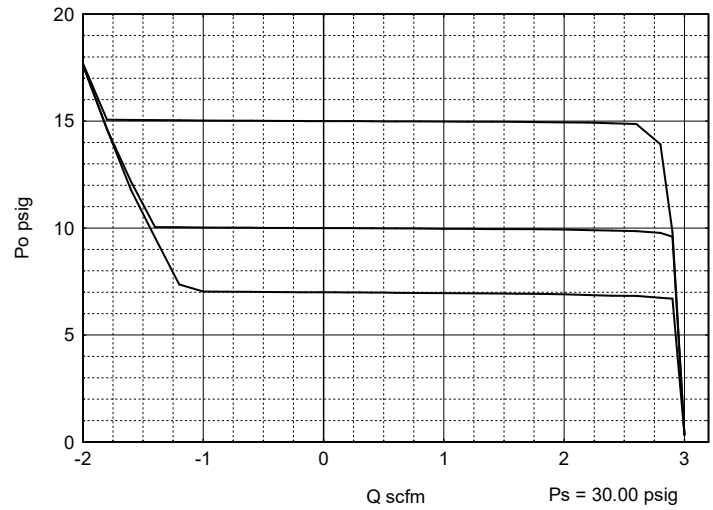
Output Pressure Range		0-2.5 psig	0-5 psig	0-7.5 psig	0-15 psig
Minimum Span	psig [BAR] (kPa)	1 [0.07] (7)	2 [0.14] (14)	3 [0.21] (21)	6 [0.41] (41)
Max Air Consumption Ps = 30 psig	SCFH (m ³ /HR)	3.1 (0.09m ³ /HR)	3.5 (0.10 m ³ /HR)	3.8 (0.11m ³ /HR)	4.7 (0.13m ³ /HR)
Frequency Response per ISA S26.4.3.1 Load Configuration A	T7501		-3 db @ 2 Hz		-3 db @ 1 Hz
Frequency Response per ISA S26.4.3.1 Load Configuration A	T7502		-3 db @ 5 Hz		-3 db @ 1.3 Hz
Maximum Permissible Output Pressure	psig [BAR] (kPa)	6 [0.41] (41)	6 [0.41] (41)	17 [1.17] (117)	17 [1.17] (117)

Model T7500 I/P or E/P Low Pressure Transducer

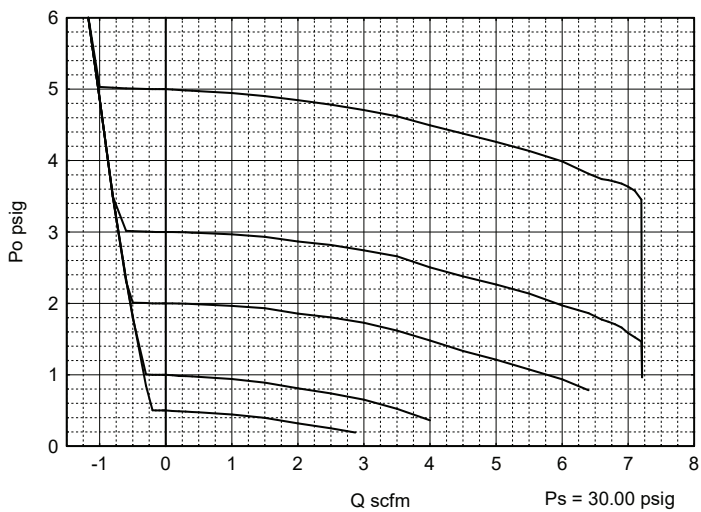
Rotork Fairchild T7501 Series Transducer
Flow Characteristics



Rotork Fairchild T7501 Series Transducer
Flow Characteristics



Rotork Fairchild T7502 Series Transducer
Flow Characteristics



Rotork Fairchild T7502 Series Transducer
Flow Characteristics

